

**Revised Ordinance Governing
MBBS DEGREE COURSE AND CURRICULUM of
Phase III Part 1 Subjects-RS4**



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RGU/AUTH/MBBS-UG/176th/164/2018-19

Date: 15/12/2022

NOTIFICATION

Sub: - Ordinance pertaining to Regulations and Curriculum of MBBS
Phase III Part 1 and Part 2 as per CBNIE Guidelines for RS4 Batch.

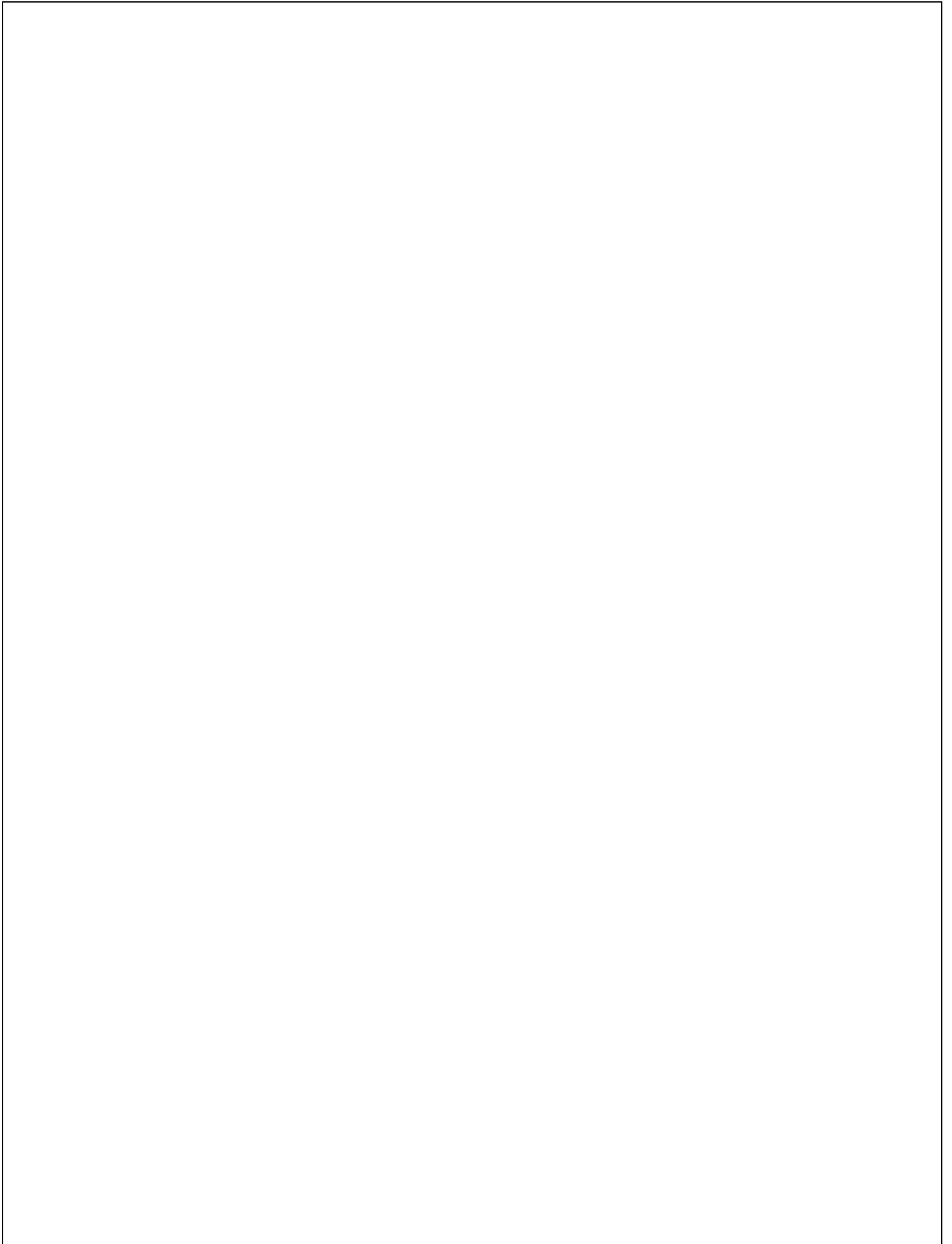
Ref:- 1. No. MCI-34(41)/2019-Med/161726, Dated 04/11/2019
2. Proceedings of 176th meeting of Syndicate held on 24/11/2022.

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In exercise of the powers vested under section 35(2) of RGUHS Act, 1994, the Revised Ordinance pertaining to Regulations and Curriculum of MBBS Phase III Part 1 and Part 2 as per CBME guidelines for RS4 batch is notified herewith as per Annexure.

Copy to:

- 1 . The Principal Secretary to Governor, Raj Bhavan, Bangalore — 560001
- 2 . The Principal Secretary Medical Education, Health & Family Welfare Dept. M S Building, Dr. B R Ambedkar Veedhi, Bangalore -560001.
- 3 . The Principals of All affiliated Medical College of RGUHS, Bangalore
- 4 . PA to Vice-chancellor/ PA to Registrar/ Registrar (Eva.)/Finance Officer, Rajiv Gandhi University of Health Sciences, Bangalore.
- 5 . All Officers of the University Examination Branch/ Academic Section.
- 6 . Guard File/ Office copy.



PREAMBLE

Introduction to CBME based curriculum

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate is able to recognize "health for all" as a national goal and should be able to fulfill his/her societal obligations. The revised curriculum has attempted to enunciate the competencies the student must be imparted and should have learnt, with clearly defined teaching-learning strategies and effective methods of assessment. Communicating effectively and sympathetically with patients and their relatives has been visualized as a core area of the revised curriculum. These and other goals identified in the curriculum are to be implemented in all medical colleges under the ambit of Medical Council of India from August 2019 and to smoothen this process Guidelines have been prepared for its effective implementation. In response to the need for a seamless introduction of the curriculum into the Undergraduate system, all medical colleges need to upgrade the teaching-learning skills of their faculty. Earlier experience with implementation of curricular changes suggests that a carefully managed, sustainable approach is necessary to ensure that every college has access to the new skills and knowledge enunciated in the new curriculum. Faculty training and development thus assumes a key role in the effective implementation and sustenance of the envisaged curricular reforms.

INTRODUCTION

The undergraduate medical curriculum of the medical council of India is created to ensure that the medical doctor who emerges from the MBBS training program is capable of assisting the nation to achieve its goal of health for all. In addition, it aspires to ensure that the “graduate” meets or exceeds global bench-mark in knowledge, attitude, skills and communication. This intent is at the core of the Graduate Medical Regulations, 2019.

The Graduate Medical Regulations, 2019 represents the first major revision to the medical curriculum since 1997 and hence incorporates changes in science and thought over two decades. A significant advance is the development of global competencies and subject-wise outcomes that define the roles of the “Indian Medical Graduate”. Learning and assessment strategies have been outlined that will allow the learner to achieve the competencies/ outcomes. Effective appropriate and empathetic communication, skill acquisition, student-doctor method of learning, aligned and integrated learning and assessment are features that have been given additional emphasis in the revised curriculum.

The revised curriculum is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

This document represents a compilation of the resource material that was used in the Curricular Implementation Support Program (CISP) and has attempted to provide a stepwise and comprehensive approach to implement the curriculum. It details the philosophy and the steps required in a simple and richly illustrated manner. Teachings slide decks, faculty guides and on line resource material supplement this document. The document is to be used in conjunction with the Competency document, AETCOM module and the GMR document.

Indian Medical Graduate Training Programme

The undergraduate medical education programme is designed with a goal to create an “Indian Medical Graduate” (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that he may function appropriately and effectively as a physician of first contact of the community while being globally relevant. To achieve this, the following national and institutional goals for the learner of the Indian Medical Graduate training programme are here by prescribed:-

National Goals

At the end of undergraduate program, the Indian Medical Graduate should be able to:

- (a) Recognize “health for all” as a national goal and health right of all citizens and by undergoing training for medical profession to fulfill his/hersocial obligations towards realization of this goal.
- (b) Learn every aspect of National policies on health and devote her/him to its practical implementation.
- (c) Achieve competence in practice of holistic medicine, encompassing promotive, preventive, curative and rehabilitative aspects of common diseases.
- (d) Develop scientific temper, acquire educational experience for proficiency in profession and promote healthy living.
- (e) Become exemplary citizen by observance of medical ethics and fulfilling social and professional obligations, so as to respond to national aspirations.

Institutional Goals

(1) In consonance with the national goals each medical institution should evolve institutional goals to define the kind of trained manpower (or professionals) they intend to produce. The Indian Medical Graduates coming out of a medical institute should:

(a) Be competent in diagnosis and management of common health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant

investigations.

(b) Be competent to practice preventive, promotive, curative, palliative and rehabilitative medicine in respect to the commonly encountered health problems.

(c) Appreciate rationale for different therapeutic modalities; be familiar with the administration of "essential medicines" and their common adverse effects.

(d) Be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude towards the patients in discharging one's professional responsibilities. (e) Possess the attitude for continued self learning and to seek further expertise or to pursue research in any chosen area of medicine, action research and documentation skills.

(f) Be familiar with the basic factors which are essential for the implementation of the National Health Programmes including practical aspects of the following:

(i) Family Welfare and Maternal and Child Health (MCH)

(ii) Sanitation and water supply

(iii) Prevention and control of communicable and non-communicable diseases

(iv) Immunization

(v) Health Education

(vi) Indian Public Health Standards (IPHS), at various levels of service delivery

(vii) Bio-medical waste disposal

(viii) Organizational and/ or institutional arrangements.

(g) Acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, hospital management, inventory skills and counseling.

(h) Be able to identify community health problems and learn to work to resolve these by designing, instituting corrective steps and evaluating outcome of such measures.

(i) Be able to work as a leading partner in health care teams and acquire proficiency in communication skills.

(j) Be competent to work in a variety of health care settings.

(k) Have personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

All efforts must be made to equip the medical graduate to acquire the skills as detailed in Table 11
Certifiable procedural skills – A Comprehensive list of skills recommended as desirable for Bachelor of
Medicine and Bachelor of Surgery (MBBS) –Indian Medical Graduate.

Goals and Roles for the Learner

In order to fulfill the goal of the IMG training programme, the medical graduate must be able to function in the following roles appropriately and effectively

- Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.
- Leader and member of the health care team and system with capabilities to collect, analyze, synthesize and communicate health data appropriately.
- Communicate with patients, families, colleagues and community.
- Life long learner committed to continuous improvement of skills and knowledge.
- Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

Competency Based Training Programme of the Indian Medical Graduate

Competency based learning would include designing and implementing medical education curriculum that focuses on the desired and observable ability in real life situations. In order to effectively fulfil the roles as listed in clause 2, the Indian Medical Graduate would have obtained the following set of competencies at the time of graduation:

Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion

- Demonstrate knowledge of normal human structure, function and development from a molecular, cellular, biologic, clinical, behavioral and social perspective.
- Demonstrate knowledge of abnormal human structure, function and development from a molecular, cellular, biological, clinical, behavioral and social perspective.
- Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence healthcare.
- Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and care givers, a history that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is contextual to gender, age, vulnerability, social and economic status, patient preferences, beliefs and values.
- Demonstrate ability to perform a physical examination that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to perform a physical examination that is contextual to gender, social and economic status, patient preferences and values.
- Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals.
- Maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.

- Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context.
- Demonstrate ability to prescribe and safely administer appropriate therapies including nutritional interventions, pharmacotherapy and interventions based on the principles of rational drug therapy, scientific validity, evidence and cost that conform to established national and regional health programmes and policies for the following:
 - (i) Disease prevention,
 - (ii) Health promotion and cure,
 - (iii) Pain and distress alleviation, and (iv) Rehabilitation.
- Demonstrate ability to provide a continuum of care at the primary and/ or secondary level that addresses chronicity, mental and physical disability.
- Demonstrate ability to appropriately identify and refer patients who may require specialized or advanced tertiary care.
- Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

Leader and member of the health care team and system

- Work effectively and appropriately with colleagues in an inter-professional health care team respecting diversity of roles, responsibilities, and competencies of other professionals.
- Recognize and function effectively, responsibly, and appropriately as a health care team leader in primary and secondary health care settings.
- Educate and motivate other members of the team and work in a collaborative and collegial fashion that will help maximize the health care delivery potential of the team.
- Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyze and utilize health data.
- Participate appropriately and effectively in measures that will advance quality of health care and patient safety within the health care system.
- Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition: in a) life style diseases and b) cancers, in collaboration with other members of the health care team.

Communicator with patients, families, colleagues and community

- Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health care outcomes.

- Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trust worthy.
- Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality, and privacy.
- Demonstrate ability to communicate with patients, colleagues and families in a manner that encourages participation and shared decision-making.

Lifelong learner committed to continuous improvement of skills and knowledge

- Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills.
- Demonstrate ability to apply newly gained knowledge or skills to the care of the patient.
- Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
- Demonstrate ability to search (including through electronic means), and critically evaluate the medical literature and apply the information in the care of the patient.
- Be able to identify and select an appropriate career path way that is professionally rewarding and personally fulfilling.

Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

- Practice selflessness, integrity, responsibility, accountability and respect.
- Respect and maintain professional boundaries between patients, colleagues and society.
- Demonstrate ability to recognize and manage ethical and professional conflicts.
- Abide by prescribed ethical and legal codes of conduct and practice.
- Demonstrate a commitment to the growth of the medical profession as a whole.

Broad Outline on training format

In order to ensure that training is in alignment with the goals and competencies listed in sub-clause 2 and 3 above:

- There shall be a "Foundation Course" to orient medical learners to MBBS programme, and provide them with requisite knowledge, communication (including electronic), technical and language skills.
- The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible in order to enhance learner's interest and eliminate redundancy and overlap.
- Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning.
- Clinical training shall emphasize early clinical exposure, skill acquisition, certification in essential skills; community/ primary/ secondary care-based learning experiences and emergencies.
- Training shall primarily focus on preventive and community-based approaches to health and disease, with specific emphasis on national health priorities such as family welfare, communicable and non-communicable diseases including cancer, epidemics and disaster management.
- Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.
- The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal in-land dedicated programme on professional development including attitude, ethics and communication.
- Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained. Appropriate Faculty Development Programmes shall be conducted regularly by institutions to facilitate medical teachers at all levels to continuously update their professional and teaching skills, and align their teaching skills to curricular objectives.

SECTION II

Admission to the Indian Medical Graduate Programme NATIONAL ELIGIBILITY-CUM-ENTRANCE TEST AND COMMON COUNSELLING

SECTION III

Migration AS PER MCI GUIDE LINES

SECTION IV

REGULATIONS GOVERNING MBBS DEGREE COURSE

[Eligibility for Admission, Duration, Attendance and Scheme of Examination]

1. ELIGIBILITY

As per guidelines of National Medical Council of India

2. DURATION OF THE COURSE

Every learner shall undergo a period of certified study extending over 4 ½ academic years, divided into nine semesters from the date of commencement of course to the date of completion of examination which shall be followed by one year of compulsory rotating internship.

Each academic year will have at least 240 teaching days with a minimum of eight hours of working on each day including one hour as lunch break. The period of 4½ years is divided as follows:

- **Pre-Clinical Phase [(Phase I) - First Professional phase of 13 months]** preceded by Foundation Course of one month]: will consist of preclinical subjects—Human Anatomy, Physiology,

Biochemistry, Introduction to Community Medicine, Humanities, Professional development including Attitude, Ethics & Communication (AETCOM) module and early clinical exposure, ensuring both horizontal and vertical integration.

- **Para-clinical phase [(Phase II) - Second Professional of 12 months]:** will consist of Paraclinical subjects namely Pathology, Pharmacology, Microbiology, Community Medicine, Forensic Medicine and Toxicology, Professional development including Attitude, Ethics & Communication (AETCOM) module and introduction to clinical subjects ensuring both horizontal and vertical integration.

The clinical exposure to learners will be in the form of learner-doctor method of clinical training in all phases. The emphasis will be on primary, preventive and comprehensive healthcare. A part of training during clinical postings should take place at the *primary level* of health care. It is desirable to provide learning experiences in secondary health care, wherever possible. This will involve:

- (a) Experience in recognizing and managing common problems seen in out patient, in patient and emergency settings,
- (b) Involvement in patient care as a team member,
- (c) Involvement in patient management and performance of basic procedures.

- **Clinical Phase – [(Phase III) Third Professional (28 months)]**

- (a) Part I (13 months) - The clinical subjects include General Medicine, General Surgery, Obstetrics & Gynecology, Pediatrics, Orthopaedics, Dermatology, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Psychiatry, Respiratory Medicine, Radio diagnosis & Radio therapy and Anaesthesiology & Professional development including AETCOM module.

(b) Electives (2months)- To provide learners with opportunity for diverse learning experiences, to do research/ community projects that will stimulate enquiry, self directed experimental learning and lateral thinking[9.3].

(c) Part II (13months)-Clinical subjects include:

- i. Medicine and allied specialties (General Medicine, Psychiatry, Dermatology Venereology And Leprosy (DVL), Respiratory Medicine including Tuberculosis)
- ii. Surgery and allied specialties (General Surgery, Orthopedics [including trauma]), Dentistry, Physical Medicine and rehabilitation, Anesthesiology and Radiodiagnosis)
- iii. Obstetrics and Gynecology (including Family Welfare)
- iv. Pediatrics
- v. AETCOM module

• A learner shall not be titled to graduate after 10 years of his/her joining of the first part of the MBBS course

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundation course	IMBBS			
IMBBS								Phase I exam	IIMBBS		
IIMBBS								Phase II exam	IIIMBBS PART 1		
IIIMBBS PART 1									Phase III part 1 exam	Electives and skills	
III MBBS PART 2											
Phase III part 2 exam		Internship									
Internship											

DISTRIBUTION OF SUBJECTS BY PROFESSIONAL PHASE

Phase and Year of MBBS Training	Subjects and new teaching elements	Duration	University examination
First professional MBBS	<ul style="list-style-type: none"> • Foundation course(1month) • Human Anatomy, Physiology & Biochemistry • Introduction of Community Medicine, Humanities • Early Clinical Exposure • Attitude. Ethics and Communication Module (AETCOM) 	1+13 months	I st Professional
Second professional MBBS	<ul style="list-style-type: none"> • Pathology, Microbiology, Pharmacology, Forensic Medicine and Toxicology • Introduction to clinical subjects including community Medicine • Clinical postings • AETCOM 	12months	II nd Professional
Third professional MBBS-part I	<ul style="list-style-type: none"> • Internal Medicine, General Surgery, OBG, Pediatrics, Orthopedics, Dermatology, Psychiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory Medicine, Radio diagnosis & Radio therapy, Anesthesiology • Clinical Subjects/postings • AETCOM 	12months	III rd Professional Part I
Electives	<ul style="list-style-type: none"> • Electives, skills and assessment 	2months	
Third professional MBBS-part II	<ul style="list-style-type: none"> • Internal Medicine, Pediatrics, General Surgery, Orthopedics, Obstetrics and Gynecology, including Family welfare and allied specialties • Clinical Postings/subjects • AETCOM 	13months	III rd Professional PartII

AETCOM modules in 3rd MBBS Part 1

AETCOM Module number	Title	Department
3.1	The foundations of communication - 3	Community Medicine
3.2	Case studies in bioethics - Disclosure of medical errors	Forensic Medicine
3.3	The foundations of communication - 4	Ophthalmology
3.4	Case studies in bioethics - Confidentiality	Community Medicine
3.5	Case studies in bioethics - Fiduciary duty	ENT

AETCOM modules in 3rd MBBS Part 2

AETCOM Module number	Title	Department
4.1	The foundations of communication - 5	General Surgery
4.2	Case studies in medico-legal and ethical situations	Obstetrics and Gynaecology
4.3	Case studies in medico-legal and ethical situations	Internal Medicine
4.4	Case studies in ethics empathy and the doctor-patient relationship	General Surgery
4.5	Case studies in ethics: the doctor-industry relationship	Paediatrics
4.6	Case studies in ethics and the doctor - industry relationship	Orthopaedics
4.7	Case studies in ethics and patient autonomy	Paediatrics
4.8	Dealing with death	Internal Medicine
4.9	Medical Negligence	Obstetrics and Gynaecology

3. ATTENDANCE

- Every candidate should have **attendance not less than 75% of the total classes conducted in theory and not less than 80% of the classes conducted in practical** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.
- **Seventy five percent (75%) attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year** (vide Medical Council of India Notification on Graduate Medical Education (Amendment) Regulations 2019, published in the Gazette of India Part III, Section 4, Extraordinary issued on 4th November 2019)
- In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
- If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional- Part II examination.

The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University.

A candidate lacking in the prescribed attendance and progress in any subject (s) in theory or practical should not be permitted to appear for the examination in that subject(s)

4. TEACHINGHOURS: Third Professional Part 1

Subjects	Lecture(h ours)	Smallgrou plearning(Tutorials /Seminars) /Integrated Learning(hours)	Self DirectedLe arning(hou rs)	Total(hours)
General Medicine	25	35	5	65
General Surgery	25	35	5	65
Obstetrics and Gynecology	25	35	5	65
Pediatrics	20	30	5	55
Orthopaedics	15	20	5	40
Forensic Medicine and Toxicology	25	45	5	75
Community Medicine	40	60	5	105
Otorhinolaryngology	25	40	5	70
Ophthalmology	30	60	10	100
Dermatology	20	5	5	30
Psychiatry	25	10	5	40
Respiratory Medicine	10	8	2	20
Radiodiagnosis and Radiotherapy	10	8	2	20
Anesthesiology	8	10	2	20
Clinicalpostings		-		756
Attitude, Ethics &Communication Module(AETCOM)		19	6	25
Total	303	401	66	1551

Teaching and learning shall be aligned and integrated across specialties both vertically and horizontally for better learner comprehension. Learner centered learning methods Should include problem oriented learning, case studies, community-oriented learning, self- directed and experiential learning.

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- Didactic lectures shall not exceed one third of the schedule; two third of the schedule shall include interactive sessions, practicals, clinical or/and group discussions. The learning process should include clinical experiences, problem-oriented approach, case studies and community health care activities.
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Subjects	Period of training in weeks			Total(weeks)
	II MBBS	III MBBS Part 1	III MBBS Part 2	
Electives			8(4weeks clinical postings to continue)	
General Medicine	4	4	8+4	20
General Surgery	4	4	8+4	20
Obstetrics and Gynecology	4	4	8+4	20
Pediatrics	2	4	4	10
Orthopaedics including Trauma	2	4	2	8
Community Medicine	4	6	-	10
Otorhinolaryngology	4	4	-	8
Ophthalmology	4	4	-	8
Dermatology	2	2	2	6
Psychiatry	2	2	-	4
Respiratory Medicine	2	-	-	2
Radio diagnosis	2	-	-	2
Dentistry &Anesthesiology	-	2	-	2
Casualty	-	2	-	2
Total	36	42	44	126

Table: Clinical postings for all clinical Subjects

SCHEME OF EXAMINATION

• INTERNAL ASSESSMENT

General guidelines

- Regular periodic examinations shall be conducted throughout the course.
- There shall be **minimum three internal assessment examinations** in each 3rd MBBS Part 1 subjects which includes ENT, Ophthalmology, Community Medicine and Forensic medicine and one internal assessment examination in each of the other clinical subject in a professional year.
- An end of posting clinical assessment shall be conducted for each clinical posting in each professional year
- The **third internal examination** should be conducted on the lines of the university examination (Preliminary examination).

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- When subjects are taught in more than one phase, the internal assessment must be done in each phase

and must contribute proportionately to final assessment. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently.

- An **average of the marks scored in all internal assessment examinations and the average of all marks scored in the end of posting clinical assessment** will be considered as the final internal assessment scores and eligibility for University examinations.
 - Learners **must secure not less than 40 % marks in theory and practical separately and not less than 50% marks of the total marks (combined in theory and practical)** assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject.
 - A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial measures by the institution. If he/she successfully completes these remedial measures, he/she is eligible to appear for University Examination. Remedial measures shall be completed before submitting the internal assessment marks online to the university.
 - **Internal assessment marks will reflect under separate head in the marks card of the university examination. The internal assessment marks (theory and practical) will not be added to the marks secured (theory/practical) in the university examination for consideration of pass criteria, pass percentage, award of first class/distinction/gold medal.**
 - **The results of IA should be displayed on the notice board within a 1-2 week of the test.**
 - Colleges should formulate policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
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- Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

	First Theory IA	Second Theory IA	Third Theory IA *
Theory paper Marks	80	80	Paper 1- 100 Marks Paper 2- 100Marks
Periodic test 1	5	5	NIL
Periodic test 2	5	5	NIL
Periodic test 3	5	5	NIL
Professionalism	5	5	NIL
Total Marks	100	100	200

THEORY INTERNAL ASSESSMENT

Note: * Subjects having single paper will have one paper for 100 marks only.

** Subjects taught in more than one year will have an theory IA in each year also

PRACTICALS INTERNAL ASSESSMENT

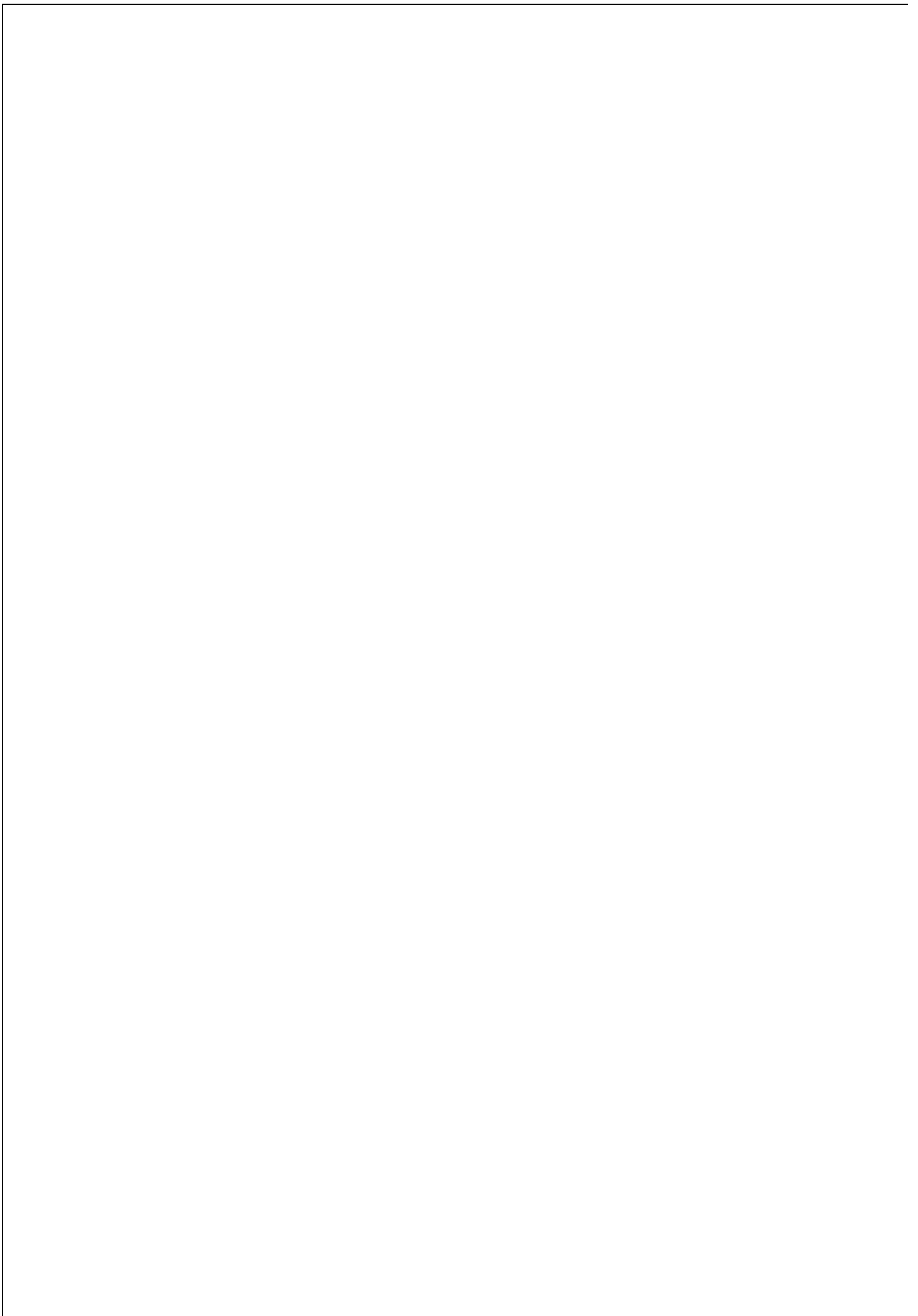
	First Practical IA	Second Practical IA	Third Practical IA
Marks	80	80	100 (University pattern, including viva voce)
Formative Assessment	20 (record+ log book)	20 (record+ log book)	NIL
Total	100	100	100

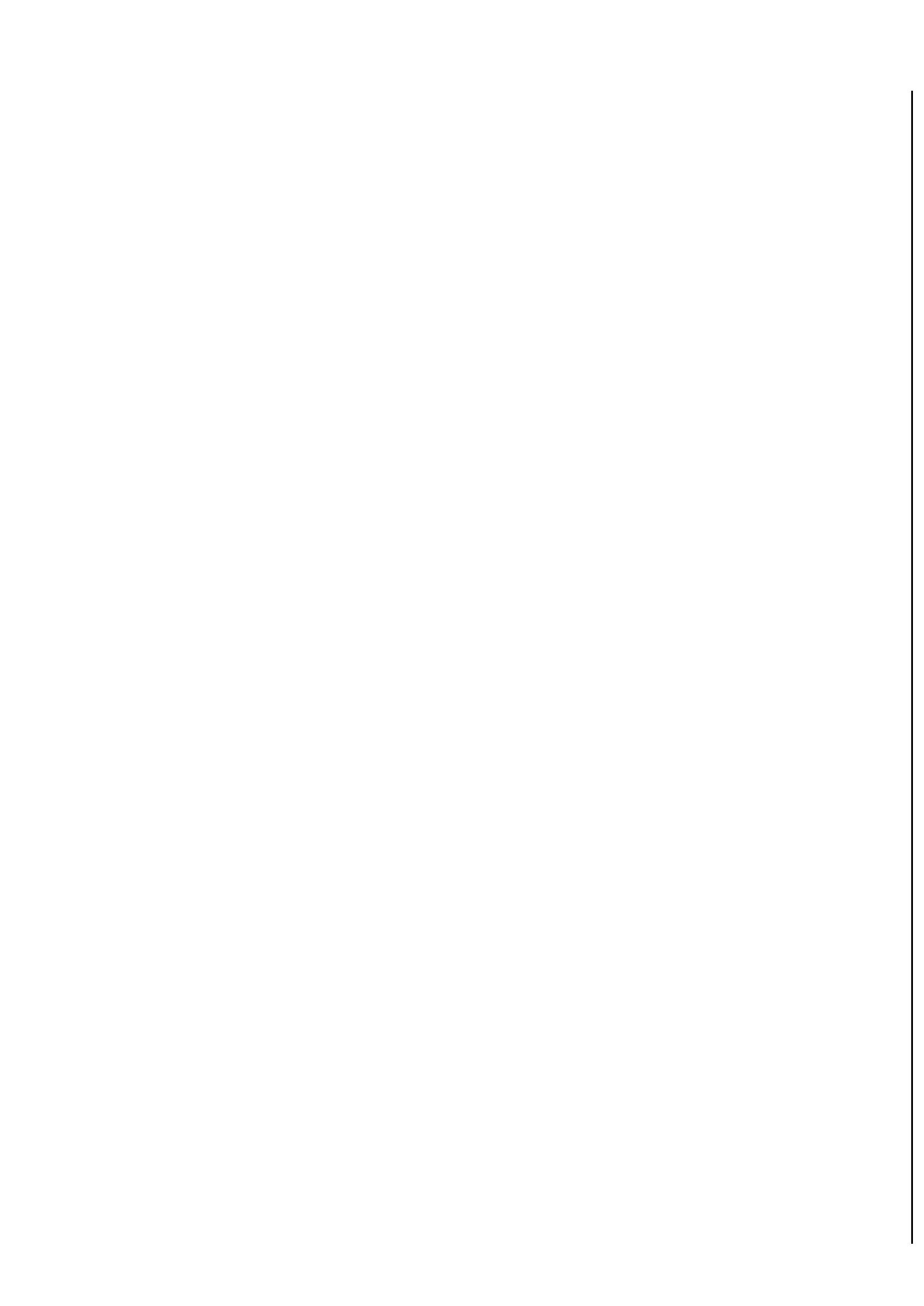
****Subjects with clinical postings in more than one year will have an end-of-posting after each clinical posting in addition**

3.Guidelines for Remedial measures for students who are unable to score qualifying marks and attendance:

Academic council of respective institutes / Colleges to provide the guidelines for remedial measures

TABLE SHOWING SCHEME FOR CALCULATION OF INTERNAL EXAMINATION MARKS





UNIVERSITY EXAMINATION

Examination schedule

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundati oncour se	IMBBS			
IMBBS								Phase exam	IIMBBS		
IIMBBS								Phase II exam	III MBBS PART 1		
III MBBS PART 1								Phase III part1 exam	Electives and skills		
III MBBS PART 2											
Phase III part 2 exam		Internship									
Internship											

General guidelines

- University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.
- Nature of questions will include different types such as structured essays (Long Answer Questions-LAQ), Short Essays, Short Answer Questions (SAQ) and Multiple choice questions (MCQs). Marks for each part should be indicated separately.
- **The blueprint for theory paper indicating the topics and marks allotted for each are also given. The blueprinting provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions**
- **The distribution of topics in paper 1 and paper 2, when a subject has 2 papers is also given below. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.**
- **The learner must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together) to pass in Community Medicine.**
- In subjects with one question paper the learner must secure a minimum of 50% marks to pass.
- Clinical examinations will be conducted at the bedside in the hospital wards. The objective will be to assess proficiency and skills to elicit a detailed history, perform clinical examination, interpret data and form logical conclusion, wherever applicable.

- **There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.**

THEORY	Community Medicine	Forensic Medicine	Ophthalmology	Otorhinolar yngology
Written Paper				
No. of Papers & Maximum Marks for each paper.	2×100=200	1×100=100	1×100=100	1×100=100
Total theory	200	100	100	100
PRACTICAL				
1. Practical exam	80	80	80	80
2. Viva-voce	20	20	20	20
Total practical	100	100	100	100
Internal assessment*				
Internal Assessment (Theory)	100	100	100	100
Internal assessment (Practical)	100	100	100	100

-
- **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS**
-

course.

- **A maximum number of four permissible attempts would be available to clear the first Professional University examination, where by the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.**
- **THIRD PROFESSIONALPART 1 EXAMINATION:**

This examination shall be held at the end of third professional training (11months), in the subjects of Otorhinolaryngology, Ophthalmology, Community Medicine and Forensic medicine.

Phase II

Table:Examination components, Subjects and Distribution of Marks

***Internal assessment marks will reflect under separate head in the marks card of the university examination.**

Type, number of questions and distribution of marks for written paper

TYPES OF QUESTION	NUMBER OF QUESTIONS	MARKS FOR EACH QUESTION
Long essay	2	10
Short essay	8	5
Shortanswers	10	3
MCQs	10	1
Total		100

5. SUBMISSION OF LOGBOOK

At the time of Clinical Examination each candidate shall submit to the Examiners his/her logbook record duly certified by the Head of the Department as a bonafide record of the work done by the candidate.

6. ELIGIBILITY TO APPEAR FOR EXAMINATION

The following criteria to be met by the students to be eligible for the university exams:

- Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.
- Shall have attended not less than 75% of the total classes conducted in theory and not less than 80% of the total classes conducted in practical separately to become eligible to appear for examination in that subject/subjects.
- Minimum of 40% marks to be obtained **separately** in theory and practical AND at least 50% marks of the total marks **combined** in theory and practical assigned for internal assessment is to be obtained in a particular subject to appear for university exam. (average of 3 internal assessments theory and practical separately)
- Learners must have completed the required certifiable competencies for that phase of training and completed the logbook appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

7. CRITERIA FOR PASS

For declaration of pass in any subject in the University examination, a candidate shall pass both in Theory and Practical examination components separately as stipulated below:

- The Theory component consists of marks obtained in University Written papers only. For a pass in theory, a candidate must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together).
- For a pass in practical examination, a candidate shall secure not less than 50% marks in aggregate, i.e., marks obtained in university practical examination and viva voce added together

- **Internal assessment marks will reflect as a separate head of passing at the university examination.**
- **The IA marks will not be added to the marks obtained in the University examination and will NOT be used to calculate pass percentage, award of class, distinction and GOLD medal.**
- A candidate not securing 50% marks in aggregate in Theory or Practical examination + viva in a subject shall be declared to have failed in that subject and is required to appear for both Theory and Practical again in the subsequent examination in that subject.

8. DECLARATION OF CLASS

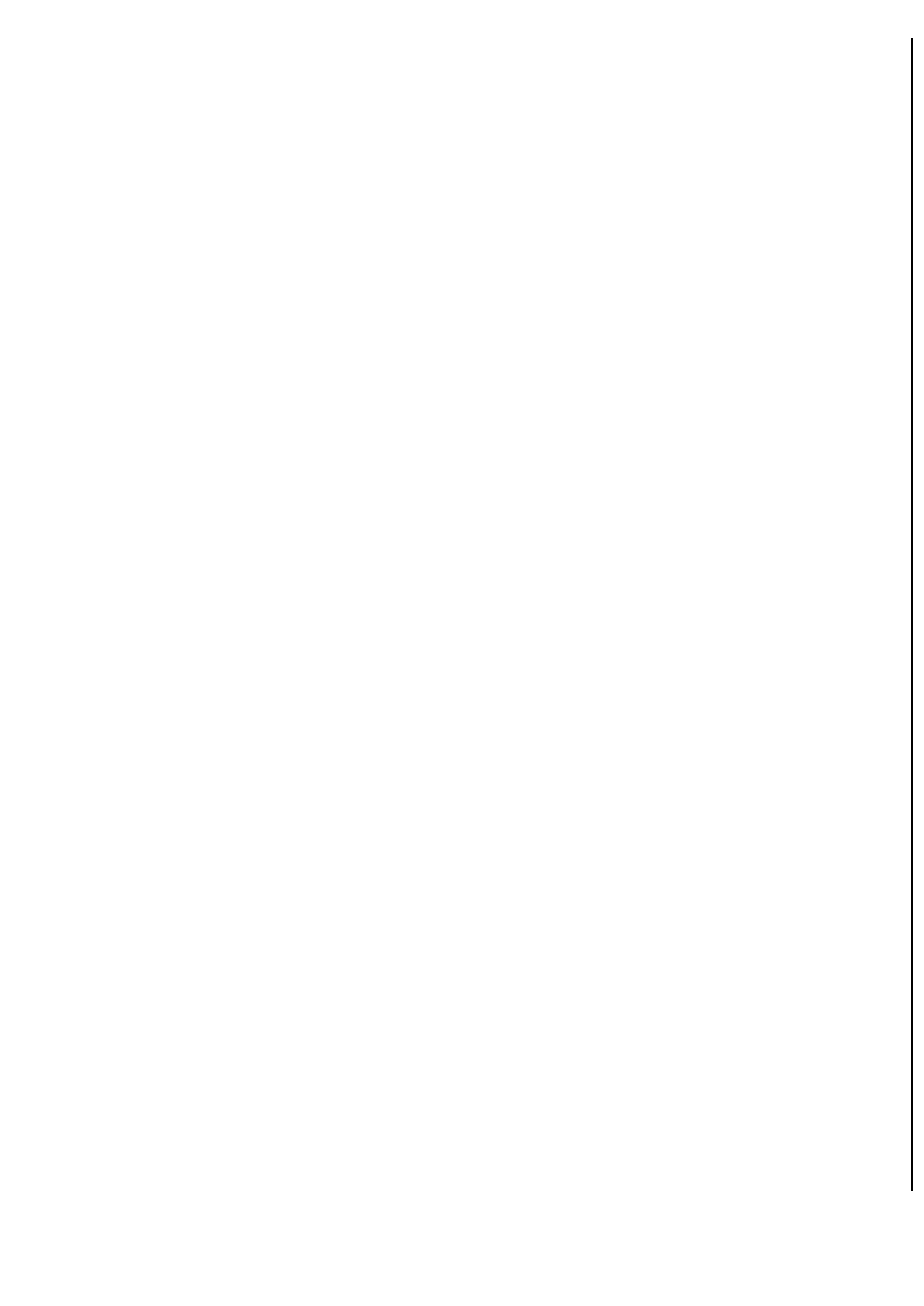
- a. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of **grand total marks (Only university examination)** prescribed will be declared to have passed the examination with distinction.
- b. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 65% of marks or more but less than 75% of **grand total marks (Only university examination)** prescribed will be declared to have passed the examination in First Class.
- c. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 50% of marks or more but less than 65% of **grand total marks (Only university examination)** prescribed will be declared to have passed the examination in Pass Class.
- d. A candidate passing a university examination in more than one attempt shall be placed in Pass class irrespective of the percent age of marks secured by him/her in the examination.

Note: Please note fraction of marks will not be rounded off for clauses(a),(b)and(c)

Appointment of Examiners

- (a) Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/ approved/ permitted medical college.
- (b) For the Practical/ Clinical examinations, there shall be atleast four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chair man and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.
- (c) External examiners may not be from the same University.
- (d) The internal examiner in a subject shall not accept external examinership for a college from which external examiner is appointed in his/her subject.
- (e) A University having more than one college shall have separate sets of examiners for each college, with internal examiners from the concerned college.
- (f) External examiners shall rotate at an interval of 2 years.
- (g) There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

- (h) All eligible examiners with requisite qualifications and experience can be appointed internalexaminersbyrotation intheirssubjects.
- (i) All theory paper assessment should be done as central assessment program (CAP) of concerned university.



- (j) Internal examiners should be appointed from same institution for unitary examination in same institution. For pooled examinations at one centre approved internal examiners from same university may be appointed.
- (k) The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption

Guidelines for electives for MBBS batch admitted in 2019

The 2019 admitted batch is expected to start their III MBBS Part II in February- March 2023. As per the Regulations on Graduate Medical Education (Amendment), 2019 the batch is expected to start elective posting at the start of III professional Part II, one month in Basic sciences (preclinical, paraclinical and research) and one month in clinical subjects. However, in view of the revised examination schedule, RGUHS is providing following guidelines for the electives, applicable for the batch admitted in 2019.

1. The duration of electives is reduced to one month, instead of original 2 months.
2. There shall be two blocks, block 1 and block 2 of fifteen days each.
3. Electives should be started immediately after completion of III MBBS part I practical examination.
4. Following are the details of the Block 1 and Block 2

	Block 1	Block 2
When to start	Immediately after completion of III MBBS Part I Practical Examination / After Completion of other Block of elective	
Possible Areas	Pre-clinical departments Para- clinical departments Basic Science laboratory Research	Clinical Specialities including Urban and Rural Health Centres
Nature of learning	Supervised Experiential Immersive Self-directed	Supervised Experiential Immersive Self-directed
Regular clinical postings	Will continue	Will not be offered
Attendance	Minimum 75 % to be eligible for III MBBS Part II examination	Minimum 75 % to be eligible for III MBBS Part II examination
Assessment	Formative Record of activities in log book	Formative Record of activities in log book
Whether permitted for Out of Institution within city	Allowed (Provided clinical postings can be continued)	Allowed within City
Whether permitted for Out of City	No	With prior permission of RGUHS / NMC, if out of State

<p>Examples of possible “Learning experiences” (not exhaustive)</p>	<ol style="list-style-type: none"> 1. Neuro-Anatomy 2. Biochemistry lab 3. Pathology Lab 4. Any one out of Bacteriology, virology, parasitology, serology etc labs 5. Genetics 6. Molecular Biology 7. Immunology 8. Pharmaco-vigilance and clinical pharmacology 9. Infection Control 10. Assisted living and Hospice care 11. Rehabilitation 	<ol style="list-style-type: none"> 1. Any clinical Broad Speciality 2. Any clinical super-speciality 3. Adult Intensive Care 4. Pediatric Intensive care 5. Emergency Care 6. Health care quality and safety 7. Adolescent Reproductive Health issues 8. Rehabilitation and palliative care 9. Medical retina 10. Sports medicine 11. Clinical Ethics 12. Urban or Rural community Health Centres
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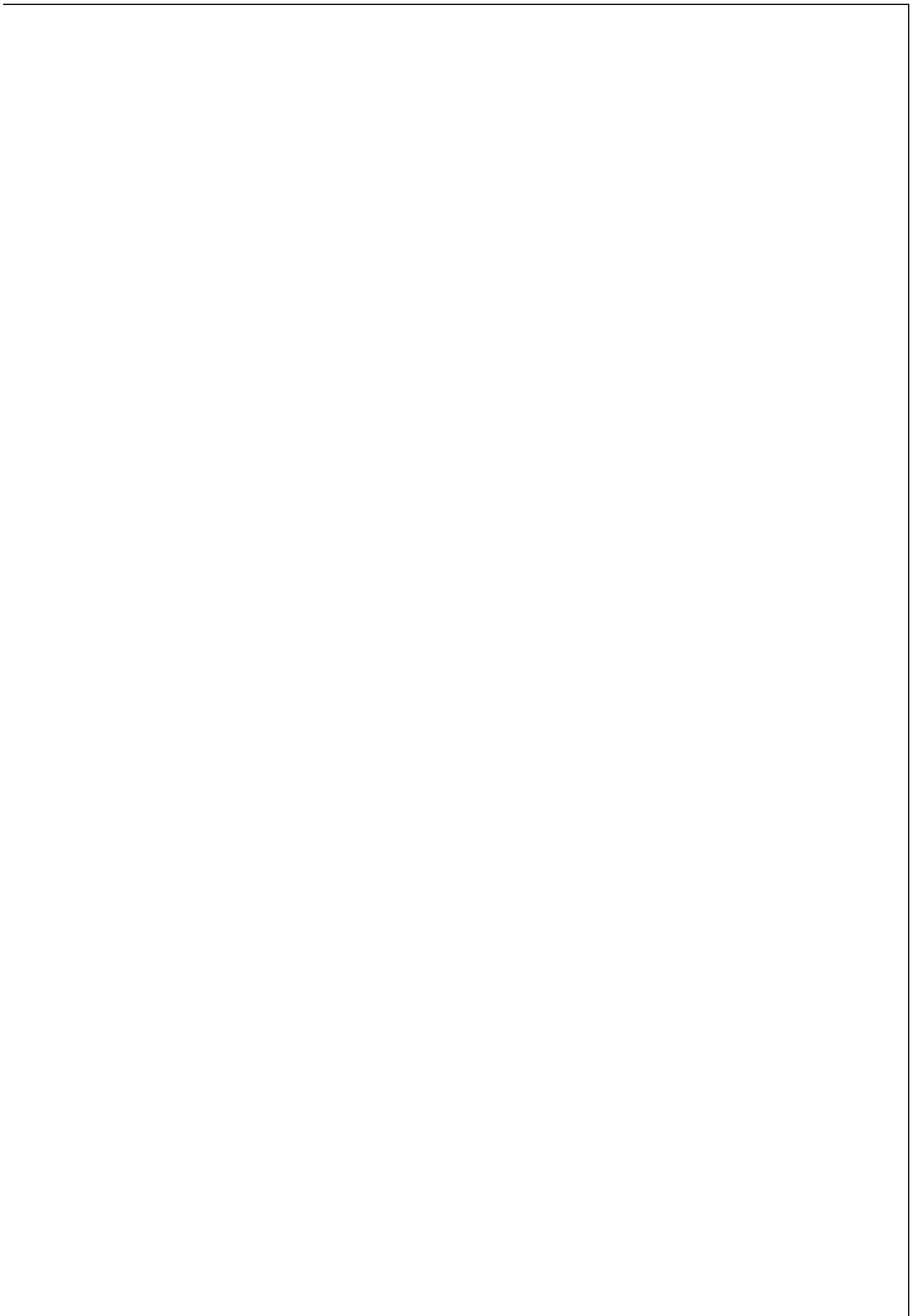
	12. Community / epidemiological surveys 13. Bio-statistics 14. Ethics 15. Bio-informatics 16. Computers and AI in health care 17. Learning Management System	
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5. Institutions shall pre-determine the number and nature of electives, names of the supervisors, and the number of learners in each elective based on the local conditions, available resources and faculty.
6. For each such elective should have the following details:
 - a) Defined learning objectives,
 - b) An identified preceptor responsible for guiding the student
 - c) A pre-published timetable of activities identified for the learner during the elective
 - d) List of learning resources for the learner to be used during the elective,
 - e) Provision to be part of the team to obtain an immersive learning experience
 - f) Prerequisites, if any, to be completed before joining the elective,
 - g) Defined formative assessments with appropriate requirements for portfolio and log book entry, h) Program evaluation by the stakeholders.
7. The list of available learning experiences for each block and the names of preceptors for each should be available to students on the institutional notice board at least three months before the commencement of the electives. A process for submitting applications for both blocks with choices should be made available to the students. Written information on each learning experience (details as per point 6) must be available for students to examine and make an informed choice.
8. A counseling session with faculty mentors to help students choose electives is desirable. The faculty mentors must ascertain a student's expectation from the electives he/she has chosen. Students must also be made aware of the rules regarding attendance, work schedule, documentation and assessment requirements for each elective. The allocation of electives may be done based on student choice and availability of rotation by faculty who have been identified to be in-charge of the electives program, for each block. The allocation must be done sufficiently in advance and the students informed so that the prerequisites for the electives, if any (such as knowledge training in good laboratory practices, good research practices, CPR training etc.) can be completed by the student. A process to identify the veracity of student-initiated electives must be in place.
9. Institutions must prepare details of learning experiences as shown in following examples.

Block	Block 1
Name of Elective	Training in Medical retina
Location odepartment or hospital Lab or research facility	Department of Ophthalmology, Medical College Hospital
Name of internal preceptor(s)	
Name of external preceptor	N / A
Learning objectives of elective	<ol style="list-style-type: none"> 1. Perform direct ophthalmoscopy confidently 2. Diagnose papilloedema accurately in patients with raised ICP 3. Detect diabetic retinopathy, stage the disease and refer to higher center for further treatment

		<ol style="list-style-type: none">4. Describe indications for laser treatment in diabetic retinopathy5. Detect hypertensive retinopathy using direct ophthalmoscopy	
	Number of students that can be accommodated in this elective	Four	

Prerequisites for elective	Good clinical practice
List of activities of student participation	<ol style="list-style-type: none"> 1. Work with supervisor in the retina division of ophthalmology 2. Attend evening rounds with postgraduate resident examine inpatients with diabetes and hypertension. 3. Participate in clinical meetings of retina division. 4. Enter details of cases seen in opd and inpatients into logbook
Learning Resources	
Portfolio entries required	Enter details of cases examined
Log book entry required	Satisfactory completion of posting with a “meets expectation ‘(M)’ grade”
Assessment	OSCE Write a reflection of their time in retina division



FORENSIC MEDICINE & TOXICOLOGY GOAL:

The aim of teaching the undergraduate student in Forensic Medicine is to impart such knowledge and skills that may enable him to manage common medico-legal problems in day to day practice. He/she shall acquire competence for post mortem diagnosis based on history, physical examination and relevant observations during autopsy.

COMPETENCIES:

Period of Training – Phase II MBBS & Phase III part I MBBS The learner

must demonstrate:

- Understanding of medico-legal responsibilities of physicians in primary and secondary care settings,
- Understanding of the rational approach to the investigation of crime, based on scientific and legal principles,
- Ability to manage medical and legal issues in cases of poisoning/ overdose,
- Understanding the medico-legal framework of medical practice and medical negligence,
- Understanding of codes of conduct and medical ethics.

Period of Training – Internship

A. An intern must perform or assist in:

- Identifying and documenting medico-legal problems in a hospital and general practice,
- Identifying the medico-legal responsibilities of a medical practitioner in various hospital situations,
- Diagnosing and managing with competence basic poisoning conditions in the community,
- Diagnosing and managing with competence and documentation in cases of Rape /Sexual assault,
- Preparing medico-legal reports in various medico legal situations.

B. An intern must have observed or preferably assisted at the following operations/ procedures:

- Various medico legal / post-mortem procedures and formalities during their performance by police.

Certifiable Procedural skills desirable of Indian Medical Graduate in Forensic Medicine & Toxicology

- Documentation and certification of trauma(I)
- Diagnosis and certification of death(D)

Competencies in Phase II MBBS and Phase III part 1 MBBS			
No.	Topic	Competencies	Procedures requiring certification
1	General information	11	Nil

2	Forensic Pathology	35	Nil
3	Clinical Forensic Medicine	33	Nil
4	Medical jurisprudence (Medical Law & Ethics)	30	Nil
5	Forensic Psychiatry	06	Nil
6	Forensic laboratory investigation in Medico legal practice	03	Nil
7	Emerging technologies in Forensic Medicine	01	Nil
8	General Toxicology	10	Nil
9	Chemical Toxicology	06	Nil
10	Pharmaceutical Toxicology	01	Nil
11	Biotoxicology	01	Nil
12	Sociomedical Toxicology	01	Nil
13	Environmental Toxicology	02	Nil
14	Skills in Forensic Medicine & Toxicology	22	Nil
	TOTAL	162	Nil

- Legal documentation related to emergency cases (D)

- Certification of medico-legal cases e.g. Age estimation, Sexual Violence etc. (D)
- Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc (D)

I-Independently performed on patients,

O-Observed in patients or on simulations,

D- Demonstration on patients or simulations and performance under supervision in patients

Competencies in Internship

<u>Sl no</u>	<u>Topic</u>	<u>Competencies</u>	<u>Procedures requiring certification</u>
<u>1</u>	Documentation and certification of Trauma(I)	<u>1</u>	<u>1</u>
<u>2</u>	Diagnosis and certification of death(D)	<u>1</u>	<u>1</u>
<u>3</u>	Legal documentation related to Emergency cases(D)	<u>1</u>	<u>1</u>
<u>4</u>	Certification of medico-legal cases e.g. Ageestimation, Sexual Violenceetc. (D)	<u>3</u>	<u>3</u>
<u>5</u>	Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc(D)	<u>3</u>	<u>3</u>
<u>6</u>	Prerequisites, Procedure, Documentation and Opinion writing in Medicolegal Autopsy(D)	<u>1</u>	<u>1</u>
	Total	10	10

Forensic Medicine & Toxicology	Lectures (hours)	Small group learning (Tutorials /Seminars) /Integrated learning(hours)	Self-Directed Learning (hours)	Total(h ours)
Phase II	15	30	05	50
Phase IIIpart1	25	45	05	75
Total	40	75	10	125

AETCOM	Lectures (hours)	Small group learning (Tutorials /Seminars) /Integrated learning (hours)	Self-Directed Learning (hours)	Total(h ours)
Phase II	02	04	02	08
Phase IIIpart1	01	02	02	05
Total	03	06	04	13

Subject	Period of posting
Forensic Medicine & Toxicology	7days

Minimum Teaching Hours in MBBS Phase II& Phase III part1

Minimum Teaching Hours in Internship

List of Competencies and SLOs to be covered in PhaseII MBBS

General Information

- **Lecture– 1hr (Orientation class)**

- **Assessment:**No assessment

FM1.1 - Demonstrate knowledge of basics of Forensic Medicine like definitions of Forensic medicine, Clinical Forensic Medicine, Forensic Pathology, State Medicine, Legal Medicine and Medical Jurisprudence : Define Forensic Medicine and Medical Jurisprudence.

: Describe different branches of Forensic medicine like Clinical Forensic Medicine, Forensic Pathology, Forensic Odontology and Forensic Psychiatry.

: Discuss Forensic Medicine practice in different parts of the world.

FM1.2 –Describe history of Forensic Medicine : Describe the etymology of Forensic Medicine.

: Describe how knowledge of medicine was applied to aid in the administration of justice from ancient time and its evolution to the recent times.

: Enumerate the important people and events related to Forensic Medicine.

Forensic Pathology

- **Lecture– 1hr(Interactive)**

Assessment: Written, Viva voce

FM2.1 - Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death

: Define death.

: Describe the types of death (somatic, molecular, brain-death, cortical death and brain stem death).

: Describe the procedure of declaring death with specific reference to brain stem death.

FM2.2-Describe and discuss natural and un natural deaths

2.2.1: Describe the manner of death and cause of death

FM2.3 –Describe and discuss issues related to sudden natural deaths : Define sudden natural death.

: Enumerate the causes for sudden natural death.

: Describe the medicolegal importance of sudden natural death.

2.3.4: Discuss the autopsy

procedure in case of sudden natural death.

- **SDL–1hr(Followed by reflective writing) Assessment:** Written, Viva voce

FM2.4 - Describe salient features of the Organ Transplantation and The Human Organ Transplant (Amendment) Act 2011 and discuss ethical issues regarding organ donation

2.4.1: Discuss the ethical and legal issues related to organ donation and transplantation.

2.4.2: Describe the salient features of The Human Organ Transplant Act, 1994 with amendment still date.

- **Lecture– 1hr (Interactive) Assessment:** Written, Viva voce

FM2.5 -Discuss moment of death, modes of death-coma, asphyxia and syncope 2.5.1: Describe the modes of death (coma, syncope, asphyxia).

FM2.6 –Discuss presumption of death and survivorship

2.6.1: Discuss the importance of presumption of death (Sec.107 & 108 IEA).

FM2.7 –Describe and discuss suspended animation : Define

suspended animation.

: Enumerate the causes for suspended animation.

: Discuss the medicolegal importance of suspended animation.

• **SGD–2 hrs Assessment:** Written, Viva voce

FM2.10 –Discuss estimation of time since death

2.10.1: Enumerate the various factors which help in determination of time since death

2.10.2: Discuss on Forensic entomology.

FM2.8 - Describe and discuss postmortem changes including signs of death, cooling of body, post-mortem lividity, rigor mortis, cadaveric spasm, cold stiffening and heat stiffening

2.8.1 Classify post-mortem changes (immediate, early, late).

2.8.2 Describe postmortem cooling and its medicolegal importance.

2.8.3: Define postmortem lividity.

2.8.4: Describe postmortem lividity and its medicolegal importance.

2.8.5: Define rigormortis.

2.8.6: Describe rigor mortis and its medico legal importance 2.8.7: Enumerate the conditions simulating rigor mortis.

2.8.8 : Define cadaveric spasm.

2.8.9 : Differentiate between cadaveric spasm and rigor mortis.

2.8.10 : Discuss on cold stiffening, heat stiffening, chemical stiffening and gas stiffening.

• **SGD– 1hr Assessment:** Written, Viva voce

FM2.9-Describe putrefaction, mummification, adipocere and maceration 2.9.1: Describe the various changes seen in the body due to putrefaction.

2.9.2: Define adipocere.

2.9.3: Describe adipocere and its medico legal importance.

2.9.4: Define mummification.

2.9.5: Describe mummification and its medicolegal importance.

• **Lecture– 1hr**

Assessment: Written, Viva voce

FM2.11 - Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination

2.11.1 Describe the types of autopsy.

2.11.2 Enumerate the objectives of medicolegal autopsy.

2.11.3: Enumerate the objectives of foetal autopsy.

2.11.4: Enumerate the objectives of skeletal remains examination.

FM2.14 - Describe and discuss examination of clothing, preservation of viscera on post-mortem examination for chemical analysis and other medico-legal purposes, post-mortem artefacts

2.14.1 Describe the method of preservation and dispatch of viscera and body fluids for chemical analysis.

2.14.2 Describe the method of preservation and dispatch of viscera and body fluids for histopathology and microbiological investigations.

2.14.3 : Describe the method of preservation and dispatch of clothes in a medicolegal case.

2.14.4 : Discuss on post-mortem artefacts and the medicolegal importance

***FM8.5 - Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis**

8.5.1: Explain the procedure of medico-legal autopsy in a suspected case of poisoning.

8.5.2: Describe the method of preserving the various viscera in a case of poisoning.

8.5.3: Describe the procedure for dispatch of viscera for chemical analysis in a case of poisoning.

***FM8.9 - Describe the procedure of intimation of suspicious cases or actual cases of foulplay to the police, maintenance of records, preservation and dispatch of relevant samples for laboratory analysis.**

8.9.1 Describe the procedure of intimation of suspicious cases or actual cases of foul play to the police

- S.39 CrPC, S. 40CrPC,S. 175 CrPC.
- S. 166(B) IPC,S.176 IPC,S.177IPC,S.201IPC,S.202 IPC.

8.9.2 Describe the procedure of record maintenance in a case of poisoning.

8.9.3 : Describe the procedure of collection and dispatch of viscera for chemical analysis in a case of poisoning.

• **Lecture– 1hr**

Assessment: Written, Vivavoce

FM2.12 - Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination 2.12.1: Describe the rules for conducting medicolegal autopsy.

2.12.2: Enumerate the skin incisions in medicolegal autopsy.

: Enumerate the methods of evisceration in medicolegal autopsy.

: Describe the external and internal examination in medicolegal autopsy.

2.12.5: Explain the special techniques used in medicolegal autopsy (demonstration of pneumothorax, air embolism, etc).

FM2.13 –Describe and discuss obscure autopsy

2.13.1: Discuss on obscure autopsy with examples.

2.13.2: Discuss on negative autopsy with examples.

FM2.17 –Describe and discuss exhumation

2.17.1 : Define exhumation.

2.17.2 : Enumerate the objectives of exhumation.

2.17.3 : Describe the rules and procedure of exhumation.

- **SGD–4hrs (Practical) Assessment:** Written, Viva voce, OSPE, Practical book, Logbook

FM2.16 –Describe and discuss examination of mutilated bodies or fragments, charred bones and bundle of bones

2.16.1 Describe the procedure of examination of mutilated bodies/fragments.

2.16.2 Describe the procedure of examination of skeletal remains (including charred bones).

***FM14.9 - Demonstrate examination of & present an opinion after examination of skeletal remains in a simulated/ supervised environment**

14.9.1 Enumerate the objectives of skeletal remains examination.

14.9.2 Demonstrate the procedure of examination of skeletal remains in a simulated/supervised environment.

14.9.3 Draft a medicolegal report and opinion after examination of skeletal remains.

- **SGD– 1hrAssessment:** Written, Vivavoce

FM2.18 -CrimeSceneInvestigation: -

Describe and discuss the objectives of crime scene visit, the duties & responsibilities of doctors on crime scene and the reconstruction of sequence of events after crime scene investigation

2.18.1 Enumerate the objectives of crime scene visit by an autopsy surgeon.

2.18.2 Describe the procedure of examination of crime scene and preservation of Evidentiary material.

2.18.3 Explain the construction of a case after the crime scene visit.

- **SGD– 1hr** **Assessment:** Vivavoce

FM2.31 - Demonstrate ability to work in a team for conduction of medicolegal autopsies in cases of death following alleged medical negligence, dowry death, death in custody or following violation of human rights as per National Human Rights Commission Guidelines on exhumation

2.31.1 Demonstrate the benefit of team work in a medicolegal autopsy of alleged medical negligence.

2.31.2 Demonstrate the benefit of team work in a medicolegal autopsy of alleged dowry death.

2.31.3 : Demonstrate the benefit of team work in a medicolegal autopsy of alleged custodial death.

2.31.4 : Demonstrate the benefit of team work in a medicolegal autopsy of death due to violation of human rights.

2.31.5 : Demonstrate the benefit of team work in exhumation.

- **SDL– 1 hr Assessment:** Written, Vivavoce

FM2.19 - Investigation of anaesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences

2.19.1: Explain the significance of autopsy in operative deaths.

2.19.2: Describe the procedure of autopsy in operative deaths.

2.19.3: Describe the procedure of preservation and dispatch of evidentiary material for investigation in deaths associated with anaesthesia and surgery

- **SDL– 1 hr**

Assessment: Written,

FM2.15 - Describe special protocols for conduction of medico-legal autopsies in cases of death in custody or following violation of human rights as per National Human Rights Commission Guidelines

2.15.1: Describe the National Human Rights Commission guidelines for conduction of medicolegal autopsy in cases of death in custody or violation of human rights.

- **SGD– 1hr** **Assessment:** OSPE, Written, Vivavoce

FM2.32 - Demonstrate ability to exchange information by verbal or non verbal communication to the peers, family members, law enforcing agency and judiciary

2.32.1 Demonstrate the skills of communication by a doctor with the peers.

2.32.2 Demonstrate the skills of communication by a doctor with the patient's family members in MLC works at casualty.

2.32.3 Demonstrate the skills of communication by a doctor with the deceased family members during medicolegal autopsy.

2.32.4 : Demonstrate the skills of communication by a doctor with the law enforcing agency/judiciary in medicolegal practices.

FM2.33 & FM2.34 - Demonstrate ability to use local resources whenever required like in mass disasters situations

: 2.33.1 Define Mass disaster

: 2.33.2 Enumerate the types of Mass disaster.

: 2.33.3 List the objectives of forensic investigation in mass disasters. 2.33.4: Describe the procedure of examination at disaster site and autopsy.

2.33.5: Describe the evidentiary materials to be preserved in mass disasters.

2.33.6: Demonstrate the importance of team work in Mass Disasters. **FM2.35-Demonstrate**

professionalism while conducting autopsy in medicolegal situations, interpretation of findings and making inference/opinion, collection, preservation and dispatch of biological or trace evidences

- 2.35.1 Demonstrate the professionalism of a doctor during conduction of medicolegal autopsies (such as interaction with investigating officer/ relatives of deceased, receiving in quest form, maintaining confidentiality, etc).
- 2.35.2 Demonstrate the professionalism in preservation and dispatching evidentiary materials to FSL (such as proper method of preservation and dispatch of materials with necessary forms and maintaining confidentiality).
- 2.35.3 : Demonstrate the professionalism in preservation and dispatching evidentiary materials to histopathology and microbiology investigations (such as proper method of preservation and dispatch of materials with necessary forms and maintaining confidentiality).
- 2.35.4 : Demonstrate the professionalism while giving opinion in medicolegal cases (such as honesty with unbiased inferences).

Clinical Forensic Medicine

• **SGD–2 hrs**

Assessment: Written,

FM3.1 -IDENTIFICATION

Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, Stature, age determination using morphology, teeth-eruption, decay, bite marks, bone ossification centres, medicolegal aspects of age

3.1.1 Define Corpus delicti

: 3.1.2 Describe the importance of corpus delicti in establishing the crime.

3.1.3: List the various means of identification in living and dead persons.

3.1.4 Explain the role of hand writing analysis, gait, speech, photography and facial description as a tool of identification.

3.1.5 Describe the methods of determination of race.

3.1.6 Describe the methods of sex determination in a living person.

3.1.7 Describe the methods of sex determination in a dead person.

3.1.8 Define inter sex.

3.1.9: Describe the types of intersex and its medicolegal importance.

3.1.10: Describe the methods of age determination in a living person.

3.1.11: Describe the methods of age determination in a dead person.

3.1.12: Explain the method of age estimation using Gustafson's technique.

3.1.13: Discuss the forensic aspects related to teeth.

3.1.14: Describe the methods of determination of stature.

• **SGD– 1hr Assessment:** Written, Viva voce

FM3.2 -IDENTIFICATION

Describe and discuss identification of criminals, unknown persons, dead bodies from their mains-hairs, fibres, teeth, anthropometry, dactylography, foot prints, scars, tattoos, poroscopy & superimposition

3.2.1: Explain the role of hair in the identification of an individual.

3.2.2: Describe the medicolegal importance of hair.

3.2.3: Describe the dyes used, methods of erasure and medicolegal importance of a tattoo.

3.2.4: Describe the medicolegal importance of the scar.

: Define anthropometry.

: Describe various data included in anthropometry and its importance in identification.

3.2.7: Define dactylography.

3.2.8: Describe the types, method of collection and medicolegal importance of dactylography.

3.2.9: Discuss the role of poroscopy, cheiloscopy and rugoscopy in identification.

: Describe the role of foot prints in establishing the identity.

: Describe the role official reconstruction in establishing the identity.

3.2.12: Discuss the role of super imposition in establishing the identity.

SGD–2hrs(Practical)Assessment: OSPE, Practical book, Log book

***FM14.6 - Demonstrate and interpret medico-legal aspects from examination of hair(human& animal) fibre, semen & otherbiological fluids**

:14.6.1 Identify hair (human/ animal), other fibres by physical and microscopic examinationanddescribeits medicolegal importance.

: 14.6.2 Identify the **semen** by physical and microscopic examination and describe itsmedicolegalimportance.

***FM14.7 - Demonstrate & identify that a particular stain is blood and identify thespeciesofits origin**

: 14.7.1 Identifythebloodbyphysical and microscopicexamination.

: 14.7.2 Explain the various medicolegal conclusions by examining the blood stains.

14.7.3:Explain the methodofidentifyingthespeciesoforiginofthe bloodstain.

***FM14.8 - Demonstrate the correct technique to perform and identify ABO & RH bloodgroupofa person**

14.8.1: Perform the technique of identifying the ABO blood group of a

person.14.8.2:PerformthetechniqueofidentifyingtheRhbloodgroupofap erson.

Toxicology:GeneralToxicology

SDL– 1 hrAssessment: Written, VivaVoce

FM8.1-Describethehistoryof Toxicology 8.1.1:DescribethehistoryofToxicology.

Lecture– 1hrAssessment: Written, VivaVoce

FM8.2 - Define the terms Toxicology, Forensic Toxicology, Clinical Toxicology andpoison

8.2.1:DefineToxicology, Forensic Toxicology, ClinicalToxicologyandPoison

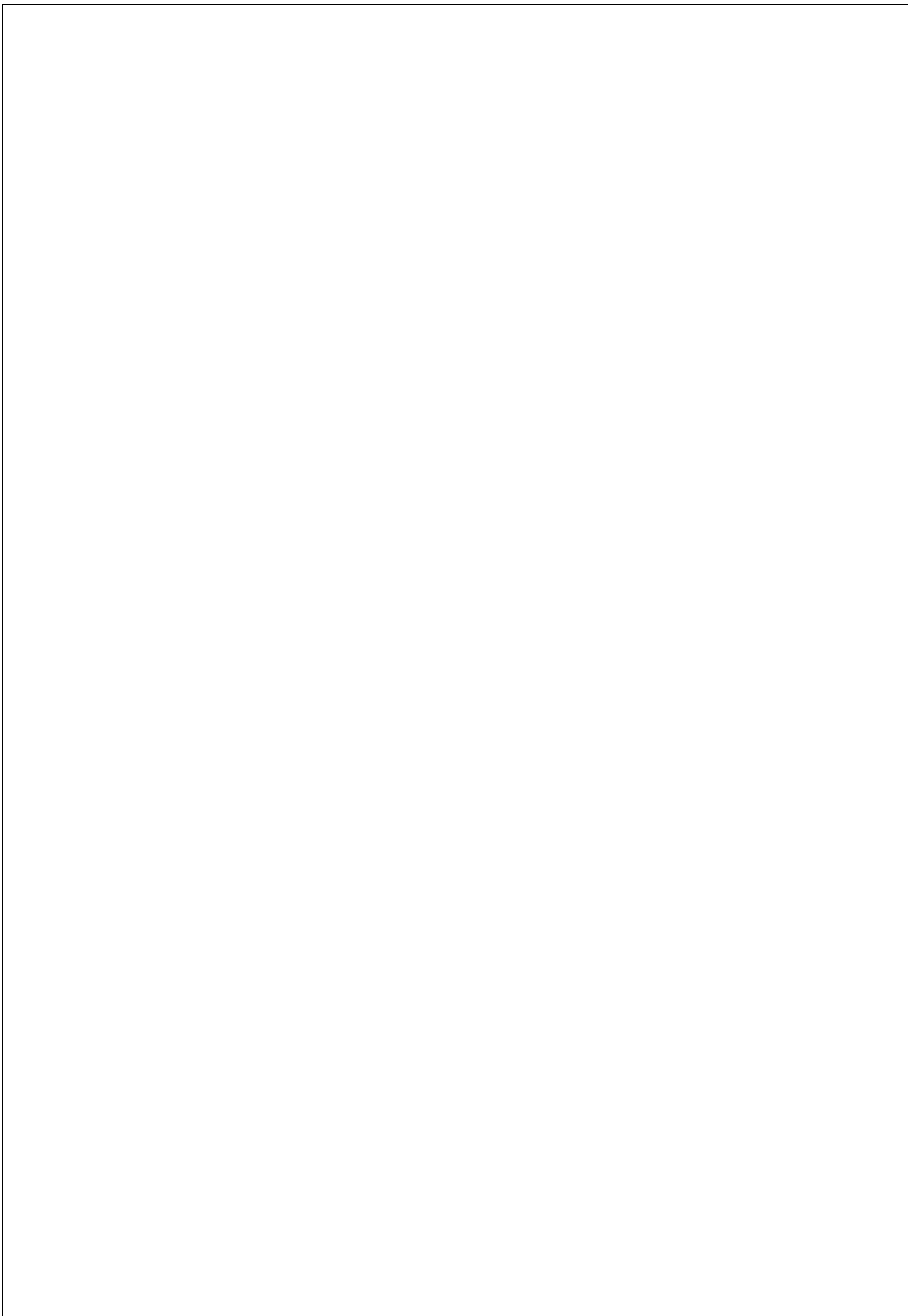
FM8.3 –Describethevarioustypesof poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead

8.3.1: Classify poisons in respect to mode of action and mode of usage.

8.3.2: Describe pharmacokinetics & pharmacodynamics of the poisons.

8.3.3: Explain the diagnosis of poisoning in the living individual.

8.3.4: Explain the diagnosis of poisoning in the dead individual



FM8.4 - Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons

8.4.1 Describe the legal sections related to poisoning in India.

S.85 IPC, S.86 IPC, S.274 IPC, S.284 IPC, S.299 IPC, S.300 IPC, S.304(A) IPC, S.375 IPC
S.324 IPC, S.325 IPC, S.326 IPC, S.326A IPC, S.326B IPC, S.328 IPC
S.357C CrPC

S.185 IMV Act, S.203 IMV Act, S.204 IMV Act

8.4.2 Describe Narcotic Drugs and Psychotropic Substances Act, 1985.

8.4.3: Describe Karnataka Poisons (Possession and Sale) Rules, 2015.

8.4.4: Describe the legal responsibilities of a doctor in a case of poisoning

FM8.6 - Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India

8.6.1: Describe the general symptoms and signs of the common poisons encountered in India.

8.6.2: Describe the general principles of diagnosis of the common poisons encountered in India.

8.6.3: Enumerate the line of management of the common poisons encountered in India.

• **Lecture – 1hr**

Assessment: Written, Viva Voce

FM8.8 - Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination

8.8.1: List the general treatment procedure in case of poisoning.

8.8.2: Explain the procedure of Gastric lavage.

8.8.3: Enumerate the indications and contraindications for Gastric lavage.

8.8.4: Define antidote.

8.8.5: Describe the various types of antidotes. 8.8.6: Explain Chelation therapy.

8.8.7: Describe the methods for hastening elimination of absorbed poison.

• **Lecture – 1hr** **Assessment:** Written, Viva Voce

FM8.10 - Describe the general principles of Analytical Toxicology and give a brief description of analytical methods available for toxicological analysis: Chromatography – Thin Layer Chromatography, Gas Chromatography, Liquid Chromatography and Atomic Absorption Spectroscopy

8.10.1: List the various analytical methods used in Toxicology. 8.10.2: Describe the general principle of Thin Layer Chromatography. 8.10.3: Describe the basic principle and uses of Gas Chromatography.

: Describe the basic principle and uses of Liquid Chromatography.

: Describe the basic principle and uses of Atomic Absorption Spectroscopy

8.10.6: Describe the basic principle and uses of Mass Spectrometry.

8.10.7: Describe the basic principle and uses of Radioimmuno Assay

SGD – 2hrs (Practical/Skills lab)

Assessment: OSPE, Written, Viva Voce

***FM14.2-**

Demonstrate the correct technique of clinical examination in a suspected case of poisoning & prepare medico-legal report in a simulated/ supervised environment

14.2.1: Take an informed consent from the Patient / Guardian after explaining the importance of MLC registration in Poisoning cases.

: Perform the clinical examination (history taking, general physical examination, systemic examination, laboratory investigations, differential diagnosis) in poisoning cases in a simulated/ supervised environment.

: Prepare the medico-legal certificate after documenting the clinical findings.

14.2.4: Prepare the police intimation.

***FM14.3 - Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination**

14.3.1: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **ingested poisoning**.

14.3.2: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **inhalation poisoning** along with clinical examination.

14.3.3: Demonstrate the process of collecting, preserving and dispatch of the materials/exhibits in a suspected case of **injected poisoning** along with clinical examination.

FM8.7 - Describe simple Bedside clinic tests to detect poison/drug in a patient's body fluids

: Describe the bedside clinic tests for Hydrochloric acid poisoning (Ammonia test, Litmus paper test, Silver nitrate test).

: Describe the bedside clinic tests for Nitric acid poisoning (Ferrous Sulphate test). 8.7.3: Describe the bedside clinic tests for Sulphuric acid poisoning (Litmus paper test).

8.7.4: Describe the bedside clinic tests for Oxalic acid poisoning (Barium nitrate test).

8.7.5: Describe the bedside clinic tests for Caustic alkalis poisoning (Litmus paper test).

8.7.6: Describe the bedside clinic tests for Phenol (Folin Ciocalteu reagent test).

8.7.7: Describe the bedside clinic tests for Salicylates (Trinder's reagent test).

Toxicology: Chemical Toxicology

• **SGD-2 hrs Assessment:** Written, Viva voce

FM9.1 - Describe General Principles and basic methodologies in treatment of poisoning

:decontamination, supportive therapy, antidote therapy, procedures of

enhanced elimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic-Carbolic Acid (phenol), Oxalic and acetylsalicylic acids : Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Sulphuric acid poisoning.

: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Nitric acid poisoning.

9. 1.3: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Hydrochloric acid poisoning.

: Discuss on Vitriolage.

Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Carbolic acid poisoning.

: Discuss on Carboluria.

: Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Oxalic acid poisoning.

: Discuss on Oxaluria.

: Describe the characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Acetylsalicylic acid poisoning.

• **Lecture – 1hr**

Assessment: Written, Viva voce

FM9.2 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Phosphorus, Iodine, Barium

9.2.1: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Phosphorus poisoning.

9.2.2: Discuss on Phossy jaw.

9.2.3: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Iodine poisoning.

9.2.4: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Barium poisoning

• **Lecture – 2 hrs**

Assessment: Written, Viva voce

FM9.3 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Arsenic, lead, mercury, copper, iron, cadmium and thallium

9.3.1: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Arsenic poisoning.

: Describe the characteristics, mechanism of action, fatal dose,

fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Lead poisoning.

: Describe the characteristics, mechanism of action, fatal dose, fatal period,

clinical features, treatment, postmortem findings and medicolegal aspects of Mercury poisoning

9.3.4: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features,

treatment, postmortem findings and medicolegal aspects of Copper poisoning.

- 9.3.5: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Iron poisoning. 9.3.6: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Thallium poisoning. 9.3.7: Describe the characteristics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Cadmium poisoning. 9.3.8: Describe the causes, clinical features and treatment of Metallic fume fever.

• **Lecture–2 hrs**

Assessment: Written, Viva voce

FM9.4 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ethanol, methanol, ethyleneglycol

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of ethanol intoxication.

: Define drunkenness.

: Describe the methods of detection of drunken person in legal situations.

: Describe clinical features, treatment and medicolegal aspects of chronic alcoholism.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects in a case of methanol poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment and medicolegal aspects of ethyleneglycol poisoning.

• **SGD–2hrs(Integration–Pharmacology)Assessment:** Written, Viva Voce **FM9.5 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Organophosphates, Carbamates,**

Organochlorines, Pyrethroids, Paraquat, Aluminium and Zinc phosphide : Classify agricultural poisons.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Organo-phosphorous poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Carbamate poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Organo-chlorine poisoning.

:Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period,

clinical features, treatment, postmortem findings and medicolegal aspects of Paraquat poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Pyrethroid poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Aluminum and Zinc phosphide poisoning.

• **SGD – 1hr**

Assessment: Written, Viva Voce

FM9.6 - Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ammonia, carbon monoxide, hydrogen cyanide & derivatives, methyl isocyanate, tear (riot control) gases

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Ammonia poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings & medicolegal aspects of Carbon monoxide poisoning.

: Describe physical/chemical characteristics, pharmacokinetics, mechanism of action, fatal dose, fatal period, clinical features, treatment, postmortem findings and medicolegal aspects of Cyanide poisoning.

: Describe physical/chemical characteristics, mechanism of action, clinical features, treatment, postmortem findings and medicolegal aspects of Methyl Isocyanate poisoning.

9.6.5: Describe clinical features, treatment and medicolegal aspects of exposure to tear gas (in riot control).

Toxicology: Pharmaceutical Toxicology

• **SDL – 1 hr (Integration – Pharmacology)** **Assessment:** Written, Viva Voce **FM10.1 -**

Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to: i. Antipyretics – Paracetamol, Salicylates

ii. Anti-Infectives (Common antibiotics – an overview)

iii. Neuropsychotoxicology Barbiturates, benzodiazepines, phenytoin, lithium, haloperidol, neuroleptics, tricyclics

iv. Narcotic Analgesics, Anaesthetics, and Muscle Relaxants

v. Gastro-Intestinal and Endocrinal Drugs – Insulin

: Describe clinical features, treatment and medico-legal aspects of poisoning due to Antipyretics (such as Paracetamol and Salicylates).

: Describe clinical features, treatment and medico-legal aspects of poisoning due to Anti-Infective overdose (common antibiotics).

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Barbiturate poisoning.

: Describe clinical features, treatment and medico-legal aspects of

Benzodiazepinepoisoning.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of opium and its alkaloids.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of poisoning due to Gastro-Intestinal and Endocrinal Drugs (e.g., Insulin).

- **Lecture– 1hr Assessment:** Written, Viva voce

FM10.1 vi - Cardiovascular Toxicology Cardiotoxic plants – oleander, odollam, aconite, digitalis

: Enumerate the cardiotoxic plants.

: Describe the active principles, mechanism of action, fatal dose, fatal period, clinical features, treatment, post-mortem findings and medico-legal aspects of poisoning due to cardiotoxic plants.

Toxicology : Biotoxicology

- **SGD–2 hrs Assessment:** Written, Viva Voce

FM11.1 - Describe features and management of Snake bite, scorpion sting, bee and wasp sting and spider bite

11.1.1: Differentiate poisonous and non-poisonous snakes.

11.1.2: Classify poisonous snakes.

: Identify the common poisonous and non-poisonous snakes in India.

: Describe mechanism of action, clinical features, management, postmortem findings and medico-legal aspects of snake bite (Ophitoxaemia).

: Identify the common scorpions seen in India.

: Describe mechanism of action, clinical features, management, postmortem findings and medico-legal aspects of scorpion sting.

: Describe mechanism of action, clinical features, management, postmortem findings and medico-legal aspects of bee and wasp sting, and spider bite.

Toxicology: Environmental Toxicology

- **Lecture– 1hr Assessment:** Written, Viva voce

FM13.1 - Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry

: Enumerate the causes for environmental pollution.

: Describe the health effects of environmental pollution due to toxic substances.

13.1.3: Describe the medico-legal aspects of toxic hazards on employees of an industry

FM13.2 - Describe medico-legal aspects of poisoning in Workman's Compensation Act

13.2.1: Describe the medico-legal issues arising out of effects of poisoning due to occupational exposure as per Workman's Compensation Act.

13.2.2: Discuss the role of physician in cases of poisoning due to occupational exposure.

Toxicology: Sociomedical Toxicology

- **Lecture– 2 hrs Assessment:** Written, Viva voce

FM12.1 - Describe features and management of abuse/ poisoning with following chemicals: Tobacco, cannabis, amphetamines, cocaine, hallucinogens, designer drugs & solvent

12.1.1:Definedrugabuse, drugaddiction, drughabituatiion and drugdependence.12.1.2:List the

drugs of abuse.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic tobacco poisoning.

: Enumerate the active principles and various preparations of cannabis.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic cannabis poisoning.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of acute and chronic cocaine poisoning.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of amphetamine poisoning.

: Enlist the hallucinogenic substances.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Lysergic acid diethylamide poisoning.

: Define 'Designer drug'.

: Describe the clinical features and management of common designer drugs. 12.1.12: Define 'Solvent abuse'.

: Describe clinical features, treatment, post-mortem findings and medico-legal aspects of Solvent abuse.

: Discuss Body packer's syndrome.

Skills in Forensic Medicine & Toxicology

• **SGD-2hrs (Practical) Assessment:** OSPE, Practical book, Logbook, Viva Voce **FM14.17 - To identify & draw medico-legal inference from common poisons e.g. dhatura, castor, cannabis, opium, aconite, copper sulphate, pesticides, marking nut, oleander, Nuxvomica, abrus seeds, Snakes, capsicum, calotropis, lead compounds & tobacco.**

: Identify with physical and/or chemical characteristics of the common poisons

e.g. dhatura, castor, cannabis, opium, aconite, copper sulphate, pesticide compounds, marking nut, oleander, Nux vomica, abrus seeds, snakes, capsicum, calotropis, lead compounds & tobacco. (*regional / local poisons*)

: Draw the medico-legal inferences with the use of the common poisons.

• **SGD-5hrs (Practical-5 cases) Assessment:** OSPE, Practical book, Logbook, Viva Voce **FM14.5 - Conduct & prepare post-mortem examination report of varied aetiologies (at least 15) in a simulated/supervised environment** : Describe the

techniques of conducting a medicolegal autopsy.

: Describe the postmortem findings (external and internal) in a medicolegal autopsy.

14.5.3: Enumerate the ancillary investigations required (along with appropriate materials for such investigations) in a medicolegal autopsy.

14.5.4: Draft the postmortem report after a medicolegal autopsy.

Medicolegal autopsies may be a case of unnatural death, natural death, custodial death, alleged medical negligence, decomposed body, mutilated body.

• **SGD-1hr (Practical) Integration Pathology**

Assessment: OSPE,

Practical book, Logbook, Viva Voce

FM14.19* - To identify & prepare medico-legal inference from histo-pathological slides of Myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, Pulmonary oedema, (remaining slides will be covered in phase 3 MBBS)

: List the microscopic identifying features after examining the histopathological slides of

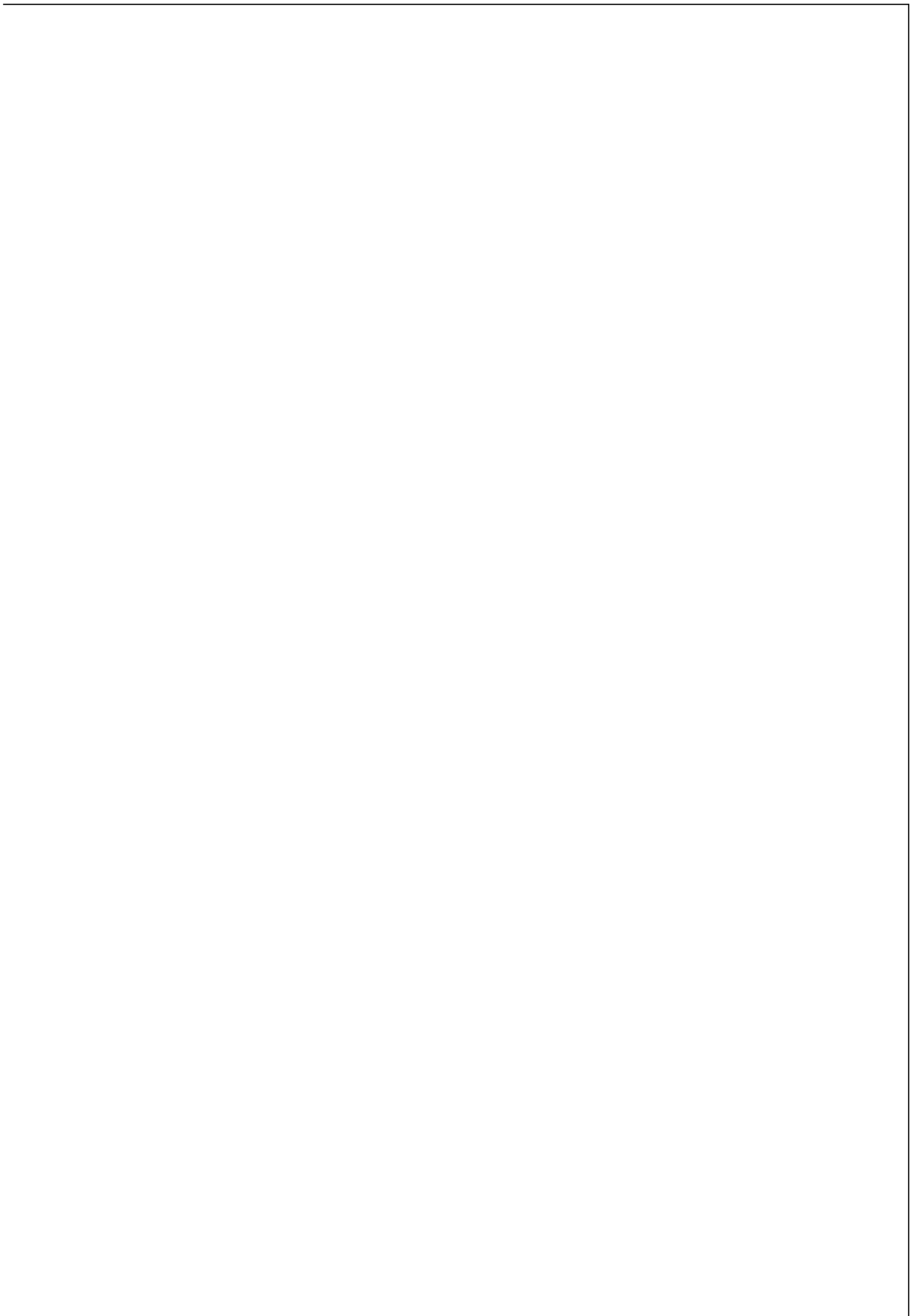
Sl. No.	Teaching hours and type	Competency numbers	Assessment methods
1.	Lecture– 1 hr (Orientation class)	1.1, 1.2	No assessment
2.	Lecture– 1 hr (Interactive)	2.1, 2.2, 2.3	Written, Viva voce
3.	SDL– 1 hr (Followed by reflective writing)	2.4	Written, Viva voce
4.	Lecture– 1 hr (Interactive)	2.5, 2.6, 2.7	Written, Viva voce
5.	SGD– 2 hrs	2.10, 2.8	Written, Viva voce
6.	SGD– 1 hr	2.9	Written, Viva voce
7.	Lecture– 1 hr	2.11, 2.14, 8.5, 8.9	Written, Viva voce
8.	Lecture– 1 hr	2.12, 2.13, 2.17	Written, Viva voce
9.	SGD– 4 hrs (Practical)	2.16, 14.9	Written, Viva voce, OSPE, Practical book, Logbook
10.	SGD– 1 hr	2.18	Written, Viva voce
11.	SGD– 1 hr	2.31	Viva voce
12.	SDL– 1 hr	2.19	Written, Viva voce
13.	SDL– 1 hr	2.15	Written, Viva voce
14.	SGD– 1 hr	2.32, 2.33, 2.34, 2.35	OSPE, Written, Viva voce
15.	SGD– 2 hrs	3.1	Written, Viva voce
16.	SGD– 1 hr	3.2	Written, Viva voce
17.	SGD– 2 hrs (Practical)	14.6, 14.7, 14.8	OSPE, Practical book, Logbook
18.	SDL– 1 hr	8.1	Written, Viva voce
19.	Lecture– 1 hr	8.2, 8.3, 8.4, 8.6	Written, Viva voce
20.	Lecture– 1 hr	8.8	Written, Viva voce
21.	Lecture– 1 hr	8.10	Written, Viva voce
22.	SGD– 2 hrs (Practical/ Skillslab)	14.2, 14.3, 8.7	OSPE, Written, Viva voce
23.	SGD– 2 hrs	9.1	Written, Viva voce

myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, pulmonary edema.

: Describe the medico-legal inferences after examining the abovementioned histopathological slides

Summary of TL methods and list of competencies to be covered in Phase IIMBBS and Assessment methods

24.	Lecture– 1 hr	9.2	Written, Vivavoce
25.	Lecture– 2 hrs	9.3	Written, Vivavoce
26.	Lecture– 2 hrs	9.4	Written, Vivavoce
27.	SGD–2hrs(Integration – Pharmacology)	9.5	Written, Vivavoce
28.	SGD– 1 hr	9.6	Written, Vivavoce
29.	SDL–1 hr (Integration – Pharmacology)	10.1(i-v)	Written, Vivavoce
30.	Lecture– 1 hr	10.1(vi)	Written, Vivavoce
31.	SGD– 2 hrs	11.1	Written, Vivavoce
32.	Lecture– 1 hr	13.1, 13.2	Written, Vivavoce
33.	Lecture– 2 hrs	12.1	Written, Vivavoce
34.	SGD–2hrs(Practical)	14.17	OSPE, Practicalbook, Logbook, VivaVoce
35.	SGD– 5hrs(5 cases)	14.5	OSPE, Practicalbook, Logbook, VivaVoce
36.	SGD–1hr(Practical) Integration Pathology	14.19	OSPE, Practicalbook, Logbook, VivaVoce



List of Competencies and SLOs to be covered in Phase III MBBS part 1

General Information

- **Lecture – 1 hr (Orientation class/ SDL)**

Assessment: No assessment

FM1.3 - Describe legal procedures including Criminal Procedure Code, Indian Penal Code, Indian Evidence Act, Civil and Criminal Cases, Inquest (Police Inquest and Magistrate's Inquest), Cognizable and Non-cognizable offences

- 1.3.1: Describe the meaning of Criminal Procedure Code, Indian Penal Code, and Indian Evidence Act.
- 1.3.2: Differentiate between civil and criminal cases and their proceedings in the court of law.
- 1.3.3: Define inquest.
- 1.3.4: Describe the types of inquest practiced in India.
- 1.3.5: Discuss the meaning of cognizable and non-cognizable offence with examples.

FM 1.4 - Describe Courts in India and their powers: Supreme Court. High Court, Sessions court, Magistrate's Court. Labour Court. Family Court, Executive Magistrate Court and Juvenile Justice Board

- 1.4.1: List various civil and criminal courts in India.
- 1.4.2: Describe the location, presiding officer and powers of various courts in India.

FM 1.5 - Describe Court procedures including issue of summons, conduct money, types of witnesses, recording of evidence: oath, affirmation, examination in chief, cross examination, re- examination & court questions, recording of evidence & conduct of doctor in witness box.

- 1.5.1: Define 'Summons'.
- 1.5.2: Describe the formalities to be followed by a doctor while receiving summons and consequence of not honouring the summons.
- 1.5.3: Define 'Witness'.
- 1.5.4: Describe the types of witness. 1.5.5: Define 'Evidence'.
- 1.5.6: Describe the types of evidence.
- 1.5.7: Describe the steps of recording evidence in the court of law.
- 1.5.8: Describe the conduct of a doctor in the witness box.

FM 1.6 - Describe the offences in Court including Perjury; Court strictures vis-a-vis medical officer

- 1.6.1: Explain the meaning of perjury and its punishment.
- 1.6.2: Mention the various offences that could be charged upon medical officer by the court of law and its punishment.

- **SGD – 2 hrs (Moot Court)**

Assessment: Log book / Viva voce / OSCE

FM14.22 - To give expert medical/ medico-legal evidence in Court of law

- 14.22.1: Describe **conduct of a doctor in witness box** during the process of deposing expert medical/ medico-legal evidence in Court of law.
- 14.22.2: Describe **the steps /procedure of recording of expert medical/ medico-legal evidence** in Court of law with relation to Court procedures.

FM2.29 - Demonstrate respect to the directions of courts, while appearing as witness for recording of evidence under oath or affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence

2.29.1: Demonstrate the procedure of receiving summons.

2.29.2: Demonstrate the oath taking in the court of law.

2.29.3: Demonstrate the procedure of recording of evidence in court of law (examination in chief, cross examination, re-examination, question by Judge). 2.29.4: Demonstrate the doctor's professionalism (attitude and subject expertise) expected in the witness box.

• **SGD – 1 hr(Role play)**

Assessment: Log book / Viva voce / OSCE / Skill station

FM 1.7 - Describe Dying Declaration and Dying Deposition.

1.7.1: Define dying declaration and dying deposition.

1.7.2: Describe the procedure of recording of dying declaration.

1.7.3: Differentiate between dying declaration and dying deposition.

FM14.20 - To record and certify dying declaration in a simulated/ supervised environment

14.20.1: Certify compos mentis (sound mind) by examining higher mental functions before recording of dying declaration in a simulated environment.

14.20.2: Record dying declaration in a simulated environment.

14.20.3: Assist the executive magistrate in recording of dying declaration in a simulated environment

• **Lecture – 1 hr**

Assessment: Written, Viva voce

FM 1.8 - Describe the latest decisions/ notifications/resolutions/circulars/ standing orders related to medico-legal practice issued by Courts/Government authorities etc.

1.8.1: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medicolegal practice issued by Courts.

1.8.2: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medicolegal practice issued by Central Government authorities.

1.8.3: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medicolegal practice issued by State Government authorities.

1.8.4: Describe the latest decisions/notifications/resolutions/ circulars/ standing orders related to medicolegal practice issued by NMC/MCI/ SMC.

FM2.30 - Have knowledge/awareness of latest decisions/ notifications/ resolutions/ circulars/standing orders related to medico-legal practice issued by Courts/ Government authorities etc

2.30.1: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by Courts.

2.30.2: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by Central Government.

2.30.3: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by State Government.

2.30.4: Debate on the latest decisions/notifications/circulars/standing orders related to medico-legal practice issued by NMC/MCI/ SMC

• **Lecture – 1 hr**

Assessment: Written, Viva voce

FM 1.9 - Describe the importance of documentation in medical practice in regard to medicolegal examinations, Medical certificates & medicolegal reports especially

- Maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centres.
- Maintenance of medico-legal register like accident register
- Documents of issuance of wound certificate
- Documents of issuance of drunkenness certificate
- Documents of issuance of sickness & fitness certificate
- Documents of issuance of death certificate
- Documents of issuance of medical certification of cause of death-form no.4, 4A
- Documents of estimation of age by physical, dental & radiological examination & issuance of certificate

1.9.1: Enumerate various medical / medicolegal records to be maintained by hospital/ medical practitioner.

1.9.2: Describe the importance of documentation and maintenance of medical records (out-patient slips, in-patient case details, consent forms, operative & anesthetic notes, discharge/death summary, sickness & fitness certificates, MCCD certificate, etc).

1.9.3: Describe the importance of documentation and maintenance of medicolegal records (MLC register, MTP register, age certificate, wound certificate, drunkenness certificate, sexual violence report, postmortem report, etc).

• **SGD – 1 hr(Practical)**

Assessment: Written / Viva voce / OSCE

FM 1.10 - Select appropriate cause of death in a particular scenario by referring ICD 10 code.

1.10.1: Explain the importance of ICD-10 code in certifying the cause of death.

1.10.2: Enumerate the important causes of death as per ICD-10.

1.10.3: Chose the appropriate cause of death in a particular scenario.

FM 1.11 - Write a correct cause of death certificate as per ICD 10 document

1.11.1: Describe the objectives of MCCD certification.

1.11.2: Draft the MCCD certificate in a particular scenario as per ICD-10.

1.11.3: Explain the procedure of dispatching MCCD certificate to the concerned authorities.

Forensic Pathology

• **SGD – 5 hrs**

Assessment: Written / Viva voce

FM 2.20 - Mechanical asphyxia: Define, classify and describe asphyxia and medico-legal interpretation of post-mortem findings in asphyxial deaths.

- 2.20.1: Define asphyxia.
- 2.20.2: Mention the various types of asphyxial deaths (mechanical, pathological, toxic, environmental, traumatic, postural, iatrogenic).
- 2.20.3: Describe the pathophysiology (vicious cycle) of asphyxia.
- 2.20.4: Explain the types of anoxia/ hypoxia (Gordon's classification).
- 2.20.5: Discuss the classical postmortem findings in asphyxial deaths.

FM 2.21 - Mechanical asphyxia: Describe and discuss different types of hanging and strangulation including clinical findings, causes of death, post-mortem findings and medico-legal aspects of death due to hanging and strangulation including examination, preservation and dispatch of ligature material.

- 2.21.1: Define mechanical asphyxia death.
- 2.21.2: Classify mechanical asphyxial deaths.
- 2.21.3: Define hanging.
- 2.21.4: Enumerate the types of hanging.
- 2.21.5: Explain the symptoms experienced by the victim in hanging.
- 2.21.6: Describe the causes of death, postmortem findings and medicolegal aspects of death due to hanging.
- 2.21.7: Discuss on judicial hanging.
- 2.21.8: Define strangulation.
- 2.21.9: Enumerate the types of strangulation.
- 2.21.10: Describe the causes of death, postmortem findings and medicolegal aspects of death due to ligature strangulation.
- 2.21.11: Describe the causes of death, postmortem findings and medicolegal aspects of death due to manual strangulation.
- 2.21.13: Discuss on Bansdola, Mugging, Garrotting,
- 2.21.14: Describe the examination, preservation and dispatch of ligature material used in hanging and strangulation.
- 2.21.15: Explain the fractures of hyoid bone.

FM 2.22 - Mechanical asphyxia: Describe and discuss patho-physiology, clinical features, postmortem findings and medico-legal aspects of traumatic asphyxia, obstruction of nose & mouth, suffocation and sexual asphyxia.

- 2.22.1: Define traumatic asphyxia.
- 2.22.2: Describe the pathophysiology, postmortem findings and medicolegal aspects of traumatic asphyxia.
- 2.22.3: Discuss on postural/positional asphyxia.
- 2.22.4: Discuss on Overlying.
- 2.22.5: Define suffocation.
- 2.22.6: Enumerate the types of suffocation.
- 2.22.7: Describe the postmortem findings and medicolegal aspects of Environmental asphyxia, Smothering, Gagging and Choking.

2.22.8: Discuss on Café-coronary.

2.22.9: Discuss on Burking.

2.22.10: Describe methods used, postmortem findings and medicolegal aspects of Sexual/ Auto-erotic asphyxia.

FM 2.23 - Mechanical asphyxia: Describe and discuss types, patho-physiology, clinical features, post-mortem findings and medico-legal aspects of drowning, diatom test and gettler test.

2.23.1: Define drowning.

2.23.2: Explain the mechanism of drowning.

2.23.3: Enumerate the types of drowning.

2.23.4: Describe the pathophysiology, causes of death, postmortem findings and medicolegal aspects of drowning.

2.23.5: Describe the clinical features and treatment of Post-immersion syndrome (Near drowning).

2.23.6: Discuss on Diatom test and its medicolegal importance.

2.23.7: Discuss on Gettler test and its medicolegal importance.

• SGD – 1 hr

Assessment: Written / Viva voce

FM 2.24 - Thermal deaths: Describe the clinical features, post-mortem finding and medicolegal aspects of injuries due to physical agents like heat (heat-hyper-pyrexia, heat stroke, sun stroke, heat exhaustion/ prostration, heat cramps [miner's cramp] or cold (systemic and localized hypothermia, frostbite, trench foot, immersion foot)

2.24.1: Classify thermal injuries.

2.24.2: Describe the local (frostbite, trench foot, immersion foot) and general effects (hypothermia) due to Cold.

2.24.3: Describe the postmortem findings and medicolegal aspects of deaths due to Hypothermia.

2.24.4: Describe the general effects due to Heat (heat cramps, heat exhaustion/prostration, heat hyperpyrexia/heat stroke/ sunstroke).

2.24.5: Describe the postmortem findings and medicolegal aspects of deaths due to Heat stroke.

• SGD – 1 hr

Assessment: Written / Viva voce / OSPE

FM 2.25 - Describe types of injuries, clinical features, patho-physiology, postmortem findings and medico-legal aspects in cases of burns, scalds, lightning, electrocution and radiations.

2.25.1: Define Burn.

2.25.2: Enumerate the types or causes of burns. 2.25.3: Describe the degree of burns (Dupuytren's, Wilson's and Clinical classification).

2.25.4: Explain the method of calculation of percentage of burns (Rule of Nine/Wallace, Lund and Browder chart).

2.25.5: Describe the clinical features, management, causes of death, postmortem findings and medicolegal aspects of Dry burns and Scalds.

2.25.6: Differentiate between antemortem and postmortem burns.

2.25.7: Describe the factors affecting the electrical injuries.

- 2.25.8: Describe the postmortem findings, causes of death and medicolegal aspects in deaths due to electrocution.
- 2.25.9: Describe the factors affecting the lightning injuries.
- 2.25.10: Describe the postmortem findings, causes of death and medicolegal aspects in deaths due to lightning.
- 2.25.11 Discuss on injuries caused by exposure to radiation

• **Lecture – 1 hr**

Assessment: Written, Viva voce

FM 2.26 - Describe and discuss clinical features, post-mortem findings and medico-legal aspects of death due to starvation and neglect

- 2.26.1: Explain the meaning of starvation.
- 2.26.2: Enumerate the types of starvation.
- 2.26.3: Enumerate the causes of starvation.
- 2.26.4: Describe the factors modifying the effects of starvation.
- 2.26.5: Describe the clinical features, management, causes of death, postmortem findings and medicolegal aspects of starvation.

• **SGD – 3 hrs**

Assessment: Written / Viva voce / OSPE / log book / Practical record

FM 2.27 - Define and discuss infanticide, foeticide and stillbirth

- 2.27.1: Define Foeticide, Neonaticide and infanticide.
- 2.27.2: Define dead birth, still birth and live birth.
- 2.27.3: Discuss on medicolegal aspects of infanticide

FM 2.28 - Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centres, Hydrostatic test, Sudden Infant Death syndrome. Munchausen's syndrome by proxy. [Munchausen's syndrome by proxy is covered in FM 3.29]

- 2.28.1: Describe the causes of Intra Uterine Death (IUD).
- 2.28.2: Describe the features of 'Dead born foetus'. 2.28.3: Define 'Viability of foetus' and its medicolegal importance.
- 2.28.4: Describe the method of estimation of gestational age of foetus. 2.28.5: Describe the signs of 'Live birth'.
- 2.28.6: Describe the causes of infant death.
- 2.28.7: Define Sudden Infant Death Syndrome (SIDS).
- 2.28.8: Describe causes, postmortem findings & medicolegal aspects of SIDS

FM14.13 - To estimate the age of foetus by post-mortem examination 14.13.1:

- Enumerate the objectives of foetal autopsy.
- 14.13.2: Describe the procedure of foetal autopsy.
- 14.13.3: Estimate the age of foetus by examination of ossification centres, anthropometric measurements, blood constituents, hair, nail, umbilical cord etc.
- 14.13.4: Draft a medicolegal report and opinion after foetal autopsy.

Clinical Forensic Medicine

• **SGD – 4 hrs**
OSCE

Assessment: Written, Viva voce,

FM 3.3 - Mechanical injuries and wounds: Define, describe and classify different types of mechanical injuries, abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/ fabricated wounds and their medico-legal aspects.

- 3.3.1: Define mechanical injury.
- 3.3.2: Classify mechanical injuries.
- 3.3.3: Define abrasion.
- 3.3.4: Describe the characteristic features, types and medicolegal aspects of an abrasion
- 3.3.5: Define contusion.
- 3.3.6: Describe the characteristic features, types and medicolegal aspects of contusion.
- 3.3.7: Describe the factors influencing the formation of contusion.
- 3.3.8: Define laceration.
- 3.3.9: Describe the characteristic features, types and medicolegal aspects of a laceration.
- 3.3.10: Define an incised wound.
- 3.3.11: Describe the characteristic features, types and medicolegal aspects of an incised wound.
- 3.3.12: Define chop wound.
- 3.3.13: Describe the characteristic features and medicolegal aspects of chop wound.

- 3.3.14: Define stab wound.
- 3.3.15: Describe the characteristic features, types and medicolegal aspects of stab wound.
- 3.3.16: Define defense wound.
- 3.3.17: Describe the characteristic features and medicolegal importance of defense wound.
- 3.3.18: Define fabricated wound.
- 3.3.19: Describe the characteristic features and medicolegal importance of fabricated wound.

• **Lecture – 2 hrs**

Assessment: Written, Viva voce

FM 3.4 - Define injury, assault & hurt. Describe IPC pertaining to injuries 3.4.1:

Define injury (S. 44 IPC), assault (S. 351 IPC) and hurt (S. 319 IPC).

- 3.4.2: Define homicide.
- 3.4.3: Describe the types of homicide.
- 3.4.4: Describe Grievous hurt (S. 320 IPC).
- 3.4.5: Understand the IPC sections pertaining to injuries (Sec. 44, 299, 300, 302, 304, 304-A, 304-B, 306, 307, 319, 320, 321-326, 351, 354, 497, 498-A).

FM 3.5 - Describe accidental, suicidal and homicidal injuries. Describe simple, grievous and dangerous injuries. Describe ante-mortem and post-mortem injuries.

- 3.5.1: Define medico-legal case (MLC) with examples.
- 3.5.2: Differentiate between the accidental, suicidal and homicidal injuries with examples.
- 3.5.3: Describe simple and grievous hurt.
- 3.5.4: Explain the difference between the injuries that are likely to cause death, sufficient in the ordinary course of nature to cause death and imminently dangerous.
- 3.5.5: Describe the difference between ante-mortem and post-mortem wounds.

FM 3.6 - Describe healing of injury and fracture of bones with its medico-legal importance 3.6.1:

Describe wound healing by primary and secondary intention and its medicolegal importance.

- 3.6.2: Enumerate the types of fracture.
- 3.6.3: Describe the healing of a fracture and its medicolegal importance.

3.6.4: Describe the difference between ante-mortem and post-mortem fracture.

FM 3.7 - Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death: Primary and Secondary (along with FM 14.1)

3.7.1: Describe the factors influencing the causation of an injury.

3.7.2: Describe the factors that influence healing of an injury or fracture.

3.7.3: Discuss the primary and secondary causes of death from a wound.

FM 3.8 - Describe and discuss different types of weapons including dangerous weapons and their examination

3.8.1: Identify the weapons that cause blunt force and sharp force injuries.

3.8.2: Define dangerous weapon (S. 324 IPC and 326 IPC).

• **SGD – 3 hrs**
OSCE

Assessment: Written, Viva voce,

FM 3.9 - Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking

3.9.1: Define Forensic ballistics, Proximal ballistics, Intermediate ballistics, and Terminal ballistics.

3.9.2: Define firearm.

3.9.3: Classify firearms.

3.9.4: Enumerate the parts of the basic firearms.

3.9.5: Explain 'rifling' and 'calibre' of a firearm.

3.9.6: Explain 'choking' in a firearm and its purpose.

3.9.7: Enumerate the components of rifled firearm and shotgun cartridge, and its function.

3.9.8: Describe the types of gunpowder.

3.9.9: Discuss on types of bullets and pellets.

FM 3.10 - Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries, various tests related to confirmation of use of firearms

3.10.1: Define wound ballistics.

3.10.2: Enumerate the factors affecting gunshot wound production.

3.10.3: Explain the mechanism of firing and various components of discharge of firing.

3.10.4: Describe the entry and exit wounds from a rifled firearm at various ranges.

3.10.5: Describe the entry and exit wounds from a shotgun at various ranges.

3.10.6: Discuss on Ricocheting of a bullet and its effect.

3.10.7: Discuss on Tumbling bullet, Yawning bullet, Dumdum bullet, Tandem bullet, Souvenir bullet.

3.10.8: List the evidentiary materials to be collected in gunshot wounds.

3.10.9: Describe the method of collection and preservation of evidentiary materials in gunshot wounds.

3.10.10: Describe the significance of bullet markings and use of comparison microscope.

3.10.11: Enumerate the tests done for detection of gunshot residue.

3.10.12: Describe the injuries caused by bomb blast / explosion

• **SGD – 4 hrs**
OSCE / OSPE

Assessment: Written, Viva voce,

FM 3.11 - Regional injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton

3.11.1: Define head injury.

3.11.2: Discuss the forensic anatomy of scalp and scalp injuries.

3.11.3: Enumerate the types of skull fracture.

3.11.4: Describe the intracranial hemorrhages and its medicolegal aspects.

3.11.5: Describe the cerebral injuries and its medicolegal aspects.

3.11.6: Explain 'concussion of brain' and 'diffuse axonal injury'.

3.11.7: Discuss on 'Punch drunk syndrome'.

3.11.8: Describe the mechanism, clinical features and medicolegal aspects of whiplash injury. 3.11.9:

Discuss on 'railway spine'.

3.11.10: Discuss on injuries to chest, abdomen and genital organs

FM 3.12 - Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondary injuries, crush syndrome, railway spine

3.12.1: Describe the injuries sustained to person in a fall from height.

3.12.2: Describe the injuries to a pedestrian in vehicular accident (primary impact, second impact and secondary injuries).

3.12.3: Describe the injuries to driver, front seat passenger and back seat passenger of a motor car. 3.12.4:

Discuss on 'Crush syndrome'.

• **SGD – 2 hrs (Practical)**

Assessment: Log book / Skill station / Viva voce, OSCE

FM14.1 - Examine and prepare Medico-legal report of an injured person with different etiologies in a simulated/ supervised environment

14.1.1: Take an informed consent from the Patient / Guardian after explaining the importance of MLC registration in Medicolegal cases (Road traffic accident / Fall from height / Assault / Self infliction of injuries / Burns / Firearms).

14.1.2: Perform the clinical examination of an injured person (history taking, general physical examination, systemic examination, laboratory investigations) in a simulated/ supervised environment.

14.1.3: Prepare the wound certificate after documenting the clinical findings.

14.1.4: Prepare the police intimation.

• **SGD – 1 hr (Practical)**

Assessment: Log book / Practical record / Viva voce, OSPE

FM14.10 - Demonstrate ability to identify & prepare medicolegal inference from specimens obtained from various types of injuries e.g. contusion, abrasion, laceration, firearm wounds, burns, head injury and fracture of bone

14.10.1: Prepare a medicolegal inference from **photographs** showing various types of injuries/ lesions/ postmortem findings.

14.10.2: Prepare a medicolegal inference from **wet specimens** showing various types of injuries/ lesions/ postmortem findings.

14.10.3: Prepare medicolegal inference from **models** showing various types of injuries/ lesions/ postmortem findings.

• **Lecture – 2 hrs**

Assessment: Written, Viva voce

FM3.18 - Describe legitimacy and its medicolegal importance. Describe and discuss how 'signs' of virginity (so called 'virginity test', including finger tests on female genitalia) are unscientific, inhuman and discriminatory. Describe and discuss how to appraise the courts about unscientific basis of these tests if court orders it.

3.18.1: Define legitimacy.

3.18.2: Enumerate the medicolegal importance of legitimacy.

3.18.3: Discuss the unscientificity, discriminatory nature, legal position and violation of human rights of 'two finger test'.

3.18.4: Discuss whether there is an evidence based validity of Virginity tests in medical research.

FM3.19 - Discuss the medicolegal aspects of pregnancy and delivery, signs of pregnancy, precipitate labour, superfoetation, superfecundation, and signs of recent and remote delivery in living and dead

3.19.1: Describe the presumptive, probable and positive signs of pregnancy.

3.19.2: Describe pseudocyesis.

3.19.3: Define superfoetation and superfecundation.

3.19.4: Describe the medicolegal aspects of pregnancy.

3.19.5: Define delivery.

3.19.6: Describe the signs of recent and remote delivery in a living individual.

3.19.7: Enumerate the signs of recent & remote delivery in a dead individual.

3.19.8. Mention the medicolegal aspects of delivery.

3.19.9: Define precipitate labour.

3.19.10: Describe the signs and medicolegal aspects of precipitate labour.

FM3.20 - Discuss disputed paternity and maternity

3.20.1: Discuss the medicolegal issues related to disputed paternity and maternity.

3.20.2: Describe the method of identifying paternalism and maternalism.

• **Lecture – 2 hrs**

Assessment: Written, Viva voce

FM3.22 - Define and discuss impotence, sterility, frigidity, sexual dysfunction, premature ejaculation. Discuss the causes of impotence and sterility in male and female

3.22.1: Define impotence, sterility, frigidity, sexual/erectile dysfunction and premature ejaculation.

3.22.2: List the causes of impotence in male and female.

3.22.3: Describe the medicolegal issues related to impotence, sexual/erectile dysfunction and premature ejaculation.

3.22.4: List the causes of sterility in male and female.

3.22.5: Describe the medicolegal issues related to sterility.

3.22.6: Describe procedure of examination in alleged case of impotency.

FM3.23 - Discuss Sterilization of male and female, artificial insemination, Test Tube Baby, surrogate mother, hormonal replacement therapy with respect to appropriate national and state laws

3.23.1: Describe the methods of sterilization in male and female.

3.23.2: Discuss the medicolegal issues related to sterilization procedure.

3.23.3: Define artificial insemination.

3.23.4: Mention the types of artificial insemination.

3.23.5: Enumerate the indications for artificial insemination.

3.23.6: Discuss ethical issues and precautions to be taken during the artificial insemination.

3.23.7: Describe medicolegal issues related to artificial insemination.

3.23.8: Discuss on invitro fertilization/ test tube baby and surrogate motherhood.

FM3.26 - Discuss the national Guidelines for accreditation, supervision & regulation of ART Clinics in India

3.26.1: Discuss the National Guidelines for accreditation, supervision & regulation of ART Clinics in India.

3.26.2: Explain the recent updates on laws related to ART and Surrogacy.

• **SDL – 1 hr**

Assessment: Written, Viva voce

FM3.21 - Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC&PNDT) - Prohibition of Sex Selection Act 2003 and Domestic Violence Act 2005

3.21.1: Describe the objectives of PCPNDT Act, 1994.

3.21.2: Enumerate the indications for prenatal diagnostic procedures.

3.21.3: List the various prenatal diagnostic techniques.

3.21.4: Describe the guidelines for establishing and maintaining the centres to practice prenatal diagnostic procedures.

3.21.5: Describe the punishment for offences under PCPNDT Act.

3.21.6: Discuss on amendments to the PCPNDT Act till date.

3.21.7: Define domestic violence.

3.21.8: Describe the salient features of The Protection of Women from Domestic Violence Act, 2005.

3.21.9: Explain the medicolegal responsibilities of a medical practitioner in a domestic violence case.

FM3.24 - Discuss the relative importance of surgical methods of contraception (vasectomy and tubectomy) as methods of contraception in the National Family Planning Programme

3.24.1: Describe the salient features of the National Family Planning Programme related to vasectomy and tubectomy.

FM3.25 - Discuss the major results of the National Family Health Survey

3.25.1: Discuss the major results of National Family Health Survey (NFHS).

• **Lecture – 1 hr**

Assessment: Written, Viva voce, OSPE / OSCE

FM 3.13 – Describe various sections of IPC & CrPC related to definition of rape and sexual assault, medical examination of rape victim and accused of rape, police information by the doctors and medical care with recent amendments notified till date (i.e., section 375IPC, 166B IPC, 357C CrPC, 164A CrPC, 53A CrPC). Describe the relevant provisions of POCSO Act related to medical examination, emergency medical care and police information.

3.13.1: Describe the legal provisions of Sexual Violence as per criminal law and Special law like POCSO Act.

3.13.2: Describe the legal basis of medical examination of victim / survivor of Sexual violence

3.13.3: Describe the legal basis of medical examination of accused of Sexual violence

3.13.4: Discuss the issues related to mandatory reporting of sexual violence.

• **Lecture – 1 hr**

Assessment: Written, Viva voce, OSCE

FM 3.14 - Describe and discuss the examination of the victim of an alleged case of rape, and the preparation of report, framing the opinion and preservation and dispatch of trace evidences in such cases.

3.14.1: Describe the findings in a victim of sexual violence.

3.14.2: Describe the duties of doctor towards victim of sexual violence.

3.14.3: Understand the legal sections related to examination of a victim of sexual violence (164-A CrPC, 327 CrPC, 357-C CrPC, 228-A IPC, 114-A IEA, 146 IEA).

3.14.4: Describe the procedure of examination, contents of the format, guidelines for preliminary and final opinion in a victim of sexual violence (given by Ministry of Health and Family welfare, Government of India).

3.14.5: Describe the procedure of collecting, preservation and dispatch of evidentiary materials from a victim of sexual violence.

3.14.6: Understand the significance of SAFE kit in collecting evidentiary material from a victim of sexual assault.

SGD – 3 hrs

Assessment: Written, Viva voce, OSCE

FM 3.15 - Describe and discuss examination of accused and victim of sodomy, preparation of report, framing of opinion, preservation and despatch of trace evidences in such cases.

3.15.1: Define sodomy.

3.15.2: Describe the findings in a victim of sodomy.

3.15.3: Describe the procedure of examination, contents of the format, and guidelines for opinion in a victim of sodomy.

3.15.4: Describe the procedure of collecting, preservation and dispatch of evidentiary materials from a victim of sodomy.

3.15.5: Describe the findings in an accused of sexual assault.

3.15.6: Describe the procedure of examination, contents of the format, and guidelines for opinion in an accused of sexual assault.

3.15.7: Understand the recent amendments in section 377 IPC.

FM 3.16 - Describe and discuss informed consent in sexual intercourse. Describe and discuss histories of gender and sexuality –based (sexual orientation) identities and rights in India. Describe history of decriminalization of ‘adultery’ and consensual adult homosexual sexual behavior. Describe sexual offences with its medicolegal significance –

- forced / non-consensual penetrative anal sex

- forced / non-consensual oral sex

-sexual acts with animals / bestiality / zoophilia

- forced / non-consensual insertions of fingers or objects

- forced / non-consensual touching or groping or disrobing (indecent assault)

3.16.1: Discuss the role of consent in adjudication of forced sexual intercourse / sexual violence.

3.16.2: Discuss the past and current legal status of gender and sexuality based identities and sexual rights in India.

3.16.3: Discuss the role of consent and age in sexual relations covered under section 377 IPC between human beings.

3.16.4: Discuss the role of consent and age in sexual relations covered under section 377 IPC between human being and animals (Zoophilia).

3.16.5: Discuss the current legal and ethical status of Adultery (like under Sec 498 IPC, Domestic violence, Divorce, abetment of Suicide, Professional misconduct).

3.16.6: Understand the salient features of Indecent assault as per section 354, 354-A, 354-B, 354-C and 354-D IPC.

3.16.7: Describe the procedure of examination, collection, preservation and dispatch of evidentiary materials in a accused of bestiality/ Zoophilia

FM 3.17 – Describe the difference between Paraphilia and Paraphilic disorder. Describe Paraphilic disorder as per the latest guidelines of DSM & ICD and describe the medicolegal implications of paraphilic disorder by referring scientific literature and legal justification (if any). Describe and discuss various paraphilias in the context of informed consent during any sexual interaction.

3.17.1: Define Paraphilia and Paraphilic disorder as per DSM and ICD guidelines.

3.17.2: Explain the Paraphilia/ Paraphilic disorder requiring partner for sexual gratification (sadism, masochism, frotteurism, pedophilia, necrophilia, necrophagia) and its medicolegal importance.

3.17.3: Explain the Paraphilia/ Paraphilic disorder not requiring partner for sexual gratification (voyeurism, exhibitionism) and its medicolegal importance.

3.17.4: Explain the Paraphilia/ Paraphilic disorder requiring object/article as a stimulus for sexual gratification (fetishism, transvestism) and its medicolegal importance.

3.17.5: Discuss the role of consent and age in sexual relations covered under Paraphilia/ Paraphilic disorder

SGD – 1 hr (Practical)

Assessment: Practical record, log book, Viva

voce, OSCE

FM14.15 - To examine & prepare medico-legal report on an alleged victim of various sexual offences in a simulated/ supervised environment. (Guidelines and Protocols of Medicolegal Care for Survivors / Victims of Sexual Violence. Ministry of Health & Family Welfare, GOI – with latest modifications, if any.) Demonstrate an understanding of framing the opinion and preservation and dispatch of trace evidences in such cases. Describe and discuss sympathetic / empathetic examination and interview of victims of sexual assault, including presence of trusted adult figure in cases of minor victims.

14.15.1: Describe the procedure of obtaining an informed consent for examination of an alleged victim of sexual offence.

14.15.2 : Discuss the sensitivity required for an empathetic history collection/ interaction and examination from an alleged victim of sexual violence (based on Age, sexual identity, disability and other vulnerabilities)

14.15.3: Describe the procedure of examination and collection of evidentiary material for medical and medicolegal purposes from an alleged victim of sexual violence.

14.15.4: Prepare a medicolegal report and opinion in an alleged victim of sexual offence.

14.15.5: Explain the procedure of handing over the evidentiary material to the investigating officer after medical examination of an alleged victim of sexual offence.

SGD – 1 hr (Practical)

Assessment: Practical record, log book, Viva

voce, OSCE

FM14.14 - To examine & prepare report on an alleged accused person in cases of various sexual offences in a simulated/ supervised environment. Demonstrate an understanding of framing the opinion and preservation and dispatch of trace evidences in such cases. Describe and discuss personal opinions and their impact on such examinations and the need for objectivity / neutrality to avoid prejudice influencing the case.

14.14.1: Describe the procedure of obtaining an informed consent for examination of an alleged accused of sexual offence.

14.14.2: Discuss the need for objectivity / neutrality required in history collection/ interaction and examination on an alleged accused of sexual violence (based on Age, sexual identity, disability and also other personal biases and prejudices)

14.14.3: Describe the procedure of examination and collection of evidentiary material for medical and medicolegal purposes on an alleged accused of sexual violence.

14.14.4: Prepare a medicolegal report and opinion in an alleged accused of sexual offence.

14.14.4: Explain the procedure of handing over the evidentiary material to the investigating officer after medical examination of an alleged accused of sexual offence.

• **Lecture – 2 hrs**

Assessment: Written, Viva voce, OSCE

FM3.27 - Define, classify and discuss abortion, methods of procuring MTP and criminal abortion and complication of abortion. MTP Act 1971

3.27.1: Define abortion.

3.27.2: Classify abortion.

3.27.3: Describe the methods used for therapeutic abortion.

3.27.4: Describe the methods used for criminal abortion & its complications.

3.27.5: Discuss the Medical termination of Pregnancy Act, 1971 and its amendments.

FM3.28 - Describe evidences of abortion - living and dead, duties of doctor in cases of abortion, investigations of death due to criminal abortion

3.28.1: Describe evidences of abortion in living and dead individual.

3.28.2: Explain the circumstances under which a case of abortion is brought to the notice of medical officer.

3.28.3: Describe the medical and legal duties of doctor in a case of criminal abortion.

3.28.4: Describe the examination, method of collection, preservation and dispatch of evidentiary materials during investigation of death of woman in criminal abortion.

• **Lecture – 1 hr**

Assessment: Written, Viva voce, OSCE

FM3.29 - Describe and discuss child abuse and battered baby syndrome

3.29.1: Define child abuse or child maltreatment (as per WHO).

3.29.2: Enumerate different forms of child abuse.

3.29.3: Define battered baby syndrome.

3.29.4: Describe the clinical findings and medicolegal aspects of battered baby syndrome.

3.29.5: Discuss on Shaken baby syndrome and Cinderella syndrome. 3.29.6:

Discuss on Munchausen's Syndrome by proxy.

3.29.7: Describe the medicolegal responsibilities of a doctor in child abuse cases.

SDL – 1 hr

Assessment: Written, Viva voce, OSCE

FM3.30 - Describe and discuss issues relating to torture, identification of injuries caused by torture and its sequelae, management of torture survivors

3.30.1: Define Torture (as per UN Convention of Torture, World Medical Association).

3.30.2: Enumerate the types/methods/techniques used for torture.

3.30.3: Explain the medical findings in a case of torture.

3.30.4: Outline the management of torture survivors.

3.30.5: Discuss the ethical and legal issues related to torture.

FM3.31 - Torture and Human rights- Describe and discuss guidelines and Protocols of National Human Rights Commission regarding torture

3.31.1: Describe the guidelines and protocols of National human rights commission in cases of torture.

SGD – 2 hrs

Assessment: Practical record, Log book, Viva voce, OSCE

FM3.32 - Demonstrate the professionalism while preparing reports in medico-legal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences

3.32.1: Demonstrate the professionalism to be shown by a doctor while preparing reports in medicolegal cases, interpretation of findings and making inference/opinion.

3.32.2: Demonstrate the professionalism to be shown by a doctor during the collection, preservation and dispatch of biological or trace evidences.

FM3.33 - Should be able to demonstrate the professionalism while dealing with victims of torture and human right violations, sexual assaults psychological consultation, rehabilitation

3.33.1: Demonstrate the professionalism to be shown by a doctor while dealing with victims of torture and human right violations.

3.33.2: Demonstrate the professionalism to be shown by a doctor during the examination, psychological consultation and rehabilitation of sexual victims

FM14.18 - To examine & prepare medico-legal report of a person in police, judicial custody or referred by Court of Law and violation of human rights as requirement of NHRC, who has been brought for medical examination

14.18.1: Explain the procedure of examination and preparing the medico-legal report of a person in police custody/ judicial custody who has been brought for medical examination.

14.18.2: Explain the procedure of examination and preparing the medico-legal report of a person referred by Court of Law for medical examination.

14.18.3: Explain the procedure of examination and preparing the medico-legal report of a person with history of violation of human rights as per requirement of NHRC (victim of torture, hunger strike, etc), who has been brought for medical examination.

Medical Jurisprudence (Medical Law and ethics)

• **Lecture – 3 hrs**

Assessment: Written, Viva voce, OSCE

FM4.1 - Describe Medical Ethics and explain its historical emergence 4.1.1:

Define Ethics and Medical ethics.

4.1.2: Describe the historical emergence of Medical ethics.

4.1.3: Discuss the need for and the emergence of World Medical Association's Declaration of Helsinki 1964 and its subsequent revisions.

FM4.2 - Describe the Code of Medical Ethics 2002 conduct, Etiquette and Ethics in medical practice and unethical practices & the dichotomy

4.2.1: Describe the 'Code of medical ethics' as per Indian Medical Council (Professional conduct, Etiquette and Ethics) Regulations, 2002.

4.2.2: Enumerate the various practices of a medical practitioner which are considered as unethical.

4.2.3: Explain the meaning of Dichotomy with examples.

4.2.4: Mention guidelines laid down by MCI with respect to remuneration

FM4.3 - Describe the functions and role of Medical Council of India / National Medical Commission and State Medical Councils

4.3.1: Describe the constitution and functions of Medical Council of India/ National Medical Council.

4.3.2: Describe the constitution and functions of State Medical Council.

FM4.4 - Describe the Indian Medical Register

4.4.1: List the various particulars to be entered in Indian Medical Register (IMR).

4.4.2: Mention under which schedules, the degrees obtained by institutions in and outside India are recognized by MCI.

4.4.3: Describe the procedure for a foreign medical practitioner to get enrolled in IMR.

4.4.4: Mention the advantages to a Doctor after enrolling in IMR.

FM4.5 - Rights/privileges of a medical practitioner, penal erasure, infamous conduct, disciplinary Committee, disciplinary procedures, warning notice and penal erasure

4.5.1: Enumerate the Rights/privileges of a medical practitioner

4.5.2: Define Infamous conduct/Professional misconduct with suitable examples (as per IMC regulations, 2002)

4.5.3: Describe the composition of disciplinary committee and its procedure in dealing with cases of infamous conduct.

4.5.4: Discuss the various punishments awarded by disciplinary committee for infamous conduct (warning notice, temporary erasure, penal erasure).

FM4.6 - Describe the Laws in Relation to medical practice and the duties of a medical practitioner towards patients and society

4.6.1: Enumerate the laws related to medical practice in India. 4.6.2: Describe the 'Duties of a medical practitioner' in general towards his patient, society and research.

• **Lecture – 1 hr**

Assessment: Written, Viva voce, OSCE

FM4.7 - Describe and discuss the ethics related to HIV patients 4.7.1:

Describe legal and ethical issues in HIV testing.

4.7.2: Mention the rights of HIV positive patients.

4.7.3: Discuss the duties of a Doctor while treating HIV patients with respect to confidentiality & disclosure.

4.7.4: Discuss the current policies related to the research and health care of HIV positive patients.

FM4.12 - Discuss legal and ethical issues in relation to stem cell research 4.12.1: Enumerate the application of stem cells in research and therapy.

4.12.2: Discuss the ethical issues arising from stem cell research and therapy.

4.12.3: Discuss the legal status of stem cell therapy and research in India.

4.12.4: Describe the guidelines for stem cell research in India.

FM4.13 - Describe social aspects of Medico-legal cases with respect to victims of assault, rape, attempted suicide, homicide, domestic violence, dowry- related cases

4.13.1: Describe the social aspects and role of medical professionals with respect to victim of sexual violence.

4.13.2: Describe the social aspects and role of medical professionals with respect to victim of attempted suicide.

4.13.3: Describe the social aspects and role of medical professionals with respect to victim of attempted homicide.

4.13.4: Describe the social aspects and role of medical professionals with respect to victim of domestic violence.

• **Lecture – 1 hr**

Assessment: Written, Viva voce, OSCE

FM4.8 - Describe the Consumer Protection Act-1986 (Medical Indemnity Insurance, Civil Litigations and Compensations), Workman's Compensation Act & ESI Act

4.8.1: Discuss on Consumer Protection Act-1986 & 2019 in view of medical services with latest amendments.

4.8.2: Describe the purpose of Medical Indemnity Insurance in civil litigations and compensations.

4.8.3: Discuss the role of a doctor in awarding compensation to workers or their dependents as per Workman's Compensation Act and ESI Act.

SGD – 1 hr

Assessment: Practical record, Log book, Viva voce, OSCE

FM4.9 - Describe the medico - legal issues in relation to family violence, violation of human rights, NHRC and doctors

4.9.1: Define Domestic Violence.

4.9.2: Discuss the salient features of "Protection of women from domestic violence Act, 2005" in relation to medical and legal responsibilities of a medical practitioner.

4.9.3: Enumerate the cases related to violation of human rights.

4.9.4: Discuss the responsibilities of a doctor in cases of violation of human rights.

FM4.10 - Describe communication between doctors, public and media

4.10.1: Describe the communication skills by a doctor with the public and its importance.

4.10.2: Describe the communication skills and precautions to be taken by a doctor while interacting with the media.

4.10.3: Describe communication skills by a doctor with his/her colleagues

FM4.14 - Describe & discuss the challenges in managing medico-legal cases including development of skills in relationship management – Human behaviour, communication skills, conflict resolution techniques

4.14.1: Discuss the challenges in managing the medico legal cases.

4.14.2: Describe the principles of doctor-patient relationship management.

4.14.3: Describe the development of human behavior and communication skills required for managing doctor-patient relationship.

4.14.4: Discuss the conflict resolution techniques in managing medico-legal cases.

FM4.15 - Describe the principles of handling pressure – definition, types, causes, sources and skills for managing the pressure while dealing with medico-legal cases by the doctor

4.15.1: Define stress.

4.15.2: Mention the types of pressure while dealing with medico-legal cases by a doctor.

4.15.3: List the causes/ sources of pressure in handling medico-legal cases.

4.15.4: Discuss the skills needed for managing the pressure situations in handling a medico-legal case.

• Lecture – 1 hr

Assessment: Written, Viva voce

FM4.16 - Describe and discuss Bioethics

4.16.1: Define bioethics.

4.16.2: Enumerate the issues in medical practice wherein bioethics is applied.

4.16.3: Mention the four main principles of bioethics.

4.16.4: Discuss the medico-legal issues related to bioethics in patient care.

FM4.17 - Describe and discuss ethical Principles: Respect for autonomy, non-maleficence, beneficence & justice

4.17.1: Describe respect for patient's autonomy.

4.17.2: Describe the role of beneficence as a guiding principle in patient care.

4.17.3: Describe the role of non-maleficence as a guiding principle in patient care.

4.17.4: Discuss the application of justice in distributing resources and benefits in medical practice and research.

FM4.11 - Describe and discuss euthanasia 4.11.1:

Define euthanasia.

4.11.2: Describe various types of euthanasia.

4.11.3: Debate around euthanasia- the arguments against and in favour.

4.11.4: Mention the legal status of euthanasia in India and in other countries.

4.11.5: Discuss the landmark case of Aruna Shanbaug and its impact on the status of euthanasia in India.

SGD – 3 hrs

Assessment: Written, Viva voce

FM4.18 - Describe and discuss medical negligence including civil and criminal negligence, contributory negligence, corporate negligence, vicarious liability, Res Ipsa Loquitur, prevention of medical negligence and defenses in medical negligence litigations

4.18.1: Define medical negligence.

4.18.2: Describe the elements of medical negligence.

4.18.3: Describe civil and criminal negligence with examples.

4.18.4: Describe contributory negligence with examples.

4.18.5: Describe the importance of Vicarious liability in medical practice.

4.18.6: Describe Corporate Negligence with examples.

4.18.7: Describe Res Ipsa Loquitur with examples.

4.18.8: Mention the precautionary measures to be taken to avoid medical negligence.

4.18.9: Describe the various defenses for a doctor in medical negligence (including Contributory negligence, Therapeutic misadventure, Medical maloccurrence, Calculated risk doctrine, Novus actus interveniens, Res judicata etc).

FM4.19 - Define Consent. Describe different types of consent and ingredients of informed consent. Describe the rules of consent and importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication 4.19.1: Define consent.

4.19.2: Describe the different types of consent with suitable examples.

4.19.3: Describe the ingredients of an informed consent.

4.19.4: Describe the rules and regulations associated with consent.

4.19.5: Explain the importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication (with relevant sections of IPC).

FM4.20 - Describe therapeutic privilege, Malingering, Therapeutic Misadventure, Professional Secrecy, Human Experimentation 4.20.1: Explain the concept of ‘therapeutic privilege’ in medical practice.

4.20.2: Discuss the legal aspects of Malingering during medical practice.

FM4.21 - Describe Products liability and Medical Indemnity Insurance 4.21.1:

Discuss about ‘product liability’ in medical negligence.

4.21.2: Describe medical indemnity insurance and its purpose.

FM4.24 - Enumerate rights, privileges and duties of a Registered Medical Practitioner. Discuss doctor-patient relationship: professional secrecy and privileged communication 4.24.1: Enumerate the rights and privileges of Registered Medical Practitioner.

4.24.2: Describe the duties of a Registered Medical Practitioner.

4.24.3: Discuss on doctor-patient relationship in clinical practice.

4.24.4: Explain professional secrecy with examples.

4.24.5: Describe Privileged communication with examples.

FM4.22 - Explain Oath – Hippocrates, Charaka and Sushruta and procedure for administration of Oath

4.22.1: Explain oath as described by Hippocrates, Charaka and Sushruta.

4.22.3: Describe the procedure for administration of oath for a medical practitioner.

FM4.23 - Describe the modified Declaration of Geneva and its relevance 4.23.1:

Describe the components of declaration of Geneva.

4.23.2: Describe the components of modified declaration of Geneva.

4.23.3: Explain the relevance of Declaration of Geneva in the medical profession.

FM4.25 - Clinical research & Ethics - Discuss human experimentation including clinical trials

4.25.1: Enumerate the need and drawbacks of different types of clinical research on humans.

4.25.2: Describe the phases of clinical trials and its implications.

4.25.3: Describe the ethical regulations and guidelines for clinical research.

4.25.4: Discuss the principles pertaining to human experimentation in Nuremberg code and Belmont report.

4.25.5: Discuss the steps to be taken for protection of vulnerable population in clinical trials/research

FM4.26 - Discuss the constitution and functions of ethical committees 4.26.1:

List the composition of Institutional Ethics Committee (IEC).

4.26.2: Mention the responsibilities and duties of IEC.

4.26.3: Describe the proposals that are required to be presented before IEC.

4.26.4: Discuss limitations of IEC.

FM4.27 - Describe and discuss Ethical Guidelines for Biomedical Research on Human Subjects & Animals

4.27.1: Describe the international and national ethics guidelines for human and animal research.

4.27.2: Discuss the principles of ICMR guidelines for research involving human participants.

4.27.3: Discuss the rights of human research participants.

4.27.4: Discuss the 5 R's (replace, reduce, refine, reuse, and rehabilitate) of animal research ethics.

SGD – 1 hr

Assessment: OSPE, Viva voce

FM4.28 - Demonstrate respect to laws relating to medical practice and Ethical code of conduct prescribed by Medical Council of India and rules and regulations prescribed by it from time to time

4.28.1: Demonstrate the conduct of doctor with patients as per the Code of Medical Ethics prescribed by IMC.

FM4.29 - Demonstrate ability to communicate appropriately with media, public and doctors 4.29.1:

Demonstrate the skills of communication by a doctor with the public.

4.29.2: Demonstrate the skills of communication by a doctor with the media.

4.29.3: Demonstrate the skills of communication by a doctor with his/her colleagues.

FM4.30 - Demonstrate ability to conduct research in pursuance to guidelines or research ethics

4.30.1: Prepare a research protocol for a study as per the ICMR guidelines.

4.30.2: Demonstrate the procedure of taking informed consent for conducting a research.

Forensic Psychiatry

• Lecture – 1 hr

Assessment: Written, Viva voce

FM5.1 - Classify common mental illnesses including post-traumatic stress disorder (PTSD) 5.1.1:

Define Forensic Psychiatry.

5.1.2: Define mental illness.

5.1.3: Classify common mental illnesses.

5.1.4: Explain PTSD with examples.

FM5.2 - Define, classify and describe delusions, hallucinations, illusion, lucid interval and obsessions with exemplification 5.2.1: Define delusion.

5.2.2: Describe types of delusions and their medicolegal importance.

5.2.3: Define hallucination.

5.2.4: Describe types of hallucinations and their medicolegal importance.

5.2.5: Define illusion with examples.

5.2.6: Define lucid interval.

5.2.7: Describe the medicolegal importance of lucid interval.

5.2.8: Define Impulse.

5.2.9: Describe impulsive disorders with examples.

5.2.10: Describe the obsessive-compulsive disorders with examples.

• **Lecture – 1 hr**

Assessment: Written, Viva voce

FM5.3 - Describe Civil and criminal responsibilities of a mentally ill person 5.3.1:

Describe Civil responsibility of a mentally ill person.

5.3.2: Describe Criminal responsibility of a mentally ill person.

5.3.3: Describe the McNaughten Rule and critics about it.

5.3.4: Discuss the alternate hypotheses/tests in relation to criminal responsibility.

5.3.5: Describe the criminal responsibility in Automatism, Somnambulism, Somnolentia, Hypnotism and Intoxication.

FM5.4 - Differentiate between true insanity from feigned insanity

5.4.1: Differentiate between true and feigned insanity. **FM5.5 -**

Describe & discuss Delirium tremens 5.5.1: Define delirium tremens.

5.5.2: Describe the criminal responsibility in delirium tremens.

• **SDL – 1 hr**

Assessment: Written, Viva voce

FM5.6 - Describe the Indian Mental Health Act, 1987 & Indian Mental Healthcare Act 2017 with special reference to admission, care and discharge of a mentally ill person

5.6.1: Describe the important definitions mentioned in Mental Health Care Act, 2017 (MHCA). 5.6.2:

Describe the Rights of mentally ill person including 'Advance directive' as per the MHCA.

5.6.3: Describe the guidelines to start and run a 'Mental health establishment'. 5.6.4: Discuss on 'Admission, Treatment and Discharge of mentally ill person' as described in the MHCA.

5.6.5: Discuss on punishment for violation of provisions of MHCA.

Forensic Laboratory investigation in medical legal practice

• **SGD – 1 hr**

Assessment: OSPE, Viva voce

FM6.1 - Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faeces, saliva), Skin, Nails, tooth pulp, vaginal smear, viscera,

skull, specimen for histo-pathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle

6.1.1: Describe the importance of trace evidences in crime investigation. 6.1.2:

Explain Locard's principle of exchange in crime investigation.

6.1.3: Enlist the various trace evidences seen in different type of crimes (living and dead).

6.1.4: Discuss the importance of DNA profiling in forensic investigation.

6.1.5: Enlist body tissue and body fluid suitable for DNA profiling.

6.1.6: Discuss the importance of histopathology and cytology examination in forensic investigation.

6.1.7: Discuss importance of blood grouping in forensic investigation.

6.1.8: Discuss significance of HLA typing in forensic investigation.

FM6.2 - Describe the methods of sample collection, preservation, labeling, dispatch, and interpretation of reports

6.2.1: Describe method of collection, packing, labelling, sealing and dispatch of evidentiary materials to the laboratory.

6.2.2: Describe the method of interpretation of investigation reports like Chemical analysis, Histopathological examination, Microbiological examination etc.

FM6.3 - Demonstrate professionalism while sending biological or trace evidences to Forensic Science lab, specifying the required tests to be carried out, objectives of preservation of evidences sent for examination, personal discussions on interpretation of findings

6.3.1: Draft requisition letter to be sent along with the samples preserved for laboratory analysis/examination mentioning type of sample preserved, required tests to be done, and brief history of the case.

6.3.2: Demonstrate professionalism while sending the samples for analysis such as maintaining confidentiality and chain of custody.

FM14.21 - To collect, preserve, seal and dispatch exhibits for DNA-Finger printing using various formats of different laboratories.

14.21.1: Describe the procedure involved in collecting, preserving, sealing and dispatching exhibits for DNA profiling from a living individual.

14.21.2: Describe the procedure involved in collecting, preserving, sealing and dispatching exhibits for DNA profiling from a dead individual after conducting medicolegal autopsy.

14.21.3: Describe the procedure involved in collecting samples for DNA profiling depending on the laboratory policies of collecting blood on dry gauze or EDTA vacutainer or on FTA cards,

Emerging technologies in Forensic Medicine

• **SDL – 1 hr**

Assessment: Written, Viva voce

FM7.1 - Enumerate the indications and describe the principles and appropriate use for:- DNA profiling, Facial reconstruction, Polygraph (Lie Detector), Narcoanalysis, Brain Mapping, Digital autopsy, Virtual Autopsy, Imaging technologies

7.1.1: Discuss principle, procedure and medico-legal significance of DNA profiling.

7.1.2: Describe principle and medico-legal significance of Facial reconstruction.

7.1.3: Enlist different Lie detection tests.

7.1.4: Describe principle, procedure and medico-legal significance of Polygraph, Narcoanalysis and Brain mapping.

7.1.5: Describe principles of Virtual / Digital autopsy.

7.1.6: Describe the uses of different Imaging technologies in crime investigation.

Skills in Forensic Medicine & Toxicology

- **SGD – 2 hrs (Practicals)** **Assessment:** OSPE, OSCE, Viva voce

FM14.4 - Conduct and prepare report of estimation of age of a person for medico-legal and other purposes & prepare medico-legal report in a simulated/ supervised environment

14.4.1: Explain the procedure of taking an informed consent from a person after explaining the importance and procedure of age estimation in criminal cases (accused/ victim of a crime) and civil cases (joining employment, obtaining pension, etc).

14.4.2: Estimate the age of a person by using physical, dental and radiological findings.

14.4.3: Prepare the medicolegal report on the age of a person.

- **SGD – 10 hr (along with discussion of concerned competencies (Mechanical injuries, firearm injuries, thermal injuries, asphyxia, sexual offences, etc) in other SGD)**

Assessment: OSPE, Viva voce, Practical record, Log Book

FM14.5 - Conduct & prepare post-mortem examination report of varied etiologies (at least 10) in a simulated/ supervised environment

14.5.1: Describe the techniques of conducting a medicolegal autopsy.

14.5.2: Describe the postmortem findings (external and internal) in a medicolegal autopsy.

14.5.3: Enumerate the ancillary investigations required (along with appropriate materials for such investigations) in a medicolegal autopsy.

14.5.4: Draft the postmortem report after a medicolegal autopsy.

Medicolegal autopsies may be a case of unnatural death, natural death, custodial death, alleged medical negligence, decomposed body, mutilated body.

- **SGD – 2 hrs (Practicals)**

Assessment: OSPE, Viva voce,

Practical record, Log Book

FM14.11 - To identify & describe weapons of medicolegal importance which are commonly used e.g. lathi, knife, kripaan, axe, gandasa, gupti, farsha, dagger, bhalla, razor & stick. Able to prepare report of the weapons brought by police and to give opinion regarding injuries present on the person as described in injury report/ PM report so as to connect weapon with the injuries. (Prepare injury report/ PM report must be provided to connect the weapon with the injuries)

14.11.1: Document the information before commencing the weapon examination.

14.11.2: Examine and document the details of weapons of medicolegal importance.

14.11.3: Prepare a report on the weapon examined.

14.11.4: Opine whether the injuries present in the wound certificate/ postmortem report are possible to be caused by the weapon examined.

14.11.5: Explain the method of packing and handing over the weapon to concerned police (maintaining the chain of custody).

FM14.12 - Describe the contents and structure of bullet and cartridges used & to provide medicolegal interpretation from these

14.12.1: Describe the structure and contents of Rifled cartridge & prepare a medico-legal inference.

14.12.2: Describe the structure and contents of Shotgun cartridge & prepare a medico-legal inference.

- **SGD – 1 hr (Practical)**

Assessment: OSPE, OSCE, Viva voce,

Practical record, Log Book

FM14.16 - To examine & prepare medico-legal report of drunk person in a simulated/ supervised environment

14.16.1: Take an informed consent for examination of a person with alleged drunkenness.

14.16.2: Describe the procedure of examination and collection of evidentiary material for medicolegal purpose.

14.16.3: Prepare a medicolegal report and opinion in a drunkenness case.

14.16.4: Explain the procedure of handing over the evidentiary material to the investigating officer.

• **SGD – 1 hr (Practical)** **Assessment:** OSPE, Viva voce, Practical record, Log Book

FM14.19 - To identify & prepare medico-legal inference from bone fracture, soot particles, diatoms & wound healing (slides)

14.19.1: List the microscopic identifying features after examining the histopathological slides of brain infarct, liver cirrhosis, brain haemorrhage, bone fracture, pulmonary oedema, brain oedema, soot particles, diatoms & wound healing.

14.19.2: Describe the medico-legal inferences after examining the above mentioned histopathological slides.

**Summary of TL methods and list of competencies to be covered in
Phase III IMBBS part 1 and Assessment methods**

Sl. No.	Teaching hours and type	Competency numbers	Assessment methods
1.	Lecture / SDL– 1 hr (Orientation class)	1.3, 1.4, 1.5, 1.6	No assessment
2.	SGD– 2 hrs (Moot Court)	14.22, 2.29	Log book / Viva voce / OSCE
3.	SGD – 1 hr (Role play)	1.7, 14.20	Log book / Viva voce / OSCE / Skill station
4.	Lecture – 1 hr	1.8, 2.30	Written, Viva voce
5.	Lecture – 1 hr	1.9	Written, Viva voce
6.	SGD – 1hr (Practical)	1.10, 1.11	Written / Viva voce / OSCE
7.	SGD – 5 hrs	2.20, 2.21, 2.22, 2.23,	Written / Viva voce
8.	SGD – 1 hr	2.24	Written / Viva voce
9.	SGD – 1 hr	2.25	Written / Viva voce / OSPE
10.	Lecture – 1 hr	2.26	Written, Viva voce
11.	SGD – 3hrs	2.27, 2.28, 4.13	Written / Viva voce / OSPE / log book / Practical record
12.	SGD – 4 hrs	3.3	Written, Viva voce, OSCE
13.	Lecture – 2hrs	3.4, 3.5, 3.6, 3.7, 3.8	Written, Viva voce
14.	SGD – 3 hrs	3.9, 3.10	Written, Viva voce, OSCE
15.	SGD – 4 hrs	3.11, 3.12	Written, Viva voce, OSCE / OSPE

16.	SGD – 2 hrs (Practicals)	14.1	Log book / Skill station / Viva voce, OSCE
17.	SGD – 1 hr (Practicals)	14.10	Log book / Practical record / Viva voce, OSPE
18.	Lecture – 2 hrs	3.18, 3.19, 3.20	Written, Viva voce
19.	Lecture – 2 hrs	3.22, 3.23, 3.26	Written, Viva voce
20.	SDL – 1 hr	3.21, 3.24, 3.25	Written, Viva voce
21.	Lecture – 1 hr	3.13	Written, Viva voce, OSPE / OSCE
22.	Lecture – 1 hr	3.14	Written, Viva voce, OSCE
23.	SGD – 3 hrs	3.15, 3.16, 3.17	Written, Viva voce, OSCE
24.	SGD – 1hr (Practical)	14.15	Practical record, log book, Viva voce, OSCE
25.	SGD – 1hr (Practical)	14.14	Practical record, log book, Viva voce, OSCE
26.	Lecture – 2 hrs	3.27, 3.28	Written, Viva voce, OSCE
27.	Lecture – 1 hr	3.29	Written, Viva voce, OSCE
28.	SDL – 1 hr	3.30, 3.31	Written, Viva voce, OSCE
29.	SGD – 2 hrs	3.32, 3.33, 14.18	Practical record, Log book, Viva voce, OSCE
30.	Lecture – 3 hrs	4.1, 4.2, 4.3, 4.4, 4.5, 4.6	Written, Viva voce, OSCE
31.	Lecture – 1 hr	4.7, 4.12, 4.13	Written, Viva voce, OSCE
32.	Lecture – 1 hr	4.8	Written, Viva voce, OSCE
33.	SGD – 1 hr	4.9, 4.10, 4.14, 4.15	Practical record, Log book, Viva voce, OSCE
34.	Lecture – 1 hr	4.16, 4.17, 4.11	Written, Viva voce
35.	SGD – 3hrs	4.18, 4.19, 4.20, 4.21, 4.24, 4.22, 4.23, 4.25, 4.26, 4.27	Written, Viva voce
36.	SGD – 1 hr	4.28, 4.29, 4.30	OSPE, Viva voce
37.	Lecture – 1 hr	5.1, 5.2	Written, Viva voce
38.	Lecture – 1 hr	5.3, 5.4, 5.5	Written, Viva voce
39.	SDL – 1 hr	5.6	Written, Viva voce
40.	SGD – 1 hr	6.1, 6.2, 6.3, 14.21	OSPE, Viva voce
41.	SDL – 1 hr	7.1	Written, Viva voce
42.	SGD – 2hrs (Practicals)	14.4	OSPE, OSCE, Viva voce
43.	SGD – 10 hrs	14.5	OSPE, Viva voce, Practical record, Log Book
44.	SGD – 2hrs (Practicals)	14.11, 14.12	OSPE, Viva voce, Practical record, Log Book
45.	SGD – 1 hr (Practicals)	14.16	OSPE, OSCE, Viva voce, Practical record, Log Book
46.	SGD – 1 hr (Practicals)	14.19	OSPE, OSCE, Viva voce, Practical record, Log Book

Model Time table for Phase II &Phase III part 1 MBBS

Refer to RGUHS website

Competencies in Internship

Certifiable Procedural skills desirable of Indian Medical Graduate in Forensic Medicine & Toxicology

A. An Intern must have observed or preferably assisted in:

- Documentation and certification of trauma (I)
- Diagnosis and certification of death (D)
- Legal documentation related to emergency cases (D)
- Certification of medico-legal cases e.g. Age estimation, Sexual Violence etc. (D)
- Establishing communication in medico-legal cases with police, public health authorities, other concerned departments, etc (D)

I- Independently performed on patients,

O- Observed in patients or on simulations,

D- Demonstration on patients or simulations and performance under supervision in patients **B.**

An Intern must have observed a medicolegal autopsy / postmortem

Compulsory rotating Internship posting of 7 days in Forensic Medicine and Toxicology Log book to be maintained.

The internship posting has to be extended (repeated) till all the certifiable skills are achieved.

Use of skill lab is desirable wherever available

Sl. No	Competency	Number of times to be done	Assessment	Setting
1	IMG should independently examine a trauma patient / simulated patient and document and certify trauma	02	Skill assessment	Casualty / EMD
2	IMG should demonstrate on patients or simulations and performance under supervision in patients the diagnosis and certification of death	01	Skill assessment / DOAP Session	Casualty / EMD / Ward / ICU
3	IMG should demonstrate the legal documentation related to emergency care in a medicolegal register / accident register maintained at casualty / EMD	01	Skill assessment / DOAP Session	Casualty / EMD
4	IMG should examine, document and certify in a medicolegal case of age estimation	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
5	IMG should examine, document and certify in a medicolegal case of victim of Sexual violence	01	Skill assessment / DOAP Session	OBG /Forensic Medicine /Casualty / EMD
6	IMG should examine, document and certify in a medicolegal case of accused of Sexual violence	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
7	IMG should demonstrate communication in medicolegal cases with police	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
8	IMG should demonstrate communication in medicolegal cases with public health authorities	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
9	IMG should demonstrate communication in medicolegal cases with Radiology / Pathology / Microbiology / FSL departments	01	Skill assessment / DOAP Session	Forensic Medicine /Casualty / EMD
10	IMG should observe and document a medicolegal autopsy / postmortem examination	01	Skill assessment / DOAP Session	Forensic Medicine

Assessment in Forensic Medicine & Toxicology

Summative Assessment - An assessment conducted at the end of instruction to check how much the student has learnt.

Formative Assessment - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

Internal Assessment - Range of assessments conducted by the teachers teaching a particular subject with the purpose of knowing what is learnt and how it is learnt. Internal assessment can have both formative and summative functions.

Note - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually.

Scheduling of Internal Assessment - In Phase II MBBS there will be ONE Internal assessments in theory and practicals.

- In Phase III part 1 MBBS there will be two Internal assessments in theory and practical. One of the test should be prelim or pre-university examination

Theory IA can include: Theory tests, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have essay questions, short notes and creative writing experiences.

Practical IA can include: practical tests, Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), records maintenance and attitudinal assessment.

Assessment of Log-book- Log book should record all activities like seminar, symposia, quizzes and other academic activities. It should be assessed regularly and submitted to the department. Up to twenty per cent IA Theorymarks should be for Log book assessment.

Assessment of Practical Record book- Practical book should record all skills and other practical exercises done during the academic programme. It should be assessed regularly and submitted to the department. Up to twenty per cent IA Practical marks should be for Log book assessment

Internal Assessment for AETCOM will include: - Written tests comprising of short notes and creative writing experiences.

OSCE based clinical scenarios and/or viva voce. Skill competencies acquired during the Professional Development Programme (AETCOM) must be tested during the practical and viva voce.

Feedback in Internal Assessment - Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and students must be sensitized to giving and receiving feedback.

The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.

It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination. Internal assessment should be based on competencies and skills.

Criteria for appearing in University examination: Learners must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination

Annexure

Teaching Learning Methods

Teaching Learning Methods

- Didactic lectures should be made more interactive by encouraging the more involvement of the students. In the present digital era, student's involvement is more with usage of technology. For examples, many polling sessions, quizzes etc can be done using google slides and other apps like Kahoot, Socrative, menti.com etc.
- Small group discussion (SGD) should be planned properly and discussed among the faculty members before taking the class. As far as possible, uniformity should be maintained in the SGD by various facilitators. Case based learning (CBL) and problem based learning (PBL) may be used to make the learner understand and learn about the various aspects in order to achieve the particular competency.
- Encourage the students learn themselves through self-directed learning (SDL). SDL sessions may be planned with objectives in order to cover the particular competency. These sessions may be conducted by providing learning material (research articles, public news, videos, etc) by a teacher and ask the students to search on a particular topic. Students should learn themselves by going through available resources and come back to classes allotted for SDL sessions where teacher able to connect the learning of students in order to achieve the competency.
- Integrated classes should be planned in order to cover the competency involving the topics from different subjects. These classes can be taken using Nesting, Temporal Coordination or Sharing. Case linkers may be used to link the topic/subject area among different subjects/ departments.
- Skills should be taught using the clinical cases at hospital wards/casualty/EMD, simulation in skills labs and/or departmental demonstration rooms. Case scenarios may be developed while teaching at skills lab and/or demonstration rooms.

Example for teaching the clinical examination in poisoning:

- **Case scenario:** A farmer working in a field was brought with history of breathlessness, vomiting, excessive sweating and muscle twitching. On examination, the pupils were constricted and heart rate was decreased. He had defecated in his cloths. Smell of kerosene was present in his breath. Even the cloths were soiled smelling kerosene.
- **Demonstration of clinical examination:** Mannequins or standardised patients in the skills lab may be used for examination and recording of vital parameters like pulse, BP, RR, SPO2 and state of pupils. Also, response to treatment can be.
- **Diagnosis and management:** Discuss the differential diagnosis, investigations and definitive diagnosis. Discuss the various treatment modalities. The response to drugs used for treatment can be demonstrated using high fidelity mannequins.

- **Medicolegal responsibilities:** The medicolegal responsibilities such as preservation of gastric lavage material, medicolegal documentation, and police intimation should be demonstrated in a simulated environment and using standard formats.

Example for teaching the topic Injuries/ Trauma with integration:

Linker Case: A 30-year-old male while travelling in a motor bike met with an accident with a car coming from opposite side. As a result of this, he sustained multiple injuries (can be displayed in the form of photographs). He was brought by his friend to the hospital. On reaching the hospital, patient was in semiconscious state with difficulty in breathing.

Subjects for integration: Forensic Medicine, General Surgery.

- Forensic Medicine: Topics covered in this subject include different types of mechanical injuries possible in such accidents and other relevant topics related to mechanical injuries. [Competencies to be covered: FM 3.3, 3.4, 3.8]
- General Surgery: First aid treatment, Basic life support, Transportation of patient, Basic management of injuries at hospital. [Competencies to be covered: SU 17.1, 17.2, 17.3] **Type of Integration:**
- Horizontal: Temporal coordination can be done if is done in the same phase.
- Vertical: Nesting can be used if it is done in two different phases.

Additional details to case scenario:

- In addition to linker case, case details need to be added by respective departments depending on the progression of the class (such as clinical features, internal injuries, postmortem findings etc).
- Case details may be introduced step by step in order to involve students in discussion.

Example for teaching the topic Drugs / Substances of abuse with integration:

Linker Case: A 15-year-old student was brought by his parents to the hospital with a history of addiction to drugs and behavioural changes since 6 months. On examination, the patient was anxious, restless and was hesitant to talk.

Subjects for integration: Pharmacology, Forensic Medicine, Psychiatry.

- Pharmacology: Topics covered in this subject include Definitions, List of drugs of abuse, Mechanism of drug addiction. [Competencies to be covered: PH 1.22, 1.23]
- Forensic Medicine: Description of features and management of drugs/substances of abuse. [Competencies to be covered: FM 12.1]
- Psychiatry: Etiology, clinical features, treatment of drugs/substances of abuse. [Competencies to be covered: PS 4.1, 4.2, 4.3, 4.4, 4.6, 4.7] **Type of Integration:**
- Horizontal: Temporal coordination/ Sharing can be done if is done in the same phase.
- Vertical: Nesting can be used if it is done in two different phases.

Additional details to case scenario:

- In addition to linker case, case details need to be added by respective departments depending on the progression of the class (such as clinical features, behavioural changes, complications, legal problems etc).
- Case details may be introduced step by step in order to involve students in discussion.

Annexure

Blue Print& Assessment methods - Theory

Type of questions	Marks per question	Number of questions	Total marks
MCQs	1	10	10
Long Essay questions	10	2	20
Short essay questions	5	8	40
Short answer questions	3	10	30

Number of QPs for the subject: One Theory marks 100

Theory Question Paper: Blue print

This shows the weightage given to each chapter in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each chapter.

Number of QPs for the subject: One.

Only CORE competencies shall be considered for framing questions. Each paper should contain the following distribution of questions (as shown in below table).

Theory Question Paper:

Only CORE competencies shall be considered for framing questions. Each paper should contain the following distribution of questions (as shown in below table).

Distribution of marks in suggested blue print:

Section	Chapters	Marks allotted
Section 1	General information [Dying declaration, Dying deposition, Medical records, Cause of death]	5 marks
Section 2	Forensic Pathology [Thanatology, Medicolegal autopsy, Mechanical asphyxia, Thermal deaths, Death due to starvation and neglect, Infanticide]	25 marks*
Section 3	Clinical Forensic Medicine [Identification, Mechanical injuries, Firearm injuries, Regional injuries, Sexual offences, Virginity, Pregnancy, Abortion, Impotence, Sterility, Sterilization, Artificial Insemination, Torture, Child abuse]	25 marks*
Section 4	Medical Jurisprudence [Medical law and ethics, Euthanasia, Bioethics, Research ethics]	15 marks
Section 5	Forensic Psychiatry, Forensic Laboratory Investigation in medico-legal practice	5 marks
Section 6	General Toxicology, Chemical Toxicology, Pharmaceutical Toxicology, Biototoxicology, Sociomedical Toxicology, Environmental Toxicology	25 marks*
	Total number of questions	100 marks

The Long essay questions shall be chosen from any two sections of Sections 2, 3 and 6. The distribution of questions for these sections shall be as follows:

- Two sections should contain 2 MCQs, 1 Long essay question, 2 Short essay questions and 1 Short answer question.
- One section should contain 1 MCQ, 3 Short essay questions and 3 Short answer questions.

One Long Essay question and One Short Essay question should be of Problem solving or on Clinical application.

35% questions should be of the Higher order thinking

This shows the weightage given to each topic in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each topic.

Annexure

Blue Print & Assessment methods - Practicals

**Practicals 80
Viva Voce 20**

Practical Question Paper: Blue print

<i>Excercise No.</i>	<i>Excercise</i>	<i>Marks</i>
Excercise-1	Wound certificate	10
Excercise-2	Age certificate	15
Excercise-3	Skeletal remains	10
Excercise-4 (Any one exercise)	Victim of rape	10
	Accused of rape	
	Drunkenness certificate	
Excercise-5	PM certificate	10
Excercise-6	Spotters	10
Excercise-7	MCCD	10
Excercise-8	Preservation of evidentiary materials in living and dead cases	5

Distribution of exercises among examiners for marking:

Evaluation of practical exercises should be equally distributed among the examiners. Suggested distribution as follows:

Examiner-1: Exercise 1 (10 marks) + Exercise 7 (10 marks)

Examiner-2: Exercise 2 (15 marks) + Exercise 8(5 marks)

Examiner-3: Exercise 3 (10 marks) + Exercise 6 (10 marks) *Examiner-4:*

Exercise 4 (10 marks) + Exercise 5 (10 marks) **Detailed planning of**

practical assessment:

<i>Exercise No.</i>	<i>Exercise</i>	<i>Assessment</i>	<i>Marks</i>
Excercise-1	Wound certificate	<p>Option-A:</p> <ul style="list-style-type: none"> • A case scenario containing the details of a patient, history and part-task trainer with injuries will be given. • Student will be asked to draft a certificate as per the format based on above case details. <p>Option-B:</p> <ul style="list-style-type: none"> • A case scenario containing the details of a patient, history, multiple photographs of injuries with scale attached (printed in a single page) will be given. • Student will be asked to draft a certificate as per the format based on above case details. 	10
Excercise-2	Age certificate	<ul style="list-style-type: none"> • A case scenario containing the details of a patient / subject, history, findings of General Physical Examination, Tooth eruption (picture of dentition or Orthopantomogram) and X-ray film/s of various joints will be given. • Student will be asked to draft a certificate as per the format based on above case details. 	15
Excercise-3	Skeletal remains	<ul style="list-style-type: none"> • A case scenario containing the history and relevant findings of scene from where the bone/s were recovered will be given. • Student will be asked to examine the bone/s and draft a report as per the format. 	10

Excercise-4 (Any one exercise)	Victim of rape	<ul style="list-style-type: none"> • A case scenario containing the details of a patient / subject, history and findings related to sexual violence (victim of rape) will be given. • Student will be asked to draft a report in a format (as per MOHFW, GOI) based on case details and answer questions related to case scenario. 	10
	Accused of rape	<ul style="list-style-type: none"> • A case scenario containing the details of a patient / subject, history and findings related to sexual violence (accused of rape) will be given. 	

		<ul style="list-style-type: none"> • Student will be asked to draft a report as per the format based on case details and answer questions related to case scenario. 	
	Drunkenness certificate	<ul style="list-style-type: none"> • A case scenario containing the details of a patient / subject, history and findings related to drunkenness will be given. • Student will be asked to draft a report as per the format based on case details and answer questions related to case scenario. 	
Excercise-5	PM certificate	<ul style="list-style-type: none"> • A case scenario containing the details of a deceased, history and postmortem findings will be given. • Student will be asked to draft the PM certificate and give opinion on cause of death, time since death and any other questions related to case scenario. 	10
Excercise-6 (Spotters)	Hair, Semen, & other Biological fluids; Blood - Identification of species; Photographs / Specimens; Poisons; Histopathology Slides; Firearm cartridge	<ul style="list-style-type: none"> • It should contain 10 spotters. Each spotter will be awarded maximum of one mark for correct responses. Ideally spotters should contain applied type of questions related to content of the spotter. • Evaluation will be based on the marks allotted to structured questions. 	10
Excercise-7	MCCD	<ul style="list-style-type: none"> • A case scenario containing the details of a patient, history and clinical findings related to MCCD will be given. • Student will be asked to draft a certificate as per the format based on above case details and answer questions related to case scenario and MCCD. 	10

Excercise-8	Preservation of evidentiary materials in living and dead cases	<ul style="list-style-type: none"> • A case scenario containing the details of a living patient or deceased, history and clinical features of any poisoning / disease or injuries condition for histopathology examination / requirement for DNA profiling will be given. • Student will be asked to list the various evidentiary materials to be preserved in such cases, write the labels for such preservation, and write the letters to FSL or concerned laboratory for analysis. 	5
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Annexure

Integration topics

Integration: The teaching should be aligned and integrated horizontally and vertically recognizing the importance of medico-legal, ethical and toxicological issues as they relate to the practice of medicine.

Integration of Forensic Medicine with Other departments:

The suggested topics, competencies and the subjects/departments for integrated teaching are shown in below table.

<i>Sl. No.</i>	<i>Topic for integration</i>	<i>Subject [Competencies]</i>
1	Injuries / Trauma	Forensic Medicine [FM 3.3, 3.4, 3.8, 3.9, 3.10] General Surgery [SU 17.1, 17.2, 17.3]
2	Wound healing	General Surgery [SU 5.1, 5.2, 5.3, 5.4] Pathology [PA 5.1] Forensic Medicine [FM 3.6]
3	Regional injuries	Forensic Medicine [FM 3.11, 3.12] General Surgery [SU 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 17.10]
4	Burns	Forensic Medicine [FM 2.24, 2.25] General Surgery [SU 4.1, 4.2, 4.3, 4.4]
5	Organ transplantation	General Surgery [SU 13.1, 13.2, 13.3, 13.4] Ophthalmology [OP 4.9, 4.10] Forensic Medicine [FM 2.4]
6	Pregnancy and labour	Forensic Medicine [FM 3.19, 3.20] OBG [OG 6.1, 7.1]
7	Abortion	Forensic Medicine [FM 3.27, 3.28] OBG [OG 1.3, 9.1, 9.2, 20.1, 20.2]
8	PCPNDT Act	OBG [OG 20.3] Radiodiagnosis [RD 1.13] Forensic Medicine [FM 3.21]
9	Impotence and Sterility	Forensic Medicine [FM 3.22, 3.23, 3.24, 3.25, 3.26] Pharmacology [PH 1.40] OBG [OG 28.1, 28.2, 28.3, 28.4]
10	Psychiatric disorders	Psychiatry [PS 3.7, 3.8] Forensic Medicine [FM 5.1, 5.2, 5.3, 5.4, 5.5, 5.6]
11	General toxicology	Forensic Medicine [FM 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8] Pharmacology [PH 1.4, 1.5, 1.11] General Medicine [IM 21.1, 21.5, 21.6, 21.7, 21.8]
12	Insecticides	Forensic Medicine [FM 8.6] Pharmacology [PH 1.52] Community Medicine [CM 3.8]
13	Corrosives	Forensic Medicine [FM 9.1] General Medicine [IM 21.3]
14	Heavy metal poisoning	Forensic Medicine [FM 9.2, 9.3] Pharmacology [PH 1.53]
15	Plant poisons	General Medicine [IM 21.2] Forensic Medicine [FM 10.1]
16	Snake, scorpion, insect bites	Forensic Medicine [FM 11.1] General Medicine [IM 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9]

17	Alcohol disorders	Pharmacology [PH 1.20, 1.21] Pathology [PA 12.1, 25.4] General Medicine [IM 5.5] Forensic Medicine [FM 9.4]
18	Drugs of abuse	Pharmacology [PH 1.22, 1.23] Forensic Medicine [FM 12.1] Psychiatry [PS 4.1, 4.2, 4.3, 4.4, 4.6, 4.7]

Sl no	Subject	Competency number	Competency	TL method	Assessment	Vertical Integration	Horizontal Integration
1	Anatomy	AN14.3	Describe the importance of ossification of lower end of femur & upper end of tibia	Lecture	Viva voce / Practicals	Forensic Medicine	-
2	Pharmacology	PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	Lecture / SGD	Written / Viva voce	Psychiatry	Forensic Medicine

3		PH5.7	Demonstrate an understanding of the legal and ethical aspects of prescribing drugs	SGD	Short note / viva voce	-	Forensic Medicine
4	Radiodiagnosis	RD1.13	Describe the components of the PC & PNDD act and its medicolegal implications	Lecture / SGD		OBG, Forensic Medicine	-
5	Psychiatry	PS19.3	Describe and discuss the basic legal and ethical issues in psychiatry	Lecture / SGD	Written / Viva voce	Forensic Medicine, AETCOM	-
6	General Medicine	IM20.1	Enumerate the poisonous snakes of your area and describe the distinguishing marks of each	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
7		M20.2	Describe, demonstrate in a volunteer or a mannequin and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	DOAP session	Skill assessment / Written / Viva voce	Forensic Medicine	
8		M20.3	Describe the initial approach to the stabilisation of the patient who presents with snake bite	Lecture / SGD	Written / Viva voce	Forensic Medicine	
9		M20.4	Elicit and document and present an appropriate history, the circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite	Bedside clinic, DOAP session	Skill assessment	Forensic Medicine	

10	IM21.2	Enumerate the common plant poisons seen in your area and describe their toxicology, clinical features, prognosis and	Lecture /SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
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			specific approach to detoxification				
11		IM21.3	Enumerate the common corrosives used in your area and describe their toxicology, clinical features, prognosis and approach to therapy	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
12		IM21.4	Enumerate the commonly observed drug overdose in your area and describe their toxicology, clinical features, prognosis and approach to therapy	Lecture / SGD	Written / Viva voce	Forensic Medicine, Pharmacology	
13		IM21.5	Observe and describe the functions and role of a poison centre in suspected poisoning	DOAP Session	Document in log book	Forensic Medicine, Pharmacology	
14		IM21.6	Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to write a medico legal report on a suspected poisoning	Lecture / SGD / DOAP Session	Written / Viva voce / Skill assessment	Forensic Medicine, Pharmacology	
15		IM21.7	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	DOAP Session	Skill assessment	Forensic Medicine, Pharmacology	
16		IM21.8	Enumerate the indications for psychiatric consultation and precautions to take in a patient with suspected suicidal ideation / gesture	DOAP Session	Skill assessment	Forensic Medicine, Psychiatry	

17	OBG	OG1.3	Define and Discuss still birth and abortion	Lecture / SGD	Notes	Forensic Medicine	
18		OG9.2	Describe the steps and observe/ assist in the performance of an MTP evacuation	DOAP Session, Bedside clinic	Viva voce	Forensic Medicine	
19		OG20.1	Enumerate the indications and describe and discuss the legal aspects, indications, methods for first and second trimester MTP; complications and management of complications of medical termination of pregnancy	Lecture / SGD	Written / Viva voce	Forensic Medicine	
20		OG20.2	In a simulated environment administer informed consent to a person wishing to undergo medical termination of pregnancy	DOAP Session	Skill assessment	Forensic Medicine	
21		OG20.3	Discuss Pre-conception and Prenatal Diagnostic Techniques (PC&PNDT) Act 1994 & its amendments	Lecture / SGD	Written / Viva voce	Forensic Medicine	
22	General Surgery	SU8.1	Describe the principles of Ethics as it pertains to surgery	Lecture / SGD	Written / Viva voce / Skill assessment	Forensic Medicine, AETCOM	
23		SU8.2	Demonstrate Professionalism and empathy to the patient undergoing surgery	Lecture / SGD / DOAP Session	Written / Viva voce / Skill assessment	Forensic Medicine, AETCOM	
24		SU8.3	Discuss Medico legal issues in surgical practice	Lecture / SGD	Written / Viva voce / Skill assessment	Forensic Medicine, AETCOM	

Annexure

Topics for Electives

Topics for Electives

- Disaster management
- Medicolegal aspects of healthcare / hospital administration
- Depositing evidence in a Court of Law
- Medicolegal aspects in management of emergency cases
- Forensic odontology
- Disaster victim identification
- Forensic anthropology
- Forensic psychiatry
- Forensic radiology
- Forensic toxicology
- Snake bite – species identification and management
- Crime scene examination
- Forensic ballistics

Annexure

Reference Books and Journals

Suggested references (as per Vancouver style): (Specification mentioned such as edition – subject to change with newer edition)

- **Basic references**

- 1) Reddy KSN, Murthy OP. The Essentials of Forensic Medicine and Toxicology. 35th edition, 2022. Jaypee Brothers Medical Publishers, New Delhi.
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 - 5) Journal of Karnataka Medico-Legal Society.
 - 6) Journal of South India Medico-Legal Association.
 - 7) Journal of Indian Academy of Forensic Medicine.
 - 8) Journal of Indian Society of Toxicology
 - 9) Journal of Forensic and Legal Medicine
 - 10) Journal of Forensic Sciences
 - 11)
 - 12)

Annexure

Log Book Format

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



FORENSIC MEDICINE and TOXICOLOGY
LOGBOOK
FOR MBBS

AS PER
Competency-Based Medical Education Curriculum

College Name

College Logo

Affiliated to

**Rajiv Gandhi University of Health Sciences, Karnataka
College Name**

(Affiliated to Rajiv Gandhi University of Health Sciences, Karnataka)

**M.B.B.S Log Book
Forensic Medicine and Toxicology**

Name of the Student :

University Registration Number :

Academic year :

Signature of the Student :

CERTIFICATE

This is to certify that Ms / Mr is student of Medical College, He / She has participated in the National Medical Commission mandated sessions as a part of the Competency Based Medical Education Curriculum in the subject of Forensic Medicine and Toxicology during the period to

Recording of the contents in this Log Book is a bonafide work of the student.

Staff In-charge

Head of Department

Date:

Place:

GENERAL INSTRUCTIONS

- 1) Log book is the record of all the relevant academic/co-curricular activities undertaken by the student in a particular department.
- 2) The student is responsible for getting the entries in the logbook verified by the Faculty in charge regularly.
- 3) Entries in the logbook will reflect the activities undertaken in the department and have to be scrutinized by the Head of the Department.
- 4) The logbook is a record of various activities by the student like:
 - a. Overall participation & performance
 - b. Attendance
 - c. Participation in sessions
 - d. Record of completion of pre-determined activities.
 - e. Acquisition of selected competencies
- 5) The logbook is the record of work done by the candidate in that department and should be verified by the college before submitting the application of the students for the University examination.

INDEX

Sl. No.	Type of activity	Page Numbers	
		From	To
1	MBBS Phase II: Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc		
2	MBBS Phase II: Skill / Practical Sessions, Postmortem/ Clinical case observation		
3	MBBS Phase II: Self-directed learning		
4	MBBS Phase II: AETCOM module		
5	MBBS Phase II: Attendance and Internal Assessment		
6	MBBS Phase III, Part I: Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc		
7	MBBS Phase III, Part I: Skill / Practical Sessions, Postmortem/ Clinical case observation		
8	MBBS Phase III, Part I: Self-directed learning		
9	MBBS Phase III, Part I: AETCOM module		
10	MBBS Phase III, Part I: Attendance and Internal Assessment		
11	Final Attendance and Internal Assessment marks		
12	Certifiable Skill Acquisition in Forensic Medicine and Toxicology		
13	Achievements, Awards, Conference/ CME/ Workshop attended		
14	Certifiable skills in Internship		

ACTIVITIES DONE IN

MBBS PHASE II

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

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Self-directed learning

Name of the topic:

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Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?

3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.

4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

Formative Assessment

(Written test/ MCQs/ Viva Voce/ Quiz/ Debate etc)

Sl No .	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

Rating: *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Formative Assessment

(Written test/ MCQs/ Viva Voce/ Quiz/ Debate etc)

Sl No .	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

Rating: *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Attendance at the end of MBBS Phase II

<i>Percentage of classes attended</i>				<i>Student's signature</i>	<i>Faculty's signature</i>
<i>Lecture</i>	<i>SGD</i>	<i>SDL</i>	<i>AETCOM</i>		

Internal Assessment (IA)

<i>Sl. No.</i>	<i>Type of Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>

In theory marks, certain weightage can be given to up-to-date entries of logbook, AETCOM module reflection, Showing Professionalism during the course, etc.

In practical marks, certain weightage can be given to acquisition of skills and up-to-date entries of practical record book.

ACTIVITIES DONE IN

MBBS PHASE III, Part I

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Seminars, Tutorials, Projects, Case discussion, Debate, Quiz etc

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

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Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Skill / Practical Sessions, Postmortem/ Clinical case observation

Sl No.	Name of Activity	Date	Completed (C) /Repeat (R)	Faculty's signature

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1.

2.

3.

What did you learn from the above session?

How do you apply your knowledge in a medical / medicolegal situation?

What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

Self-directed learning

Name of the topic:

Objectives:

1.

2.

3.

4.

Reflective narration:

1. What did you learn from the above session?

2. How do you apply your knowledge in a medical / medicolegal situation?

3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

Self-directed learning

Name of the topic:

3.

4.

Reflective narration:

- 1.
- 2.
- 3.

Objectives:

- 1.
- 2.

What did you learn from the above session?

How do you apply your knowledge in a medical / medicolegal situation?

What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from the above session?

2. How do you apply your knowledge in a medical / medicolegal situation?

3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

- 3.
- 4.

Reflective narration:

1.

2.

3.

Self-directed learning

Name of the topic:

Objectives:

1.

2.

3.

4.

Reflective narration:

- 1.
- 2.
- 3.

What did you learn from the above session?

How do you apply your knowledge in a medical / medicolegal situation?

What knowledge or skill do you need to develop to handle similar situation in future? Signature
of Faculty

Self-directed learning

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from the above session?
2. How do you apply your knowledge in a medical / medicolegal situation?
3. What knowledge or skill do you need to develop to handle similar situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
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Signature of Faculty

AETCOM Session Module

number:

Name of the topic:

Objectives:

- 1.
- 2.
- 3.
- 4.

Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

AETCOM Session Module

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Name of the topic:

Objectives:

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- 3.
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Reflective narration:

1. What did you learn from this AETCOM session?
2. How do you apply the knowledge gained in a medical / medicolegal situation?
3. What skill do you need to develop to handle a real situation in future?

Signature of Faculty

Formative Assessment

(Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

Rating: *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Formative Assessment

(Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

Rating: *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Formative Assessment

(Written test/ MCQs/ Viva Voce/ Quizzes/ Debate etc)

Sl No	Name of Activity	Date	Rating	Faculty's signature	Feedback	Student's signature

Rating: *Below Expectations (B) – less than 50 %; Meets Expectations (M) – 51 to 70 %; Exceeds Expectations (E) – above 70 %.*

Attendance at the end of MBBS Phase III, Part I

<i>Percentage of classes attended</i>				<i>Student's signature</i>	<i>Faculty's signature</i>
<i>Lecture</i>	<i>SGD</i>	<i>SDL</i>	<i>AETCOM</i>		

Internal Assessment (IA)

<i>Sl. No.</i>	<i>Type of Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>

In theory marks, certain weightage can be given to up-to-date entries of logbook, AETCOM module reflection, Showing Professionalism during the course, etc.

In practical marks, certain weightage can be given to acquisition of skills and up-to-date entries of practical record book.

FINAL ATTENDANCE

<i>Phase</i>	<i>Percentage of classes attended</i>			<i>Eligible for University examination (Yes / No)</i>	<i>Student's signature</i>	<i>Faculty's signature</i>
	<i>Theory</i>	<i>Practical</i>	<i>AETCOM</i>			
Attendance at the end of MBBS Phase II				Not applicable		
Attendance at the end of MBBS Phase III (Part I)						

FINAL INTERNAL ASSESSMENT MARKS

<i>Sl. No.</i>	<i>Type of Assessment</i>	<i>Total marks</i>	<i>Marks scored</i>	<i>Student's signature</i>	<i>Faculty's signature</i>
1	Theory				

2	Practical				
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Achievements, Awards, Conference/ CME/ Workshop attended

(Related to Forensic Medicine and Toxicology)

Sl No	Date	Particulars	Faculty's signature

ACTIVITIES DONE

During Internship

Skills in Forensic medicine & Toxicology

Skill	Observed		Assisted		Done under Supervision		Able to do independently		Remarks/ Comments
	Date	No	Date	No	Date	No	Date	No	
Documentation and certification of trauma(I)									

Diagnosis and certification of death (D)									
Legal documentation related to emergency cases (D)									
Legal documentation related to emergency cases (D)									

Certification of medicallegal cases - Age estimation,. (D)									
Certification of medicallegal cases - sexual violence etc. (D)									
Certification of medicallegal cases - sexual violence etc. (D)									
Establishing communication in medico-legal cases with police, (D)									
Establishing communication in medico-legal cases with public health authorities, (D)									
Establishing communication in medico-legal cases with other concerned departments (D)									
Skill	Observed		Assisted		Done under Supervision		Able to do independently		Remarks/ Comments
	Date	No	Date	No	Date	No	Date	No	
Prerequisites, Conduction and Opinion writing in Medicolegal Autopsy (D)									

Prerequisites, Conduction and Opinion writing in Medicolegal Autopsy (D)									
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Annexure

Model Question papers

Rajiv Gandhi University of Health Sciences, Karnataka
Forensic Medicine & Toxicology
QP Code – XXXXX

Answer all questions, Illustrate your answer with diagrams wherever relevant

Max Marks 100 (This Question paper has XX pages) Max Time 3 hours

Long Essay: (10 M X 2 = 20 M)

1. A 30 year old agricultural labourer was brought to emergency department of the hospital with symptoms of excessive salivation, tears in the eyes, blurred vision, frequent urination, diarrhea and difficulty in breathing. Relatives accompanying him give history of hespraying some fluid in the fields when they saw him collapsed at the field. The doctor on examination found smell of kerosene emitting from mouth and nostrils, miosis, hypotension, bradycardia.
 - a) What is the probable diagnosis of poisoning? Give reasons **2M**
 - b) What is the mechanism of action in such poisoning for the expression of different signs and

- symptoms 2M
- c) Describe the management of such poisoning cases. 2M
- d) Describe the postmortem examination features in such poisoning case deaths. 2M
- e) Describe the Medicolegal importance of such poisoning cases 2M

2. Classify changes after death. Describe in detail about the mechanism of action, factors affecting, medicolegal importance and conditions mimicking Rigor mortis.

(2+2+2+2+2= 10M)

Short Essay: (5 M X 8= 40 M)

3. The Police found a human hand in a dust bin with intact fingers and tissues without any decomposition. How to identify the owner of this hand by examining the skin findings of the finger tips only? Describe in detail about this method of identification. What is the medicolegal importance of such method of identification? (1+2+2= 5M)
4. Describe in detail the procedure of calculation of time since death by use of features of late changes after death in a dead body. 5M
5. Describe in detail the procedure of medicolegal autopsy in a case of Custodial death as per NHRC (National Human Rights Commission) guidelines. 5M
6. Describe the mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of chronic lead poisoning (1+1+1+1+1= 5M)
7. Describe the mechanism of action, clinical features, management, postmortem findings and medicolegal aspects of Organophosphorus poisoning (1+1+1+1+1= 5M)
8. Define Professional Misconduct, Enlist four examples. What is the disciplinary procedure in such cases by State medical Council? (1+2+2= 5M)
9. Classify Skull fractures. What is Signature fracture and Ring fracture? What is lucid interval of head injury? (2+2 +1= 5M)
10. Describe the differentiating features between dry flame burns, scalds and chemical burns of skin. Add a note on Heat hematoma and heat laceration. (3+2=5M)

Short Answer: (3 M X 10 = 30 M)

11. Define Rape under Section 375 IPC 3M
12. Describe the entry wound of a Rifled firearm of a contact shot over the temple region of skull 3M
13. Name three poisons which can be identified by their characteristic smell / odour in a poisoned person. (Both Poison name and characteristic smell / odour has to be written) (1+1+1= 3M)
14. Describe the changes brought out by the MTP Amendment Act of 2021 3M
15. What is Privileged Communication, Describe with examples 3M
16. What constitutes Res ipsa loquitur, Describe with examples 3M

17. Describe the Rights of a registered medical practitioner 3M
18. Describe three differences between True insanity and Feigned insanity 3M
19. Describe three acts of Omission for causing Infanticide 3M
20. Describe three differences between Dying Declaration and Dying Deposition 3M *MCQ*
(Multiple choice questions): (1M X 10 = 10 M)
- 21.
- i. Kleptomania is an example of disorder
 a) Delusion b) Impulse c) Hallucination d) Insomnia
- ii. Luminal test is used to identify stains of
 a) Blood b) Semen c) Feces d) Saliva
- iii. Diagnosis of COMA in a dead person is alsoknown as
 a) Moment of death b) Mode of death c) Cause of death d) Manner of death
- iv. Oochronosis is seen in poisoning of
 a) Formic acid b) Nitric acid c) Oxalic acid d) Carbollic acid
- v. N-acetyl Cysteine is used as antidote in the poisoning of
 a) Paraquat b) Phosphorus c) Paracetamol d) Paraldehyde
- 22.
- i. Certifying Compos mentis by the doctor is done by examining
 a) Bicep reflex b) Patellar reflex c) Babinski sign d) Higher mental functions
- ii. Suspended animation is also known as
 a) Apparent death b) Brain death c) Sudden death d) Instantaneous death
- iii. Brush burn is also known as
 a) Scalds b) Joule burn c) Dermabrasion d) Grazed abrasion
- iv. Penal erasure means
 a) Punishment under IPC b) Professional death sentence c) Judicial hanging d) Marking Nut
- v. Locard's method is also known as
 a) Poroscopy b) Rugoscopy c) Cheiloscopy d) Palatoscopy

RAJIV GANDHI UNIVERSITY OF MEDICAL SCIENCES, KARNATAKA
MBBS Phase – III, Part I (CBME) Degree Examination

Time: Three hours

Max. Marks: 100 Marks

FORENSIC MEDICINE (RS-4) Q.P.

CODE:

Your answers should be specific to the questions asked

Draw neat labelled diagrams wherever necessary

(Questions No. 21 & 22 will have Multiple Choice Questions)

LONG ESSAYS:

2 x 10 = 20

marks

1. A 42-year-old male was found dead in his house in Mangalore. Autopsy was conducted on the deceased on 21st February, which revealed a moderately built adult male, measuring 165 cm in length and weighing 58 kg. Muscles of the jaw, neck, trunk and upper limbs were stiffened. The back of trunk was bluish to purplish coloured and on pressure over it for about a minute showed blanching. Body orifices are intact and healthy. Conjunctiva is pale on both sides. No external injuries are present on the body. Internal examination revealed oedematous lungs, congestion of liver, kidney and spleen. Heart examination revealed atherosclerotic changes in all the coronary arteries. Organs were preserved for histopathological examination. Viscera and blood preserved for chemical analysis. Cause of death kept pending histopathology and chemical analysis reports.

Question 1.1: Name of postmortem changes 'muscle stiffness of the body' and 'bluish colouration over back of trunk'. (2 marks)

Question 1.2: Enumerate the early postmortem changes after death. (2 marks)

Question 1.3: Describe the mechanism of postmortem change 'muscle stiffness'. (2 marks)

Question 1.4: Describe the medicolegal importance of postmortem change 'muscle stiffness'. (2 marks)

Question 1.5: Estimate the time since death in this case with reasons. (2 marks)

2. A 30-year-old male was brought to a casualty with a history of consumption of an unknown poison. Patient was in semiconscious state with vomitus material on the shirt with kerosene like odour. He had difficulty in breathing with excessive salivation and profuse sweating. On examination, it was

observed that pupils were constricted with bradycardia, hypotension, abdominal cramps, wheezing and crepitations on lung auscultation.

- Question 2.1: What is the most probable diagnosis in this case? (1 mark)
Question 2.2: Explain the mechanism of this poisoning. (2 marks)
Question 2.3: Interpret the lung findings in this case with reasoning. (2 marks)
Question 2.4: Suggest the investigations required in this case. (2 marks)
Question 2.5: Create a treatment plan for this poisoning. (3 marks)

SHORT ESSAYS:

8 x 5 = 40 Marks

3. Define hanging. Describe the postmortem findings in a complete hanging. (1+4 =5 marks)
4. Explain difference between scald and flame burn. (5 marks)
5. Define Dactylography. Mention it's types. Explain its medicolegal importance. (1+2+2=5 marks)
6. A 25-year-old unmarried female was arrived to a hospital with history of sexual violence. The patient was examined by the duty doctor and documented the findings and preserved samples for medical laboratory and forensic laboratory analysis. After receiving the lab reports, doctor opines as 'there are signs suggestive of vaginal intercourse with force'.
Question 6.1: Enumerate the findings of general physical examination. (1 mark)
Question 6.2: Describe the findings of genital examination. (2 marks)
Question 6.3: Enumerate the samples collected for medical & forensic laboratory analysis. (1 mark)
Question 6.4: Justify with reasons for the doctor's opinion. (1 mark)
7. Define contusion. Describe its medicolegal importance. (1+4 = 5 marks)
8. A patient visits a doctor complaining of pain abdomen since 2 days. After clinical examination doctor asks the patient to get a US scan abdomen at XYZ laboratory. Patient pays his professional fee Rs. 300 and visits the laboratory for scanning. After scanning, the patient was asked to pay Rs. 2000, which was argued by the patient for extra charges and threatened to lodge a complaint. Finally, lab informs that 50% goes to the doctor as cuts for referring the patient.
Question 8.1: Name the unethical act by the doctor in this case. (1 mark)
Question 8.2: Define the doctor's offence in this case as per the IMC Act. (1 mark)
Question 8.3: Justify the reason for concluding the doctor's act as unethical. (2 mark)
Question 8.4: Describe any two punishments for unethical act in this case. (1 mark)
9. Differentiate between venomous and non-venomous snake. (5 marks)
10. Explain the treatment of cyanide poisoning. (5 marks)

SHORT ANSWERS:**10 x 3 = 30 Marks**

11. Define dying declaration and explain its medicolegal importance. (1+2 = 3 marks)
12. Describe the skin incisions used for medicolegal autopsy. (3 marks)
13. What is meant by tandem bullet, Dum-Dum bullet and Souvenir bullet. (3 marks)
14. Write briefly on whiplash injury. (3 marks)
15. Enumerate any three indications for MTP. (3 marks)
16. Name any one active principle of Abrusprecatorius, Ricinus and Cannabis. (1+1+1 = 3 marks)
17. Define Bioethics. Enumerate any 4 principles of Bioethics. (1+2 = 3 marks)
18. Define Euthanasia and explain its types. (1+2 = 3 marks)
19. What is meant by 'Res Ipsa Loquitur'? Give any two suitable examples. (1+2 = 3 marks)
20. Explain the Criminal responsibility of an insane person. (3 marks)

MULTIPLE CHOICE QUESTIONS:**10 x 1 = 10 Marks**

[Instructions: Write the question number followed by your response.]

- 21.i) The form used for Medical Certification of Cause of Death in institutional deaths is: a.
Form No. 3
b. Form No. 3A
c. Form No. 4
d. Form No. 4A
- 21.ii) As per Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002, a physician has to maintain indoor medical records for a period of: a. 2 years
b. 3 years
c. 5 years
d. 10 years
- 21.iii) All the following organs are shrunken in death due to starvation, EXCEPT:
a. Pancreas
b. Spleen
c. Gall bladder
d. Liver
- 21.iv) The measurement usually taken to calculate the gestational age in Haase's rule is:
a. Crown-heel length
b. Crown-rump length
c. Crown-toe length
d. Rump-heel length
- 21.v) For Homologous Artificial Insemination, the semen is obtained from:

- a. Husband
- b. Donor
- c. Sperm bank
- d. Both husband and donor

22.i) One of the following is NOT a recognized type of consent in medical practice:

- a. Implied
- b. Expressed
- c. Informed
- d. Hearsay

22.ii) A false perception in the absence of any sensory stimulus is called as:

- a. Delusion
- b. Hallucination
- c. Illusion
- d. Delirium

22.iii) One of the following is NOT a test for detecting seminal stains:

- a. Zinc test
- b. Florence test
- c. Phenolphthalein test
- d. Barberio's test

22.iv) The term "Corrosive sublimate" refers to:

- a. Sulfuric acid
- b. Carbolic acid
- c. Copper sulfate
- d. Mercuric chloride

22.v) One of the following opiates does NOT belong to 'Phenanthrene' group:

- a. Papaverine
- b. Thebaine
- c. Morphine
- d. Codeine

Competency Based Medical Education
MBBS
Phase III , Part I
Community Medicine (a)

Competencies: The learner must demonstrate:

1. Understanding of physical, social, psychological, economic and environmental determinants of health and disease,
2. Ability to recognize and manage common health problems including physical, emotional and social aspects at individual, family and community level in the context of National Health Programmes
3. Ability to implement and monitor National Health Programmes in the primary care setting
4. Knowledge of maternal and child wellness as they apply to national health care priorities and programmes,
5. Ability to recognize, investigate, report, plan and manage community health problems including malnutrition and emergencies.

(b) **Integration:** The teaching should be aligned and integrated **horizontally** and vertically in order to allow the learner to understand the impact of environment, society and national health priorities as they relate to the promotion of health and prevention and cure of disease.

TEACHING METHODS & HOURS

	Large group Teaching	Small group teaching/Practical /Tutorials	SDL	AETCOM	Total	Clinical/Field Posting
1 st Professional	20 hours	27 hours	5 hours	-	52 hours	-
2 nd Professional	20 hours	30 hours	10 hours	7 hours	60 hours	4 weeks
3 rd Professional	40 hours	60 hours	5 hours	-	105 hours	6 weeks
Total	80 hours	117 hours	20 hours	7 hours	217 hours	10 weeks

**COMMUNITY MEDICINE SYLLABUS FOR
FIRST PROFESSIONAL YEAR**

Sl no	TOPIC	LECTURE	SGD/DOAP	SDL	TOT HOURS
1	Concept of Health and Disease (CM 01)	8	13	1	22
2	Relationship of social and behavioural to health and disease (CM 02)	4	3	1	8
3	Nutrition (CM 05)	5	7	2	14
4	Demography and vital statistics (CM 09)	3	4	1	8
TOTAL HOURS		20	27	5	52
*AETCOM		8 HRS			
INTEGRATION / AETCOM SUPERVISION					

**COMMUNITY MEDICINE SYLLABUS FOR
SECOND PROFESSIONAL YEAR**

Sl no	TOPIC	LECTURE	SGD/DOAP	SDL	TOTAL HOURS
1	Environmental health problems (CM 3)	2	19	2	23
2	Epidemiology (CM 7)	10	8	2	20
3	Occupational Health (CM 11)	4	0	1	5
4	Disaster Management (CM 13)	2	0	2	4
5	Mental Health (CM 15)	0	2	2	4
6	International health (CM 18)	2	0	0	2
7	Essential Medicine (CM 19)	0	1	1	2
TOTAL HOURS		20	30	10	60

✚	<ul style="list-style-type: none"> ✚ The number of hours mentioned above are rough guidelines that can be modified to Suit the specific requirements of a medical college. ✚ It is recommended that didactic teaching be restricted to less than one third of the total time allotted for that discipline. ✚ Greater emphasis is to be laid on hands-on training, symposia, seminars, small group discussions, problem-oriented and problem-based discussions and self-directed learning. ✚ Students must be encouraged to take active part in and shared responsibility for their Learning.
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COMMUNITY MEDICINE SYLLABUS FOR THIRD PROFESSIONAL YEAR

SI no	TOPIC	LECTURE	SGD/DOAP	SDL	TOTAL HOURS
1	Principles of health promotion and education (CM 04)	03	0	0	03
2	Basic statistics and its applications (CM 06)	0	12	0	12
3	Epidemiology of communicable and non-communicable diseases (CM 08)	15	30	01	46
4	Reproductive maternal and child health (CM 10)	10	10	01	21
5	Geriatric services (CM 12)	01	02	0	03
6	Hospital waste management (CM 14)	01	02	01	04
7	Health planning and management (CM 16)	02	02	0	04
8	Health care of the community (CM 17)	06	0	01	07
9	Recent advances in Community Medicine (CM 20)	02	02	01	05
	TOTAL HOURS	40	60	05	105

Sl no	Topic
1	Concept of Health and Disease (CM 01)
2	Relationship of social and behavioural to health and disease (CM 02)
3	Environmental health problems (CM 3)
4	Principles of health promotion and education (CM 04)
5	Nutrition (CM 05)
6	Basic statistics and its applications (CM 06)
7	Epidemiology (CM 7)
8	Epidemiology of communicable and non- communicable diseases (CM 08)
9	Demography and vital statistics (CM 09)
10	Reproductive maternal and child health (CM 10)
11	Occupational Health (CM 11)
12	Geriatric services (CM 12)
13	Disaster Management (CM 13)
14	Hospital waste management (CM 14)
15	Mental Health (CM 15)
16	Health planning and management (CM 16)
17	Health care of the community (CM 17)
18	International health (CM 18)
19	Essential Medicine/Integration (CM 19)
20	Recent advances in Community Medicine (CM 20)

ASSESSMENT/UNIVERSITY EXAMINATION

Summative Assessment - An assessment conducted at the end of instruction to check how much the student has learnt.

Formative Assessment - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

Internal assessment – Range of assessments conducted by the teacher teaching a particular subject with the purpose of knowing what is learnt. Internal assessment can have both formative and summative functions.

Note - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually.

Scheduling of Internal Assessment - done once at the end of each professional year

Theory IA can include: Written tests should have essay questions, short notes, and creative writing experiences.

Practical IA can include: Spotters, Problem solving exercises, Objective Structured Practical/Clinical Examination (OSPE/OSCE), Clinic social case discussion, and records maintenance and log book assessment.

Assessment of Log-book-

Logbook should record all academic and curricular activities like seminar, symposia, and quizzes. It should be assessed regularly and submitted to the department. Marks should be allotted for logbook assessment and should be included as a part of formative assessment marks under practical's

Assessment of Practical Record book- Practical book should record all skills and other practical exercises done during the academic programme. It should be assessed regularly and

submitted to the department. Marks should be allotted for practical record and should be included as a part of formative assessment marks under practical's

Assessment for AETCOM will include: - Written tests comprising of short notes and creative writing experiences only in internal assessment.

INTERNAL ASSESSMENT

- | There will be 3 internal assessment examinations in Community Medicine. The structure of the internal assessment examinations should be like the structure of University examinations.
- | It is mandatory for the students to appear for all the internal assessment examinations.
- | First internal assessment examination will be held at the end of 1st professional, second internal assessment examination will be held at the end of 2nd professional and 3rd internal assessment examination will be held at the end of 3rd professional as per University Pattern.
- | Pattern of first and second Internal Assessment are left to the discretion of the individual institute. However, third internal assessment is to be conducted in the same pattern of the University exam
- | Additional internal assessment examination for absent students can be considered due to genuine reason after approval by the head of the department. It should be taken before the submission of internal assessment marks to the University.
- | Internal assessment marks allotted for theory and practical for the first and second internal assessment are left to the discretion of the respective institutes. Marks allotted in the third (final) Internal Assessment should be preferably for 100 marks each for Theory and Practical.
- | 20% of the internal assessment marks should be from Formative Assessment in Practical internal assessment

| Feedback in Internal Assessment - Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The need for feedback is structured and the faculty and students must be sensitized to giving and receiving feedback.

| The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.

| It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

| Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

| Internal assessments should be based on competencies and skills.

| Criteria for appearing in University examination: Learners must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination.

| **Average marks obtained in all three internal assessments should be calculated to 40 marks.**

| A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/she successfully complete the same, he/she is eligible to appear for University Examination. Remedial assessment shall be completed before submitting the internal assessment marks online to the University.

Annexures

SCHEME OF EXAMINATION

Internal assessment

TABLE SHOWING SCHEME FOR CALCULATION OF INTERNAL EXAMINATION MARKS

	First Theory IA	Second Theory IA	Third Theory IA *
Theory paper Marks	80	80	Paper 1- 100 Marks Paper 2- 100Marks
Periodic test 1	5	5	NIL
Periodic test 2	5	5	NIL
Periodic test 3	5	5	NIL
Professionalism	5	5	NIL
Total Marks	100	100	200

THEORY INTERNAL ASSESSMENT

Note: * Subjects having single paper will have one paper for 100 marks only.

**** Subjects taught in more than one year will have an theory IA in each year also**

PRACTICALS INTERNAL ASSESSMENT

	First Practical IA	Second Practical IA	Third Practical IA
Marks	80	80	100 (University pattern, including viva voce)
Formative Assessment	20 (record+ log book)	20 (record+ log book)	NIL
Total	100	100	100

****Subjects with clinical postings in more than one year will have an end-of-posting after each clinical posting in addition**

3. Guidelines for Remedial measures for students who are unable to score qualifying marks and attendance :

Academic council of respective institutes / Colleges to provide the guidelines for remedial measures

GENERAL INSTRUCTIONS

- Questions in each paper should be as per distribution of competencies in each professional year.
- The SLO to be referred while setting the question paper
- Repetition of questions from the same SLO to be avoided
- The marks allotted to the different topics & sections to be adhered • There will be at least one question on AETCOM in the theory papers.
- Internal assessment needs to be for 40 marks in theory and 40 marks for Practical
- Internal assessment for theory may constitute Long essay, Short essay, and short answers
- 20% of the internal assessment marks will be contributed by formative assessment in both theory

- Total internal assessment marks of 40 will be 32 for internal assessment and 8 for formative assessment conducted. (32+8=40)
- Marks allocated for record and logbook maintenance will be added to practical internal assessment marks.

FORMATIVE ASSESSMENT

- CBME mandates conduct of formative assessments, institutions can conduct formative assessments as per their convenience however the formative assessment would contribute towards the internal assessments.
- Institutions can select from the suggested methods of formative assessment that are given below however the institutions can adapt methods that comply with that of the MCI regulations.
- Feedback to students regarding formative assessment have to be documented and should be the basis for mark allocation.
- The logbook in community medicine is a record of all activities of the students. All competencies at a “Shows How” level in the Miller’s pyramid should be documented in the logbook. In addition, logbook also contains documentation of attendance, involvement in departmental academic and extracurricular activities and feedback given to the student. The logbook should be signed by faculty on a regular basis. A total of 10 marks should be allotted to logbook in the second professional year. This should be reduced and added to formative assessment marks.
- The practical record in community medicine contains documentation of the practical sessions held during the course. A total of 10 marks should be allotted to practical record and should be reduced and added to formative assessment marks in the second professional year.
- Suggested methods for Formative Assessments are:
 - MCQs
 - Essays
 - Assignments
 - Seminar presentations
 - Project work
 - OSCE
 - OSPE

Total marks	University Examination Marks			Internal Assessment	
	Theory	Clinical/ Practical	Viva	Theory	Practical
Theory Two papers 200 Practicals 80	Paper1=100 Paper2=100 Long Essay 10X2 Short essay 8x5=40 marks Short answer 10x3=30marks MCQs 10x1=10marks	<ul style="list-style-type: none"> • Case Discussion (35) • Epidemiological Exercises (35) • Spotters (10) =80	20	100	100
Passmarks	Mandatory 50% in theory and Practical			50% combined in theory and Practical (not less than 40% in each) for eligibility of appearing the University Examination	

RGUHS
**Distribution of Topics/Competencies for Paper 1 & Paper 2 Community
 Medicine for the University Examination**

Paper 1		Paper 2	
Competency No.	Topic	Competency No.	Topic
CM 01	Concept of Health and Disease	CM 02	Relationship of social and behavioural to health and disease
CM 03	Environmental health problems	CM 08	Epidemiology of communicable and non-communicable diseases
CM 04	Principles of health promotion and education	CM 10	Reproductive maternal and child health
CM 05	Nutrition	CM 12	Geriatric services
CM 06	Basic statistics and its applications	CM 13	Disaster Management
CM 07	Epidemiology	CM 15	Mental Health
CM 09	Demography and vital statistics	CM 16	Health planning and management
CM 11	Occupational Health	CM 17	Health care of the community
CM 14	Hospital waste management	CM 19	Essential Medicine
CM 18	International Health	CM 20	Recent advances in Community Medicine

Sl No.	Classes Teaching method		Competency	Integration	Misc.	Assessm
PRINCIPLES OF HEALTH PROMOTION AND EDUCATION (CM 04)						
1	Describe the models of Health education&Describe variousmethodsofhealtheducationwiththeiradvantagesandlimitations	LGT	CM4.1			Written/ Viva-voc
2	Describe the methods of organizing health promotion andeducationand counselingactivitiesatindividualfamilyandcommunity	SGT	CM4.2			Written/ Viva-voc
3	Demonstrateanddescribethestepsinevaluation ofhealthpromotionandeducationprogram	SGT	CM4.3			Written/ Viva-voc Skill Assessm
Note: L- Lecture (03); SGD- Small group discussion (00); SDL-Self-directed learning (0)						
BASIC STATISTICS AND ITS APPLICATIONS [CM 6 - 6.1 TO 6.4]						
1.	Discuss and introduce the topic of biostatistics and its applications. Formulate a research question for a study	SGD -1	CM 6.1	V.I with General Medicine &Paediatrics	Practical	Written Viva-v Skill Assess
2.	Describe and discuss the principles and demonstrate the methods of collection and classification of statistical data	SGD -2	CM 6.2	V.I with General Medicine &Paediatrics	Practical	Written Viva-v Skill Assess
3.	Enumerate, discuss and demonstrate common sampling techniques	SGD -3	CM 6.4	V.I with General Medicine &Paediatrics	Practical	Written Viva-v Skill Assess
4.	Describe and discuss the principles and demonstrate the methods of analysis and interpretation	SGD -4	CM 6.2	V.I with General Medicine &Paediatrics	Practical	Written Viva-v Skill Assess
5.	Describe and discuss the principles and demonstrate the methods of presentation of statistical data using frequency distribution and	SGD -5	CM 6.2 & 6.4	V.I with General Medicine &Paediatrics	Practical	Written Viva-v Skill Assess

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	other appropriate methods					
6.	Describe and discuss the elementary statistical methods - central tendency and dispersion	SGD -6	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
7.	Demonstrate the application of measures of central tendency and dispersion for discrete data	SGD -7	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
8.	Demonstrate measures of central tendency and dispersion for continuous data	SGD -8	CM 6.4	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
9.	Describe, discuss and demonstrate the application of test of significance in various study designs – normal distribution and significance of ‘P’-value.	SGD -9	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
10.	Demonstrate the application of test of significance for large samples	SGD -10	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
11.	Demonstrate the application of test of significance for small samples	SGD -11	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess
12.	Demonstrate the application of test of significance – Chi square test	SGD -12	CM 6.3	V.I with General Medicine & Paediatrics	Practical	Written Viva-v Skill Assess

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SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment method
EPIDEMIOLOGY OF COMMUNICABLE AND NON- COMMUNICABLE DISEASES [CM 8 - 8.1 TO 8.7]						
1.	Discuss the lessons learnt from Smallpox eradication. scribe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Chickenpox.	Lecture-1	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce

2.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for, Mumps and Rubella	Lecture-2	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
3.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Influenza	Lecture-3	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
4.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Diphtheria, Whooping Cough and Meningococcal Meningitis	Lecture-4	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
5.	cribe and discuss the epidemiological and control measures including the use of essential laboratory	SGD-1	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce

THIRD PROFESSIONAL YEAR

	tests at the primary care level for Measles and ARI					
6.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for SARS including novel Corona Virus.	SGD-2	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
7.	cribe and discuss the epidemiology of TB up to Tuberculin test	SGD-3	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
8.	Describe and discuss the prevention and control measures including the use of essential laboratory tests at the primary care level for Tuberculosis	SGD-4	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
9.	Describe and discuss NTEP	SGD-5	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise & Visit	Written/ Viva-voce
10.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Poliomyelitis	Lecture-5	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
11.	Describe and discuss NPSP	SGD-6	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
12.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Viral Hepatitis	Lecture-6	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
13.	Describe and discuss the epidemiological and control measures including the use of	SGD-7	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce

	essential laboratory tests at the primary care level for Acute Diarrheal Diseases & ADD control Programme					
14.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Cholera, Food Poisoning	SGD-8	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercises	Written/ Viva-voce
15.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Typhoid fever	SGD-9	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	CSCD	Written/ Viva-voce
16.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Amoebiasis, Soil Transmitted Helminthiasis & Dracunculiasis with its related programme	Lecture-7	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
17.	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for The Dengue Syndrome	SGD-10	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
18.	Describe and discuss the epidemiology of Malaria till approaches and strategies of malaria control	SGD-11	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
19.	Describe and discuss the control measures including the use of essential laboratory tests at the primary care	SGD-12	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce

	level for malaria control including the diagnosis and treatment of malaria in India as per 2013 guidelines					
20.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for Lymphatic Filariasis and National filarial control programme	Lecture-8	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
21.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for Japanese encephalitis, Chikungunya, Yellow Fever, Zika Virus disease	Lecture-9	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
22.	cribe and discuss the control measures including the use of essential laboratory tests at the primary care level for KFD	SGD-13	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
23.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Nipah Virus, Brucellosis and Human Salmonellosis	Lecture10	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
24.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Rabies	SGD-14	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
25.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Leptospirosis,	Lecture11	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
	Plague, Rickettsial diseases					

26.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Trachoma and Tetanus	SGD-15	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
27.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Taeniasis, Hydatid disease and Leishmaniasis	Lecture12	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
28.	cribe and discuss the epidemiology of Leprosy till diagnosis	SGD-16	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
29.	cribe and discuss the epidemiological and control measures for Leprosy and describe and discuss NLEP	SGD-17	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise/ CSCD	Written/ Viva-voce
30.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for STD along with syndromic approach	SGD-18	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
31.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for endemic treponematosi s – Yaws eradication programme	Lecture13	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology		Written/ Viva-voce
32.	cribe and discuss the epidemiology of HIV/AIDS including the use of essential laboratory tests	SGD-19	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
33.	cribe and discuss the epidemiological and control measures for	SGD-20	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology	Epidemiological exercise	Written/ Viva-voce
	HIV/AIDS			& Pathology		
34.	cribe and discuss NACP	SGD-21	CM 8.1 & 8.3	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce

43.	cribe and discuss the epidemiological and control measures for Infectious Diseases and Injuries	SGD-22	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment method
36.	Describe and discuss the principles of Hospital acquired infections and evaluating control	SGD-25	CM 8.1	V.I with General Medicine & Paediatrics H.I with Microbiology & Pathology	Epidemiological exercise	Written/ Viva-voce
REPRODUCTIVE MATERNAL AND CHILD HEALTH [CM-10 -10.1 TO 10.9]						
37.	Describe and discuss the measures for disease at community level and bearing in mind the importance of the use of appropriate and describe the use of Cardiovascular	Lecture-1	CM 8.2 10.1	V.I with OBG & Paediatrics	Epidemiological exercise/ CSCD	Written/ Viva-voce
2.	Describe and discuss the importance of the use of appropriate and describe the use of Cardiovascular	Lecture-2	CM 10.2	V.I with OBG & Paediatrics		Written/ Viva-voce
45.	Describe and discuss the principles of management of group A streptococci	Lecture-16	CM 8.7			Written/ Viva-voce
38.	Describe and discuss the importance of the use of appropriate and describe the use of Cardiovascular	SGD-25	CM 8.2	V.I with General Medicine	Epidemiological exercise	Written/ Viva-voce
46.	Describe and discuss the importance of the use of appropriate and describe the use of Cardiovascular	SGD-30	CM 10.6 10.3	V.I with OBG & Paediatrics	Family Study/ CSCD	Written/ Viva-voce
47.	Observe the reporting of the SD in hospital and epidemiological and control measures including the use of essential laboratory tests for Hypertension	SDL-1	CM 8.6		Assignment	Written/ Viva-voce
39.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Stroke, RHD and Cancer	SGD-26	CM 8.2	V.I with General Medicine	Epidemiological exercise/ CSCD	Written/ Viva-voce
40.	cribe and discuss the epidemiological and control measures including the use of essential laboratory tests for Stroke, RHD and Cancer	Lecture-14	CM 8.2	V.I with General Medicine		Written/ Viva-voce
41.	cribe and discuss NPCDCS	Lecture-15	CM 8.2 & 8.3	V.I with General Medicine		Written/ Viva-voce
42.	cribe and discuss the epidemiological and control measures for Visual Impairment and Blindness along with control programme	SGD-27	CM 8.2 & 8.3	V.I with General Medicine	Epidemiological exercise	Written/ Viva-voce

discussion (12)**Note: L- Lecture (15); SGD- Small group discussion (30); SDL-Self-directed learning (1)**

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4.	Describe the reproductive, maternal, newborn & child health (RMNCH); child survival and safe motherhood interventions	SGD-2	CM 10.4	V.I with OBG & Paediatrics	CSCD	Written/ Viva-voce
5.	Describe Universal Immunization Program; Integrated Management of Neonatal and Childhood Illness (IMNCI) and other existing Program including RBSK, BFHI, IYCF	SGD-3	CM 10.5	V.I with Paediatrics	Epidemiological exercise	Written/ Viva-voce
6.	Observe and classify neonatal and childhood illnesses in our hospital/ health centres according to IMNCI	SDL-1	CM 10.5	V.I with Paediatrics	Assignment	Written/ Viva-voce
7.	Describe the physiology, clinical management and principles of adolescent health including ARSH, RKSK, WIFS	SGD-4	CM 10.8		Tutorial	Written/ Viva-voce
8.	Describe and discuss gender issues and women empowerment including gender bias	SGD-5	CM 10.9		Tutorial	Written/ Viva-voce
9.	Describe and discuss NRHM	SGD-6	CM 10.5	V.I with Paediatrics	Tutorial	Written/ Viva-voce
10.	Describe and discuss NUHM	SGD-7	CM 10.5	V.I with Paediatrics	Tutorial	Written/ Viva-voce
11.	Describe and discuss NHM	Lecture-3	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
12.	Describe and discuss Ayushman Bharat	Lecture-4	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
13.	Describe and discuss INAP	Lecture-5	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
14.	Describe and discuss various public health legislations MTP Act and PNDT Act, PFA Act and CP Act	SGD-8	CM 10.5 & 20.4	V.I with Paediatrics	Tutorial	Written/ Viva-voce

15.	Describe and discuss School health program	Lecture-6	CM 10.4 & 10.5	V.I with OBG &Paediatrics		Written/ Viva-voce
16.	Describe and discuss Behavioral problems and Handicapped children and ICF	Lecture-7	CM 10.4 & 10.5	V.I with OBG &Paediatrics		Written/ Viva-voce
17.	Describe and discuss prevention of congenital malformations and describe and discuss rights of persons with disabilities bill-2016,	Lecture-8	CM 10.4	V.I with OBG &Paediatrics		Written/ Viva-voce
18.	Describe and discuss children in difficult circumstances, battered baby syndrome, the children act 1960 and National policy for children, rights of women and children	Lecture-9	CM 10.4	V.I with OBG &Paediatrics		Written/ Viva-voce
19.	Describe and discuss Juvenile delinquency and Juvenile justice act 1986, 2000 & 2015	Lecture10	CM 10.4	V.I with OBG &Paediatrics		Written/ Viva-voce
20.	Describe and discuss Street children, Refugee and displaced children, Child labor and child exploitation, child trafficking, child marriage, Child abuse	SGD-9	CM 10.4	V.I with OBG &Paediatrics	Tutorial	Written/ Viva-voce
21.	Describe and discuss Child guidance clinic and child placement	SGD-10	CM 10.4	V.I with OBG &Paediatrics	Tutorial	Written/ Viva-voce
22.	Describe and discuss MNP and 20 pointprogramme	Lecture11	CM 10.5	V.I with Paediatrics		Written/ Viva-voce
23.	Describe and discuss tribal Health	Lecture12	CM 10.4 & 10.5	V.I with OBG &Paediatrics		Written/ Viva-voce
Sl No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
GERIATRIC SERVICES [CM 12 - 12.1 TO 12.4]						

1.	Define and describe the concept of Geriatric services	Lecture-1	CM 12.1	V.I with General Medicine		Written/ Viva-voce
2.	Describe health problems of aged population	SGD-1	CM 12.2	V.I with General Medicine	CSCD	Written/ Viva-voce
3.	Describe the prevention of health problems of aged population. Describe National program for elderly	SGD-2	CM 12.3 & 12.4	V.I with General Medicine	CSCD	Written/ Viva-voce

Note: L- Lecture (1); SGD- Small group discussion (2)

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
HOSPITAL WASTE MANAGEMENT [CM 14 - 14.1 TO 14.3]						
1.	Define and classify hospital waste	Lecture-1	CM 14.1	H.I with Microbiology		Written/ Viva-voce
2.	Describe various methods of treatment of hospital waste	SGD-1	CM 14.2	H.I with Microbiology	Field visit	Written/ Viva-voce
3.	Describe laws related to hospital waste management	SGD-2	CM 14.3	H.I with Microbiology	Field visit	Written/ Viva-voce
4.	Observe the hospital waste management done at hospital/ Maridi	SDL-1	CM 14.2	H.I with Microbiology	Assignment	Written/ Viva-voce

Note: L- Lecture (1); SGD- Small group discussion (2); SDL-Self-directed learning (1)

SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
HEALTH PLANNING AND MANAGEMENT [CM 16 - 16.1 TO 16.4]						
1.	Define and describe the concept of Health planning	Lecture-1	CM 16.1			Written/ Viva-voce
2.	Describe planning cycle	Lecture-2	CM 16.2			Written/ Viva-voce
3.	Describe Health management techniques	SGD-1	CM 16.3		Tutorial	Written/ Viva-voce
4.	Describe health planning in India and National policies related to health and health planning	SGD-2	CM 16.2		Tutorial	Written/ Viva-voce

Note: L- Lecture (2); SGD- Small group discussion (2)

Note: L- Lecture (6); SDL-Self-directed learning (1)

SI No.	Classes	Teaching	Competency	Integration	Misc.	Assessment
SI No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
HEALTH CARE OF THE COMMUNITY [CM 17 - 17.1 TO 17.5]						
1.	Define and describe the concept of health care to community	Lecture-1	CM 17.1			Written/ Viva-voce
2.	Describe community diagnosis	Lecture-2	CM 17.2			Written/ Viva-voce
3.	Describe primary health care, its components and principles	Lecture-3	CM 17.3			Written/ Viva-voce
4.	Describe National policies related to health and health planning and millennium development goals	Lecture-4	CM 17.4			Written/ Viva-voce
5.	Describe Sustainable development goals	Lecture-5	CM 17.4			Written/ Viva-voce
6.	Describe health care delivery in India	Lecture-6	CM 17.5			Written/ Viva-voce
7.	Observe the health care delivery in different level of health systems at primary, secondary and tertiary	SDL-1	CM 17.5		Assignment	Written/ Viva-voce

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		method				
RECENT ADVANCES IN COMMUNITY MEDICINE [CM 20 - 20.1 TO 20.4]						
1.	List important public health events of last five years	SDL-1	CM 20.1		Assignment	Written/ Viva-voce
2.	Describe various issues during outbreaks and their prevention	SGD-1	CM 20.2		Tutorials	Written/ Viva-voce
3.	Describe any event important to Health of the Community	Lecture-1	CM 20.3			Written/ Viva-voce
4.	Discuss the laws pertaining to practice of medicine	Lecture-2	CM 20.4			Written/ Viva-voce

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5.	Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ Transplantation Act and its implications	SGD-2	CM 20.4		Tutorials	Written/ Viva-voce
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Note: L- Lecture (2); SGD- Small group discussion (2); SDL-Self-directed learning (1)

Specific Learning Objectives for 3rd Professional, Part - I

CM 4 - Principles of Health Promotion & Education

Competency4.1:

Describe various methods of health education with their advantages and limitations

Level: Knows How

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Define health education
2. Describe the various methods of health education
3. Describe the advantages and limitations of each health education method

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Definition of health education	Lecture discussion	05 minutes
2	Methods of health education	Lecture discussion	30 minutes
3	Advantages and limitations of each health education method	Lecture discussion	10 mins

Evaluation

1. Long essay (example)
 - a. Discuss in brief the different methods of 'Group Health Education'

2. Short essay (example)
 - a. Health education and health propaganda
 - b. Socratic and didactic methods in communication

3. Multiple choice questions (example)
 - a) In which method of group teaching, there is no active participation from learners:
 - i. Lecture
 - ii. Group discussion
 - iii. Symposium
 - iv. Role play

Competency 4.2

Describe the methods of organizing health promotion and education and counselling activities at individual family and community settings

Level: Knows How

Specific Learning Objectives

At the end of the course, the learner should be able to:

1. Describe the methods of organizing health promotion and education and counselling activities at Individual, family and community settings

2. Plan a health education session at Individual/ family / community settings by selecting appropriate methods

3. Conduct a training session for given scenarios /target audience on the given topic

Content and TL methods

Sl No	Content	TL methods	Time allotted
1.	Brief description of the methods of health promotion and counselling activities at Individual, family and community settings	Interactive discussion	15 minutes
2.	Allocation of scenarios for batches of 10 students each. Students are asked to prepare a	Interactive discussion	15 minutes

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	training plan under the following headings: <ul style="list-style-type: none"> • Topic • Pre test • Set induction • Key messages • Methodology to deliver the key messages • Training material and other resources needed • Time scheduling • Post test 		
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3	Development of training material by students	Group work	30 minutes
4	Implementation of the training program	Group presentation	1 hour

Evaluation

1. Scores for the training program by faculty using a structured checklist that may include the following
 - a. Quality of the training plan
 - b. Session objectives
 - c. Design of pretest and post test questions
 - d. Key messages
 - e. Implementation of the training program
 - f. Training material
 - g. Team work and coordination
 - h. Audience involvement

2. Similar scoring to be used for health education program during ROP and CHAP

Competency 4.3:

Demonstrate and describe the steps in evaluation of health promotion and education program

Level: Shows How

Specific Learning Objectives

At the end of the session, the learner should be able to:

- 1.Enumerate the steps in evaluation of health education program
- 2.Describe the steps in evaluation of health education program
- 3.Demonstrate and Apply the steps in evaluation of a health program

Content and TL methods

Sl No	Content	TL methods	Time allotted
1.	Steps in evaluation of health education program	Interactive discussion	15 minutes
2.	Application of the steps in evaluation of health promotion program : Following implementation of training program (Competency4.2), Students are asked to evaluate the sessions conducted by them	Interactive discussion	30 minutes
3	Debriefing by faculty	Interactive discussion	05 minutes

Evaluation

1. Scores for the evaluation session using a structured checklist

CM 06 - BASIC STATISTICS AND ITS APPLICATIONS

Competency 6.1: (1hr)

Formulate research question for the study.

Level – know how

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a)Introduction to health research and biostatistics
- b)Difference between qualitative and quantitative approaches to research
- c)Elements of research question
- d)Steps in framing a research question, criteria in framing research question.

Evaluation:

Describe various steps in research methodology.

Competency 6.2:

Small group field activity (2hrs)

Level – Know how

Describe and discuss the principles and the methods, classification, interpretation and presentation of statistical data.

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Making of questionnaire based on research
- b) They will do the data collection using data questionnaire
- c) How to classify the data.

d) Steps in analysis and interpretation **Competency 6.3:**

Describe, discuss and demonstrate the application of elementary statistical methods including test of significance in various study designs.

Level – Show how

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Able to calculate Mean, Median and Mode, Standard deviation, Standard error.
- b) To know various methods of graphical representation of data.
- c) To know various data entry tools- MS excel, Epinfo, Google forms, Google sheets.

EVALUATION:

- 1) Calculate mean, median and mode.
- 2) Describe Normal distribution curve.

Competency 6.4:

Enumerate, discuss and demonstrate common sampling techniques, simple statistical methods, frequency distribution, measures of central tendency and dispersion.

Level – Show how

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) To know various sampling techniques and sample error.
- b) To know correlation and regression
- c) Able to calculate chisquare test

EVALUATION:

- 1) Describe various sampling techniques.
- 2) Chisquare test

Epidemiology of Communicable and Non- Communicable diseases (CM 08)

Competency 8.1

Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for communicable diseases

Specific Learning Objectives

At the end of the course, the learner should be able to:

1. Describe the epidemiology of the following groups of communicable diseases
 - Respiratory diseases
 - Gastrointestinal infections
 - Vector borne diseases
 - Surface infections
2. Apply the concept of dynamics of disease control to the communicable disease under the above groups
3. Describe the salient features of national programs for the prevention and control of communicable diseases

Content

Theory

1. Overview of communicable diseases
2. Epidemiology of the following communicable diseases.....
 - Respiratory diseases ■ Measles
 - Tuberculosis
 - Influenza
 - Diphtheria
 - Pertusis
 - Gastrointestinal infections
 - Cholera
 - Typhoid
 - Poliomyelitis
 - Viral hepatitis
 - Helminthiasis
 - Vector borne diseases
 - Malaria
 - Dengue
 - Surface infections
 - HIV
 - Leprosy
 - Tetanus
 - Zoonotic diseases
 - Emerging and reemerging diseases
 - Hospital acquired infections

.....under the following headings

- Burden
 - Epidemiological triad
 - Chain of transmission for that disease
 - How to break the chain of transmission
3. Explain the following national health programs.....
 - Revised national tuberculosis control program
 - National polio surveillance program
 - National vector borne disease control program
 - National AIDS control program

.....under the following headings

- Relevance and need for the program
- Objectives
- Strategies
- Infrastructure for service delivery
- Monitoring and evaluation indicators

Practical

Discuss public health scenarios on the following:

- Respiratory diseases
- Gastrointestinal infections
- Vector borne diseases
- Surface infections

Clinico-social case discussions

1. Dengue
2. Typhoid
3. Acute respiratory tract infection
4. Acute diarrheal disease
5. HIV
6. Rabies

For the above diseases, focus on the following:

- Clinical features
- Assessment of determinants
- Recommendations at individual, family and community level

Assessment questions

1. Which of the following disease is covered under the national vector borne disease control program
 - a. Sleeping sickness
 - b. Kala azar
 - c. Yellow fever
 - d. Tick typhus
2. The population covered by a Tuberculosis Unit (TU) under RNTCP is
 - a. 500,000
 - b. 100,000
 - c. 50,000
 - d. 30,000
3. Purified Chick Embryo Cell Rabies vaccine is given by which of the following ways
 - a. Infiltration locally into the wound
 - b. Intramuscularly in the deltoid
 - c. Intramuscularly in the gluteal region
 - d. Subcutaneously in the abdomen
4. A district is classified under the category “Neonatal Tetanus Elimination” if it meets which of the following criteria:
 - a. NNT rate $<0.1/1000$ live births, TT coverage $>90\%$ and attended deliveries $>75\%$
 - b. NNT rate $<1/1000$ live births, TT coverage $>90\%$ and attended deliveries $>75\%$
 - c. NNT rate $<1/1000$ live births, TT coverage $>70\%$ and attended deliveries $>50\%$
 - d. NNT rate $<1/1000$ live births, TT coverage $>70\%$ and attended deliveries $>75\%$
5. What is the WHO clinical staging of HIV disease in a person who is HIV positive and has pulmonary tuberculosis?
 - a. Clinical stage 1
 - b. Clinical stage 2
 - c. Clinical stage 3

d. Clinical stage 4

Competency 8.2

Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Non Communicable diseases (diabetes, Hypertension, Stroke, obesity and cancer etc.)

Specific Learning Objectives

At the end of the course, the learner should be able to:

1. Explain the characteristics of a non communicable disease
2. Explain the meaning of the term “risk factor”
3. Describe the epidemiology of the following non communicable diseases
 - Hypertension
 - Diabetes
 - Coronary heart disease
 - Cancers
 - Blindness
 - Accidents
4. Apply the concept of levels of prevention to the above non communicable disease
5. Describe the salient features of national programs for the prevention and control of NCDs

Essential content

Theory

2. Introduction to NCDs
 - What are NCDs
 - Characteristics
 - Risk factor
 - Prevention and control

3. Epidemiology, prevention and control of the following diseases.....
 - Hypertension
 - Diabetes
 - Coronary heart disease
 - Cancers
 - Blindness
 - Accidents

.....under the following headings

 - Burden
 - Time trends
 - Place and person distribution
 - Risk factors (and web of causation)
 - Primordial, primary and secondary and tertiary prevention
 - Key initiatives at international and national level

Practical

Case studies on diabetes, RHD and stroke

Clinico-social case discussions

1. Hypertension
2. Diabetes
3. Coronary heart disease
4. Stroke

For the above diseases, focus on the following:

- Clinical features
- Assessment of risk factors
- Anthropometric measurements
- Recommendations at individual, family and community level

Assessment questions

1. Tracking of hypertension is an example for :
 - a. Treatment Strategy
 - b. Evaluation Strategy
 - c. High Risk Strategy
 - d. Diagnostic Strategy

2. The true statement regarding a “Risk Factor” is:
 - a. Risk factors are the same as an agent in a non communicable disease
 - b. Risk factors are observable only after the onset of disease
 - c. Risk factors are significantly associated with the development of disease.
 - d. If a risk factor is modified, the probability of occurrence of the disease will not change.

3. Which of the following statements is TRUE :
 - A. HPV is implicated in the development of cancer cervix
 - B. Mycobacterium tuberculosis is implicated in the development of lung cancer
 - C. Plasmodium falciparum is implicated in the development of blood cancer
 - D. Infective agents are not implicated in the development of cancers

4. The type of time trend seen in coronary heart disease is:
 - A. Secular Trend
 - B. Cyclic Trend
 - C. Seasonal Trend
 - D. Periodic Trend

Competency 8.3

Enumerate and describe disease specific National Health Programs including their prevention and treatment of a case

Specific Learning Objectives

At the end of the course, the learner should be able to:

1. List the national health programs in India
2. Describe the objectives and strategies for the following national health programs
 - a. RMNCH+A
 - b. RNTCP

- c. NVBDCP
- d. NACP
- e. NLEP
- f. ICDS
- g. NPCDCS
- h. NBCP

Contents: (linked to competency 8.7)

Describe the salient features of the following national programs

- a. RMNCH+A
- b. RNTCP
- c. NVBDCP
- d. NACP
- e. NLEP
- f. ICDS
- g. IDSP
- h. NPCDCS
- i. NBCP
- j. NHM

.... under the following headings

- Need for national program (in terms of burden of problem)
- Objectives
- Strategies
- Infrastructure for service delivery and personnel at each level of care
- Monitoring indicators

Evaluation

Long essay (example)

1. Describe the strategies under RMNCH+A to prevent maternal deaths in India.

Short essay (example)

1. Daily drug regimen under RNTCP

Competency 8.4

Describe the principles and enumerate the measures to control a disease epidemic

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. To be able to list the definition of epidemic
2. To be able to list the steps of investigation out break

3. To be able to list the factors leading to an outbreak in the community **Content:**

1. Definition of epidemic, endemic and sporadic
2. Objectives of an epidemic investigation
3. 10 Steps of an outbreak investigation with example
4. Epidemiological case sheet
5. Epidemic curve
6. Report writing
7. List the control measures based on the epidemic with actual examples

Assessment:

1. Prepare an epidemiological case sheet for an outbreak of food poisoning in the hostel

Competency 8.5:

Describe and discuss the principles of planning, implementing and evaluating control measures for disease at community level bearing in mind the public health importance of the disease

Level: Knows

Specific Learning Objectives

At the end of the session, the learner should be able to:

4. Describe the meaning of the terms “control”, “elimination” and “eradication” of disease
5. List the problems of public health importance in India
6. Describe the steps of the planning cycle (Link to competency 16.2 on planning cycle) and apply the steps of the planning cycle to common problems of public health importance
7. Describe the methods to prevent and control disease with two examples (one communicable and one non communicable disease)
8. Describe the strategies being used in the corresponding national program for the control of the two diseases chosen in SLO 5 (Link to competency 8.3 on national health programs)
9. Describe the steps in evaluation of a health program
10. Apply the steps in evaluation of a health program

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Meaning of “control”, “elimination” and “eradication” of disease	Lecture discussion (Theory, 2 nd Professional)	30 minutes
2	Problems of public health importance in India	Lecture discussion (Theory, 2 nd Professional)	30 minutes
3	Application of the steps of planning cycle to a public health problem	Large group activity and interactive discussion (Theory, 2 nd Professional)	2 hours
4	Prevention and control of disease (with two examples - one communicable and one non communicable disease)	Small group activity (UOP, 2 nd Professional)	1 hour
5	Strategies used in the corresponding national program for the control of the two diseases chosen in SLO 4	Small group activity (UOP, 2 nd Professional)	1 hour

6	Steps in evaluation of a health program	Small group activity (Practicals, 3 rd Professional)	30 minutes
7	Application of steps in evaluation of a health program to a health program	Small group activity (Practicals 3 rd Professional)	1 hour

Evaluation

4. Long essay (example)
 - a. Describe the epidemiology, prevention and control of tuberculosis
 - b. You are the district health officer of Kolar district. Describe the steps in evaluating a campaign for the prevention and control of cardiovascular diseases your district.
5. Short essay (example)
 - a. National immunization day
 - b. Steps to be followed by ANM to plan a VHSND in a village
6. Multiple choice questions (example)
 - a. Use of chemoprophylaxis in malaria is an example for
 - i. Primordial prevention
 - ii. Primary prevention
 - iii. Secondary prevention
 - iv. Tertiary prevention

Integration

- Medicine
- Microbiology
- Pharmacology

Competency 8.6

Educate and train health workers in disease surveillance, control & treatment and health education

Level: Shows how

Specific Learning Objectives

At the end of the course, the learner should be able to:

4. Conduct a training session for health workers on the given topic
5. Conduct a health education program for a target audience (Link to competency 4.2 on health promotion. Covered as a part of a) ROP – community program b) ROP – child to child program and c) CHAP – health education in school)

Note :

- a) Health workers to include nursing aids, nurses, workers from allied health departments like housekeeping, laundry etc, ASHAs, Anganwadi workers etc
- b) The sessions will involve prior preparation by faculty to identify the target audience, topic, evaluation material, chart paper, markers, permissions etc
- c) The topic for health education will depend on the audience and will be allotted by faculty. Suggested topics include handwashing, dengue, healthy lifestyle, tobacco control etc

Content and TL methods

SI No	Content	TL methods	Time allotted
1	Allocation of topic and division into groups of 10 students each. Students are asked to prepare a training plan on the allotted topic under the following headings: <ul style="list-style-type: none"> • Topic • Pre test • Set induction • Key messages • Methodology to deliver the key messages • Training material and other resources needed • Time scheduling • Post test 	Interactive discussion Practical, Professional	15 minutes
2	Development of training material by students	Group work Practical, Professional	1 hour
3	Review of training plan by faculty	Group presentation Practical, Professional	45 minutes
4	Implementation of the training program for the target audience	Group presentation Practical, Professional	1 hour
5	Debriefing by faculty	Interactive discussion	30 minutes

Evaluation

3. Scores for the training program by faculty using a structured checklist that may include the following
 - a. Quality of the training plan
 - b. Session objectives
 - c. Design of pretest and post test questions
 - d. Key messages
 - e. Implementation of the training program
 - f. Training material
 - g. Team work and coordination
 - h. Audience involvement

4. Similar scoring to be used for health education program during ROP and CHAP

Integration

- Nursing & allied health sciences
- Government functionaries

Competency 8.7:

Describe the principles of management of information systems

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Define health management information system [HMIS]
2. List the uses of HMIS
3. Describe the flow of data in HMIS in the public health system in India
4. List the sources of health information in India

Content

1. Definition of HMIS
2. Distinction between data and information
3. WHO requirements for health information systems
4. Uses of HMIS
5. Sources of health information
6. HMIS in public health system in India

TL methods

Lecture discussion, 3rd Professional

Evaluation

1. Short essay (example)
 - a. Describe the uses of health information
 - b. Sample registration system
2. Multiple choice question (example)
 - a. Which of the following is an advantage of hospital records?
 - i. They are a good guide to the estimation of disease frequency in the community
 - ii. They provide good data on association between different diseases
 - iii. They provide data from patients from a defined catchment area They provide uniform data from different types of hospitals **Reproductive Maternal and Child Health (CM 10)**

Competency 10.1:

Describe the current status of Reproductive, maternal, newborn and child health Level:

Knows

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Enumerate and discuss the indicators to measure the status of Maternal and child health- MMR, PMR, NMR, PNMR, IMR and Under 5 Mortality rate
- b) Define Maternal mortality rate and maternal mortality ratio.
- c) Discuss the approaches for measuring maternal mortality.
- d) Discuss the status of maternal mortality in India and rest of the world

- e) Discuss the direct and indirect causes of maternal mortality
- f) Discuss the global strategy for women's , children's and adolescents health(2016-2030)
- g) Describe the various interventions to prevent and reduce maternal mortality h) Define foetal deaths
- i) Define still birth rate
- j) Define Perinatal Mortality rate, neonatal and post neonatal mortality rate
- k) Discuss causes of PMR, NMR and PNMR

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	Current status of Reproductive, maternal, new born and child health	Lecture	1 hour

Evaluation

1. Define maternal mortality ratio and list the causes and preventive measures of MMR.
2. Enumerate causes of PMR, NMR and PNMR

Integration

Obstetrics and Gynaecology
Paediatrics

Competency 10.2:

Enumerate and describe the methods of screening high-risk groups and common health problems.

Level: Knows

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Enumerate the screening methods for high-risk groups among antenatal women.
- b) Describe high risk approach in antenatal care
- c) Discuss the preventive services for antenatal mother- Antenatal checkup, investigations and prenatal advices.
- d) Enumerate common health problems among antenatal women and its management and prevention- Iron deficiency anemia, PIH, GDM, Rh incompatibility
- e) Discuss the complications of post- partal period and its management

Content and TL methods

Sl No	Content	TL methods	Time allotted
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1	The methods of screening high-risk groups among antenatal women	Lecture	30 minutes
2	Common health problems among antenatal women	Lecture	30 minutes

Evaluation

- 1) Describe the screening methods for high risk antenatal women
- 2) Enumerate the common health problems among infants

Integration

Obstetrics and Gynaecology

Competency 10.3:

Describe local customs and Practices during Pregnancy, Child birth, Lactation and Child feeding practices

Level: Knows

Specific Learning Objectives

At the end of the session, the learner should be able to:

- a) Describe the Dietary Practices for a pregnant woman
- b) List the Pre-natal customs and Practices in detail
- c) List the Child Bearing Practices that a mother should know
- d) Enumerate the importance of Institutional delivery
- e) Enumerate the Advantages and Disadvantages of the Practice of Domiciliary Mid wifery services
- f) Describe the Nutritional Practices of a Post-natal mother
- g) Describe the practice of Post-natal exercises as well as the Psychological and Social support in a Post-natal women
- h) Enumerate the Benefits of the Practice of “Rooming In”
- i) Enlist the Advantages of Practice of Breast Feeding both Exclusive Breast Feeding and later
- j) Describe the various Family Planning Practices that a mother should adopt, according to her convenience.

Content and TL methods

Sl No	Content	TL methods	Time allotted
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1	Prenatal customs and practices	Lecture	30 minutes
2	Child bearing practices and Child care	Lecture	30 minutes

Evaluation

- 1) Enlist the Advantages of Practice of Breast Feeding both Exclusive Breast Feeding and later
- 2) Enumerate the Benefits of the Practice of “Rooming In”

INTEGRATION

Obstetrics and Gynaecology
Paediatrics

Competency 10.4:

Describe the RMNCH and CSSM interventions

Level: Knows

Specific Learning Objectives

At the end of the session, the learner should be able to:

I REPRODUCTIVE

- 1) Enlist causes of STI
- 2) Describe the syndromic approach
- 3) Enumerate various FP methods

II MATERNAL HEALTH

- 1) Enlist objectives of Antenatal Care
- 2) Enlist objectives of Intra natal Care and Postnatal Care
- 3) Define Maternal Mortality Rate (MMR) and describe causes of maternal mortality
- 4) List out preventive services for mothers
- 5) Describe High Risk Approach
- 6) Describe Essential and Emergency Obstetric Care

III NEWBORN

- 1) Describe Essential New Born Care
- 2) Discuss Baby Friendly Hospital Initiative
- 3) Define Exclusive Breastfeeding **IV**

CHILD

- 1) Define IMR and discuss causes of infant mortality and its prevention.
- 2) Discuss causes of Under-five mortality
- 3) Discuss causes and prevention of ARI and diarrhoeal diseases
- 4) List objectives of Under-five clinics
- 5) Demonstrate ORS preparations
- 6) Classify ARI and diarrhoeal diseases

V ADOLESCENT

- 1) Enlist adolescent health problem
- 2) Describe adolescent health program

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	STI and Family planning methods	Lecture	60 minutes
2	Antenatal, Intranatal and Postnatal care	Lecture	90 minutes
3	Newborn care, Child and Adolescent health	Lecture	90 minutes

Evaluation

- 1) Describe Essential New Born Care and Discuss Baby Friendly Hospital Initiative 2) Discuss causes and prevention of ARI and diarrhoeal diseases

Integration

Obstetrics and Gynaecology
Paediatrics

Competency 10.5:

Level: Shows how

Specific Learning Objectives

A. UNIVERSAL IMMUNIZATION PROGRAMME

At the end of the session, the learner should be able to:

11. Outline the National Immunization Schedule .
12. Explain goals and targets of Mission Indradhanush and Intensified Mission Indradhanush.
13. Describe schedule, dose, route, site of administration, storage and AEFI of different vaccines.
14. Identify different components of Cold Chain.

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	National immunization schedule	Small group discussion	30minutes
2	Visit to UHTC and Demonstrate steps in vaccine administration and storage	Small group activity and interactive discussion	60 minutes

3	Steps in surveillance of AFP and reporting and management of AEFI	Small group discussion	30 minutes
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Evaluation

7. Long essay (example)
 - a. Describe universal immunization programme. Explain components of cold chain maintenance. Add a brief note on vaccine vial monitoring (VVM).
 - b. For a case of Acute Flaccid Paralysis (AFP) , describe the steps for AFP surveillance and measures for prevention and control of further cases.

8. Short essay (example)
 - a. National immunization day.
 - b. Write a brief note on AEFI.

9. Multiple choice questions (example)
 - a. Which of the following is the most heat sensitive vaccine among the below :
 - i. OPV
 - ii. JE Vaccine
 - iii. DPT
 - iv. DT

Integration

- Paediatrics
- Obstetrics

B.INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS (IMNCI)

At the end of the session, the learner should be able to:

- Enlist the principles of IMNCI.
- Classify the childhood illnesses according to colour coding of IMNCI.
- Describe salient features of NavjatShishu Suraksha Karyakram, Janani Shishu Suraksha Karyakram, Baby Friendly Hospital Initiative
- Interpretation of growth charts.

Content and TL methods

Sl No	Content	TL methods	Time allotted
1	IMNCI-STRATEGY, STEPS, COMPONENTS	SMALL GROUP DISCUSSION	30 Minutes
2	IMNCI CASE MANAGEMENT WITH SCENARIO	SMALL GROUP ACTIVITY AND INTERACTIVE DISCUSSION	30 minutes
3	NEWBORN & CHILD HEALTH PROGRAMS	SMALL GROUP DISCUSSION	30 minutes
4	GROWTH MONITORING & GROWTH CHART	SMALL GROUP DISCUSSION	30 minutes

Evaluation

1. Visit to uhtcpaediatricopd to classify of illness of children according to color coding of IMNCI.
2. Interpreting growth charts. Long Essay:
 1. Describe the strategy, steps and components of IMNCI. Short Essay:
 1. Note on Baby Friendly Hospital Initiative. Multiple choice:
 1. NavjatShishu Suraksha karyakram addresses the below except:
 - a) Care of baby at birth
 - b) Care of antenatal mother
 - c) Prevention of hypothermia
 - d) Transport of neonates

Integration

- PAEDIATRICS

CM10.6 Enumerate and describe various family planning methods, their advantages and shortcomings

Domain – Knowledge,

Level - Knows How,

Core competency – Y

Specific Learning objectives

At the end of the session the learner should be able to

1. Classify and enumerate the different Family planning methods / contraception (Spacing methods and Permanent methods)
2. Describe the various family planning methods – including ideal candidates for each method
3. Enumerate the disadvantages and failure rates for the family planning methods
4. Explain the concept of failure rates of contraceptives (Pearl index) and the method of calculating the same
5. Describe Medical termination of Pregnancy, its legal basis. The circumstances/ indications under which it can be performed. The setting where it can be performed and qualifications to perform the same. The role of MTP in Reproductive and Child health care
6. Explain the concept of emergency contraception and various methods.

Content and teaching learning methods

Sl	Content	Teaching Method	Time Allotted
1	List the contraceptive methods. Describe 'Condom', 'Mala N/Mala D', 'Saheli' & 'Antara' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing	SGD	1 hour

2	Describe Contraceptive Methods 'Copper T 380A', 'No Scalpel Vasectomy' & 'Minilap' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives	SGD	1 hour
3	Describe the various methods of emergency contraceptive methods. Describe the various methods of Medical Termination of Pregnancy (MTP). Describe the circumstances under which MTP can be performed. Describe the settings & qualifications required to perform MTP.	Lecture	1 hour
			3 hrs

Evaluation

LONG ESSAY

1. Describe the contraceptive methods used for spacing under RCH.
2. Describe the terminal contraceptive methods.

SHORT ESSAY

1. Describe 'Condom' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing
2. Describe 'Mala N/Mala D' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Social Marketing
3. Describe 'Saheli' & 'Antara' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate
4. Describe 'Copper T 380A' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate
5. Describe 'No Scalpel Vasectomy' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives
6. Describe 'Minilap' under the following headings (a) Description (b) Method of use (c) Advantages (d) Disadvantages (e) Failure Rate (f) Incentives
7. Describe the various methods of emergency contraceptive methods.
8. Describe the various methods of Medical Termination of Pregnancy (MTP).
9. Describe the circumstances under which MTP can be performed.
10. Describe the settings & qualifications required to perform MTP.

MCQs

- 1) What is the maternal mortality rate (MMR) of India according to SRS(2018-2020)? a) 113/1, 00,000 live births
b) 173/100,000 live births C]
188/100,000 live births
D] 211/100,000 live births
- 2) What is the Infant Mortality Rate[IMR] of India according to SRS(2018-20)? a) 57/ 1000 live births
b) 57/one lakh live births
c) 32/1000 live births

d) 32/one lakh live births

3) All the following are prelacteal feeds EXCEPT a)

Honey

b) zamzam

c) Sugar

d) Colostrums

4) According to WHO Exclusive breast feeding to be continued till a)

1 year

b) 6 months

c) 5 months

d) 4 months

5) What is the route of administration of Rotaviral vaccine ? a)Intramuscular

b) Subcutaneous

c) Intradermal

d) Oral

Integration – no integration has been suggested in the NMC document

CM 10.7 Enumerate and describe the basis and principles of the Family Welfare Program including the organization, technical and operational aspects

Domain – Knowledge,

Level - Knows How,

Core competency – Y

Specific Learning objectives

At the end of the session the learner should be able to

1. Describe the historical evolution of family planning/ family welfare programme in India
2. Define family planning. Explain the sociological and demographical basis of family planning
3. Explain how family planning programme is planned at various levels (National, State, District and PHC level, including various fertility related statistics)
4. Explain how family planning programme is implemented at the district level and below
5. Explain basics of evaluation of family planning programme (needs, plans, performance, effects and impact)
6. Explain the National Population Policy – historical evolution, current NPP2000. Goals, objectives and targets

Content and teaching learning methods

Sl No	Content	TL methods	Time allotted
1	Definition, demographic & Sociological basis of family planning in India and evolution of FP/FW program	Lecture	30 mins

2	Indicators used for calculation of Family welfare targets. Actual calculation of eligible couple number, indenting of FP methods	Practical / Lecture	60 mins
3	Organizational pattern of Family planning Program at District level and below.	SDL	30 mins
4	Community needs assessment survey. Types & Steps of health program evaluation	Lecture	60 Mins
5	NPP 2000 Historical evolution, current NPP2000. Goals, objectives and targets	Lecture	30 mins
			3 hrs 30 mins

Evaluation

Long Essay

Describe the goals, objectives and targets of National Population policy 2000.

(2+3+5)

Short Essay

MCQs

1) Failure rate of Copper- T is a)

0.8%

b) 0.5%

c) 1%

d) 2%

2) The IUD used in PHC under the National Programme is a)

Copper T 220C

b) Copper T 380A

c) Copper T 200B

d) Multiload 375

3) Mechanism of action of OCPS is

a) Prevent the release of ovum form the ovary

b) Cervical mucus thickening

c) Inhibit tubal motility

d) All of the above

4) The drugs used as post coital pills EXCEPT a)

Levonorgestrol 0.75mg

b) Ethinyl estradiol 50mcg

c) Mifepristone 10mg

d) Misoprostol 35mcg

5) The effectiveness of MALA D and MALA N is a)

100%

- b) 80%
- c) 90%
- d) 70%

Integration – no integration has been suggested in the NMC document

CM 10.8 Describe the physiology, clinical management and principles of adolescent health including ARSH (total hrs of teaching required 2 hrs 30 mins) Domain – Knowledge,

Level - Knows How,

Core competency – Y

Specific Learning objectives

At the end of the session the learner should be able to

1. Enumerate the physiological changes taking place during adolescence in male and females and how it is assessed
2. List the priority interventions under Adolescent Health Programme and describe the various services provided at clinic, outreach/ sub center, family and community level
3. Explain the need for a separate adolescent reproductive and sexual health programme (ARSH) under RMNCH+A and how it is to be delivered.
4. Explain the topics to be covered while counseling for adolescent health.
5. Describe the global strategy for women’s, children’s and adolescents’s health 2016-2030

Content and teaching learning methods

Sl No	Content	TL methods	Time allotted
1	Physiological changes in adolescence and its assessment	Lecture	15 min
2	Adolescent health programme – components and services delivered	Lecture, SGD, Field visits	30 min
3	Sensitivity involved in delivering reproductive and sexual health programme for adolescents, components of ARSH, service delivery in PHCs, CHCs, THs and District Hospitals	SGD	45 min
4	Counselling Adolescents – steps in counselling, contents of adolescent health education (physiological changes, changes in personality, both males and females, general health, reproductive and sexual health, counselling regarding not using habit forming substances)	SGD	45 mins
5	Global strategy for Women’s, children’s and adolescents’ health 2016-2030	Lecture	15 mins

Evaluation**Long Essay****Describe Health needs and problems of adolescents.****(5+5)****Short Essay****MCQs**

1) Under the MTP Act Medical termination is allowed up to

- a) 18 weeks
- b) 20 weeks
- c) 24 weeks
- d) 28 weeks

2) How many days after normal delivery can copper T be inserted? a)

- Immediately after delivery
- b) After 1 & half months
- c) After 3 months
- d) After 9 months

3) Content of MALA D is

- a) Ethinyl Estradiol 0.03mg & Levonorgestrol 0.3mg
- b) Ethinyl Estradiol 0.3mg & Levonorgestrol 0.03mg
- c) Ethinyl Estradiol 0.1mg & Levonorgestrol 0.33mg
- d) Ethinyl Estradiol 0.03mg & Levonorgestrol 0.1mg

4) What is cafeteria approach in National Family Welfare Programme? a)

- Giving the option to couples to choose for contraceptives
- b) Advising them to choose a right contraceptive
- c) Giving the advantages and disadvantages of different contraceptives and giving them option to choose
- d) none of the above

5) The present National Family Welfare Programme is under a)

- NRHM
- b) RMNCHA
- c) National Family Planning Programme
- d) NHM

Integration – no integration has been suggested in the NMC document**CM10.9 Describe and discuss gender issues and women empowerment**

Domain – Knowledge,

Level - Knows How,

Core competency – Y

Specific Learning objectives

At the end of the session the learner should be able to

1. Explain the difference between “sex” and “gender” in terms of biological and social perspective.
2. Explain the difference between patriarchal and matriarchal societies with positive and negative aspects of both.
3. Explain how “gender” is a determinant of health and why it has been mentioned (specifically women and children) in the Directive principles of state policy of the Constitution of India
4. Describe the concept of women empowerment with examples

Content and teaching learning methods

sl.no	Content	TL Methods	Time allocated
1	Explain the difference between sex and gender in terms of biological and social perspective	Lecture/SGD	30minutes
2	Explain the difference between patriarchal and matriarchal society and its adv and disadvantages	SGD	30minutes
3	Explain how gender is the determinant of health and why the importance of girl child have been mentioned as the directive policy of constitution of India	Lecture	1 hour
4	Discuss the concept of women empowerment and role of self help group in empowering women	Small group discussion	30 minutes
5	Explain about gender bias and medical and social problem faced by girl child at different ages	Group discussion	30 minutes
			3 hrs

Evaluation

Long Essay

Define sex ratio. Describe socio-cultural determinants of sex ratio in India. Add a note on steps taken for women empowerment.

(2+4+4).Short Essay

MCQs

- 1)Habit disorders are all EXCEPT a)Thumb sucking
b) bed wetting
c) nail-biting
d)day-dreaming

- 2) Juvenile means a boy who has not attained the age of a) 16 years

- b) 18 years
- c) 21 years
- d) 25 years

3. Beneficiaries of Integrated child development scheme are all EXCEPT

- a) Pregnant women
- b) Children less than 6 years of age
- c) Children 7-14 years of age
- d) Nursing mothers

4. Components of UJJAWALA scheme to combat child trafficking are a)
Rescue

- b) Rehabilitate
- c) Reintegrate
- d) Repatriation
- e) All of the above

5. All are ACTS to preserve the rights of the children in India except

- a) Child labour (prohibition and regulation) ACT
- b) Child Placement ACT
- c) Juvenile justice ACT
- d) Children ACT

Integration – no integration has been suggested in the NMC document

For CM 10.1 to CM 10.9 (total 21 hrs – Lecture 10 hrs and SGD/ Practicals/ SDL – 11hrs)

GERIATRIC SERVICES [(CM 12) - 12.1 TO 12.4]

Sl No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
GERIATRIC SERVICES [CM 12 - 12.1 TO 12.4]						
1	Define and describe the concept of Geriatric services	Lecture-1	CM 12.1	V.I with General Medicine		Written/ Viva-voce
2	Describe health problems of aged population	SGD-1	CM 12.2	V.I with General Medicine	CSCD	Written/ Viva-voce
3	Describe the prevention of health problems of aged population. Describe National program for elderly	SGD-2	CM 12.3 & 12.4	V.I with General Medicine	CSCD	Written/ Viva-voce

Competency 12.1:

Define and describe the concept of Geriatric services

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Delineate the age group that is described as elderly.
2. Discuss the characteristic features of geriatric health care services
3. Discuss the challenges in providing geriatric health care services.

Content

1. Who can be called an elderly?
2. Classify the elderly as young old, old old and old older.
3. Discuss the impact of demographic and epidemiologic transition on providing geriatric health care services
4. Discuss accessibility, availability, acceptability and quality of health care services with respect to geriatric health services
5. Discuss the economic, logistic, psychosocial, socio cultural challenges in providing geriatric health care services.
6. Discuss comprehensive geriatric health care services.

TL methods

Lecture discussion or SGD 6th term

Evaluation

3. Short essay(example)
Discuss the implications of demographic transition on health services.
4. Multiple choice question (example)
Proportion of elderly in India as per 2011 census is
 - a. 7.4%
 - b. 8.0%
 - c. 8.6%
 - d. 9.0% Ans: c

Competency 12.2:

Describe health problems of aged population

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Classify the problems faced by the elderly.
2. Discuss the health problems of the elderly

Content

1. Health problems due to ageing
2. Problems due to chronic illness.
3. Health problems specific to gender.

TL methods

Lecture discussion or SGD 6th term

Evaluation

1. Short essay(example)
Discuss the health problems of the elderly.
2. Multiple choice question (example)

Of the following diseases select the one that is not the primary disease of elderly age group. (a) Parkinsonism (b) Alzheimer's (c) Multiple sclerosis (d) Cerebrovascular disease
 Ans: C

Competency 12.3 & 4:

Describe the prevention of health problems of aged population.

Describe National program for elderly

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Explain the concept of healthy ageing
2. Describe the multipronged approach to prevention of health problems of the elderly
3. State the objectives and strategies of National health program for the aged.

Content

1. Multipronged approach for prevention of health problems of the elderly including health, social sectors.
2. Concept of healthy ageing
3. Explain the policies and welfare programs applicable to elderly
4. Objectives, strategies and implementation of national program for the elderly
5. Importance of creation of elderly friendly environment in terms of elderly friendly walkways, elderly friendly homes, elderly friendly public transport system
6. Discuss the policies for the elderly.

TL methods

Lecture discussion or SGD 6th term

Evaluation

1. Short essay(example)
 State the objectives and discuss the strategies of National program for the elderly.
2. Multiple choice question (example)
 Health communication regarding prevention and control of health problems of elderly should be targeted to:
 (a) Elderly (b) People in late adulthood (c) Younger people (d) All of the above Ans:
 d

HOSPITAL WASTE MANAGEMENT [CM 14 - 14.1 TO 14.3]

Sl No.	Classes	Teaching method	Competency	Integration	Misc.	Assessment
1	Define and classify hospital waste	Lecture-1	CM 14.1	H.I with Microbiology		Written/ Viva-voce
2	Describe various methods of treatment of hospital waste	SGD-1	CM 14.2	H.I with Microbiology	Field visit	Written/ Viva-voce

3	Describe laws related to hospital waste management	SGD-2	CM 14.3	H.I with Microbiology	Field visit	Written/ Viva-voce
4	Observe the hospital waste management done at hospital and Common Biomedical Waste Treatment Facility(CBWTF)	SDL-1	CM 14.2	H.I with Microbiology	Assignment	Written/ Viva-voce

Competency 14.1:

Define and classify hospital waste

Specific Learning Objectives

At the end of the session, the learner should be able to:

5. Define Biomedical Waste
6. Differentiate between Biomedical waste, Health care waste and Hospital waste
7. Describe effects of improper management of biomedical waste on environment and human health.
8. Enlist the different types of waste generated in the hospital
9. Classify biomedical waste

Content

7. Definition of Biomedical waste, Health care waste and Hospital waste
8. Effect of improper management of Biomedical waste on the environment such as Air, water and soil pollution.
9. Effect of Persistent organic pollutants on human health in terms of cancers and endocrine disorders.
10. List the different types of waste generated in the Hospital
11. Classification of biomedical waste as per WHO classification and BMW Rules 2016

TL methods

Lecture discussion or SDL, 6th term

Evaluation

5. Short Answer (example)
 - Define Biomedical waste
 - Enlist the different categories of waste generated in a hospital
 - Classify biomedical waste
6. Multiple choice question (example)

Competency 14.2:

Describe various methods of treatment of hospital waste

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Enlist the various methods of treatment of Biomedical waste.
2. Explain the advantages and disadvantages between burn and non burn technologies for treatment of biomedical waste

3. Explain the importance of pre-treatment of certain categories of Biomedical waste.

Content

1. Describe the available technologies for treatment of various categories of biomedical waste such as- Chemical treatment, Incineration, disinfection and shredding.
2. Describe the working of incineration and the difference between incineration and burning.
3. Describe the working of autoclave and microwave. Discuss the difference between sterilization and disinfection.
4. Discuss the advantages and disadvantages of autoclave and microwave over incineration
5. Discuss the treatment methods available for waste water treatment from the hospital
6. Discuss specifically the treatment to be followed as per the BMW Rules 2016 for the various categories of waste. **TL methods**

Lecture discussion 6th term

Evaluation

7. Short essay(example)
Describe the process of incineration for Biomedical waste treatment
8. Multiple choice question (example)

Microwave is not suitable for treatment of _____

- a. Clinical lab wastes
- b. Chemotherapeutic wastes
- c. Sample collection containers
- d. Items contaminated with blood

Answer: b. Chemotherapeutic wastes

The sources of waste water from the hospital are _____.

- i. Laundry
 - ii. Laboratories
 - iii. Operation theaters
 - iv. Hospital kitchen
-
- a. i and iii
 - b. ii and iv
 - c. i,ii and iii
 - d. All of the above

Answer: c. i,ii and iii

The environmental risks of waste water from the hospital are _____

- a. Pollute the water bodies
- b. Emergence of microbial resistance.
- c. Outbreaks of water borne diseases
- d. All of the above

Ans d. All of the above

Competency 14.3:

Describe laws related to hospital waste management

Specific Learning Objectives

At the end of the session, the learner should be able to:

1. Describe the scope and applicability of BMW Rules 2016.
2. Discuss the processes of segregation, collection, transportation and final disposal mechanisms as per BMW Rules 2016
3. Discuss the roles and responsibilities of Regulatory authorities in implementation of BMW Rules 2016

Content

1. Describe the Scope and applicability of BMW Rules 2016
2. Explain the role and process of segregation in Biomedical waste management as per BMW 2016.
3. Describe the process of collection and transportation as per BMW Rules 2016
4. Describe the role of bar coding and tracking of waste as described in BMW Rules 2016.
5. Describe the roles of various committees such as Infection control committee or Biomedical waste management
6. Describe Spill management process.

TL methods

Lecture discussion 6th term

Evaluation

9. Short essay (example)

Justify Segregation of biomedical waste is the heart of biomedical waste management.

10. Multiple choice question (example)

1. Identify the statement that correctly represents segregation of biomedical waste? Select the correct answer.
 - a. Putting different categories of biomedical waste into single bin
 - b. Putting different categories of biomedical waste into appropriate color coded bin
 - c. Putting same category of biomedical waste into different color coded bin
 - d. None of the above

Answer: b. Putting different categories of waste into different color coded bin

Competency 14.4:

Observe the Biomedical waste management done at hospital or Common Biomedical Waste Treatment Facility (CBWTF)

Specific Learning Objectives

At the end of the observation session, the learner should be able to:

1. Identify the steps involved in biomedical waste management in a hospital as per BMW Rules 2016
2. Enlist the documents that are to be maintained at the hospital as per BMW Rules 2016

Content

1. Student will use an observation check list and observe the segregation, collection, in house transportation, temporary storage, documentation process and use of personal protective equipment by the personnel.
2. Student will visit various locations in the hospital to observe the biomedical waste management process. **TL methods**

Demonstration of Biomedical waste management processes in the hospital. Interaction with nursing personnel.

Evaluation

Evaluate the report of the visit submitted by the student

Topic: Health planning and management (CM 16)

Total time allotted - 4 hours (2 hours large group and 2 hours small group learning)

Competency No	Competency	Domain K/S/A/C	Level	Phase	TL method	Integration	Assessment*	Remarks
16.1	Define and describe the concept of Health Planning	K	K	3	Interactive lecture		SAQ SEQ	
16.2	Describe planning Cycle	K	K	3	Interactive lecture		LAQ SEQ SAQ	
16.3	Describe Health Management Techniques	K/S	KH/S H	2 and 3	SGD Practical PHC/ DHO visit		LAQ SEQ SAQ MCQ Assignment and log book entry Reflection writing	
16.4	Describe Health planning in India and National policies related to health and health planning	K	KH	3	Interactive lecture		SAQ SEQ MCQ	Pandemic module, PM 2.4) FC 3.1 (foundation course)

*Formative Assessment tools for Interactive lecture

- Quiz/MCQ test (app or google form)
- One minute paper
- Directed paraphrasing
- Muddiest point
- Buzz groups

- Exit slip/ticket
- Yes/No response (color cards)
- Log book/portfolio

Formative assessment for small group learning (some of them are used both for teaching and assessment)

- Checklist completion • Peer assessment
- Think, Pair and share
- Round robin charts
- Jigsaw method
- Feedback forms
- Informal presentations
- Group discussions
- Poster making
- Role play
- Debates
- Logbook/practical record/portfolio

CM 16.1- Define and Describe the concept of Health Planning

SLOs: *At the end of teaching learning session the student should be able to*

1. Define Health planning as per WHO
2. Identify the purpose of health planning
3. Define health needs (Postings during second year/family survey)
4. Define health demands (Postings during second year/family survey)
5. Differentiate between Goal, Target and Objective using suitable examples.

Content:

- Need for planning in health
- Pre requisites for planning
- Examples of planning in health care (national programs, hospitals and during health crisis)
- Health needs and demands Assessment:

Sample Short answer Question:

Differential between goal, target and objective using suitable examples- 3 marks

CM 16.2- Describe planning cycle

SLOs: *At the end of teaching learning session the student should be able to*

1. Define Planning Cycle
2. Describe the 8 steps of the Planning Cycle in the correct order with an example Content:
 - Planning cycle at various levels with examples'
 - Gantt chart
 - Types of planning Assessment:

Sample Long answer question:

Describe the steps of planning cycle with an example – 10 marks

CM 16.3- Describe Health management techniques

SLOs: *At the end of teaching learning session the student should be able to*

1. Define health management
2. Describe the principles of health management
3. Differentiate between management, organisation and administration in health
4. Describe the modern health management techniques with suitable examples Content:

- Management and administration
- Organisational control
- Budgeting
- Inventory management
- Network analysis
- Time management Assessment:

Sample Long answer question- 10 marks

As a new medical officer of the primary health centre of a tribal area, you are planning to implement the mother and child health programmes as per the needs of the community.

Answer the following questions in the context of the above scenario

- What is the importance of planning?
- Describe your plan of action using planning cycle.

Sample Short answer: 3 marks

What is Cost-benefit and Cost-effective Analysis?

Sample Long Essay: 10 marks

Describe Inventory management techniques with example Sample MCQ

Which of the following is NOT a inventory management technique?

1. ABC analysis
2. FSN analysis
3. VED analysis
4. PHC analysis

Key- 4

CM 16.4- Describe health planning in India and National policies related to health and health planning

SLOs: *At the end of teaching learning session the student should be able to*

1. Describe the steps to prepare a micro plan for vaccination activity at PHC level (Pandemic module, PM 2.4)
2. List the goal, key principles and objectives of National Health Policy 2017
3. Demonstrate the understanding of the national health goals and policies FC 3.1 (foundation course)
4. Describe the thrust areas under National Health Policy 2017
5. Enumerate the recommendations of the various Health Committees in India
6. List the functions of NITI in Health planning in India
7. Describe role of Five-year plans with respect to health care in India Content:
 - NITI AYOJ and health
 - Five-year plans and health
 - Health committee recommendations
 - National Health policy 2017 highlights Assessment:

Sample Short Essay- 5 marks

- Describe the key features of national health policy 2017

Faculty Guide:

Sample lesson plan Topic:

Health Planning

Competency:

CM16.1- Define and describe the concept of Health planning

CM16.2- Describe planning cycle Specific Learning

Objective:

At the end of teaching learning session, a Phase 3 student should be able to

1. Define Health planning correctly as per WHO definition.
2. Identify the purpose of health planning correctly.
3. Define health needs and health demands.
4. Differentiate between Goal, Target and Objective correctly using examples.
5. Define the Planning Cycle correctly.
6. Describe the steps of the Planning Cycle correctly.

Domain - Knowledge

Level – Knows, Knows how

Core – Yes

Integration: NIL

LESSON PLAN

Sl. No.	Content	TL Method	TL Media	Time
1.	Set induction- Need/ Purpose for Health Planning	Brainstorming	Black/white board	5 min
2.	Define Health planning as per WHO definition	Lecture	PPT	5 min
3.	Differentiate between Target and Goal, Objective using examples	Lecture	PPT	5 min
4.	Define planning Cycle	Lecture	PPT	5 min
5.	Formative assessment	MCQ	Kahoot	5 min
6.	Describe the steps of the Cycle planning	Lecture	PPT	20 min
7	Assessment	Summative: Q&A session		5 min

8	Summary	Brainstorming	PPT, White/ Black board	5 min
9	Attendance			5 min

Faculty guide:

Assessment of small group learning:

Rubric for Small group Discussion

Score	Criteria for assessment
5	Is a proactive participant showing a balance between listening, initiating, and focusing discussion. Displays a proactive use of the whole range of discussion skills to keep discussion going and to involve everyone in the group. Understands the purpose of the discussion and keeps the discussion focused and on topic. Applies skills with confidence, showing leadership and sensitivity.
4	Is an active participant showing a balance between listening, initiating, and focusing discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps the discussion going but more as a supporter than a leader. Tries to involve everyone in the group. Demonstrates many skills but lacks the confidence to pursue them so that the group takes longer than necessary to reach consensus. Demonstrates a positive approach but is more focused on getting done than on having a positive discussion.
3	Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skills such as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Lacks balance between discussion and analytical skills. Either displays good analysis skills and poor discussion skills or good discussion skills and poor analysis skills.
2	Is an active listener but defers easily to others and tends not pursue personal point of view, lacking confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result, offers little evidence to support any point of view.
1	Demonstrates no participation or effort. Participates only when prompted by the teacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic. Participates minimally so that it is impossible to assess analysis skills or understanding of the issues.

1 to 3 =Below Expectations

4 =Meets Expectations

5 =Above Expectations

HEALTH CARE OF THE COMMUNITY (CM 17) Competency 17.1/2/3

Define and describe the concept of health care to community/ Describe community diagnosis/ Describe primary health care, its components and principles.

Specific learning Objectives

At the end of the session the learner will be able to:

- a. Define Health care.
- b. Classify levels of health care.
- c. Define Primary Health Care.
- d. Describe Principles and Elements of Primary Health Care.
- e. Define community diagnosis

Competency 17.4

Describe National policies related to health and health planning and millennium development goals.

Specific learning Objectives

At the end of the session the learner will be able to:

- a. Describe National Population Policy.
- b. Describe National Children Policy.
- c. Describe National policy for older persons.
- d. Describe Sustainable Development Goals (SDG) and targets.

Competency 17.5

Describe health care delivery in India.

Specific learning Objectives

At the end of the session the learner will be able to:

- a. Describe Health Systems in India – Centre, State,
- b. District Level: Panchayati Raj and Rural Development
- c. Describe Health Care Systems, Indigenous systems of medicine and its advantages and disadvantages in India.
- d. Describe the IPHS standards for PHC and Health and wellness centre, subcentre
- e. Describe the voluntary health agencies working in India
- f. Define evaluation
- g. Describe steps involved in evaluation of Health Service
- h. Describe Health Systems Research and Health Forecasting

LONG ESSAY

1. Define primary health care. Describe principals and elements of primary healthcare.
2. Describe Primary health care in India.

Short essay

-
1. Levels of health care in India
 2. Enumerate functions of primary health centre
 3. Primary Health care workers
 4. Describe IPHS standards for PHC.

Short notes :

1. Appropriate technology with example
2. List 4 functions of ASHA worker
3. List 4 functions of anganwadi worker.
4. List 4 voluntary health agency working in India
5. Enumerate 4 functions of Medical officer of PHC.

MCQ :

1. The population covered by a Primary health centre in rural areas is a) 15000 b) 20000 c) 25000 d)30000
2. The population covered by a health and wellness centre, subcentre in tribal areas is a) 5000 b) 30000 c)4000 d)6000

Ans : 3000

3. Treatment of locally endemic diseases is a job responsibility of PHC MO a). true b).false

Ans : True

Recent advances in Community Medicine (CM 20)

Total time allotted – 2 hours

Competency No	Competency	Domain K/S/A/C	Level	Phase	TL method	Assessment*	Remarks
CM 20.1	List important public health events of last five years	K	KH	3	SGD SDL	Reflective writing	Participate in the public health events in their college or state
CM 20.2	Describe various issues during outbreaks and their prevention	K	KH	3	SGD	SAQ	Reflective writing by the previous pandemic experiences • To be covered in Pandemic module
CM 20.3	Describe any event important to Health of the Community	K	KH	3	SGD	Assignment and log book entry Reflection writing	Participate in the public health events in their college or state

CM 20.4	Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment	K	KH	3	SGD SDL	MCQ	
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		Act and Human Organ Transplantation Act and its implications						
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Formative assessment for small group learning (some)

- Checklist completion • Peer assessment
- Think, Pair and share
- Feedback forms
- Informal presentations
- Group discussions
- Poster making
- Role play
- Debates
- Logbook/practical record/portfolio

CM 20.1- List important public health events of last five years

SLOs: *At the end of teaching learning session the student should be able to*

6. List the important public health events
7. Know the importance of it and the theme of that year
8. Events conducted in their college or district and participate

Assessment:

Log book – Reflective writing

CM 20.2- Describe various issues during outbreaks and their prevention

SLOs: *At the end of teaching learning session the student should be able to*

3. Define Pandemic and should be able to describe the steps taken in containment of the pandemic
4. Should know the various government bodies and non Govt agencies which help in the outbreaks
5. Various problems faced by the health care professionals in during pandemic

Assessment:

Log book – reflective writing

CM 20.3 - Describe any event important to Health of the Community

SLOs: *At the end of teaching learning session the student should be able to*

1. List the important health event
2. Know the importance of it and participate in it

Assessment:

Log book – reflective writing

CM 20 .4- Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ

Transplantation Act and its implications

SLOs: *At the end of teaching learning session the student should be able to*

8. Demonstrate awareness about various laws in the state and in India
9. And the implications on health

Assessment:

Log book – reflective writing

AETCOM

3.1 The Foundations of Communication- 3 A.

Healthcare as a right:

- 1) What are the implications of healthcare as a right?

- 2) What are social and economic implications of healthcare as a right?
- 3) What are the implications of doctor?

Evaluation:

Write a short note on barriers of implementation of healthcare as a universal right.

B. Working In a healthcare team:

- 1) Demonstrate ability to work in a team of peers and superiors.
- 2) Demonstrate respect in relationship with patients, fellow team members, superiors and other healthcare workers.

Name of Block	Block 1
Name of Elective	Assessment of client satisfaction of ANC services in urban and rural health center
Location of hospital Lab or research facility	Urban/Rural health training center of - ---
Name of internal preceptor(s)	Dr. Dr. Dr. Dr.
Name of external preceptor(s)	NA
Learning objectives of elective	1. Writing objectives of the study 2. Sample size calculation, sampling method 3. Review of literature Study tool designing 4. Data collection methods and techniques 5. Data analysis 6. Report writing

Number of students that can be	10
--------------------------------	----

C. Doctor-patient relationship

- 1) Demonstrate empathy in patient encounters.
- 2) Communicate care options to patient and family with a terminal illness in a simulated environment.

3.3 The Foundations of Communication-4

(For Assessment of AETCOM competency please refer “AETCOM-Competency for the Indian medical Graduate 2018, MCI New Delhi Document)

ELECTIVES:

Electives : Department of Community Medicine

accommodated	
Prerequisites	Good communication skills
List of activities of student participation	<ol style="list-style-type: none"> 1. Orientation to research methods 2. Protocol writing 3. Review of literature 4. Preparing questionnaire 5. Data collection 6. Data analysis and interpretation 7. Project report writing and presentation
Learning resources	Books on Research methodology Books on biostatistics Antenatal mothers
Portfolio	Activity Book with photos
Logbook	Satisfactory completion of posting with a “meets expectation ‘(M)’ grade”
Assessment	Attendance: Successful completion of objectives and log book entry
Comments	

Name of Block	Block 1
Name of Elective	Community based research
Location of hospital Lab or research facility	Urban/Rural field practice area of --- -
Name of internal preceptor(s)	Dr. Dr. Dr. Dr.
Name of external preceptor(s)	
Learning objectives of elective	<ol style="list-style-type: none"> 1. To select the research topic 2. To frame objectives of research topic 3. To write methodology for research 4. To collect data and analyze the results. 5. To present abstract to the group.
Number of students that can be accommodated	10
Prerequisites	Communication skills

List of activities of student participation	<ol style="list-style-type: none"> 1. Work with supervisor in selecting the topic, framing the objectives 2. Write up the Introduction, Review of literature. 3. Work up with statistician to write up methodology and to do analysis to the data collected 4. Present abstract of the research done
Learning resources	Leon Gordis: Clinical Epidemiology
Portfolio	Data collection notes Statistical work sheet Abstract created
Logbook	Satisfactory completion of posting with a “meets expectation ‘(M)’ grade”
Assessment	Attendance Successful completion of objectives and log book entry
Comments	

LOGBOOK:

(Refer RGHUS 2nd Professional Document ordinance.)

Reference Books

(Refer RGHUS 2nd Professional Document ordinance.)

REFERENCEBOOK

1. K.Park, Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot Publishers, Jabalpur.-
2. B.K. Mahajan & M. Gupta Text book of preventive and social medicine, Jaypee Brothers.
3. Mahajan's Methods in Biostatistics for Medical Students and Research

Workers. Jaypee Publishers

4). D.K. Mahabalaraju., Essentials of Community Medicine, Practicals.

5) Sundar Lal, Textbook of Community Medicine, CBS Publishers.

Level III

- 1) AM Kadri. IAPSM's Textbook of Community Medicine.
- 2) J Kishore. Kishore's National Health Programs of India 3) Rajvir Bhalwar, Textbook of Public Health and Community Medicine, Published in Collaboration with WHO.
- 3) Principles of Medical Education: Dr. T. Singh
- 4) AHSurya Kanth Community Medicine with Recent Advances.

Level-III

1. Donald Hunter, (2018) The Disease of Occupations, Latest Edition, Hodder & Stoughton London, Sydney, Auckland, Toronto.
2. International Labour Organization, Encyclopaedia of Occupational Health and Safety, Volume 1 & 2. ILO, Geneva, Switzerland
3. Jallifee, Clinical Nutrition, WHO., Geneva

Model Question paper
Department of Community Medicine

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS PHASE III PART I MODEL QUESTION PAPER

Total 100 Marks

LONG ESSAY: (2 x 10 = 20 Marks)

- 1) .A 40-year male with sedentary lifestyle came to a medical centre with complaints of weakness and lethargy along with the history of increased thirst and appetite during the day and night. He told the doctor that his sleep is disturbed during the night due to increase in frequency of micturition (2 to 3 visits to toilet). He further said to the doctor that his father is 72 year and has been suffering from diabetes and hypertension.

- a) What level of prevention is applicable for this specific scenario? (2M)
- b) What measures are required to prevent from further disability? (2M)
- c) What measure patient could have taken to delay the onset of a disease? (2M)
- d) Describe the modes of intervention under each level of prevention with suitable examples. (4M)

- 10M

- 2) Enumerate the maternal and child health indicators. Define perinatal mortality rate. Write the causes and measures to reduce perinatal mortality in India. (4+2+4)

SHORT ESSAY: (5 x 8 = 40 Marks)

- 3) Discuss various methods of nutritional assessment in the community.
- 4) Write in detail about Adverse Events Following Immunization (AEFI) and precautions to be taken.
- 5) Radiation – hazards (biological effects) and prevention.
- 6) What is sampling. Enumerate different methods.
- 7) Carrier state in disease. Salient features. Classification with examples.
- 8) Surveillance of drinking water quality.
- 9) What is Neuroleptism? Mention the causes, clinical features and interventions for the control of the problem.
- 10) Intrauterine device. Ideal candidate, advantages, contraindications and side-effects.

SHORT ANSWERS : (3 x 10 = 30 Marks)

- 11) Role of Immunoglobulins in disease prevention.
- 12) Population pyramid.
- 13) What are social factors affecting health.
- 14) Breakpoint chlorination.
- 15) Essential new-born care.
- 16) Emporiatics and its components.
- 17) Uses of screening.
- 18) Social security.
- 19) Balwadi nutrition programme 20) Healthcare delivery indicators.

MCQS : (1 x 10 = 10 Marks)

21) **Human living standards can be compared in different countries by:** a. HDI

- b. PQLI
- c. HPI
- d. DALY

(ANS=b)

22) Which of the following is the aggregation of two or more epidemics? a. Endemic

- b. Syndemic
- c. Poly epidemic
- d. Pandemic

(ANS=b)

23) All are true about milk as a diet except:-

- a. It is low in iron content but rich in calcium, sodium and potassium.
- b. The major carbohydrates is lactose
- c. The chief proteins are caseinogens and lactalbumin
- d. It is rich in vit C and D but poor in vit A and Riboflavin

(ANS=d)

24) Which of the following has the highest glycemic index? a. Icecream

- b. Dextron
- c. Dextrose
- d. Bread

(ANS=c)

25) Which of the following pollutant gases is not produced both naturally and as a result of industrial activity? a. CFCs

- b. CO₂
- c. NO₂
- d. Methane

(ANS=a)

- 26) Range of values surrounding the estimate which has a specified probability of including the true population values
- Standard deviation
 - Standard error
 - Confidence interval
 - Correlational coefficient

(ANS=c)

- 27) Which fitness campaign of India has recently been applauded by WHO?
- Fitness ka Dose Aadha Ghanta Roz
 - Indian Swasthya Abhiyan
 - Hum Swasth to Jan Swasth
 - None of the above

(ANS=a)

28) NRHM seeks to strengthen:

- Private healthcare system
- Public healthcare system
- Private and public healthcare system
- None of these

(ANS=c)

- 29) Which of the following is an important determinant of population change?
- Migration
 - Human development report
 - Net attendance ratio
 - Life expectancy

(ANS=a)

- 30) If arithmetic mean is 82 and median is 78 then the appropriate value of mode will be.
- 50
 - 60
 - 70
 - 80

(ANS=d)



UNDERGRADUATE LOGBOOK
For 1st 2nd and 3rd Professional Year MBBS Students

DEPARTMENT OF COMMUNITY MEDICINE

Name of College, address & Logo

PREFACE

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate (IMG) is able to recognize "Health for all" as a national goal. He/she should also be able to fulfil his/hersocietal obligations. The revised curriculum has specified the competencies that a student must attain and clearly defined teaching learning strategies for the same. With this goal in mind, integrated teaching, skill development, AETCOM and self-directed learning have been introduced. There would be emphasis on communication skills, basic clinical skills, and professionalism. There is a paradigm shift from the traditional didactic classroom based teaching to learning environments where there is emphasis on learning by exploring, questioning, applying, discussing, analysing, reflecting, collaborating, and doing. The recognition of this need is enshrined by a greatly enhanced allocation of time to these methods and also the assessment techniques. With this view in mind the logbook has been designed as per the guidelines of Competency Based Curriculum.

INSTRUCTIONS

- 1) The logbook is a record of the academic and co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.
- 2) The student is responsible for
- 3) Getting the entries in the logbook verified by the faculty in charge regularly.
- 4) Entries in the logbook will reflect the activities undertaken in the department & have to be scrutinized by the Head of the concerned department.
- 5) The logbook is a record of various activities by the student like:
 - Overall participation & performance
 - Attendance
 - Participation in sessions
 - Record of completion of pre-determined activities.
 - Acquisition of selected competencies
- 6) The logbook is the record of work done by the candidate in that department /specialty and should be verified by the college before submitting the application of the students for the university examination.

Passportsize photo

Name	
RollNo	
UniversityRegistrationNumber	
Batch	
ContactNo	
Email Id	
Guardian/Parent Name	
ContactNumber	
FacultyMentor Name Department	

BASICINFORMATION

LOGBOOK CERTIFICATE

This is to certify that this log book is the bonafide record of Mr./Ms...

..... Registration number

..... and admitted to this Institution in the academic year

..... whose particulars are given above. His/Her logo of competencies acquired,

are as noted in the entries in this log book in the subject of COMMUNITY MEDICINE and

related AETCOM modules as per the Competency Based

Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019, during the

period

.....to.....

She / He is not eligible / eligible to appear for the summative (University) assessment as on the

date given below.

Signature of

Faculty Mentor Name and

Designation

Countersigned by Head of the Department

Place: Date:

Topic	PageNos.	Signatureof Faculty
CoreActivities		
Attendanceextract	-----	
Internalassessmentmarks	Withrecord feedback	
Communicationactivity		
Familystudy		
Clinico-socialCase		
Seminar		
Self-DirectedLearning		
RecordMaintenance		
HealthDays		
VolunteeringinNationalHealthProgramRelatedField Activities		
FieldVisit		
AETCOM		
Research		
InvestigationofanEpidemic*		
Non-CoreActivities		
Co-CurricularActivities (Quiz,Poster,Debate,Essay,Skits)		
CME/Conference/Workshop		
Awards/recognition		
Overallassessmentofstudent		

INDEX

Professional year	Classesconducted		Classesattended		Percentage	
	Theory	Practical	Theory	Practical	Theory	Practical
First						
Second						
Third						
Total						

ATTENDANCEEXTRACT

Signature of faculty and date

Note:

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and self-directed learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.

The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University

Professional year	Theory		Practicals	
	Total marks	Obtained	Total	Obtained
First				
Feedback given Date Signature of faculty Signature of student				
Second				
Feedback given Date Signature of faculty Signature of student				
Third				
Feedback given Date Signature of faculty Signature of student				

INTERNALASSESSMENTMARKS

Sl. No.	Type of Assessment	Total marks	Marks scored	Signature of student	Signature of Teacher with date
1	Seminars/Tutorials/other activities/SGD	10			
2	Professionalism	10			
	TOTAL	20			

SUMMARY OF FORMATIVE ASSESSMENT FOR THE ENTIRE YEAR

Note: Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect as separate head of passing at the summative examination.

Phase	Areas assessed				Total (20)	Signature of student	Signature of teacher
	Regular for Classes (5)	Submission of records (5)	Behaviour in class and discipline (5)	Dress code and presentability (5)			
At the end of 1 st IA							
At the end of 2 nd IA							
At the end of 3 rd IA							
Average score at the end of the year							

RUBRICFORASSESSINGTHEPROFESSIONALISM

Competency #addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

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COMMUNICATIONACTIVITY

Competencies covered

- : Demonstrate the role of effective communication skills in health in a simulated environment
- : Demonstrate the important aspects of the doctor patient relationship in a simulated environment
- 4.3: Demonstrate and describe the steps in evaluation of health promotion and education program

Competency #addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

Competenciescovered

- :Describe the steps and perform clinic-socio-cultural and demographic assessment of the individual, family, and community
- :Describe the socio-cultural factors, family (types), its role in health and disease & demonstrate in a simulated environment the correct assessment of socioeconomicstatus
- :Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behaviour
- 5.2: Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families, and the community by using the appropriate method
- 5.4: Plan and recommend a suitable diet for the individuals and families based on local availability of foods and economic status, etc in a simulated environment

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Competency #addressed	Name of Activity	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

Competenciescovered

- :Describe the steps and perform clinic-socio-cultural and demographic assessment of the individual, family, and community
- :Describe the socio-cultural factors, family (types), its role in health and disease & demonstrate in a simulated environment the correct assessment of socioeconomicstatus
- :Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behaviour
- 5.2: Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families, and the community by using the appropriate method
- 5.4: Plan and recommend a suitable diet for the individuals and families based on local availability of foods and economic status, etc in a simulated environment

Competency #addressed	Topic	Date completed	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets (M) expectations Exceeds (E) Expectations	Decision of faculty Completed (C) Repeat (R) Remedial (Re)	Initial of faculty and date	Feedback received Initial of learner

Competencies covered

- 1.9:
Demonstrate the role of effective communication skills in health in a simulated environment
- 4.3: Demonstrate and describe the steps in evaluation of health promotion and education program

S. No.		Strongly Disagree(1)	Disagree(2)	Uncertain(3)	Agree(4)	Strongly Agree(5)
Content:						
1.	The topic chosen was relevant to the course					
2.	The objectives of the topic were clearly stated.					
3.	There was an adequate review of the literature.					
4.	The student maintained good continuity of thoughts throughout the presentation.					
5.	The student demonstrated a good understanding of the topic.					
6.	The material presented was appropriate for the time allotted.					
Presentation:						
1.	The presentation was well organized.					
2.	The audio visuals were well prepared.					
3.	The voice was clear and audible.					
4.	The student maintained regular eye contact with the audience.					
5.	The student adhered to the expected style of a scientific talk.					
6.	The student maintained the interest of the audience throughout the presentation.					
7.	The student maintained proper pace during the presentation.					
8.	The student handled all the questions well.					
9.	The student summarized the topic well emphasizing a take home.					

Suggestions for Improvement:

STUDENTSEMINAREVALUATIONRUBRIC

Name of the student: _____

Reg.No. _____

Name of the Topic: _____ Date of Presentation: _____

Please tick mark () the response which best represents your answer for the following questions.

AnyotherComments

:

Overall Score:

Evaluatedby:NameoftheFaculty: _____

Module#	Name of SGD/SDL Activity	Date completed	Score	Initial Faculty and date	Feedback Received Initial of learner

SMALL GROUP DISCUSSION-ASSESSMENT AND FEEDBACK

Score	Criteriaforassessment
5	<p>Is a proactive participant showing a balance between listening, initiating, and focusing discussion. Displays a proactive use of the whole range of discussion skills to keep discussion going and to involve every one in the group. Underst and the purpose of the discussion and keeps the discussion focused and o ntopic.</p> <p>Applies skills with confidence, showing leader ship and sensitivity.</p>
4	<p>Is an active participant showing a balance between listening, initiating, and focusing discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps thediscussiongoingbut moreasasupporterthana leader.Tries to involve every one in the group. Demonstrates many skills but lacks the confidence to pursue themso that the group takes longer than necessary to reach consensus. Demonstrates appositive approachbut is more focused on getting done than on having a positive discussion.</p>
3	<p>Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skillssuch as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic.Lacks balance between discussion and analytical skills. Either displays good analys is skills and poor discussion skills or good discussion skills and pooranalysis skills.</p>
2	<p>Isanactivelistenerbut deferseasily to others and tends not pursue personal point of view, lacking confidence. Limits discussion skills to asking questions,summarizing, and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result,offers little Evidence to support any point of view.</p>
1	<p>Demonstrates no participation or effort. Participates only when prompted by theteacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic.Participates minimally so that it is impossible to assess Analysis skill sorunder standing of the issues.</p>

These small group discussions will be scored based on the following criteria. Marks to be given

1.	Assembles for the session in time					
2.	Contributes relevant information in discussions					
3.	Shares learning resources relevant to the topic					
4.	Give scritical feedback					
5.	Take scriticis min a healthy manner					
6.	Seeks answers to learning questions					
7.	Integrates old and new knowledge (across the courses)					
8.	Shows consideration for group process					
9.	Shows confidence in areas of understanding					
10.	Shows commitment to correct deficiencies					
	Total					

SIGNATURE	SIGNATURE
NAME:	NAME:
REG.NO.	DEPARTMENT:

EVALUATION OF SGLSESSIONS

COURSE TITLE: _____

PHASE _____ DATE: _____

Scale:1-Never

2- Occasionally

3- Some times

4- Often

5- Always

1 2 3 4 5

STUDENT

TUTOR

Sl no	Date	TopicofSDL	Feedback	Signature of faculty/mentor
1				
2				
3				
4				
5				

6				
7				
8				
9				
10				
11				
12				

Documentation and feedback for Self-Directed Learning

Reflection on Self-directed learning Experience

Topic:

Date:

Signature of Teacher-in- charge

Criterion	Rating	Signature of faculty and date
Completion		
Quality of content		
Appropriate diagrams where required		
Neatness		
Total		

RECORD MAINTAINANCE

Scoring: Excellent(8-10) Good(6-7) Average(4-5)Poor(<4)

Health day observed		
Date		
Location		
Role of the student	Participated	Observed
Details of the program		
Reflection by student		

WORLD HEALTH DAY

Signature of faculty and date

Name of the National Health Program		
Date		
Location		
Role of the student	Participated	Observed
Details of the activity		
Reflection by student		

VOLUNTEERING IN NATIONAL HEALTH PROGRAM RELATED FIELD

ACTIVITIES

Signatureoffacultyanddate

Nameof thevisit	Date	Reportwritteninr ecord	Signature offaculty
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FIELD OR CLINIC VISIT

The following are there commended field visits for undergraduate students

1. PHC
2. Anganwadi
3. DOTSCentre
4. HospitalWaste Management Facility
5. WaterTreatmentPlant
6. ART/ ICTCCentre

	1	2	3	4	5
1. There is a comment on whether the objectives of the visit have been fulfilled, if not which objective has not been covered					
2. There is Clear Description of student observation/ skill learned.					
3. Analysis of strengths and weaknesses of the services in light of theory and key concepts of the course					
4. Report include information that supports student analysis [Pictures, maps, forms]					
5. There is evidence of active participation of student during the visit					
6. There is statement of Limitation/suggestions					

CheckListforEvaluationofFieldVisitReport

Field Visit Report will be marked on five-point Likert Scale:

1=Strongly Disagree,2=Disagree,3=Neutral,4=Agree,5=Strongly Agree

Competency #addressed	NameofActivity	Date	Signature offaculty	Feedback Received Initial of learner

Activity	
Objectives	
Studydesign and samplesize	
Studytool	
Mainresults	
Results presented in conference/ department	
Signature of faculty guide	

RESEARCH

Competencies covered

- : Describe and discuss the principles and demonstrate the methods of collection, classification, analysis, interpretation, and presentation of statistical data
- : Describe, discuss, and demonstrate the application of elementary statistical methods including test of significance in various study designs
- : Enumerate, discuss, and demonstrate Common sampling techniques, simple statistical methods, frequency distribution, measures of central tendency and dispersion
- 7.9: Describe and demonstrate the application of computers in epidemiology

Name of the exercise	Date	Documentation in record	Signature of faculty

INVESTIGATION OF EPIDEMIC

Competencies covered

7.7: Describe and demonstrate the steps in the Investigation of an epidemic of communicable disease and describe the principles of control measures/ If this activity is not possible a case scenario/ simulated event may be given for completion of this activity

Name of event	Date	Role	Learnings	Signature of faculty

CME/CONFERENCE/ WORK SHOP

Details of event	Date	Role	Learnings	Signature of faculty

CO-CURRICULAR ACTIVITIES

SINo	Details

AWARDS/ RECOGNITION

STRENGTHS	
SUGGESTIONS	

OVER ALL ASSESSMENT OF THE STUDENT

Signature of Mentor

Signature of HOD

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



Ophthalmology Curriculum
as per
Competency-Based Medical Education Curriculum

RGUHS Ophthalmology Curriculum as per the new Competency Based Medical Education Preamble
The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the

IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes⁷²-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Ophthalmology is one of the most advanced specialities in the field of medicine. Ophthalmology deals with preserving vision, the most important special sense. The eye is a unique organ, with none other to match it in structure, function, and gross appearance. Most disorders of the eye lend itself to direct visualisation. The advances in ophthalmology are frequent both in diagnostics and treatment options. It is an interesting area of study. The Ophthalmology undergraduate curriculum provides the IMG the requisite knowledge, essential skills, and appropriate attitudes to be able to diagnose and treat common ocular disorders and to be able to recognise serious eye conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of ophthalmology competencies required for an IMG and these have been included in this ophthalmology curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching Learning methods and preferred assessment methods both formative and summative.

Following this is a detailed **blueprint** showing the weightage and the assessment tool for a particular chapter. This blueprint will ensure that there is an alignment between the SLO's, TL methods and the assessment. A **question paper layout** has also been added to ensure that there is consistency among different paper setters. Finally, the list of practical skills along with the most appropriate TL and assessment methods has been laid out.

Goals and Objectives of the RGUHS Ophthalmology Curriculum

Goals

The broad goal of the ophthalmology curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common ophthalmic disorders affecting our population.

Objectives

A) Knowledge

At the end of the course student should be able to:

- a. Describe the applied anatomy, physiology and biochemical attributes of the normal eye and adnexa.
- b. Describe the pathophysiology, clinical features, and management of diseases of the eye, orbit and adnexa.
- c. Demonstrate the ability to apply the knowledge in a clinical setting. 72

(B) Skills

At the end of the course the student should be able to:

- a. Elicit a detailed clinical history and perform an ocular examination in both outpatient and ward setting.
- b. Apply the elicited history and examination to arrive at correct diagnosis and plan treatment.
- c. Perform minor diagnostic and therapeutic procedures in an emergency situation prior to referral to higher centres

C) Attitude and communication skills

At the end of the course the student should be able to:

- a. Communicate effectively with patients, their families and the public at large.
- b. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- c. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- d. Appreciate the issues of equity and social accountability while undergoing all clinical encounters

List of all Ophthalmology Competencies with their specific learning objectives, with suggested teaching-learning and assessment methods

	Competencies	Specific learning objectives	Teaching learning methods	When T-L will be done	Formative assessment	Summative assessment
Topic: Refractive errors						
OP 1.1	Describe the physiology of vision	Anatomy of retina and fovea Visual pathway Mechanism of vision Theories of color vision	Lecture	6 th term	MCQs at the end of lecture	Short essay/viva voce
OP 1.2	Define, classify and describe the types and methods of correcting refractive errors.	Definition of myopia, hypermetropia and astigmatism Describe the Types of myopia Describe Types of hypermetropia Describe Types of astigmatism Enumerate the Treatment options for myopia Enumerate the retinal findings in myopia Enumerate the Treatment options of hypermetropia Describe the treatment of astigmatism List the indications and advantages, complications of contact lenses	Lectures Tutorial to reinforce learning and prevent decay	6 th term	MCQs/SAQ's at the end of lecture or a group of lectures	Essay/SAQ/ viva voce

OP 1.3	Demonstrate the steps in performing the visual acuity assessment for distance vision, near vision, color vision, the pin hole test and the menace and blink	Assess visual acuity using Snellen's chart Demonstrate use of pin hole in visual acuity testing and interpret the findings Assess near vision using Times new	DOAP session during clinical posting	1 st posting	Skill assessment during clinics Logbook	End of 1st posting – OSCE or short case
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Page. 4

	reflexes	Roman charts Elicit the blink reflex and menace reflex in an adult patient Assess color vision using Ishihara's color plates				
OP 1.4	Enumerate the indications and describe the principles of refractive surgery	Enumerate the types of refractive surgery Enumerate the indication for refractive surgery Briefly describe the principle of LASIK	Lecture	6 th term	MCQ's/SA Q/ Viva voce at the end of lecture	Short essay/viva voce
OP 1.5	Define, enumerate the types and the mechanism by which strabismus leads to amblyopia	Define amblyopia Enumerate the types of amblyopia Describe briefly the mechanism of strabismic amblyopia	Lecture	6 th term	MCQ's/SA Q/ Viva voce at the end of lecture	Short essay/viva voce
Topic: Lids and Adnexa, Orbit Number of Competencies: (08)						

OP 2.1	Enumerate the causes, describe and discuss the aetiology, clinical presentations and diagnostic features of common conditions of the lid and adnexa	Describe the etiology, clinical features of common conditions of the lid and adnexa including Hordeolum externum/ internum, blepharitis, preseptal cellulitis, dacryocystitis, hemangioma, dermoid, ptosis, entropion, lid lag, lagophthalmos	Lecture, Small group discussion like tutorials, PBL or CBL	6th term	MCQs/SAQ / Viva voce	Short essay/viva voce
OP 2.2	Demonstrate the symptoms & clinical signs of conditions enumerated in OP2.1	Elicit signs and symptoms of common eyelid conditions Diagnose accurately common lid conditions based on the elicited signs and symptoms Accurately prescribe the local medication for common lid conditions Counsel a patient with	DOAP session during clinical posting	1st clinical posting	Skill Assessment during clinics Logbook	End of 1st posting – OSCE or short case

		lagophthalmos the need for tarsorrhaphy				
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OP 2.3	Demonstrate under supervision clinical procedures performed in the lid including: bells phenomenon, assessment of entropion/ectropion, perform the regurgitation test of lacrimal sac. Massage technique in cong. dacryocystitis, and trichiatic cilia removal by epilation	Elicit Bell's phenomenon perform lacrimal sac regurgitation test Demonstrate the correct technique of lacrimal sac massage for congenital nasolacrimal duct obstruction to the mother	DOAP session during clinical posting	1st clinical posting	Skill Assessment during clinics Logbook	End od 1 st posting – OSCE or short case
OP 2.4	Describe the aetiology, clinical presentation. Discuss the complications and management of orbital cellulitis	Discuss the etiopathogenesis of orbital cellulitis Describe the clinical features of OC Discuss the management of OC	Lecture, Small group discussion	7th term	MCQs/ SAQ/ Viva voce	Short essay/viva voce
OP 2.5	Describe the clinical features on ocular examination and management of a patient with cavernous sinus thrombosis	Enumerate the predisposing factors for cavernous sinus thrombosis Compare and contrast clinical features of OC and cavernous sinus thrombosis Describe the management of CST	Lecture	7th term	MCQs/SAQ / Viva voce	Short essay/viva voce
OP 2.6	Enumerate the causes and describe the differentiating features, and clinical features and management of proptosis	Discuss causes of unilateral proptosis Enumerate the causes of bilateral proptosis	Lecture, SGD	7th term	MCQs/ SAQ/ Viva voce	Short essay/viva voce
OP 2.7	Classify the various types of orbital tumours. Differentiate the symptoms and signs of the presentation of various types of		Lecture, SGD	7 th term	Written/ Viva voce	Short essay/viva voce

	ocular tumours					
OP 2.8	List the investigations helpful in diagnosis of orbital tumours. Enumerate the indications for appropriate referral		Lecture, SGD	7th term	Written/ Viva voce	Short essay/viva voce
Topic: Conjunctiva Number of Competencies (09)						
OP 3.1	Elicit document and present an appropriate history in a patient presenting with a "red eye" including congestion, discharge, pain	Elicit appropriate history in a patient presenting with "Red eye" Perform ocular examination including vision assessment, pupil examination in a patient with "red eye" Counsel a patient with conjunctivitis on appropriate hand hygiene to prevent spread of infection	DOAP session during clinical posting Logbook	1st clinical posting	Skill assessment Logbook	End of 1st posting – OSCE or short case
OP 3.2	Demonstrate document and present the correct method of examination of a "red eye" including vision assessment, corneal lustre, pupil abnormality, ciliary tenderness	Demonstrate correct method of digital tonometry Discuss the differential diagnosis of "red eye"	DOAP session	1st clinical posting	Skill assessment Logbook	End of 1st posting – OSCE or short case

OP 3.3	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications. and management of various causes of conjunctivitis	Describe the clinical features of ophthalmia neonatorum according to the pathogenetic agent Describe the management of Ophthalmia neonatorum Compare the clinical features of conjunctivitis of different aetiologies Describe the management of	Lecture	6th term	SAQ Viva voce	Essay/SAQ
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		bacterial conjunctivitis				
OP 3.4	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications, and management of trachoma.	Describe the clinical features of Trachoma Describe the management of Trachoma Describe the WHO classification of Trachoma Discuss the National programme for control of blindness due to Trachoma	Lecture	6th term	MCQs/SAQ / Viva voce	Essay/SAQ
OP 3.5	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management of vernal catarrh	Describe the clinical features of vernal catarrh How will you manage a patient with vernal catarrh	Lecture,	6th term	Written/ Viva voce	Essay/SAQ

OP 3.6	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management of pterygium	Elicit appropriate history and clinical signs of pterygium Enumerate causes of decreased vision due to pterygium Describe the different surgical options for pterygium	Lecture	6th term	Skill assessment SAQs	Essay/SAQ
OP 3.7	Describe the aetiology, pathophysiology, ocular features, differential diagnosis, complications and management of symblepharon	Enumerate causes and complications of symblepharon	Lecture	6th term	MCQs/SAQ / Viva voce	SAQ
OP 3.8	Demonstrate correct technique of removal of foreign body from the eye in a simulated environment	Demonstrate correct technique of removal of foreign body from the eye in a simulated environment	DOAP session during clinical posting Logbook	1st clinical posting	Skill assessment Logbook	
OP 3.9	Demonstrate the correct technique of instillation of eye	Demonstrate the correct technique of instillation of eye	DOAP session during	1st clinical posting	Skill assessment Logbook	

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	drops in a simulated environment	drops in a simulated environment	clinical posting Logbook			
OP 3.10	Demonstrate the correct technique of applying an eye pad	Demonstrate the correct technique of applying an eye pad	DOAP session during clinical posting Logbook	1st clinical posting	Skill assessment Logbook	
Topic: Cornea Number of Competencies: (10)						

OP 4.1	Enumerate, describe and discuss the types and causes of corneal ulceration	Discuss the pathogenesis of corneal ulcer Discuss the clinical features based on etiological agent Elicit signs and symptoms of corneal ulcer Describe the general principles of management of corneal ulcers	Lecture	6th term	MCQs/SAQ / Viva voce Skill assessment	Essay/SAQ
OP 4.2	Enumerate and discuss the differential diagnosis of infective keratitis	Enumerate the causes of infective keratitis Compare and contrast the clinical features of bacterial and fungal corneal ulcer	Lecture, SGD	6th term	Written/ Viva voce	Essay/SAQ
OP 4.3	Enumerate the causes of corneal edema	Enumerate the causes of corneal edema	Lecture	6th term	Written/ Viva voce	SAQ
OP 4.4	Enumerate the causes and discuss the management of dry eye	Describe briefly the Physiology of Tear film Describe briefly the tests done to detect dry eyes Enumerate different modalities of treatment of dry eyes	Lecture, SGD	6th term	SAQs/ Viva voce	Essay/SAQ
OP 4.5	Enumerate the causes of corneal blindness	Enumerate the causes of corneal blindness	Lecture, SGD	6th term	Written/ Viva voce	SAQ
OP 4.6	Enumerate the indications and the types of keratoplasty	Enumerate the indications and the types of keratoplasty	Lecture, SGD	6th term	Viva voce	Essay/SAQ
Page. 9						

OP 4.7	Enumerate the indications and describe the methods of tarsorrhaphy	Enumerate the indications and describe the methods of tarsorrhaphy	Lecture	6th term	Written/ Viva voce	Essay/SAQ
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OP 4.8	Demonstrate technique of removal of foreign body in the cornea in a simulated environment	Demonstrate technique of removal of foreign body in the cornea in a simulated environment	DOAP during clinical posting	6th term	Logbook	SAQ
OP 4.9	Describe and discuss the importance and protocols involved in eye donation and eye banking	Enumerate the contraindications for eye donation List all methods of corneal button storage	Lecture	6th term	Written/ Viva voce	Essay/SAQ
OP 4.10	Counsel patients and family about eye donation in a simulated environment	Counsel patients and family about eye donation in a simulated environment	DOAP during clinical posting	1st clinical posting	Logbook	

Topic: Sclera Number of competencies: (02)

OP 5.1	Define, enumerate and describe the aetiology, associated systemic conditions, clinical features complications indications for referral and management of episcleritis	Define scleritis Discuss the etiology of scleritis	Lecture, SGD	6th term	Written/ Viva voce	Essay/SAQ
OP 5.2	Define, enumerate, and describe the aetiology, associated systemic conditions, clinical features, complications, indications for referral and management of scleritis	Describe the clinical features, and treatment of scleritis Enumerate the complications of scleritis	Lecture, SGD	6th term	Written/ Viva voce	Essay/SAQ

Topic: Iris and Anterior chamber Number of Competencies (10)

OP 6.1	Describe clinical signs of intraocular inflammation and enumerate the features that	Describe the etiology, clinical features of iridocyclitis Describe the distinguishing features of granulomatous and non-granulomatous iridocyclitis	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
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	distinguish granulomatous from non-granulomatous inflammation. Identify acute iridocyclitis from chronic condition	What is the etiology of granulomatous iridocyclitis				
OP 6.2	Identify and distinguish acute iridocyclitis from chronic iridocyclitis	Define acute and chronic iridocyclitis Mention the differentiating features between acute and chronic iridocyclitis	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
OP 6.3	Enumerate systemic conditions that can present as iridocyclitis and describe their ocular manifestations	Enumerate the systemic conditions associated with iridocyclitis Enumerate the other ocular manifestations	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
OP 6.4	Describe and distinguish hyphema and hypopyon	What is hyphema and what are its causes How will you manage a case of hyphema What is a hypopyon and what are its causes	Lecture	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
OP 6.5	Describe and discuss the angle of the anterior chamber and its clinical correlates	Describe the anatomy of the angle of the anterior chamber How will you grade the angle of the anterior chamber	Lecture	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
OP 6.6	Identify and demonstrate the clinical features and distinguish and diagnose common clinical conditions affecting the anterior chamber	Describe the clinical features of Primary open angle glaucoma Describe the management of POAG What is Trabeculectomy and describe its steps Describe the clinical features and management of Primary angle closure glaucoma Describe the clinical features and management of congenital glaucoma	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ

OP 6.7	Enumerate and discuss the aetiology, the clinical distinguishing features of shallow and deep anterior	What are the causes of shallow and deep anterior chamber What is gonioscopy What is perimetry and what are the visual field changes in glaucoma	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
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	chamber. Choose appropriate investigations for patients with above conditions of the anterior chamber	What is tonometry and how is it measured Demonstrate digital tonometry				
OP 6.8	Enumerate and choose the appropriate investigation for patients with conditions affecting the Uvea	Describe the investigations in a patient with iridocyclitis	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ
OP 6.9	Choose the correct local and systemic therapy for conditions of the anterior chamber and enumerate their indications, adverse events and interactions	Describe the management of a patient with iridocyclitis Enumerate the side effects of steroid use Discuss various routes of administration of steroids in ocular disease	Lecture , SGD	6 th term	MCQs/SAQ / Viva voce	Essay/ SAQ

OP 6.10	Counsel patients with conditions of the iris and anterior chamber about their diagnosis, therapy and prognosis in an empathetic manner in a simulated environment	Counsel a patient with uveitis regarding the need for compliance	DOAP during clinical posting	1st posting	OSCE	OSCE/short case examination
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Topic: Lens Number of Competencies: (06)

OP 7.1	Describe the surgical anatomy and the metabolism of the lens	Describe the anatomy of the lens Describe the metabolism of the lens	Lecture	6th term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP 7.2	Describe and discuss the etiopathogenesis, stages of maturation and complications of cataract	Describe the etiopathogenesis of cataract Stages of cortical and nuclear cataract Complications of senile cataract Discuss etiology and morphol complicated cataract	Lecture/Ss senile GD biology of	6th term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP 7.3	Demonstrate the correct technique of ocular examination in a patient with a cataract	Differentiate between immature, and hypermature cataract Demonstrate the presence of iris s Macular function tests	mature DOAP during adowclinical posting	1st posting	OSCE	OSCE/sh ort case examinat ion

OP 7.4	Enumerate the types of cataract surgery and describe the steps, intraoperative and postoperative	Describe the steps of cataract surgery. Mention the intraoperative complications. Mention the early and late postoperative complications. Treatment of After cataract	rySGD/Lect ationsure operative	6th term	MCQs/S AQ/ Viva voce	Essay/S AQ
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	complications of extracapsular cataract extraction surgery.					
OP 7.5	To participate in the team for cataract surgery	Discuss the preoperative preparation of a patient for cataract surgery. Experience a walkthrough of a patient from advising for surgery to discharge of the patient	on of a Learner doctor single ery till	2nd post ing	OSCE	OSCE/sh ort case examinat ion
OP 7.6	Administer informed consent and counsel patients for cataract surgery in a simulated environment	Administer informed consent and counsel patients for cataract surgery in a simulated environment	DOAP during clinical posting	2nd post ing	OSCE	OSCE/sh ort case examinat ion

Topic: Retina & optic Nerve Number of Competencies (05)

OP 8.1	Discuss the aetiology, pathology, clinical features and management of vascular occlusions of the retina	Describe the etiology, pathology, features, and management of Retinal vein occlusions. Describe the etiology, pathology, features, and management of Retinal artery occlusions. What is cherry red spot and what causes it	clinical Lecture/S al vein GD clinical al rtery t are ts	7th term	MCQs/S AQ/ Viva voce	Essay/S AQ
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OP8. 2	Enumerate the indications for laser therapy in the treatment of retinal diseases (including retinal detachment, retinal degenerations, diabetic retinopathy & hypertensive retinopathy)	<p>What is the pathogenesis of retinopathy</p> <p>What are the stages of diabetic retinopathy and maculopathy</p> <p>What is the management for each stage</p> <p>What are the grades of hypertensive retinopathy? What is Keith classification</p> <p>Enumerate the types of retinal detachment and its management</p> <p>What is age related macular degeneration? What are the clinical features management</p>	diabetic retinopathy of hypertensive retinopathy	Lecture/Seminar GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
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OP8. 3	Demonstrate the correct technique of a fundus examination and describe and distinguish the funduscopic features in a normal condition and in conditions causing an abnormal retinal exam	<p>Demonstrate the correct technique of using DOAP a direct ophthalmoscope. in skills lab</p> <p>Describe a normal fundus with the help of a diagram</p>			6-7 th term	OSCE	
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OP8. 4	Enumerate and discuss treatment modalities in management of diseases of the retina	<p>Enumerate the various disease conditions of the retina</p> <p>Enumerate the treatment modalities of the above conditions</p>	diabetic retinopathy of hypertensive retinopathy	Lecture/Seminar GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
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OP8.5	Describe and discuss the correlative anatomy, aetiology, clinical manifestations, diagnostic tests, imaging and management of diseases of the optic nerve and visual pathway	Describe the anatomy of the Optic nerve Describe the clinical features, GD f investigations and management of Optic neuritis Describe the clinical features, stages and fundus picture, investigations and management of Papilledema Describe the clinical features, classification, investigations and management of Optic Atrophy Describe the anatomy of the pathway Describe the visual field defects occurring in diseases affecting the visual pathway Describe the pupillary pathway Describe the clinical features of various malities- the pupillary abnor Hutchinson pupil, ARP, Adies Pupil, Gunn Pupil Demonstrate swinging flashlight test	Lecture/S GD	7th term	MCQs/S AQ/ Viva voce	Essay/S AQ
PA 36.1	Describe the etiology, genetics,	Discuss the pathogenesis, histopathology and genetics of retinoblastoma	Lecture/S GD	7th term	MCQs/S AQ/ Viva voce	Essay/S AQ

	pathogenesis, pathology, presentation, sequelae, and complications of retinoblastoma	Enumerate the causes of leukocoria Describe the staging and clinical features of retinoblastoma Discuss the treatment options for the various stages of retinoblastoma				
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Topic: Miscellaneous Number of Competencies (05) Number of procedures that require certification: (01)

OP9.1	Demonstrate the correct technique to examine extra ocular movements (Uniocular & Binocular)	List the extraocular muscles insertions, and their actions Demonstrate the correct technique to examine extra ocular movements (Uniocular & Binocular)	DOAP their during movements posting	1 st & 2 nd posting	Logbook	
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OP9. 2	Classify, enumerate the types, methods of diagnosis and indications for referral in a patient with heterotropia/strabismus	List the types of strabismus What are the differences between squint and Concomitant squint Enumerate and demonstrate the type in a case of Squint (Hirschberg's test posture) List the conditions in which a patient with strabismus has to be referred	Lecture/S Analytic GD Tests done Head test with	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP9. 2	Describe the role of refractive error correction in a patient with headache and enumerate the indications for referral	Enumerate the causes of headache and list the differentiating features to suggest ocular cause List the type of headaches which require referral	and list Lecture/S Suggestive in GD require	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
OP9. 4	Enumerate, describe and discuss the causes of avoidable blindness and the National Programs for Control of	What are the causes of avoidable blindness What is NPCB. What are the diseases included in this What is vision 2020 Define legal blindness, social blindness and economical blindness	Lecture/S Blindness GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ

Blindness (including vision 2020)						
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OP9.5	Describe the evaluation and enumerate the steps involved in the stabilisation, initial management and indication for referral in a patient with ocular injury	List the types of ocular injuries List the effects of blunt trauma to the eye List the steps of initial management of eye nt Demonstrate the correct method of irrigation List the steps of initial management of open globe injury	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
Integration – Anatomy						
AN 30.5	Explain effect of pituitary tumours on visual pathway	Describe the visual field changes in pituitary tumors Discuss the anatomical basis of VF changes in pituitary lesions	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN31.3	Describe anatomical basis of Horner's syndrome	What is Horner's syndrome? Differentiate acquired from congenital HS Describe the anatomical basis for HS due to various causes	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN 31.5	Explain the anatomical basis of oculomotor, trochlear and abducent palsy	Describe the anatomy of the 3 rd , 4 th and 6 th cranial nerves Enumerate the causes of 3 rd , 4 th and 6 th cranial nerve palsies	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN 41.1	Describe & demonstrate parts and layers of eyeball		Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN 41.2	Describe the anatomical aspects of cataract, glaucoma & central		Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
AN	Describe the		Lecture/S	7 th	MCQs/S	Essay/S

41.3	position, nerve supply and actions of intraocular muscles		GD	term	AQ/ Viva voce	AQ
Integration- Physiology						
PY 10.17	Describe and discuss functional anatomy of eye, physiology of image formation, physiology of vision including colour vision, Refractive errors, colour blindness, Physiology of pupil and light reflex	Describe the theories of color vision Describe the pupillary pathway Describe the clinical features of the various pupillary abnormalities	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY 10.18	Describe and discuss the physiological basis of lesion in visual pathway	Draw a neat, labelled diagram of the visual pathway Describe the field defects of lesions affecting the visual pathway	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY 10.19	Describe and discuss auditory & visual evoke potentials		Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
PY 10.20	Demonstrate testing of visual acuity, colour and field of vision in a simulated environment	Assess visual acuity, colour vision and visual field in a simulated patient	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ
PH 1.58	Describe drugs used in Ocular disorders	Describe the mechanism of action, dosage, duration, modes of delivery and side effects of the following groups of drugs used in	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ

		Ophthalmology Anti-glaucoma drugs, antibiotics, antifungals, mydriatic and cycloplegics, steroids				
IM 24.15	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of vision and visual loss in the elderly	List the causes of acute painless loss of vision in the elderly and their systemic causes List the causes of acute painful loss of vision in the elderly and their systemic causes Discuss the systemic investigations that is required in acute loss of vision in the elderly Discuss the treatment of acute loss of vision in the elderly	Lecture/S GD	7 th term	MCQs/S AQ/ Viva voce	Essay/S AQ

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Ophthalmology

Course content

The course content been given in detail in the above Table, which includes competencies, specific learning objectives for each competency and the suggested Teaching-Learning methods and assessment methods both formative and summative. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have written by the expert committee constituted by Rajiv Gandhi University of Health Sciences.

Teaching-Learning methods and Time allotted

	Lectures	Small group discussion	Self-directed learning	Total hours	Clinical postings
Ophthalmology	30hours	60hours	10hours	100 hours	Two postings of 4 weeks each. First posting in 34 th terms (15hours/week) and Second posting in 67 th terms (18hours/week)

- Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

- The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. The integration allows the student to understand the structural basis of ophthalmologic problems, their management and correlation with function, rehabilitation, and quality of life
- Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in Direct Ophthalmoscopy although not mandatory, but it is desirable.
- The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)
- The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)
- Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings in ophthalmology itself.
- The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the second clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.
- The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, systems-based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship. MBBS Phase 3 Part 1, has to complete 5 modules of 5hours each. The Ophthalmology faculty will have the responsibility of conducting 1-2 modules as per the decision and logistics of each institution.

Assessment

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Ophthalmology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3rd professional year 3 part 1. **Internal Assessment**

- Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

- There shall be no less than three internal assessment examinations in Ophthalmology. An end of posting clinical assessment shall be conducted for each of the Ophthalmology clinical posting.
- Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.
- Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Ophthalmology in order to be eligible for appearing at the final University examination.
- Internal assessment marks will reflect as separate head of passing at the summative examination.
- The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.
- Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
- Learners must have completed the required certifiable competencies for that phase of training and Ophthalmology logbook entry completed to be eligible for appearing at the final university examination.
- AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

University examinations

Third Professional Part I shall be held at end of third Professional part 1 of training (12 months) in the subjects of Ophthalmology, Otorhinolaryngology, Community Medicine and Forensic Medicine and Toxicology

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible. **Marks allotted**

Ophthalmology	Theory	Clinical examination
Total marks	100 marks	100 marks
	Long essay 2X10= 20	Two cases x40marks=80marks
	Short essay 8x5=40 marks	Viva voce 2x10=20marks
	Short answer question 10x3=30marks	
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

All the question papers to follow the suggested **blueprint(APPENDIX 1)**. **It is desirable that the marks allotted to a particular topic are adhered to.**

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will

act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation

External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

APPENDIX 1: Blueprint for Ophthalmology theory Examinations

Topics	Marks allotted
Eyelids disorders	6
Conjunctival diseases	10
Corneal disorders	10
Refractive errors	6
Lacrimal Drainage system	6
Tear Film abnormalities	5
Diseases of Sclera	3
Diseases of Lens	8
Glaucoma	10
Uveitis	5
Diseases of Retina and choroid	10
Orbital diseases	5
Neuroophthalmological conditions	8
Community Ophthalmology	5
Strabismus	3
Total	100

Sample Ophthalmology Question Paper

Ophthalmology Paper

Time: 3 hours

Marks: 100

Your answers should be specific to the questions asked. Draw neat, labelled diagrams wherever necessary.

Long essays (2 X 10 = 20 marks)

1. A 42year old male, farmer by profession seeks treatment for painful loss of vision in the left eye 1 week duration after he sustained trauma with vegetable matter while working. On examination his visual acuity is CF 3meters with a central whitish lesion on the cornea.

What is the most likely diagnosis? Describe the clinical features of this condition? Discuss the investigations and treatment for this condition. Describe briefly the complications associated with this condition (1+3+4+2=10)

2. Describe the staging of diabetic retinopathy with the clinical features and treatment of each stage. Add a note on anti-VEGF treatment (8+2=10)

Short essays (8x5=40marks)

Page.

3. A 3month old male child was brought with complaints of watering of right eye since birth with intermittent yellowish-white discharge. What is the most probable diagnosis and how will you manage this child?
4. Describe the WHO classification of vitamin A deficiency. Add a note on treatment of vitamin A deficiency
5. Discuss the etiological classification of entropion. Discuss the etiopathogenesis and management of senile entropion
6. Describe the visual field changes in Primary open angle glaucoma
7. Describe the Classification of Hypermetropia and management
8. A 48year old female presents with gradually progressive loss of vision in the right eye since 8months. What is the probable differential diagnosis and how will you investigate and manage this patient?
- 9.Enumerate the causes and discuss the investigations and treatment of non-granulomatous iridocyclitis.
10. Discuss the etiology, clinical features and management of optic neuritis

Short answer questions (10x3=30marks)

11. What is Paracentesis? Enumerate the indications
12. Enumerate the Differential diagnosis of Leukocoria
13. Briefly describe the tests for dry eyes
14. Causes of Anisocoria
15. Describe briefly the actions and nerve supply of Extraocular muscles
16. Write a short note on the uses of Atropine in Ophthalmology
17. Classification of scleritis
18. Write briefly on the Treatment of trachoma
19. Write a note on clinical features of orbital cellulitis
20. Enumerate the indications for keratoplasty

Multiple choice questions (10x1=10marks, with no negative marking)

21. (i) Corneal perforation is an expected complication of
 - A) Hypopyon ulcer
 - B) Fasicular ulcer
 - C) Mooren's ulcer
 - D) Dendritic ulcer

21. (ii) Surgery of choice in "Buphthalmos" is
 - A) cyclocryo therapy
 - B) iridectomy
 - C) trabeculectomy
 - D) trabeculotomy

21. (iii) A vertically oval mid-dilated pupil unresponsive to light is diagnostic of
 - A) acute anterior uveitis
 - B) acute mucopurulent conjunctivitis
 - C) acute congestive glaucoma
 - D) acute nodular scleritis

21. (iv) Orbicularis oculi is innervated by which cranial nerve?

- A) 4th
- B) 5th
- C) 6th
- D) 7th

21. (v) Proptosis is measured using

- A) Keratometer
- B) Tonometer
- C) Exophthalmometer
- D) Gonioscope

22. (i) Formation of a “Cyclitic membrane” leads to all the following **EXCEPT**

- A) Hypotony
- B) Glaucoma
- C) Loss of vision
- D) Pthisis bulbi

22. (ii) In an adult male presenting with acute severe purulent conjunctivitis, preauricular lymph node enlarged and tender with associated constitutional symptoms the treatment of choice is

- A) Ceftriaxone 1gm intramuscularly with intensive topical penicillin therapy
- B) Intensive topical penicillin therapy alone
- C) Fluoroquinolones 500mg BID intravenously with topical tetracycline therapy
- D) Intensive topical tetracycline therapy alone

22. (iii) Topical Mitomycin C is used in the treatment of pterygium to

- A) Prevent malignant transformation
- B) Improve circulation
- C) Prevent recurrence
- D) Prevent calcification

22. (iv) “Pizza pie” appearance is typically seen in A)

- Retinitis pigmentosa
- B) CMV retinitis
- C) Toxoplasma retinitis
- D) Tuberculous retinitis

22. (v) “Homonymous hemianopia with macular sparing” is seen in lesions of

- A) Occipital cortex
- B) Optic radiation
- C) Optic chiasm
- D) Optic nerve

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



OPHTHALMOLOGY
LOGBOOK
FOR
PHASE III MBBS
AS PER

Competency-Based Medical Education Curriculum

Page.

Name and address of the college

Insert
institution
logo

Ophthalmology
Logbook

Name of the student:

Contact Number:

Email id:

Date of admission to MBBS
course:

Date of beginning of the current
phase:

Reg. No. (College ID):

Reg. No. (University ID):

Student
photo

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BONAFIDE CERTIFICATE

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ST. JOHN'S MEDICAL COLLEGE

This is to certify that the candidate

Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for Phase III MBBS in OPHTHALMOLOGY including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019 during the period fromto

He/She is eligible to appear for the summative (University) assessment.

Faculty Mentor:

Head of Department:

Name:

Name:

Signature:

Signature:

Place:

Date:

Page.

PREFACE

This logbook is designed to follow and record your academic journey through the Ophthalmology course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

Section 1 contains the **CBME competencies in Ophthalmology**. It includes the competencies that would be covered during the course.

Section 2 records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to Ophthalmology.

Section 3 consists of the **scheme and summary of formative assessments** in Ophthalmology, including the internal assessments.

Section 4 documents the **procedures that require certification and those that do not require certification but only need to be maintained in the logbook**.

Section 5 documents **additional-curricular activities** (Seminars, conference, workshops attended, scientific project presentations, outreach activities, etc.) and **extracurricular activities**. We hope that this logbook serves as a guide and facilitates your progress through the year.

GENERAL INSTRUCTIONS

1. This logbook is a record of the academic/co-curricular activities in Ophthalmology of the designated student.
2. The student is responsible for getting the entries in the logbook verified by the faculty in-charge regularly.
3. Entries in the Logbook will reflect the activities performed by you in the department of Ophthalmology during your course.
4. The student has to get this logbook verified by the mentor and the Head of the department before submitting the application of the University examination.
5. All signatures must be done with a date stamp.

<i>Block/Phase</i>	<i>Percentage of classes attended</i>		<i>Eligible for University examination (Yes / No)</i>	<i>Signature of student with date</i>	<i>Signature of teacher with date</i>
	<i>Theory</i>	<i>Practical</i>			
First Block					
Second Block					
Third Block					
Attendance at the end of MBBS Phase II					

SUMMARY OF ATTENDANCE

<i>Sl. No.</i>	<i>Internal Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>		<i>Marks scored</i>		<i>Signature of student with date</i>	<i>Signature of teacher with date</i>
			<i>Theory</i>	<i>Practical</i>	<i>Theory</i>	<i>Practical</i>		

1	First							
2	Second							
3	Third							
4	Remedial							

SUMMARY OF INTERNAL ASSESSMENT (IA)

Note: A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The remedial assessment shall be completed before submitting the internal assessment marks online to the University.

Sl no	Topic	Competency
1	Visual acuity assessment	OP 1.1, 1.2, OP1.4, 1.5
2	Lids, adnexa and orbit	OP 2.1, OP2.4 to 2.8
3	Conjunctiva	OP 3.3 to 3.7
4	Cornea	OP4.1 to 4.7, OP 4.9
5	Sclera	OP5.1, 5.2
6	Iris and anterior chamber	OP 6.1 to 6.5, OP6.7 to 6.9
7	Lens	OP 7.1, 7.2
8	Retina and optic nerve	OP 8.1, 8.2 OP8.4, 8.5
9	Miscellaneous	OP 9.2 to 9.5

SECTION: 1

Competencies in Ophthalmology

Competency-Based Medical Education (CBME) curriculum in Ophthalmology

Competencies in Ophthalmology:

There are **60** competencies in ophthalmology that have been listed in the CBME curriculum by the MCI (*Refer Annexure 1*). They can be categorized into knowledge, skills and affect domains as given below.

There are 43 competencies in the knowledge domain

1.A Competencies in the knowledge domain

Topics	Competency	Description
Visual acuity	OP 1.3	Demonstrate steps in visual acuity assessment- distance, near, colour vision and pinhole
Lids, adnexa and orbit	OP 2.2	Demonstrate clinical signs of hordeolum, ptosis, lagophthalmos
	OP 2.3	Demonstrate (under supervision) clinical procedures: bells phenomenon, assessment of entropion/ectropion, perform the regurgitation test of lacrimal sac, massage technique in congenital dacryocystitis and trichiatic cilia removal by epilation
Conjunctiva	OP 3.1	Elicit detailed history for red eye

	OP 3.2	Demonstrate clinical examination of a patient with red eye- corneal lustre, pupil, anterior chamber depth
	OP 3.8	Removal of FB in simulated environment
	OP 3.9	Demonstrate eyedrop instillation in simulated environment
Cornea	OP 4.8	Removal of FB in simulated environment
Iris and anterior chamber	OP 6.6?	Identify and demonstrate the clinical features and distinguish and diagnose common clinical conditions affecting the anterior chamber
Lens	OP 7.3	Demonstrate technique of examination in cataract
	OP 7.4	Enumerate types, explain steps, complications of cataract surgery
	OP 7.5	To participate in the team of cataract surgery
	OP 7.6	Administer informed consent and counsel patients of cataract surgery in a simulated environment
Retina and optic nerve	OP 8.3	Demonstrate the correct technique of fundus examination in normal fundus and in abnormal retinal exam- skills lab
Miscellaneous	OP 9.1	Demonstrate the correct technique to examine the extra-ocular movements(Uniocular& binocular)

Competencies in Skills: There are **15** competencies in this domain. These are as given below.

1.B Competencies in Skills

SECTION 2:

FORMAT OF AETCOM Modules Report

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

1. What did you learn from this AETCOM session based on the objectives?
2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

Page.

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

1. What did you learn from this AETCOM session based on the objectives?
2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

Page.

	Maximum marks	Marks obtained	Feedback and Signature
Formative assessment Theory	50		
Formative assessment Practical	25		

	Maximum marks	Marks obtained	Feedback and Signature
Formative assessment Theory	50		
Formative assessment Practical	25		

SECTION: 3

Formative Assessment 1

Formative Assessment 2

	Maximum marks	Marks obtained	Feedback and Signature
Formative assessment Theory	100		
Formative assessment Practical	25		

<i>Phase</i>	<i>Areas assessed</i>					<i>Signature of student</i>	<i>Signature of teacher</i>
	<i>Regular for classes (5marks)</i>	<i>Regular in completing assignments (5marks)</i>	<i>Behaviour in class and discipline (5marks)</i>	<i>Dress code and presentation (5marks)</i>	<i>Total (20marks)</i>		
At the end of 1 st IA							
At the end of 2 nd IA							
At the end of 3 rd IA							
Average score at the end of the year							

Formative Assessment 3

Rubric for Assessing Professionalism

Sl no.	Date	Topic of SDL	Feedback	Signature of faculty/mentor
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Note: Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the

end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.

**Evaluation and feedback
on self-directed learning (SDL)- 10 hours**

Overall remarks:

In-charge faculty signature with date:

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	Competency #	Attempt at activity	Rating	Decision of faculty	Initial faculty date	of &
	SLO	First or Only (F)	(B): Below expectations	Completed (C)		
		Repeat (R)	(M) : Meets expectations	Repeat (R)		
		Remedial (Re)	(E): Exceeds expectations	Remedial (Re)*		
			Or Numerical Score			
OP 6.6& 7.3	Demonstrate the technique of examining the eye in anterior segment disorders including cataract, uveitis and glaucoma					
OP 7.5 & 7.6	OP 7.6: Administer informed consent and counsel patients of cataract surgery in a simulated environment					
OP 8.3	OP 8.3: Demonstrate the correct technique of fundus examination in the skills lab					

Competency #		Attempt at activity	Rating	Decision of faculty
		First or Only (F)	(B): Below expectations	Completed (C)
		Repeat (R)	(M): Meets expectations	Repeat (R)
		Remedial (Re)	(E): Exceeds expectations	Remedial (Re)*
			Or Numerical Score	
OP1.3	Measure visual acuity including - distance, near, colour vision and pinhole			
OP2.2	Elicit the clinical signs of common eyelid disorders including Bell's phenomenon			
OP2.3	Perform the lacrimal regurgitation test of lacrimal sac, and lacrimal sac massage technique in congenital dacryocystitis			
OP 3.1	Elicit detailed history in a patient with red eye			
OP 3.2	Demonstrate clinical examination of a patient with red eye- corneal lustre, pupil, anterior chamber depth			
OP 3.8	Demonstrate removal of FB in simulated environment			
OP 3.9	Demonstrate the correct technique of eyedrop instillation in simulated environment			

No.	name of patient	diagnosis	presented/ participated	physician signature

No.	name of patient	diagnosis	presented/ participated	physician signature

Case presentation 1st posting

Sl no	Date	Particulars	Signature of the faculty

Sl no	Date	Particulars	Signature of the faculty

Sl no	Date	Particulars	Signature of the faculty

Case presentation 2nd posting

**Section 5:Additional Curricular
and extracurricular Activities**

5.1 Additional curricular activities

(Seminar, conferences, outreach activities, Workshops etc.)

5.2 Extracurricular activities

5.3 Achievements/awards

Sl no.	Description	Dates		Attendance in percentage	Status *	Signature o the teacher date with
		From	To			
1	Certifiable skills					
2	AETCOM Modules					
3	Internal assessment Marks					

FINAL SUMMARY

Signature of Head of department

Date:

* Status: Complete/Incomplete: For skills and AETCOM modules
Eligible/Ineligible: For Internal marks

Learner doctor method

Posting 1

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status , communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method

Reflection on the learner doctor method of learning; What happened?

So what ?

What next?

Signature of faculty:

Date :

Learner doctor method

Page.

Posting 1

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

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Learner doctor method

Lerner doctor method

Reflection on the learner doctor method of learning; What happened?

So what ?

What next?

Signature of faculty:

Date :

Rajiv Gandhi University of Health Sciences

Bangalore, Karnataka



Otorhinolaryngology Curriculum as per
Competency-Based Medical Education

Page.

Preamble

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcome-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality. The field of Otorhinolaryngology (ENT) came to be recognized as a separate entity in medicine at the end of the 19th century. It has been evolving as a separate surgical speciality since then owing to the contributions of pioneers in understanding the disease processes.

ENT as a speciality has been steered into new heights today due to the many technological advances in microsurgery by stalwarts in this field. Otology, Laryngology, Rhinology, Endoscopic Skull Base Surgery, Head and Neck Surgery, Facial Plastic Surgery, Neuro-otology, Pediatric ENT and Phonosurgery are the various sub-specialities that ENT has ramified into. ENT related medical problems are commonly encountered at a primary care and for this, an MBBS graduate requires a basic knowledge and skill in the speciality of ENT. The new CBME curriculum equips the undergraduate students with the skill and knowledge to face these challenges using innovative teaching learning methods.

Goals and Objectives of the RGUHS Otorhinolaryngology Curriculum

Goals

The Goal of training in this subject is to make the candidate familiar with common ENT problems. The IMG should be competent enough to diagnose and treat routine ENT diseases and should be able to identify the cases, which require specialist care and identify deaf individuals at the earliest and refer them for proper rehabilitation

Competencies

The Learner must demonstrate :-

1. Knowledge of the common Otorhinolaryngological(ENT) emergencies and problems
2. Ability to recognize, diagnose and manage common ENT emergencies and problems in primary care setting
3. Ability to perform simple ENT procedures as applicable in a primary care setting
4. Ability to recognize hearing impairment and refer to the appropriate Hearing impairment rehabilitation programme.

Skills

1. Examine and diagnose common disorders of the Ear, Nose and Throat region and manage at first level of care.
2. Recognize premalignant and malignant cases of head and neck region at an early stage.
3. Remove foreign bodies in the ear and nose.
4. Perform life saving surgical procedures in patients with airway emergencies.
5. Should be familiar with drainage of intra oral and neck abscesses.
6. Able to do anterior and posterior nasal packing to control Epistaxis

Integration

The teaching should be aligned and integrated horizontally and vertically in order to allow the learner to understand the structural basis of ENT problems, their management and correlation with function, rehabilitation and quality of life

Attitude and communication skills

At the end of the course the student should be able to:

- e. Communicate effectively with patients, their families and the public at large.
- f. Communicate effectively with peers and teachers; demonstrate the ability to work effectively with peers in a team.
- g. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- h. Appreciate the issues of equity and social accountability while undergoing early clinical exposure.

Sl No	Topics
1	Anatomy & Physiology of Ear
2	Anatomy & Physiology of Nose
3	Anatomy & Physiology of Throat
4	Anatomy & Physiology of Head & Neck
5	Diseases of the External Ear
6	Non-infectious disorders of Middle Ear
7	Infections of Middle Ear
8	Diseases of Inner Ear
9	Hearing Loss & Tinnitus
10	Vertigo & Balance Disorders
11	Facial Nerve Paralysis
12	Diseases of Nasal Septum
13	Non-infectious Rhinitis
14	Acute & Chronic Rhinosinusitis
15	Epistaxis & Head & neck Trauma
16	Tumors of Nose & PNS
17	Tumors of Nasopharynx & JNA
18	Diseases of Salivary glands
19	Acute & chronic Pharyngitis & Tonsillitis
20	Head & Neck Space Infections
21	Laryngeal Infections & Benign disorders of Larynx
22	Malignancy of Larynx & Hypopharynx
23	Stridor & management of Airway Emergencies
24	Diseases of Oesophagus
25	HIV manifestations of the ENT

Interactive Lectures – 25 hours

Proposed topics

Sl No	Topics	No of hours	SG TL methods
1	Anatomy & Physiology of Ear	2	Seminars & Model/chart making
3	Otoscopic examination of the Tympanic membrane	2	Simulation (DOAP)
4	Otomicroscopic examination in a simulated environment	2	Simulation (DOAP)
5	Tuning fork Tests	2	DOAP
6	Foreign body removal from ear / Syringing wax from ear	2	Simulation (DOAP)
7	Assessment & Rehabilitation of Hearing impaired & NPPCD	2	Seminars & SGD (DOAP)
8	Interpretation of Pure Tone Audiograms & Impedance audiograms	2	SGD (Discussion of patient reports)
9	Surgical Procedures of the Ear	3	Seminars & Video demonstration
10	Diagnostic nasal endoscopy & anatomy of Nose	3	Seminars, Video demonstration & Simulation
11	Smell and taste perception	2	Seminars, SGD – chart making
12	Epistaxis & Anterior Nasal packing	3	Seminars, Video demonstration & Simulation
13	Foreign bodies in the nose & Upper respirator tract & their management	3	Video demonstration & Simulation
14	Surgical procedures of the Nose	2	Seminars & Video demonstration
15	Anatomy & Physiology of throat	2	Seminars & Model/chart making
16	Surgical procedures of the throat	2	Seminars & Video demonstration
17	Airway emergencies & management of Stridor (including Tracheostomy)	3	Seminars, Video demonstration & Simulation

18	Counsel & Administer informed consent	1	Simulation -DOAP
19	Malignant & pre- malignant ENT diseases	1	Seminars, SGD
20	The national programs for prevention of deafness, cancer, noise & environmental pollution	1	Seminars, Awareness activities (Poster making)

Small Group Teaching— 40 hours

Proposed topics

Sl. No	Integrated Teaching	Integrated with (Department)
1	Describe the (1) morphology, relations, blood supply and applied anatomy of palatine tonsil and (2) composition of soft palate	Human Anatomy
2	Describe the components and functions of Waldeyer's lymphatic ring	Human Anatomy
3	Describe the boundaries and clinical significance of pyriform fossa	Human Anatomy
4	Describe the anatomical basis of tonsillitis, tonsillectomy, adenoids and peri-tonsillar abscess	Human Anatomy
5	Describe the clinical significance of Killian's dehiscence	Human Anatomy
6	Describe & demonstrate features of nasal septum, lateral wall of nose, their blood supply and nerve supply	Human Anatomy
7	Describe location and functional anatomy of paranasal sinuses	Human Anatomy
8	Describe anatomical basis of sinusitis & maxillary sinus tumours	Human Anatomy
9	Describe the morphology, identify structure of the wall, nerve supply, blood supply and actions of intrinsic and extrinsic muscles of the larynx	Human Anatomy
10	Describe the anatomical aspects of laryngitis	Human Anatomy
11	Describe anatomical basis of recurrent laryngeal nerve injury	Human Anatomy
12	Explain the anatomical basis of hypoglossal nerve palsy	Human Anatomy
13	Describe & identify the parts, blood supply and nerve supply of external ear	Human Anatomy
14	Describe & demonstrate the boundaries, contents, relations and functional anatomy of middle ear and auditory tube	Human Anatomy
15	Describe the features of internal ear	Human Anatomy
16	Explain anatomical basis of otitis externa and otitis media	Human Anatomy
17	Explain anatomical basis of myringotomy	Human Anatomy
18	Describe and discuss perception of smell and taste sensation	Physiology
19	Describe and discuss functional anatomy of ear and auditory pathways & physiology of hearing	Physiology

20	Describe and discuss pathophysiology of deafness. Describe hearing tests	Physiology
21	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/ simulated environment	Physiology
22	Describe the health hazards of air, water, noise, radiation and pollution.	Community Medicine
23	Discuss the prevalence of oral cancer and enumerate the common types of cancer that can affect tissues of the oral cavity	Dentistry

24	Discuss the role of etiological factors in the formation of precancerous /cancerous lesions	Dentistry
25	Identify potential pre-cancerous /cancerous lesions	Dentistry
26	Counsel patients to risks of oral cancer with respect to tobacco, smoking, alcohol and other causative factors	Dentistry
27	Describe and discuss the etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of hearing loss in the elderly	General Medicine
28	Discuss the risk factors, clinical features, Diagnosis and management of Kerosene ingestion	Paediatrics/General Medicine
29	Discuss the etio-pathogenesis, clinical features and management of Naso pharyngitis	Paediatrics
30	Discuss the etio-pathogenesis of Pharyngo Tonsillitis	Paediatrics
31	Discuss the clinical features and management of Pharyngo Tonsillitis	Paediatrics
32	Discuss the etio-pathogenesis, clinical features and management of Acute Otitis Media (AOM)	Paediatrics
33	Discuss the etio-pathogenesis, clinical features and management of Epiglottitis	Paediatrics
34	Discuss the etio-pathogenesis, clinical features and management of Acute laryngo-trachea-bronchitis	Paediatrics
35	Discuss the etiology, clinical features and management of Stridor in children	Paediatrics
36	Discuss the types, clinical presentation, and management of foreign body aspiration in infants and children	Paediatrics
37	Elicit, document and present age appropriate history of a child with upper respiratory problem including Stridor	Paediatrics
38	Perform otoscopic examination of the ear	Paediatrics
39	Perform throat examination using tongue depressor	Paediatrics
40	Perform examination of the nose	Paediatrics
41	Interpret X-ray of the paranasal sinuses and mastoid; and /or use written report in case of management. Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in pediatric chest X-rays	Paediatrics
42	Describe the etio-pathogenesis, management and prevention of Allergic Rhinitis in Children	Paediatrics
43	Describe the etio-pathogenesis, clinical features and management of Atopic dermatitis in children	Paediatrics
44	Describe etiopathogenesis of oral cancer, symptoms and signs of pharyngeal cancer. Enumerate the appropriate investigations and discuss the principles of treatment.	General Surgery

Sl. No	Topics
1	Hearing Loss
2	Vertigo
3	Allergy
4	Rhinosinusitis
5	Head & Neck Tumors

Proposed topics

TOPIC: ANATOMY AND PHYSIOLOGY OF EAR, NOSE, THROAT, HEAD & NECK

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN1.1.1	Describe the Anatomy of ear	Lecture, Demonstration	Written, viva-voce
EN1.1.2	Describe the Anatomy of nose	Lecture, Demonstration	Written, viva-voce
EN1.1.3	Describe the Anatomy of throat	Lecture, Demonstration	Written, viva-voce
EN1.1.4	Describe the Anatomy of head & neck	Lecture, Demonstration	Written, viva-voce
EN1.1.5	Describe the Physiology of ear	Lecture, Demonstration	Written, viva-voce
EN1.1.6	Describe the Physiology of nose	Lecture, Demonstration	Written, viva-voce
EN1.1.7	Describe the Physiology of throat	Lecture, Demonstration	Written, viva-voce
EN1.1.8	Describe the Physiology of head & neck	Lecture, Demonstration	Written, viva-voce

Core competencies – color Blue

Non - Core competencies – color Green

Number of competencies:(02)

Number of procedures that require certification:(NIL)

EN1.1 Describe the Anatomy & physiology of ear, nose, throat, head & neck

Domain – K

Level - KH

Vertical Integration – Human Anatomy

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
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Page.

EN1.2.1	Describe the patho-physiology of common diseases of the ear	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.2	Describe the patho-physiology of common diseases of the nose	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.3	Describe the patho-physiology of common diseases of the throat	Lecture, Demonstration, Bedside clinics	Written, viva-voce
EN1.2.4	Describe the patho-physiology of common diseases of the head & neck	Lecture, Demonstration, Bedside clinics	Written, viva-voce

TOPIC: CLINICAL SKILLS

Number of competencies: (15)

Number of procedures that require certification: (NIL)

To be taught and assessed in bed-side clinics and / or simulated environment.

EN2.1 Elicit document and present an appropriate history in a patient presenting with an ENT complaint

Domain – K/S/A/C

Level – SH

EN2.2 Demonstrate the correct use of a headlamp in the examination of the ear, nose and throat

Domain – S

Level – SH

EN2.3 Demonstrate the correct technique of examination of the ear including Otoscopy

Domain – K/S/A

Level – SH

EN2.4 Demonstrate the correct technique of performance and interpret tuning fork tests

TOPIC: DIAGNOSTIC AND THERAPEUTIC PROCEDURES IN ENT

EN2.5 Demonstrate the correct technique of examination of the nose & paranasal sinuses including the use of nasal speculum

Domain – S

Level – SH

EN2.6 Demonstrate the correct technique of examining the throat including the use of a tongue depressor

Domain – S

Level – SH

EN2.7 Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus

Domain – S

Level – SH

EN2.8 Demonstrate the correct technique to perform and interpret pure tone audiogram & impedance audiogram

Domain –K/S

Level – SH

EN2.9 Choose correctly and interpret radiological, microbiological & histological investigations relevant to the ENT disorders

Domain –K/S

Level – SH

EN2.10 Identify and describe the use of common instruments used in ENT surgery

Domain –K

Level – SH

EN2.11 Describe and identify by clinical examination malignant & pre- malignant ENT diseases

Domain –K/S

Level – SH

EN2.12 Counsel and administer informed consent to patients and their families in a simulated environment

Domain –S/A/C

Level – SH

EN2.13 Identify, resuscitate and manage ENT emergencies in a simulated environment (including tracheostomy, anterior nasal packing, removal of foreign bodies in ear, nose, throat and upper respiratory tract)

Domain –K/S/A

Level – SH

EN2.14 Demonstrate the correct technique to instilling topical medications into the ear, nose and throat in a simulated environment

Domain –K/S

Level – SH

EN2.15 Describe the national programs for prevention of deafness, cancer, noise & environmental pollution

Domain –K

Level – KH

TOPIC: MANAGEMENT OF DISEASES OF EAR, NOSE & THROAT

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.1.1	List the causes of Otolgia	Lecture	Written, viva-voce
EN4.1.2	Elicit correct history in patients with Otolgia	Bedside clinic	Skill assessment

Page.

Number of competencies:(06)

Number of procedures that require certification: (NIL)

To be taught and assessed in bed-side clinics and / or simulated environment.

EN3.1 Observe and describe the indications for and steps involved in the performance of Otomicroscopic examination in a simulated environment

Domain –S

Level – KH

EN3.2 Observe and describe the indications for and steps involved in the performance of diagnostic nasal Endoscopy

Domain –S

Level – KH

EN3.3 Observe and describe the indications for and steps involved in the performance of Rigid/Flexible Laryngoscopy

Domain –K

Level – KH

EN3.4 Observe and describe the indications for and steps involved in the removal of foreign bodies from ear, nose & throat

Domain –K

Level – KH

EN3.5 Observe and describe the indications for and steps involved in the surgical procedures in ear, nose & throat

Domain –K

Level – KH

EN3.6 Observe and describe the indications for and steps involved in the skills of emergency procedures in ear, nose & throat

Domain –K

Level – KH

Number of competencies: (53)

Number of procedures that require certification: (NIL) **EN4.1**

Elicit, document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Otagia

Domain – K/S

Level - SH

Page.

EN4.1.3	Document and present correct history in patients with Otagia	Bedside clinic	Skill assessment
EN4.1.4	Describe the clinical features in a patient presenting with Otagia	Bedside clinic	Skill assessment
EN4.1.5	Choose the correct investigations in a patient presenting with Otagia	Bedside clinic	Viva voce
EN4.1.6	Describe the principles of management of Otagia	Lecture ,Bedside clinic	Viva voce
Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.2.1	List the diseases of external ear	Lecture	Written, viva-voce
EN4.2.2	Elicit correct history in patients presenting with disease of the external Ear	Bedside clinic	Skill assessment
EN4.2.3	Document and present correct history in patients with diseases of the external Ear	Bedside clinic	Skill assessment
EN4.2.4	Describe the clinical features in a patient presenting with diseases of the external Ear	Bedside clinic	Skill assessment
EN4.2.5	Choose the correct investigations in a patient presenting with diseases of the external Ear	Bedside clinic	Viva voce
EN4.2.6	Describe the principles of management of diseases of the external Ear	Lecture ,Bedside clinic	Viva voce

Number	Specific Learning objective	TeachingLearning methods	Assessment methods
EN4.3.1	Elicit correct history in patients presenting with ASOM	Bedside clinic	Skill assessment

choose the correct investigations and describe the principles of management of diseases of the external Ear

Domain – K/S

Level - SH

EN4.3.2	Document and present correct history in patients with ASOM	Bedside clinic	Skill assessment
EN4.3.3	Describe the clinical features in a patient presenting with ASOM	Bedside clinic	Skill assessment
EN4.3.4	Choose the correct investigations in a patient presenting with ASOM	Bedside clinic	Viva voce
EN4.3.5	Describe the principles of management of ASOM	Lecture ,Bedside clinic	Viva voce/Written

EN4.3 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of ASOM

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching Learning methods	Assessment methods
EN4.4.1	Describe the normal appearance of Tympanic membrane	Lecture	Viva voce
EN4.4.2	Demonstrate the correct technique to hold & visualize the tympanic membrane	DOAP session	Skill assessment
EN4.4.3	Demonstrate the correct technique to assess the mobility of the tympanic membrane	DOAP session	Skill assessment

Page.

EN4.4.4	Interpret and diagrammatically represent the findings of the tympanic membrane assessment	Bedside clinics	Viva voce
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Number	Specific Learning objective	Teaching Learning methods	Assessment methods
EN4.5.1	Elicit correct history in patients presenting with OME	Bedside clinics	Skill assessment
EN4.5.2	Document and present correct history in patients with OME	Bedside clinics	Skill assessment
EN4.5.3	Describe the clinical features in a patient presenting with OME	Lecture, Bedside clinics	Skill assessment
EN4.5.4	Choose the correct investigations in a patient presenting with OME	Bedside clinics	Viva voce

membrane and its mobility and interpret and diagrammatically represent the findings

Domain – K/S/A

Level - SH

EN4.5 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of OME

EN4.5.5	Describe the principles of management of OME	Lecture	Written, viva voce
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Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.6.1	List the causes of Discharging ear	Lecture	Written, viva-voce
EN4.6.2	Elicit correct history in patients presenting with Discharging ear	Bedside clinic	Skill assessment
EN4.6.3	Document and present correct history in patients with Discharging ear	Bedside clinic	Skill assessment
EN4.6.4	Describe the clinical features in a patient presenting with Discharging ear	Bedside clinic	Skill assessment
EN4.6.5	Choose the correct investigations in a patient presenting with Discharging ear	Bedside clinic	Viva voce
EN4.6.6	Describe the principles of management of Discharging ear	Lecture ,Bedside clinic	Written, Viva voce

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
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Page.

EN4.7.1	Elicit correct history in patients presenting with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.2	Document and present correct history in patients with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.3	Describe the clinical features in a patient presenting with mucosal type of CSOM	Bedside clinic	Skill assessment
EN4.7.4	Choose the correct investigations in a	Bedside clinic	Viva voce,

EN4.6 Elicit document and present a correct history, demonstrate and describe the clinical features,

Page.

choose the correct investigations and describe the principles of management of Discharging ear

Domain – K/S

Level - SH

EN4.7 Elicit document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of mucosal type of CSOM

Domain – K/S

Level - SH

	patient presenting with mucosal type of CSOM		written
EN4.7.5	Describe the principles of management of mucosal type of CSOM	Lecture ,Bedside clinic	Written, Viva voce

EN4.8 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of squamosal type of CSOM

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.8.1	Elicit correct history in patients presenting with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.2	Document and present correct history in patients with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.3	Describe the clinical features in a patient presenting with squamosal type of CSOM	Bedside clinic	Skill assessment
EN4.8.4	Choose the correct investigations in a patient presenting with squamosal type of CSOM	Bedside clinic	Viva voce, written
EN4.8.5	Describe the principles of management of squamosal type of CSOM	Lecture ,Bedside clinic	Written, Viva voce

Domain –

Page.

EN4.9 Demonstrate the correct technique for syringing wax from the ear in a simulated environment

S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.9.1	Describe the correct technique for syringing wax from the ear	DOAP	Skill assessment
EN4.9.2	Demonstrate the correct technique for syringing wax from the ear in a simulated environment	DOAP	Skill assessment

EN4.10 Observe and describe the indications for and steps involved in myringotomy and myringoplasty

Domain –S

Level - KH

Domain –

Page.

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.10.1	Enumerate the indications for myringotomy	Lecture	Written , viva voce
EN4.10.2	Describe the steps of myringotomy	Lecture, video demonstration	Written , viva voce
EN4.10.3	Observe steps involved in myringotomy	Clinical (OT)	Written , viva voce
EN4.10.4	Enumerate the indications for myringoplasty	Lecture	Written , viva voce
EN4.10.5	Describe the steps of myringoplasty	Lecture, video demonstration	Written , viva voce
EN4.10.6	Observe steps involved in myringoplasty	Clinical (OT)	Written , viva voce

EN4.11 Enumerate the indications describe the steps and observe a Mastoidectomy

Domain – K/S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.11.1	Enumerate the indications for Mastoidectomy	Lecture	Written , viva voce
EN4.11.2	Describe the steps of Mastoidectomy	Lecture	Written , viva voce
EN4.11.3	Observe steps involved in Mastoidectomy	Clinical (OT)	Written , viva voce

EN4.12 Elicit document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Hearing loss

K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.12.1	List the causes of Hearing loss	Lecture	Written, viva-voce
EN4.12.2	Elicit correct history in patients presenting with Hearing loss	Bedside clinic	Skill assessment
EN4.12.3	Document and present correct history in patients with Hearing loss	Bedside clinic	Skill assessment
EN4.12.4	Describe the clinical features in a patient presenting with Hearing loss	Bedside clinic	Skill assessment

Domain –

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EN4.12.5	Choose the correct investigations in a patient presenting with Hearing loss	Bedside clinic	Viva voce
EN4.12.6	Describe the principles of management of Hearing loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.13 Describe the clinical features, investigations and principles of management of Otosclerosis
Domain – K **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.13.1	Describe the clinical features of Otosclerosis	Lecture	Written
EN4.13.2	Describe the investigations required for patient with Otosclerosis	Bedside clinic	Viva voce
EN4.13.3	Describe the principles of management of Otosclerosis	Lecture ,Bedside clinic	Written, Viva voce

EN4.14 Describe the clinical features, investigations and principles of management of Sudden Sensorineural Hearing Loss
Domain – K **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.14.1	Describe the clinical features of Sudden Sensorineural Hearing Loss	Lecture	Written
EN4.14.2	Describe the investigations required for patient presenting with Sudden Sensorineural Hearing Loss	Bedside clinic	Viva voce
EN4.14.3	Describe the principles of management of Sudden Sensorineural Hearing Loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.15 Describe the clinical features, investigations and principles of management of Noise Induced Hearing Loss
K **Level - KH**

Domain –

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.15.1	Describe the clinical features of Noise Induced Hearing Loss	Lecture	Written
EN4.15.2	Describe the investigations required for patient presenting with Noise Induced Hearing Loss	Bedside clinic	Viva voce
EN4.15.3	Describe the principles of management of Noise Induced Hearing Loss	Lecture ,Bedside clinic	Written, Viva voce

EN4.16 Observe and describe the indications for and steps involved in the performance of pure tone audiometry

Domain –S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.16.1	Enumerate the indications for pure tone audiometry	Lecture	Written, viva voce
EN4.16.2	Describe the steps involved in the performance of pure tone audiometry	DOAP	viva voce
EN4.16.3	Observe the steps involved in the performance of pure tone audiometry	DOAP	viva voce

EN4.17 Enumerate the indications and interpret the results of an audiogram

Domain –S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.17.1	Enumerate the indications for an audiogram	Bedside clinics, DOAP	Viva voce
EN4.17.2	Interpret the results of an audiogram	DOAP	Skill assessment

N4.18 Describe the clinical features, investigations and principles of management of Facial Nerve palsy

Domain – K

Level - KH

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Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.18.1	Describe the clinical features of Facial Nerve palsy	Lecture	Written, viva voce
EN4.18.2	Describe the investigations required for patient presenting with Facial Nerve palsy	Bedside clinics	Written, viva voce
EN4.18.3	Describe the principles of management of Facial Nerve palsy	Lecture ,Bedside clinic	Written, Viva voce

EN4.19 Describe the clinical features, investigations and principles of management of Vertigo
Domain – K **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.19.1	Describe the clinical features of patient presenting with Vertigo	Lecture	Written, viva voce
EN4.19.2	Describe the investigations required for patient presenting with Vertigo	Bedside clinics	Written, viva voce
EN4.19.3	Describe the principles of management of Vertigo	Lecture ,Bedside clinic	Written, Viva voce

EN4.20 Describe the clinical features, investigations and principles of management of Meniere's Disease
Domain – K **Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.20.1	Describe the clinical features of patient presenting with Meniere's Disease	Lecture	Written, viva voce
EN4.20.2	Describe the investigations required for patient presenting with Meniere's Disease	Bedside clinics	Written, viva voce
EN4.20.3	Describe the principles of management of Meniere's Disease	Lecture ,Bedside clinic	Written, Viva voce

EN4.21 Describe the clinical features, investigations and principles of management of Tinnitus

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.21.1	Describe the clinical features of patient presenting with Tinnitus	Lecture	Written, viva voce
EN4.21.2	Describe the investigations required for patient presenting with Tinnitus	Bedside clinics	Written, viva voce
EN4.21.3	Describe the principles of management of Tinnitus	Lecture ,Bedside clinic	Written, Viva voce

EN4.22 Elicit document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Nasal Obstruction

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.22.1	List the causes of Nasal obstruction	Lecture	Written, viva-voce
EN4.22.2	Elicit correct history in patients presenting with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.3	Document and present correct history in patients with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.4	Describe the clinical features in a patient presenting with Nasal obstruction	Bedside clinic	Skill assessment
EN4.22.5	Choose the correct investigations in a patient presenting with Nasal obstruction	Bedside clinic	Viva voce
EN4.22.6	Describe the principles of management of Nasal obstruction	Lecture ,Bedside clinic	Written, Viva voce

EN4.23 Describe the clinical features, investigations and principles of management of DNS

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.23.1	Describe the clinical features of patient presenting with DNS	Lecture	Written, viva voce
EN4.23.2	Describe the investigations required for patient presenting with DNS	Bedside clinics	Written, viva voce
EN4.23.3	Describe the principles of management of DNS	Lecture ,Bedside clinic	Written, Viva voce

EN4.24 Enumerate the indications observe and describe the steps in a septoplasty

Domain –S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.24.1	Enumerate the indications for septoplasty	Lecture	Written , viva voce
EN4.24.2	Describe the steps of septoplasty	DOAP - video demonstration	Written , viva voce
EN4.24.3	Observe steps involved in septoplasty	DOAP - Clinical (OT)	Written , viva voce

EN4.25 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Nasal Polyps

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.25.1	Elicit correct history in patients presenting with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.2	Document and present correct history in patients with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.3	Describe the clinical features in a patient presenting with Nasal polyps	Bedside clinic	Skill assessment
EN4.25.4	Choose the correct investigations in a patient presenting with Nasal polyps	Bedside clinic	Viva voce
EN4.25.5	Describe the principles of management of Nasal polyps	Lecture ,Bedside clinic	Written, Viva voce

EN4.26 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Adenoids

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.26.1	Elicit correct history in patients presenting with Adenoids	Bedside clinic	Skill assessment
EN4.26.2	Document and present correct history in patients with Adenoids	Bedside clinic	Skill assessment
EN4.26.3	Describe the clinical features in a patient presenting with Adenoids	Bedside clinic	Skill assessment
EN4.26.4	Choose the correct investigations in a patient presenting with Adenoids	Lecture, DOAP	Viva voce
EN4.26.5	Describe the principles of management of Adenoids	Lecture ,Bedside clinic	Written, Viva voce

EN4.27 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Allergic Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.27.1	Elicit correct history in patients presenting with Allergic Rhinitis	Bedside clinic	Skill assessment
EN4.27.2	Document and present correct history in patients with Allergic Rhinitis	Bedside clinic	Skill assessment

EN4.27.3	Describe the clinical features in a patient presenting with Allergic Rhinitis	Bedside clinic	Skill assessment
EN4.27.4	Choose the correct investigations in a patient presenting with Allergic Rhinitis	Lecture, DOAP	Viva voce
EN4.27.5	Describe the principles of management of Allergic Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.28 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Vasomotor Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.28.1	Elicit correct history in patients presenting with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.2	Document and present correct history in patients with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.3	Describe the clinical features in a patient presenting with Vasomotor Rhinitis	Bedside clinic	Skill assessment
EN4.28.4	Choose the correct investigations in a patient presenting with Vasomotor Rhinitis	Lecture, DOAP	Viva voce
EN4.28.5	Describe the principles of management of Vasomotor Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.29 Elicit document and present a correct history demonstrate an describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Rhinitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.29.1	Elicit correct history in patients presenting with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.2	Document and present correct history in patients with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.3	Describe the clinical features in a patient presenting with Acute Rhinitis	Bedside clinic	Skill assessment
EN4.29.4	Choose the correct investigations in a patient presenting with Acute Rhinitis	Lecture, DOAP	Viva voce
EN4.29.5	Describe the principles of management of Acute Rhinitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.29.6	Elicit correct history in patients presenting with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.7	Document and present correct history in patients with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.8	Describe the clinical features in a patient presenting with Chronic Rhinitis	Bedside clinic	Skill assessment
EN4.29.9	Choose the correct investigations in a patient presenting with Chronic Rhinitis	Lecture, DOAP	Viva voce
EN4.29.10	Describe the principles of management of Chronic Rhinitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.30 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Epistaxis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.30.1	Enumerate the causes of Epistaxis	Lecture	Written, Viva voce
EN4.30.2	Elicit correct history in patients presenting with Epistaxis	Bedside clinic	Skill assessment
EN4.30.3	Document and present correct history in patients with Epistaxis	Bedside clinic	Skill assessment
EN4.30.4	Describe the clinical features in a patient presenting with Epistaxis	Bedside clinic	Skill assessment
EN4.30.5	Choose the correct investigations in a patient presenting with Epistaxis	Lecture, DOAP	Viva voce
EN4.30.6	Describe the principles of management of Epistaxis	Lecture ,Bedside clinic	Written, Viva voce

EN4.31 Describe the clinical features, investigations and principles of management of trauma to the face & neck

Domain – K/S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.31.1	Describe the clinical features in a patient presenting with trauma to face	Lecture	Written, Viva voce
EN4.31.2	Choose the correct investigations in a patient presenting with trauma to face	Lecture, DOAP	Viva voce
EN4.31.3	Describe the principles of management of trauma to face	Lecture ,Bedside clinic	Written, Viva voce
EN4.31.4	Describe the clinical features in a patient presenting with trauma to neck	Lecture	Written, Viva voce
EN4.31.5	Choose the correct investigations in a patient presenting with trauma to neck	Lecture, DOAP	Viva voce
EN4.31.6	Describe the principles of management of trauma to neck	Lecture ,Bedside clinic	Written, Viva voce

EN4.32 Describe the clinical features, investigations and principles of management of nasopharyngeal Angiofibroma

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.32.1	Describe the clinical features in a patient presenting with nasopharyngeal Angiofibroma	Lecture	Written, Viva voce
EN4.32.2	Choose the correct investigations in a patient presenting with nasopharyngeal Angiofibroma	Lecture, DOAP	Viva voce
EN4.32.3	Describe the principles of management of nasopharyngeal Angiofibroma	Lecture ,Bedside clinic	Written, Viva voce

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EN4.33 Elicit document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Sinusitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.33.1	Elicit correct history in patients presenting with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.2	Document and present correct history in patients with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.3	Describe the clinical features in a patient presenting with Acute Sinusitis	Bedside clinic	Skill assessment
EN4.33.4	Choose the correct investigations in a patient presenting with Acute Sinusitis	Lecture, DOAP	Viva voce
EN4.33.5	Describe the principles of management of Acute Sinusitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.33.6	Elicit correct history in patients presenting with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.7	Document and present correct history in patients with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.8	Describe the clinical features in a patient presenting with Chronic Sinusitis	Bedside clinic	Skill assessment
EN4.33.9	Choose the correct investigations in a patient presenting with Chronic Sinusitis	Lecture, DOAP	Viva voce
EN4.33.10	Describe the principles of management of Chronic Sinusitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.34 Describe the clinical features, investigations and principles of management of Tumors of Maxilla

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
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EN4.34.1	Describe the clinical features in a patient presenting with Tumors of Maxilla	Lecture	Written, Viva voce
EN4.34.2	Choose the correct investigations in a patient presenting with Tumors of Maxilla	Lecture, DOAP	Viva voce
EN4.34.3	Describe the principles of management of Tumors of Maxilla	Lecture ,Bedside clinic	Written, Viva voce

EN4.35 Describe the clinical features, investigations and principles of management of Tumors of Nasopharynx

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.35.1	Describe the clinical features in a patient presenting with Tumors of Nasopharynx	Lecture	Written, Viva voce
EN4.35.2	Choose the correct investigations in a patient presenting with Tumors of Nasopharynx	Lecture, DOAP	Viva voce
EN4.35.3	Describe the principles of management of Tumors of Nasopharynx	Lecture ,Bedside clinic	Written, Viva voce

EN4.36 Describe the clinical features, investigations and principles of management of diseases of the Salivary glands

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.36.1	Describe the clinical features in a patient presenting with Diseases of salivary glands	Lecture	Written, Viva voce
EN4.36.2	Choose the correct investigations in a patient presenting with Diseases of salivary glands	Lecture, DOAP	Viva voce
EN4.36.3	Describe the principles of management of Diseases of salivary glands	Lecture ,Bedside clinic	Written, Viva voce

EN4.37 Describe the clinical features, investigations and principles of management of Ludwig's angina

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.37.1	Describe the clinical features in a patient presenting with Ludwig's angina	Lecture	Written, Viva voce
EN4.37.2	Choose the correct investigations for a patient presenting with Ludwig's angina	Lecture, DOAP	Viva voce
EN4.37.3	Describe the principles of management of Ludwig's angina	Lecture ,Bedside clinic	Written, Viva voce

EN4.38 Elicit document and present a correct history demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of type of dysphagia

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.38.1	Enumerate the causes of Dysphagia	Lecture	Written, Viva voce
EN4.38.2	Elicit correct history in patients presenting with Dysphagia	Bedside clinic	Skill assessment
EN4.38.3	Document and present correct history in patients with Dysphagia	Bedside clinic	Skill assessment
EN4.38.4	Describe the clinical features in a patient presenting with Dysphagia	Bedside clinic	Skill assessment
EN4.38.5	Choose the correct investigations for a patient presenting with Dysphagia	Lecture, DOAP	Viva voce
EN4.38.6	Describe the principles of management of Dysphagia	Lecture ,Bedside clinic	Written, Viva voce

EN4.39 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Acute & Chronic Tonsillitis

Domain – K/S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.39.1	Elicit correct history in patients presenting with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.2	Document and present correct history in patients with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.3	Describe the clinical features in a patient presenting with Acute Tonsillitis	Bedside clinic	Skill assessment
EN4.39.4	Choose the correct investigations in a patient presenting with Acute Tonsillitis	Lecture, DOAP	Viva voce
EN4.39.5	Describe the principles of management of Acute Tonsillitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.39.6	Elicit correct history in patients presenting with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.7	Document and present correct history in patients with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.8	Describe the clinical features in a patient presenting with Chronic Tonsillitis	Bedside clinic	Skill assessment
EN4.39.9	Choose the correct investigations in a patient presenting with Chronic Tonsillitis	Lecture, DOAP	Viva voce
EN4.39.10	Describe the principles of management of Chronic Tonsillitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.40 Observe and describe the indications for and steps involved in a tonsillectomy / adenoidectomy

Domain – S

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.40.1	Enumerate the indications for tonsillectomy	Lecture, Bedside clinic	Written, Viva voce
EN4.40.2	Observe the steps involved in a tonsillectomy	Video demonstration, DOAP (OT)	Viva voce
EN4.40.3	Describe the steps involved in a tonsillectomy	DOAP (OT), Bedside clinic	Viva voce
EN4.40.4	Enumerate the indications for adenoidectomy	Lecture, Bedside clinic	Written, Viva voce
EN4.40.5	Observe the steps involved in an adenoidectomy	Video demonstration, DOAP (OT)	Viva voce
EN4.40.6	Describe the steps involved in an adenoidectomy	DOAP (OT), Bedside clinic	Viva voce

EN4.41 Describe the clinical features, investigations and principles of management of Acute & chronic abscesses in relation to Pharynx

Domain – K/S

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.41.1	List the abscesses in relation to pharynx	Lecture, Bedside clinic	Written, Viva voce
EN4.41.2	Describe the clinical features of acute abscesses in relation to pharynx	Bedside clinic	Viva voce
EN4.41.3	Choose the correct investigations in a patient presenting with an acute abscess related to the pharynx	DOAP, Bedside clinic	Viva voce

EN4.41.4	Describe the principles of management of a patient presenting with an acute abscess related to the pharynx	Lecture, DOAP	Viva voce
EN4.41.5	Describe the clinical features of chronic abscesses in relation to pharynx	Bedside clinic	Viva voce
EN4.41.6	Choose the correct investigations in a patient presenting with chronic abscess related to the pharynx	DOAP, Bedside clinic	Viva voce
EN4.41.7	Describe the principles of management of a patient presenting with chronic abscess related to the pharynx	Lecture, DOAP	Viva voce

EN4.42
Elicit,

document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of hoarseness of voice

Domain – K/S

Level – SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.42.1	Enumerate the causes of hoarseness of voice	Lecture	Written, Viva voce
EN4.42.2	Elicit correct history in patients presenting with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.3	Document and present correct history in patients with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.4	Describe the clinical features in a patient presenting with hoarseness of voice	Bedside clinic	Skill assessment
EN4.42.5	Choose the correct investigations for a patient presenting with hoarseness of voice	Lecture, DOAP	Viva voce
EN4.42.6	Describe the principles of management of a patient with hoarseness of voice	Lecture, Bedside clinic	Written, Viva voce

EN4.43 Describe the clinical features, investigations and principles of management of Acute & Chronic Laryngitis

Domain – K

Level - KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.43.1	Describe the clinical features in a patient presenting with Acute Laryngitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.43.2	Choose the correct investigations in a patient presenting with Acute Laryngitis	Lecture, DOAP	Viva voce
EN4.43.3	Describe the principles of management of Acute Laryngitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.43.4	Describe the clinical features in a patient presenting with Chronic Laryngitis	Lecture ,Bedside clinic	Written, Viva voce
EN4.43.5	Choose the correct investigations in a patient presenting with Chronic Laryngitis	Lecture, DOAP	Viva voce
EN4.43.6	Describe the principles of management of Chronic Laryngitis	Lecture ,Bedside clinic	Written, Viva voce

EN4.44 Describe the clinical features, investigations and principles of management of benign lesions of the vocal cord

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.44.1	Enumerate the benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce
EN4.44.2	Describe the clinical features in a patient presenting with benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce
EN4.44.3	Choose the correct investigations for a patient presenting with benign lesions of the vocal cord	Lecture, DOAP	Viva voce
EN4.44.4	Describe the principles of management of benign lesions of the vocal cord	Lecture ,Bedside clinic	Written, Viva voce

EN4.45 Describe the clinical features, investigations and principles of management of Vocal cord palsy

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.45.1	Enumerate the causes of Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce
EN4.45.2	Describe the clinical features in a patient presenting with Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce
EN4.45.3	Choose the correct investigations for a patient presenting with Vocal cord palsy	Lecture, DOAP	Viva voce
EN4.45.4	Describe the principles of management of Vocal cord palsy	Lecture ,Bedside clinic	Written, Viva voce

EN4.46 Describe the clinical features, investigations and principles of management of Malignancy of the Larynx & Hypopharynx

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.46.1	Describe the clinical features in a patient presenting with Malignancy of the Larynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.2	Choose the correct investigations for a patient presenting with Malignancy of the Larynx	Lecture, DOAP	Viva voce
EN4.46.3	Describe the principles of management of Malignancy of the Larynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.4	Describe the clinical features in a patient presenting with Malignancy of the Hypopharynx	Lecture ,Bedside clinic	Written, Viva voce
EN4.46.4	Choose the correct investigations for a patient presenting with Malignancy of the Hypopharynx	Lecture, DOAP	Viva voce

EN4.46.4	Describe the principles of management of Malignancy of the Hypopharynx	Lecture ,Bedside clinic	Written, Viva voce
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EN4.47 Describe the clinical features, investigations and principles of management of Stridor

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.47.1	Enumerate the causes of Stridor	Lecture ,Bedside clinic	Written, Viva voce
EN4.47.2	Describe the clinical features in a patient presenting with Stridor	Lecture ,Bedside clinic	Written, Viva voce
EN4.47.3	Choose the correct investigations for a patient presenting with Stridor	Lecture, DOAP	Viva voce
EN4.47.4	Describe the principles of management of Stridor	Lecture ,Bedside clinic	Written, Viva voce

Domain – K

Level – KH

EN4.48 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of Airway Emergencies

Domain –S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.48.1	Enumerate the causes of Airway emergencies	Bedside clinic, DOAP	Viva voce
EN4.48.2	Elicit correct history in patients presenting with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.3	Document and present correct history in patients with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.4	Describe the clinical features in a patient presenting with Airway emergencies	Bedside clinic	Skill assessment
EN4.48.5	Choose the correct investigations for a patient presenting with Airway emergencies	DOAP	Viva voce
EN4.48.6	Describe the principles of management of Airway emergencies	Bedside clinic	Viva voce

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EN4.49 Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of foreign bodies in the air & food passages

Domain -S

Level - SH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.49.1	Elicit correct history in patients presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.2	Document and present correct history in patients presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.3	Describe the clinical features in a patient presenting with foreign bodies in the air passages	Bedside clinic	Skill assessment
EN4.49.4	Choose the correct investigations in a patient presenting with foreign bodies in the air passages	DOAP	Viva voce
EN4.49.5	Describe the principles of management of foreign bodies in the air passages	Bedside clinic	Viva voce
EN4.49.6	Elicit correct history in patients presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.7	Document and present correct history in patients presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.8	Describe the clinical features in a patient presenting with foreign bodies in the food passages	Bedside clinic	Skill assessment
EN4.49.9	Choose the correct investigations in a patient presenting with foreign bodies in the food passages	DOAP	Viva voce
EN4.49.10	Describe the principles of management of foreign bodies in the food passages	Bedside clinic	Viva voce

EN4.50 Observe and describe the indications for and steps involved in tracheostomy

Domain – S**Level - KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.50.1	Enumerate the indications for Tracheostomy	Bedside clinics	Viva voce
EN4.50.3	Observe steps involved in Tracheostomy	DOAP - Clinical (OT), video demonstration	Viva voce
EN4.50.3	Describe the steps of Tracheostomy	DOAP - video demonstration	Viva voce

EN4.51 Observe and describe the care of the patient with a tracheostomy**Domain – S****Level – KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.51.1	Observe steps involved in care of the patient with a tracheostomy	DOAP - Clinical (OT), video demonstration	Viva voce
EN4.51.2	Describe the steps involved in care of the patient with a tracheostomy	DOAP - video demonstration	Viva voce

EN4.52 Describe the Clinical features, Investigations and principles of management of diseases of Oesophagus**Domain – K****Level – KH**

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.52.1	Enumerate the Diseases of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce
EN4.52.2	Describe the clinical features in a patient presenting with Disease of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce
EN4.52.3	Choose the correct investigations for a patient presenting with Disease of Oesophagus	Lecture, DOAP	Viva voce

EN4.52.4	Describe the principles of management of Diseases of Oesophagus	Lecture ,Bedside clinic	Written, Viva voce
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EN4.53 Describe the clinical features, investigations and principles of management of HIV manifestations of the ENT (vertical integration- General Medicine)

Domain – K

Level – KH

Number	Specific Learning objective	Teaching-Learning methods	Assessment methods
EN4.53.1	Enumerate the HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce
EN4.53.2	Describe the clinical features in a patient presenting with HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce
EN4.53.3	Choose the correct investigations for a patient presenting with HIV manifestations of the ENT	Lecture, DOAP	Viva voce
EN4.53.4	Describe the principles of management of HIV manifestations of the ENT	Lecture ,Bedside clinic	Written, Viva voce

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Otorhinolaryngology

Teaching-Learning methods and Time allotted -Otorhinolaryngology

Lectures	Small group discussion	Selfdirected learning	Total hours	Clinical postings
25 hours	40 hours	5 hours	70 hours	Two postings of 4 weeks each. First posting in II MBBS(15hours/week) and Second posting II MBBS Part I(18hours/week)

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally **aligned and integrated** to the maximum extent possible to enhance learner’s interest and eliminate redundancy and overlap. Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.

The **clinical postings** in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings in Otorhinolaryngology itself. The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the second clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patients care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

AETCOM module. The purpose is to help the students apply principles of bioethics, systems based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values.

Assessment

Eligibility to appear for University examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Otorhinolaryngology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3rd professional year 3 part 1.

Internal Assessment

Formative and summative assessments should be carried out periodically. Log book of skill-based training shall be also maintained.

There shall be no less than three internal assessment examinations (Theory and Clinical) in Otorhinolaryngology. Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Otorhinolaryngology in order to be eligible for appearing at the final University examination.

Learners must have completed the required certifiable competencies for that phase of training and Otorhinolaryngology logbook entry completed to be eligible for appearing at the final university examination.

University examinations

Third Professional Part I shall be held at end of third Professional part 1 of training (12 months) in the subjects of Ophthalmology, Otorhinolaryngology, Community Medicine and Forensic Medicine and Toxicology

Marks allotted

Otorhinolaryngology	Theory	Clinical examination
Total marks	100	100
	Long essay 2X10= 20	Two cases x40marks=80marks

Short essay 8x5=40 marks	Viva voce 2x10=20marks
Short answer question 10x3=30marks	
MCQs 10x1=10marks	

Theory Blueprint

Sl No	Competency No - Topics	Marks allotted
1	EN1.1 - Anatomy & Physiology of Ear, Nose & throat	5
2	EN4.2 - Diseases of the External Ear	3
3	EN4.5, 4.13 - Non-infectious disorders of Middle Ear EN4.13-Otosclerosis EN4.5-Serous Otitis Media EN4.18 - Facial Nerve Paralysis	8
4	EN4.6, 4.7, 4.8 - Infections of Middle Ear EN4.10 Myringotomy, Myringoplasty, Mastoidectomy	10
5	EN4.14, 4.15 - Diseases of Inner Ear EN4.20- Meniere's Disease	5
6	EN4.12, 4.21 - Hearing Loss & Tinnitus EN4.19, 4.20 - Vertigo & Balance Disorders	3
7	EN4.22, 4.23, 4.24 - Diseases of Nasal Septum EN4.27, 4.28 - Non-infectious Rhinitis EN4.27- Allergic Rhinitis	8
8	EN4.29, 4.33 - Acute & Chronic Rhinosinusitis including complications EN4.25 Nasal polyps	8
9	EN4.30, 4.31 - Epistaxis & Head & neck Trauma	10
10	EN4.34 - Tumors of Nose & PNS EN4.35, 4.32 - Tumors of Nasopharynx & JNA	6
11	EN4.26 – Adenoids EN4.39-EN4.42 - Acute & chronic Pharyngitis & Tonsillitis EN4.37 -Head & Neck Space Infections EN4.36 - Diseases of Salivary glands	10
12	EN4.43, 4.44 - Laryngeal Infections & Benign disorders of Larynx EN4.46 - Malignancy of Larynx & Hypopharynx EN4.45- Vocal cord Palsy	8
13	EN4.47, 4.48 - Stridor & management of Airway Emergencies EN4.50 Tracheostomy	10

14	EN4.38 Dysphagia,EN4.49 FB Bronchus EN4.52 - Diseases of Oesophagus EN4.53 - HIV manifestations of the ENT	6
Total		100

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, and attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, etc. is to be also assessed.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

Sample Otorhinolaryngology Question Paper Otorhinolaryngology Paper

Time: 3 hours

Marks: 100

Your answers should be specific to the questions asked. Draw neat, labelled diagrams wherever necessary.

Long essays

(2 X 10 = 20 marks)

Page.

1. A 14 year old adolescent boy presents with left nasal obstructions and recurrent episodes of spontaneous, profuse and self limiting epistaxis. On examination pinkish mass was found in left nasal cavity along with fullness of left cheek
- What is the most likely diagnosis?
 - Describe the etiopathogenesis of this condition?
 - Discuss the laboratory investigations for diagnosing the above condition.
 - Write a note on various modalities of treatment.

(1+3+2+4)

2. A 35year old woman complaints of bilateral hearing loss for 5 years, which had worsened during her pregnancy 1 year back. She does not give any past history of ear discharge.
- What is the most likely disease she is suffering from?
 - Discuss the etiopathogenesis & types of this disease?
 - Describe the investigations for confirming the diagnosis?
 - Discuss the treatment modalities along with their contraindications?

(1+3+3+3)

Short essays

(8x5=40marks)

3. A 38 year old female complains of fever, sore throat and pain during swallowing Since 3 days. On examination, the left tonsil is congested and enlarged and bulge in the soft palate on left side, and uvula pushed to the right.
- What is the diagnosis of this condition?
 - What are the symptoms and signs of this condition?
 - How do you manage this patient?

(1+2+2)

4. Write a note on Graft materials for tympanoplasty.
5. Discuss Vocal rehabilitation following total laryngectomy.
6. Describe the Clinical features & management of acute Epiglottitis.
7. Discuss the Causes & management of nasal septal perforation.
8. Write a note on Corticosteroids in ENT.
9. Discuss the Clinical features & management of Post Covid-19 mucormycosis -.
10. A 27 year old male patient who met with a road traffic accident was seen in the emergency room with complaint of clear watery nasal discharge.
- What are the bed side clinical tests to diagnose this condition?
 - What are the investigations that need to be done for this patient?
 - What is the treatment for this condition?

(1+2+2 Short)

answer questions (10x3=30)

11. Write a note on Siegles speculum.
12. Enumerate three causes for Bell's palsy.
13. Write three Topodiagnostic tests for facial nerve palsy.
14. Constrictions of Oesophagus.
15. Write a note on Objective tests of hearing.

16. Blood supply of Adenoids.

17. Three causes for Referred Otalgia

18. Removal of Ear foreign body.

19. Stylalgia.

20. Informed consent for tracheostomy.

MCQ's (10 x 1=10)

21. (i) Cart wheel appearance of tympanic membrane is seen in

- a) ASOM
- b) Glomus tumor
- c) OME
- d) CSOM

(ii) Cricothyroid muscle is supplied by :

- a) External laryngeal nerve
- b) Recurrent laryngeal nerve
- c) Internal laryngeal nerve
- d) Glossopharyngeal nerve

(iii) Which of the following is known as gateway of tears

- a) Killian's dehiscence
- b) Rathke's pouch
- c) Waldeyer ring
- d) Sinus of Morgagni

(iv) Bony septal perforation is seen in :

- a) TB
- b) Syphilis
- c) Leprosy
- d) Sarcoidosis

(v) Which of the following is not the component of Gradenigotriad :

- a) Involvement of Vth and VIth cranial nerve
- b) Persistent otorrhea
- c) Palatal palsy
- d) Retro- orbital pain

(vi) Laryngocele arises from

- a) Anterior commissure
- b) True cords
- c) Saccule of ventricle
- d) False cords

(vii) Woodruff's plexus is located at :

- a) Posterior end of middle turbinate
- b) Posterior end of inferior turbinate
- c) Posterior end of superior turbinate
- d) None of the above (viii) Steeple sign is seen in :

- a) Quinsy
- b) Larngomalacia
- c) Acute epiglottitis
- d) Croup

(ix) Grommet insertion with myringotomy is done at

- a) Antero-inferior quadrant
- b) Postero- inferior quadrant
- c) Antero superior quadrant
- d) Postero superior quadrant (x)

Caldwell view is done for :

- a) Sphenoid sinus
- b) Ethmoid sinus
- c) Maxillary sinus
- d) Frontal sinus

References:

1. Diseases of Ear, Nose & Throat. Mohan Bansal, 3rd Edition.
2. Diseases of Ear, Nose and Throat & Head and Neck Surgery. P L Dhingra, 8th Edition.

**RAJIV GANDHI UNIVERSITY OF
HEALTH SCIENCES
BANGALORE, KARNATAKA**

Page.



**ENT LOGBOOK
For
MBBS PHASE II and III**

As Per
Competency-Based Medical Education Curriculum

NAME OF THE CANDIDATE :

NAME OF THE COLLEGE :

UNIVERSITY REGISTER NUMBER:

ACADEMIC YEAR :

BASIC PROFORMA OF THE STUDENT

Page

PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

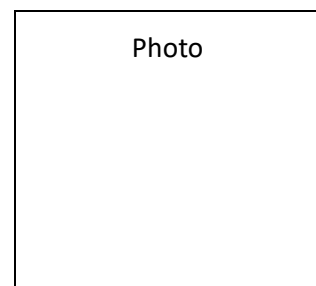
RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature:.....



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INSTITUTE OF MEDICAL SCIENCES

DEPARTMENT OF ENT

BONAFIDE CERTIFICATE

This is to certify that the candidateReg No.....
has satisfactorily completed all requirements mentioned in this Logbook for Phase III MBBS in ENT
including related AETCOM modules as per the Competency-Based Undergraduate Medical
Education Curriculum, Graduate Medical Regulation 2019 during the period from to
..... He/She is eligible to appear for the summative (University) assessment.

Faculty Incharge:

Head of Department:

Name:

Name:

Signature:

Signature:

Place:

Place:

Date:

Date:

PREFACE

This logbook is designed to follow and record your academic journey through the ENT course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

This logbook contains the **CBME competencies in ENT**. It includes the topics that would be covered during the course, records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to ENT.

This logbook consists of the **scheme and summary of formative assessments** in ENT, including the internal assessments and documents the **procedures that require certification and those that do not require certification but only need to be maintained in the logbook**.

This logbook also contains **additional-curricular activities** (Seminars, conference, workshops attended, scientific project presentations, outreach activities, etc.) and **extracurricular activities**.

We hope that this logbook serves as a guide and facilitates your progress through the year.

GENERAL INSTRUCTIONS

6. This logbook is a record of the academic/co-curricular activities in ENT of the designated student.
7. The student is responsible for getting the entries in the logbook verified by the faculty in-charge regularly.
8. Entries in the Logbook will reflect the activities undertaken in the department of ENT during your course.
9. The student has to get this logbook verified by the mentor and the Head of the department before submitting the application of the University examination.
10. All signatures must be done with a date stamp.

**SUGGESTED GUIDELINES FOR
LOGBOOK:
GENERAL INFORMATION:**

- 1)** The logbook is a record of the academic/co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.
- 2)** The student is responsible for getting the entries in the logbook verified by the Faculty In-charge regularly.
- 3)** Entries in the logbook will reflect the activities undertaken in the department & have to be scrutinized by the Head of the concerned department.
- 4)** The logbook is a record of various activities by the student like:
 - a)** Overall participation & performance
 - b)** Attendance
 - c)** Participation in sessions
 - d)** Record of completion of pre-determined activities.
 - e)** Acquisition of selected competencies
- 5)** The logbook is the record of work done by the candidate in that department/specialty and should be verified by the college before submitting the application of the students for the University examination.

SUMMARY OF ATTENDANCE

	Clinical Postings			Theory Classes			Signature of student	Signature of Faculty
	Total Conducted	Total Attended	Percentage	Total Conducted	Total Attended	Percentage		
Phase II								
Phase III Part I								
Attendance at the end of MBBS Phase III Part I								

Internal Assessment	Date of Assessment	Total marks		Marks scored		Signature of student	Signature of teacher
		Theory	Practical	Theory	Practical		
First							
Second							
Third							
Remedial							
Average IA							

SUMMARY OF INTERNAL ASSESSMENT (IA)

Note: A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/ she successfully completes the same, he/she is eligible to appear for University Examination. Remedial assessment shall be completed before submitting the internal assessment marks online to the University.

Sl no	Type	Maximum marks	Marks obtained	Feedback	Signature of Student	Signature of the faculty

Formative Assessments

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial	Rating Below Expectation(B) Meets Expectations	Decision of Faculty Completed (C) Repeat (R)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 2.2	Demonstrate the correct use of headlamp in examination of Ear, Nose & Throat		(RE)	(M)	Remedial		learner
EN 2.3	Demonstrate the correct technique of examination of the ear including Otoscopy						
EN 2.4	Demonstrate the correct technique of performance and interpret tuning fork tests						

Competency Assessment- Certifiable Skills

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial	Rating Below Expectation(B) MeetsExpectations (M) ExceedsExpectations(E)	Decision of Faculty Completed (C) Repeat (R)	Initial of the faculty and date	Feedback Received Initial of the learner
EN 2.5	Demonstrate the correct technique of Examination of the nose & paranasal sinuses including the use of nasal speculum		(RE)		Remedial		
EN 2.6	Demonstrate the correct technique of examining the throat including the use of a tongue depressor						
EN 2.7	Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus						

Competency Assessment- Certifiable Skills

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remdial (RE)	Rating Below Expectation(B) MeetsExpectation s (M) Exceeds Expectati ons(E)	Decision of Faculty Completed (C) Repeat (R) Remed	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 3.1	Observe and describe the indications for and steps involved in the performance of Otomicroscopic examination in a						
EN 3.2	simulated Observe and describe the indications for and steps involved in the performance of diagnostic nasal endoscopy						
EN 4.9	Demonstration the correct technique for syringing wax from the ear in a simulated environment						

Competency Assessment- Certifiable Skills

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat	Rating Below Expectation (B) Meets Expectations (M) Exceeds Expectations	Decision of Faculty Completed (C) Repeat	Initial of faculty and date	Feedback Received Initial of
EN 4.10	Demonstration the correct technique the indications for and steps involved in myringotomy and myringoplasty		(R)	Exceeds Expectations	Repeat		the
EN 4.16	Observe and describe the indications for and steps involved in the performance of pure tone audiometry						
EN 4.17	Enumerate the indications and interpret the results if an audiogram						

Competency Assessment- Certifiable Skills

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat (R) Remedial (RE)	Rating Below Expectation(B) MeetsExpectations (M) ExceedsExpectations(E)	Decision of Faculty Completed (C) Repeat (R) Remedial (RE)	Initial of the faculty and date	Feed Back Received Initial of the learner
EN 4.24	Enumerate the indications observe and describe the steps in a septoplasty						

Competency Assessment- Certifiable Skills

EN 4.40	Observe and describe the indications for and steps involved in a tonsillectomy / adenoidectomy						
EN 4.49	Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the						

	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat	Rating Below Expectation(B) MeetsExpectations (M) ExceedsExpectations	Decision of Faculty Complete (C) Repeat	Initial of the faculty and date	Feedback Received Initial of
EN 4.50	Observe and describe the indications for and steps involved in tracheostomy		(R)	ExceedsExpectations	Repeat		the

principles

of

Competency Assessment- Certifiable Skills

EN 4.51	Observe and describe the care of the patient with a tracheostomy						
PY 10.20	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/simulated environment						

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat	Rating Below Expectation (B) Meets Expectations (M) Exceeds Expectations (R)	Decision of Faculty Complete (C) Repeat	Initial of the faculty and date	Feedback Received Initial of the
PE 28.9	Elicit document and present age appropriate history of a child with upper respiratory problem including stridor		(R)	Exceeds Expectations	Repeat		
PE 28.10	Perform otoscopic examination of the ear						
PE 28.11	Perform throat examination using tongue depressor						

Competency	Name of the Activity	Date Completed	Attempt at Activity First (F) Repeat	Rating Below Expectation (B) Meets Expectations (M) Exceeds Expectations (R)	Decision of Faculty Complete (C) Repeat	Initial of the faculty and date	Feedback Received Initial of the
PE 28.12	Perform examination of the nose		(R)	Exceeds Expectations	Repeat		
PE 28.17	Interpret X-ray of the paranasal sinuses and mastoids; and/or use written report in case of management interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in pediatric chest X-rays						

Sl. No.	Competency No.	Topic	Certification Date	Signature of Faculty
01	EN 2.2	Demonstrate the correct use of headlamp in examination of Ear, Nose & Throat		
02	EN 2.3	Demonstrate the correct technique of examination of the ear including Otoscopy		
03	EN 2.4	Demonstrate the correct technique of performance and interpret tuning fork tests		
04	EN 2.5	Demonstrate the correct technique of Examination of the nose & paranasal sinuses including the use of nasal speculum		
05	EN 2.6	Demonstrate the correct technique of examining the throat including the use of a tongue depressor		
06	EN 2.7	Demonstrate the correct technique of examination of neck including elicitation of laryngeal crepitus		
07	EN 3.1	Observe and describe the indications for and steps involved in the performance of Otomicroscopic examination in a simulated environment		
08	EN 3.2	Observe and describe the indications for and steps involved in the performance of diagnostic nasal endoscopy		
09	EN 4.9	Demonstration the correct technique for syringing wax from the ear in a simulated environment		
10	EN 4.10	Demonstration the correct technique the indications for and steps involved in myringotomy and myringoplasty		
11	EN 4.16	Observe and describe the indications for and steps involved in the performance of pure tone audiometry		
12	EN 4.17	Enumerate the indications and interpret the results if an audiogram		

CERTIFICATIONS OF SKILLS

13	EN 4.24	Enumerate the indications observe and describe the steps in a septoplasty						
14	EN 4.40	Observe and describe the indications for and steps involved in a tonsillectomy / adenoidectomy						
15	EN 4.49	Elicit document and present a correct history, demonstrate and describe the clinical features, choose the correct investigations and describe the principles of management of foreign bodies in the air and food passages						
16	EN 4.50	Observe and describe the indications for and steps involved in tracheostomy						
17	EN 4.51	Observe and describe the care of the patient with a tracheostomy						
18	PY 10.20	Demonstrate (i) hearing (ii) testing for smell and (iii) taste sensation in volunteer/simulated environment						
#	Competency	Name of Activity	Date	Rating	Decision	Initial of faculty	Initial of learner	Feedback
19	PE 28.9	Elicit document and present history of a child with upper respiratory problem including stridor	completed	Below appropriate Expectations(C) Meets	Complete Repeat	with date		Received Initial of learner
20	PE 28.10	Perform otoscopic examination of the ear		Expectations(B) Exceeds	Remedial			
21	PE 28.11	Perform throat examination using tongue depressor		Expectations(A)				
22	PE 28.12	Perform examination of nose						
23	PE 28.17	Interpret X ray of the paranasal sinuses and mastoids; and/or use written report in case of management. Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in paediatric chest X-rays						

NON-CERTIFIABLE (SHOWS HOW) ACTIVITIES

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#Competency	Name of Activity	Date completed	Rating Below Expectations(C) Meets Expectations(B) Exceeds Expectations(A)	Decision of faculty Completed Repeat Remedial	Initial of faculty with date	Feedback Received Initial of learner

1. Duplicate of this template shall be made depending on the activities planned

2. Activities may be skill sessions, seminars, tutorials, projects, etc.

NON-CERTIFIABLE (SHOWS HOW) ACTIVITIES

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Competency	Name of Activity	Date completed	Rating Below Expectations(C) Meets Expectations(B) Exceeds Expectations(A)	Decision of faculty Completed Repeat Remedial	Initial of faculty with date	Feedback Received Initial of learner

1. Duplicate of this template shall be made depending on the activities planned

2. Activities may be skill sessions, seminars, tutorials, projects, etc.

NON-CERTIFIABLE (SHOWS HOW) ACTIVITIES

1. Duplicate of this template shall be made depending on the activities planned 2. Activities may be

skill sessions, seminars, tutorials, projects, etc.

FORMAT OF AETCOM MODULES REPORT

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

4. What did you learn from this AETCOM session based on the objectives?
5. What change did this session make in your learning?
6. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

4. What did you learn from this AETCOM session based on the objectives?
5. What change did this session make in your learning?
6. How will you apply this knowledge in future?

Remarks by Facilitator

Signature of facilitator with date

RUBRIC FOR ASSESSING PROFESSIONALISM

	Areas assessed					Signature of student	Signature of teacher
	Regular for classes (5marks)	Regular in completing assignments (5marks)	Behaviour in class and discipline (5marks)	Dress code and presentation (5marks)	Total (20 marks)		
At the end of 1 st IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

Note: Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.

Small Group Discussion

Sl. No.	Date	Competency and Topic	Level of Participation (Attended /Actively Participated/Presented	Signature of Faculty

Small Group Discussion

Sl. No.	Date	Competency and Topic	Level of Participation (Attended /Actively Participated/Presented	Signature of Faculty
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Small Group Discussion

Sl. No.	Date	Competency and Topic	Level of Participation (Attended /Actively Participated/Presented	Signature of Faculty

The small group discussions will be scored based on the following criteria. Marks to be given

Score	Criteria for assessment
5	Is a proactive participant showing a balance between listening, initiating, and focusing on discussion. Displays a proactive use of the whole range of discussion, skills to keep discussion going and to involve everyone in the group. Understands the purpose of the discussion and keeps the discussion focused and on topic. Applies skills with confidence, showing leadership and sensitivity.
4	Is an active participant showing a balance between listening, initiating, and focusing on discussion. Demonstrates all the elements of discussion skills but uses them less frequently and with less confidence than the above level. Keeps the discussion going but more as a supporter than a leader. Tries to involve everyone in the group. Demonstrates many skills but lacks the confidence to pursue them so that the group takes longer than necessary to reach consensus. Demonstrates a positive approach but is more focused on getting done than on having a positive discussion.
3	Is an active listener but defers easily to others and lacks confidence to pursue personal point of view even when it is right. Participates but doesn't use skills such as summarizing and clarifying often enough to show confidence. Limits discussion skills to asking questions, summarizing, and staying on topic. Lacks balanced between discussion and analytical skills. Either displays good analysis skills and poor discussion skills or good discussion skills and poor analysis skills.
2	Is an active listener but defers easily to others and tends not to pursue personal point of view, lacking confidence. Limits discussion skills to asking questions, summarizing and staying on topic. Rarely demonstrates analysis skills because doesn't understand the purpose of the discussion, and as a result, offers little evidence to support any point of view.
1	Demonstrates no participation or effort. Participates only when prompted by the teacher. Only responds to others and initiates nothing. Provides limited responses that are often off topic. Participates minimally so that it is impossible to assess / analyze skills or understanding of the issues.

SELF-DIRECTED LEARNING (SDL)- 5 hours

Sl no.	Date	Topic of SDL	Feedback	Signature of faculty/mentor
1				
2				
3				
4				
5				

6				
7				
8				
9				
10				

Sl. No	Date	Topic	Attendance	Signature of faculty

CONFERENCE/CME/WORKSHOP ATTENDED

SL NO	DATE	PARTICULARS	REMARK SIFANY	SIGNATURE OF FACULTY

SCIENTIFIC PROJECT PRESENTATIONS/REPORTS/OUTREACH ACTIVITIES

SL.NO	DATE	PARTICULARS	SIGNATURE OFSTAFF

EXTRACURRICULAR ACTIVITIES

Sl no	Date	Particulars	Signature of the faculty

ACHIEVEMENTS/AWARDS

Sl no	Date	Particulars	Signature of the faculty

FINAL SUMMARY

Sl no.	Description	Dates		Attendance in percentage	Status *	Signature of the teacher with date
		From	To			
1	Certifiable skills					
2	AETCOM Modules					

3	Internal assessment Marks					
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Signature of Head of department

Date:

* Status: Complete/Incomplete: For skills and AETCOM modules
Eligible/Ineligible: For Internal marks

Acknowledging the Contributors to the development of Curriculum of 3rd MBBS Part 1

Subject	Name	College
Forensic Medicine	Dr Jagadeesh N - Vydehi Institute of Medical Sciences & Research Centre, Whitefield, Bangalore Dr Nagesh K R - Father Muller Medical College, Mangalore Dr Hemanth Raj M N - Shridevi Institute of Medical Sciences & Research Hospital, Tumkur Dr Arun M - JSS Medical College, Mysore Dr Pramod Kumar G N - Karwar Institute of Medical Sciences, Karwar Dr Srinivasa Reddy - Sri Devaraj Urs Medical College, Kolar Dr Umesh Babu R - Kodagu Institute of Medical Sciences, Madikeri Dr Raghavendra Babu Y P - Koppal Institute of Medical Sciences, Koppal Dr Vijayamahantesh S N - S Nijalingappa Medical College, Bagalkot Dr Naveen Kumar T - Kempegowda Institute of Medical Sciences, Bangalore Dr Shankar M Bakkannavar - Kasturba Medical College, Manipal Dr Uday Shankar B S - Saphagiri Institute of Medical Sciences & Research Centre, Bangalore Dr Dayananda R - Mysore Medical College & Research Institute, Mysore Dr Lohith Kumar R and Dr Ravindra Kumar - Chickmagalur Institute of Medical Sciences, Chickmagalur Dr Yadukul S - AIIMS, Bibinagar, Hyderabad	

Community Medicine	Dr Ranganath TS, and Dr Ravish KS - Bangalore Medical College and Research Institute, Bangalore Dr Farah Fatima- St. John's Medical College, Bangalore, Dr Suman, - M.S. Ramaiah Medical College, Bangalore Dr Manjunath SN - Mysore Medical College and Research Institute, Mysore Dr Harish BR and Dr Subash Babu - Mandya Institute of Medical Sciences, Mandya Dr Ramesh Masti - Kempegowda Institute of Medical Sciences, Bangalore Dr Sudhir Prabhu – Fr Muller's Medical College Dr Ajay Kumar - Gulbarga Institute of Medical Sciences, Dr Ashok Dorle – SNMC, Bagalkot
Ophthalmology	Dr Suneetha Nithyanandam and Dr Shubashree Karat - St. John's Medical College, Bangalore Dr Suresh Babu - Bangalore Medical College and Research Institute, Bangalore
Otorhinolaryngology	Dr Ravi D, Mandya Institute of Medical Sciences, Mandya Dr Swetha Naidu- Kodagu Institute of Medical Sciences,

**Revised Ordinance Governing
MBBS DEGREE COURSE AND CURRICULUM of
Phase III Part 2 Subjects- RS4**



**RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA
4th T Block, Jayanagar, Bengaluru- 560041**



ರಾಜೀವ್ ಗಾಂಧಿ ಆರೋಗ್ಯ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ, ಬೆಂಗಳೂರು
RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA, BENGALURU
4th T Block, Jayanagar, Bengaluru - 560 041

RGU/AUTH/MBBS-UG/176th/164/2018-19

Date: 15/12/2022

NOTIFICATION

Sub: - Ordinance pertaining to Regulations and Curriculum of MBBS
Phase III Part 1 and Part 2 as per CBNIE Guidelines for RS4 Batch.

Ref:- 1. No. MCI-34(41)/2019-Med/161726, Dated 04/11/2019
2. Proceedings of 176th meeting of Syndicate held on 24/11/2022.
**

In exercise of the powers vested under section 35(2) of RGUHS Act, 1994, the Revised Ordinance pertaining to Regulations and Curriculum of MBBS Phase III Part 1 and Part 2 as per CBME guidelines for RS4 batch is notified herewith as per Annexure.



REGISTRAR

Copy to:

7. The Principal Secretary to Governor, Raj Bhavan, Bangalore — 560001
8. The Principal Secretary Medical Education, Health & Family Welfare Dept. M S Building, Dr. B R Ambedkar Veedhi, Bangalore -560001.
9. The Principals of All affiliated Medical College of RGUHS, Bangalore
10. PA to Vice-chancellor/ PA to Registrar/ Registrar (Eva.)/Finance Officer, Rajiv Gandhi University of Health Sciences, Bangalore.
11. All Officers of the University Examination Branch/ Academic Section.
12. Guard File/ Office copy.

GMER - SECTION I7/15/2022

PREAMBLE

Introduction to CBME based curriculum

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate is able to recognize "health for all" as a national goal and should be able to fulfill his/her societal obligations. The revised curriculum has attempted to enunciate the competencies the student must be imparted and should have learnt, with clearly defined teaching-learning strategies and effective methods of assessment. Communicating effectively and sympathetically with patients and their relatives has been visualized as a core area of the revised curriculum. These and other goals identified in the curriculum are to be implemented in all medical colleges under the ambit of Medical Council of India from August 2019 and to smoothen this process Guidelines have been prepared for its effective implementation. In response to the need for a seamless introduction of the curriculum into the Undergraduate system, all medical colleges need to upgrade the teaching-learning skills of their faculty. Earlier experience with implementation of curricular changes suggests that a carefully managed, sustainable approach is necessary to ensure that every college has access to the new skills and knowledge enunciated in the new curriculum. Faculty training and development thus assumes a key role in the effective implementation and sustenance of the envisaged curricular reforms.

INTRODUCTION

The undergraduate medical curriculum of the medical council of India is created to ensure that the medical doctor who emerges from the MBBS training program is capable of assisting the nation to achieve its goal of health for all. In addition, it aspires to ensure that the "graduate" meets or exceeds global bench-mark in knowledge, attitude, skills and communication. This intent is at the core of the Graduate Medical Regulations, 2019.

The Graduate Medical Regulations, 2019 represents the first major revision to the medical curriculum since 1997 and hence incorporates changes in science and thought over two decades. A significant advance is the development of global competencies and subject-wise outcomes that define the roles of the "Indian Medical Graduate". Learning and assessment strategies have been outlined that will allow the learner to achieve these competencies/outcomes. Effective appropriate and empathetic communication, skill acquisition, student-doctor method of learning, aligned and integrated learning and assessment are features that have been given additional emphasis in the revised curriculum.

The revised curriculum is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

This document represents a compilation of the resource material that was used in the Curricular Implementation Support Program (CISP) and has attempted to provide a stepwise and comprehensive approach to implement the curriculum. It details the philosophy and the steps required in a simple and richly illustrated manner. Teaching slide decks, faculty guides and online resource material supplement

this document. The document is to be used in conjunction with the Competency document, AETCOM module and the GMR document.

Indian Medical Graduate Training Programme

The undergraduate medical education programme is designed with a goal to create an “Indian Medical Graduate” (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that she or he may function appropriately and effectively as a physician of first contact of the community while being globally relevant. To achieve this, the following national and institutional goals for the learner of the Indian Medical Graduate training programme are hereby prescribed: - **National Goals**

At the end of undergraduate program, the Indian Medical Graduate should be able to:

- (f) Recognize “health for all” as a national goal and health right of all citizens and by undergoing training for medical profession to fulfill his/her social obligations towards realization of this goal.
- (g) Learn every aspect of National policies on health and devote her/him to its practical implementation.
- (h) Achieve competence in practice of holistic medicine, encompassing promotive, preventive, curative and rehabilitative aspects of common diseases.
- (i) Develop scientific temper, acquire educational experience for proficiency in profession and promote healthy living.
- (j) Become exemplary citizen by observance of medical ethics and fulfilling social and professional obligations, so as to respond to national aspirations.

Institutional Goals

(2) In consonance with the national goals each medical institution should evolve institutional goals to define the kind of trained manpower (or professionals) they intend to produce. The Indian Medical Graduates coming out of a medical institute should:

- (a) be competent in diagnosis and management of common health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant investigations.
- (b) be competent to practice preventive, promotive, curative, palliative and rehabilitative medicine in respect to the commonly encountered health problems.
- (c) appreciate rationale for different therapeutic modalities; be familiar with the administration of “essential medicines” and their common adverse effects.
- (d) be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude towards the patients in discharging one's professional responsibilities.
- (e) possess the attitude for continued self-learning and to seek further expertise or to pursue research in any chosen area of medicine, action research and documentation skills.
- (f) be familiar with the basic factors which are essential for the implementation of the National Health Programmes including practical aspects of the following:
 - (i) Family Welfare and Maternal and Child Health (MCH)
 - (ii) Sanitation and water supply
 - (iii) Prevention and control of communicable and non-communicable diseases
 - (iv) Immunization
 - (v) Health Education
 - (vi) Indian Public Health Standards (IPHS), at various levels of service delivery
 - (vii) Bio-medical waste disposal
 - (viii) Organizational and/or institutional arrangements.
- (g) acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, hospital management, inventory skills and counseling.
- (h) be able to identify community health problems and learn to work to resolve these by designing, instituting corrective steps and evaluating outcome of such measures.
- (i) be able to work as a leading partner in health care teams and acquire proficiency in communication skills.
- (j) be competent to work in a variety of health care settings.
- (k) have personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

All efforts must be made to equip the medical graduate to acquire the skills as detailed in Table 11 Certifiable procedural skills – A Comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate.

Goals and Roles for the Learner

In order to fulfil the goal of the IMG training programme, the medical graduate must be able to function in the following roles appropriately and effectively

- Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.
- Leader and member of the health care team and system with capabilities to collect analyze, synthesize and communicate health data appropriately.
- Communicator with patients, families, colleagues and community.
- Lifelong learner committed to continuous improvement of skills and knowledge.
- Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

Competency Based Training Programme of the Indian Medical Graduate

Competency based learning would include designing and implementing medical education curriculum that focuses on the desired and observable ability in real life situations. In order to effectively fulfil the roles as listed in clause 2, the Indian Medical Graduate would have obtained the following set of competencies at the time of graduation:

Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion

- Demonstrate knowledge of normal human structure, function and development from a molecular, cellular, biologic, clinical, behavioural and social perspective.
- Demonstrate knowledge of abnormal human structure, function and development from a molecular, cellular, biological, clinical, behavioural and social perspective.
- Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence health care.
- Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is contextual to gender, age, vulnerability, social and economic status, patient preferences, beliefs and values.

- Demonstrate ability to perform a physical examination that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to perform a physical examination that is contextual to gender, social and economic status, patient preferences and values.

- Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals.
- Maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.
- Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context.
- Demonstrate ability to prescribe and safely administer appropriate therapies including nutritional interventions, pharmacotherapy and interventions based on the principles of rational drug therapy, scientific validity, evidence and cost that conform to established national and regional health programmes and policies for the following:
 - (i) Disease prevention,
 - (ii) Health promotion and cure, (iii) Pain and distress alleviation,
 - and (iv) Rehabilitation.
- Demonstrate ability to provide a continuum of care at the primary and/or secondary level that addresses chronicity, mental and physical disability.
- Demonstrate ability to appropriately identify and refer patients who may require specialized or advanced tertiary care.
- Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

Leader and member of the health care team and system

- Work effectively and appropriately with colleagues in an inter-professional health care team respecting diversity of roles, responsibilities and competencies of other professionals.
- Recognize and function effectively, responsibly and appropriately as a health care team leader in primary and secondary health care settings.
- Educate and motivate other members of the team and work in a collaborative and collegial fashion that will help maximize the health care delivery potential of the team.
- Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyze and utilize health data.
- Participate appropriately and effectively in measures that will advance quality of health care and patient safety within the health care system.
- Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition: in a) life style diseases and b) cancers, in collaboration with other members of the health care team.

Communicator with patients, families, colleagues and community

- Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health care outcomes.

- Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trustworthy.
- Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality and privacy.
- Demonstrate ability to communicate with patients, colleagues and families in a manner that encourages participation and shared decision-making.

Lifelong learner committed to continuous improvement of skills and knowledge

- Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills.
- Demonstrate ability to apply newly gained knowledge or skills to the care of the patient.
- Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
- Demonstrate ability to search (including through electronic means), and critically evaluate the medical literature and apply the information in the care of the patient.
- Be able to identify and select an appropriate career pathway that is professionally rewarding and personally fulfilling.

Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

- Practice selflessness, integrity, responsibility, accountability and respect.
- Respect and maintain professional boundaries between patients, colleagues and society.
- Demonstrate ability to recognize and manage ethical and professional conflicts.
- Abide by prescribed ethical and legal codes of conduct and practice.
- Demonstrate a commitment to the growth of the medical profession as a whole.

Broad Outline on training format

In order to ensure that training is in alignment with the goals and competencies listed in sub-clause 2 and 3 above:

- There shall be a "Foundation Course" to orient medical learners to MBBS programme, and provide them with requisite knowledge, communication (including electronic), technical and language skills.
- The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible in order to enhance learner's interest and eliminate redundancy and overlap.
- Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning.
- Clinical training shall emphasize early clinical exposure, skill acquisition, certification in essential skills; community/primary/secondary care-based learning experiences and emergencies.
- Training shall primarily focus on preventive and community-based approaches to health and disease, with specific emphasis on national health priorities such as family welfare, communicable and noncommunicable diseases including cancer, epidemics and disaster management.
- Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.
- The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics and communication.
- Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Appropriate Faculty Development Programmes shall be conducted regularly by institutions to facilitate medical teachers at all levels to continuously update their professional and teaching skills, and align their teaching skills to curricular objectives.

SECTION II

Admission to the Indian Medical Graduate Programme

NATIONAL ELIGIBILITY-CUM-ENTRANCE TEST AND COMMON COUNSELLING

SECTION III

Migration

AS PER MCI GUIDELINES

SECTION IV

REGULATIONS GOVERNING MBBS DEGREE COURSE

[Eligibility for Admission, Duration, Attendance and Scheme of Examination]

9. ELIGIBILITY

As per guidelines of National Medical Council of India

10. DURATION OF THE COURSE

Page.

Every learner shall undergo a period of certified study extending over 4 ½ academic years, divided into nine semesters from the date of commencement of course to the date of completion of examination which shall be followed by one year of compulsory rotating internship.

Each academic year will have at least 240 teaching days with a minimum of eight hours of working on each day including one hour as lunch break The period of 4 ½ years is divided as follows:

- **Pre-Clinical Phase [(Phase I) - First Professional phase of 13 months]** preceded by Foundation Course of one month]: will consist of preclinical subjects – Human Anatomy, Physiology, Biochemistry, Introduction to Community Medicine, Humanities, Professional development including Attitude, Ethics & Communication (AETCOM) module and early clinical exposure, ensuring both horizontal and vertical integration.
- **Para-clinical phase [(Phase II) - Second Professional of 12 months]**: will consist of Para-clinical subjects namely Pathology, Pharmacology, Microbiology, Community Medicine, Forensic Medicine and Toxicology, Professional development including Attitude, Ethics & Communication (AETCOM) module and introduction to clinical subjects ensuring both horizontal and vertical integration.

- **Clinical Phase – [(Phase III) Third Professional (28 months)]**
 - (d) **Part I (13 months)** - The clinical subjects include General Medicine, General Surgery, Obstetrics & Gynaecology, Pediatrics, Orthopaedics, Dermatology, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Psychiatry, Respiratory Medicine, Radiodiagnosis & Radiotherapy and Anaesthesiology & Professional development including AETCOM module.
 - (e) **Electives (2 months)** - To provide learners with opportunity for diverse learning experiences, to do research/community projects that will stimulate enquiry, self-directed experimental learning and lateral thinking [9.3].
 - (f) **Part II (13 months)** - Clinical subjects include:
 - vi. Medicine and allied specialties (General Medicine, Psychiatry, Dermatology Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis)
 - vii. Surgery and allied specialties (General Surgery, Orthopedics [including trauma]), Dentistry, Physical Medicine and rehabilitation, Anaesthesiology and Radiodiagnosis)
 - viii. Obstetrics and Gynecology (including Family Welfare) ix. Pediatrics

x. AETCOM module

The clinical exposure to learners will be in the form of learner-doctor method of clinical training in all phases. The emphasis will be on primary, preventive and comprehensive health care. A part of training during clinical postings should take place at the *primary level* of health care. It is desirable to provide learning experiences in secondary health care, wherever possible. This will involve:

- (d) Experience in recognizing and managing common problems seen in outpatient, inpatient and emergency settings,
- (e) Involvement in patient care as a team member,
- (f) Involvement in patient management and performance of basic procedures.

• **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course**

Calendar for the MBBS Course for the new CBME curriculum

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Founda tion course	I MBBS			
I MBBS								Phase I exam	II MBBS		

II MBBS		Phase II exam	III MBBS PART 1
III MBBS PART 1		Phase III part 1 exam	Electives and skills
III MBBS PART 2			
Phase III part 2 exam		Internship	
Internship			

DISTRIBUTION OF SUBJECTS BY PROFESSIONAL PHASE

Phase and Year of MBBS Training	Subjects and new teaching elements	Duration	University examination
First professional MBBS	<ul style="list-style-type: none"> • Foundation course (1month) • Human Anatomy, Physiology & Biochemistry • Introduction of Community Medicine, Humanities • Early Clinical Exposure • Attitude, Ethics and Communication Module (AETCOM) 	1+13 months	1 st Professional

Second professional MBBS	<ul style="list-style-type: none"> • Pathology, Microbiology, Pharmacology, Forensic Medicine And Toxicology • Introduction to clinical subjects including community Medicine • Clinical postings • AETCOM 	12 months	II nd Professional
Third professional MBBSpart I	<ul style="list-style-type: none"> • General Medicine ,General Surgery, OBG, Paediatrics, Orthopaedics, Dermatology, Psychiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory Medicine, Radiodiagnosis & Radiotherapy, Anaesthesiology • Clinical Subjects /postings • AETCOM 	12 months	III rd Professional Part I
Electives	<ul style="list-style-type: none"> • Electives ,skills and assessment 	2 months	
Third professional MBBSpart II	<ul style="list-style-type: none"> • General Medicine ,Paediatrics, General Surgery, Orthopaedics, Obstetrics and Gynaecology, including Family welfare and allied specialties • Clinical Postings /subjects • AETCOM 	13 months	III rd Professional Part II

11. ATTENDANCE

- Every candidate should have **attendance not less than 75% of the total classes conducted in theory and not less than 80% of the classes conducted in practical** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.
- **Seventy five percent (75%) attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year** (vide Medical Council of India Notification on Graduate Medical Education (Amendment) Regulations 2019, published in the Gazette of India Part III, Section 4, Extraordinary issued on 4th November 2019)
- In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
- If an examination comprises more than one subject (for e.g., General Surgery and allied Page.

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branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University.

A candidate lacking in the prescribed attendance and progress in any subject(s) in theory or practical should not be permitted to appear for the examination in that subject(s).

12. TEACHING HOURS: Third Professional Part 2

Subjects	Teaching hours - lectures	Tutorials/seminars Integrated teaching	Self-directed learning	Total
General Medicine	70	125	15	210
General surgery	70	125	15	210
Obstetrics & Gynecology	70	125	15	210
Pediatrics	20	35	10	65
Orthopedics	20	25	5	50
AETCOM	28		15	43
Electives				200
Total	250	435	60	1780

- Teaching and learning shall be aligned and integrated across specialties both vertically and horizontally for better learner comprehension. Learner centered learning methods should include problem oriented learning, case studies, community-oriented learning, self- directed and experiential
- Didactic lectures shall not exceed one third of the schedule; two third of the schedule shall include interactive sessions, practicals, clinical or/and group discussions. The learning process should include clinical experiences, problem-oriented approach, case studies and community health care activities.

Table : Clinical postings for all clinical Subjects

Subjects	Period of training in weeks			Total (weeks)
	II MBBS	III MBBS Part 1	III MBBS Part 2	
Electives			8(4weeks clinical postings to continue)	
General Medicine	4	4	8+4	20
General Surgery	4	4	8+4	20
Obstetrics and Gynecology	4	4	8+4	20
Pediatrics	2	4	4	10
Orthopaedics including Trauma	2	4	2	8
Community Medicine	4	6	-	10
Otorhinolaryngology	4	4	-	8
Ophthalmology	4	4	-	8
Dermatology	2	2	2	6
Psychiatry	2	2	-	4
Respiratory Medicine	2	-	-	2
Radiodiagnosis	2	-	-	2
Dentistry & Anesthesiology	-	2	-	2
Casualty	-	2	-	2
Total	36	42	44	126

AETCOM modules in 3rd MBBS Part 2

AETCOM Module number	Title	Department
4.1	The foundations of communication - 5	General Surgery
4.2	Case studies in medico-legal and ethical situations	Obstetrics and Gynaecology
4.3	Case studies in medico-legal and ethical situations	Internal Medicine
4.4	Case studies in ethics empathy and the doctor-patient relationship	General Surgery
4.5	Case studies in ethics: the doctor-industry relationship	Paediatrics
4.6	Case studies in ethics and the doctor - industry relationship	Orthopaedics
4.7	Case studies in ethics and patient autonomy	Paediatrics
4.8	Dealing with death	Internal Medicine
4.9	Medical Negligence	Obstetrics and Gynaecology

SCHEME OF EXAMINATION INTERNAL ASSESSMENT:

- Regular periodic examinations shall be conducted throughout the course. There shall be no less than three examinations in each clinical subject in the final professional year (3rd MBBS Part2) and one in each of the other years that the clinical subjects are taught in.
- The **third internal examination** should be conducted on the lines of the university examination(Preliminary examination).
- An end of posting clinical assessment shall be conducted for each clinical posting in each professional year.
- When subjects are taught in more than one phase, the internal assessment must be done in each phase and must contribute proportionately to final assessment. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently.

- Day to day records and log book (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.
- The final internal assessment in a broad clinical specialty (e.g., Surgery and allied specialties etc.) shall comprise of marks from all the constituent specialties. The proportion of the marks for each constituent specialty shall be determined by the time of instruction allotted to each.
- An **average of the marks scored in all internal assessment examinations and the** average of all marks scored in the end of posting clinical assessment will be considered as the final internal assessment scores and eligibility for University examinations.
- Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject.
- **Internal assessment marks will reflect under separate head in the marks card of the university examination. The internal assessment marks (theory and practical) will not be added to the marks secured (theory/practical) in the university examination for consideration of pass criteria, pass percentage, award of first class/distinction/gold medal.**
- The results of internal assessment should be displayed on the notice board within a 1-2 weeks of the test.
- Colleges should formulate policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
- Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

13. UNIVERSITY EXAMINATION

Examination schedule

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundatio n course	I MBBS			
I MBBS								Phase I exam	II MBBS		
II MBBS								Phase II exam	III MBBS PART 1		
III MBBS PART 1									Phase III part 1 exam	Electives and skills	
III MBBS PART 2											
Phase III part 2 exam		Internship									
Internship											

General guidelines

- University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.
- Nature of questions will include different types such as structured essays (Long Answer Questions - LAQ), Short Essays, Short Answers Questions (SAQ) and Multiple-choice questions (MCQs). Marks for each part should be indicated separately.
- The learner **must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together) to pass, in subjects with more than one paper.**
- In subjects with one question paper the learner must secure a minimum of 50% marks to pass.
- Clinical examinations will be conducted at the bedside in the hospital wards. The objective will be to assess proficiency and skills to elicit a detailed history, perform clinical examination, interpret data and form logical conclusion, wherever applicable.
- **There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.**
- **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.**
- **A maximum number of four permissible attempts would be available to clear the first Professional University examination, whereby the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.**
- **THIRD PROFESSIONAL PART 2 EXAMINATION:**
This examination shall be held at the end of the fourth-year of training (13 months), in the subjects of Internal medicine, General Surgery including Orthopaedics, Obstetrics and Gynaecology, and Paediatrics.

Table: Examination components, Subjects and Distribution of Marks

THEORY	Internal Medicine	Surgery & Orthopedics	Obstetrics & Gynecology	Pediatrics
Written Paper				
No. of Papers & Maximum Marks for each paper.	2×100=200	2×100=200	2×100=200	1×100=100

Total theory	200	200	200	100
PRACTICAL				
1. Practical exam	160	160	160	80
2. Viva-voce	40	40	40	20
Total practical	200	200	200	100
Internal assessment*				
Internal Assessment (Theory)	200	200	200	100
Internal assessment (Practical)	200	200	200	100

* **Internal assessment marks will reflect under separate head in the marks card of the university examination.**

Type, number of questions and distribution of marks for written paper

TYPES OF QUESTION	NUMBER OF QUESTIONS	MARKS FOR EACH QUESTION
Long essay	2	10
Short essay	8	5
Short answers	10	3
MCQs	10	1
Total		100

A blueprint for theory paper indicating the topics and marks allotted for each are given for each of the subjects below. The blueprint provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions.

The distribution of topics in paper 1 and paper 2, are also given in clinical subjects with more than one theory paper. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

14. SUBMISSION OF LOGBOOK

- a. At the time of Clinical Examination each candidate shall submit to the Examiners his/her logbook record duly certified by the Head of the Department as a bona fide record of the work done by the candidate.

15. ELIGIBILITY TO APPEAR FOR EXAMINATION

The following criteria to be met by the students to be eligible for the university exams:

- e. Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.
- f. Shall have attended not less than 75% of the total classes conducted in theory and not less than 80% of the total classes conducted in practical separately to become eligible to appear for examination in that subject/subjects.
- g. Minimum of 40% marks to be obtained **separately** in theory and practical AND at least 50% marks of the total marks **combined** in theory and practical assigned for internal assessment is to be obtained in a particular subject to appear for university exam. (average of 3 internal assessments theory and practical separately)
- h. Learners must have completed the required certifiable competencies for that phase of training and completed the logbook appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

16. CRITERIA FOR PASS

For declaration of pass in any subject in the University examination, a candidate shall pass both in Theory and Practical examination components separately as stipulated below:

- The Theory component consists of marks obtained in University Written papers only. For a pass in theory, a candidate must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together).
- For a pass in practical examination, a candidate shall secure not less than 50% marks in aggregate, i.e., marks obtained in university practical examination and viva voce added together.
- **Internal assessment marks will reflect as a separate head of passing at the university examination.**
- **The IA marks will not be added to the marks obtained in the University examination and will NOT be used to calculate pass percentage, award of class, distinction and GOLD medal.**
- A candidate not securing 50% marks in aggregate in Theory or Practical examination + viva in a subject shall be declared to have failed in that subject and is required to appear for both Theory and Practical again in the subsequent examination in that subject.

17. DECLARATION OF CLASS

- e. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of **grand total marks (university examination)** prescribed will be declared to have passed the examination with distinction.
- f. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 65% of marks or more but less than 75% of **grand total marks (university examination)** prescribed will be declared to have passed the examination in First Class.
- g. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 50% of marks or more but less than 65% of **grand total marks (university examination)** prescribed will be declared to have passed the examination in Pass Class.
- h. A candidate passing a university examination in more than one attempt shall be placed in Pass class irrespective of the percentage of marks secured by him/her in the examination.

Note: Please note fraction of marks will not be rounded off for clauses (a), (b) and (c)

Appointment of Examiners

- a. Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.
- b. For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.
- c. External examiners may not be from the same University.
- d. The internal examiner in a subject shall not accept external examinership for a college from which external examiner is appointed in his/her subject.
- e. A University having more than one college shall have separate sets of examiners for each college, with internal examiners from the concerned college.
- f. External examiners shall rotate at an interval of 2 years.
- g. There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.
- h. All eligible examiners with requisite qualifications and experience can be appointed internal examiners by rotation in their subjects.
- i. All theory paper assessment should be done as central assessment program (CAP) of concerned university.

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- j. Internal examiners should be appointed from same institution for unitary examination in same institution. For pooled examinations at one centre approved internal examiners from same university may be appointed.

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption

Bangalore, Karnataka



Internal Medicine Curriculum including Respiratory Medicine as per Competency Based Curriculum

RGUHS Internal Medicine Curriculum as per the new Competency Based Curriculum

Preamble

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each specialty with the input from expert groups under each specialty.

The NMC, in the Graduate medical regulations 2019, has provided the list of internal medicine competencies required for an IMG and these have been included in this document.

The document begins with the goals and objectives of the medicine curriculum, then a summary of phase wise hours allotted to internal medicine and their distribution across didactic lecture, small group discussion and self-directed learning. Subsequently, this document suggests phase wise topics in the 4 clinical postings, directory of minimum cases to be seen, and suggested clinical assessment methods for the postings. The blueprint for theory exams and sample question paper is also included.

This is followed by the competencies to be delivered, along with the SLOs, suggested TL methods, and suggested assessment methods.

The document also includes the competencies of Respiratory medicine. They have been divided into the three main domains of teaching-learning.

Goals and Objectives of the medicine curriculum

Goals

The broad goal of the medicine curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common disorders affecting the adult population.

Objectives

A) Knowledge

At the end of the course student should be able to:

- d. Describe the pathophysiology of common diseases of adults
- e. Describe the clinical features, diagnosis and management of the above
- c. Be well versed with the preventive aspects of the internal medical curriculum, specifically patient education, lifestyle modification and adult vaccination. **(B) Skills**

At the end of the course the student should be able to:

- d. Demonstrate the ability to elicit a detailed clinical history and perform a general physical and systemic examination, in outpatient and inpatient settings.
- e. Demonstrate the ability to apply the elicited history and examination to arrive at correct diagnosis and plan treatment.

-
- f. Demonstrate the ability to deliver immediate care to commonly seen emergencies prior to referral to higher centre.

C) Attitude and communication skills

At the end of the course the student should be able to:

- i. Communicate effectively with patients, their families and the public at large
 - j. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
 - k. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
 - l. Appreciate the issues of equity and social accountability
-

Phase	Lecture	Small group discussion	Self-directed learning
Phase 2	25		
Phase 3, part 1	25	35	5
Phase 3, part 2	70	125	15

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Internal medicine –

Distribution of hours :

Time allotted excludes time reserved for internal / University examinations, and vacation.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. 25% of allotted time (non-clinical time) of third Professional shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects.

The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap.

Small group discussion (SGD) may include the following

1. Tutorials
2. Case based discussion
3. Skill lab sessions

Unless otherwise mentioned, in the TL methods suggested in the competency table, SGD sessions are for 2 hours, and lectures for 1 hour and skill lab sessions are for 4 hours

Phase wise competencies suggested

Phase 2 : Introduction to history taking, introduction to systems

Phase 3 part 1 : 4,6,9,11,12,16,25

Phase 3 part 2 : remaining competencies and pandemic module

Suggested SDL topics, both Phases together. The individual institutions can modify according to their need.

Topics for self-directed learning in Phase 1 (1 hour each)

1. KFD/ JE

2. Acromegaly & hyperprolactinemia

3. Posterior pituitary disorders

4. Sideroblastic anemia

5. Haemolytic anemias

Topics for SDL in phase 2

1. Introduction to cardiovascular disease in adults

2. Cardiomyopathies

3. Pneumoconiosis

4. Nephrotic syndrome

5. Epilepsy

6. Drug induced liver injury

7. Hepatic transplantation

8. physiologic effects of acute blood and volume loss

9. therapy of bee sting allergy

10. Heat stroke

11. medico legal aspects of suspected suicidal or homicidal poisoning

12. multiple endocrine neoplasia syndrome

13. Autoimmune hepatitis

14. Systemic sclerosis

15. Primary biliary cirrhosis

Clinical posting, certifiable skills, case matrix, clinical skills assessment , clerkship , skill lab topics

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Acquisition and certification of skills shall be through bedside clinics, clerkship (student doctor) , diagnostic and skill laboratories.

	Perform and interpret a capillary blood glucose test	IM 11.12

Clinical postings – phase wise objectives

Posting 1 : The student , at the end of the posting, would have practiced the following

A. Building a rapport with the patient

Eliciting history in native language of patient

Examining vital signs – pulse, blood pressure, temperature, jugular venous pressure

General physical examination – pallor, icterus, cyanosis, lymphadenopathy, edema

Observation of systemic examination

Posting 2

Practice of skills attained in posting 1

Systemic examination (inspection, palpation, percussion, auscultation) of cardiovascular system, respiratory system, abdomen, and central nervous system Posting 3

Practice of skills attained in posting 1 and 2

Fluent, confident systemic examination

Ability to distinguish between normal and abnormal physical findings

Collating history and examination findings to arrive at differential diagnoses

Posting 4

Practice and refinement of skills attained in postings 1, 2 and 3

Certifiable skills

2	Perform and interpret a urinary ketone estimation with a dipstick	IM 11.13
3	Describe and discuss the indications for and insert a peripheral intravenous catheter	IM10.21
4	Perform and interpret a 12 lead ECG	IM 1.18, IM 2.10, IM 8.17
5	Describe and discuss the indications to perform an ABG and to interpret the results. to perform arterial blood gas analysis: interpret the data	IM 10.20
6	Perform and demonstrate in a mannequin BLS	IM 2.22
7	Perform and interpret a gram stain and AFB stain	IM 3.14, IM6.14
8	Describe, perform and interpret a peripheral smear and stool occult blood	IM 9.10

Sl. No.	Topic/System	Case
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Case matrix

1.	Cardiovascular system	Heart Failure Coronary Artery Disease Hypertension Valvular heart disease
2.	Respiratory System	Pneumonia Pleural effusion Fibrosis COPD
3.	Gastrointestinal and hepatobiliary System	Hepatitis GI Bleed Diarrheal disorders
4.	Central Nervous System	Cerebrovascular accident Movement disorders Peripheral Neuropathy Spinal Cord Disorders
5.	Endocrine system	Diabetes Mellitus Thyroid disorders Obesity
6.	Infectious diseases	Fever and febrile disorders HIV Miscellaneous Infections
7.	Musculoskeletal System	Rheumatological disorders
8.	Nutrition	Anemia Nutrition and vitamin deficiencies
9.	Geriatrics	Comprehensive geriatric assessment
10.	Renal System	Acute kidney injury and chronic kidney disease

11.	Miscellaneous	Common Malignancies Envenomation Poisoning

Clerkship: should be mandatorily implemented, from 1st clinical postings in Medicine .

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Goal: To provide learners with experience in:

- (a) Longitudinal patient care,
- (b) Being part of the health care team,
- (c) Hands-on care of patients in outpatient and inpatient setting.
- (d) No learner will be given independent charge of the patient
- (e) The supervising physician will be responsible for all patient care decisions

The learner will function as a part of the health care team with the following responsibilities:

Be part of the unit's outpatient services on admission days,

Remain with the admission unit until 6 PM except during designated class hours,

Be assigned patients admitted during each admission day for whom he/she will undertake responsibility, under the supervision of a senior resident or faculty member,

Participate in the unit rounds on its admission day and will present the assigned patients to the supervising physician,

Clerkship phase wise

Perform simple tasks, including nebulisation, patient education

Follow the patient's progress throughout the hospital stay until discharge,

Participate, under supervision, in procedures, surgeries, deliveries etc. of assigned patients

Participate in unit rounds on at least one other day of the week excluding the admission day, Discuss ethical and other humanitarian issues during unit rounds,

Attend all scheduled classes and educational activities,

Document his/her observations in a prescribed log book / case record.

Year of Curriculum	Focus of Learner - Doctor programme
Year 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Year 2	History taking, physical examination, assessment of change in clinical status, communication and patient education
Year 3	All of the above and choice of investigations, basic procedures and continuity of care
Year 4	All of the above and decision making, management and outcomes

Eligibility to appear for Professional examinations

(a) Attendance

1. Attendance requirements are 75% in theory and 80% in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
2. If an examination comprises more than one subject (for e.g., Internal Medicine and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting.
3. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

(b) Internal Assessment:

Theory assessment

100 marks
Long essay 2X10= 20
Short essay 8x5=40 marks
Short answer question 10x3=30marks

MCQs 10x1=10marks

A 100-mark question paper covering the topics of part 1 may be conducted. Mark division will be as follows:

A minimum of 80% of the marks should be from the must know component of the curriculum. A maximum of 20% can be from the desirable to know component. All main essay questions to be from the must know component of the curriculum.

One main essay question to be of the modified variety containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Log book

1. (a) A designated faculty member in each unit will coordinate and facilitate the activities of the learner, monitor progress, provide feedback and review the log book/ case record.
2. (b) The log book/ case record must include the written case record prepared by the learner including relevant investigations, treatment and its rationale, hospital course, family and patient discussions, discharge summary etc.
3. (c) The log book should also include records of patients assigned. Submission of the log book/ case record to the department is required for eligibility to appear for the final examination of the subject.

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Medicine. An end of posting clinical assessment shall be conducted for each of the clinical postings in Medicine. Internal assessment may be conducted as follows

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce

The competencies to be delivered in AETCOM have been summarized at the end of the competency table. The question paper must include a least one question based on AETCOM competencies covered in that phase. AETCOM competencies must also be tested in the viva voce.

Internal assessment at the end of clinical postings

Internal assessment marks at the end of each posting will be a sum of log book (documentation of skills practiced, clerkship, assessment of behaviour in posting) and clinical internal assessment marks. Internal assessment may be conducted as follows in postings

Medicine	Theory	Clinical examination
Total marks	2 papers of 100 marks each for Medicine . The pattern of each question paper is given below	200 marks
	Long essay 2X10= 20	One long case for 80 marks
	Short essay 8x5=40 marks	Two short cases for 40 marks each
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Xray & ECG Station-2: Instruments

Posting 1 – long case focusing on history, vital signs and general physical examination

Posting 2 – OSCE with the following stations – history, vital signs, general physical examination, CVS, RS, Abdomen, CNS, diagnostic skills, communication Posting 3
– Long case or OSLER (Objective Structured Long Examination Record) Posting 4 – short case and/or long case

There will be one Theory and Clinical preliminary exam before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills. Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Medicine to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Medicine logbook entry completed to be eligible for appearing at the final university examination.

University examinations

University examinations Third Professional Part II - (Final Professional) examination shall be at the end of training (14 months including 2 months of electives) in the subjects of General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics.

The discipline of Psychiatry and Dermatology, Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis will constitute 25% of the total theory marks in General Medicine incorporated as a separate section in paper II of General Medicine.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

		Station-3: Specimens Station-4: Drugs & case scenarios	allotted
Marks	MCQs 10x1=10marks		

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated

separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed. All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation. External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions. All theory paper assessment should be done as central assessment program (CAP) of concerned university.

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate, Interpret, Review, Summarise
Application	Apply, Choose, Compute, Modify, Solve, Prepare, Produce, Select, Show, Transfer,

As per verbs of the		Use	RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT NMC guidelines, a balance should be drawn between the action which are specified in the Bloom's taxonomy along with a balance topics of the curriculum Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.
	Analysis	Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram, Differentiate, Distinguish, Relate, Categorise	
	Synthesis	Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate, Organise, Plan, Produce, Propose, rewrite	
	Evaluation	Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict, Prioritise, Prove, Rank	

Number	Topic	Marks on 200
1	Heart failure	10
2	Acute Myocardial infarction	9
3	Pneumonia	9
4	Basic sciences including Pharmacology	10
5	Fever and febrile syndromes (miscellaneous infections)	12

The blueprint for Internal Medicine theory paper indicating the topics and marks allotted for each are given below. The blueprinting provided is an estimate only, the spirit of the blueprint must be

honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions

The distribution of topics in paper 1 and paper 2 in Internal Medicine is also given below. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

6	Liver disease	6
7	HIV	4
8	Rheumatological disease	6
9	HTN	10
10	Anaemia and other blood disorders	8
11	AKI/CKD	8
12	DM	10
13	Thyroid and other endocrine disorders	5
14	Common malignancies	4
15	obesity	5
16	GI bleeding	4
17	Diarrhoeal diseases	5
18	Headache	6
19	Cerebrovascular accidents	10
20	Envenomation	4
21	Movement disorder	2
22	Poisonings	7
23	Mineral, Fluid Electrolyte and Acid base Disorder	10
24	Nutritional and Vitamin Deficiencies	5

25	Geriatrics	6
26	Chronic respiratory diseases	10
27	Dermatology	7
28	Psychiatry	8
	Total marks	200



Internal Medicine Paper 1		Internal Medicine paper 2	
	Topic		Topic
1	Basic sciences including pharmacology	1	Psychiatry
2	Nutrition including obesity	2	Dermatology
3	Cardiovascular disorders	3	Respiratory diseases including Pneumonia and Tuberculosis
4	Gastrointestinal disorders including diarrheal diseases	4	Geriatrics
5	Immunology including rheumatology	5	Central nervous system including Headache, movement disorder
6	Diabetes and other endocrine disorders	6	Infectious diseases including PUO and HIV
7	Hypertension	7	Nephrology
8	Poisoning, envenomation and environmental disorders	8	Haematology- oncology including Anemia and other malignancies

General Medicine- Paper 1

2 ×10 =20 Marks

LONG ESSAYS

1. Discuss the aetiology, clinical features and management of Acute ischemic stroke. (2+3+5)
2. A 45 year old man undertook an 18 hour air flight. After his flight he noticed swelling of right lower limb swelling. Two days later he developed sudden onset of left sided chest pain and hemoptysis. What is the most probable diagnosis? How would you confirm the diagnosis and manage the patient. (2+3+5)

SHORT ESSAYS

8×5 =40 marks

3. Secondary hypertension
4. Infective endocarditis
5. Management of acute STEMI
6. Atypical pneumonia
7. Pyrexia of unknown origin
8. Spontaneous bacterial peritonitis
9. Microangiopathic hemolytic anemia
10. Dengue shock syndrome

SHORT ANSWERS

10×3=30 Marks

11. Paradoxical split
12. Variceal bleed acute management
13. Integrase inhibitors
14. Falls in the elderly
15. Dermatological manifestations in HIV
16. Pseudohyperkalemia
17. Chorea

18. Non alcoholic steatohepatitis

19. Bedaquiline
20. Lupus nephritis

MULTIPLE CHOICE QUESTIONS

10×1=10 Marks Choose one

single answer. There is no negative marking.

21. Which of the following antimicrobials is associated with prolongation of QT intervals A) Isoniazid B) Co- amoxiclav c) **Erythromycin** d) Gentamicin
22. Which one of the following trace elements is implicated as a cause of cardiomyopathy
A)Copper B) **Selenium** C) Magnesium D)Zinc
23. A 54-year-old man presents with central crushing chest pain. Examination is normal. 12-lead ECG shows ST segment elevation in leads II, III, aVF, and ST depression in V1, V2 and V3. Which coronary artery is occluded?
A Circumflex B) **Right coronary artery** C) Left anterior descending
D) Obtuse marginal
24. A 26-year-old professional footballer collapses while playing football. He is rushed to the Emergency Department, and is found to be in ventricular tachycardia. He is defibrillated successfully and his 12 lead ECG following resuscitation demonstrates left ventricular hypertrophy. Ventricular tachycardia recurs and despite prolonged resuscitation he dies. Which of the following is the most likely diagnosis?
A **Hypertrophic cardiomyopathy** B) Pulmonary embolism C) Myocardial infarction D) Aortic stenosis
25. Which of the following statements is true of infections with Mycobacterium tuberculosis?
A) A positive tuberculin test indicates active disease B) In pregnant women treatment should not be given until after delivery C) Lymph node positive disease requires longer treatment than pulmonary disease D) **Non-sputum producing patients are non-infectious**
26. A 45-year-old woman was diagnosed with bacterial endocarditis. What is the characteristic fundoscopic feature of this disease?
A) Janeway lesions B) Macular star C) Retinal artery aneurysms D) **Roth's spots**
27. To which of the following drug classes does the oral hypoglycaemic agent pioglitazone belong?
A) biguanide B) A peroxisome proliferator activated receptor (PPAR)-alpha agonist C) **A peroxisome proliferator activated receptor (PPAR)-gamma agonist** D) A sulphonylurea
28. A 64-year-old man comes to the clinic for review of his type 2 diabetes. He is currently managed with metformin 1 g BD and sitagliptin 100 mg. On examination his blood pressure is 156/90 mmHg, his pulse is 80 and his BMI is 30. Of note on routine investigations is a raised triglyceride level. Which of the following is associated with elevated triglycerides? A) Decreased hepatic fat B) **Increased insulin resistance** C) Increased subcutaneous fat D) Reduced cardiovascular risk
29. Which of the following is activated by cholera toxin?
A) **Adenylate cyclase** B) Guanylate cyclase C) Peroxisome proliferator receptor (PPAR) gamma D) Sodium/potassium ATPase

30 A 55-year-old male is admitted with vomiting. He has a long history of alcohol abuse, appears slightly jaundiced, and is dishevelled and unkempt. He was started on an intravenous glucose infusion

and diazepam and he symptomatically improved. One day later he became confused, developed vomiting and diplopia, and was unable to stand. What is the most likely diagnosis? A) Delirium tremens
B) Hepatic encephalopathy C) Subdural haematoma

D) Vitamin B deficiency

General Medicine- Paper 2

2 × 10 = 20 Marks

LONG ESSAYS

1. Describe the aetiology, clinical features and investigation of bronchial asthma. Discuss briefly the management of and acute severe asthma. (1+2+2+5)
2. Discuss the aetiopathogenesis, clinical examination, and management of Pyogenic Meningitis. (2+3+5)

SHORT ESSAYS

8 × 5 = 40 marks 3.

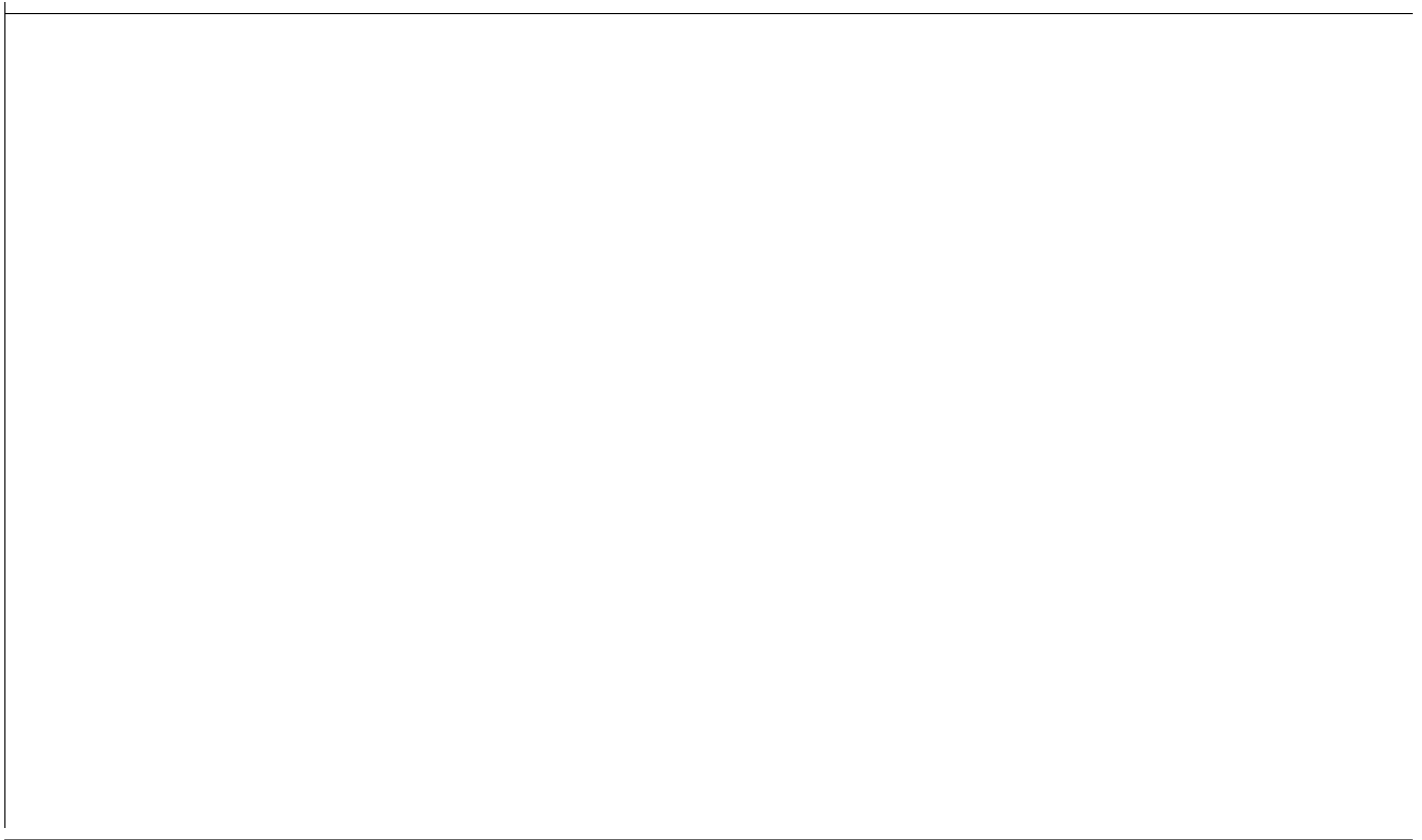
Psoriatic arthritis

4. Temporal arteritis
5. Management of DKA
6. Thyrotoxic crisis
7. Obstructive sleep apnea
8. Cobra bite
9. Yellow phosphorus poisoning
10. Falls in the elderly

SHORT ANSWERS

10 × 3 = 30 Marks

11. Renal replacement therapy
12. SGLT 2 inhibitors
13. Philadelphia chromosome
14. Chronic diarrhea
15. Migraine prophylaxis
16. Metabolic acidosis
17. Hypophosphatemia
18. Scabies
19. Post traumatic stress disorder
20. Erythema nodosum leprosum



MULTIPLE CHOICE QUESTIONS**10×1=10 Marks**

21. A 29-year-old woman who is known to have one episode of severe allergy to egg protein in childhood comes to the vaccination clinic for review. She is travelling with her partner to South America and inquires about which vaccinations she is able to have. Which of the following vaccinations should definitely be avoided?
A)MMR B)Recombinant influenza vaccine C) Typhoid D) **Yellow fever**
22. A 19-year old student is diagnosed with bipolar disorder and is started on olanzapine. Which of the following is the most common side effect that she may experience? A)Elevated transaminases
B)Thrombocytopaenia C)Urinary retention D)**Weight gain**
23. A 27-year-old patient presented to his GP with persistent cough and weight loss. He had night sweats. He was diagnosed with TB and referred to the respiratory clinic. He was started on treatment. His urine became orange in colour. Which one of the following drugs causes this?
A)Ethambutol B) Isoniazide C) Pyrazinamide D) **Rifampicin**
24. A patient is prescribed warfarin for prophylaxis of DVT. Which vitamin does warfarin antagonise?
a)B6 B)C C)D D)**K**
25. A 23-year-old man with known peanut allergy presented to the Emergency department with anaphylaxis. He has a swollen face and lips. His BP is 90/60 mmHg, pulse 110 bpm and he is wheezy. Which of the following formulations of adrenaline should be given?
A)0.5 ml of 1:10000 adrenaline IM B) **0.5 ml of 1:1000 adrenaline IM** C) 5 ml of 1:1000 adrenaline IM D)10 ml of 1:10000 adrenaline IV
26. A patient is suspected of having taken a substance with anticholinesterase effects. Which of the following combinations of signs, if present, would be the most likely to confirm this effect?
A)**Bradycardia and miosis** B)Bradycardia and mydriasis C) Bradycardia and urinary retention D)Tachycardia and diarrhoea
27. A 52-year-old woman with a three year history of sero-positive erosive rheumatoid arthritis has recently commenced methotrexate therapy initiated at the rheumatology clinic. Which one of the following agents should she also be receiving in conjunction with her methotrexate?
A) Omeprazole B)Thiamine C)VitaminC D)**Folic Acid**
28. A 62-year-old female with colonic carcinoma is treated with chemotherapy and is receiving ondansetron for intractable nausea and vomiting. Which of the following best describes the pharmacological actions of ondansetron?
A) Dopaminergic antagonists B)H1 antihistamine C)**5-HT3 antagonist** D) Anticholinergic
29. A 51-year-old man presents with wheals and urticaria. He takes a variety of medications. Which drug is the most likely to have caused this reaction?
A) **Aspirin** B) Glyceryl trinitrate C)Omeprazole D)Paracetamol
- 30 A 72-year-old man presents with painful lumps in his feet and is diagnosed with gout. Following initial treatment with non-steroidal anti-inflammatory agents he is started on allopurinol. How does allopurinol work?
A) Inhibits cyclooxygenase II B) Inhibits macrophage tubular formation C)Inhibits nitric oxide synthase D)**Inhibits xanthine oxidase**

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
Topic: Heart Failure					
IM1.1	Introduction to cardiovascular disease in adults	1. Describe and discuss the epidemiology of common causes of heart disease including: rheumatic/ valvular, ischemic, hypertrophic inflammatory	SDL	Short essay	Pathology, Physiology
IM1.2,1.4,1.5 1.6	Heart failure	1. Describe and discuss the genetic basis of forms of heart failure 2. Stage heart failure 3. Describe, discuss and differentiate the processes involved in heart failure with reduced Vs preserved ejection fraction 4. Describe and discuss the compensatory mechanisms involved in heart failure including cardiac remodeling and neurohormonal adaptations	Lecture	EQ	Pathology, Physiology
1.7,1.23,1.26 1.27	Treatment of heart failure	1. Develop management plan for patient with heart failure 2. Enumerate, describe and discuss the factors that exacerbate heart failure 3. Describe, prescribe and communicate non pharmacologic management of heart failure including sodium restriction, physical activity and limitations	Case based discussion	MEQ	

1.24	Pharmacotherapy of heart failure	1. Describe and discuss the pharmacology of drugs including indications, contraindications in the management of heart failure including diuretics, ACE inhibitors, Beta blockers,	Small group discussion	Short essay Viva voce	
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Competency & SLO table : competencies in 3rd MBBS Part 1 : 4,6,9,11,12,16,25. All others in 3rd MBBS Part 2. The following are guidelines, and modifications may be made in SLOs, TL

methods and assessment based on institution infrastructure and practices.

		aldosterone antagonists and cardiac glycosides			
IM1.3,1.9,1.27	Rheumatic fever	<ol style="list-style-type: none"> 1. Describe and discuss the etiopathogenesis & clinical evolution of rheumatic fever, modified Jones criteria, and rheumatic valvular heart disease and its complications including infective endocarditis 2. Describe and discuss the clinical presentation and features, diagnosis, recognition and management of acute rheumatic fever 3. Describe and discuss the role of penicillin prophylaxis in the prevention of rheumatic heart disease 	Lecture	SEQ Viva voce	Pathology
IM1.8	Arrhythmias	<ol style="list-style-type: none"> 1. Describe and discuss the pathogenesis and development of common arrhythmias 2. Discuss the classification, etiopathogenesis, clinical features diagnosis and management of atrial fibrillation 	Lecture	<ol style="list-style-type: none"> 1. Short essay question 2. ECG interpretation in OSCE station 3. Viva voce 	Pathology, Physiology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.10,1.11	History and examination in cardiovascular disease	<ol style="list-style-type: none"> 1. Elicit document and present an appropriate history that will establish the diagnosis, cause and severity of heart failure including: presenting complaints, precipitating and exacerbating factors, risk factors exercise tolerance, changes in sleep patterns, features suggestive of infective endocarditis 2. Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and estimate its severity including 	Small group discussion followed by Bedside clinic	Long case	
IM1.12,1.13,1.14,1.15	Vital signs and their interpretation in CVS case Cardiovascular examination	<ol style="list-style-type: none"> 1. Demonstrate peripheral pulse, volume, character, quality and variation in various causes of heart failure 2. Measure the blood pressure accurately, recognize and discuss alterations in blood pressure in valvular heart disease and other causes of heart failure and cardiac tamponade 3. Demonstrate and measure jugular venous distension 4. Identify and describe the timing, pitch quality conduction and significance of precordial murmurs and their variations 	Small group discussion Bedside clinic	Physical examination station in OSCE Short case	

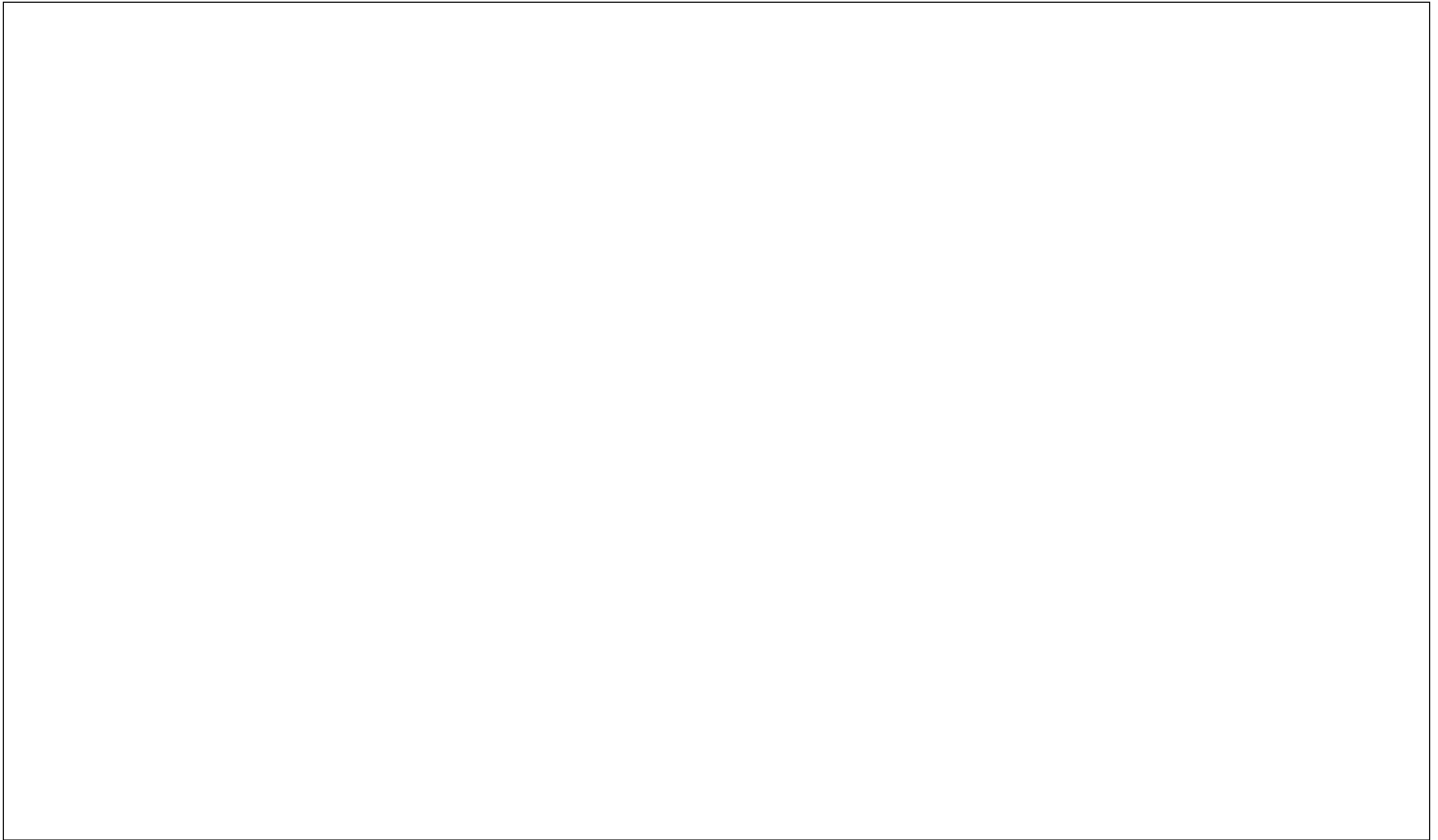


IM1.16,1.17,1.19	Investigations in heart disease	<ol style="list-style-type: none"> 1. Generate a differential diagnosis based on the clinical presentation and prioritize it based on the most likely diagnosis 2. Order and interpret diagnostic testing based on the clinical diagnosis including 12 lead ECG, Chest radiograph, blood cultures 3. Enumerate the indications for and describe the findings of heart failure with the following conditions including: 2D echocardiography, brain natriuretic peptide, exercise testing, nuclear medicine testing and coronary angiogram 	Clerkship Small group discussion	Documentation in logbook Problem based short essay question	
IM1.18,2.10	Perform and interpret a 12 lead ECG		Small group discussion Clerkship	Documentation in logbook	



Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.20, 1.25	Introduction to Valvular heart disease	<ol style="list-style-type: none"> Determine the severity of valvular heart disease based on the clinical and laboratory and imaging features and determine the level of intervention required including surgery Enumerate the indications for valvuloplasty, valvotomy, coronary revascularization and cardiac transplantation 	Lecture	Short case Examination station in OSCE	
	Mitral valve disease	<ol style="list-style-type: none"> Discuss the haemodynamics, etiopathogenesis , clinical features of mitral stenosis Discuss the haemodynamics, etiopathogenesis , clinical features of mitral regurgitation 	Lecture		
	Aortic valve disease	<ol style="list-style-type: none"> Discuss the haemodynamics, etiopathogenesis , clinical features of aortic stenosis Discuss the haemodynamics, etiopathogenesis , clinical features of aortic regurgitation 	Lecture		
IM1.21	Infective endocarditis	<ol style="list-style-type: none"> Describe the clinical features of acute and subacute endocarditis, echocardiographic findings, blood culture and sensitivity and therapy 	Lecture	SEQ	

IM1.22	Phlebotomy and collecting specimen for culture	Assist and demonstrate the proper technique in collecting specimen for blood culture	DOAP session Clerkship	Skill assessment in OSCE station	Microbiology
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IM1.28	Congenital heart disease in adults	<ol style="list-style-type: none"> 1. Enumerate common adult presentations of congenital heart disease and describe the distinguishing features between cyanotic and acyanotic heart disease 2. Discuss etiopathogenesis and prevention of congenital heart disease 	Lecture	Short essay Short answer	
	ASD	<ol style="list-style-type: none"> 1. Discuss the embryology, haemodynamics , pathophysiology of ASD 2. Discuss the management of ASD 	Lecture		
	VSD,	<ol style="list-style-type: none"> 1. Discuss the embryology, haemodynamics , pathophysiology of VSD <p>Discuss the management of VSD</p>	Lecture		
IM 1.29	PDA	<ol style="list-style-type: none"> 1. Describe haemodynamics, clinical features, complications and management of patent ductus arteriosus 	Lecture	Short essay Viva voce	

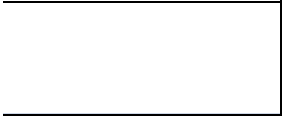


Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.30	Intramuscular injection	1. Administer an intramuscular injection with aseptic precautions and appropriate explanation to the patient	Task trainer	Log book	Pharmacology
IM2.1,2.2,2.4,2.5,2.9	Ischemic heart disease	1. Discuss the epidemiology of coronary artery disease 2. Discuss the aetiology of risk factors - modifiable & non-modifiable - of atherosclerosis and IHD 3. Discuss and describe the pathogenesis natural history, evolution and complications of atherosclerosis and IHD 4. Describe the approach to a case of stable angina	Lecture	Short essay	Pathology, Physiology, Community Medicine
IM2.3	Lipid cycle	Discuss and describe the lipid cycle and the role of dyslipidemia in the pathogenesis of atherosclerosis	Lecture	Viva voce	Physiology, Biochemistry
IM2.6,2.7,2.8	Examination of patient with IHD	1. Elicit appropriate history including onset evolution, presentation risk factors, family history, comorbid conditions, complications, medication 2. Perform, demonstrate and document a physical examination including a vascular and cardiac examination that is appropriate for the clinical presentation 3. Generate and present a differential diagnosis based on clinical presentation and prioritize based on "cannot miss", most likely diagnosis and severity	Small group discussion followed by bedside clinics	Physical examination station in OSCE Short case	

IM2.9		<ol style="list-style-type: none"><li>1. Distinguish and differentiate between stable and unstable angina and AMI based on the clinical presentation<li>2. Discuss emergent management of a case of acute coronary syndrome prior to	Case based discussion	History station in OSCE	
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referral to a tertiary centre



Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM2.11,2.12, 2.13	Investigations in IHD	1.Order and interpret markers of acute myocardial infarction 2. Choose and interpret a lipid profile and identify the desirable lipid profile in the clinical context 3. Discuss and enumerate the indications for and findings on echocardiogram, stress testing and coronary angiogram	Small group discussion Case based discussion	Data interpretation station OSCE Viva voce	

IM2.14,2.15, 2.16, 2.18, 2.19, 2.20 ,2.23	Acute coronary syndrome	<ol style="list-style-type: none"> 1. Discuss pathogenesis, recognition and management of ACS & its complications 2. Discuss indications for admission to a CCU 3. Discuss indications for acute thrombolysis, PTCA and CABG 4. Discuss indications, formulations, doses, side effects and monitoring for drugs used in the management of dyslipidemia 5. Describe indications for nitrates, antiplatelet agents, gpIIb IIIa inhibitors, beta blockers, ACE inhibitors etc. in the management of coronary syndromes 	Lecture	SEQ MEQ	
IM2.17	Discuss and describe the indications and methods of cardiac rehabilitation		Small group discussion Interdisciplinary learning with physiotherapy team	Short answer	

IM2.20	Discuss and describe the assessment and relief of pain in acute coronary syndromes		Lecture	Short answer	Pharmacology
IM2.21	Observe and participate in a controlled environment an ACLS program		Skill lab session	NA	

IM2.22	Perform and demonstrate in a mannequin BLS		Skill lab session	Skill assessment	
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM2.24	Counselling	1. Counselling patient with IHD 2. Communication with empathy of lifestyle changes in patients with atherosclerosis	Small group discussion Clerkship	Counselling station in OSCE	AETCOM
IM3.1,3.2,3.3,	Pneumonia	1. Define community acquired pneumonia, nosocomial pneumonia and ventilator associated pneumonia 2. Discuss etiology of pneumonia depending on setting and patient immune status 3. Describe pathogenesis, clinical features and complications of pneumonia	Lecture	Short essay	Human Anatomy, Pathology, Microbiology
3.11, 3.12, 3.13, 3.15, 3.16	Investigations and treatment of pneumonia	1. Enumerate indications for HRCT, Viral cultures, PCR 2. Select appropriate empirical antimicrobial based on the likely etiology 3. Describe and enumerate the indications for hospitalization in patients with pneumonia 4. Describe and enumerate the indications for isolation and barrier nursing in patients with pneumonia	Lecture	Case based MCQ Short answer	

IM3.4,3.5 .3.6,3.7	History and examination in pneumonia	1.Elicit document and present an appropriate history including the evolution, risk factors including immune status and occupational risk 2.Demonstrate general & systemic examination to confirm diagnosis, severity	Small group discussion Bedside clinic	Short case	
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		and complications 3. Generate differential diagnosis based on history and examination 4. Order and interpret diagnostic tests based on the clinical presentation			
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM3.8	Perform ABG	Demonstrate in a mannequin & interpret results of an arterial blood gas examination	Skill lab	Skill assessment	
IM3.9	Perform pleural aspiration	Demonstrate in a mannequin and interpret results of a pleural fluid aspiration	Skill lab	Skill assessment	
IM3.10	Blood culture	Demonstrate the correct technique in a mannequin and interpret results of a blood culture	DOAP session	Skill assessment	Microbiology
IM3.14	Gram stain & AFB	Perform and interpret a sputum gram stain and AFB	Clerkship (side lab)	Documentation in logbook	Microbiology
IM3.17	Oxygen therapy	Discuss advantages & disadvantages of methods of supplemental oxygen delivery Choose method of supplemental oxygen delivery	Lecture	Short answer	
IM3.18 IM3.19	Counselling	Communicate and counsel patient and family on the diagnosis and therapy of pneumonia Educate and motivate patients for pneumococcal and influenza vaccine	Small group discussion Clerkship	Documentation in logbook	

Number	COMPETENCY The student should be able to	SLOs: By the end of the session the student will be able to describe/discuss/demonstrate	TL methods	Suggested Assessment methods	Vertical Integration
IM4.1,4.2,4.4 4.5	Describe and discuss the febrile response	<ol style="list-style-type: none"> 1. The influence of host immune status, risk factors and comorbidities on the febrile response 2. The influence of special populations on the febrile response including: the elderly, immune suppression, malignancy and neutropenia, HIV 3. The pathophysiology and manifestations of inflammatory causes of fever 4. The pathophysiology and manifestations of malignant causes of fever including hematologic and lymph node malignancies 	Lecture	1. LEQ 2. MEQ	Microbiology
IM4.3	Discuss and describe the common causes, pathophysiology and manifestations of fever in various regions in India	<ol style="list-style-type: none"> 1. Pathophysiology, clinical features of Dengue 2. Pathophysiology, clinical features of Chikungunya 3. Pathophysiology, clinical features of typhus 	Lecture	SEQ	Microbiology, Community Medicine
IM4.6, 4.23,4.26	Discuss and describe the pathophysiology clinical features, diagnosis and treatment of malaria	<ol style="list-style-type: none"> 1. Epidemiology, etiopathogenesis of malaria 2. Diagnosis of malaria 3. Complications and treatment of malaria 4. Prescribe drugs for malaria based on the species identified, prevalence of drug resistance and national programs. Discuss the pharmacology, indications, drug reactions, and basis of resistance in antimalarial drugs 5. Counsel the patient on malarial prevention 6. 	Lecture followed by Case based learning	SEQ	Microbiology Pharmacology

IM4.7	Discuss and describe the pathophysiology and manifestations of the sepsis syndrome	<ol style="list-style-type: none"> 1. Etiopathogenesis of sepsis 2. Clinical features and Diagnosis of sepsis 	Lecture	EQ	
		<ol style="list-style-type: none"> 3. Management of sepsis : antibiotics, vasopressors, mechanical ventilation 			
IM4.8, 4.16	Discuss and describe the pathophysiology, aetiology and clinical manifestations of fever of unknown origin (FUO) including in a normal host, neutropenic host, nosocomial host and a host with HIV disease	<ol style="list-style-type: none"> 1. Definition of FUO 2. Causes of PUO, as relevant to India 3. Investigation and Diagnosis of PUO 4. Enumerate the indications and describe the findings in tests of inflammation and specific rheumatologic tests, serologic testing for pathogens including HIV, bone marrow aspiration and biopsy 	Lecture followed by Small group discussion	Written	Microbiology
IM4.9,4.10,	History and examination in fever case	<ol style="list-style-type: none"> 1. evolution and pattern of fever 2. associated symptoms 3. immune status, comorbidities, risk factors, exposure 4. Perform physical examination in a case of fever : including skin mucosae, lymph node examination, chest, liver, spleen 	Case based discussion Bedside clinic	History station in OSCE	Microbiology

Number	COMPETENCY The student should be able to	SLOs	TL methods	Suggested Assessment methods	Vertical Integration
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IM4.11,4.21,4.24,4.25	Generate a differential diagnosis and prioritize based on clinical features that help distinguish between infective, inflammatory, malignant and rheumatologic causes	<ol style="list-style-type: none"> 5. List differentials for PUO after history and examination 6. Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritized and cost-effective manner 7. Develop an appropriate empiric treatment plan based on the patient's clinical and immune status pending definitive diagnosis 	Case based discussion Bedside clinic	EQ Viva Communication station in OSCE	
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		8. Communicate diagnosis and treatment to patient family			
IM4.12,4.18	Order and interpret the following diagnostic tests based on the differential diagnosis	<ol style="list-style-type: none"> 1. CBC with differential, peripheral smear, urinary analysis with sediment, Chest X ray, blood and urine cultures, sputum gram stain and cultures, sputum AFB and cultures, CSF analysis, pleural and body fluid analysis, stool routine and culture and QBC 2. Enumerate the indications for use of imaging in the diagnosis of febrile syndromes 	Small group discussion Clerkship(learner doctor)	SEQ Viva Log book	Pathology, Microbiology
IM4.13,4.14,4.15, 4.17,4.19,4.20	Perform and interpret relevant investigations in case of fever	1.sputum gram stain 2. sputum AFB 3. malarial smear 4. Observe & assist in performance of bone marrow aspiration & biopsy in simulated environment 5. Assist in the collection of blood and wound cultures 6. Interpret a PPD	Clerkship(learner doctor)	Log book	Microbiology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM5.1	Hyperbilirubinemia	Describe and discuss the physiologic and biochemical basis of hyperbilirubinemia	Lecture	Written/viva voce	
IM5.2 IM5.3	Hepatic injury	1.Describe and discuss the aetiology and pathophysiology of liver injury 2.Describe and discuss the pathologic changes in various forms of liver disease	Lecture	Written/viva voce	
IM5.4	Hepatitis	1.Describe and discuss the epidemiology, microbiology, immunology and clinical evolution of infective (viral) hepatitis 2. Discuss the management of Hepatitis B & C	Lecture	Written/viva voce	
IM5.5	Alcoholic liver disease	Discuss the etiopathogenesis, clinical features, diagnosis & management of alcoholic liver disease	Lecture	Written/viva voce	
IM5.6	Cirrhosis & PHT	Describe and discuss the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome and hepatic encephalopathy	Lecture	Written/viva voce	
IM5.16	Management of cirrhosis with PHT	Describe management of hepatitis, cirrhosis, portal hypertension, ascites spontaneous, bacterial peritonitis and hepatic encephalopathy	Lecture	Written/viva voce	

IM5.7	Drug induced liver injury	Enumerate and describe the causes and pathophysiology of drug induced liver injury	SDL	Short answer	
IM5.8	Cholecystitis, cholelithiasis	Describe and discuss the pathophysiology, clinical evolution and complications cholelithiasis and cholecystitis	Lecture	Essay Viva voce	General Surgery
IM5.9 5.10 5.11	History & examination in liver disease	1. Elicit medical history in a case of liver disease including clinical presentation, risk factors, drug use, sexual history, vaccination history and family history 2.Perform a systematic examination that establishes the diagnosis and severity and complications of liver disease 3.Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology for the presenting symptom	Small group discussion Bedside clinic	Skill assessment	
IM5.12 5.13 5.14	Investigations in liver disease	Choose and interpret appropriate diagnostic tests including: CBC, bilirubin, function tests, Hepatitis serology and ascitic fluid examination in patient with liver diseases. Enumerate modalities of investigations in liver disease and discuss indications , advantages and disadvantages of each Outline a diagnostic approach to liver disease based on hyperbilirubinemia, liver function changes and hepatitis serology	Lecture	Skill assessment	Pathology

	Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical In
	IM5.15	Ascitic tap	1. Assist in the performance of an ascitic fluid analysis interpret the findings of ascitic fluid analysis	DOAP session Clerkship	documentation in log book	
	IM5.17	Vaccination in liver disease	1. Enumerate the indications for vaccination in liver disease 2. counsel patients for vaccination in liver disease	1. Visit to immunization clinic 2. Clerkship	1. Viva voce 2. documentation in log book	Microbiolog
	IM5.18	Hepatic transplantation	Enumerate the indications for hepatic transplantation	Lecture SDL	Written/ Viva voce	

Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods
IM6.8,6.9, , 6.10, 6.11,6.16, 6.12, 6.17, 6.18,6.13	Diagnosis and management of HIV AIDS , and opportunistic infections	1.Enumerate the indications and describe the findings for CT , MRI, ABG, CXR 2. Describe and enumerate the indications and side effects of drugs for bacterial, viral and other types of diarrhoea 3. Discuss and describe the principles of HAART, the classes of antiretrovirals used, adverse reactions and interactions 4.Discuss and describe the principles and regimens used in post exposure prophylaxis	Lecture

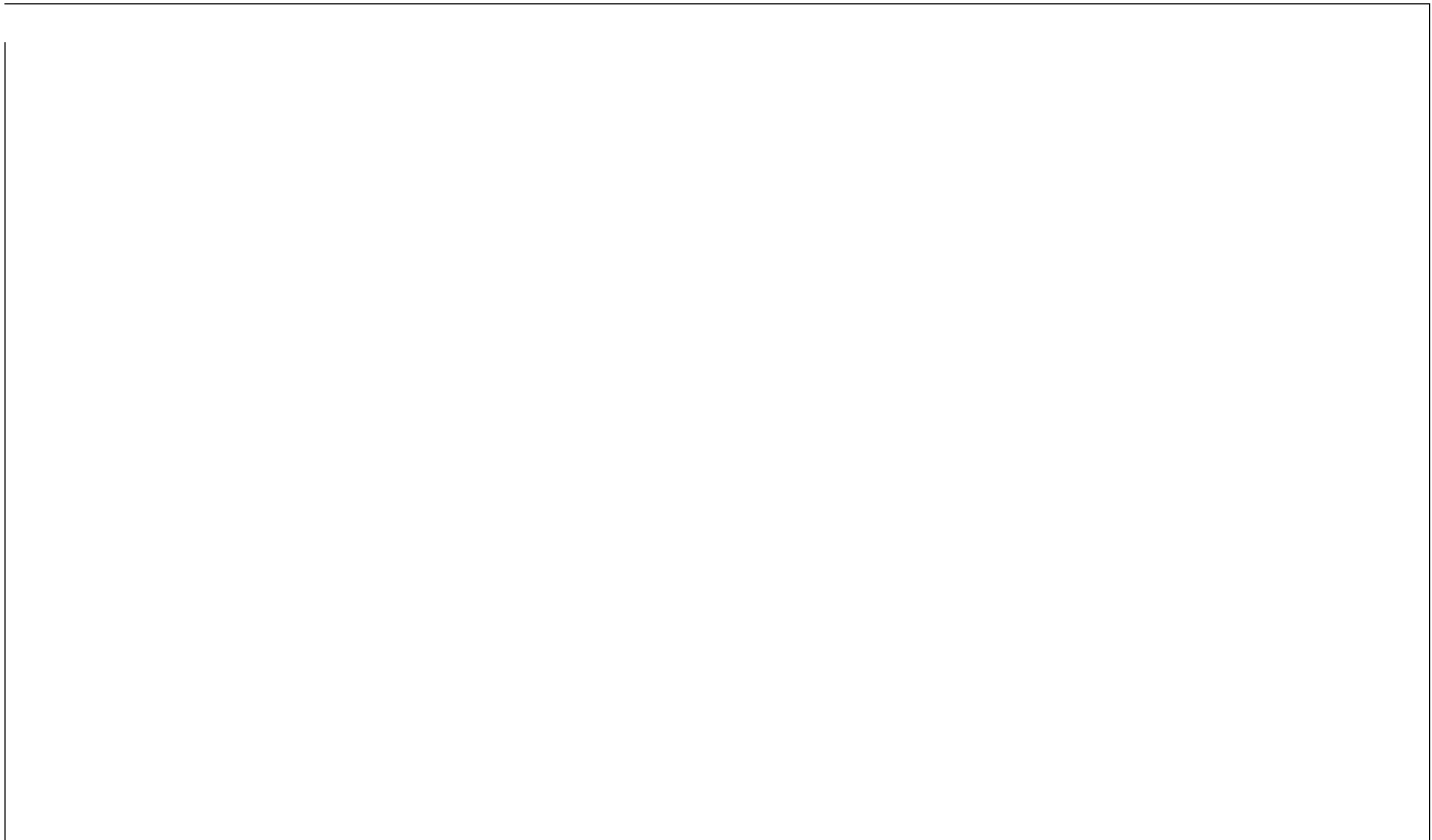
Suggested Assessment methods	Vertical	Integ
Short answer MCQ		

		5.Enumerate the indications and discuss prophylactic drugs used to prevent HIV related opportunistic infections			
IM6.14	Perform and interpret AFB sputum		DOAP session	Skill assessment	Microbiology
IM6.15	Demonstrate in a model the correct technique to perform a lumbar puncture		Simulation	Skill assessment	Microbiology
Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM6.19,6.20,6.21,6.22,6.23	Counsel patients at diagnosis of HIV, and prevention of HIV transmission	<ol style="list-style-type: none"> 1. Communicate diagnosis, treatment plan and subsequent follow up plan to patients 2. Communicate with patients on the importance of medication adherence 3. Demonstrate understanding of ethical and legal issues regarding patient confidentiality and disclosure in patients with HIV 4. Demonstrate a non-judgmental attitude to patients with HIV and to their lifestyles 	<p>Small group discussion Clinical clerkship Tag along</p>	Communication station of OSCE	AETCOM

	Competencies	SLOs	Suggested TL methods	Suggested assessment	Vertical Integration
IM7.1 IM7.2 7.15	Introduction to autoimmunity	<ol style="list-style-type: none"> 1. Describe the pathophysiology of autoimmune disease 2. Describe the genetic basis of autoimmune disease 3. Enumerate the indications for and interpret the results of : CBC, anti- CCP, RA, ANA, DNA and other tests of autoimmunity 	Lecture	Short essay Viva voce	Pathology
7.22 7.23 7.19	Rheumatoid arthritis	<ol style="list-style-type: none"> 1. Describe the systemic manifestations of rheumatoid arthritis 2. Etiopathogenesis, clinical features, diagnosis of rheumatoid arthritis 3. Select, prescribe and communicate treatment option for rheumatoid arthritis 4. Describe the basis for biologic and disease modifying therapy in rheumatoid arthritis 5. Develop an appropriate treatment plan for patients with rheumatoid arthritis 	Lecture	Essay question MEQ	Pathology

	SLE	<ol style="list-style-type: none">1. Describe the systemic manifestations of Systemic Lupus Erythematosus2. Etiopathogenesis, clinical features, diagnosis of Systemic Lupus Erythematosus3. Select, prescribe and communicate treatment option for Systemic Lupus Erythematosus4. Describe the therapy of Systemic Lupus Erythematosus5. Develop an appropriate treatment plan for patients with Systemic Lupus Erythematosus	Lecture		
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	Systemic sclerosis	Etiopathogenesis, clinical features & management of systemic sclerosis	Lecture		
IM7.3 7.4 7.5 7.6 7.7 7.8 7.10	Approach to joint pain	<ol style="list-style-type: none"> 1. Classify cause of joint pain based on the pathophysiology 2. Develop a systematic clinical approach to joint pain 3. Describe and discriminate acute, subacute and chronic causes of joint pain 4. Discriminate, describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain 5. Discriminate articular from periarticular complaints 6. Determine the potential causes of joint pain based on the presenting features of joint involvement 7. Describe the common signs and symptoms of articular and periarticular diseases 	Lecture	Written/ Viva voce	



	Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
	IM7.11 IM7.12 IM7.13 7.14	History & examination in Rheumatoid arthritis	Elicit document and present a medical history that will differentiate the etiologies of disease 2. Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease 3. Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology 4. the appropriate diagnostic work up based on the presumed aetiology	Bedside clinic Small group discussion	Physical examination station in ISCE Short case	
	IM7.16,7.17	Investigations in rheumatologic disease	Enumerate the indications for arthrocentesis Enumerate the indications and interpret plain radiographs of joints	Case based discussion	Written/ Viva voce	

IM7.18-7.27	Management & counselling in autoimmune diseases	<ol style="list-style-type: none"> 1. Communicate diagnosis, treatment plan and subsequent follow up plan to patients 2. Select, prescribe and communicate appropriate medications for relief of joint pain 3. Select, prescribe and communicate preventive therapy for crystalline arthropathies 4. Communicate and incorporate patient preferences in the choice of therapy 5. Develop and communicate appropriate follow up and monitoring plans for patients with rheumatologic conditions 6. Demonstrate an understanding of the impact of rheumatologic conditions on quality of life, well-being, work and family 7. Determine the need for specialist consultation 	Clerkship Case based discussion	Communication station in OSCE Short answer		
	Competency	SLOs	Suggested TL	Suggested assessment	Integration	
IM8.1, IM8.2 IM8.3 IM8.4 IM8.5 8.7 IM8.20 8.14	Hypertension	<ol style="list-style-type: none"> 1. Discuss the epidemiology, aetiology and the prevalence of primary and secondary hypertension 2. Discuss the pathophysiology of hypertension 3. Define and classify hypertension and discuss the differences between primary and secondary hypertension 4. Discuss etiology and clinical features of secondary HTN 5. Develop an appropriate treatment plan for essential hypertension 6. Determine the need for specialist consultation 	Lecture	Long essay	Pathology, physiology	

IM8.6 IM8.8 IM 8.15	Acute & chronic complications of HTN	<ol style="list-style-type: none">1. Discuss and recognize hypertensive urgency and emergency2. Manage hypertensive emergencies3. Discuss and identify target organ damage due to hypertension	Lecture	Clinical scenario based short essay		
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Number	Competency The student should be able to	SLOs	Suggested learning methods	Suggested assessment methods	Vertical integration
IM8.9 IM8.10 IM8.11 IM8.12	Examination of a case of hypertension	1.elicit medical history in a case of HTN 2.perform systematic including measurement of bp, fundus, examination of vasculature and heart 3. Generate a differential diagnosis 4. Describe the appropriate diagnostic work up based on the presumed aetiology	Small group discussion Bedside clinics	Short case	
IM8.16 IM8.18 IM8.19		1.develop and communicate to the patient lifestyle modification including weight reduction, moderation of alcohol intake, physical activity and sodium intake 2. Incorporate patient preferences in the management of HTN 3. Demonstrate understanding of the impact of hypertension on quality of life, well-being, work and family	Small group discussion Clerkship	Documentation in log book	
IM8.17	Perform and interpret a 12 lead ECG		DOAP session	Documentati on in log book/ skills station	

IM9.1, 9.2, 9.6, 9.7, 9.8, 9.9, 9.12, 9.13	Iron deficiency anemia	<ol style="list-style-type: none"> 1. Define & classify anemia 2. Describe morphology, aetiology and prevalence of various causes of anemia 3. Describe the diagnostic work up of anemia 4. describe the interpretation of the hemogram and the tests for iron deficiency 	Lecture	Essay question	Pathology
IM9.3	Elicit, document and present medical history in a case of anemia	<ol style="list-style-type: none"> 1. Enquire for symptoms of anemia 2. Possible causes : GI bleeding, prior history, medications, menstrual history, and family history 	Bed side clinic	OSCE history station	
IM9.4	Perform a general physical and relevant systemic examination in a case of anemia	<ol style="list-style-type: none"> 1. examination for pallor, icterus, lymphadenopathy, sternal tenderness, evidence of CTD 2. check for hyper dynamic circulation, spleen, liver 	Bedside clinic	OSCE – physical examination station – general physical examination/abdomen	
IM9.5, 9.11	Generate a differential diagnosis in a case of anemia in order of likelihood and prioritize based on clinical features that suggest a specific aetiology	<ol style="list-style-type: none"> 1. given clinical features and hemogram in a case of anemia , to generate a differential diagnosis in order of likelihood 	Small group discussion Case based learning	Modified essay question Data interpretation question	Pathology
IM9.9, 9.13	Macrocytic anemia	<ol style="list-style-type: none"> 1. list causes of macrocytic anemia describe 2. pathogenesis of various types of macrocytic anemia 3. Order and interpret for diagnosis of macrocytic anemia 4. Describe treatment of different causes of macrocytic anemia 	Lecture class	SEQ	Pathology

IM9.10	Perform bedside investigations in a case of anemia	<ol style="list-style-type: none"> 1. Perform and interpret peripheral blood smear 2. Check stool for occult blood 	Clerkship(learner doctor)	Log book	Pathology
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Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods	Suggested Assessment methods	Vertical Integration
IM9.11	Bone marrow biopsy	<ol style="list-style-type: none"> 1. Student should be able to enumerate the indications for bone marrow biopsy and describe the procedure of bone marrow biopsy 	Small group discussion	Written/ Viva voce/ Skill assessment	Pathology
IM9.14	Describe the national programs for anemia prevention		Lecture	Written/ Viva voce	Pharmacology, Community Medicine
IM9.15,9.16 9.20	Patient counselling in anemia	<ol style="list-style-type: none"> 1. Communicate the diagnosis and the treatment appropriately to patients 2. Incorporate patient preferences in treatment of anemia Communicate and counsel patients with methods to prevent nutritional anemia 	DOAP session	Skill assessment	
IM9.17,9.18	Blood transfusion	Describe the indications for blood transfusion and the appropriate use of blood components Describe the precautions required necessary when performing a blood transfusion	Lecture, Small group discussion	Viva voce	Pathology
IM9.19	Assist in a blood transfusion		Clerkship (learner doctor)	document in log book	
	Polycythemia	<ol style="list-style-type: none"> 1.define and classify polycythemia 2. discuss clinical features and differentiation of primary and secondary polycythemia 3.describe investigations and management of polycythemia rubra vera 	Lecture		

	Leukemia	<ol style="list-style-type: none"> 1. Enumerate leukemias common in adults 2. Describe clinical features of leukemia in adults 3. Discuss diagnosis and management of leukemia 	Lecture		
	Multiple myeloma	Describe the clinical features, diagnosis and management of multiple myeloma	Lecture		

		SLOs	Suggested TL method	Suggested assessment	Vertical integration
IM10.1 IM10.2 IM10.3 IM10.4 IM10.25	AKI	<ol style="list-style-type: none"> 1. Define renal insufficiency. Distinguish between acute & chronic renal insufficiency 2. Describe the pathophysiology & causes of pre renal, renal and post renal AKI 3. Describe the evolution, natural history and treatment of AKI 4. Identify and describe the priorities in the management of ARF including diet, volume management, alteration in doses of drugs, monitoring and indications for dialysis 	Lecture	Essay question	Pathology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM10.5 IM10.6 IM10.7 IM10.8 IM 10.27 IM 10.28	CKD	<ol style="list-style-type: none"> 1. Discuss the aetiology of CKD 2. Stage Chronic Kidney Disease 3. discuss the pathophysiology & clinical features of uremia 4. discuss the significance of proteinuria in CKD 5. discuss the indications for hemodialysis 6. discuss renal replacement therapy 	Lecture	Short essay	Pathology
IM10.9 IM10.10 IM10.11 IM10.26	Complications of CKD	<ol style="list-style-type: none"> 1. discuss pathophysiology of anemia & hyperparathyroidism in CKD 2. discuss association between CKD glycemia and hypertension 3. discuss relationship between CAD risk factors and CKD 4. discuss supportive therapy in CKD 	Lecture	Short answer	Pathology
IM10.12 IM10.13 IM10.14	Examination of patient with renal disease	<ol style="list-style-type: none"> 1. Elicit history to differentiate between AKI & CKD and to suggest aetiology of renal disease 2. Perform systematic examination to establish diagnosis and stage of CKD, and features of uremia 3. Generate differential diagnosis to suggest specific etiology 	Small group discussion Bedside clinic	Short case	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Number required to certify	Vertical Integration
IM10.15 IM10.16 IM10.17 IM10.18 IM10.19 IM10.20	Investigations in renal disease	<ol style="list-style-type: none"> 1. Describe the appropriate diagnostic work up based on presumed aetiology 2. Enumerate indications for and interpret the results of : renal function tests, calcium, phosphorus, PTH, urine electrolytes, osmolality, Anion gap 3. Describe and calculate indices of renal function 4. Identify ECG findings in hyperkalemia 5. Enumerate indications and describe findings in renal ultrasound 6. discuss indications to perform arterial blood gas analysis: interpret the data 	Lecture	Skill assessment / Written/ Viva voce		
IM10.21 IM10.22	Femoral/jugular catheterization	<ol style="list-style-type: none"> 1. discuss indications for and insert a peripheral intravenous catheter 2. discuss the indications, demonstrate in a model and assist in the insertion of a central venous or a dialysis catheter 	DOAP session, skill lab	documentation in logbook		

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM10.24 IM10.29 IM10.30 IM10.31 IM10.23	Patient counselling & ethical issues	1.Counsel patients on a renal diet 2.discuss and communicate the ethical and legal issues involved in renal replacement therapy 3. Recognize the impact of CKD on patient's quality of life wellbeing work and family 4.Incorporate patient preferences in to the care of CKD 5. Communicate diagnosis treatment plan and subsequent follow up	Small group discussion Clerkship	Documentation in logbook	

Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods	Suggested Assessment methods	Vertical Integration

IM11.1 IM11.2 IM11.3 IM11.4	Diabetes	<ol style="list-style-type: none"> 1. Define and classify diabetes 2. Discuss the epidemiology and pathogenesis and risk factors and clinical evolution of type 1 diabetes 3. Discuss the epidemiology, pathogenesis and risk factors economic impact and clinical evolution of type 2 diabetes 4. Describe and discuss the genetic background and the influence of the environment on diabetes 	Lecture		
IM11.5 IM11.6	Complications of diabetes	<ol style="list-style-type: none"> 1. Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes 2. Describe and discuss the pathogenesis and precipitating factors, recognition and management of diabetic emergencies 	Lecture		
IM11.7,11.8	History and examination of a patient with diabetes	<ol style="list-style-type: none"> 1. Elicit document and present a medical history that will differentiate the aetiologies of diabetes including risk factors, precipitating factors, lifestyle, nutritional history, family history, medication history, co-morbidities and target organ disease 2. Perform a systematic examination that establishes the diagnosis and severity that includes skin, peripheral pulses, blood pressure measurement, fundus examination, detailed examination of the foot (pulses, nervous and deformities and injuries) 	Bedside clinic	History station in OSCE Examination station in OSCE (GPE, foot examination, checking for DPN)	

IM 11.12,11.13	Bedside investigations in a patient with diabetes	1.Perform and interpret a capillary blood glucose test 2. Perform and interpret a urinary ketone estimation with dipstick	Small group discussion Clerkship – learner doctor	Skill assessment	Pathology, Biochemistry
IM11.11,11.16,11.17 11.18, 11.22	Management of diabetes	1. Order and interpret laboratory tests to diagnose diabetes and its complications 2.Discuss and describe the pharmacologic therapies for diabetes their indications, contraindications, adverse reactions and interactions	Lecture followed by small group discussion	Short essay	Pharmacology
		3.Outline a therapeutic approach to therapy of T2Diabetes based on presentation, severity and complications in a cost-effective		MEQ	

		manner 4. Describe and discuss the pharmacology, indications, adverse reactions and interactions of drugs used in the prevention and treatment of target organ damage and complications of Type II Diabetes including neuropathy, nephropathy, retinopathy, hypertension, dyslipidemia and cardiovascular disease 4.Enumerate the causes of hypoglycemia and describe the counter hormone response and the initial approach and treatment			
Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM11.19,11.20,11.21	Education and counselling of patient with diabetes	<ol style="list-style-type: none"> 1. Demonstrate and counsel patients on the correct technique to administer insulin 2. Demonstrate to and counsel patients on the correct technique of self-monitoring of blood glucoses 3. Recognise the importance of patient preference while selecting therapy for diabetes 	Small group discussion Clerkship – learner doctor	OSCE – communication station	Pharmacology
IM12.1,12.2,12.3,12.4,12.12,12.13,12.14,12.15	Etiopathogenesis, diagnosis and management of thyroid disorders	<ol style="list-style-type: none"> 1. Discuss the etiopathogenesis if hypothyroidism and hyperthyroidism 2. Describe and discuss the physiology of the hypothalamopituitary - thyroid axis, principles of thyroid function testing 3. Describe and discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders 	Lecture	Essay question, short essay	Pathology, Physiology

		<ol style="list-style-type: none"> 4. Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs 5. Discuss iodization programs of GOI 6. Write and communicate to the patient appropriately a prescription for thyroxine based on age, sex, and clinical and biochemical status 			
Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM,12.6 12.7,12.8,	History, examination and bedside diagnosis of thyroid disorders	1.Elicit document and present an appropriate history that will establish the diagnosis cause of thyroid dysfunction and its severity 2. Perform and demonstrate examination of thyroid, including signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	Bedside clinic	OSCE Short case	
		3.Generate a differential diagnosis based on the clinical presentation and prioritize it based on the most likely diagnosis			
IM12.9,12.10, 12.11,		1.Order and interpret diagnostic testing for thyroid disease 2. Identify atrial fibrillation, pericardial effusion and bradycardia	Small group discussion	Short essay question Modified essay question	

		3.Interpret TFT			
	Etiopathogenesis, diagnosis and management of Cushing's syndrome	<ol style="list-style-type: none"> 1. Discuss the etiopathogenesis of Cushing's syndrome 2. Describe the clinical features of Cushing's syndrome 3. Describe the diagnosis and management of Cushing's syndrome 	Lecture		

	Etiopathogenesis, diagnosis and management of Addison's disease	<ol style="list-style-type: none">1. Discuss the etiopathogenesis of Addison's disease2. Describe the clinical features of Addison's disease3. Describe the diagnosis and management of Addison's disease	Lecture		
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	Competency	SLOs	TL method	Assessment	Integration
IM13.1 IM13.2 IM13.3 IM13.4	Introduction to cancer	<ol style="list-style-type: none"> 1. Describe clinical epidemiology , inherited & modifiable risk factors for common malignancies in India 2. Describe the genetic basis of selected cancers 3. Describe the relationship between infection and cancers 4. Describe the natural history, presentation, course, complications and cause of death for common cancers 	Lecture	Short note	Pathology, Biochemistry
IM13.5 IM13.6 IM13.16 IM13.17 IM13.18 IM13.19	Palliative care & pain relief	<ol style="list-style-type: none"> 1. Describe common issues encountered in patients at the end of life and principles of management 2. distinguish between curative and palliative care in patients with cancer 3. Demonstrate an understanding of needs and preferences of patients when choosing curative and palliative therapy 4. Discuss indications, use, side effects of narcotics in pain alleviation in patients with cancer 5. Discuss ethical & medico legal issues involved in end-of-life care 6. Describe therapies used in alleviating suffering in patients at the end of life 	Lecture	Short note/ Viva voce	

IM13.7 IM13.8	History & examination in a case of cancer	1.Elicit history that will help establish aetiology of cancer	Small group discussion Bedside clinic	Skill assessment/ Short case	
IM13.10		2. Perform physical examination including general and local examination to identify diagnosis, extent of spread and complications of cancer 3.Generate a differential diagnosis based on the presenting symptoms and clinical features			
IM13.9		Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Skill lab	Skill assessment/ Short case	Human Anatomy

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
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IM13.11 IM13.12 IM13.13 IM13.14 IM13.15	Investigation & management in cancer	<ol style="list-style-type: none"> 1. Order and interpret diagnostic testing based on clinical diagnosis including CBC and stool occult blood and prostate specific antigen 2. Describe indications and interpret results of Chest X Ray, mammogram, skin and tissue biopsies and tumor markers used in common cancers 3. Describe and assess pain and suffering objectively in a patient with cancer 4. Describe the indications for surgery, radiation and chemotherapy for common malignancies 5. Describe the need, tests involved, their utility in the prevention of common malignancies 	Small group discussion	Short note/ Viva voce	Radiodiagnosis
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	Competency	SLOs	TL methods	Assessment	Integration
IM14.1 IM14.2 IM14.3 IM14.5	Overview	<p>Define and measure obesity as it relates to the Indian population</p> <p>Describe and discuss the aetiology of obesity including modifiable and nonmodifiable risk factors and secondary causes</p> <p>Describe and discuss the monogenic forms of obesity</p> <p>Describe and discuss the natural history of obesity and its complications</p>	Lecture	Written/viva voce	
IM14.6 IM14.7 IM14.8	Examination	<p>Elicit and document and present an appropriate history that includes the natural history, dietary history, modifiable risk factors, family history, clues for secondary causes and motivation to lose weight</p> <p>Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities</p> <p>Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities</p>	<p>Small group discussion</p> <p>Bedside clinic</p>	Short case	

IM14.9 IM14.10	Investigation of obesity	Order and interpret diagnostic tests based on the clinical diagnosis	Lecture	Written/viva voce	
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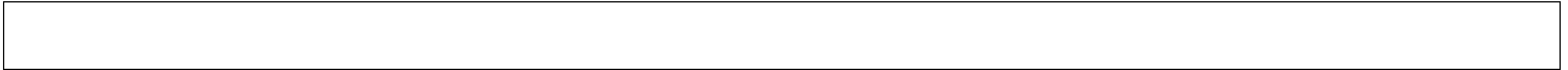
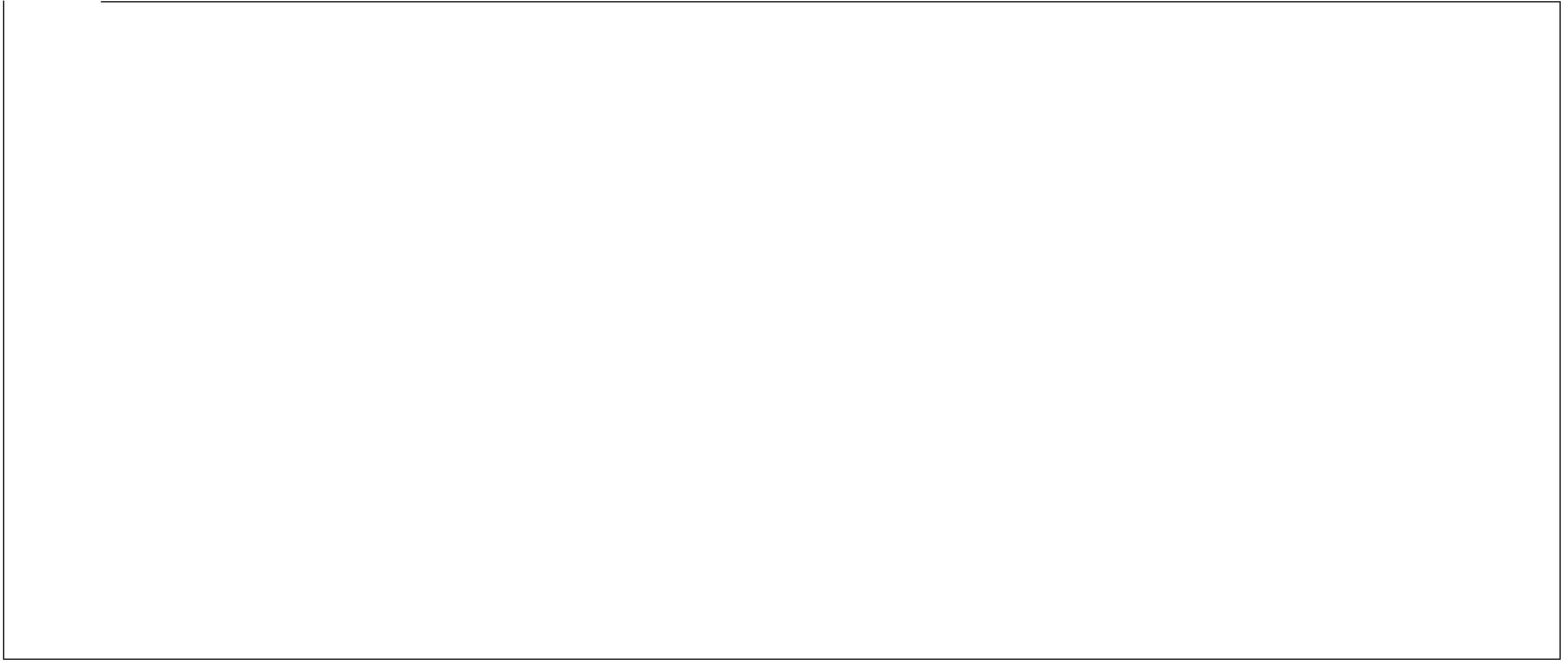
		<p>including blood glucose, lipids, thyroid function tests etc.</p> <p>Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities</p>			
<p>IM14.11</p> <p>IM14.12</p>	Counselling & education	<p>Communicate and counsel patient on behavioural, dietary and lifestyle modifications</p> <p>Demonstrate an understanding of patient's inability to adhere to lifestyle instructions and counsel them in a non-judgmental way</p>	<p>Clerkship</p> <p>Case based discussion</p>	Documentation in logbook	
<p>IM14.13</p> <p>IM14.14</p> <p>IM14.15</p>	Management of obesity	<p>Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for obesity</p> <p>Describe and enumerate the indications and side effects of bariatric surgery</p> <p>Describe and enumerate and educate patients, health care workers and the public on measures to prevent obesity and promote a healthy lifestyle</p>	Lecture	Written/viva voce	

	Competency	SLOs	TL methods	Assessment	Integration
IM15.1 IM15.2	GI bleed	<ol style="list-style-type: none"> 1. Discuss the aetiology of upper and lower GI bleeding 2. Discuss the evaluation & stabilization of patient who presents with GI bleed 	Lecture	Short essay	Pathology
IM15.3		Discuss the physiologic effects of acute blood and volume loss	SDL – pre reading	Viva voce	Pathology, Physiology
IM15.4 IM15.5 IM15.6 IM15.8	Examination of patient with GI bleed	<ol style="list-style-type: none"> 1. Elicit history to identify source of GI bleed, amount of bleed & hemodynamic compromise 2. Perform physical examination including general examination, volume assessment and abdominal examination 3. Distinguish between upper & lower GI bleed 4. Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritize based on the most likely diagnosis 	Small group discussion Bedside clinic	Long case	
IM15.7		Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent	DOAP session	Skill assessment	

	Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
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<p>IM15.9 IM15.10 IM15.11 IM15.12 IM15.14 IM15.16 IM15.17 IM15.15</p>	<p>Investigation & management of GI bleed</p>	<p>Choose and interpret diagnostic tests : CBC, PT and PTT, stool occult blood, LFT H.pylori test. Enumerate the indications for endoscopy, colonoscopy Develop treatment plan including fluid resuscitation, blood and blood component transfusion and arresting bleed Enumerate indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion Discuss pharmacotherapy of acute GI bleed Enumerate the indications for endoscopic interventions and Surgery Determine appropriate level of specialist consultation Describe pharmacotherapy of acid peptic disease including Helicobacter pylori</p>	<p>Case based discussion</p>	<p>Modified essay Question</p>	

	IM15.13	Observe cross matching and blood / blood component transfusion		Small group discussion Clerkship	Documentation in logbook	Pathology
	IM15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options		Small group discussion Clerkship	Documentation in logbook	



Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM16.3 16.6 16.12 16.13 16.14	Diarrhoea	<ol style="list-style-type: none"> 1. Describe and discuss the chronic effects of diarrhoea including malabsorption 2. Distinguish between diarrhoea and dysentery based on clinical features 3. Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhoea 4. Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for parasitic causes of diarrhoea 5. Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for bacterial and viral diarrhoea 	Lecture	Short note	

IM16.4 16.5 16.7 16.8	History, examination and diagnosis in a case of diarrhoea	1.Elicit and document and present an appropriate history that includes the natural history, dietary history, travel , sexual history and other concomitant illnesses 2.Perform, document and demonstrate a physical examination based on the history that includes GPE & abdomen exam 3. Generate a differential diagnosis based on the presenting symptoms and clinical features 4.Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination	Bedside clinic	Short case OSCE history station	Microbiology, Pathology

IM16.9 16.10 16.11	Investigations in diarrhoea	Identify common parasitic causes of diarrhoea under the microscope in a stool specimen Identify vibrio cholera in a hanging drop specimen Enumerate the indications for stool cultures and blood cultures in patients with acute diarrhoea	DOAP session (1 hour)	Skill assessment	Microbiology
Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM16.15 16.16 16.17	IBD	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy including immunotherapy Describe and enumerate the indications for surgery in inflammatory bowel disease	Lecture followed by casebased discussion	Short note	Pathology
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	Competency	SLOs	TL methods	Assessment	
IM17.1 IM17.3 IM17.10	Headache - introduction	<ol style="list-style-type: none"> 1. Define & classify headache & describe clinical features of various types of headache 2. Classify migraine and describe the distinguishing features between classical and non-classical forms of migraine 3. Enumerate indications for emergency care, admission and immediate supportive care in patients 	Lecture	Short essay Viva voce	

		with headache			
IM17.11 IM17.12	Vascular headache	<p>1. Describe indications, pharmacology, dose, side effects of abortive therapy in migraine</p> <p>2. Describe the indications, pharmacology, dose, side effects of prophylactic therapy in migraine</p>	Lecture	Short essay	
IM17.2 IM17.4 IM17.5 IM17.6	History & examination in headache case	<p>1. Elicit history including aura, precipitating aggravating and relieving factors, associated symptoms to identify the cause</p> <p>2. Perform neurologic examination & look for signs of raised ICT</p> <p>3. Generate differential diagnosis based on clinical features, & prioritize the diagnosis based on the presentation</p> <p>4. Choose & interpret diagnostic testing based on clinical diagnosis including imaging</p>	Small group discussion Bedside clinic	History station in OSCE	

17.9 IM17.7 IM17.13	Meningitis	1.Etiopathogenesis & clinical features of meningitis 2. describe the findings in the CSF in patients with meningitis 3.Describe the pharmacology, dose, adverse reactions and regimens of drugs used in the treatment of bacterial, tubercular and viral	Lecture	Short essay Viva voce	
		meningitis			

Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM17.8	Lumbar puncture	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	Skill lab	Skill assessment	Microbiology, Pathology
IM17.9	CSF analysis	Interpret the CSF findings when presented with various parameters of CSF fluid analysis	Case based discussion	Problem based short essay question	Microbiology, Pathology
IM17.14	Counselling	Counsel patients with migraine and tension headache on lifestyle changes and need for prophylactic therapy	Small group discussion Clerkship	Documentation in logbook	Pharmacology

	Competency	SLOs			
IM18.1	Neuroanatomy	Describe the functional and the vascular anatomy of the brain	Lecture	Short answer Diagram	Human Anatomy
IM18.2	Cerebrovascular accident	Classify cerebrovascular accidents & describe aetiology, predisposing risk factors & pathogenesis of hemorrhagic and non-hemorrhagic stroke	Lecture	SEQ	Pathology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM18.3 IM18.4 IM18.5 IM18.6 IM18.7 IM18.8	History & examination of a case of stroke	<ol style="list-style-type: none"> 1. Elicit history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of stroke 2. Identify the nature of stroke based on the temporal evolution and resolution of the illness 3. Perform physical examination including general and a detailed neurologic examination as appropriate, based on the history 4. Distinguish lesion based on upper vs lower motor neuron, side, site and most probable nature of the lesion 5. Describe clinical features and distinguish, based on clinical examination, the various disorders of speech 6. Describe and distinguish, based on the clinical presentation, the types of bladder dysfunction seen in CNS disease 	Small group discussion Bedside clinic	<ol style="list-style-type: none"> 1. Long case 2. Physical examination station in OSCE 	

IM18.9 IM18.10 IM18.11 IM18.12 IM18.13 IM18.14 IM18.15	Investigations & treatment of stroke	1.Choose and interpret appropriate diagnostic & imaging tests to delineate site & underlying cause of lesion 2. Choose and interpret appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA) 3. Describe the initial supportive	Lecture	1. data interpretation station in osce 2. Short answer	Radiodiagnosis
		management of a patient presenting with a cerebrovascular accident (CVA) 4. Enumerate the indications for and describe acute therapy of nonhemorrhagic stroke including the use of thrombolytic agents 5.Enumerate the indications for and describe the role of anti-platelet agents in non-hemorrhagic stroke 6.Describe the initial management of a hemorrhagic stroke 7. Enumerate the indications for surgery in a hemorrhagic stroke			
IM18.16	Rehabilitation of stroke	observe the multidisciplinary rehabilitation of patients with a CVA	DOAP session		
IM18.17	Counselling	Counsel patient and family about the diagnosis and therapy in an empathetic manner	Small group discussion Clerkship	Documentation in logbook	

	Competency	SLOs			
IM19.1	Neuroanatomy basal ganglia	Describe the functional anatomy of the locomotor system of the brain	Lecture	Written/ Viva voce	Human Anatomy, Physiology
IM19.2	Movement disorders and Parkinson's disease	3. Classify movement disorders based on distribution, rhythm, repetition, exacerbating and relieving factors 4. Describe the clinical features of Parkinson's disease	Lecture	Written/ Viva voce	
IM19.3 IM19.4 IM19.5 IM19.6	History & examination of movement	1.Elicit history including onset, progression precipitating and aggravating relieving factors, associated symptoms to identify cause of movement disorders 2.Perform physical examination that includes a general and detailed neurologic examination 3.3.Perform physical examination that includes a general and detailed neurologic examination 4.Generate differential diagnosis & prioritize based on history & physical examination 5.Reach clinical diagnosis of location, nature and cause of lesion based on clinical presentation	Small group discussion Bedside clinic	Short case Examination station in OSCE	

IM19.7 IM19.8 IM19.9	Investigation & management of movement disorders	Choose and interpret diagnostic and imaging tests in the diagnosis of movement disorders Discuss pharmacology, dose, side effects and interactions used in the drug therapy of Parkinson's syndrome Enumerate the indications for use of surgery and botulinum toxin in the treatment of movement disorders	Lecture	Skill assessment/ Written/ Viva voce	Radiodiagnosis
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM20.1 IM20.3 IM20.6 IM20.7	Snake bite	1.Enumerate local poisonous snakes & describe the distinguishing marks of each	Lecture	Essay question Viva voce	Forensic Medicine, Pharmacology

		2. Choose & interpret appropriate diagnostic testing in patients with snake bite 3. Describe initial approach to stabilization of patient with snake bite 4. Describe pharmacology, dose, adverse reactions, hypersensitivity reactions of anti-snake venom			
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IM20.2	Patient Education	Demonstrate and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	DOAP session Role play for patient education	Viva voce	Forensic Medicine
IM20.4 IM20.5	Examination of snake bite case	1. Elicit history including circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite 2. Perform general, local, appropriate cardiac and neurologic examination in case of snake bite	Small group discussion Bedside clinic	OSCE examination station on simulated patient	Forensic Medicine
IM20.8		Describe the diagnosis, initial approach, stabilization and therapy of scorpion envenomation	Lecture	Written/ Viva voce	Pharmacology
IM20.9		Describe the diagnosis initial approach stabilization and therapy of bee sting allergy	SDL	Written/ Viva voce	Pharmacology
		Clinical features, stabilization , management of attempted hanging	Lecture		
		Clinical features, stabilization , management of attempted drowning	Lecture		
		Heat stroke	SDL		



Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM21.1 IM21.2	Poisoning	1.Describe the initial approach to the stabilization of the patient who presents with poisoning 2.describe toxicology, clinical features and management of common plant poisons	Lecture	Viva voce Structured essay	
IM21.3 IM21.4		1.describe toxicology, clinical features and management of common corrosive poisons 2.describe toxicology, clinical features and management of patients admitted with common drug overdose	Lecture	Short answer	
	Hepatotoxic poisons	1.Describe toxicology, clinical features, management in a patient admitted with paracetamol/rodenticide poisoning 2.Discuss the role of liver transplant in. these cases	Lecture	Short essay	
IM21.8		1.describe the precautions to be taken in a patient with suspected suicidal ideation / gesture	Small group discussion	viva	

IM21.5		Observe and describe the functions and role of a poison center in suspected poisoning	DOAP session	document in log book	Forensic Medicine, Pharmacology
IM21.6		Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to write a medico legal report on a suspected poisoning	SDL – revision & pre reading	Viva voce	Forensic Medicine, Pharmacology
IM21.7	Counselling	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	Small group discussion Clerkship	Communication station in osce	Forensic Medicine, Pharmacology
	Competency	SLOs	TL method	Assessment method	Integration
IM22.1 IM22.2 IM22.3	Hypercalcaemia	Enumerate causes of hypercalcemia ; distinguish features of PTH vs non PTH mediated hypercalcemia Describe etiology, clinical features, diagnosis and approach to primary hyperparathyroidism Describe the approach to the management of hypercalcemia	Lecture	Short essay	Pathology, Physiology
	Hypocalcaemia	Clinical features, diagnosis and treatment of hypocalcaemia	Lecture	Short essay	
IM22.4		Enumerate the components and describe the genetic basis of the multiple endocrine neoplasia syndrome	SDL	Viva voce	Pathology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM22.5 IM22.6	Abnormalities of sodium metabolism	Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hyponatremia Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hypernatremia	Lecture	Short answer Viva voce	
IM22.7 IM22.8	Abnormalities of potassium metabolism	Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hypokalemia Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hyperkalemia	Lecture		
IM22.9 IM22.10 IM22.11 IM22.12	Acidosis & alkalosis	1. Discuss the clinical and laboratory features of metabolic acidosis and alkalosis 2. Discuss the clinical and laboratory features of respiratory acidosis and alkalosis	Lecture	Short essay MCQs	Physiology

IM22.13		Identify the underlying acid base disorder based on ABG report and clinical situation	Assignments Problem solving	Problem based short essay question	Physiology
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM23.1 IM23.2	Nutrition in illness	Discuss and describe the methods of nutritional assessment in an adult and calculation of caloric requirements during illnesses Discuss and describe the causes and consequences of protein caloric malnutrition in the hospital	Lecture	Short answer	
IM23.3	Vitamins	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	Lecture	Short answer	Physiology, Biochemistry
IM23.4	Nutrition in the critically ill	Enumerate the indications for enteral and parenteral nutrition in critically ill patients	Lecture	Short answer	Physiology, Biochemistry
IM23.5		Counsel and communicate to patients in a simulated environment with illness on an appropriate balanced diet	DOAP session Clerkship	Documentation in logbook	

	Competency	SLOs	TL methods	Assessment	Integration
IM24.17 IM24.1 IM24.4 IM24.8 IM24.9	Common illnesses in the elderly	1.Describe the impact of demographic changes in ageing on the population 2.Describe the epidemiology, pathogenesis, clinical evolution, presentation and	Lecture	Long essay	
IM24.10		course of common diseases in the elderly: vascular events, osteoporosis, CVA, COPD			
IM24.2	Examination of the elderly	Perform multidimensional geriatric assessment that includes medical, psycho-social and functional components	Small group discussion Bedside clinic	Short case	Psychiatry
IM24.3 IM24.6 IM24.22 IM24.5 IM24.7	Delirium , dementia and depression	Discuss etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of acute confusional states, nutritional disorders dementia in the elderly depression in the elderly personality changes in the elderly	Lecture	Long essay	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM24.11 IM24.12 IM24.13 IM24.14 IM24.15	Multidisciplinary care of the elderly	Describe etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of elderly with : degenerative joint disease, falls, fractures,, visual & hearing loss	Multidisciplinary panel discussion Team teaching	Short answer	
		Describe and discuss the etiopathogenesis , clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery			

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM24.16 IM24.19 IM24.20 IM24.21	Physical & mental rehabilitation of elderly	<ol style="list-style-type: none"> 1. discuss principles of physical & social rehabilitation, functional assessment, role of physiotherapy and occupational therapy in the management of disability in the elderly 2. Enumerate & describe social problems in the elderly including isolation, abuse, change in family structure and their impact on health. 3. Enumerate and describe social interventions in the care of elderly including domiciliary services, rehabilitation facilities, old age homes and state interventions 4. Enumerate and describe ethical issues in the care of the elderly 	Case based discussion	Written/ Viva voce	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
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IM25.4	Leptospirosis	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of leptospirosis 2. Clinical features of leptospirosis 3. Diagnosis and management of leptospirosis 	lecture	SEQ	
IM25.5	Enteric fever	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of enteric fever 2. Clinical features of enteric fever 3. Diagnosis and management of enteric fever 	lecture	Short answer	
	Tuberculosis	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of Tuberculosis 2. Clinical features of Tuberculosis 3. Diagnosis and management of Tuberculosis 	lecture		

Pandemic Module

	Competency	Hours	TL method
4.1	Care of patients	6	Small group discussion
4.2	Emergency procedures	8	Small group discussion
4.3	Death related management	2	Small group discussion
4.4	Communications & media management	4	Small group discussion
4.5	Intensive care	4	Small group discussion
4.6	Palliative care	4	

Competencies to be covered in AETCOM sessions

	Competency
IM26.1	Enumerate and describe professional qualities and roles of a physician
IM27.1	Describe and discuss the commitment to lifelong learning as an important part of physician growth
IM26.3	Describe and discuss the role of non-maleficence as a guiding principle in patient care
IM26.4	Describe and discuss the role of autonomy and shared responsibility as a guiding principle in patient care
IM26.5	Describe and discuss the role of beneficence of a guiding principle in patient care
IM26.6	Describe and discuss the role of a physician in health care system
IM26.7	Describe and discuss the role of justice as a guiding principle in patient care
IM26.8	Identify discuss medicolegal, socioeconomic and ethical issues as it pertains to organ donation
IM26.9	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as it pertains to rights, equity and justice in access to health care
IM26.10	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to confidentiality in patient care

Number	COMPETENCY The student should be able to
IM26.11	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to patient autonomy, patient rights and shared responsibility in health care
IM26.12	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to decision making in health care including advanced directives and surrogate decision making
IM26.13	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the capability or capacity to give consent
IM26.14	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to research in human subjects
IM26.15	Identify, discuss and defend, medicolegal, sociocultural and ethical issues as they pertain to consent for surgical procedures
IM26.16	Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues as it pertains to the physician patient relationship (including fiduciary duty)
IM26.17	Identify, discuss physician's role and responsibility to society and the community that she/ he serves
IM26.18	Identify, discuss and defend medicolegal, socio-cultural, professional and ethical issues in physician- industry relationships
IM26.19	Demonstrate ability to work in a team of peers and superiors
IM26.20	Demonstrate ability to communicate to patients in a patient, respectful, non-threatening, non-judgmental and empathetic manner

IM26. 21	Demonstrate respect to patient privacy
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Number	COMPETENCY The student should be able to
IM26. 22	Demonstrate ability to maintain confidentiality in patient care
IM26. 23	Demonstrate a commitment to continued learning
IM26. 24	Demonstrate respect in relationship with patients, fellow team members, superiors and other health care workers
IM26. 25	Demonstrate responsibility and work ethics while working in the health care team
IM26. 26	Demonstrate ability to maintain required documentation in health care (including correct use of medical records)
IM26. 27	Demonstrate personal grooming that is adequate and appropriate for health care responsibilities
IM26. 28	Demonstrate adequate knowledge and use of information technology that permits appropriate patient care and continued learning
IM26. 29	Communicate diagnostic and therapeutic options to patient and family in a simulated environment
IM26. 30	Communicate care options to patient and family with a terminal illness in a simulated environment
IM26. 31	Demonstrate awareness of limitations and seeks help and consultations appropriately

IM26. 32	Demonstrate appropriate respect to colleagues in the profession
IM26. 33	Demonstrate an understanding of the implications and the appropriate procedures and response to be followed in the event of medical errors
IM26. 34	Identify conflicts of interest in patient care and professional relationships and describe the correct response to these conflicts

Number	COMPETENCY The student should be able to
IM26.35	Demonstrate empathy in patient encounters
IM26.36	Demonstrate ability to balance personal and professional priorities
IM26.37	Demonstrate ability to manage time appropriately
IM26.38	Demonstrate ability to form and function in appropriate professional networks
IM26.39	Demonstrate ability to pursue and seek career advancement
IM26.40	Demonstrate ability to follow risk management and medical error reduction practices where appropriate

IM26.41	Demonstrate ability to work in a mentoring relationship with junior colleagues
IM26.42	Demonstrate commitment to learning and scholarship
IM26.43	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as they pertain to in vitro fertilization donor insemination and surrogate motherhood
IM26.44	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues pertaining to medical negligence
IM26.46	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues in dealing with impaired physicians

IM26.47	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support
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IM26.4 8	Demonstrate altruism
IM26.4 9	Administer informed consent and appropriately address patient queries to a patient being enrolled in a research protocol in a simulated environment

Respiratory Medicine – Knowledge Competencies

Topic - Tuberculosis					
	Competency	Teaching learning method	Formative assessment	Summative assessment	Integration
CT1.1	Describe and discuss the epidemiology of tuberculosis and its impact on the work, life and economy of India	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine
CT1.2	Describe and discuss the microbiology of tubercle bacillus, mode of transmission, pathogenesis, clinical evolution and natural history of pulmonary and extra pulmonary forms (including lymph node, bone and CNS)	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology

CT1.3	Discuss and describe the impact of co-infection with HIV and other co-morbid conditions. Like diabetes on the natural history of tuberculosis	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.4	Describe the epidemiology, the predisposing factors and microbial and therapeutic factors that determine resistance to drugs	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine, Microbiology,

					Pharmacology
CT1.12	Enumerate the indications for tests including: serology, special cultures and polymerase chain reaction and sensitivity testing	Small group discussion, Lecture	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.13	Describe and discuss the origin, indications, technique of administration, efficacy and complications of the BCG vaccine	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.14	Describe and discuss the pharmacology of various anti-tuberculous agents, their indications, contraindications, interactions and adverse reactions	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Pharmacology, Microbiology
CT1.16	Describe the appropriate precautions, screening, testing and indications for chemoprophylaxis for contacts and exposed health care workers	Bedside clinic, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine
Topic – Obstructive airway disease					

CT2.1	Define and classify obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Physiology
CT2.2	Describe and discuss the epidemiology, risk factors and evolution of obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Physiology

CT2.3	Enumerate and describe the causes of acute episodes in patients with obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Physiology
CT2.4	Describe and discuss the physiology and pathophysiology of hypoxia and hypercapnea	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Physiology
CT2.5	Describe and discuss the genetics of alpha 1 antitrypsin deficiency in emphysema	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.6	Describe the role of the environment in the cause and exacerbation of obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	

CT2.7	Describe and discuss allergic and non-allergic precipitants of obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.16	Discuss and describe therapies for OAD including bronchodilators, leukotriene inhibitors, mast cell stabilisers, theophylline, inhaled and systemic steroids, oxygen and immunotherapy	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.17	Describe and discuss the indications for vaccinations in OAD	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.20	Describe and discuss the principles and use of oxygen therapy in the hospital and at home	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.25	Discuss and describe the impact of OAD on the society and workplace	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.26	Discuss and describe preventive measures to reduce OAD in workplaces	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
	Integration Topics				

PH1.32	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in bronchial asthma and COPD	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Physiology
PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/ mucolytics)	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology
PH1.44	Describe the first line antitubercular dugs, their mechanisms of action, side effects and doses.	Lecture	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology
PH1.45	Describe the dugs used in MDR and XDR Tuberculosis	Lecture	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology

IM24.10	Describe and discuss the aetiopathogenesis,clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of COPD in the elderly	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Internal medicine
PE28.19	Describe the etio-pathogenesis, clinical features, diagnosis, management and prevention of asthma in children	Bedside clinics, Small group discussion , Lecture	Skill Assessment / Written/ Viva voce		Paediatrics

PE34.1	Discuss the epidemiology, clinical features, clinical types, complications of Tuberculosis in Children and Adolescents	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics
PE34.2	Discuss the various diagnostic tools for childhood tuberculosis	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics
PE34.3	Discuss the various regimens for management of Tuberculosis as per National Guidelines	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics
PE34.4	Discuss the preventive strategies adopted and the objectives and outcome of the National Tuberculosis Control Program	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics

PE34.10 Discuss the various samples for demonstrating the clinical, organism eg Gastric Aspirate, Sputum, CSF, FNAC
 Bed side MCQs/Drills Essay/SAQ/ Paediatrics
 Small group discussion **Respiratory medicine -**

PE34.12 Enumerate the indications and discuss the limitations of methods of culturing M.Tuberculi
 Small group MCQs/Drills Essay/SAQ/ Paediatrics
 MCQs discussion

Psychomotor competencies

Topic - Tuberculosis

CT1.5 Elicit, document and present an appropriate that includes risk factor, contacts, symptoms including cough and fever and other manifestations
 Bed side clinic, DOAP session CNS
 Skill assessment medical history

CT1.6 Demonstrate and perform a systematic
 Bed side clinic, Skill assessment

	examination that establishes the diagnosis based on the clinical presentation that includes a a) general examination, b) examination of the chest and lung including loss of volume, mediastinal shift, percussion and auscultation (including DOAP session of lung sounds and added sounds) c) examination of the lymphatic system and d) relevant CNS examination	DOAP session			
CT1.7	Perform and interpret a PPD (mantoux) and describe and discuss the indications and pitfalls	DOAP session	Maintenance of		
CT1.10	Perform and interpret an AFB stain	log book of the test DOAP session			
CT1.11	Assist in the performance, outline the correct tests that require to be performed and interpret the results of a pleural fluid aspiration	DOAP session			
CT1.15	Prescribe an appropriate antituberculosis regimen based on the location of disease, smear	Bedside clinic, Small group			

	positivity and negativity and co- morbidities based on current national guidelines including directly observed tuberculosis therapy (DOTS)	discussion, Lecture			
CT1.17	Define criteria for the cure of Tuberculosis; describe and recognise the features of drug resistant tuberculosis, prevention and therapeutic regimens	S	P	Y	
CT1.8	Generate a differential diagnosis based on the clinical history and evolution of the disease that prioritises the most likely diagnosis	Bedside clinic, Small group discussion	Bedside clinic/ Viva voce		

CT1.9	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.8	Elicit document and present a medical history that will differentiate the aetiologies of obstructive airway disease, severity and precipitants	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.9	Perform a systematic examination that establishes the diagnosis and severity that includes measurement of respiratory rate, level of respiratory distress, effort tolerance, breath sounds, added sounds, identification of signs of consolidation pleural effusion and pneumothorax	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.10	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.11	Describe, discuss and interpret pulmonary function tests	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.12	Perform and interpret peak expiratory flow rate	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.13	Describe the appropriate diagnostic work up based on the presumed aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.14	Enumerate the indications for and interpret the results of : pulse oximetry, ABG, Chest Radiograph	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.15	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.18	Develop a therapeutic plan including use of bronchodilators and inhaled corticosteroids	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.19	Develop a management plan for acute exacerbations including bronchodilators, systemic steroids, antimicrobial therapy	Bedside clinic, DOAP session	OSCE	Long case/short case	
Integration topics					
PY6.8	Demonstrate the correct technique to perform & interpret Spirometry	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.5	Able to elicit, document and present history of contact with tuberculosis in every patient encounter	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.6	Identify a BCG scar	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.7	Interpret a Mantoux test	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.8	Interpret a Chest Radiograph	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.1	Perform AFB staining	DOAP	Logbook		
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Respiratory medicine – Communication competencies

CT1.18	Educate health care workers on National Program of Tuberculosis and administering and monitoring the DOTS program	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT1.19	Communicate with patients and family in an empathetic manner about the diagnosis, therapy	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.21	Describe discuss and counsel patients appropriately on smoking cessation	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.22	Demonstrate and counsel patient on the correct use of inhalers	Bedside clinic, DOAP session	OSCE /logbook	Long case/short case	
CT2.23	Communicate diagnosis treatment plan and subsequent follow up plan to patients	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.24	Recognise the impact of OAD on patient's quality of life, well being, work and family	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.27	Demonstrate an understanding of patient's inability to change working, living and environmental factors that influence progression of airway disease	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.28	Demonstrate an understanding for the difficulties faced by patients during smoking cessation	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE28.20	Counsel the child with asthma on the correct use of inhalers in a simulated environment	Bedside clinic, DOAP session	OSCE/ logbook	Long case/short case	

List of certifiable competencies

CT2.12	Perform and interpret peak expiratory flow rate	Bedside clinic, DOAP session	Logbook	
PE34.11	Perform AFB staining	DOAP	Logbook	

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Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka



General Medicine Allied Subjects Curriculum
Including Psychiatry and Dermatology as
per
Competency-Based Medical Education Curriculum

Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka



Psychiatry Curriculum as
per
Competency-Based Medical Education Curriculum

RGUHS Psychiatry Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Mental health is essential to overall health and the well-being of individuals and societies. Mental health affects the individual's ability to function, to be productive, to establish and maintain positive relationships, and to experience a state of well-being. This is the reason we say, "There is no health without mental health." Mental disorders, a highly prevalent group of non-communicable diseases, affect the lives of 1 out of 5 persons. Factors related to mental illness can interfere with the treatment of other illnesses and frequently co-occur with CVS, diabetes, cancer, and other non-communicable diseases, and communicable diseases like HIV and TB. Therefore, training undergraduate medical students in mental health is vital. Knowledge of Psychiatry, Mental health, and Behavioral Sciences equips the students to deal with various difficult and complex situations during medical practice. Additionally, it will help them to develop proper communication skills and to empathize with their patients and their suffering. Moreover, since psychiatric problems are common among patients seen in general practice (about 25%) and specialty clinics (about 15%), adequate training in Psychiatry during UG course makes the student a better doctor.

The Psychiatry undergraduate curriculum provides the IMG the requisite knowledge, essential skills and appropriate attitudes to be able to diagnose and treat common psychiatric disorders and also to be able to recognize serious conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of competencies in Psychiatry, required for an IMG and these have been included in this Psychiatry curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods. The topics have been segregated under three heads: Lecture topic, integrated topics and clinical posting topics. A suggested scheme for teaching Clinical skills topics as posting one and posting two has been made.

Competency Based Medical Education
Suggested Lecture schedule plan (IIIrd MBBS, Part 1)

No	Topic	Competencies	Time	T/L method	Assessment
1	Doctor patient relationship	<ul style="list-style-type: none"> • Components of communication • breaking bad news • importance of confidentiality PS1.2	1 hour	Lecture/ Small Group	Viva/written/MCQs
2	Mental health	<ul style="list-style-type: none"> • Stress, components and cause • time-management, study skills, balanced diet, sleep wake cycle PS2.1, PS2.2	1 hour	Lecture/ Small Group	Viva/written/MCQs

3	Mental health	<ul style="list-style-type: none"> • Components of memory, learning and emotions • Principles of personality development and motivation • Define and distinguish between normality and abnormality <p>PS2.3, PS2.4, PS2.5</p>	1 hour	Lecture/small groups	Written/Viva/MCQs
4	Introduction to psychiatry	<ul style="list-style-type: none"> • Growth, history, development of psychiatry as specialty • Brain and behaviour <p>PS3.1</p>	1 hour	Lecture/Small Group	Viva/written/MCQs
5	Introduction to psychiatry	<ul style="list-style-type: none"> • Signs and symptoms of common mental disorders • Biological, psychological and social factors and their interactions in causation of mental disorders • Distinguish psychotic and non-psychotic disorders <p>PS3.2, PS3.6, PS3.12</p>	1 hour	Lecture/Small Group	Viva/written/MCQs
6	Introduction to psychiatry	<ul style="list-style-type: none"> • Pharmacological basis and side-effects of drugs used in psychiatric disorders <p>PS3.10</p>	1 hour	Lecture/Small Group	Viva/written/MCQs

7	Substance Use disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS4.1, PS4.4, PS4.6, PS4.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
8	Psychotic disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS5.1, PS5.3, PS5.5, PS5.6	1 hour	Lecture/ Small Group	Viva/written/MCQs
9	Depression	<ul style="list-style-type: none"> • • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs 	1 hour	Lecture/ Small Group	Viva/written/MCQs

		<ul style="list-style-type: none"> • Conditions for specialist referral PS6.1, PS6.4, PS6.6, PS6.7			
10	Bipolar disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS7.1, PS7.4, PS7.6, PS7.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
11	Assessment		1 hour		
12	Anxiety disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS8.1, PS8.4, PS8.6, PS8.7	1 hour	Lecture/ Small Group	Viva/written/MCQs

13	OCD	<ul style="list-style-type: none">• Magnitude & aetiology• Treatment• Pharmacological basis and side-1-hour effects of drugs• Conditions for specialist referral <p>PS8.1, PS8.4, PS8.6, PS8.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
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14	Stress related disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS9.1, PS9.4, PS9.6, PS9.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
15	Personality disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS11.1, PS11.4, PS11.6, PS11.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
16	Psychosexual and Gender Identity disorders (Psychosexual disorders)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS13.1, PS13.4, PS13.6, PS13.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs

17	Psychosexual and Gender Identity disorders (Gender Identity disorders)	<ul style="list-style-type: none">• Magnitude & aetiology• Treatment• Pharmacological basis and side-effects of drugs• Conditions for specialist referral PS13.1, PS13.4, PS13.6, PS13.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
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18	Emotional & Behavioral problems in Child and Adolescence (ADHD, ODD, CD)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS14.1, PS14.3, PS14.5, PS14.6</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
19	Other specific childhood psychiatric disorders (enuresis)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS14.1, PS14.3, PS14.5, PS14.6</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
20	Psychiatric disorders in elderly	<ul style="list-style-type: none"> • Common psychiatric disorders including dementia, depression & psychosis • Magnitude & aetiology • Therapy in elderly • Conditions for specialist referral <p>PS16.1, PS16.2, PS16.3, PS16.5</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
21	Psychiatric emergencies	<ul style="list-style-type: none"> • Describe recognition of psychiatric emergencies like suicide, deliberate self-harm and aggressive <p>PS17.1, PS17.2, PS17.3</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs

22	Therapeutics	<ul style="list-style-type: none"> Describe principles of psychosocial interventions in psychiatric illness including psychotherapy, rehabilitation and behavioural therapy <p>PS18.3</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
23	Assessment	<ul style="list-style-type: none"> Second assessment 	1 hour	Lecture/ Small Group	Viva/written/MCQs
24	Review and Feedback				

Competency Based Medical Education Suggested
Integrated Lecture/Tutorials schedule plan

No	Topic	Competencies	Posting & Integration	Time	T/L method	Assessment
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1	Introduction to psychiatry	<ul style="list-style-type: none"> • Enumerate, describe common psychiatric disorders, magnitude, aetiology and clinical features in patients with organic psychiatric disorders • Essential investigations in patients with organic psychiatric disorders <p>PS3.7, PS3.8</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs
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2	Alcohol substance use and disorders	<ul style="list-style-type: none"> • Magnitude and aetiology of alcohol use disorders • Treatment of alcohol use disorders including pharmacotherapy and psychotherapy • Pharmacological basis and side-effects of drugs in alcohol use disorders • Appropriate conditions for specialist referrals in alcohol use disorders <p>PS4.1, PS4.4, PS4.6, PS4.7</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs
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3	Psychosomatic disorders	<ul style="list-style-type: none"> • Magnitude and aetiology of psychosomatic disorders • Treatment of psychosomatic disorders • Pharmacological basis of treatment and side-effects of psychosomatic disorders • Appropriate conditions for specialist referral <p>PS12.1, PS12.4, PS12.6, PS12.7</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs
4	Psychosomatic disorders	<ul style="list-style-type: none"> • Magnitude and aetiology of psychosomatic disorders • Treatment of psychosomatic disorders • Pharmacological basis of treatment and side-effects of psychosomatic disorders • Appropriate conditions for specialist referral <p>PS12.1, PS12.4, PS12.6, PS12.7</p>	3 rd year Dermatology	1 hour	Lecture/ Small Group	Viva/written/MCQs

5	Mental retardation, scholastic backwardness, neurodevelopmental disorders, autism	<ul style="list-style-type: none">• • Magnitude & aetiologyIntelligence quotient and assessment	3 rd year Pediatrics	1 hour	Lecture/ Small Group	Viva/written/MCQs
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		<ul style="list-style-type: none"> • Psychosocial treatments and interventions <p>PS15.1, PS15.3, PS15.4</p>				
6	Miscellaneous	<ul style="list-style-type: none"> • Relevance and role of community psychiatry • Objectives, strategies and contents of National Mental Health Program • Enumerate and describe salient features of MHCA 2017 • Describe the concept principles of preventive mental health promotion (positive mental health); and community education • Enumerate and describe the identifying features and the principles of participatory management of mental illness occurring during and after disasters <p>PS19.1, PS19.2, PS19.4, PS19.5, PS19.6</p>	3 rd year Community psychiatry	1 hour	Lecture/ Small Group	Viva/written/MCQs

7	Miscellaneous	<ul style="list-style-type: none">Describe and discuss basic legal and ethical issues in psychiatry PS19.3, PS19.4	3 rd year Forensic	1 hour	Lecture/ Small Group	Viva/written/MCQs
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8	Risk assessment for suicide	<ul style="list-style-type: none"> Enumerate and describe recognition of suicide risk in individuals PS17.1	3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs
9	ECT and other modalities like RTMS	<ul style="list-style-type: none"> Indications of modified ECT Indications of other modalities PS 18.2	3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs
10	Psychological assessments		3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs

**PSYCHIATRY CLINICAL
POSTINGS**

POSTING 1- II MBBS

No	Topic	Competencies	SLOs	Domain /Level	T/L method	Assessment
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1	Doctor patient relationship	Developing rapport & empathy (PS1.1, PS3.4) Importance of	Define and describe the meaning of terms rapport and empathy. Demonstrate comfort with communicating with patient, use modes of communication enabling patient to feel safe and comfortable to participate in a dialogue. Enumerate the ethical principles of confidentiality including safeguarding of information, and consent to disclose	K/K H S/S H K/K	Small group discussion Small group discussion, guided observation of consultants, role-plays, demonstrations Small group discussion Small group discussion	MCQ MCQ, OSCE MC Q
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		confidentiality (PS1.4)	information. Enumerate conditions under which confidentiality can be breached.	H K/K H		MC Q
2	Breaking bad news	Breaking bad news (PS1.3)	Demonstrate breaking bad news to a patient or their family.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ/ OSCE
3	Introduction to psychiatry	Eliciting, presenting & documenting psychiatric history (PS3.3)	Interview a patient to elicit onset, course, duration and progress of illness with respect to present illness, past history, medical history, family history, personal history and premorbid history relevant to present illness.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ, OSCE
4	Introduction to psychiatry	Performing mini mental state examination (PS3.5)	Examine a patient to elicit consciousness, orientation, attention and registration, recent and remote memory, affect and mood, speech, form and content of thought, perception, insight into mental illness.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ, OSCE
5	Alcohol use disorders	Describe, elicit & document clinical features of alcohol use disorders (PS4.2)	Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment

6	Substance use disorders-tobacco	Describe, elicit & document clinical features of substance use disorders- tobacco (PS4.2)	Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.	S/SH	Small group discussion, guided observation of consultants, role- plays, demonstration, portfolio	MCQ, OSCE, Portfolio assessment
7	Depression	Describe, elicit & document clinical features in patients with depression (PS6.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression.	S/SH S/SH	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment MCQ, OSCE, Portfolio assessment
			Perform a mental status examination to assess thought, perception and affect in a patient with depression.			
8	Anxiety disorders (excluding OCD)	Describe, elicit & document clinical features in patients with anxiety (PS8.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with anxiety disorders.	S/SH S/SH	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided	MCQ, OSCE, Portfolio assessment

			Perform a mental status examination to assess thought, perception and affect in a patient with anxiety disorders.		observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment
9	Bipolar and Psychotic disorders	Describe, elicit & document clinical features in patients with bipolar disorders (PS7.2) Describe, elicit & document clinical features in patients with psychotic disorders (PS5.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with bipolar disorder/ schizophrenia. Perform a mental status examination to assess thought, perception and affect in a patient with bipolar disorder/ schizophrenia.	S/S H S/S H	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment MCQ, OSCE, Portfolio assessment
10		End-of-postings assessment with feedback				MCQ, OSCE

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two case records in their logbook.
- 50% marks in the end-of posting assessment.

	TOPIC	COMPETENCIES	SPECIFIC LEARNING OBJECTIVE	T/L METHODS	ASSESSMENT
1	Recap of psychiatric history and examination	Eliciting, presenting & documenting psychiatric history and examination (PS3.3, PS6.2, PS7.2, PS5.2, PS8.2)	Document and present a history in patients with mental disorder including current illness, past history, medical history, family history, personal history and premorbid history. Perform a mental status examination to assess general appearance, psychomotor activity, speech, affect, thought and perception	S/SH Small group discussion, guided observation of consultants, role-plays, demonstrations	CBD, Portfolio assessment
2	Organic Psychiatry	Eliciting delirium using the criteria and describe the higher mental functions. PS3.5	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history in a patient with delirium. Perform a mental status examination to assess higher mental functions in a patient with delirium	K/KH Role play, guided observation, demonstration	MCQ, OSCE
3	Family education Part 1	Describe the steps of family education in a simulated environment in a patient with substance use disorder, Depression, Anxiety disorders (PS4.5, PS6.5, PS8.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists	S/SH Guided observation of consultants, role-plays, demonstrations, simulations, Audio-visual aid	OSCE, DOPS
	Family education part 2	Describe steps of family education in a simulated environment in a patient with severe mental illness and elderly with psychiatric illnesses (PS5.4, PS7.5, PS16.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists	S/SH Guided observation of consultants, role-plays, demonstrations, simulations, Audio-visual aid	OSCE, DOPS

4	Stress related/ Dissociative disorders	Describe, elicit & document clinical features of stress related/dissociative disorders. Enumerate, describe and interpret their laboratory investigations PS9.2, PS9.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with stress related disorders. Perform a mental status examination to assess thought, perception and affect in a patient with stress related/dissociative disorder	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS
5			Interview a patient to elicit history of present		

	Somatoform disorder	Describe, elicit & document clinical features of somatoform disorders. Enumeration, describe and interpret laboratory investigations PS10.2, PS10.3	illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with somatoform disorders. Perform a mental status examination to assess thought, perception and affect in a patient with somatoform disorder	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS
6	Personality disorder and gender related issues	Describe, elicit & document clinical features of personality disorders and gender related issues. Enumeration, describe and interpret laboratory investigations in such patients PS11.2, PS11.3, P13.2, P13.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with personality disorders and gender related issues. Perform a mental status examination to assess general appearance, speech, thought, perception and affect in a patient with personality disorder and gender identity issues.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ

7	Psychosomatic disorder	Describe, elicit & document clinical features in patients with psychosomatic disorders. Discuss the psychological factors associated with worsening of underlying medical conditions. Enumeration, describe and interpret laboratory investigations in such patients PS12.2, PS12.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with psychosomatic disorder. Perform a mental status examination to assess thought, perception and affect in a patient with Psychosomatic disorder	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS, CBD
8	Child and adolescent Psychiatric disorders	Describe, elicit & document clinical features in patients with child and adolescent psychiatric disorders. Enumeration, describe and interpret laboratory investigations in such patients PS14.2	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, affect and thought.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, CBD
9	Mental retardation	Describe, elicit & document clinical history in child with mental retardation. Perform adequate physical examination in such children. Choose appropriate investigations in child with mental retardation PS15.4	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, thought and intelligence including adaptive functioning.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, CBD, OSCE

10	Lab investigation in alcohol use disorders , other substance use disorders , depression, bipolar disorder, anxiety disorder	Enumeration, describe and interpret laboratory investigations in such patients (PS4. 3, PS6.3, PS7.3,PS8.2, PS8.3)	Enumerate and describe at least two indications of laboratory tests used in alcohol use disorders and other substance use disorders, depression and bipolar disorder, anxiety disorder	K/KH Small group discussion	MCQ
11	Depression and bipolar disorder	Suicide risk assessment PS6.3, PS7.3	Interview a patient and enumerate risk factors for suicide in the patient. Elicit components of intentionality and lethality	S/SH Demonstration, small group discussion	MCQ, Portfolio assessment, OSCE,DOPS
		Assessment and feedback			

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two cases in their logbook.
- 50% marks in the end-of posting assessment.

Acknowledgements

- 1) This curriculum was adapted from the draft document prepared by the Indian Psychiatry Society UG education subcommittee 2021-2022:
Chairperson: Dr Ravi Gupta,

Co-chairperson: Dr Vinay H R, Convenor: Dr Priya Sreedaran, Advisor: Dr Anil Nischal and EC Co-ordinator: Dr Adarsh Tripathi

2) Dr Luke Salazar and Dr Bhuvaneshwari Sethuraman, from Department of Psychiatry, St John's Medical College, Bangalore

RAJIV GANDHI UNIVERSITY OF

HEALTH SCIENCES

BANGALORE, KARNATAKA



Psychiatry Logbook For Undergraduates

As Per Competency-Based Medical Education Curriculum

BASIC PROFORMA OF THE STUDENT

Photo

PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

PREFACE

This booklet has been adopted from the guidelines of the Indian Psychiatry Society UG education subcommittee 2021-2022 and complies with the “**Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019**” as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress of an undergraduate student through the specified 18 competencies in Dermatology. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

This model logbook is with an aim to create a standard protocol for documenting the achievement of competencies allotted to Psychiatry as per the **Competency Based UG Curriculum (2018)** and the **Regulations on Graduate Medical Education, 2019, Part II**.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as

to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner’s stay in the Department of Psychiatry. This logbook would be a verifiable record of the learner’s progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Completion of specified activities, and submission of certified logbook is necessary for clearing Formative Assessment in Psychiatry. **Successful documentation and submission of the logbook should be a prerequisite for being allowed to take the final summative examination.**

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4. PHASE III PART 1 <ul style="list-style-type: none"> • Clinical Case Presentation Record during 2nd posting • Case records with reflections during 2nd posting 	

5. SCIENTIFIC PROJECT LIKE ICMR/PRESENTATIONS/ OUTREACH ACTIVITIES	
6. ACHIVEMENETS	
7. EXTRACURRICULAR ACTIVITIES	
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9. ATTENDANCE EXTRACT	
10. FINAL SUMMARY	

(Name of College)

Department of Psychiatry

BONAFIDE CERTIFICATE

This is to certify that the candidate Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for undergradutes in Psychiatry including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019.

He/ She is eligible to appear for the University assessment.

Faculty Incharge:

Name:

Signature:

Place:

Date:

Head of Department:

Name:

Signature:

Place:

Date:

2. GENERAL INSTRUCTIONS

- 1.** This logbook is a record of academic and other activities of the student during his/ her designated clinical posting in the Department of DVL.
- 2.** Entries in the logbook reflect the activities undertaken by the student during the posting and are certified by the faculty.
- 3.** The student is responsible for maintaining his/her logbook regularly.
- 4.** The student is responsible for getting the logbook entries verified by concerned faculty regularly. They will not be signed/ verified/ certified after 15 days have elapsed after the end of posting.
- 5.** The logbook should be verified by the Head of Department before forwarding the application of the student for the University Examination. This is mandatory requirement for appearing for University Examinations
- 6.** The reflections should demonstrate the learning of the student that has taken place during the period of clinical posting. Please do not simply repeat the activities performed. A note on the learning experience, what was learnt and how it is going to be useful in the future, is expected. Reflections will be a useful document and assess learning for many competencies where formal assessment is not being done. Student needs to write academically useful reflections as per the prescribed format and within the time frame of the posting. These will be assessed by the teachers.

A. COMPETENCIES to be acquired during clinical postings 1, Phase 2

No	Topic	Competencies	SLOs
1	Doctor patient relationship	Developing rapport & empathy (PS1.1, PS3.4) Importance of confidentiality (PS1.4)	Define and describe the meaning of terms rapport and empathy. Demonstrate comfort with communicating with patient, use modes of communication enabling patient to feel safe and comfortable to participate in a dialogue. Enumerate the ethical principles of confidentiality including safeguarding of information, and consent to disclose information. Enumerate conditions under which confidentiality can be breached.
2	Breaking bad news	Breaking bad news (PS1.3)	Demonstrate breaking bad news to a patient or their family.
3	Introduction to psychiatry	Eliciting, presenting & documenting psychiatric history (PS3.3)	Interview a patient to elicit onset, course, duration and progress of illness with respect to present illness, past history, medical history, family history, personal history and premorbid history relevant to present illness.
4	Introduction to psychiatry	Performing mini mental state examination (PS3.5)	Examine a patient to elicit consciousness, orientation, attention and registration, recent and remote memory, affect and mood, speech, form and content of thought, perception, insight into mental illness.
5	Alcohol use disorders	Describe, elicit & document clinical features of alcohol use disorders (PS4.2)	Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.
6	Substance use disorders- tobacco	Describe, elicit & document clinical features of substance use disorders- tobacco (PS4.2)	Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.

7	Depression	Describe, elicit & document clinical features in patients with depression (PS6.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression. Perform a mental status examination to assess thought, perception and affect in a patient with depression.
8	Anxiety disorders (excluding OCD)	Describe, elicit & document clinical features in patients with anxiety (PS8.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with anxiety disorders. Perform a mental status examination to assess thought, perception and affect in a patient with anxiety disorders.
9	Bipolar and Psychotic disorders	Describe, elicit & document clinical features in patients with bipolar disorders (PS7.2) Describe, elicit & document clinical features in patients with psychotic disorders (PS5.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with bipolar disorder/ schizophrenia. Perform a mental status examination to assess thought, perception and affect in a patient with bipolar disorder/ schizophrenia.
10		End-of-postings assessment with feedback	

DAILY WORKFLOW (Suggested):

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two case records in their logbook.

- 50% marks in the end-of posting assessment.

1st Posting

CLINICAL CASE PRESENTATION RECORD

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases) **At least 3 cases per clinical posting**

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

1st Posting Phase II

REFLECTIONS: CLINICAL CASE PRESENTATION

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA (Alcohol/Tobacco)

Student name: Roll no.:

Session date:

Session objectives: (SLOs) Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.

OR Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well?
How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature:

Date:

**U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA
(Depression/Anxiety)**

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression/ anxiety.

2. Perform a mental status examination to assess thought, perception and affect in a patient with depression/ anxiety.

P Patient initials :

Age:

Sex:

Hist

ory:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature:

Date:

Phase II
End of posting Assessment

Suggested Methods

- 1. Viva Voce**
- 2. CA-OSCE/ Short case**
- 3. Bedside assessment**
- 4. MCQs**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

Phase III Part 1
CLINICAL CASE PRESENTATION RECORD

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases per clinical posting. Competencies to be addressed is given next)

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

	TOPIC	COMPETENCIES	SPECIFIC LEARNING OBJECTIVE
1	Recap of psychiatric history and examination	Eliciting, presenting & documenting psychiatric history and examination (PS3.3, PS6.2, PS7.2, PS5.2, PS8.2)	Document and present a history in patients with mental disorder including current illness, past history, medical history, family history, personal history and premorbid history. Perform a mental status examination to assess general appearance, psychomotor activity, speech, affect, thought and perception

2	Organic Psychiatry	Eliciting delirium using the criteria and describe the higher mental functions. PS3.5	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history in a patient with delirium. Perform a mental status examination to assess higher mental functions in a patient with delirium
3	Family education Part 1	Describe the steps of family education in a simulated environment in a patient with substance use disorder, Depression, Anxiety disorders (PS4.5, PS6.5, PS8.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists
	Family education part 2	Describe steps of family education in a simulated environment in a patient with severe mental illness and elderly with psychiatric illnesses (PS5.4, PS7.5, PS16.5)	
4	Stress related/Dissociative disorders	Describe, elicit & document clinical features of stress related/dissociative disorders. Enumerate, describe and interpret their laboratory investigations PS9.2, PS9.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with stress related disorders. Perform a mental status examination to assess thought, perception and affect in a patient with stress related/dissociative disorder
5	Somatoform disorder	Describe, elicit & document clinical features of somatoform disorders. Enumeration, describe and interpret laboratory investigations	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with somatoform disorders. Perform a mental status examination to
		PS10.2, PS10.3	assess thought, perception and affect in a patient with somatoform disorder

6	Personality disorder and gender related issues	Describe, elicit & document clinical features of personality disorders and gender related issues. Enumeration, describe and interpret laboratory investigations in such patients PS11.2, PS11.3, P13.2, P13.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with personality disorders and gender related issues. Perform a mental status examination to assess general appearance, speech, thought, perception and affect in a patient with personality disorder and gender identity issues.
7	Psychosomatic disorder	Describe, elicit & document clinical features in patients with psychosomatic disorders. Discuss the psychological factors associated with worsening of underlying medical conditions. Enumeration, describe and interpret laboratory investigations in such patients PS12.2, PS12.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with psychosomatic disorder. Perform a mental status examination to assess thought, perception and affect in a patient with Psychosomatic disorder
8	Child and adolescent Psychiatric disorders	Describe, elicit & document clinical features in patients with child and adolescent psychiatric disorders. Enumeration, describe and interpret laboratory investigations in such patients PS14.2	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, affect and thought.
9	Mental retardation	Describe, elicit & document clinical history in child with mental retardation. Perform adequate physical examination in such children. Choose appropriate investigations in child with mental retardation PS15.4	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, thought and intelligence including adaptive functioning.
10	Lab investigation in alcohol use	Enumeration, describe and interpret laboratory	Enumerate and describe at least two indications of laboratory tests used in

	disorders, other substance use disorders, depression, bipolar disorder, anxiety disorder	investigations in such patients (PS4. 3, PS6.3, PS7.3,PS8.2, PS8.3)	alcohol use disorders and other substance use disorders, depression and bipolar disorder, anxiety disorder
11	Depression and bipolar disorder	Suicide risk assessment PS6.3, PS7.3	Interview a patient and enumerate risk factors for suicide in the patient. Elicit components of intentionality and lethality
		Assessment and feedback	

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two cases in their logbook.
- 50% marks in the end-of posting assessment.

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA

(Family education in a patient with substance use /anxiety/depression/severe mental illness/elderly with psychiatric illness)

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis, need for treatment for a specific diagnosis and referral to specialists

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature and Date:

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA
(Suicidal risk assessment)

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview a patient and enumerate risk factors for suicide in the patient
2. Elicit components of intentionality and lethality

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature and Date:

Phase III Part 1
End of posting Assessment

Suggested Methods

- 1. Viva Voce**
- 2. CA-OSCE / Short case**
- 3. Bedside assessment**
- 4. MCQs**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

6. SCIENTIFIC PROJECT PRESENTATIONS/REPORTS/OUTREACH ACTIVITIES/UG QUIZ

SL NO	DATE	PARTICULARS	SIGNATURE OFSTAFF

9. ASSESSMENT RECORD

Phase	Duration (From-To)	Assessment score (marks obtained)	Total marks	Assessment (%)	Remarks	Faculty Signature
Phase II						
Phase III Part I						
Total						

10. SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1 st	Phase II	2 weeks					
2 nd	Phase III Part I	2 weeks					
Total						Cumulative attendance n/%	

Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka



Dermatology, Venereology & Leprosy Curriculum as per Competency-Based Medical Education Curriculum

RGUHS Dermatology, Venereology & Leprosy Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate (IMG), should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Dermatology is the branch of medicine dealing with the skin and its appendages. It is a speciality which deals with diseases of skin including leprosy and sexually transmitted diseases, hair, nails, and cosmetic problems and encompasses both medical and surgical modalities. The dermatology undergraduate curriculum provides the IMG the requisite knowledge, essential skills, and appropriate attitudes to be able to diagnose and treat common skin disorders and to be able to recognise and refer other cutaneous conditions.

The NMC, in the Graduate medical regulations 2019, has provided the list of dermatology competencies required for an IMG and these have been included in this dermatology curriculum document. The Specific

learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching/Learning methods and preferred assessment methods both formative and summative. Since dermatology doesn't have a separate dermatology exam paper for undergraduate, model division of marks for dermatology under medicine papers has been highlighted. Also, model questions for the same has been attached.

Goals and Objectives of the RGUHS Dermatology, Venereology & Leprosy Curriculum

Goals

Specific goal for IMG in dermatology is to identify and treat common dermatology disease and to refer as appropriate.

Objectives

A) Knowledge

At the end of the course student should be able to:

- f. Describe the applied anatomy, physiology and biochemical attributes of the normal skin and its appendages.
- g. Understanding of the principles of diagnosis of diseases of the skin and its appendages.
- h. Demonstrate the ability to apply the knowledge in a clinical setting.

(B) Skills

At the end of the course the student should be able to:

- a. Ability to recognize, diagnose, order appropriate investigations and treat common diseases of the skin including leprosy in the primary care setting and refer as appropriate
- b. A syndromic approach to the recognition, diagnosis, prevention, counselling, testing and management of common sexually transmitted diseases including HIV based on national health priorities.
- c. Ability to recognize and treat emergencies including drug reactions and refer as appropriate.

C) Attitude and communication skills

At the end of the course the student should be able to:

- m. Communicate effectively with patients, their families and the public at large.
- n. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- o. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- p. Appreciate the issues of equity and social accountability while undergoing all clinical encounters.

Teaching hours (Third professional, Part-I)				
Subject	Teaching hours	Tutorials/Seminars/Integrated teaching (Hours)	Self directed learning (Hours)	Total (Hours)
Dermatology	20	5	5	30

Clinical postings (Total : 6 weeks)

2 weeks: II MBBS
2 weeks: III MBBS Part I
2 weeks: III MBBS Part II

Theory teaching hours (Third professional, Part-I)

THEORY				
Sl. No.	Topic	Competencies	Time	T/L method
1	Structure & function of skin with its appendages	AN 4.2	1 hour	Lecture
2	Acne	DR 1.1, DR 1.3	1 hour	Lecture
3	Vitiligo	DR 2.2	1 hour	Lecture
4	Papulosquamous disorders: Psoriasis	DR 3.3	1 hour	Lecture
5	Lichen Planus	DR 4.2	1 hour	Lecture
6	Scabies	DR.5.1, DR5.3	1 hour	Lecture
7	Pediculosis	DR 6.1	1 hour	Lecture
8	Fungal infections	DR 7.1, DR 7.3	1 hour	Lecture
9	Viral Infections	DR 8.1, DR 8.7	1 hour	Lecture
10	Leprosy Part I	DR 9.1, DR 9.4, DR 9.5	1 hour	Lecture
11	Leprosy Part II	DR 9.6, DR 9.7	1 hour	Lecture
12	STD's Part I	DR 10.3, DR 10.4	1 hour	Lecture
13	STD's Part I	DR 10.6, 10.8, DR 10.9, DR 10.10, DR 10.11	1 hour	Lecture

14	HIV	DR 11.1, DR 11.3	1 hour	Lecture
15	Dermatitis & Eczema	DR 12.1, DR 12.3, DR 12.4	1 hour	Lecture
16	Urticaria & angioedema	DR 14.1, 14.5	1 hour	Lecture
17	Bacterial Infections/ Pyoderma	DR 15.3	1 hour	Lecture
18	Nutritional Disorders & Skin	DR 17.1, 17.2, 17.3, 17.4	1 hour	Lecture
19	Systemic Diseases & Skin	DR 18.1, DR 18.2	1 hour	Lecture
20	Drugs in skin diseases	PH 1.57	1 hour	Lecture
	Total		20 hours	

List of all Dermatology Competencies with their specific learning objectives, with suggested teaching learning and assessment methods

	Competencies	Specific learning objectives	Teaching learning methods	Assessment
Topic: Structure & function of skin with its appendages				
AN 4.2 of with its	Structure & function of appendages Structure &	skin Structure & function of function of Hair lecture Structure & function of Nail	Skin Lecture	MCQs at the end
Topic: Acne				
DR1.1	Enumerate the causative and risk factors of acne	Composition of sebum Functions of sebaceous glands Etiopathogenesis of acne Risk factors for development acne	Lecture	MCQs at the end of lecture
DR1.3	Describe the treatment and preventive measures for various kinds of acne	Preventive measures to control Topical therapeutics in acne Systemic therapeutics in acne Lasers in management of acne	Lecture	MCQs at the end of lecture
Topic: Vitiligo				
DR2.2	Describe the treatment of vitiligo	Etiopathogenesis of vitiligo Clinical types of vitiligo Topical modalities in treatment of vitiligo Systemic modalities in	Lecture	MCQs at the end of lecture

		treatment of vitiligo Phototherapy in management of vitiligo		
Topic: Papulosquamous disorders				
DR 3.3	Enumerate the indications for and describe the various modalities of treatment of psoriasis including topical, systemic and phototherapy	Etiopathogenesis of psoriasis Clinical features and types of psoriasis Diagnosis of psoriasis Topical therapy and its indications Phototherapy and its indications Systemic therapy and its indications Biologicals in psoriasis	Lecture	MCQs at the end of lecture
Topic: Lichen planus				
DR 4.2	Enumerate and describe the treatment modalities for lichen planus	Etiopathogenesis of lichen planus Clinical features and types of lichen planus Diagnosis of lichen planus Topical and systemic modalities of lichen planus	Lecture	MCQs at the end of lecture
Topic: Scabies				
DR 5.1	Describe the etiology, microbiology, pathogenesis, natural history, clinical features, presentations and complications of scabies in adults and children	Structure and life cycle of scabies mite Clinical types and presentations of scabies Complications of scabies	Lecture	MCQs at the end of lecture
DR 5.3	Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Diagnosis of scabies General measures of treatment Topical scabicide agents and method of administration Systemic drugs for treatment Adverse effects of scabicide agents Preventive measures to reduce transmission	Lecture	MCQs at the end of lecture
Topic: Pediculosis				
DR 6.1	Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Etiopathogenesis of pediculosis Clinical features of pediculosis Complications of pediculosis	Lecture	MCQs at the end of lecture

		Diagnosis of pediculosis Treatment modalities and method of administration		
Topic: Fungal Infections				
DR 7.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adult and children	Etiopathogenesis of Dermatophytosis Clinical manifestations and types of dermatophytosis Laboratory diagnosis of dermatophytosis	Lecture	MCQs at the end of lecture
DR 7.3	Describe the pharmacology and action of antifungal (systemic and topical) agents. Enumerate side effects of antifungal therapy	Mechanism of action, indications and side effect profile of systemic antifungals Mechanism of action, indications and side effect profile of topical antifungals	Lecture	MCQs at the end of lecture
Topic: Viral infections				
DR 8.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Etiopathogenesis and clinical features of herpes virus infections Etiopathogenesis and clinical features of human papilloma virus infections Etiopathogenesis and clinical features of molluscum contagiosum	Lecture	MCQs at the end of lecture
DR 8.7	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for common viral illnesses of the skin	Mechanism of action, indications and side effect profile of antiviral therapy	Lecture	MCQs at the end of lecture
Topic: Leprosy				
DR 9.1	Classify describe the epidemiology etiology, microbiology, pathogenesis, clinical presentations and diagnostic features of Leprosy	History and epidemiology of Hansen's disease Microbiology and ultrastructure of M. Leprae Etiopathogenesis and clinical presentations of leprosy Laboratory diagnosis of leprosy	Lecture	MCQs at the end of lecture

DR 9.4	Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	Etiopathogenesis, types and clinical features of lepra reactions Management of lepra	Lecture	MCQs at the end of lecture
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		reactions		
DR 9.5	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	Mechanism of action, administration, indications and side effect profile of anti leprosy medication.	Lecture	MCQs at the end of lecture
DR 9.6	Describe the treatment of Leprosy based on the WHO guidelines	Multi drug therapy	Lecture	MCQs at the end of lecture
DR 9.7	Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	Complications of Hansen's disease Management of deformities in Hansen's disease	Lecture	MCQs at the end of lecture

Topic: Sexually Transmitted Diseases

DR 10.3	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	Etiology, pathogenesis and microbiology of syphilis Clinical features, types of syphilis Laboratory diagnosis of syphilis Treatment of syphilis	Lecture	MCQs at the end of lecture
DR 10.4	Describe the prevention of congenital syphilis	Laws and clinical manifestations of congenital syphilis Preventive aspects of congenital syphilis	Lecture	MCQs at the end of lecture
DR 10.6	Describe the etiology, diagnostic and clinical features of non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Etiopathogenesis, types and clinical features of chancroid Etiopathogenesis, types and clinical features of Donovanosis Etiopathogenesis, types and clinical features of LGV	Lecture	MCQs at the end of lecture

DR 10.8	Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Management of chancroid Management of donovanosis Management of LGV	Lecture	MCQs at the end of lecture
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DR 10.9	Describe the syndromic approach to ulcerative sexually transmitted disease	Syndromic management of genital ulcer disease	Lecture	MCQs at the end of lecture
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DR 10.10	Describe the etiology, diagnostic and clinical features and management of gonococcal and nongonococcal urethritis	Etio-pathogenesis of gonococcal urethritis and non-gonococcal urethritis Laboratory diagnosis of gonococcal urethritis and non-gonococcal urethritis Treatment of gonococcal and non gonococcal urethritis	Lecture	MCQs at the end of lecture
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DR 10.11	Describe the etiology, diagnostic and clinical features and management of vaginal discharge	Differential diagnosis of vaginal discharge Clinical features, risk factors and diagnosis of trichomoniasis Predisposing factors, clinical features and diagnosis of candidiasis Clinical features and diagnosis of bacterial vaginosis	Lecture	MCQs at the end of lecture
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Topic: HIV

DR 11.1	Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	Structure of HIV Etiopathogenesis and stages of HIV Cutaneous manifestations of AIDS Complications of AIDS	Lecture	MCQs at the end of lecture
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DR 11.3	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	Antiretroviral therapy:- Pharmacology, route of administration, indications and adverse reactions of ART.	Lecture	MCQs at the end of lecture
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Topic: Dermatitis and Eczema

DR 12.1	Describe the aetiopathogenesis of eczema	Definition of eczema Etiology and predisposing factors of eczema.	Lecture	MCQs at the end of lecture
DR 12.3	Classify and grade eczema	Various classification and grading eczema	Lecture	MCQs at the end of lecture
DR 12.4	Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in	General measures in management of eczema Indications for topical therapy Indications for systemic	Lecture	MCQs at the end of lecture

	the treatment of eczema	therapy		
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Topic: Urticaria Angioedema

DR 14.1	Describe the etiology, pathogenesis and clinical precipitating features and classification of Urticaria and angioedema	Classification of urticaria and angioedema Etio-pathogenesis and precipitating factors of urticarial Clinical features of urticaria and angioedema	Lecture	MCQs at the end of lecture
DR 14.5	Enumerate the indications and describe the pharmacology indications and adverse reactions of drugs used in the urticaria and angioedema	Diagnostic tests for urticaria and angioedema Treatment of urticaria and angioedema	Lecture	MCQs at the end of lecture

Topic: Pyoderma

DR 15.3	Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	Classify pyoderma Etiopathogenesis of pyodermas Clinical features of staphylococcal pyoderma Clinical features of streptococcal pyodermas Clinical features of other bacterial infections Management of pyoderma	Lecture	MCQs at the end of lecture
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Topic: Nutritional Deficiencies and Skin

DR 17.1	Enumerate and identify the cutaneous findings in vitamin A deficiency	Cutaneous manifestations of Vitamin A deficiency Treatment of Vitamin A deficiency	Lecture	MCQs at the end of lecture
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DR 17.2	Enumerate and describe the various skin changes in Vitamin B complex deficiency	Cutaneous manifestations of Vitamin B complex deficiency Treatment of Vitamin B complex deficiency	Lecture	MCQs at the end of lecture
DR 17.3	Enumerate and describe the various changes in Vitamin C deficiency	Cutaneous manifestations of Vitamin C deficiency Treatment of Vitamin C deficiency	Lecture	MCQs at the end of lecture
DR 17.4	Enumerate and describe the various changes in Zinc deficiency	Cutaneous manifestations of Zinc deficiency Treatment of Zinc deficiency	Lecture	MCQs at the end of lecture
Topic: Systemic diseases and the skin				
DR 18.1	Enumerate the cutaneous features of Type 2 diabetes	Cutaneous manifestations of Type 2 diabetes	Lecture	MCQs at the end of lecture
DR 18.2	Enumerate the cutaneous features of hypo/hyperthyroidism	Cutaneous manifestations of Hypothyroidism Cutaneous manifestations of Hyperthyroidism	Lecture	MCQs at the end of lecture
Topic: Drugs in skin diseases				
PH 1.57	Drugs in skin disease	Topical agents in dermatology Systemic agents in dermatology	Lecture	MCQs at the end of lecture

Self- Directed learning:

Duration: 5 hours

Students will be given clinical case scenarios. Reference books and E material will be suggested to them beforehand. Discussion regarding the case scenarios including approach to diagnosis and management will be done.

Self- Directed learning		
Sl. No.	Topics	Competencies
1	Vesiculobullous disorders	DR 13.1-13.3
2	Cutaneous adverse reaction	DR 12.7
3	Leprosy	DR 9.1-9.7
4	Collagen vascular disorders	DR 16.1
5	STDs – Genital ulcer diseases	DR 10.9
Duration	5 hours	

SGD (Small Group Discussion):

A small group of 25 students will be done. A topic is given to each group and same will be discussed among the group.

Sl No.	Topic	Competencies	Duration (Hours)
1	Cutaneous manifestations in Diabetes Mellitus	DR18.1	1
2	Cutaneous manifestations in Thyroid disorders	DR18.2	1
3	Cutaneous manifestations in HIV	DR11.1,11.3	1
4	Psychocutaneous disorders	DR 9.7	1
5	Collagen vascular disorders	DR16.1,16.2	1
Total: 5 hours			

Integration: The teaching should be aligned and integrated horizontally and vertically in order to emphasize the biologic basis of diseases of the skin, sexually transmitted diseases and leprosy and to provide an understanding that skin diseases may be a manifestation of systemic disease. **Topics for vertical integration**

SI No	Integrated teaching	Integrated with
		(Department)
1	AN4.2 Describe structure & function of skin with its appendages	Anatomy
2	AN4.4 Describe modifications of deep fascia with its function	Anatomy
3	AN4.5 Explain principles of skin incisions	Anatomy
4	DR5.3 Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Pharmacology
5	DR6.1 Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Microbiology
6	DR7.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adults and children	Microbiology
7	DR7.2 Identify Candida species in fungal scrapings and KOH mount	Microbiology
8	DR7.3 Describe the pharmacology and action of antifungal (systemic and topical) agents. Enumerate side effects of antifungal therapy	Microbiology, Pharmacology
9	DR8.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Microbiology

10	DR8.7 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for common viral illnesses of the skin	Pharmacology
11	DR9.1 Classify describe the epidemiology etiology microbiology pathogenesis, clinical presentations and diagnostic features of Leprosy	Microbiology, Community medicine
12	DR9.4 Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	Pharmacology
13	DR9.5 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	Pharmacology, Community medicine
14	DR9.6 Describe the treatment of Leprosy based on the WHO guidelines	Pharmacology, Community medicine
15	DR9.7 Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	Pharmacology, Psychiatry
16	DR10.1 Identify and classify syphilis based on the presentation and clinical manifestations	Microbiology
17	DR10.2 Identify spirochete in a dark ground microscopy	Microbiology

18	DR10.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	Microbiology, Pharmacology
19	DR10.6 Describe the etiology, diagnostic and clinical features of nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology
20	DR10.7 Identify and differentiate based on the clinical features non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology
21	DR10.8 Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non- syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology, Pharmacology
22	DR11.1 Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	Microbiology
23	DR11.2 Identify and distinguish the dermatologic manifestations of HIV, its complications, opportunistic infections and adverse reactions	Microbiology

24	DR11.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	Microbiology, Pharmacology
25	DR12.7 Identify and distinguish fixed drug eruptions and Steven Johnson syndrome from other skin lesions	Microbiology, Pathology
26	DR14.1 Describe the etiology, pathogenesis and clinical precipitating features and classification of Urticaria and angioedema	Microbiology, Pathology
27	DR15.2 Identify staphylococcus on a gram stain	Microbiology
28	DR15.3 Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	Microbiology, Pharmacology
29	PH1.46 Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antileprotic drugs	Pharmacology
30	DR16.2 Identify and distinguish Raynaud's phenomenon	Pathology
31	DR17.1 Enumerate and identify the cutaneous findings in vitamin A deficiency	Biochemistry
32	DR17.2 Enumerate and describe the various skin changes in Vitamin B complex deficiency	Biochemistry
33	DR 17.3 Enumerate and describe the various changes in Vitamin C deficiency	Biochemistry
34	DR17.4 Enumerate and describe the various changes in Zinc deficiency	Biochemistry
35	PA34.1 Describe the risk factors, pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	Pathology
36	PA34.2 Describe the risk factors, pathogenesis, pathology and natural history of basal cell carcinoma of the skin	Pathology
37	PA34.3 Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors, morphology clinical features and metastases of melanoma	Pathology
38	MI4.3 Describe the etio-pathogenesis of Skin and soft tissue infections and discuss the clinical course, and the laboratory diagnosis.	Microbiology
39	MI7.2 Describe the etio-pathogenesis and discuss the laboratory diagnosis of sexually transmitted infections. Recommend preventive measures, wherever relevant.	Microbiology
40	PH1.57 Describe drugs used in skin disorders	Pharmacology

41	DR14.5 Enumerate the indications and describe the pharmacology indications and adverse reactions of drugs used in the urticaria and indications and adverse reactions of drugs used in the urticaria and angioedema	Pharmacology
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Topics for horizontal integration

SI No	Integrated teaching	Integrated with (Department)
1	DR5.1 Describe the etiology, microbiology, pathogenesis, natural history, clinical features, presentations and complications of scabies in adults and children	Pediatrics
2	DR5.2 Identify and differentiate scabies from other lesions in adults and children	Pediatrics
3	DR5.3 Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Pediatrics
4	DR6.1 Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Pediatrics
5	DR6.2 Identify and differentiate pediculosis from other skin lesions in adults and children	Pediatrics
6	DR7.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adults and children	Pediatrics

7	DR8.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Pediatrics
8	PE31.4 Identify Atopic dermatitis and manage	Pediatrics
9	DR9.1 Classify describe the epidemiology etiology microbiology pathogenesis, clinical presentations and diagnostic features of Leprosy	General Medicine
10	DR9.2 Demonstrate (and classify based on) the clinical features of leprosy including an appropriate neurologic examination	General Medicine

11	DR9.4 Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	General Medicine
12	DR9.5 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	General Medicine
13	DR9.6 Describe the treatment of Leprosy based on the WHO guidelines	General Medicine
14	DR9.7 Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	General Medicine
15	DR10.1 Identify and classify syphilis based on the presentation and clinical manifestations	General Medicine
16	DR10.2 Identify spirochete in a dark ground microscopy	General Medicine
17	DR10.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	General Medicine
18	DR10.4 Describe the prevention of congenital syphilis	General Medicine
19	DR10.5 Counsel in a non-judgemental and empathetic manner patients on prevention of sexually transmitted disease	General Medicine
20	DR10.6 Describe the etiology, diagnostic and clinical features of nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
21	DR10.7 Identify and differentiate based on the clinical features nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
22	DR10.8 Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non- syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
23	DR10.9 Describe the syndromic approach to ulcerative sexually transmitted disease	General Medicine
24	DR10.10 Describe the etiology, diagnostic and clinical features and management of gonococcal and non-gonococcal urethritis	General Medicine
25	DR11.1 Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	General Medicine

26	DR11.2 Identify and distinguish the dermatologic manifestations of HIV, its complications, opportunistic infections and adverse reactions	General Medicine
27	DR11.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	General Medicine
28	DR12.7 Identify and distinguish fixed drug eruptions and Steven Johnson syndrome from other skin lesions	General Medicine
29	DR16.1 Identify and distinguish skin lesions of SLE	General Medicine
30	DR16.2 Identify and distinguish Raynaud's phenomenon	General Medicine
31	DR17.1 Enumerate and identify the cutaneous findings in vitamin A deficiency	General Medicine/Pediatrics
32	DR17.2 Enumerate and describe the various skin changes in Vitamin B complex deficiency	General Medicine/Pediatrics
33	DR 17.3 Enumerate and describe the various changes in Vitamin C deficiency	General Medicine/Pediatrics
34	DR17.4 Enumerate and describe the various changes in Zinc deficiency	General Medicine/Pediatrics
35	DR18.1 Enumerate the cutaneous features of Type 2 diabetes	General Medicine
36	DR18.2 Enumerate the cutaneous features of hypo/hyper-thyroidism	General Medicine
37	DR15.3 Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	General Surgery
38	DR15.4 Enumerate the indications for surgical referral	General Surgery
39	DR10.11 Describe the etiology, diagnostic and clinical features and management of vaginal discharge	Obstetrics & Gynaecology

Assessment

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings which will be added to General Medicine for eligibility to appear for the examinations.

Internal Assessment

There won't be separate internal assessment but 10% of total internal exams marks in general medicine should include questions from dermatology in consultation with department of Dermatology.

University examinations

Dermatology doesn't have a separate paper for third Professional Part II. But discipline of Dermatology, venereology and Leprosy (DVL) in combination with Psychiatry and Respiratory medicine including Tuberculosis should constitute 25% of theory marks in Paper II of General Medicine as separate section. So, 10% of questions must be incorporated from Dermatology in Paper II of General Medicine.

Marks allotted

Dermatology	Theory
Total marks	8-10 marks
	Short answer question 2x3 = 6 marks
	MCQs 4x1=4 marks

Clinical examination/ Practical's:

It is desirable to include one short cases in practical examination in General Medicine examination.

Sample Questions to be incorporated in General Medicine paper II as separate section

Sample short answers (3 marks each)

1. Describe special lesions in Dermatology with examples?
2. Describe in detail Cardinal signs of leprosy?
3. Discuss clinical variants of scabies?
4. Discuss syndromic management of genital ulcer disease?
5. Classify vitiligo based on morphology and distribution?
6. Discuss etiopathogenesis of acne?

Sample MCQs (1 marks each)

1. Which of the following types of psoriasis can be life threatening?
a. Guttate psoriasis b. Unstable psoriasis c. Localized pustular psoriasis d. Erythrodermic psoriasis
2. Nikolsky sign is positive in:
a. Bullous pemphigoid b. Herpes simplex c. Pemphigus vulgaris d. Epidermolysis bullosa
3. All of the following is manifestation of scurvy, except:
a. Hemorrhagic signs b. Hyperkeratosis of hair follicles c. Hyperpigmentation d. Hypochondriasis
4. Ecthyma gangrenosum is caused by:
a. Streptococcus pyogenes b. Pseudomonas aeruginosa c. Staphylococcus aureus d. Proteus vulgaris
5. One finger tip unit ointment (FTU) is equivalent to
a. 0.25g b. 0.75g c. 0.5g d. 1.0g
6. The isomorphic phenomenon is seen all except:
a. Lichen planus b. Psoriasis c. Vitiligo d. Lichen spinulosus

Acknowledgement **of contributors**

Dr Shashi Kumar BM, Associate Professor, Department of Dermatology, Mandya Institute of Medical Sciences.
Dr Deepadarshan K, Assistant professor in Department of Dermatology, Mandya Institute of Medical Sciences,
Mandya for his contribution in preparation of this curriculum.

BANGALORE, KARNATAKA



**Dermatology, Venereology & Leprosy
LOGBOOK
For Undergraduates**

As Per
Competency-Based Medical Education Curriculum

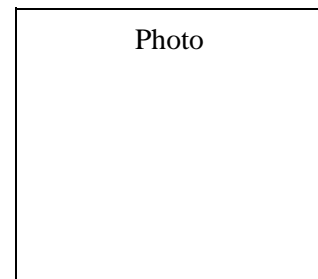
NAME OF THE CANDIDATE :

NAME OF THE COLLEGE :

UNIVERSITY REGISTER NUMBER:

ACADEMIC YEAR :

BASIC PROFORMA OF THE STUDENT



PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

PREFACE

This booklet has been adopted from the book prepared by an Expert Group of IADVL Academy and complies with the **“Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019”** as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress of an

undergraduate student through the specified 18 competencies in Dermatology. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

These guidelines for recording logbook entries are recommended for the MBBS students from the academic year 2019-20 onwards. This model logbook is with an aim to create a standard protocol for documenting the achievement of competencies allotted to DVL as per the **Competency Based UG Curriculum (2018)** and the **Regulations on Graduate Medical Education, 2019, Part II**.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner's stay in the Department of Dermatology and STD. This logbook would be a verifiable record of the learner's progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Completion of specified activities, and submission of certified logbook is necessary for clearing Formative Assessment in Dermatology and STD. **Successful documentation and submission of the logbook should be a prerequisite for being allowed to take the final summative examination.**

Glossary of terms

1. **Number** of Competency- addressed as per Volume of the UG Curriculum e.g. DR2.1
2. **Name of the activity-** To specify seminar/ Live or Group discussion/ Session/ Clinical Interaction/ Demonstration etc.
3. **Date the activity gets completed**
4. **Attempt at each activity by the learner**
 - a. First attempt (or) only attempt
 - b. Repeat (R) of a previously done activity

- c. Remedial activity (Re) based on the determination by the faculty
- 5. **Rating upon completion of activity**
 - a. Below expectations (B);
 - b. Meets expectations (M)
 - c. Exceeds expectations (E)
- 6. **Decision of faculty**
 - a. **C (closed)**: activity is completed, therefore closed. It can be certified, if needed.
 - b. **R (repeat)**: activity needs to be repeated without any further intervention.
 - c. **Re (remedial)**: activity needs remedial action (usually done after repetition did not lead to satisfactory completion)
- 7. Initials (Signature) of faculty indicating the completion or other determination
- 8. Initial (Signature) of the learner, if feedback has been received.

A numerical score may also be used if deemed necessary by the Department

Three posting of 2 weeks each as per GMER document. Competencies have been divided accordingly.

Method of teaching-learning advised.

Method of assessment advised.

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<ul style="list-style-type: none"> • Clinical Case Presentation Record • Reflections 	
14. PHASE III PART 1 <ul style="list-style-type: none"> • Competencies Requiring Certification • Clinical Case Presentation Record • Reflections 	
15. PHASE III PART 2 <ul style="list-style-type: none"> • Competencies Requiring Certification • Clinical Case Presentation Record • Reflections 	
16. SCIENTIFIC PROJECT LIKE ICMR/PRESENTATIONS/ OUTREACH ACTIVITIES	
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21. FINAL SUMMARY	

(Name of Institution)

DEPARTMENT OF Dermatology, Venereology & Leprosy (DVL)

BONAFIDE CERTIFICATE

This is to certify that the candidate Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for undergraduates in DVL including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019.

He/ She is eligible to appear for the University assessment.

Faculty Incharge:

Head of Department:

Name:

Name:

Signature:

Signature:

Place:

Place:

Date:

Date:

2. GENERAL INSTRUCTIONS

1. This logbook is a record of academic and other activities of the student during his/ her designated clinical posting in the Department of DVL.
2. Entries in the logbook reflect the activities undertaken by the student during the posting and are certified by the faculty.
3. The student is responsible for maintaining his/her logbook regularly.
4. The student is responsible for getting the logbook entries verified by concerned faculty regularly. They will not be signed/ verified/ certified after 15 days have elapsed after the end of posting.
5. The logbook should be verified by the Head of Department before forwarding the application of the student for the University Examination. This is mandatory requirement for appearing for University Examinations
6. The reflections should demonstrate the learning of the student that has taken place during the period of clinical posting. Please do not simply repeat the activities performed. A note on the learning experience, what was learnt and how it is going to be useful in the future, is expected. Reflections will be a useful document and assess learning for many competencies where formal assessment is not being done. Student needs to write academically useful reflections as per the prescribed format and within the time frame of the posting. These will be assessed by the teachers.

3. COMPETENCIES: PHASE II

B. Psychomotor Competencies that are required to be complete during the Clinical postings

Competency Addressed	Date of completion	Suggested Activity
DR-A1: Identify and differentiate the primary, secondary and special skin lesions		CASE PRESENTATION
DR-A3: Elicit and present medical history of a common dermatology case		<i>Any of the following cases:</i>

DR-A2: Present and describe basics of dermatological examination of a common dermatology case.		<i>Pediculosis, scabies, herpes labialis, herpes zoster and varicella, viral warts, molluscum contagiosum, folliculitis impetigo and carbuncle, Leprosy, Psoriasis, Tinea.</i>
DR5.2: Identify and differentiate scabies from other lesions in adults and children		
DR6.2: Identify and differentiate pediculosis from other skin lesions in adults and children		
DR8.2: Identify and distinguish herpes simplex and herpes labialis from other skin lesions		
DR8.3: Identify and distinguish herpes zoster and varicella from other skin lesions		
DR8.4: Identify and distinguish viral warts from other skin lesions		
DR8.5: Identify and distinguish molluscum contagiosum from other skin lesions		
DR8.6: Enumerate the indications, describe the procedure and perform a Tzanck smear		
DR15.1: Identify and distinguish folliculitis impetigo and carbuncle from other skin lesions		
DR 7.2 Identify candida species in fungal scrapings and KOH mount		In the side laboratory observe each at least once
DR 10.2 Identify spirochete in a dark ground microscopy		
DR 15.2 Identify staphylococcus on a gram stain		

**Phase II
CLINICAL CASE PRESENTATION RECORD**

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases) **At least 3 cases per clinical posting**

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

**Phase II
REFLECTIONS: CLINICAL CASE PRESENTATION**

(Students should preferably reflect on cases which they themselves have presented): **At least one Reflection per Clinical Posting**

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date

Student Presenter	
What Happened?	
So What?	
What Next?	
Signature of Faculty	Date

Phase II
End of posting Assessment

Suggested Methods

5. **Viva Voce**
6. **CA-OSCE / OSCE / OSPE**
7. **Bedside assessment**
8. **Communication skill (Counselling)**
9. **Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

**Phase III Part 1
CLINICAL CASE PRESENTATION RECORD**

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases) At least 3 cases per clinical posting

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

**Phase III Part 1
REFLECTIONS: CLINICAL CASE PRESENTATION**

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				

What Happened?	
So What?	
What Next?	
Signature of Faculty	Date

Phase III Part 1
End of posting Assessment

Suggested Methods

- 10. Viva Voce**
- 11. CA-OSCE / OSCE / OSPE**
- 12. Bedside assessment**
- 13. Communication skill (Counselling)**
- 14. Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

**Phase III Part II
CLINICAL CASE PRESENTATION RECORD**

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases) At least 3 cases per clinical posting

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

REFLECTIONS: CLINICAL CASE PRESENTATION

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase III Part 2

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				

What Happened?	
So What?	
What Next?	
Signature of Faculty	Date

End of posting Assessment

Suggested Methods

- 1. Viva Voce**
- 2. CA-OSCE / OSCE / OSPE**
- 3. Bedside assessment**
- 4. Communication skill (Counselling)**
- 5. Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

6. SCIENTIFIC PROJECT PRESENTATIONS/REPORTS/OUTREACH ACTIVITIES/UG QUIZ

SL NO	DATE	PARTICULARS	SIGNATURE OFSTAFF

7. EXTRACURRICULAR ACTIVITIES

Sl no	Date	Particulars	Signature of the faculty

8. ACHIEVEMENTS/AWARDS

Sl no	Date	Particulars	Signature of the faculty

9. ASSESSMENT RECORD

Phase	Duration (From-To)	Assessment score (marks obtained)	Total marks	Assessment (%)	Remarks	Faculty Signature
Phase II						
Phase III Part I						

Phase III Part 2						
Total						

10. SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1 st	Phase II	2 weeks					
2 nd	Phase III Part I	2 weeks					
3 rd	Phase III Part II	2 weeks					
Total						Cumulative attendance n/%	

Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



General Surgery Curriculum for Competency Based Curriculum

RGUHS General Surgery Curriculum as per the new Competency Based Curriculum Preamble

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and

the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each specialty with the input from expert groups under each specialty.

The NMC, in the Graduate medical regulations 2019, has provided the list of General Surgery medicine competencies required for an IMG and these have been included in this document.

The document begins with the goals and objectives of the Surgery curriculum, then a summary of phase wise hours allotted to general surgery and their distribution across didactic lecture, small group discussion and selfdirected learning. Subsequently, this document suggests phase wise topics in the 4 clinical postings, directory of minimum cases to be seen, and suggested clinical assessment methods for the postings.

This is followed by the competencies to be delivered, along with the SLOs, suggested TL methods, and suggested assessment methods. The competencies have been divided according the three main domains which is Knowledge, Psychomotor skills and Communication skills. The competency tables also indicate the phase they should be taught in. This will be helpful for the faculty and students.

Goals and Objectives of the medicine curriculum

Goals

The broad goal of the General Surgery curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common surgical disorders affecting the adult population.

Objectives

A) Knowledge

At the end of the course student should be able to:

- i. Describe the pathophysiology of common diseases of adults
- j. Describe the clinical features, diagnosis and management of the above
- c. Be well versed with the preventive aspects of the surgery curriculum, specifically patient education and lifestyle modification.

(B) Skills

At the end of the course the student should be able to:

- g. Demonstrate the ability to elicit a detailed clinical history and perform a general physical and systemic examination, in outpatient and inpatient settings.
- h. Demonstrate the ability to apply the elicited history and examination to arrive at correct diagnosis and plan treatment.
- i. Demonstrate the ability to deliver immediate care to commonly seen emergencies prior to referral to higher centre.

C) Attitude and communication skills

At the end of the course the student should be able to:

- q. Communicate effectively with patients, their families and the public at large
- r. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- s. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- t. Appreciate the issues of equity and social accountability

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in General Surgery

Distribution of Teaching hours :

Phase	Lecture	Small group discussion	Self-directed learning	Total
Phase 2	25			25
Phase 3, part 1	25	35	5	65
Phase 3, part 2	70	125	15	210

Time allotted excludes time reserved for internal / University examinations, and vacation.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. In the third Professional year both Part1& Part2, 25% of allotted time (non-clinical time) shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects. Horizontal integration between the Final MBBS Part 2 subjects is necessary wherever feasible The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner’s interest and eliminate redundancy and overlap.

Small group discussion (SGD) may include the following

- 1.Tutorials
- 2.Case based discussion
3. Skill lab sessions

Unless otherwise mentioned, in the TL methods suggested in the competency table, SGD sessions are for 2 hours, and lectures for 1 hour and skill lab sessions are for 4 hours

Suggested Topics for Theory classes for each MBBS Phase

2 nd MBBS	
Competency number	Topic
SU1	Metabolic response to injury

SU2	Shock
SU3	Blood and blood components
SU4	Burns
SU8	Ethics

SU10	Pre-op, intra-op and post-op care
SU12	Nutrition and fluid therapy
SU18	Skin and subcutaneous tissue
SU27	Vascular disorders

3rd MBBS Part 1

Competency number	Topic
SU5	Wound healing and wound care
SU6	Surgical infections
SU7	Surgical audit and research
SU11	Anaesthesia and pain management
SU14	Basic surgical skills
SU17	Trauma
SU19	Congenital facial anomalies
SU20	Oropharyngeal carcinoma
SU21	Salivary Gland
SU22	Thyroid gland and Adrenal gland
SU 23	Adrenal glands and other endocrine glands
SU25	Breast

3rd MBBS Part 2

Competency number	Topic
SU13	Transplantation
SU15	Biohazard disposal

SU16	Minimally invasive surgery
SU24	Pancreas
SU26	Cardio thoracic surgery
SU28	Abdomen
SU29	Urinary system
SU30	Male reproductive system
	Neurosurgery

Clinical posting, certifiable skills, case matrix, clinical skills assessment, clerkship, skill lab topics Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily. The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Acquisition and certification of skills shall be through bedside clinics, clerkship (student doctor), diagnostic and skill laboratories.

Clinical postings – phase wise objectives

Posting 1: The student, at the end of the posting, would have practiced the following

- A. Building a rapport with the patient
- B. Eliciting history in native language of patient
- C. Examining vital signs – pulse, blood pressure, temperature, jugular venous pressure
- D. General physical examination – pallor, icterus, cyanosis, lymphadenopathy, edema
- E. Observation of systemic examination

Posting 2

- A. Practice of skills attained in posting 1
- B. Systemic examination (inspection, palpation, percussion, auscultation) of cardiovascular system, respiratory system, abdomen, and central nervous system

Posting 3

- A. Practice of skills attained in posting 1 and 2
- B. Fluent, confident systemic examination
- C. Ability to distinguish between normal and abnormal physical findings
- D. Collating history and examination findings to arrive at differential diagnoses

Posting 4

Practice and refinement of skills attained in postings 1, 2 and 3

Suggested topics for Clinical postings for each MBBS Phase

1st posting - 2nd MBBS, (4 weeks)		
1	History taking in a surgical patient	
2	Examination of ulcer	
3	Clinical examination of a swelling	
4	Examination of abdomen	
5	Examination of the vascular system	
6	Examination of the lymphatic system	
7	Hand wash and draping patients in OT	
8	Basic instruments in surgical operation theatre	
2nd Posting 3rd MBBS Part 1 (4weeks)		
1	Wound care	
2	BLS	
3	Airway maintenance	
4	Thyroid examination	
5	Breast examination	
6	Examination of Abdomen	
7	Hernia	
8	Disorders of Stomach	
9	Submandibular region and salivary glands	
9	Revise and review all topics in 1 st posting	
3rd and 4th Posting 3rd MBBS Part 2 (8+4weeks)		

1	Investigations in a surgical patient	
2	Pre-op and post-op care	
3	Anaesthesia and pain management	
4	Transplant	
5	Revisit, review and revise all topics in 1 st and 2 nd postings	

Suggested topics for Skills lab in Surgery

	To perform breast examination
	To perform per rectal examination to palpate the prostate
	To administer an appropriate dose of local anaesthetic and incise and drain abscess
	To appropriately apply dressing for injuries and burns
	To clean and suture superficial skin wounds
	To insert an intercostal needle/drainage

Learner-doctor method (Clerkship): should be mandatorily implemented, from 1st clinical postings in Surgery.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Goal: To provide learners with experience in:

- (a) Longitudinal patient care,
- (b) Being part of the health care team,
- (c) Hands-on care of patients in outpatient and inpatient setting.
- (d) No learner will be given independent charge of the patient

(e) The supervising physician will be responsible for all patient care decisions

The learner will function as a part of the health care team with the following responsibilities:

Be part of the unit's outpatient services on admission days, Remain with the admission unit until 6 PM except during designated class hours,

Be assigned patients admitted during each admission day for whom he/she will undertake responsibility, under the supervision of a senior resident or faculty member,

Participate in the unit rounds on its admission day and will present the assigned patients to the supervising physician,

Perform simple tasks, including nebulisation, patient education

Follow the patient's progress throughout the hospital stay until discharge,

Participate, under supervision, in procedures, surgeries, deliveries etc. of assigned patients

Participate in unit rounds on at least one other day of the week excluding the admission day, Discuss ethical and other humanitarian issues during unit rounds, Attend all scheduled classes and educational activities,

Document his/her observations in a prescribed log book / case record.

Learner-doctor method phase wise

Year of Curriculum	Focus of Learner - Doctor programme
Year 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Year 2	History taking, physical examination, assessment of change in clinical status, communication and patient education
Year 3	All of the above and choice of investigations, basic procedures and continuity of care
Year 4	All of the above and decision making, management and outcomes

Eligibility to appear for Professional examinations

(b) Attendance

1. Attendance requirements are 75% in theory and 80% in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
2. If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting.
3. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Log book

4. A designated faculty member in each unit will coordinate and facilitate the activities of the learner, monitor progress, provide feedback and review the log book/ case record.
5. The log book/ case record must include the written case record prepared by the learner including relevant investigations, treatment and its rationale, hospital course, family and patient discussions, discharge summary etc.
6. The log book should also include records of patients assigned. Submission of the log book/ case record to the department is required for eligibility to appear for the final examination of the subject.

Theory assessment

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Surgery. An end of posting clinical assessment shall be conducted for each of the clinical postings in Surgery.

A 100-mark question paper covering the relevant topics of the MBBS Phase may be conducted. Mark division will be as follows:

100 marks
Long essay 2X10= 20
Short essay 8x5=40 marks
Short answer question 10x3=30marks
MCQs 10x1=10marks

A minimum of 80% of the marks should be from the must know component of the curriculum. A maximum of 20% can be from the desirable to know component. All main essay questions to be from the must know component of the curriculum.

One main essay question to be of the modified variety containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Internal assessment at the end of clinical postings

Internal assessment marks at the end of each posting will be a sum of log book (documentation of skills practiced, clerkship, assessment of behaviour in posting) and clinical internal assessment marks.

Internal assessment may be conducted as follows in postings

Posting 1 – long case focusing on history, vital signs and general physical examination

Posting 2 – OSCE with the following stations – history, vital signs, general physical examination, examination of specific system/structure, diagnostic skills, communication

Posting 3 – Long case/short case

Posting 4 – short case and/or long case

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce

The competencies to be delivered in AETCOM have been summarized at the end of the competency table. The question paper must include a least one question based on AETCOM competencies covered in the phase. AETCOM competencies must also be tested in the viva voce.

There will be one Theory and Clinical preliminary exam before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Surgery to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Medicine logbook entry completed to be eligible for appearing at the final university examination.

University examinations

University examinations Third Professional Part II - (Final Professional) examination shall be at the end of training (14 months including 2 months of electives) in the subjects of General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics.

The discipline of Orthopaedics, Anaesthesiology, Dentistry and Radiodiagnosis will constitute 25% of the total theory marks incorporated as a separate section in paper II of General Surgery.

The discipline of Psychiatry and Dermatology, Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis will constitute 25% of the total theory marks in General Medicine incorporated as a separate section in paper II of General Medicine.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

Marks allotted

Medicine

Theory

Clinical examination

Total marks	2 papers of 100 marks each for General surgery (including orthopaedics and other surgery allied subjects). The pattern of each question paper is given below. As indicated above adequate weightage to be given to surgery allied subjects	200 marks
	Long essay 2X10= 20	One long case for 80 marks
	Short essay 8x5=40 marks	Two short cases for 40 marks each
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Xray & ECG Station-2: Instruments Station-3: Specimens Station-4: Drugs & case scenarios
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations University

Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions. All theory paper assessment should be done as central assessment program (CAP) of concerned university.

BLUEPRINT FOR ASSESSMENT

RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT

As per NMC guidelines, a balance should be drawn between the action verbs which are specified in the Bloom's taxonomy along with a balance of the topics of the curriculum **Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.**

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate, Interpret, Review, Summarise
Application	Apply, Choose, Compute, Modify, Solve, Prepare, Produce, Select, Show, Transfer, Use
Analysis	Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram, Differentiate, Distinguish, Relate, Categorise

Synthesis	Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate, Organise, Plan, Produce, Propose, rewrite
Evaluation	Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict, Prioritise, Prove, Rank

The blueprint for General surgery theory paper indicating the topics and marks allotted for each are given below. The blueprinting provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions

The distribution of topics in paper 1 and paper 2 in General surgery is also given below. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

Blue print for General surgery

Competency number	Topic	Marks
	Applied basic sciences	6
SU1	Metabolic response to injury	2
SU2	Shock + its management	5
SU3	Blood and blood components	4
SU4	Burns	4
SU5	Wound healing and wound care	5
SU6	Surgical infections	5
SU7 +SU8	Surgical audit and research+ Ethics	2
SU19	Congenital facial anomalies	2
SU20	Oropharyngeal carcinoma	3
SU21	Salivary Gland+ neck cysts+ cervical lymphadenitis	4
	Skin lesions including ulcers, sinuses, fistulas and malignancies	5
SU9	Investigations in a surgical patient	5
SU10	Pre-op, intra-op and post-op care	6

SU12	Nutrition and fluid therapy	5
SU13	Transplantation	4
SU14	Basic surgical skills	3
SU15	Biohazard disposal	2
SU16	Minimally invasive surgery	5
SU17	Trauma	5
SU22	Thyroid gland	6
SU 23	Adrenal glands and other endocrine glands	4
SU24	Pancreas	5
SU25	Breast	8
SU26	Cardio thoracic surgery and Neurosurgery	7
SU27	Vascular system	10
SU28	Abdomen including hernias	12
SU29	Urinary system	10
SU30	Male reproductive system	6
Total		150

Distribution of topics In General surgery Paper 1 and Paper 2 for University Examination

Paper 1 – Section A and B 100marks		
1	Applied basic sciences	
2	Metabolic response to injury	
3	Shock + its management	
4	Blood and blood components	
5	Burns	
6	Wound healing and wound care	
7	Surgical infections	
8	Surgical audit and research+ Ethics	
9	Congenital facial anomalies	

10	Oropharyngeal carcinoma	
11	Salivary Gland+ neck cysts+ cervical lymphadenitis	
12	Skin lesions including ulcers, sinus, fistulas and malignancies	
13	Investigations in a surgical patient	
14	Pre-op, intra-op and post-op care	
15	Nutrition and fluid therapy	
17	Transplantation	
18	Basic surgical skills	
19	Biohazard disposal	
20	Minimally invasive surgery	
21	Trauma	
22	Thyroid gland	
23	Adrenal glands and other endocrine glands	
24	Breast	
Paper 2 – Section A 50marks		
1	Pancreas	
2	Cardio thoracic surgery and neurosurgery	
3	Vascular system	
4	Abdomen including hernias	
5	Urinary system	
6	Male reproductive system	
Paper 2 – Section B 50marks, Orthopedics and surgery allied subjects Anaesthesia, Radiology and dentistry		

MODEL QUESTION PAPER SURGERY -1

Section A Long Essays (10x1)

1) 56y/o woman presented with history of lump in right breast since 4 months, 6*8cm in in upper outer quadrant, hard in consistency with 2*3 cm ulcer over the lump and bloody discharge from nipple. Clinical examination revealed 2*2 cm lymph node in right axillary region. Opine regarding possible diagnosis, clinical staging, management for this patient. Add a note on BRCA 1 and 2. **(2+2+4+2 marks)**

Short Essays (5x4=20)

- 1) Buerger's disease
- 2) Discuss the complications of inguinal hernia
- 3) Mesenteric cyst
- 4) Surgical management of portal hypertension

Short Answers (3x5=15)

- 5) Premalignant conditions of oral cavity
- 3) Courvoisier's law
- 6) Le Fort classification of maxillofacial injuries
- 7) Rodent ulcer
- 8) Advantages of USG
- 9) Pilonidal sinus
- 10) Circumcision

MCQ'S (1x5 = 5)

1. 35 years old male presents with fever , jaundice ,Right upper quadrant pain, septic shock & mental status change , likely diagnosis

1. Cholangitis
2. Hepatitis
3. Cholecystitis
4. Pancreatitis

2. 30 years old female presents with diffuse thyroid swelling ,on investigations TSH levels raised. Postoperative HPE shows intense lymphocytic infiltration & Hurthle cells , likely diagnosis

1. Grave's disease
 2. Hashimoto's thyroiditis
 3. Follicular carcinoma
 4. Medullary carcinoma of thyroid
3. Most common site of development of ca prostate ?

1. Central zone
2. Peripheral zone
3. Transition zone
4. Fibromuscular stroma

4. 26 years old male presents with 4 days history of pain in right sided lower abdomen with frequent vomiting. Patient's general condition is good and tender mass felt in right iliac fossa. Most appropriate management in this case would be

1. Exploratory laparotomy
2. Immediate appendectomy
3. Ochsner – Sherren regimen
4. External drainage

6. Mercedes Benz sign on x-ray seen in

- a) Ureteric stone
- b) Renal stone
- c) Gall stone
- d) Pancreatic stone

SECTION B (Orthopedics)

Long Essays (10x1)

1) Write in detail about classification , pathology, clinical features and management

of shoulder dislocation.

Short Essays (5x4=20)

2) Malunion

3) Colles fracture

4) Acute osteomyelitis

5) Spinal anaesthesia

Short Answers (3x5=15)

6) Potts spine

7) Carpal tunnel syndrome

8) CTEV

9) Mallet Finger

10) Dupuytren's fracture

MCQ'S (1x5 = 5)

11) 32 years old female sustained injury after fall on an out-stretched hand . On evaluation there was fracture of upper one-third of ulna with dislocation of head of radius. Likely diagnosis is

a) Colles fracture

b) Monteggia fracture dislocation

c) Galeazzi fracture dislocation

d) Smith fracture

12) 40 years old male patient comes to casualty with fracture of femur, which splint used to stabilize the fracture? 1. Dennis brown splint

2. Thomas splint

3. Volkmann splint

4. Cock-up splint

13) Medial meniscus is more vulnerable to injury because of its

a) Attachment to tibial collateral ligament

b) Semicircular shape

c) Action of adductor magnus

d) Attachment to fibrous capsule 14) March fracture affects

a) Neck of 1st metatarsal

b) Body of 1st metatarsal

c) Neck of 2nd metatarsal

d) Body of calcaneus

15) Carpal bone which fractures most commonly

a) Scaphoid

b) Lunate

c) Hamate

d) Pisiform

Total marks=100

Long essay question (2 x10 marks)

1. A 42 year old woman presents with dysphagia for both solids and liquids since several months. She describes a feeling of food sticking in the lower chest. She tries to use liquids to wash it down and also tries different positions. She may then get sudden relief. She has noticed some effortless regurgitation. She has lost about 10 pounds unintentionally in the last three months.

- A. In view of the history in this patient, what is the differential diagnosis? (2 Marks)
- B. List additional history that should be obtained? (2 Marks)
- C. Discuss the pathophysiology seen in achalasia? (1 Mark)
- D. What is the diagnostic test that should be done and why? (2 Marks)
- E. Discuss the management options recommended to this patient? (3 Marks)

2. A 48 year old woman noticed a lump in her left breast about 2 months ago. She thinks that it may be slightly larger now. There is no pain. She has never had a mammogram. On examination there is a 3 cm hard mobile mass superiorly in the left breast.

- A. List additional history do you need in this patient? (2 Marks)
- B. What are other important things to note in the physical exam? (2 Marks)
- C. Name the diagnostic test to be done to diagnose this lesion? (3 Marks)
- D. Discuss the treatment approach to be take in the case ? (3 Marks)

Short Answer questions (8 x 5 marks)

- 1. Discuss the risk factors, pathophysiology and options for management of cholelithiasis? (2+2+1Marks)
- 2. Cite the predisposing factors,diagnostic workup and the surgical options in a patient with ventral or incisional hernia? (2+1+2Marks)
- 3. Enumerate the clinical manifestations, investigation and the treatment for pheochromocytoma? (2+2+1Marks)
- 4. Describe the clinical history and physical finding, investigation and the treatment of wilm's tumor ? (2+2+1Marks)
- 5. Discuss the diagnostic tests and treatment of peripheral arterial occlusive disease? (2+3Marks)
- 6. What are the clinical features, investigation and treatment of BPH? (2+1+2Marks)

7. Describe the Clinical features and treatment modality of varicose vein? (2+3 Marks)

8. Enumerate the complications of blood transfusion (Regular and Massive)? (3+2 Marks)

Short Answers (10 x 3 Marks)

1. List the operations that can be performed to treat hemorrhoids? (3Marks)

2. State the options for treating pseudocyst? (3Marks)

3. Write in sequence the potential complications of inguinal hernias making it important to repair them? (3Marks)

4. Write the Significance and boundaries of Calots triangle.(1 + 2 Marks)

5. State the various regulators of calcium metabolism in the body and how do they work? (3Marks)

6. Define paradoxical aciduria and how does it happen? (1 + 2 Marks)

7. Explain intermittent claudication and how is it graded? (1 + 2 Marks)

8. Characterise the different kinds of stones in the urinary tract based on composition? (3 Marks)

9. Enumerate the causes for Intestinal Obstruction. (3 Marks)

10. Enumerate the complications of Sebaceous cyst. (3 Marks)

MCQs (10x 1 Mark)

1. A 28-year-old man while working on a building site sustained a fracture of his tibia and fibula having fallen from a ladder. This was promptly treated by open reduction and internal fixation. On the second postoperative day, he developed severe pain in his leg exacerbated by passive movement and sensory loss. A) Compartment syndrome. b) Leg ulcer c) Necrotising soft-tissue infection D) Pressure sore
2. A prenatal ultrasound scan alerted the paediatricians to a congenital abnormality affecting the abdomen and chest. The premature neonate has been born with severe respiratory compromise and is on ventilatory support in the neonatal ICU.
a) Biliary atresia b) Congenital diaphragmatic hernia c) Duodenal atresia d) Hirschsprung's disease
3. A 65-year-old woman had a hip replacement 10 days ago. She is ready to be discharged. She went to the toilet just prior to leaving the ward for home. She collapsed in the toilet. a) Deep vein thrombosis (DVT) b) Hypovolaemic shock c) Pulmonary embolus d) Fat embolism
4. A patient presents following a fall from a third-story window and on primary survey is not maintaining adequate oxygen saturation on high-flow oxygen, is hypotensive, has a raised JVP with left tracheal deviation and the right hemi-thorax is hyper-resonant with no air entry.
a) Cardiac tamponade b) Haemothorax c) Myocardial infarction d) Tension pneumothorax
5. There is a pigmented skin lesion on the scalp that has recently changed in colour and become itchy and started to bleed. There are a few small black spots irregularly scattered around the lesion. a) Basal cell carcinoma b) Extramammary Paget's disease c) Malignant melanoma (MM) d) Squamous cell carcinoma (SCC)
6. A 78-year-old man presents with a rapidly enlarging mass in the right parotid. The skin overlying the mass is erythematous and the facial nerve function is affected. a) Bacterial parotitis b) Parotid gland cancer c) Pleomorphic adenoma d) Salivary calculus
7. An elderly woman with previous history of Hashimoto's thyroiditis presents with an irregular, hard nodule in her right thyroid lobe a) Anaplastic carcinoma b) Lymphoma c) Medullary Carcinoma d) Papillary Carcinoma
8. A 46-year-old woman has been readmitted to the surgical unit complaining of numbness around her mouth with paraesthesia and numbness in her fingers. She has had a few episodes of muscle spasms in her forearms. One week ago she underwent total thyroidectomy with bilateral lymph node dissection for papillary thyroid carcinoma. a) Primary hypoparathyroidism b) Secondary hyperparathyroidism c) Tertiary hyperparathyroidism d) Tetany
9. A 26-year-old breast-feeding mother presents as an emergency with pain, swelling in the right breast and fever for 2 days. a) Breast abscess b) Breast cyst c) Fibroadenoma d) Galactocele
10. A 68-year-old woman underwent an amputation of her right leg following severe crush injury. Three days postoperatively she has pyrexia and tachycardia and looks toxic. The amputation site looks red and brawny with the limb swollen with crepitus in the intermuscular planes.

a) Bacteremia and sepsis b) Cellulitis and lymphangitis. c) Clostridium tetani d) Gas gangrene e) Synergistic spreading gangrene

GENERAL SURGERY MODEL QUESTION PAPER

Long questions 2x10 = 20 marks

1. Describe the etio-pathogenesis, clinical features and management of multi-nodular goiter. Add a note on Plummer's disease. **(2+2+4+2 marks)**
2. A 50-year-old male came with complaints of pain in the right iliac fossa for 1 week, 2-3 episodes of vomiting and intermittent fever. On examination per abdomen is tender, smooth firm swelling noted in right iliac fossa, resonant on percussion, all borders made out. What is your diagnosis? Comment on etiology, signs, management, and give your differential diagnosis.

Short essays 8x5 = 40 marks

3. Classify salivary gland tumours. Describe the histopathology, clinical features and management of pleomorphic adenoma
4. Explain the indications, composition and complications of TPN.
5. Write a note on types of hospital biohazard waste, colour coding and methods of disposal of the same.
6. Explain anatomy of the blood supply of liver and add a note on surgical management options for portal hypertension
7. 35 year old man came with blacking discoloration of right great toe with crampy pain in calf muscles on walking for 100metres relieved on rest and on hanging the limb at the edge of the bed. Patient also is a known smoker since 10years. What is the likely diagnosis. What is Shyanoya criteria?
8. 28 y/o Patient came with complains of inability to retract foreskin with painful erections with sclerosis at the edge of the prepuce. There's no history of multiple sexual partners in past. What is the likely diagnosis and the management of the condition?
9. During a routine elective appendicectomy, there was inadvertent breach of the wall of distal ileum with spillage of its contents into the peritoneal cavity. What type of surgical wound is this? Add a note on types of surgical wounds and need for antibiotic prophylaxis in each.
10. What is massive blood transfusion? What are the possible complications of routine blood transfusion.

Short notes 3x10 = 30 marks

11. Hasselbach's triangle and it's clinical importance
12. Peutz j
Jheger's syndrome
13. PEG(Percutaneous endoscopic gastrostomy)
14. Reynolds Pentad
15. External hemorrhoids
16. Extradural vs subdural hemorrhage
17. Beck's triad
18. Patient came with history of road traffic accident with blunt trauma abdomen. Which is the preliminary radiological examination to rule out hemoperitoneum. Add a note on e-FAST.
19. Bisgard's regimen

20. Alvarado's scoring for acute appendicitis

MCQ's 1x10 = 10 marks

21. Patient came with multiple dilated veins along calf and medial aspect of leg. There was 2*2cm healing ulcer over medial malleolus. What is the clinical stage of the disease? a. C4b b. C4c c. C5 d. C6

22. Caudate lobe of liver belongs to which Couinaud segment? a. II. B. VII c. X. d. I

23. 18y/o male came with history of pain in right lower abdomen and right testis, vomiting. Relieved on scrotal elevation. What is the possible diagnosis? a. Acute Epididymo orchitis. B. Acute appendicitis. C. Torsion testis. D. Torsion of appendix of testis

24. 28 yo man comes to ER with road traffic accident with injury to right side of chest, has laboured breathing. PR- 120bpm, BP-80/50mm Hg, SpO2 70pc absent breath sounds over right hemithorax with hyper-resonance on percussion. What is your Immediate line of management?

a. ICD at 5th intercostal space. B. Needle aspiration over 2nd intercostal space. C. Needle aspiration over 5th intercostal space. D. Connect oxygen via facial mask and Plan for emergency CT thorax

25. Which is not a component of skin involvement of breast cancer?

a. Satellite nodules. B. Peau de orange. C. Puckering and dimpling. D. Ulceration

26. Which swelling does not move on deglutition?

a. Pretracheal lymph node. B. Right solitary nodule thyroid. C. Subhyoid bursitis. D. Suprasternal dermoid cyst.

27. Which is a component of saints triad?

a. Altered mental status. B. Right hypochondriac pain. C. Jaundice. D. Diverticulitis

28. Patient in emergency room post assault with head injury is randomly screaming out bad words and moaning. What is the Verbal component of GCS a. V1. B. V2. C. V3. D. V4

29. Which of the these PDS suture materials is of the narrowest caliber

a. Number 1. B. 1-0. C. 0-2. D. 3-0.

30. Which is a staghorn calculus?

a. CaSO4. B. Phosphate. C. Uric acid. D. Calcium oxalate

LONG ESSAY

2x10= 20

1. Write briefly about Cholecystitis- types, etiopathogenesis, clinical features and management.
2. A 50-year-old male came with complaints of difficulty in swallowing of solids since 5 months and to liquids also since 1 month. Associated episodes of vomiting and weight loss. On examination per abdomen is soft, non-tender with no palpable mass or lymph nodes. What is the most likely diagnosis? Discuss the approach to management of this patient.

SHORT ESSAY

8X5= 40

3. Classify ulcers and explain in detail about trophic ulcer.
4. A 49 years of diabetic male came with complaints swelling over the nape of neck on examination- 4X4 cm swelling with local rise of temperature, redness present, tenderness present, brawny induration with yellow discharge present. What is your diagnosis? Comment on etiology, symptoms, complication and management.
5. A 45 yr chronic smoker comes with pain and black discoloration of his left great toe since 3 month. He is not able to walk even in house. On examination, his toe is gangrenous and shriveled with cold left lower leg and absent dorsalis pedis pulsations. What might be the condition, the patient is suffering from? Explain the pathology and management of this condition.
6. Write briefly about Solitary nodule of thyroid and its management.
7. A 35yr male has presented with Right upper quadrant abdominal pain with fever. On examination, he is febrile, tachycardic and has right hypochondrium tenderness with right lower intercostal tenderness. What is your diagnosis? Write briefly about the pathogenesis, management & complications of this condition.
8. Complications of acute pancreatitis.
9. Intussusception – types, etiology, clinical features and management.
10. A 55 year perimenopausal lady noticed a lump in her right breast while taking bath. She gives history it has progressed faster recently. On clinical examination, she has 5x6cm irregular, hard, nontender lump which moves along with surrounding breast tissue. Her axilla has 2 enlarged lymph nodes enlarged. What is your diagnosis? Add a note on the types, clinical features, management of this patient.

SHORT ANSWER

10x3= 30

11. Eye signs of toxic goiter

12. Types of abdominal tuberculosis
13. Complications of acute pancreatitis
14. Classification of hernia
15. Complication of gastric ulcer
16. Fissure in ano -types, clinical features and management
17. Branchial cyst
18. Ganglion cyst
19. Erysipelas
20. Malignant melanoma

MCQs

10x1= 10

21. Wound over the bony prominences are called as
 - a) Traumatic ulcer
 - b) Tropical ulcer
 - c) Trophic ulcer
 - d) Venous ulcer
22. Moulding sign seen in
 - a) Lipoma
 - b) Dermoid cyst
 - c) Pyogenic abscess
 - d) Sebaceous cyst
23. Painful constriction of base of toe is called
 - a) Dry gangrene
 - b) Frost bite
 - c) Ainhum
 - d) Acrocyanosis
24. X-ray showing honeycomb/multiloculated feature of mandible
 - a) Dentigerous cyst
 - b) Adamantinoma
 - c) Osteoporosis
 - d) Fibrous dysplasia of jaw
25. Swelling in front of the ear which does not move above zygomatic bone
 - a) Submandibular abscess
 - b) Pre-auricular lymph node
 - c) Pleomorphic adenoma
 - d) Carotid body tumor
26. Sistrunk operation is done for
 - a) Ranula
 - b) Branchial cyst
 - c) Laryngocele
 - d) Thyroglossal cyst

27. Popcorn calcification seen in

- a) Fibrocystic disease b) Traumatic fat necrosis c) Fibroadenoma d) CA breast

28. Raspberry tumor is also called as

- a) Umbilical granuloma b) Carotid body tumor c) Umbilical adenoma d) Omphalitis

29. Rat tail in barium swallow is seen in

- a) Diffuse esophageal spasm b) CA Stomach c) Achalasia cardia d) Pyloric stenosis

30. CT brain shows biconvex lesion which indicates

- a) SAH b) SDH c) EDH d) Intracranial abscess

Surgery competencies – Knowledge

Metabolic response to injury				
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SU1.1	Describe Basic concepts of homeostasis, enumerate the metabolic changes in injury and their mediators.	Lecture	3, 4 term	MCQs, Quiz, Drills	Theory
SU1.2	Describe the factors that affect the metabolic response to injury.	Lecture	3, 4 term	Quiz	Theory
SU1.3	Describe basic concepts of perioperative care.	Lecture	3, 4 term	Quiz	Theory
Shock					
SU2.1	Describe Pathophysiology of shock, types of shock & principles of resuscitation including fluid replacement and monitoring.	Lecture	3, 4 term	Quiz	Theory
SU2.2	Describe the clinical features of shock and its appropriate treatment.	Lecture	3, 4 term	Quiz	Theory
Blood and blood components					
SU3.1	Describe the Indications and appropriate use of blood and blood products and complications of blood transfusion.	Lecture	3, 4 term	Quiz	Theory
Burns					
SU4.1	Elicit document and present history in a case of Burns and perform physical examination. Describe Pathophysiology of Burns.	Lecture	3, 4 term	Quiz	Theory
SU4.2	Describe Clinical features, Diagnose type and extent of burns and plan appropriate treatment.	Lecture	3, 4 term	Quiz	Theory
SU4.3	Discuss the Medicolegal aspects in burn injuries.	Lecture	3, 4 term	Quiz	Theory
Wound healing and wound care					
SU5.1	Describe normal wound healing and factors affecting healing.	Lecture	5 term	Quiz	Theory
SU5.3	Differentiate the various types of wounds, plan and observe management of wounds.	Lecture	5 term	Quiz	Theory
SU5.4	Discuss medico legal aspects of wounds	Lecture	5 term	Quiz	Theory
Surgical infections					

SU6.1	Define and describe the aetiology and pathogenesis of surgical Infections	Lecture	5 term	Quiz	Theory
SU6.2	Enumerate Prophylactic and therapeutic	Lecture	5 term	Quiz	Theory
	antibiotics				
Surgical Audit and Research					
SU7.1	Describe the Planning and conduct of Surgical audit	Lecture	8,9 ter,	Theory	Theory
SU7.2	Describe the principles and steps of clinical research in General Surgery	Lecture	8,9 term	Theory	Theory
Ethics					
SU8.1	Describe the principles of Ethics as it pertains to General Surgery	Lecture	3, 4 term	Quiz	Theory
Pre, intra and post- operative management.					
SU10.1	Describe the principles of perioperative management of common surgical procedures	Lecture	3,4 term	Quiz	Theory
Anaesthesia and pain management					
SU11.1	Describe principles of Preoperative assessment.	Lecture	6 term	Theory	Theory
SU11.2	Enumerate the principles of general, regional, and local Anaesthesia.	Lecture	6 term	Theory	Theory
SU11.4	Enumerate the indications and principles of day care General Surgery	Lecture	6 term	Theory	Theory
SU11.5	Describe principles of providing post-operative pain relief and management of chronic pain.	Lecture	6 term	Theory	Theory
SU11.6	Describe Principles of safe General Surgery	Lecture	6 term	Theory	Theory
Nutrition and fluid therapy					
SU12.1	Enumerate the causes and consequences of malnutrition in the surgical patient	Lecture	3, 4 term	Quiz	Theory

SU12.2	Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patient	Lecture	3, 4 term	Quiz	Theory
SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications	Lecture	3, 4 term	Quiz	Theory
Transplantation					
SU13.1	Describe the immunological basis of organ transplantation	Lecture	8, 9 term	Theory	Theory

SU13.2	Discuss the Principles of immunosuppressive therapy. Enumerate Indications, describe surgical principles, management of organ transplantation	Lecture	8, 9 term	Theory	Theory
SU13.3	Discuss the legal and ethical issues concerning organ donation	Lecture	8, 9 term	Theory	Theory
Basic Surgical Skills					
SU14.1	Describe Aseptic techniques, sterilization and disinfection.	Lecture	5 term	Quiz	Theory
SU14.2	Describe Surgical approaches, incisions and the use of appropriate instruments in Surgery in general.	Lecture	5 term	Quiz	Theory
SU14.3	Describe the materials and methods used for surgical wound closure and anastomosis (sutures, knots and needles)	Lecture	5 term	Quiz	Theory
Biohazard disposal					
SU15.1	Describe classification of hospital waste and appropriate methods of disposal.	Lecture	9 term	Quiz	Theory
Minimally invasive General Surgery					
SU16.1	Minimally invasive General Surgery: Describe indications advantages and disadvantages of Minimally invasive General Surgery	Lecture	8, 9 term	Theory	Theory
Trauma					

SU17.3	Describe the Principles in management of mass casualties	Lecture	5 term	Quiz	Theory
SU17.4	Describe Pathophysiology, mechanism of head injuries	Lecture	5 term	Quiz	Theory
SU17.5	Describe clinical features for neurological assessment and GCS in head injuries	Lecture	5 term	Quiz	Theory
SU17.6	Chose appropriate investigations and discuss the principles of management of head injuries	Lecture	5 term	Quiz	Theory
SU17.7	Describe the clinical features of soft tissue injuries. Chose appropriate investigations and discuss the	Lecture	5 term	Quiz	Theory

	principles of management.				
SU17.8	Describe the pathophysiology of chest injuries.	Lecture	5 term	Quiz	Theory
SU17.9	Describe the clinical features and principles of management of chest injuries.	Lecture	5 term	Quiz	Theory
Skin and subcutaneous tissue					
SU18.1	Describe the pathogenesis, clinical features and management of various cutaneous and subcutaneous infections.	Lecture	4 term	Quiz	Theory
SU18.2	Classify skin tumors Differentiate different skin tumors and discuss their management.	Lecture	4 term	Quiz	Theory
Developmental anomalies of face, mouth and jaws					
SU19.1	Describe the etiology and classification of cleft lip and palate	Lecture	6 term	Theory	Theory
SU19.2	Describe the Principles of reconstruction of cleft lip and palate	Lecture	6 term	Theory	Theory
Oropharyngeal cancer					
SU20.1	Describe etiopathogenesis of oral cancer symptoms and signs of oropharyngeal cancer.		6 term	Theory	

SU20.2	Enumerate the appropriate investigations and discuss the Principles of treatment.	Lecture	6 term	Theory	Theory
Disorders of salivary glands					
SU21.1	Describe surgical anatomy of the salivary glands, pathology, and clinical presentation of disorders of salivary glands	Lecture	6 term	Theory	Theory
SU21.2	Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands	Lecture	6 term	Theory	Theory
Endocrine General Surgery: Thyroid and parathyroid					
SU22.1	Describe the applied anatomy and physiology of thyroid	Lecture	7 term	Theory	Theory
SU22.2	Describe the etiopathogenesis of thyroidal swellings	Lecture	7 term	Theory	Theory

SU22.4	Describe the clinical features, classification and principles of management of thyroid cancer	Lecture	7 term	Theory	Theory
SU22.5	Describe the applied anatomy of parathyroid	Lecture	7 term	Theory	Theory
SU22.6	Describe and discuss the clinical features of hypo - and hyperparathyroidism and the principles of their management	Lecture	7 term	Theory	Theory
Adrenal glands					
SU23.1	Describe the applied anatomy of adrenal glands	Lecture	7 term	Theory	Theory
SU23.2	Describe the etiology, clinical features and principles of management of disorders of adrenal gland	Lecture	7 term	Theory	Theory
	Describe the clinical features, classification and principles of management of thyroid cancer	Lecture	7 term	Theory	Theory
SU23.3	Describe the clinical features, principles of investigation and management of Adrenal tumors	Lecture	7 term	Theory	Theory
Pancreas			7 term		

SU24.1	Describe the clinical features, principles of investigation, prognosis and management of pancreatitis.	Lecture	7 term	Theory	Theory
SU24.2	Describe the clinical features, principles of investigation, prognosis and management of pancreatic endocrine tumours	Lecture	9 term	Quiz	Theory
SU24.3	Describe the principles of investigation and management of Pancreatic disorders including pancreatitis and endocrine tumors.	Lecture	9 term	Quiz	Theory
Breast					
SU25.1	Describe applied anatomy and appropriate investigations for breast disease	Lecture	7 term	Theory	Theory
SU25.2	Describe the etiopathogenesis, clinical features and principles of management of benign breast disease including infections of the breast	Lecture	7 term	Theory	Theory
SU25.3	Describe the etiopathogenesis, clinical features, Investigations and principles of treatment of	Lecture	7 term	Theory	Theory

	benign and malignant tumours of breast.				
Cardio-thoracic General Surgery- Chest - Heart and Lungs					
SU26.1	Outline the role of surgery in the management of coronary heart disease, valvular heart diseases and congenital heart diseases	Lecture	9 term	Quiz	Theory
SU26.3	Describe the clinical features of mediastinal diseases and the principles of management	Lecture	9 term	Quiz	Theory
SU26.4	Describe the etiology, pathogenesis, clinical features of tumors of lung and the principles of management	Lecture	9 term	Quiz	Theory
Vascular diseases					

SU27.1	Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease.	Lecture	4 term	Quiz	Theory
SU27.3	Describe clinical features, investigations and principles of management of vasospastic disorders	Lecture	4 term	Quiz	Theory
SU27.4	Describe the types of gangrene and principles of amputation	Lecture	4 term	Quiz	Theory
SU27.5	Describe the applied anatomy of venous system of lower limb	Lecture	4 term	Quiz	Theory
SU27.6	Describe pathophysiology, clinical features, Investigations and principles of management of DVT and Varicose veins	Lecture	4 term	Quiz	Theory
SU27.7	Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis and Lymphomas	Lecture	4 term	Quiz	Theory
Abdomen					
SU28.1	Describe pathophysiology, clinical features, Investigations and principles of management of Hernias	Lecture	5 term	Quiz	Theory

SU28.3	Describe causes, clinical features, complications and principles of mangament of peritonitis	Lecture	9 term	Quiz	Theory
SU28.4	Describe pathophysiology, clinical features, investigations and principles of management of Intra-abdominal abscess, mesenteric cyst, and retroperitoneal tumors	Lecture	9 term	Quiz	Theory
SU28.5	Describe the applied Anatomy and physiology of esophagus	Lecture	9 term	Quiz	Theory
SU28.6	Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus	Lecture	9 term	Quiz	Theory

SU28.7	Describe the applied anatomy and physiology of stomach	Lecture	9 term	Quiz	Theory
SU28.8	Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinoma stomach	Lecture	9 term	Quiz	Theory
SU28.10	Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess, hydatid disease, injuries and tumors of the liver	Lecture	9 term	Quiz	Theory
SU28.11	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenic injuries. Describe the post-splenectomy sepsis - prophylaxis	Lecture	9 term	Quiz	Theory
SU28.12	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system	Lecture	9 term	Quiz	Theory
SU28.13	Describe the applied anatomy of small and large intestine	Lecture	9 term	Quiz	Theory

SU28.14	Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome	Lecture	9 term	Quiz	Theory
SU28.15	Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications.	Lecture	9 term	Quiz	Theory
SU28.16	Describe applied anatomy including congenital anomalies of the rectum and anal canal	Lecture	9 term	Quiz	Theory

SU28.17	Describe the clinical features, investigations and principles of management of common anorectal diseases	Lecture	9 term	Quiz	Theory
Urinary System					
SU29.1	Describe the causes, investigations and principles of management of Hematuria	Lecture	8 term	Theory	Theory
SU29.2	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system	Lecture	8 term	Theory	Theory
SU29.3	Describe the Clinical features, Investigations and principles of management of urinary tract infections	Lecture	8 term	Theory	Theory
SU29.4	Describe the clinical features, investigations and principles of management of hydronephrosis	Lecture	8 term	Theory	Theory
SU29.5	Describe the clinical features, investigations and principles of management of renal calculi	Lecture	8 term	Theory	Theory
SU29.6	Describe the clinical features, investigations and principles of management of renal tumours	Lecture	8 term	Theory	Theory
SU29.7	Describe the principles of management of acute and chronic retention of urine	Lecture	8 term	Theory	Theory
SU29.8	Describe the clinical features, investigations and principles of management of bladder cancer	Lecture	8 term	Theory	Theory
SU29.9	Describe the clinical features, investigations and principles of management of disorders of prostate	Lecture	8 term	Theory	Theory

SU29.11	Describe clinical features, investigations and management of urethral strictures	SU 30.2	Describe the applied anatomy clinical management of undescended testis.	features, investigations and principles of
Penis, Testis, Scrotum		SU30.3	Describe the applied anatomy clinical management of epididymo-orchitis	features, investigations and principles of
SU30.1	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis and carcinoma penis.	SU30.4	Describe the applied anatomy clinical management of varicocele	features, investigations and principles of

SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele	Lecture	8 term	Theory	Theory	<u>Surgery competencies - Psychomotor skills</u>	
SU30.6	Describe classification, clinical features, investigations and principles of management of tumours of testis	Lecture	8 term	Theory	Theory		
Wound healing and Wound care	Lecture	8	term	Lecture	8 term		Theory
Theory	Theory			Lecture	8 term		Theory
Lecture	8 term	Theory	Theory	Lecture	8 term	Theory	
SU5.2	Elicit, document and present a history in a patient presenting with wounds.	Clinics	5 term	OSCE/Short case	Long case/short case		
Ethics							
SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery	DOAP	3,4 term	OSCE/Short case	Long case/short case		
SU8.3	Discuss Medico-legal issues in surgical practice	Lecture	3, 4 term	OSCE/Short case	Long case/short case		
Investigation of surgical patient							

Su9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient	Clinics	8, 9 term	OSCE/Short case	Long case/short case
SU9.2	Biological basis for early detection of cancer and multidisciplinary approach in management of cancer	Lecture	8, 9 term	OSCE/Short case	Long case/short case
SU9.3	Communicate the results of surgical investigations and counsel the patient appropriately	DOAP	8, 9 term	OSCE/Short case	Long case/short case
Pre, intra and post- operative management.					
SU10.2	Describe the steps and obtain informed consent in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
SU10.3	Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.	DOAP	8, 9 term	OSCE/Short case	Long case/short case
SU10.4	Perform basic surgical Skills such as First aid including suturing and minor surgical procedures in simulated environment	DOAP	8, 9 term	OSCE/Short case	Long case/short case
Anesthesia and Pain management					
SU11.3	Demonstrate maintenance of an airway in a mannequin or equivalent	DOAP	8, 9 term	OSCE/Short case	Long case/short case
Transplantation					
SU13.4	Counsel patients and relatives on organ donation in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Basic Surgical skills					

SU14.4	Demonstrate the techniques of asepsis and suturing in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Trauma					
SU17.1	Describe the Principles of FIRST AID	Clinics	5 term	OSCE/Short	Long
				case	case/short case
SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment	DOAP	5 term	OSCE/Short case	Long case/short case
SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.	DOAP	5 term	OSCE/Short case	Long case/short case
Skin and subcutaneous tissue					
SU18.3	Describe and demonstrate the clinical examination of surgical patient including swelling and order relevant investigation for diagnosis. Describe and discuss appropriate treatment plan.	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Endocrine General Surgery: Thyroid and parathyroid					
SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management	Clinics	7 term	OSCE/Short case	Long case/short case

IM12.6	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and severity including systemic signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	Clinics	7th term	OSCE/Short case	Long case/short case
IM12.7	Demonstrate the correct technique to palpate the thyroid	Clinics	term	OSCE/Short case	Long case/short case
Breast					
SU24.5	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin	Clinics	7 term	OSCE/Short case	Long case/short

	or equivalent				case
Vascular Diseases					
SU27.2	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease	Clinics	4 term	OSCE/Short case	Long case/short case
SU27.8	Demonstrate the correct examination of the lymphatic system	Clinics	4 term	OSCE/Short case	Long case/short case
Abdomen					
SU28.2	Demonstrate the correct technique to examine the patient with hernia and identify different types of hernias.	Clinics	5 term	OSCE/Short case	Long case/short case
SU28.9	Demonstrate the correct technique of examination of a patient with disorders of the stomach	Clinics	8, 9 term	OSCE/Short case	Long case/short case

SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatment plan	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Urinary System					
SU29.10	Demonstrate a digital rectal examination of the prostate in a mannequin or equivalent	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Blood and blood components					
SU3.2	Observe blood transfusion	Bedside	3,4 th term	OSCE/Short case	Long case/short case
Integration – Paediatric surgery					
PE21.8	Elicit, document and present a history pertaining to diseases of the Genitourinary tract00	Bedside	6,7 term	OSCE/Short case	Bedside clinics, Skills lab
PE21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis pancreatitis perforation intussusception, Phimosi s, undescended testis, Chordee, hypospadiasis, Torsion testis, hernia Hydrocele, Vulval Synechia e	Clinics	6,7 term	OSCE/Short case	Bed side clinics, Skills lab
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Skills lab	6,7 term	OSCE	Long case/short case

IM15.7	Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent				DOAP session
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Surgery competencies – Communication skills

Shock					
SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Blood and Blood components					
SU3.3	Counsel patients and family/ friends for blood transfusion and blood donation.	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Burns					
SU4.4	Communicate and counsel patients and families on the outcome and rehabilitation demonstrating empathy and care.	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Breast					
SU24.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast	Clinics	8, 9 term	OSCE/Short case	Long case/short case

Horizontal Integration Topics – Internal medicine, Orthopedics, Obstetrics and Gynecology and Anaesthesiology

Internal Medicine					
IM5.8	Describe and discuss the pathophysiology, clinical evolution and complications of cholelithiasis and cholecystitis	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM5.13	Enumerate the indications for ultrasound and other imaging studies including MRCP and ERCP and describe the findings in liver disease	Bed side clinic, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites, spontaneous, bacterial peritonitis and hepatic encephalopathy	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM5.18	Enumerate the indications for hepatic transplantation	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM12.8	Generate a differential diagnosis based on the clinical presentation and prioritise it based on the most likely diagnosis	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Essay/sort essay/SAQ/MCQ
IM12.9	Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radio iodine uptake and scan	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/
IM12.10	Identify atrial fibrillation, pericardial effusion and bradycardia on ECG	Bed side clinic, Small	6 th and 7 th term	OSCE/short case	Longcase/short case/
		group discussion			

IM12.11	Interpret thyroid function tests in hypo-and hyperthyroidism	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/
IM12.13	Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM12.15	Describe and discuss the indications of thionamide therapy, radio iodine therapy and Surgery in the management of thyrotoxicosis	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/

IM13.7	Elicit document and present a history that will help establish the aetiology of cancer and includes the appropriate risk factors, duration and evolution	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.8	Perform and demonstrate a physical examination that includes an appropriate general and local examination that excludes the diagnosis, extent spread and complications of cancer	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.10	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.13	Describe and assess pain and suffering objectively in a patient with cancer	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.14	Describe the indications for General Surgery, radiation and chemotherapy for common malignancies	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM14.14	Describe and enumerate the indications and side effects of bariatric surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.1	Enumerate, describe and discuss the aetiology of upper and lower GI bleeding	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.2	Enumerate describe and discuss the evaluation and steps involved in stabilizing a patient who presents with acute volume loss and GI bleed	DOAP session, Small group discussion, Lecture	8 th and 9 th term	OSCE/short case	Longcase/short case/

IM15.3	Describe and discuss the physiologic effects of acute blood and volume loss	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.4	Elicit document and present an appropriate history that identifies the route of bleeding, quantity, grade, volume loss, duration, etiology, comorbid illnesses and risk factors	DOAP session, Small group discussion, Lecture	8 th and 9 th term	MCQs/Quiz/Drill	Longcase/short case/

IM15.5	Perform, demonstrate and document a physical examination based on the history that includes general examination, volume assessment and appropriate abdominal examination	Bedside clinics	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.6	Distinguish between upper and lower gastrointestinal bleeding based on the clinical features	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ
IM15.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stool examination, occult blood, liver function tests, H.pylori test.	Bedside clinic, DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ
IM15.11	Develop, document and present a treatment plan that includes fluid resuscitation, blood and blood component transfusion, and specific therapy for arresting blood loss	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ
IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion	Lecture, Small group discussion	8 th and 9 th term	OSCE/short case	Essay/sort essay/SAQ/ MCQ
IM15.13	Observe cross matching and blood / blood component transfusion	Bedside clinic	8 th and 9 th term		Longcase/short case/
IM15.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of pressors used in the treatment of Upper GI bleed	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ

IM15.15	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of acid peptic disease including <i>Helicobacter pylori</i>	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM15.16	Enumerate the indications for endoscopic interventions and Surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM15.17	Determine appropriate level of specialist consultation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options	DOAP session	8 th and 9 th term	OSCE/short case
IM16.12	Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhea	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM16.15	Distinguish, based on the clinical presentation, Crohn's disease from ulcerative colitis	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM16.17	Describe and enumerate the indications for Surgery in inflammatory bowel disease	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM18.15	Enumerate the indications for Surgery in a hemorrhagic stroke	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM19.9	Enumerate the indications for use of Surgery and botulinum toxin in the treatment of movement disorders	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM22.2	Describe the aetiology, clinical manifestations, diagnosis and clinical approach to primary hyperparathyroidism	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
IM24.11	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill

Obstetrics & Gynecology				
OG26.2	Describe the causes, prevention, clinical features, principles of management of genital injuries and fistulae	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
OG33.2	Describe the principles of management including Surgery and radiotherapy of benign, pre-malignant (CIN) and malignant Lesions of the Cervix	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill

Orthopaedics					
OR1.1	Describe and discuss the principles of pre-hospital care and casualty management of a trauma victim including principles of triage	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR1.2	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of shock	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR1.4	Describe and discuss the principles of management of soft tissue injuries	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of Bone and Joint infections a) Acute Osteomyelitis b) Subacute osteomyelitis c) Acute Suppurative arthritis d) Septic arthritis & HIV infection e) Spirochaetal infection f) Skeletal Tuberculosis	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR3.3	Participate as a member in team for procedures like drainage of abscess, sequestrectomy/ saucerisation and arthrotomy	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case
OR4.1	Describe and discuss the clinical features, Investigation and principles of management of Tuberculosis affecting major joints (Hip, Knee) including cold abscess and caries spine	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
OR10.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of benign and malignant bone tumours and pathological fractures	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ

OR11.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerve injuries in diseases like foot drop, wrist drop, claw hand, palsies of	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
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	Radial, Ulnar, Median, Lateral Popliteal and Sciatic Nerves				
Anaesthesiology					
AS3.1	Describe the principles of preoperative evaluation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
AS3.2	Elicit, present and document an appropriate history including medication history in a patient undergoing Surgery as it pertains to a preoperative anaesthetic evaluation	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case
AS3.3	Demonstrate and document an appropriate clinical examination in a patient undergoing General Surgery	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case
AS3.4	Choose and interpret appropriate testing for patients undergoing Surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
AS3.5	Determine the readiness for General Surgery in a patient based on the preoperative evaluation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
AS5.6	Observe and describe the principles and steps/ techniques involved in common blocks used in Surgery(including brachial plexus blocks)	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case
AS6.3	Describe the common complications encountered by patients in the recovery room, their recognition and principles of management	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
AS9.3	Describe the principles of fluid therapy in the preoperative period	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ
AS9.4	Enumerate blood products and describe the use of blood products in the preoperative period	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay MCQ

AS10.3	Describe the role of communication in patient safety	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/ Drill	Essay/sort essay MCQ
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**Rajiv Gandhi University of Health Sciences,
Bangalore, Karnataka**



UNDERGRADUATE LOGBOOK (CBME)

DEPARTMENT OF GENERAL SURGERY

Purpose of this logbook

The logbook is a verified record of the progression of the learner documenting the acquisition of the requisite knowledge, skills, attitude, and/or competencies in order to function as an Indian Medical Graduate. It is a record of the academic/co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.

Entries in the logbook will reflect the activities undertaken in the department and has to be scrutinized by the head of the concerned department.

The logbook is a record of various activities by the student like:

- Overall participation & performance
- Attendance
- Participation in sessions
- Record of completion of pre-determined activities
- Acquisition of selected competencies

The logbook is the record of work done by the candidate in the department and shall be verified by the college before submitting the application of the students for the university examination.

The purposes of this logbook are:

- a. To orient the students to holistic patient management by completing the case record, observing and recording procedures and discussing patient treatment in the therapeutics section.
- b. To facilitate the student's learning process, document the learning process and assist in student assessment
- c. To keep a record of the student's progress in development of the desired skills and attitudes
- d. To ensure that the time spent in the department is well utilized
- e. To form a basis for continual assessment of the student

This log book is a documentation of cases seen, clerked and witnessed by you during your posting in General Surgery. It is also a record of various seminars, case-based learning, simulation exercises and other academic activities that the learner has been a part of during course. Though efforts are made to cover as much as possible, in no way should this be considered the syllabus.

Please carry this book whenever you attend the non-lecture academic activities of the department and get it duly signed by the concerned staff at the end of the academic activity.

We expect discipline, honesty, sincerity and punctuality.

The responsibility of completing the logbook and getting it verified/assessed by the faculty lies with the student. The logbook must be carried by the student as per the given instructions.

General Instructions

1. It is expected that the students will adhere to the highest ethical standards and professionalism.
2. Shall maintain punctuality in respect to arrival and completion of the assigned work
3. Maintain a cordial relationship with peers, unit staff and hospital staff
4. Not indulge in any act which would bring disrepute to the institution.
5. You should wear a clean apron and follow the dress regulations as laid down by the college and maintain proper hygiene with wearing respective identification badge while in college and hospital.
6. You should carry the following with you for the clinics
 - a. Clinical text book
 - b. Stethoscope
 - c. Clinical kit for examination as prescribed by the department of surgery.
7. Respect the patient as an individual and recognize that he/she also has rights.
8. Cases that are discussed only have to be documented and not the dummy cases.
9. **Loss of this logbook at any time may affect the formative assessment results and impair the student appearing in the summative assessment.**
10. **The student is solely responsible for maintaining the log book record. If the student loses the logbook, he/she would be withheld from appearing for the University examination unless suitable backup proof is provided.**

Student details

Name of the student	
Roll No (College ID)	
University Registration Number	
Batch	
Contact No	
E mail Id	
Guardian/Parent Name Contact Number	
Faculty Mentor	
Name Department	

BONAFIDE CERTIFICATE

**This is to certify that the candidate Mr/Ms,
Reg No., admitted in the year..... in College**

**Hospital, has satisfactorily completed / has not completed all requirements mentioned in this logbook for MBBS course in the subject of GENERAL SURGERY including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation during the period from to.....
He/She is / is not eligible to appear for the University examination as on the date given below.**

Signature of Faculty Mentor

Name and Designation

Countersigned by Head of the Department

Date

INDEX

S. No.	Content	Page No.
1.	Bonafide certificate	
2.	Preface	
3.	General Instructions	
4.	Attendance extract	
5.	Overall Assessment	
6.	Clinical posting 1	
7.	Clinical posting 2	
8.	Clinical posting 3	
9.	Clinical posting 4	
10.	Check lists for skills assessments	
11.	AETCOM modules	
12.	Integrated sessions	
13.	Small group learning sessions	
14.	Self- Directed Learning sessions	
15.	Seminars presented	
16.	Research projects/publications	
17.	Co - Curricular Activities (Quiz, Poster, Debate, Essay, Skits)	
18.	CME/ Conference / Workshop	
19.	Awards / recognition	

ATTENDANCE EXTRACT

Theory classes

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD
Second Professional				
Third professional-part I				
Third Professional Part II				

Small Group sessions

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD
Third professional- part I				
Third Professional Part II				

Bedside clinics:

Professional Year	Unit From (date) To (date)	Number attended	Number conducted	Percentage of Attendance	Signature of Unit Head	Signature of HOD
Second Professional Posting 1						
Third Professional Part I Posting 2						
Third Professional Part II Posting 3						
Posting 4						

Note:

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and self-directed learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day in each of the subjects prescribed to be eligible to appear for the university examination.

Overall assessment of the student

	Posting 1	Posting 2	Posting 3	Posting 4
Attendance	/5	/5	/5	/5
Discipline	/5	/5	/5	/5
Middle of posting assessment	/5	/10	/20	/30
End of posting assessment	/5	/15	/20	/30
Student doctor method of learning	/5	/10	/10	-----
Total (/200)	/ 25	/45	/60	/70
Remarks if any				

Total marks obtained on a total of 200 is -----

A student will be permitted to appear for final university exams only if he/she obtains more than 100 marks in the assessments.

Final remarks if any -

Posting 1
Duration: 4 weeks
Date of Posting: From: To:
Unit:

Bedside Clinics in Surgery II MBBS

1	History taking surgery in surgery
2	General Physical examination
3	Eliciting vital signs
4	Examination of an ulcer
5	Examination of a swelling
6	Examination of abdomen
7	Hand wash and draping patients in OT
8	Basic instruments in surgical operation theatre

Learner doctor method

Posting 1

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method

Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 1:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/ Observed	Faculty signature
1					

2					
3					
4					
5					
6					
7					
8					
9					
10					

Posting 2

Duration: 4 weeks

Date of Posting: From:

To:

Unit:

Learner doctor method

Posting 2

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method

Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 2:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/ Observed	Faculty signature

1					
2					
3					
4					
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7					
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10					

S no.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty* **	Initial of faculty and date	Feedback Received Initial of learner
1	SU22.2	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management						
2	SU25.5	Demonstrate the correct technique to palpate the breast for breast lump on a patient						
3	SU27.8	Demonstrate the correct examination of the lymphatic system						
4	SU21.2	Demonstrate and document the correct clinical examination of swelling in the submandibular region and discuss the differential diagnosis and management						

*First or Only (F) Repeat (R) Remedial (Re)

**Below(B) expectations Meets(M) expectations Exceeds (E)expectations

*** Completed (C) Repeat (R) Remedial (Re)

TUTORIALS in Surgery for MBBS Professional -III PART 1

SL No.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty***	Initial of faculty and date	Feedback Received Initial of learner
1	SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care						
2	SU4.4	Burns: Communicate and counsel patients and families on the outcome and rehabilitation demonstrating empathy and care.						
3	SU5.2	Elicit, document and present a history in a patient presenting with wounds.						
4	SU6.2	Enumerate Prophylactic and therapeutic antibiotics Plan appropriate management						
5	SU11.5	Describe the steps and obtain informed consent in a simulated environment						

6	SU12.2	Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patient						
7	SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery						
8	SU3.2	Observe blood transfusions.						
9	SU3.3	Counsel patients and family/ friends for blood transfusion and blood donation.						
1	SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment						
1	SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.						

SEMINARS

1	SU4.2	Burns assessment						
1	SU8.3	Discuss Medico-legal issues in surgical practice						
1	SU17.1	Principles of FIRST AID						
1	SU14.3	Surgical Wound Closure and Anastomosis(Sutures , Knots And Needles)						
1	17.3	Mass casualties						
1	17.9	Chest Injuries						
1	SU19.2	Cleft Lip and Palate						

1	SU22. 4	Thyroid Cancer						
2	SU22. 6	Hyperparathyroidis m						
2	SU26. 1	Congenital Heart Diseases						
2	SU17. 1	Basic life support						
2	SU27. 3	Principles of Amputation						

Posting 3
Duration: 8 weeks
Date of Posting: From: To:
Unit:

Clinical postings (8+4*WEEKS)

OPD	Observe and record new and follow up cases in OPD(3hrs)
Post Admission day ward rounds	Follow up of assigned cases(1hr), Bedside clinics SGD,DOAP(1hr), SDL, Discussion and closure (1hr)
OT	Observe OT procedures and document in the logbook with Discussion(3hrs)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)

Learner doctor method

Posting 3

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Lerner doctor method

Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 3:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
2			

3			
4			
5			
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7			
8			
9			
10			

List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/Observed	Faculty signature
1					
2					
3					
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Bedside Clinics in General Surgery for MBBS Third Professional year - Part 2

Bedside Clinics in Surgery For MBBS-PHASE 3

S no.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty***	Initial of faculty and date	Feedback Received Initial of learner
	SU21.1	Salivary gland examination						
Abdomen	SU28.9	Demonstrate the correct technique to examine the patient with disorders of stomach						
Abdomen	SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatment plan						

Thyroid	SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management						
Vascular diseases	SU27.2	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease						
Penis, Testis and scrotum	SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele						
Breast	SU25.5 SU25.4	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						

Abdomen	SU28.2	Demonstrate the correct technique to examine the patient with hernia and identify different types of hernias						
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*First or Only (F) Repeat (R) Remedial (Re)

**Below(B) expectations Meets(M) expectations Exceeds (E)expectations

*** Completed (C) Repeat (R) Remedial (Re)

List of Tutorials and seminars MBBS Part 3

SL No.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty ***	Initial of faculty and date	Feedback Received Initial of learner
1	SU19.2	Principles of reconstruction of cleft lip and palate						
2	SU20.2	Principles of treatment – Oropharyngeal cancer						
3	SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						
4	SU29.10	Digital rectal examination of the prostate in a mannequin or equivalent						

5	SU9.3	Communicate the results of surgical investigations and counsel the patient appropriately						
6	SU9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient						
7	SU10.2	Describe the steps and obtain informed consent in a simulated environment						
8	SU10.4	Perform basic surgical Skills such as First aid including suturing and minor surgical procedures in simulated environment						
9	SU11.3	Demonstrate maintenance of an airway in a mannequin or equivalent						
1	SU13.4	Counsel patients and relatives on organ donation in a simulated environment						
1	SU14.4	Demonstrate the techniques of asepsis and suturing in a simulated environment						

1	SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						
SEMINARS								
1	SU28.11	post-splenectomy sepsis - prophylaxis						
1	SU28.4	Short gut syndrome						

Posting 4

Duration: 4 weeks

Date of Posting: From:

To:

Unit:

Learner doctor method

Posting 4

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method

Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 4:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
2			
3			
4			
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6			
7			
8			
9			
10			

List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/Observed	Faculty signature
1					
2					
3					
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10					

Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.

List of Minor Procedures

S.No.	Procedure (Minimum number - 2)	Number observed	Date	Faculty signature
1	ICD insertion			
2	Ryles tube insertion			
3	Foleys catheter insertion			
4	Central line insertion			
5	Swelling excision			
6	Lymph node biopsy			
7	Toe nail excision			
8	Paronychia drainage			
9	Toe disarticulation			
10	Bedside debridement			

List of common surgical procedures

S.No.	Procedure (Minimum number 2)	Number observed	Date	Faculty signature
1	Inguinal Hernia repair			
2	Appendectomy			
3	Fibroadenoma excision			
4	Circumcision			
5	Thyroidectomy			
6	Modified Radical Mastectomy			
7	Varicose vein surgery			

8	Laparotomy			
9	Laparoscopic cholecystectomy			
10	Ventral hernia repair			

TUTORIALS (60 HRS)

SL NO.	COMPETENCY NO.	TOPIC	Date of activity	Faculty feedback	Signature of Faculty
1					
2					
3					
4					
5					
6					
7					
8					
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10					
11					
12					
13					
14					
15					
16					
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52					
53					
54					
55					
56					
57					
58					
59					
60					

SEMINAR (40 Hours)

SL NO.	COMPETE NCY NO.	TOPIC	Date of activity	Faculty feedback	Signatur e of Faculty
1					
2					
3					
4					
5					
6					
7					
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10					
11					
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13					
14					
15					
16					
17					
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35					
36					
37					

38					
39					
40					

AETCOM MODULE

Competency Acquisition: Suggested Log Book pattern

Name of student	Roll number	Year of joining
Specific competency no.		
Competency required to graduate	Universal competency no.	
Administer informed consent to a patient undergoing surgery in a simulated environment (Dreyfus level advanced beginner)		
Competency must be acquired at the end of professional year	IV	
Is the acquisition of this competency a prerequisite to advancement to the next phase	Yes/ No	
Does this competency require performance in a patient	Yes/ No	
Number of times the student must have performed the skill		
	Date Completed	Supervisor
Certified by Faculty: Name, Date and UID		
Student's descriptive narrative of skill acquired		
Faculty only: If the student has not completed the competency, write down the reasons and remedial measures suggested		

Communication skills rating scale adapted from Kalamazoo consensus statement
Rating 1-3 - Poor, 4 -6 Satisfactory, 6 -10 Superior

Criteria	Score
Builds relationship	
Opens the discussion	
Gathers information	
Understands the patient's perspective	
Shares information	
Manages flow	
Overall rating	

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of General surgery

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty **AETCOM**

MODULES

Module number:

Date:

Name of the activity:

Department of General surgery

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of General Surgery

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

List of AETCOM competency				
Competency No.	Competency	Domain	Date	Signature
8	Identify and discuss medico-legal, socioeconomic and ethical issues as it pertains to organ donation	K/KH		
14	Identify, discuss and defend medico-legal, socio-cultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the capability or capacity to give consent	K/KH		
18	Identify, discuss and defend, medico-legal, socio-cultural and ethical issues as they pertain to consent for surgical procedures	K/KH		

23	<p>Demonstrate ability to communicate to patients in a patient,</p> <p>respectful, nonthreatening, nonjudgemental and empathetic manner</p>	S/SH		
32	<p>Demonstrate respect and</p>	S/SH		
	<p>follows the correct procedure when</p> <p>handling cadavers and other biologic tissues</p>			
33	<p>Administer informed consent and appropriately address patient</p> <p>queries to a patient undergoing a surgical procedure in a simulated environment</p>	S/SH		
34	<p>Communicate diagnostic and therapeutic options to patient and</p> <p>family in a simulated environment</p>	S/SH		

	Date of session	Topics covered	Competency numbers addressed	Departments involved in the conduct of the session	Signature of the student	Signature of the faculty
1						
2						
3						
4						
5						
6						

Integrated sessions

Small group discussions Phase 3, part 1

	Topic	Type of SGD	Date	Observed/Presented	Faculty Sign

Self-directed learning sessions:

Sl. No.	Date	Topic	Competency number	Signature of the Faculty
11				

12				
13				
14				
15				
16				
17				
18				
19				
20				

Seminars presented – phase 3 part 1

	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			

5			
---	--	--	--

Seminars presented Phase 3 part 2

	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			
5			

Research projects and publications

	Name of the topic	Date	Signature of the faculty
1			
2			

3			
4			
5			

Co curricular activities -(quiz, poster, debates, essays, skit)

	Name of the topic	Date	Signature of the faculty
--	-------------------	------	--------------------------

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Participation in CME, conference, and workshops.

	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			
5			
6			
7			

8			
9			
10			

Awards and recognition

	Name of the Award	Date	Signature of the faculty
1			
2			

3			
4			
5			

Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



Surgery Allied Subjects including Anaesthesiology Radiodiagnosis and Radiotherapy Curriculum as per Competency-Based Medical Education Curriculum

Anesthesiology CBME Curriculum of Phase-III Part I MBBS

Theory teaching hours				
Subject	Small group discussions	Interactive Lectures	Self directed learning (Hours)	Total (Hours)
Anaesthesiology	10	8	2	20
Clinical posting				
Anaesthesiology	One week			

THEORY (20 hours) and CLINICS (1 week)

Sl number	Topic	Competency number	T-L method	Time	Integration
1	Anaesthesiology as a specialty	AS 1.1, 1.2, 1.3, 1.4	Lecture	1 hour	
2	Cardiopulmonary resuscitation	AS 2.1, 2.2	Small group discussion, simulation	2 hours	
3	Preoperative evaluation and medication	AS 3.1,3.2,3.3,3.4,3.5,3.6	Lecture Clinics	1 hour	Surgery
4	General	AS 4.1, 4.2	Lecture	1 hour	

	Anaesthesia	AS 4.3,4.4,4.5,4.6,4.7	Small group discussion Clinics	2 hours	
5	Regional anaesthesia	AS 5.1, 5.2	Lecture	1 hour	
		AS 5.3,5.4,5.5,5.6	Small group discussion	2 hours	

			Clinics		
6	Intensive Care Management	AS 7.1,7.2	Lecture	1 hour	
		AS 7.3,7.4,7.5	Small group discussion Clinics	2 hours	Medicine
7	Pain and its management	AS 8.1,8.2,,3,8.4,8.5	Lecture	1 hour	
8	Fluids	AS 9.1,9.2	Small group discussion, skills lab	2 hours	
		AS 9.3,9.4	Lecture	1 hour	
9	Patient safety	AS 10.1,10.2,10.3,10.4	Lecture	1 hour	

Self- Directed learning:

Duration: 2 hours

Students will be given clinical case scenarios and will be told to work in groups. Reference books and E material will be suggested to them beforehand.

Discussion regarding monitoring, identification of high-risk patients, resuscitation and discharge criteria will be done.

Self-Directed Learning - 2 hours				
Sl no	Topic	Competencies	T-L method	Assessment
1	Postanaesthesia recovery	AS 6.1,6.2,6.3	Self-Directed Learning	Formative assessment Recording of team work contribution in Log Book

Assessment and Feedback of Anaesthesia: Theory paper – 50 marks, Short essay, MCQs – 1 hour
Monitoring Log Book and Feedback

Radiodiagnosis and Radiotherapy CBME Curriculum

<i>Theory teaching hours</i>				
<i>Subject</i>	<i>Teaching hours</i>	<i>Tutorials/Seminars/Integrated teaching (Hours)</i>	<i>Self directed learning (Hours)</i>	<i>Total (Hours)</i>
<i>Radiodiagnosis</i>	<i>10</i>	<i>8</i>	<i>2</i>	<i>20</i>
<i>Clinical posting</i>				
<i>Radiodiagnosis</i>	<i>2 weeks in 2nd MBBS</i>			

<i>THEORY</i>					
<i>Blocks</i>	<i>Sl. No.</i>	<i>Topic</i>	<i>Competencies</i>	<i>Time</i>	<i>T/L method</i>
	1	<i>Definition of radiation; Interaction of radiation with matter;</i>	<i>RD 1.1</i>	<i>1 hour</i>	<i>Lecture</i>
	2	<i>Radiation protection</i>	<i>RD 1.1</i>	<i>1 hour</i>	<i>Lecture</i>
	3	<i>Introduction to imaging modalities</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	4	<i>X ray and related investigations like fluoroscopy & Mammography</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	5	<i>Ultrasonography and color doppler</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	6	<i>Computed Tomography</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	7	<i>Magnetic Resonance Imaging</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	8	<i>Contrast Media and contrast reactions. Management of contrast reactions.</i>	<i>RD 1.2</i>	<i>1 hour</i>	<i>Lecture</i>
	3	<i>Imaging modalities in common malignancies</i>	<i>RD 1.8</i>	<i>1 hour</i>	<i>Lecture</i>
<i>I</i>	4	<i>Interventional Radiology in common clinical conditions</i>	<i>RD 1.9</i>	<i>1 hour</i>	<i>Lecture</i>
	5	<i>Pre-procedural Patient preparation for imaging.</i>	<i>RD 1.11</i>	<i>1 hour</i>	<i>Lecture</i>

II	6	<i>Effects of radiation on pregnancy and the methods of prevention/minimization of radiation exposure.</i>	RD 1.12	1 hour	Lecture
	7	<i>Components of PC & PNDT act and its medico-legal implications</i>	RD 1.13	1 hour	Lecture
	8	<i>Assessment and feedback (50 marks)</i>		1 hour	<i>Short essay, short answers, MCQs</i>

Self- Directed learning: Duration: 2 hours

Students will be given clinical case scenarios and asked to suggest the imaging modality of choice. Reference books and E material will be suggested to them beforehand. Discussion regarding the imaging modalities including patient preparation will be done.

Self- Directed learning		
Sl. No.	Topics	Competencies
1	Emergency Radiology	RD 1.10
2	Selection of imaging modalities in various common clinical conditions with advantages and disadvantages	RD1.2, RD1.3, RD1.4, RD1.5, RD1.6, RD1.7, RD1.8.

Clinical posting – 2 weeks in 2nd MBBS

Most of the Show/Shows how competencies are integrated with other clinical subjects

Compet Number	Competency	T-L method	Assessment	Integration
PE21.12	Interpret report of Plain radiograph of KUB	DOAP	OSCE	Pediatrics
PE21.13	Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB	DOAP	OSCE	Pediatrics
PE23.13	Interpret a chest radiograph and recognize Cardiomegaly	DOAP	OSCE	Pediatrics
PE23.16	Use the ECHO reports in management of cases	DOAP	OSCE	Pediatrics
PE28.17	Interpret X-ray of the paranasal sinuses and mastoid; and /or use written report in case of management Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in Pediatric chest X-rays	DOAP	OSCE	Pediatrics
PE30.23	Interpret the reports of EEG, CT, MRI	DOAP	OSCE	Pediatrics
PE34.8	Interpret a Chest radiograph	DOAP	OSCE	Pediatrics
IM3.7	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputum gram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG	DOAP	OSCE	Internal medicine

Tutorials/Seminars/Integrated teaching:

Sl No.	Topic	Competencies	Integration with	Duration (Hours)
1	Imaging and Radiological investigations in common ENT disorders	RD 1.3	ENT	1 hour
2	Imaging and Radiological investigations in common disorders of Obstetrics and Gynecology	RD 1.4	Ob & Gy	1 hour
3	Imaging and Radiological investigations in common disorders related to internal medicine	RD 1.5	Medicine	1 hour
4	Imaging and Radiological investigations in common disorders related to surgery	RD1.6	Surgery	1 hour
5	Imaging and Radiological investigations in common disorder related to Pediatrics	RD1.7	Paediatrics	1 hour
6	Imaging and Radiological investigations in common conditions pertaining to common malignancies	RD1.8, RD 1.3, RD1.4, RD1.5, RD1.6, RD1.7	Oncology	1 hour
7	Effects of Radiation on pregnancy and methods of prevention / minimization of radiation exposure	RD1.12, RD1.4	Ob & Gy	1 hour
8	Components of PC & PNDT act and its medicolegal implications	RD1.13, RD1.4	Forensic PSM	1 hour
Total				8

Radiotherapy – Competencies

Compet Number	Competency	T-L method	Assessment
RT1.1	Describe and discuss definition of radiation, mechanism of action of radiation, types of radiation	Lecture/SDL	MCQs/SAQ
RT1.2	Describe and discuss interaction of radiation with matter & measurement of radiation	Lecture/SDL	MCQs/SAQ
RT1.3	Enumerate, describe and discuss classification and staging of cancer (AJCC, FIGO etc.)	Lecture/SDL	MCQs/SAQ
RT2.1	Describe and discuss radiation protection and personnel monitoring during radiation treatment	Lecture/SDL	MCQs/SAQ
RT3.1	Describe and discuss cell cycle and cell survival curve, principles of radiobiology	Lecture/SDL	MCQs/SAQ
RT3.2	Describe and discuss synergism of radiation and chemotherapy	Lecture/SDL	MCQs/SAQ
RT4.1	Describe and discuss teletherapy machine (Co60/LINAC)	Lecture/SDL	MCQs/SAQ
RT4.2	Enumerate, describe and discuss types of treatment plan, basic workflow of 2D/3DCRT/IMRT/IGRT	Lecture/SDL	MCQs/SAQ
RT4.3	Describe and discuss Brachytherapy machine (remote after loading)	Lecture /SDL	MCQs/SAQ
RT4.4	Describe and discuss different radioactive isotopes and their use in cancer patients	Lecture/SDL	MCQs/SAQ

RT4.5	Describe and discuss role of radiation in management of common malignancies in India (region specific)	Lecture/SDL	MCQs/SAQ
RT4.6	Describe and discuss radiotherapy for benign disease	Lecture/SDL	MCQs/SAQ
RT4.7	Counsel patients regarding acute and late effects of radiation and supportive care	DOAP	OSCE
RT4.8	Describe oncological emergencies and palliative care	Lecture/SDL	MCQs/SAQ
RT4.9	Display empathy in the care of patients with	DOAP	OSCE

Anesthesia and Radiodiagnosis

cancer

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HEALTH SCIENCES**
BANGALORE, KARNATAKA



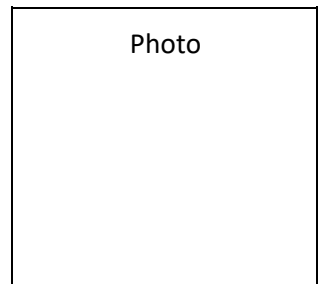
(General Surgery Allied Subjects)

LOGBOOK

For Undergraduates

As Per Competency-Based Medical Education Curriculum

BASIC PROFORMA OF THE STUDENT



PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

PREFACE

This booklet has been adopted from the book prepared by an Expert Group constituted

by the university and complies with the “**Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019**” as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress of an undergraduate student through the specified competencies in Anaesthesia and Radiodiagnosis including Radiotherapy. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner’s stay in the Departments of Anaesthesia and Radiodiagnosis. This logbook would be a verifiable record of the learner’s progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Successful documentation and submission of the logbook is a prerequisite for being allowed to take the final summative examination.

Summary of Clinical Case Presentations/Spotters in Anaesthesia

(*Departments may create/continue with a case record book for documentation of cases) **At least 3 cases in a clinical posting**

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

End of posting Assessment

Suggested Methods

15. Viva Voce

16. CA-OSCE / OSCE / OSPE

17. Bedside assessment

18. Communication skill (Counselling)

19. Psychomotor skill- Smear preparation, slide preparation, speculum examination

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1 st	Phase II	2 weeks					

Anaesthesia
REFLECTIONS: CLINICAL CASE PRESENTATION

*(Students should preferably reflect on cases which they themselves have presented): **At least one Reflection per Clinical Posting***

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				

What Next?	
Signature of Faculty	Date

Summary of Clinical Case Presentations/Spotters in Radiodiagnosis

(*Departments may create/continue with a case record book for documentation of cases) **At least 3 cases per clinical posting**

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

End of posting Assessment

Suggested Methods

1. **Viva Voce**
2. **CA-OSCE / OSCE / OSPE**
3. **Bedside assessment**
4. **Communication skill (Counselling)**
5. **Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1 st	Phase II	2 weeks					

**Radiodiagnosis
REFLECTIONS: CLINICAL CASE PRESENTATION**

*(Students should preferably reflect on cases which they themselves have presented): **At least one Reflection per Clinical Posting***

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				
What Next?				
Signature of Faculty			Date	

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



Orthopedics Curriculum
as per
Competency Based Medical Education

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Goals and Objectives for the undergraduate MBBS curriculum in Orthopaedics (As per Graduate Medical Education

Regulations (GMR), 1997 Part II)

GOAL

The aim of teaching the undergraduate student in Orthopaedics (including Trauma) and Physical Medicine and Rehabilitation is to impart such knowledge and skills that may enable him to diagnose and treat common ailments. He/she shall have ability to diagnose and suspect presence of fracture, dislocation, acute osteomyelitis, acute poliomyelitis and common congenital deformities such as Congenital Talipes Equino Varus (CTEV) and Developmental Dysplasia of Hip (DDH).

(a) **COMPETENCIES:** The student must demonstrate:

1. Ability to recognize and assess bone injuries, dislocation and poly-trauma and provide first contact care prior to appropriate referral,
2. Knowledge of the medico-legal aspects of trauma,
3. Ability to recognize and manage common infections of bone and joints in the primary care setting,
4. Recognize common congenital, metabolic, neoplastic, degenerative and inflammatory bone diseases and refer appropriately,
5. Ability to perform simple orthopaedic techniques as applicable to a primary care setting,
6. Ability to recommend rehabilitative services for common orthopaedic problems across all ages.

(b) **INTEGRATION:** The teaching should be aligned and integrated horizontally and vertically in order to allow the student to understand

the structural basis of orthopaedic problems, their management and correlation with function, rehabilitation and quality of life.

List of Topics and Competencies in Phase II MBBS, Phase III Part 1 and Part 2 MBBS

Sl.No	Topics	Competencies	Procedures requiring certification
1	Skeletal trauma, poly trauma	06	Ni I
2	Fractures	16	Ni I
3	Musculoskeletal Infection	03	Ni I
4	Skeletal Tuberculosis	01	Ni I
5	Rheumatoid Arthritis and associated inflammatory disorders	01	Ni I
6	Degenerative disorders	01	Ni I

7	Metabolic bone disorders	01	Ni I
8	Poliomyelitis	01	Ni I
9	Cerebral Palsy	01	Ni I
10	Bone Tumors	01	Ni

			I
11	Peripheral nerve injuries	01	Ni I
12	Congenital lesions	01	Ni I
13	Procedural Skills	02	Ni I
14	Counselling Skills	03	Ni I

	Total	39	Ni I
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**Period of Training in Phase II and
Phase III**

	Phase II	Phase III Part 1	Phase III Part 2	Total
Theory	NONE	40 hours	50 hours	90 hours
Clinical S	2 weeks	4 weeks	2 weeks	8 weeks

Minimum Teaching Hours in MBBS Phase II, Phase III Part 1 and Part 2

Term	Lectures (hours)	Small group discussions (SGD) (Tutorials / Seminars) /Integrated learning (hours)	Self Directed Learning (SDL) (hours)	Total (hours)
Phase II	NONE	NONE	NONE	
Phase III Part 1	15	20	05	40
Phase III Part 2	20	25	05	50*
Total				90
<i>* 25% of allotted time shall be utilized for integrated learning</i>				
AETCOM (OR14.1, 14.2, 14.3)				

Phase II				
Phase III Part 1				
Phase III Part 2		2 hours (OR 14.1, 14.2, 14.3)		
Total				

Specific Learning Objectives

Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH /SH/ P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Vertical integration	Horizontal integration
TOPIC : SKELETAL TRAUMA, Poly trauma								
OR1.1	Describe and discuss the Principles of prehospital care and Causality management of a trauma victim including principles of triage.	K	K/KH	Y	Lecture with video, Small group discussion	Written/ Viva voce/ OSCE/ Simulation		GENERAL SURGERY ANESTHESIOLOGY
Specific learning objectives:								
1.1.1	Discuss prehospital trauma care in a polytrauma patient.							
1.1.2	Enumerate interventions that may be performed by emergency personnel prior to transport to hospital in a polytrauma patient.							
1.1.3	Differentiate polytrauma and multiple fracture patients.							

1.1.4	Enumerate the steps in primary survey of a polytrauma patient in Emergency Department (ED).							
1.1.5	Discuss BLS and ATLS.							
1.1.6	Discuss secondary and tertiary survey.							
1.1.7	Discuss the concept of "GOLDEN HOUR"							
1.1.8	Discuss the principles of "TRIAGE"							

1.1.9	List the diagnostic tests done in poly trauma patient in ED.							
1.1.10	Discuss the management of polytrauma patient in ED.							9

OR1. 2	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of shock	K	K/KH	Y	Lecture	Written/ Viva voce/ OSCE/ Simulation		GERERA L SURGER Y
Specific learning objectives:								

1.2.1	Define shock.							
1.2.2	Enumerate the various causes of shock.							
1.2.3	Describe the pathophysiology as a basis for signs and symptoms associated with progression through various stages of shock.							
1.2.4	Classify hemorrhagic shock.							
1.2.5	Discuss the investigative work up in patients with various causes of shock.							
1.2.6	Describe the principles of management of hemorrhagic shock in a poly trauma patient in emergency department.							
1.2.7	Discuss the role of pharmacotherapy in various shock states.							
1.2.8	Discuss massive blood transfusion protocol in hemorrhagic shock.							

1.2.9	Discuss the ideal fluid resuscitation in shock.							
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OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	K	K/KH	Y	Lecture, Small group discussion	Written/OSCE		GENERAL SURGERY
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Specific learning objectives:

1.3.1	Enumerate the tissues involved in soft tissue injuries (STI)							
1.3.2	Classify soft tissue injuries							
1.3.3	Discuss the common causes of soft tissue injuries							
1.3.4	Discuss the clinical features of soft tissue injuries							
1.3.5	Discuss the treatment of sprains depending on grading							
1.3.6	Discuss the common investigations to diagnose soft tissue injuries							

1.3.7	List common ligaments which are injured. Knee Joint/ Ankle							
1.3.8	Enumerate the sports which puts athletes in risk for soft tissue injuries with examples.							
1.3.9	List common causes for overuse soft tissue injuries							
1.3.10	Discuss the principles of management of soft tissue injuries.							

OR1.4	Describe and discuss the Principles of management of soft tissue injuries.	K	K/KH	Y	Lecture, small group discussion	Written/ Assessment/ Viva voice		GENERAL SURGERY
-------	--	---	------	---	---------------------------------	---------------------------------	--	-----------------

Specific learning objectives:

1.4.1	Discuss the principles of management of soft tissue injuries							
1.4.2	Describe "RICE" protocol in soft tissue injuries.							

1.4.3	Discuss "NO HARM" protocol in soft tissue injuries.							
1.4.4	Discuss the management of chronic overuse soft tissue injuries (tendinitis and bursitis)							
1.4.5	Discuss how will you give prevention tips on avoiding soft tissue injuries for your nonmedical friends.							

OR1. 5	Describe and discuss the aetiopathogenesis , clinical features, investigations, and principles of management of dislocation of major joints, shoulder, knee ,hip.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ Viva voce/ OSCE/ Simulation		
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Specific learning objectives:

1.5.1	Define dislocation and subluxation.							
1.5.2	Discuss etiology and pathoanatomy of shoulder dislocation.							
1.5.3	Classify shoulder dislocations.							

1.5.4	Discuss clinical features of anterior and posterior shoulder dislocation.							
1.5.5	Discuss relevant investigations in shoulder dislocations.							
1.5.6	Define recurrent shoulder dislocations.							
1.5.7	Enumerate the essential lesions of recurrent anterior dislocation.							
1.5.8	Discuss the methods of closed reduction of shoulder dislocations.							
1.5.9	Discuss the post reduction protocol following closed reduction of anterior dislocation of shoulder.							
1.5.1 0	Enumerate the complications of shoulder dislocations.							

1.5.1 1	Describe the mechanism of knee dislocations.							
1.5.1 2	Classify knee dislocations.							
1.5.1 3	Discuss associated injuries with knee dislocation.							

1.5.1 4	Discuss relevant investigation in knee dislocation.							
1.5.1 5	Discuss the management of knee dislocation.							
1.5.1 6	Enumerate the complications associated with knee dislocations.							
1.5.1 7	Classify hip dislocations.							
1.5.1 8	Explain the mechanism and clinical features of anterior dislocation of hip.							
1.5.1 9	Describe the mechanism and clinical features of posterior dislocation of hip.							
1.5.2 0	List the investigation in hip dislocation.							
1.5.2 1	Discuss the management of anterior and posterior dislocation.							
1.5.2 2	Describe the post reduction protocol of hip dislocation.							

1.5.2 3	Enumerate the complication of hip dislocation.							
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OR1.6	Participate as a member in the team for closed reduction of shoulder dislocation /hip dislocation /knee dislocation	K	K/KH/SH	Y	Simulation, DOAP session	OSCE/ Simulation		
Specific learning objectives:								
1.6.1	Discuss the principles of closed reduction of a dislocated joint.							
1.6.2	Describe the common closed reduction techniques of shoulder dislocation.							
1.6.3	Describe the common closed reduction techniques of hip dislocation.							
1.6.4	Observe, assist in closed reduction of shoulder dislocation in skill lab as an assistant using various methods.							
1.6.5	Observe , assist in closed reduction of hip dislocation in skill lab as an assistant using various methods.							

TOPIC : FRACTURES

OR2.1	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fracture of clavicle.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ voce/ OSCE	Viva		
Specific learning objectives:									
2.1.1	Describe the anatomy of clavicle and acromio- clavicular joint.								
2.1.2	Discuss the mechanism of injury of clavicle fracture.								
2.1.3	Discuss the clinical features of clavicle fracture.								
2.1.4	Classify clavicle fractures.								
2.1.5	Enumerate associated injuries in fracture clavicle patient.								
2.1.6	Discuss the principles of management of clavicle fractures.								
2.1.7	List the surgical indications for clavicle fractures.								

2.1.8	Enumerate complications in clavicle fractures.							
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OR2.2	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fractures of proximal humerus	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ Viva voce/ OSCE		
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Specific learning objectives:

2.2.1	Describe the anatomy of proximal humerus.							
2.2.2	Discuss the blood supply and its importance.							
2.2.3	Explain the mechanism of injury.							
2.2.4	Discuss the clinical features and relevant investigations.							
2.2.5	Classify proximal humerus fractures.							

2.2.6	Discuss the principles of management of proximal humeral fractures.							
2.2.7	List the surgical indications of proximal humerus fractures.							
2.2.8	Enumerate the complications of proximal humerus fractures.							

OR2.3	Select, prescribe and communicate appropriate medications for relief of joint pain	K	K/K H/S H	Y	Lecture, Small group discussion, Bed side clinic	Written/ voce/ OSCE	Viva		
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Specific learning objectives:

2.3.1	Discuss the pathophysiology of joint pain.							
2.3.2	Enumerate the causes of joint pain .							
2.3.3	How do you evaluate join pain.							
2.3.4	Discuss WHO analgesics ladder							
2.3.5	Describe the role of opioid analgesics used in joint pains.							

2.3.6	Enumerate NSAIDS group of analgesics used in relief of joint pain.								
2.3.7	Mention parental analgesics used in relief of join pain.								
2.3.8	Discuss the side effects of chronic use of NASIDS in a osteoarthritic joint pain.								
2.3.9	Name some topical analgesics.								
2.3.10	Discuss the role of intra-articular steroid injections in osteoarthritis.								
2.3.11	Discuss the role of viscosupplementation.in osteoarthritis.								
OR2.4	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of fracture of shaft of humerus and supracondylar fracture humerus with emphasis on neurovascular deficit	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/voce/ OSCE	Viva		
Specific learning objectives:									
2.4.1	Discuss the mechanism of injury and pathoanatomy of fracture shaft of humerus.								

2.4.2	Describe the classification and various patterns of fracture shaft of humerus.							
2.4.3	Define Holstein-Lewis fracture.							
2.4.4	Discuss the principles of management of fracture shaft of humerus.							
2.4.5	Enumerate various methods of conservative management of fracture shaft of humerus.							
2.4.6	Discuss various surgical methods of fixation of fracture shaft of humerus							
2.4.7	Discuss the management of humerus fracture with radial nerve Injury.							
2.4.8	Define supracondylar fracture of humerus.							
2.4.9	Differentiate supracondylar and intercondylar humerus fractures.							
2.4.10	Classify supracondylar fracture in children.							
2.4.11	Discuss the radiological findings in paediatric supracondylar fracture humerus.							
2.4.12	Discuss the management of paediatric supracondylar fracture humerus.							

2.4.1 3	Discuss the management of paediatric supracondylar fracture with absent radial pulse.							
2.4.1 4	Define compartment syndrome.							
2.4.1 5	Discuss the investigations and management of compartment syndrome of forearm.							
2.4.1 6	Enumerate the various complications of paediatric supracondylar fracture humerus							

OR2.5	Describe and discuss the aetiopathogenesis, clinical features, mechanism of injury, investigation & principles of management of fractures of both bones forearm and Galeazzi and Monteggia injury	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ voce/ OSCE	Viva		
Specific learning objectives:									
2.5.1	Describe the anatomy of radius and ulna.								
2.5.2	Discuss the mechanism of injury of fracture both bones of forearm.								
2.5.3	Discuss clinical features and investigations in fracture both bones of forearm.								
2.5.4	Define greenstick fracture.								
2.5.5	Discuss the principles of management of forearm fracture in children								
2.5.6	Discuss the principles of management of forearm fracture in adults								
2.5.7	Define Galeazzi fracture.								

2.5.8	Describe the mechanism of injury, pathoanatomy and clinical features in Galeazzi fracture.							
2.5.9	Classify Galeazzi fracture.							
2.5.1 0	Discuss the management of Galeazzi fracture							

2.5.1 1	Define Monteggia fracture.							
2.5.1 2	Describe the mechanism of injury, pathoanatomy and clinical features of Monteggia fracture.							
2.5.1 3	Classify Monteggia fracture.							
2.5.1 4	Discuss the management of Monteggia fracture.							
2.5.1 5	Enumerate various complications of forearm fractures.							

OR2.6	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of distal radius	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
Specific learning objectives:									
2.6.1	Define Colle's fracture.								
2.6.2	Discuss the mechanism of injury, pathoanatomy and radiological findings in Colle's fracture.								
2.6.3	Define Smith's fracture.								
2.6.4	Define Barton's fracture.								
2.6.5	Describe the criteria for conservative management of fractures of distal radius.								
2.6.6	Discuss the closed reduction technique of Colle's fracture.								
2.6.7	Discuss the surgical management of fractures of distal radius.								

2.6.8	Describe the complications and its management of fractures of distal radius.							
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OR2.7	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of pelvic injuries with emphasis on hemodynamic instability	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva	
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Specific learning objectives:

2.7.1	Discuss the anatomy of pelvis.							
2.7.2	Describe the mechanism of injury, pathoanatomy and clinical features of pelvic fractures.							
2.7.3	Classify pelvic fractures.							
2.7.4	Discuss the investigations in pelvic fractures.							

2.7.5	Describe the principles of management of pelvic fractures.							
2.7.6	How will you assess and manage a patient with pelvic fracture with haemodynamic instability.							

OR2. 8	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of spine injuries with emphasis on mobilization of the patient	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
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Specific learning objectives

2.8.1	Describe the anatomy of spine.							
2.8.2	Discuss the mechanism of injury, clinical features and investigations of a patient with spine injury.							
2.8.3	Differentiate stable and unstable spine fractures.							
2.8.4	Classify spine fractures.							

2.8.5	Define Hangman's fracture.							
2.8.6	Define whiplash injury.							
2.8.7	Discuss the principles of management of spine fractures.							
2.8.8	Discuss the surgical management of spine fracture with spinal cord injury.							
2.8.9	Discuss how will you rehabilitate quadriplegic and paraplegic patients following spine fractures.							

OR2.10	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of proximal femur.	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
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Specific learning objectives:

2.10.1	Discuss the blood supply of femoral head.							
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2.10.2	Define and classify Intracapsular fractures of neck of femur.							
2.10.3	Discuss the clinical features and investigations of intracapsular fracture neck of femur							
2.10.4	Discuss the management of intracapsular fracture neck of femur in all age groups.							
2.10.5	Enumerate complications of fracture neck of femur and discuss its management.							
2.10.6	Define extracapsular fracture neck of femur							
2.10.7	Classify extracapsular fracture neck of femur.							
2.10.8	Describe the clinical features, investigations and management of extracapsular fracture neck of femur.							
2.10.9	Discuss the management of intertrochanteric fracture.							

OR2.11	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of (a)Fracture patella (b) Fracture distal femur (c) Fracture proximal tibia with special focus on neurovascular injury and compartment syndrome	K	K/KH/SH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
Specific learning objectives:									
2.11.1	Discuss the anatomy of extensor mechanism of knee.								
2.11.2	Discuss mechanism of injury and clinical features of patella fracture.								
2.11.3	Interpret radiograph of knee with patella fracture patterns.								
2.11.4	Discuss the general principles of management of fracture patella.								
2.11.5	Discuss the mechanism of injury in supracondylar and intercondylar fracture femur.								
2.11.6	Discuss general principles of management of distal femur fractures.								
2.11.7	Classify proximal tibia fractures								

2.11.8	Discuss the general principles of management of proximal tibia fractures.							
2.11.9	Enumerate the common complications of proximal tibia fracture.							
2.11.10	Discuss the etiopathogenesis, clinical features, investigation and management of compartment syndrome with proximal tibia fracture.							

OR2.12	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Fracture shaft of femur in all age groups and the recognition and management of fat embolism as a complication	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
Specific learning objectives:									
2.12.1	Discuss the etiology of fracture shaft of femur								
2.12.2	Discuss the clinical features and investigations in fracture shaft of femur								
2.12.3	Discuss the management of fracture shaft of femur in children.								
2.12.4	Discuss the management of fracture shaft of femur in adults								
2.12.5	Enumerate the complications of fracture shaft of femur								
2.12.6	Define fat embolism.								

2.12.7	Discuss the clinical features and management of fat embolism.							
2.12.8	Explain the preventive steps to avoid fat embolism in long bone fractures.							

OR2.13	Describe and discuss the aetiopathogenesis, clinical features, Investigation and principles of management of: a) Fracture both bones leg b) Calcaneus c) Small bones of foot	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
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Specific learning objectives:

2.13.1	Discuss the mechanism and clinical features of fracture both bones of leg							
2.13.2	Discuss the conservative and surgical management of fracture both bones of leg							
2.13.3	Discuss the management of isolated fibula fracture							
2.13.4	Discuss the fractures caused due to fall from height							

2.13.5	Classify calcaneal fractures.							
2.13.6	Discuss the radiological findings and management of calcaneal fractures.							
2.13.7	What is Aviator's fracture.							
2.13.8	Define Jones fracture							

OR2.14	Describe and discuss the aetiopathogenesis, clinical features, Investigation and principles of management of ankle fractures	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ voce/ OSCE	Viva		
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Specific learning objectives:

2.14.1	Discuss the mechanism of injury of ankle fractures.							
2.14.2	Classify ankle fractures							
2.14.3	Discuss the principles of management of ankle fractures							
2.14.4	Define Cotton's fracture.							

2.14.5	Mention the complications of ankle fractures.							
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OR2.15	Plan and interpret the investigations to diagnose complications of fractures like malunion, non-union, infection, compartment syndrome	K	K/K H	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
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Specific learning objectives:

2.15.1	Enumerate immediate, early and late complications of fractures.							
2.15.2	Define malunion							
2.15.3	Define nonunion.							
2.15.4	Define delayed union.							
2.15.5	Discuss the factors affecting fracture healing							
2.15.6	Classify nonunion of long bones.							
2.15.7	List the radiological investigations in nonunion.							
2.15.8	Discuss the investigation to rule out infections following fractures.							

2.15.9	Discuss the management of nonunion.							
2.15.10	Discuss the management of malunion.							
2.15.11	Define compartment syndrome.							
2.15.12	Discuss the clinical features of compartment syndrome.							
2.15.13	Discuss the investigations to rule out compartment syndrome.							
2.15.14	Discuss the indications for fasciotomy.							
2.15.15	Discuss the sequelae of compartment syndrome.							

OR2.16	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of open fractures with focus on secondary infection prevention and management	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ voce/ OSCE	Viva		
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Specific learning objectives:

2.16.1	Define open fractures.							
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2.16.2	Classify open fractures.							
2.16.3	Discuss the etiology in open fractures.							
2.16.4	Discuss the management of open fractures.							
2.16.5	Describe antibiotic prophylaxis in open fractures.							
2.16.6	Discuss wound debridement and role of irrigation in open fractures.							
2.16.7	Enumerate the complications of open fractures.							
2.16.8	Discuss the prophylaxis against tetanus and gas gangrene.							

TOPIC: Musculoskeletal Infection

OR3.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of bone and joint infections. a) Acute Osteomyelitis. b) Subacute osteomyelitis. c) Acute Suppurative arthritis. d) Septic arthritis & HIV infection e) Spirochetal infection	K	K/KH	Y	Lecture, small group discussion, video assisted lecture	Written/ Viva voice/OSCE	Pathology, Microbiology	General Surgery
Specific learning objectives:								
3.1.1	Define osteomyelitis.							
3.1.2	Classify osteomyelitis.							
3.1.3	Discuss the epidemiological aspects of osteomyelitis.							
3.1.4	Define septic arthritis.							
3.1.5	List the common organisms causing acute osteomyelitis.							
3.1.6	Discuss the routes of infection in osteomyelitis.							
3.1.7	Discuss the risk factors associated with osteomyelitis.							

3.1.8	Describe the clinical features and investigations in acute, subacute and chronic osteomyelitis.							
3.1.9	Enumerate types of sequestrum.							
3.1.10	Describe the principles of management of acute, subacute and chronic osteomyelitis.							

3.1.11	Define saucerization.							33
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3.1.1 2	Enumerate the complications of chronic osteomyelitis.							
3.1.1 3	Describe the clinical features, investigations and management of septic arthritis.							
3.1.1 4	Discuss the characteristics and management of septic arthritis in HIV patients.							

OR3.2	Participate as a member in team for aspiration of joints under supervision.	K	K/KH/S H	Y	Small group, Discussion. DOAP session	Viva voice/ OSCE/ Skill assessment.		
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Specific learning objectives:

3.2.1	Define arthrocentesis.							
3.2.2	Discuss indications for arthrocentesis.							
3.2.3	Describe the informed consent procedure before aspirations.							
3.2.4	Perform the procedure of arthrocentesis of knee on a mannequin under supervision.							
3.2.5	Enumerate the complications of arthrocentesis.							

OR3.3	Participate as a member in team for procedure like drainage of abscess , sequestrectomy/ saucerization and arthrotomy.	K	K/KH/S H	Y	DOAP session, Video demonstratio n	Viva voice/OSCE/Ski lls assessment.		General Surgery
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Specific learning objectives:

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3.3.1	Define abscess.							
3.3.2	Discuss the indications and contra indications of incision and drainage (I&D).							
3.3.3	Describe the procedure of I&D including appropriate anesthesia.							
3.3.4	Discuss the importance of aftercare and patient education about abscess and I&D.							
3.3.5	Define arthrotomy.							
3.3.6	Discuss the indications of arthrotomy.							
3.3.7	Discuss the procedure of arthrotomy of knee joint.							
3.3.8	Define sequestrum.							
3.3.9	Discuss the types of sequestrum.							
3.3.10	Enumerate the operative methods in chronic osteomyelitis							
3.3.11	Differentiate involucrum from sequestrum.							
3.3.12	Discuss the procedure of saucerization.							
3.3.13	Mention the prerequisites before doing sequestrectomy.							

Topic : Skeletal Tuberculosis

OR4.1	Describe and discuss the clinical features , investigation and principles of management of tuberculosis affecting major joints (hip, knee) including cold abscess and caries spine.	K	K/KH	Y	Lecture, Small group discussion, Case discussion.	Written voice/ OSCE	/Viva	Pathology	General surgery
Specific learning objectives:									
4.1.1	Discuss the epidemiology of skeletal tuberculosis.								
4.1.2	Describe the pathogenesis, clinical features and radiological findings in tuberculosis of hip.								
4.1.3	Enumerate the stages of TB hip.								
4.1.4	Discuss the medical and surgical management of TB hip.								
4.1.5	Discuss triple deformity of knee.								
4.1.6	Discuss the management of TB knee.								
4.1.7	Describe the pathogenesis, clinical features and investigations of TB spine.								

4.1.8	Discuss the general principles of management of TB spine.							
4.1.9	Define Pott's paraplegia.							
4.1.10	Enumerate the causes of Pott's paraplegia.							
4.1.11	Define cold abscess. List the locations where cold abscess are seen.							
4.1.12	Discuss the mechanism of action, dose ,regimen and side effects of anti-tubercular							
	drugs.							
4.1.13	Discuss psoas abscess and its management.							

Topic: Rheumatoid Arthritis and associated inflammatory disorders.

OR5.1	Describe and discuss the aetiopathogenesis , clinical features, investigations and principles of management of various inflammatory disorders of joints.	K	K/KH	Y	Lecture , Small group discussion, Bedside clinic	Written/Vi va voice/OSCE		General medicine.
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Specific learning objectives:

5.1.1	Define poly arthritis.							
5.1.2	Enumerate the causes of poly arthritic joint pain							
5.1.3	Enumerate various causes of inflammatory joint diseases.							
5.1.4	Describe the etiopathogenesis, clinical features and investigations of rheumatoid arthritis.							
5.1.5	Discuss the articular deformities in rheumatoid arthritis							
5.1.6	Discuss the extra articular manifestations in rheumatoid arthritis							
5.1.7	Describe the medical management of rheumatoid arthritis.							

5.1.8	Describe the mechanism of action, dosage and side effects of DMARDS.							
5.1.9	Enumerate various causes of seronegative arthritis.							
5.1.10	Discuss ankylosing spondylitis							
5.1.11	Describe clinical features, investigations and management of crystalline arthropathies							

Topic: Degenerative disorders

OR6.1	Describe and discuss the clinical features, investigations and principles of management of degenerative condition of spine (cervical Spondylosis, Lumbar Spondylosis, IVDP)	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written/Viva voice/OSCE		
Specific learning objectives:								
6.1.1	Define degenerative disc disease.							
6.1.2	Discuss the etiopathogenesis and clinical features of intervertebral disc prolapse (IVDP).							
6.1.3	Discuss the general principles of management of IVDP.							

6.1.4	Discuss the differential diagnosis of radicular pain of lower limbs.							
6.1.5	Discuss the differential diagnosis of Low back pain.							
6.1.6	Define cervical spondylosis.							
6.1.7	Discuss the clinical features, radiological findings and management of cervical spondylosis.							
6.1.8	Define lumbar spondylosis.							
6.1.9	Discuss the clinical features, radiological findings and management of lumbar spondylosis							
6.1.10	Define spondylolisthesis.							

Topic : Metabolic bone disorders

OR7.1	Describe and discuss the aetiopathogenesis, clinical features , investigations and principles of management of metabolic bone disorders in particular osteoporosis , osteomalacia, rickets , Paget's disease.	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written voice/ OSCE /Viva		
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Specific learning objectives:

7.1.1	Define rickets and osteomalacia.							
7.1.2	Discuss the etiopathogenesis, clinical features and investigations of rickets.							
7.1.3	Discuss the pathophysiology, clinical features and investigations of osteomalacia.							
7.1.4	Discuss the medical management of rickets and osteomalacia.							
7.1.5	Discuss the deformities in rickets and its surgical management.							
7.1.6	Define osteoporosis.							
7.1.7	Discuss the etiology and risk factors for osteoporosis.							
7.1.8	Classify osteoporosis.							
7.1.9	Describe the clinical features and investigations in osteoporosis.							
7.1.10	Discuss the general principles of management of osteoporosis.							
7.1.11	Discuss DEXA scan.							
7.1.12	Enumerate the common osteoporotic fractures.							

7.1.13	Discuss the lifestyle measures to prevent osteoporosis and its complications.							
7.1.14	Define Paget's disease.							
7.1.15	Discuss the clinical features, investigations and management of Paget's disease							

OR7.2	Perform a systematic examination of a patient with deformity of Knee.	K	K/KH/S H	Y	DOAP session, Video demonstration	Viva voice/OSCE/Skills assessment.		General Surgery
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Specific learning objectives:

7.2.1	Take an elaborate history in chronological order							
7.2.2	Perform generalized examination of patient							
7.2.3	Perform localized examination of the affected limb and discuss in terms of inspection, palpation, movements and measurements							

7.2.4	Define Genu Varum and Valgum and discuss etiologies and pathogenesis							
7.2.5	Discuss investigations required to diagnose and plan management of a patient with knee deformity							
7.2.6	Discuss management.							

Topic : Poliomyelitis								
OR8.1	Describe and discuss the aetipathogenesis, clinical features, assessment and principles of managing a patient with Post Polio Residual Paralysis.	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written /Viva voice/OSCE		
Specific learning objectives:								
8.1.1	Define poliomyelitis.							
8.1.2	Discuss the etiology, pathogenesis and clinical features of poliomyelitis.							
8.1.3	Discuss the types of poliomyelitis and its complications.							
8.1.4	What is PPRP(Post Polio Residual Paralysis).							
8.1.5	Discuss the signs and symptoms in post polio syndrome.							

8.1.6	How do you recognize the paralysis caused by poliomyelitis.							
8.1.7	Enumerate the common secondary problems following poliomyelitis.							
8.1.8	Mention the common contractures and deformities in PPRP.							
8.1.9	Discuss how do you evaluate a case of PPRP.							
8.1.10	Discuss the general principles of management of PPRP.							

Topic : Cerebral Palsy								
OR9.1	Describe and discuss the aetiopathogenesis , clinical features, assessment and principles of management of cerebral palsy patient.	K	K/KH	Y	Lecture , Small group discussion	Written/ voice/ OSCE	Viva	
Specific learning objectives:								
9.1.1	Define cerebral palsy.							
9.1.2	Discuss the etiopathogenesis of cerebral palsy.							

9.1.3	Classify cerebral palsy.							
9.1.4	Discuss the clinical features and investigations of cerebral palsy.							
9.1.5	Discuss the general principles of management of cerebral palsy.							
9.1.6	Discuss the common deformities of cerebral palsy.							
9.1.7	Mention common surgical procedures done in cerebral palsy.							

Topic : Bone tumors

OR10.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of benign and malignant bone tumors and pathological fractures.	K	K/KH	Y	Lecture , Small group discussion , Video assisted interactive lecture	Written/Viva voice/ OSCE	Pathology	General surgery. Radiotherapy
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Specific learning objectives:

10.1.1	Classify bone tumors.							
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10.1.2	Enumerate common benign tumors.							
10.1.3	Discuss aetiopathogenesis, clinical features , investigations and management of Osteochondroma.							
10.1.4	List the complications of Osteochondroma.							
10.1.5	Discuss the etiopathogenesis, clinical features, radiological findings and management of Osteoclastoma.							
10.1.6	Discuss Enneking staging of malignant bone tumors.							
10.1.7	Discuss the technique of open bone biopsy in malignant bone tumors.							
10.1.8	Describe the etiopathogenesis, clinical features, investigations and management of osteosarcoma.							
10.1.9	Discuss the etiopathogenesis, clinical features, investigations and management of Ewing's sarcoma.							
10.1.10	Define pathological fracture.							
10.1.11	Enumerate the causes of pathological fracture.							
10.1.12	Discuss the criteria for impending pathological fracture.							

10.1.13	Discuss the general principles of management of pathological fractures.							
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OR 10.2	Perform a systematic examination of a patient with bony swelling	K	K/KH/S H	Y	DOAP session, Video demonstratio n	Viva voice/OSCE/Ski lls assessment.		General Surgery
Specific learning objectives:								
10.2.1	Take an elaborate history in chorological order							
10.2.2	Perform generalized examination of patient							
10.2.3	Perform localized examination of the affected limb and discuss in terms of inspection, palpation, movements and measurements							
10.2.4	Discuss differential diagnosis of bony swellings/tumors.							
10.2.5	Discuss investigations required to establish diagnosis and plan management of benign and malignant tumors							
10.2.6	Discuss medical and surgical management of bony swelling.							

Topic: Peripheral nerve injuries.

OR11.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerve injuries in diseases like foot drop, wrist drop, claw hand, palsies of Radial , Ulnar, Median. Lateral Popliteal and Sciatic Nerves.	K	K/KH	Y	Lecture, Small group discussion, case presentation	Written/ voice/ OSCE	Viva	Human anatomy	General medicine. General surgery.
Specific learning objectives:									
11.1.1	Classify peripheral nerve injuries.								
11.1.2	Enumerate the causes of peripheral nerve injuries.								
11.1.3	Discuss the investigations to diagnose peripheral nerve injuries.								
11.1.4	Describe the etiology, clinical features, clinical tests and management of radial nerve injury.								
11.1.5	Describe the etiology, clinical features, clinical tests and management of median nerve injury.								
11.1.6	Describe the etiology, clinical features, clinical tests and management of ulnar nerve injury.								
11.1.7	Enumerate the causes of foot drop.								
11.1.8	Discuss the clinical features, clinical tests and management of foot drop.								

11.1.9	Discuss the etiology, clinical tests and management of sciatic nerve injury.							
11.1.10	Discuss various splints used in peripheral nerve injuries							

12.1.8	Discuss the clinical features, investigations and management of Torticollis.							
12.1.9	Describe the etiology, pathoanatomy , clinical features and investigations of CTEV.							
12.1.10	Discuss the general principles of management of CTEV.							
12.1.11	Discuss the correction techniques of CTEV.							
12.1.12	Enumerate the common surgical procedures performed for							
	CTEV.							

Topic: Procedural Skills								
OR13.1	Participate in a team for procedures in patients and demonstrating the ability to perform on mannequins/ simulated patients in the following: i. Above elbow plaster. ii. Below knee plaster. iii. Above knee plaster. iv. Thomas splint. v. Splinting for long bone fractures. vi. Strapping for shoulder and clavicle trauma.	K	K/KH/S H	Y	Case discussion, Video assisted Lecture, Small group discussion, Teaching , Skill lab sessions	OSCE with Simulation based assessment.		
Specific learning objectives:								
13.1.1	Differentiate cast and slab.							
13.1.2	Discuss the precautions to be followed during and after plaster application.							
13.1.3	Perform under supervision application of above elbow slab for an undisplaced supracondylar fracture.							
13.1.4	Perform under supervision the application of Colle's cast .							
13.1.5	Perform under supervision the application of above knee plaster slab to immobile proximal tibia fracture.							

13.1.6	Identify Thomas splint and enumerate its uses.							
13.1.7	Perform under supervision the application of strapping for clavicle Fractures.							
13.1.8	Perform under supervision the application of Thomas splint for fracture shaft femur							

OR13.2	Participate as a member in team for Resuscitation of Polytrauma victim by doing all of the following: (a) IV access central- peripheral (b) Bladder catheterization (c) Endotracheal intubation. (d) Splintage	K	K/KH/SH	Y	Case discussion, Video assisted Lecture, Small group discussion, Teaching, Skill lab sessions	OSCE with Simulation based assessment		Anesthesiology
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Specific learning objectives:

13.2.1	Perform under supervision in getting IV access on a mannequin in a skill lab.							
13.2.2	Perform bladder catheterization under supervision in skill lab.							
13.2.3	Perform endotracheal intubation under supervision on a mannequin in a skill lab.							

13.2.4	Perform neck immobilization using cervical collar in a polytrauma patient under supervision.							
13.2.5	Perform under supervision the use of Thomas splint to immobilize fracture both bones leg in a polytrauma patient.							
13.2.6	Perform under supervision the use of pelvic binder in a case of pelvic fracture with haemodynamic instability							

Topic : Counselling Skills

OR14.1	Demonstrate the ability to counsel patients regarding prognosis in patients with various orthopaedic illness like a. fracture with disabilities. b. fracture that requires prolonged bed stay. c. bone tumours d. congenital disabilities.	K/C	K/KH/ SH	Y	Case discussion, Video assisted lecture, Small group discussion, Teaching, Skill lab sessions.	OSCE with Simulation based assessment		AETCOM
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Specific learning objectives:

14.1.1	Demonstrate ability to communicate to patients with fractures, that multiple complications can occur leading to loss of skeletal function, restricted range of motion and neurovascular damage that can severely compromise function and performance.							
14.1.2	Demonstrate ability to communicate to patients with multiple osteoporotic vertebral fractures about the necessity of prolonged bed rest and its complication.							
14.1.3	Demonstrate ability to counsel to patients with bone tumors , the prognosis, or outlook for survival depending on the particular type of bone tumor and extent to which it had spread.							
14.1.4	Demonstrate ability to counsel parents about children with congenital disabilities with respect to function, performance and cosmesis.							

OR14.2	Demonstrate the ability to counsel patients to obtain consent for various orthopaedic procedures like limb amputation, permanent fixations etc.	K/C	K/KH/ SH	Y	Case discussion, Video assisted lecture , Small group discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment		AETCOM
Specific learning objectives:								
14.2.1	Demonstrate the ability to counsel a patient with limb amputation for serious trauma (crush or blast), about the advantages, recovery , rehabilitation and functional recovery.							
14.2.2	Demonstrate the ability to obtain informed consent from patient and family in a simulated environment.							
14.2.3	Communicate diagnostic and therapeutic options to patient and family for fracture fixation to obtain informed consent							

OR14.3	Demonstrate the ability to convince the patient for referral to a higher center in various orthropaedic illness , based on the detection of warning signals and need for sophisticated management.	K/C	K/KHS H	Y	Case discussion, Video assisted lecture , Small group discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment		AETCOM
Specific learning objectives:								
14.3.1	Enumerate common orthopedic emergencies which needs timely referral to a higher tertiary center .							
14.3.2	Demonstrate the ability to convince about referring patient with fracture proximal tibia associated with vascular injury to higher center.							
14.3.3	Demonstrate the ability to convince about referring patient with traumatic amputation of leg to higher center for replantation.							
14.3.4	Demonstrate the ability to convince about referring a spinal cord injury patient to higher center.							

Model Time table for Phase II MBBS, Phase III Part 1 and Part 2 MBBS

Phase II (2 weeks Clinical Posting)	
	9.00 AM to 12.00 Noon
Monday	Postings
Tuesday	Postings
Wednesday	Postings
Thursday	Postings
Friday	Postings
Saturday	X

Phase III Part 1 (4 weeks Clinical Posting + 5 SDL + 20hrs SGD/IT+ 15hrs Lectures)

	9.00 AM to 12.00 Noon	12.01 Pm to 1.00 PM <i>5 SDL+ 19 SGD/IT</i>	2.00PM to 3.00 PM
Monday	Postings	SDL/SGD/IT	
Tuesday	Postings	SDL/SGD/IT	
Wednesday	Postings	SDL/SGD/IT	<i>15 Lectures + 1 SGD/IT</i>
Thursday	Postings	SDL/SGD/IT	
Friday	Postings	SDL/SGD/IT	
Saturday	Postings	SDL/SGD/IT	

Phase III Part 2 (2 weeks Clinical Posting + 5 SDL+ 25 SGL/IT+ 20 Lectures)			
	9.00 AM to 12.00 Noon	12.01 Pm to 1.00 PM (5 SDL+ 7 SGD/IT)	2.00PM to 3.00 PM
Monday	Postings	SDL/SGD/IT	
Tuesday	Postings	SDL/SGD/IT	
Wednesday	Postings	SDL/SGD/IT	20 Lectures+ 18 SGD/IT
Thursday	Postings	SDL/SGD/IT	
Friday	Postings	SDL/SGD/IT	

Saturday	Postings	SDL/SGD/IT	
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**List of Competencies to cover
in each phase of
MBBS**

**Lectures in Phase III Part 1 and Part 2
MBBS**

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR1.1, 1.2, 1.3, 1.4, 1.5	
2	Fractures	OR 2.1, 2.2, 2.4, 2.5, 2.6, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16	2.7, 2.8
3	Musculoskeletal Infection		3.1
4	Skeletal Tuberculosis		4.1
5	Rheumatoid Arthritis and associated inflammatory disorders		5.1
6	Degenerative disorders		6.1
7	Metabolic bone disorders		7.1

8	Poliomyelitis		8.1
9	Cerebral Palsy		9.1
10	Bone Tumors		10.1
11	Peripheral nerve injuries		11.1
12	Congenital lesions		12.1
13	Physical Medicine and Rehabilitation		PM1.2,1.3, 1.4, 5.1, 5.2, 5.3, 5.4, 7.7, 8.1
14	Total Hours	15 hours	20 hours

Small group discussions (Tutorials / Seminars) in Phase III Part 1 and Part 2 MBBS

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR1.1, 1.2, 1.3, 1.4, 1.5, 1.6	
2	Fractures	OR 2.3, 2.4, 2.5, 2.10, 2.12, 2.14, 2.16	2.7, 2.8
3	Musculoskeletal Infection		3.2, 3.3
4	Skeletal Tuberculosis		4.1
5	Rheumatoid Arthritis and associated inflammatory disorders		5.1
6	Metabolic bone disorders		7.1
7	Bone Tumors		10.1

8	Peripheral nerve injuries		11.1
9	Congenital lesions		12.1
10	Counseling Skills	14.1,14.2,14.3	
	Total Hours	14 Hours	9 Hours

**Integrated learning in Phase III Part 1 and Part 2
MBBS**

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Anatomy	AN2.4,2.5,8.4, 8.6, 17.2, 10.12, 17.3, 18.6, 18.7, 11.4, 19.4, 19.6, 19.7	
2	Microbiology		MI 4.2
3	Forensic medicine		FM3.7, 3.8, 3.9, 3.10, 3.11, 3.12

4	Pathology		PA33.1, 33.2, 33.2, 33.4
5	General Medicine		IM7.4, 7.6, 7.7, 7.8, 7.9, 7.10, 24.12, 24.13, 24.14. 24.16
6	Physical Medicine and Rehabilitation		PM 5.1, 5.2, 5.3, 5.4 6.3, 6.4, 2.4, 7.4, 7.5
	Total Hours	6 hours	16 hours

Self Directed Learning in Phase III Part 1 and Part 2 MBBS			
Sl. No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR 1.5,1.6	

2	Fractures	OR 2.15	OR 2.7, OR 2.8
3	Musculoskeletal Infection		OR 3.1
9	Cerebral Palsy		
10	Bone Tumors		OR 10.1
11	Peripheral nerve injuries		OR 11.1
13	Physical Medicine and Rehabilitation	PM5.3, PM5.4, PM7.2,	
14	Total Hours	5 Hours	5 Hours

Time allotment for Competencies in Phase III Part 1			
MBBS			
Sl.No	Topics	Competency	Type of Learning and Hours

			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
1	Skeletal trauma, poly trauma	OR1.1	1	1	1
		OR1.2	1	1	
		OR13, OR1.4	1	1	
		OR1.5	1	1	1
		OR 1.6		1	
2	Fractures	OR 2.1, 2.2	1		
		OR 2.3		1	
		OR 2.4	1	1	
		OR 2.5	1	1	
		OR 2.6	1		
		OR 2.10	1	1	
		OR 2.11	1		

		OR2.12	1	1	
		OR 2.13	1		
		OR 2.14	1		
		OR 2.15	1	1	1

		OR 2.16	1	1	
<i>CONTINUED IN NEXT PAGE</i>					

**Time allotment for Competencies in Phase III Part 1
MBBS**

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self-Directed Learning (hours)
3	Counseling Skills	OR 14.1,14.2		1	
		OR 14.3		1	
4	Anatomy (Integrated)	AN 2.4,2.5,8.4		1	
		AN 8.6,17.2		1	
		AN10.12, 17.3		1	
		AN 18.6, 18.7		1	

		AN 11.4, 19.4		1	
		AN 19.6, 19.7		1	
5	Physical medicine and Rehabilitation	PM 5.3,5.4			1
		PM 7.2			1
	Total		15	20	5

**Time allotment for Competencies in Phase III Part 2
MBBS**

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self-Directed Learning (hours)
1	Fractures	OR 2.7	1	1	1
		OR 2.8	1	1	1
2	Musculoskeletal Infection	OR 3.1	2		1
		OR 3.2,3.3		1	
3	Skeletal Tuberculosis	OR 4.1	2	1	
4	Rheumatoid Arthritis and associated inflammatory disorders	OR 5.1	1	1	
5	Degenerative disorders	OR 6.1	1		

6	Metabolic bone disorders	OR 7.1	1	1	
7	Poliomyelitis	OR 8.1	1		
8	Cerebral Palsy	OR 9.1	1		
9	Bone Tumors	OR 10.1	2	1	1

10	Peripheral nerve injuries	OR 11.1	2	1	1
11	Congenital lesions	OR 12.1	2	1	

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Time allotment for Competencies in Phase III Part 2 MBBS

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
12	Pathology	PA 33.1		1	
		PA 33.2, 33.4		1	
13	Microbiology	MI 4.2		1	
14	Forensic Medicine and Toxicology	FM3.7, 3.8, 3.9, 3.10		1	
		FM 3.11, 3.12		1	
15	General Medicine	IM 7.5, 7.6, 7.7, 7.8, 7.9, 7.10,		2	
		24.12		1	
		24.13, 24.14, 24.16		2	

16	Physical Medicine and Rehabilitation	PM 1.2, 1.3, 1.4	1		
		PM 5.1, 5.2, 5.3, 5.4	1	1	
		PM 6.3		2	
		PM 6.4		1	
		PM 7.4		1	
		PM 7.5		1	
		PM 7.7, 8.1	1		
	TOTAL HOURS		20	25	5

Orthopaedic Competencies in Internship

GOAL

The goal of the internship programme is to train medical students to fulfill their roles as doctors of first contact in the community.

(A) THERAPEUTIC- An intern must know:

- (a) Splinting (plaster slab) for the purpose of emergency splintage, definitive splintage and post operative splintage and application of Thomas splint;
- (b) Manual reduction of common fractures – phalangeal, metacarpal, metatarsal and Colles’s fracture;
- (c) Manual reduction of common dislocations – interphalangeal, metacarpophalangeal, elbow and shoulder dislocations;
- (d) Plaster cast application for undisplaced fractures of arm, fore arm, leg and ankle;
- (e) Emergency care of a multiple injury patient;
- (f) Precautions about transport and bed care of spinal cord injury patients.

(B) Skill that an intern should be able to perform under supervision:

- (1) Advise about prognosis of poliomyelitis, cerebral palsy, CTEV and CDH;
- (2) Advise about rehabilitation of amputees and mutilating traumatic and leprosy deformities of hand;

(C) An intern must have observed or preferably assisted at the following operations:

- (1) drainage for acute osteomyelitis;
- (2) sequestrectomy in chronic osteomyelitis;
- (3) application of external fixation;
- (4) internal fixation of fractures of long bones.

Physical Medicine and Rehabilitation Competencies in

Internship

GOAL

The aim of teaching the undergraduate student in Physical Medicine & Rehabilitation is to impart such knowledge and skills that may enable him to diagnose and treat common rheumatologic, orthopedic and neurologic illnesses requiring physical treatment. He/she shall acquire competence for clinical diagnosis based on history, physical examination and relevant laboratory investigations and institute appropriate line of management.

(A) THERAPEUTIC- An intern must know:

- a) Diagnosing and managing with competence clinical diagnosis and management based on detailed history and assessment of common disabling conditions like poliomyelitis, cerebral palsy, hemiplegia, paraplegia, amputations etc.
- b) Participation as a team member in total rehabilitation including appropriate follow up of common disabling conditions, c) Procedures of fabrication and repair of artificial limbs and appliances.

**(B) An intern must have observed or preferably assisted at the following operations/
procedures: :**

- a) Use of self-help devices and splints and mobility aids
- b) Accessibility problems and home making for disabled
- c) Simple exercise therapy in common conditions like prevention of deformity in polio, stump exercise in an amputee etc. d)
Therapeutic counseling and follow up

List of Competencies to cover in Internship

<i>SL NO</i>	<i>Competency</i>	<i>Performed</i>	<i>Assisted</i>	<i>Observed</i>
1	Splinting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Cast Application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Manual Reduction of Common dislocations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4	Application of External Fixator		?	?
5	Internal Fixation of Long Bones		?	?
6	Wound repair and dressing	?	?	?
7	Drainage of Acute Osteomyelitis	?	?	?
8	Major Operative Procedures		?	?
9	Minor Operative Procedures		?	?
10	Case Sheet Writing	?		

Period Of Training in Internship

Subject	Period of Posting (Weeks)
Orthopaedics including PMR	4 weeks

Certifiable skills in Internship

A Comprehensive list of skills recommended in Orthopedics desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate

- 1. Application of basic splints and slings (I)**
- 2. Basic fracture and dislocation management (O)**
- 3. Compression bandage (I)**

- I- Independently performed on patients,
- O- Observed in patients or on simulations,
- D- Demonstration on patients or simulations and performance under supervision in patients

Assessment in Orthopaedics

Formative Assessment - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

Summative Assessment - An assessment conducted at the end of instruction to check how much the student has learnt.

Internal Assessment (IA)- Range of assessments conducted by the teachers teaching a particular subject with the purpose of knowing what is learnt and how it is learnt. Internal assessment can have both formative and summative functions.

Note - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually

Scheduling of Internal Assessment -

- A. In Phase II MBBS there will be one Internal assessments in practicals.

- B. In Phase III part 1 MBBS there will be one Internal assessment each in theory and practicals.
- C. In Phase III part 2 MBBS the test should be prelim or pre-university examination with theory and practicals **Theory can include:**

Theory tests, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have essay questions, short notes and creative writing experiences.

Practical can include:

Practical tests, Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), records maintenance and attitudinal assessment.

Log Book Assessment -

- A. Log book should record all activities like seminar, symposia, quizzes and other academic activities.
- B. It should be assessed regularly and submitted to the department.
- C. Up to twenty per cent internal marks can be considered for Log book assessment.

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Feedback in Internal Assessment

Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and students must be sensitized to giving and receiving feedback.

The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.

It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination. Internal assessment should be based on competencies and skills.

Criteria for appearing in University examination

Students must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination

Annexures

A. Teaching Learning Methods

- ✦ **Didactic lectures** should be made more interactive by encouraging the more involvement of the students. In the present digital era, student's involvement is more with usage of technology. For examples, many polling sessions, quizzes etc., can be done using google slides and other apps or websites.
- ✦ **Small group discussion (SGD)** should be planned properly and discussed among the faculty members before taking the class. As far as possible, uniformity should be maintained in the SGD by various facilitators. **Case based learning (CBL) and problem based learning (PBL)** may be used to make the learner understand and learn about the various aspects in order to achieve the particular competency.
- ✦ Encourage the students learn themselves through **self-directed learning (SDL)**. SDL sessions may be planned with objectives in order to cover the particular competency. These sessions may be conducted by providing learning material (research articles, public news, videos, etc.) by a teacher and ask the students to search on a particular topic. Students should learn themselves by going through available resources and come back to classes allotted for SDL sessions where teacher able to connect the learning of students in order to achieve the competency.

- ✦ **Integrated classes** should be planned in order to cover the competency involving the topics from different subjects. These classes can be taken using Nesting, Temporal Coordination or Sharing. Case linkers may be used to link the topic/subject area among different subjects/ departments.
- ✦ Skills should be taught using the clinical cases at hospital wards/casualty/EMD, simulation in skills labs and/or departmental demonstration rooms. **Case scenarios** may be developed while teaching at skills lab and/or demonstration rooms.

B. Blue Print & Assessment methods - Theory

**Number of QPs for
Orthopaedics: One
Theory marks: 50**

This shows the weightage given to each chapter in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each chapter.

Number of QPs for the subject: One.

Only CORE competencies shall be considered for framing questions. QP should contain the following distribution of questions (as shown in below table).

Type of Question	Marks Per Question	Number of questions	Total Marks
Long Essay	10	2	20

Short Essays	5	3	15
Short Answers	3	5	15
		Total	50

Each paper should contain Long essays (10 marks x 2), Short essay (5 marks x 3), Short answer (3 marks x 5).

Distribution of marks in suggested blue print

SL NO	Topics	Type of Question		
		Long Essay	Short Essay	Short Answers
1	Skeletal trauma, poly trauma		?	?
2	Fractures	?	?	?

3	Musculoskeletal Infection	?	?	?
4	Skeletal Tuberculosis	?	?	?
5	Rheumatoid Arthritis and associated inflammatory disorders		?	?
6	Degenerative disorders		?	?
7	Metabolic bone disorders	?	?	?
8	Poliomyelitis		?	?
9	Cerebral Palsy		?	?
10	Bone Tumors	?	?	?
11	Peripheral nerve injuries		?	?
12	Congenital lesions	?	?	?
13	Physical Medicine and Rehabilitation		?	?

NOTE: The questions should be framed only from Core competencies (as shown in above table).

C. Blue Print & Assessment methods - Practicals

1. Total Marks: 50

Suggested Marks distribution for Each Case		
Sl No	Assessment parameter	Marks
1	History and case sheet writing	5
2	Clinical examination	5
3	Diagnosis/ analysis of case	5

I. Clinical Cases: 40 Marks

I. Viva Voce: 10 Marks

4	Presentation	5
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Clinical Cases:

Two short cases (2 X 20 Marks)

Viva:

Two Radiographs (5 Marks)

Two Instruments/ Implants (5Marks)

D. Integration Topics

Integration: The teaching should be aligned and integrated horizontally and vertically recognizing the importance of orthopaedic conditions as they relate to the practice of medicine as a whole.

**HUMAN
ANATOMY**

AN2.4	Describe various types of cartilage with its structure & distribution in body	K	KH	Y	Lecture	Written/Vive voice	orthopaedics	
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Specific learning objectives:

2.4.1	Define cartilage.							
2.4.2	Enumerate types of cartilage.							
2.4.3	Discuss the components of cartilage.							
2.4.4	Describe structure of various types of cartilage with examples							
2.4.5	Discuss what happens to articular cartilage in osteoarthritis							

AN2.5	Describe various joints with subtypes and examples	K	KH	Y	Lecture	Written/Viva Voce	orthopaedics	
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Specific learning objectives:

2.5.1	Define a joint.							
2.5.2	Classify joints based on mobility between bones.							

2.5.3	Discuss the components of synovial joints.							
2.5.4	Describe the structure of joint capsule.							
2.5.5	Enumerate the types of synovial joints.							
2.5.6	Describe the supporting structures of synovial joints.							

AN8. 4	Demonstrate important muscle attachments on the given bone	K/S	SH	Y	Practical, DOAP session, Small group teaching	Viva voice/ Practicals	orthoapedics	
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Specific learning objectives:

8.4.1	Demonstrate the origin and insertion of Deltoid muscle.							
8.4.2	Demonstrate the origin and insertion of Biceps Brachii.							
8.4.3	Demonstrate the flexor group of muscles of forearm and its attachments.							
8.4.4	Demonstrate the extensor group of muscles of forearm and its attachments.							

8.4.5	Demonstrate the muscle attachment of humerus.							
8.4.6	Demonstrate the muscle attachment of radius and ulna.							
8.4.7	Discuss the muscle attachment of femur.							
8.4.8	Discuss the origin and insertion of quadriceps.							
8.4.9	Describe the muscle attachment of tibia and fibula.							

AN8.6	Describe scaphoid fracture and explain the anatomical basis of avascular necrosis	K	KH	N	DOAP session	Viva voice	orthopaedics	
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Specific learning objectives:								
8.6.1	Discuss the anatomy of scaphoid bone.							
8.6.2	Describe the blood supply of scaphoid bone.							
8.6.3	Discuss the mechanism of injury of scaphoid fracture.							
8.6.4	Classify scaphoid fractures.							

8.6.5	Discuss the clinical features and investigations in scaphoid fractures.							
8.6.6	Discuss the principles of management of scaphoid fracture.							
8.6.7	Enumerate complications of scaphoid fracture							
8.6.8	Discuss the causes of avascular necrosis of scaphoid fracture and its management.							

AN10.1 2	Describe and demonstrate shoulder joint for type, articular surfaces, capsule , synovial membrane, ligaments, relations, movements, muscle involved, blood supply, nerve supply and applied anatomy.	K/ S	SH	Y	Practical, Lecture, Small group discussion, DOAP session.	Written/Vi va voice/Skills assessment	Orthopaedics	
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Specific learning objectives:

10.12.1	Discuss shoulder joint anatomy.							
10.12.2	Describe various supporting structures of shoulder joint.							
10.12.3	Discuss glenoid labrum and its importance.							

10.12.4	Demonstrate the movements of shoulder joint.							
10.12.5	Describe sub acromial bursa and its importance.							
10.12.6	Describe the blood supply of proximal humerus and its applied anatomy.							
10.12.7	Discuss rotator cuff group of muscles							
AN11.4	Describe the anatomical basis of Saturday night paralysis	K	K/KH	Y	Practical ,Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
11.4.1	Discuss the formation of radial nerve.							
11.4.2	Discuss the anatomy of radial nerve in the arm.							
11.4.3	Define Saturday night paralysis.							
11.4.4	Discuss the mechanism of injury in Saturday night paralysis.							
11.4.5	Discuss the clinical features and investigations of radial nerve injury in the arm.							
11.4.6	Discuss the general principles of management of compression neuropathy.							

AN17.2	Describe anatomical basis of complications of fracture neck of femur,	K	K/K H	N	Lecture	Written/Viva voice	orthopaedics	
Specific learning objectives:								
17.2.1	Discuss the blood supply of femoral head.							
17.2.2	Enumerate the complications of fracture neck of femur.							
17.2.3	Discuss the reasons for high incidence of nonunion of fracture neck of femur.							
17.2.4	Discuss the reasons for high incidence of avascular necrosis of femoral head							
AN17.3	Describe dislocation of hip joint and surgical hip replacement.	K	K/K H	N	Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
17.3.1	Classify hip dislocations.							
17.3.2	Classify posterior hip dislocation.							
17.3.3	Discuss the mechanism of injury, clinical features and investigations of posterior dislocation.							
17.3.4	Discuss the closed reduction methods for posterior dislocation.							

17.3.5	Enumerate the indications for open reduction of posterior dislocation.							
17.3.6	List the complications of dislocation of hip.							
17.3.7	Differentiate hemiarthroplasty and total hip arthroplasty.							
17.3.8	Differentiate unipolar and Bipolar hemiarthroplasty.							
17.3.9	Enumerate the indications of hemiarthroplasty.							
17.3.10	Enumerate the common indications for total hip arthroplasty							

AN18.6	Describe knee joint injuries with its applied anatomy.	K	KH	N	Lecture	Written//Viva voice	orthopaedics	
Specific learning objectives:								
18.6.1	Enumerate the common knee injuries.							
18.6.2	Describe the anatomy of ligaments of the knee.							
18.6.3	Describe the anatomy of the meniscus.							
18.6.4	Descriptive the mechanism of injury, various tests and investigations in ACL injury.							
18.6.5	Discuss the general principles of management of ACL injury.							

18.6.6	Describe the mechanism of injury, various tests and investigations in meniscus injury.							
18.6.7	Discuss the general principles of management of meniscus injury							
AN18.7	Explain anatomical basis of osteoarthritis	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	

Specific learning objectives:

18.7.1	Define osteoarthritis.							
18.7.2	Classify osteoarthritis.							
18.7.3	Discuss the aetiopathogenesis of primary osteoarthritis.							
18.7.4	Discuss the changes in articular cartilage in primary osteoarthritis.							
18.7.5	Discuss the secondary causes of osteoarthritis							

AN19.4	Explain the anatomical basis of rupture of Achilles tendon	K	KH	N	Lecture	Written/Viva voice	orthopaedics	
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Specific learning objectives:

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19.4.1	Discuss the anatomy of Achilles tendon.							
19.4.2	Discuss the pathoanatomy of rupture of Achilles tendon.							
19.4.3	Discuss the mechanism of injury in tear of Achilles tendon.							
AN19.6	Explain the anatomical basis of flat foot & club foot	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
19.6.1	Define flatfoot.							
19.6.2	Discuss the arches of foot.							
19.6.3	Describe the pathoanatomy of flatfoot.							
19.6.4	Discuss the etiology of flatfoot.							
19.6.5	Define CTEV							
19.6.6	Discuss the pathoanatomy of CTEV							
19.6.7	Discuss the etiology of CTEV							

AN19.7	Explain the anatomical basis of Metatarsalgia & plantar fasciitis	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
19.7.1	Define metatarsalgia.							
19.7.2	Classify metatarsalgia.							
19.7.3	Enumerate the causes for metatarsalgia.							
19.7.4	Discuss the risk factors responsible for metatarsalgia.							
19.7.5	Define plantar fasciitis.							
19.7.6	Discuss the structure and function of plantar fascia.							
19.7.7	Discuss the risk factors responsible for plantar fasciitis							

PATHOLOG Y								
PA33.1	Classify and describe the etiology , pathogenesis , manifestation , radiologic and morphologic features and complications of osteomyelitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voice		Human anatomy Orthopaedics.

Specific learning objectives:								
33.1.1	Classify osteomyelitis.							
33.1.2	Discuss aetiopathogenesis of acute osteomyelitis.							
33.1.3	Discuss the clinical features and investigations in acute osteomyelitis.							
33.1.4	Discuss the clinical features and radiological findings in chronic osteomyelitis.							
33.1.5	Discuss the pathologic morphology in osteomyelitis.							
33.1.6	Enumerate the complications of osteomyelitis							
PA33.2	Classify and describe the etiology , pathogenesis , manifestations, radiologic and morphologic features and complications and metastases of bone tumors.	K	K H	Y	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
33.2.1	Classify skeletal metastasis.							
33.2.2	Describe the mechanism of bone metastasis.							
33.2.3	Describe the clinical features and investigative work up in bone metastasis.							
33.2.4	Discuss the principles of management of skeletal metastasis.							

33.2.5	Discuss the complication of skeletal metastasis							
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PA33.4	Classify and describe the etiology , pathogenesis , manifestations, radiologic and morphogenic features and complications of Paget's disease of the bone.	K	KH	N	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
33.4.1	Define Paget's disease.							
33.4.2	Discuss the pathophysiology of Paget's disease.							
33.4.3	Discuss the clinical features, diagnostics and differential diagnosis of Paget's disease.							
33.4.4	Discuss principles of management of Paget's disease.							
33.4.5	Discuss the complications of Paget's disease							

Microbiology

MI4.2	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of bone and joint infections.	K	KH	Y	Lecture	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
4.2.1	Discuss the aetiopathogenesis of acute osteomyelitis.							
4.2.2	Discuss the aetiopathogenesis of acute septic arthritis.							
4.2.3	Discuss the clinic features of acute osteomyelitis.							
4.2.4	Discuss the clinical features of acute septic arthritis.							
4.2.5	Discuss the laboratory diagnosis of acute osteomyelitis, chronic osteomyelitis and acute septic arthritis.							

Forensic medicine

FM3.7	Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death : primary and secondary.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		Forensic medicine. Orthopaedics.
Specific learning objectives:								
3.7.1	Describe the factors influencing the causation of an injury.							
3.7.2	Describe the factors that influence healing of an injury or fracture.							
3.7.3	Discuss the primary and secondary causes of death from a wound.							
FM3.8	Mechanical injuries and wounds: describe and discuss different types of weapons including dangerous weapons and their examination.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		General surgery. Orthopaedics.
Specific learning objectives:								
3.8.1	Identify the weapons that cause blunt force and sharp force injuries.							

3.8.2	Define dangerous weapon (S.324 IPC and 326 IPC)							
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FM3.9	Firearm injuries: Describe different types of firearms including structure and components, along with description of ammunition propellant charge and mechanism of fire-arms , different types of cartridges and bullets and various terminology in relation of firearm – caliber range , choking.	K	K/KH	Y	Lecture, Small group discussion	Written /Viva voice		General surgery. Orthopaedics.
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Specific learning objectives:

3.9.1	Define Forensic ballistics, Proximal ballistics, Intermediate ballistics and Terminal ballistics.							
3.9.2	Define firearm							
3.9.3	Classify firearms.							
3.9.4	Enumerate the parts of the basic firearms.							
3.9.5	Explain ‘ rifling’ and ‘caliber’ of a firearm.							
3.9.6	Explain choking in a firearm and its purpose.							

3.9.7	Enumerate the components of rifled firearm and shotgun and its function .							
3.9.8	Describe the types of gunpowder.							
3.9.9	Discuss on types of bullets and pellets.							

FM3.10	Firearm injuries: Describe and discuss wound ballistics- different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidenced in cases of firearm and blast injuries. Various tests related to confirmation of use of firearms.	K	K/ K H	Y	Lecture , Small group discussion. Bed side clinic DOAP session	Written/Vive voice/OSCE	General orthopaedics.	
Specific learning objectives:								
3.10.1	Define wound ballistics.							
3.10.2	Enumerate the factors affecting gunshot wound production.							
3.10.3	Explain the mechanism of firing and various components of discharge of firing.							
3.10.4	Describe the entry and exit wounds from rifled firearm at various Ranges.							
3.10.5	Describe the entry and exit wounds from a shotgun at various Ranges.							
3.10.6	Discuss on Ricocheting of a bullet and its effect.							
3.10.7	Discuss on tumbling bullet, Yawning bullet, Dumdum bullet, Tandem bullet, Souvenir bullet.							
3.10.8	List the evidentiary materials to be collected and preservation of evidentiary materials in gunshot wounds.							
3.10.9	Describe the method of collection and preservation of evidentiary Materials in gunshot wounds.							

3.10.10	Describe the significance of bullet markings and use of comparison microscope.							
3.10.11	Enumerate the tests done for detection of gunshot residue.							
3.10.12	Describe the injuries caused by bomb blast/explosion .							
3.10.13	Discuss the diagnostic evaluation in blast injury.							
3.10.14	Describe the principles of surgical management of blast extremity injury.							

FM3.11	Regional injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial hemorrhages , coup and countercoup injuries) neck, chest , abdomen, limbs ,genital organs, spinal cord and skeleton.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic or autopsy , DOAP session	Written/Viva voice/OSCE/OS PE		General surgery. Orthopaedics.
Specific learning objectives:								
3.11.1	Define head injury.							
3.11.2	Discuss the forensic anatomy of scalp and scalp injuries.							
3.11.3	Enumerate the types of skull fracture.							
3.11.4	Describe the intracranial hemorrhages and its medicolegal aspects.							
3.11.5	Describe the cerebral injuries and its medicolegal aspects.							
3.11.6	Explain ‘concussion of brain’ and ‘diffuse axonal injury’.							
3.11.7	Discuss on punch drunk syndrome.							
3.11.8	Describe the mechanism , clinical features and medicolegal aspects Of whiplash injury.							

3.11.9	Discuss on 'railway spine'.							
3.11.10	Discuss on injuries to chest , abdomen and genital organs.							

FM3.12	Reginal injuries: Describe and discuss injuries related to fall from height and vehicular injuries - Primary and Secondary impact, Secondary injuries , crush syndrome , railway spine.	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic or autopsy, DOAP session	Written/ voice/ OSCE/OPSE	Viva	General surgery. Orhopaedics.
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Specific learning objectives:

3.12.1	Describe the injuries sustained to person in a fall from height .							
3.12.2	Describe the injuries to a pedestrian in vehicular accident (primary impact , second impact and secondary injuries)							
3.12.3	Describe the injuries to driver , front seat passenger and back seat passenger of a motor car.							

3.12.4	Discuss on 'Crush syndrome'.							
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General medicine								
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IM7.5	Develop a systematic clinical approach to joint pain based on the pathophysiology.	K	K/KH	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
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Specific learning objectives:								
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7.5.1	Enumerate the common causes of joint pain.							
7.5.2	Discuss the pathophysiology of joint pain.							
7.5.3	List the causes of joint pain structurally arising from within the joint.							
7.5.4	Enumerate the causes of joint pain arising from structures around the joint.							
7.5.5	Enumerate various causes of joint pain because of referred pain.							
7.5.6	Discuss synovitis as a cause for joint pain.							
7.5.7	Discuss enthesitis as a cause for joint pain.							

7.5.8	Discuss crystal deposition as a cause for joint pain							
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IM7.6	Describe and discriminate acute, subacute and chronic causes of joint pain.	K	K/K H	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
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Specific learning objectives:

7.6.1	Enumerate the various causes of acute joint pain.							
7.6.2	Enumerate the various causes of chronic joint pain.							
7.6.3	Differentiate acute joint pain from chronic joint pain.							
7.6.4	Discuss the differential diagnosis of acute joint pain.							
7.6.5	Discuss the differential diagnosis of chronic joint pain.							

IM7.7	Discriminate , describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain	K	K/K H	Y	Lecture, Small group discussion	Written/ Viva voice		Orthopaedics.
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Specific learning objectives:

7.7.1	Define arthritis.							
7.7.2	Define arthralgia.							

7.7.3	Differentiate between arthritis and arthralgia.							
7.7.4	Enumerate the causes of mechanical joint pain with examples.							
7.7.5	Enumerate the causes of inflammatory joint pain with examples.							
7.7.6	Differentiate mechanical joint pain from inflammatory joint pain							

IM7.8	Discriminate , describe and discuss distinguishing articular from periarticular complaints.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		Orthopaedics.
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Specific learning objectives:

7.8.1	Discuss the clinical features of joint pain arising from intra-articular structures.							
7.8.2	Discuss the clinical features of joint pain arising from periarticular structures.							
7.8.3	Differentiate the articular and periarticular joint pain.							

IM7.9	Determine the potential causes of joint pain based on the presenting features of joint involvement.	K	K/KH	Y	Lecture , Small group discussion	Written/ Viva voice		Orthopaedics.
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Specific learning objectives:

7.9.1	Enumerate various presenting symptoms of joint pain conditions.							
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7.9.2	Differentiate various conditions of joint pain by presenting symptoms.							
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IM7.10	Describe the common signs and symptoms of articular and periarticular diseases.	K	K/KH	Y	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
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Specific learning objectives:

7.10.1	Discuss the clinical features of various articular conditions.							
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7.10.2	Discuss the clinical features of periarticular joint conditions							
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IM7.13	Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease.	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Orthopaedics.
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Specific learning objectives:								
7.13.1	Perform the clinical examination of Hip joint.							
7.13.2	Perform the clinical examination of Knee joint.							
7.13.3	Perform the clinical examination of Shoulder joint.							
7.13.4	Perform the clinical examination of Elbow joint.							
7.13.5	Perform the clinical examination of Wrist and Hand							
7.13.6	Perform the clinical examination of Foot and Ankle.							
IM7.17	Enumerate the indications for arthrocentesis.	K	K	Y	Lecture , Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.17.1	Describe arthrocentesis.							

7.17.2	Describe various indications for arthrocentesis							
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IM7.18	Enumerate the indications and interpret plain radiographs of joints.	K	SH	Y	Bedside clinic, Small group discussion.	Skill assessment/Written	Radiodiagnosis	Orthopaedics.
Specific learning objectives:								
7.18.1	Enumerate the investigations for joint pain.							
7.18.2	Enumerate the indications for radiological examination of joint pain.							
7.18.3	Enumerate various radiological findings in arthritis of a joint.							
7.18.4	Discuss the radiological findings of osteoarthritis knee joint.							
7.18.5	Discuss the radiological findings in tuberculosis knee joint.							
7.18.6	Discuss the radiological findings in tuberculosis of hip joint.							
IM7.21	Select, prescribe and communicate appropriate medications for relief of joint pain.	K / C	SH	Y	DOAP session	Skill assessment/Written	Pharmacology.	Orthopaedics.
Specific learning objectives:								
7.21.1	Discuss the pathophysiology of joint pain.							
7.21.2	Enumerate the causes of joint pain .							
7.21.3	How do you evaluate join pain.							

7.21.4	Discuss WHO analgesics ladder.							
7.21.5	Describe the role of opioid analgesics used in osteoarthritis							
7.21.6	Enumerate NSAIDs group analgesics used in relief of joint pain.							
7.21.7	Mention parental analgesics used in relief of joint pain.							
7.21.8	Discuss the side effects of chronic use of NSAIDs in an osteoarthritic joint pain.							
7.21.9	Name some topical analgesics.							

7.21.10	Discuss the role of intra-articular steroid injections.							
7.21.11	Discuss the role of viscosupplementation in osteoarthritis.							97

IM24.12	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of degenerative joint disease.	K	K H	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
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Specific learning objectives:

24.12.1	Define degenerative joint disease.							
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24.12.2	Discuss the aetiopathogenesis of degenerative joint disease.							
24.12.3	Describe the clinical features of degenerative joint disease.							
24.12.4	Discuss the loss of functional activity in degenerative joint disease.							
24.12.5	Discuss the management of early osteoarthritis.							
24.12.6	Discuss the principles of management of degenerative joint disease.							
24.12.7	Discuss the physical therapy and rehabilitation of degenerative Joint pain							

IM24.13	Describe and discuss the aetipathogenesis , clinical presentation, identifications, functional changes , acute care, stabilization, management and rehabilitation of falls in the elderly.	K	K H	Y	Lecture ,Small group discussion.	Written/ Viva voice		Orthopaedics. Physical medicine and rehabilitation.
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Specific learning objectives:

24.13.1	Discuss the causes of falls in elderly.							
24.13.2	Discuss the common factures in elderly because of falls.							

24.13.3	List the common presentation features following falls in elderly patients.							
24.13.4	Discuss the acute care management of fractures in elderly.							
24.13.5	Discuss general principles of management of fractures in elderly.							
24.13.6	Discuss the rehabilitation of elderly fractured patient.							
24.13.7	Describe the preventive steps to avoid falls in elderly							

IM24.16	Describe and discuss the principles of physical and social rehabilitation , functional assessment , role of physiotherapy and occupation therapy in the management of disability in the elderly.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics. Physical medicine and rehabilitation.
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Specific learning objectives:

24.16.1	Discuss the common form of disability in elderly.							
24.16.2	Discuss ageing and disability.							

24.16.3	Discuss disability of elderly population in India.							
24.16.4	Discuss the general principles of physical and social rehabilitation of the disabled elderly.							
24.16.5	Discuss the occupational therapy for a disabled elderly							

Physical Medicine & Rehabilitation

PM1.2	Define and describe disability, its cause and magnitude, identification and prevention of disability.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		General medicine Orthopaedics.
Specific learning objectives:								
1.2.1	Define disability.							
1.2.2	Describe the various causes of disabilities.							
1.2.3	Classify disability.							
1.2.4	Define impairment.							
1.2.5	Differentiate temporary and permanent disability.							
1.2.6	Define handicap.							
1.2.7	List various domains of functioning which can be affected by disability.							
1.2.8	Discuss the prevalence of disability in India and worldwide.							
PM1.3	Define and describe the methods to identify and prevent disability	K	K/KH	Y	Lecture, Small group discussion	Written/Viva voice		General medicine Orthopaedics.
Specific learning objectives:								

1.3.5	Discuss disability management							
1.3.1	Discuss the methods of identification of various disabilities.							
1.3.2	Discuss identification of locomotor disability in a child.							
1.3.3	Discuss the checklist for identification of children with special needs.							
1.3.4	Differentiate primary, secondary and tertiary prevention of disabilities.							

PM1.4	Enumerate the rights and entitlements of differently abled persons	K	K	Y	Lecture, Small group discussion	Written/ Viva voice		General medicine. Orthopaedics.
Specific learning objectives:								
1.4.1	Discuss the rights of differently abled persons.							
1.4.2	Define " persons with benchmark disabilities".							
1.4.3	Discuss the rights and entitlement of differently abled persons.							
1.4.4	Enumerate additional benefits provided for persons with benchmark disabilities and those with high support needs							

PM4.3	Observe in a mannequin or equivalent the administration of an intra-articular injection	S	KH	N	DOAP session	Skill assessment		Orthopaedics
Specific learning objectives:								
4.3.1	List out the indications for intra-articular injections.							
4.3.2	Demonstrate the sterile precautions to be taken while administering intra-articular injection.							
4.3.3	Enumerate the drugs used to be injected as intra-articular formulations.							
4.3.4	Surface marking of joint line and position of the joint for intra-articular injection to be elicited.							
4.3.5	Depiction of post intra-articular injection care and rehabilitation.							
4.3.6	Recent advances in the modality of intraarticular injection.							
4.3.7	Explain the guided intra-articular injections							
PM4.5	Demonstrate correct assessment of muscle strength and range of movements	S	SH	Y	DOAP session, Bedside clinic	Skill assessment		General medicine Orthopaedics.

Specific learning objectives:								
4.5.1	List out the MRC grading of muscle power.							
4.5.2	Explain the types of joints.							
4.5.3	Demonstrate the movements across each major joint of upper limb.							
4.5.4	Demonstrate the various movements across each major joint of lower limb.							

PM5.1	Enumerate the indications and describe the principles of amputation.	K	KH	Y	Lecture , Small group discussion.	Written/ Viva voice		Orthopaedics. General Surgery.
Specific learning objectives:								
5.1.1	Define amputation.							
5.1.2	Define disarticulation.							
5.1.3	Enumerate the indications of amputations.							
5.1.4	Discuss the general principles in techniques of amputation and disarticulations.							
5.1.5	Enumerate the complications of amputation.							
PM5.2	Describe the principles of early mobilizations, evaluation of the residual limb, contralateral limb and the influence of co-morbidities.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
5.2.1	Discuss the principles of early mobilization of an amputee patient.							
5.2.2	Discuss ideal stump in an amputated patient.							

5.2.3	Discuss the evaluation of the amputation stump for prosthesis fitting.							
5.2.4	Discuss the rehabilitation following amputation.							
5.2.5	Discuss the factors affecting the rehabilitation of an amputated patient.							
5.2.6	Discuss the influence of co morbidities in an amputated patient.							

PM5.3	Demonstrate the correct use of crutches in ambulation and postures to correct contractures and deformities	S	SH	Y	DOAP session, Bedside clinic discussion	Skill assessment		Orthopaedics.
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Specific learning objectives:								
5.3.1	List the indications for use of crutches.							
5.3.2	Enumerate various types crutches.							
5.3.3	Demonstrate the correct use of crutches while standing, walking, sitting and climbing stairs.							
5.3.4	Define contracture.							

5.3.5	Define deformity.							
5.3.6	Discuss the causes for contractures and deformities.							
5.3.7	Discuss various preventive measures to avoid contractures and deformities.							
5.3.8	Discuss how do you prevent contractures in bedridden patients							
PM5.4	Identify the correct prosthesis for common amputations.	S	SH	Y	DOAP session	Skill assessment/Written		Orthopaedics.
Specific learning objectives:								
5.4.1	Define prosthesis.							
5.4.2	Enumerate various lower limb prostheses.							
5.4.3	Enumerate various upper limb prostheses.							
5.4.4	Identify correct prosthesis for above knee amputation.							
5.4.5	Identify correct prosthesis for below knee amputation.							

5.4.6	Identify upper limb prosthesis with respect to level of amputation.							105
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PM6.3	Describe the principles of skin traction, serial casts and surgical treatment including contracture release , tendon transfer , osteotomies and arthrodesis.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
6.3.1	Define traction.							
6.3.2	Enumerate types of traction.							
6.3.3	Discuss the conditions in which traction is used.							
6.3.4	List the indications for skin tractions in upper and lower limbs.							
6.3.5	Discuss the technique of skin traction application and its complications.							
6.3.6	Define serial cast technique.							
6.3.7	Enumerate common indications for serial cast technique.							
6.3.8	Discuss the principles of deformity corrections by surgical release.							
6.3.9	List some conditions where surgical release of contracted structures is performed to correct deformity.							
6.3.10	Define tendon transfer							

6.3.11	List the indications for tendon transfers.							
6.3.12	Discuss the principles of tendon transfers.							
6.3.13	Define osteotomy.							
6.3.14	Enumerate common indications for osteotomies.							
6.3.15	Discuss the general principles of osteotomy.							
6.3.16	Define arthrodesis.							
6.3.17	Enumerate the indications of arthrodesis.							
6.3.18	Discuss the general principles of arthrodesis procedure							106

PM6.4	Describe the principles of orthosis for ambulation in PPRP	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
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Specific learning objectives:								
6.4.1	Define PPRP.							
6.4.2	Define orthosis.							
6.4.3	Discuss the general principles of orthotic management of PPRP.							

6.4.4	Enumerate the common orthosis used for lower limb, spine and upper limb in PRPP							
PM7.1	Describe and discuss the clinical features , diagnostic work up, work up diagnosis and management of spinal cord injury.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.1.1	Define complete spinal cord injury.							
7.1.2	Differentiate complete and incomplete cord injury.							
7.1.3	Discuss spinal shock.							
7.1.4	Discuss the aetiopathogenesis of spinal cord injury.							
7.1.5	Discuss the clinical features of spinal cord injury.							
7.1.6	Discuss the evaluation and diagnosis of spinal cord injuries.							
7.1.7	Discuss the management of spinal cord injury.							
7.1.8	Discuss the prognosis of spinal cord injury.							

PM7.2	Describe and demonstrate process of transfer, applications of collar restraints while maintaining airway and prevention of secondary injury in a mannequin/model.	S	SH	Y	DOAP session, Small group discussion.	Skill assessment.		Orthopaedics.
Specific learning objectives:								
7.2.1	Demonstrate the transfer process of polytrauma patient.							
7.2.2	Differentiate primary and secondary transport.							
7.2.3	Discuss the risks associated during transportation.							
7.2.4	Discuss the safety of patient transport.							
PM7.3	Perform and demonstrate a correct neurological examination in a patient with spinal injury and determine the neurologic level of injury.	S	SH	Y	Bedside clinic.	Skill assessment		Orthopaedics.
Specific learning objectives:								
7.3.1	Perform neurological examination in Quadriplegia patient.							
7.3.2	Perform neurological examination in paraplegia patient.							

7.3.3	Perform neurological examination in paraparesis patient.							
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PM7.4	Assess bowel and bladder function and identify common patterns of bladder dysfunction	S	KH	Y	Small group discussion	Written/Viva voice		General medicine. Orthopaedics.
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Specific learning objectives:

7.4.1	Enumerate the causes of bowel and bladder dysfunction.							
7.4.2	Describe the nerve supply of bladder							
7.4.3	Explain the types of bladder in spinal cord injury (SCI).							

PM7.5	Enumerate the indications and identify the common mobility aids and appliances, wheel chairs.	S	S	Y	DOAP session	Skill assessment/ Viva voice		Orthopaedics.
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Specific learning objectives:

7.5.1	Name the common mobility aids.							
7.5.2	Explain walking stick and walking frame							
7.5.3	Role of wheel chairs in orthopedics and neurology							

PM7.7	Enumerate and describe common life threatening complications following SCI like Deep vein thrombosis , Aspiration Pneumonia , Autonomic dysreflexia.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		General medicine. Orthopaedics.
Specific learning objectives:								
7.7.1	Describe the pathophysiology, investigations and management of deep vein thrombosis (DVT) and preventive measures in DVT in follow up case of SCI.							
7.7.2	Discuss the pathophysiology, investigations and management of aspiration pneumonia							
7.7.3	Enumerate the pathophysiology, investigations, management and preventive measures in autonomic dysreflexia in follow up case of SCI.							

PM8.1	Describe the clinical features , evaluation , diagnosis and management of disability following traumatic brain injury.	K	KH	Y	Lecture , Small group discussion.	Written/ Viva voice		General medicine. Orthopaedics. General surgery .
Specific learning objectives:								
7.8.1	Discuss the clinical features of traumatic brain injury (TBI).							
7.8.2	Discuss the neurological status of traumatic brain injury .							
7.8.3	Evaluate the diagnostic modality of traumatic brain injury							
7.8.3	Discuss t the management of disability of traumatic brain injury							

E. SELF DIRECTED LEARNING (10 Hours)

SL NO	MBBS PHASE III Part 1	MBBS PHASE III Part 2
1	OR1.1- Polytrauma, ATLS	OR 2.7- Pelvic Injury and Shock
2	OR 1.6- Dislocations	OR 2.8- Spinal cord injury
3	OR 2.15- Compartment Syndrome	OR 3.1- Osteomyelitis
4	PM 5.3- Crutches, Mobility Aids	OR 10.1- Malignant Bone Tumor

5	PM 5.4- Amputation , Prosthesis	OR 11.1- Peripheral Nerve injury
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SDL EXAMPLE 1: Case Scenario:- Polytrauma

A 35-year-old man is brought to the emergency department following a motorcycle accident. He is breathing spontaneously and has a systolic blood pressure of 80 mm Hg, a pulse rate of 120/min, and a temperature of 98.6° F (37° C). Examination suggests an unstable pelvic fracture. Ultrasound evaluation of the abdomen is negative. Despite administration of 4 L of normal saline solution, he still has a systolic pressure of 90 mm Hg and a pulse rate of 110. Urine output has been about 20 mL since arrival 35 minutes ago. Discuss Management of this patient

Learning objectives

- A. Classify a polytrauma patient to one of the four groups (stable, borderline, unstable, extremis) based on the physiology
- B. Learn which injury pattern and physiologic parameters can lead to ARDS and MODS in the polytrauma patient
- C. Outline the latest advances in resuscitation (ATLS)
- D. Define the role of orthopedic surgery in saving life and limb after major trauma

- E. Identify patients that can safely have early total care
- F. Consider the suitability of damage control surgery
- G. Set priorities for management of injuries - Long bone vs Pelvic Ring

SDL EXAMPLE 2: Case Scenario:- **Compartment Syndrome**

20 year old male patient was treated conservatively with a cast for fracture of right radius and ulna. He comes to ER 24 hours later with severe pain in his forearm.

What is the most likely diagnosis?

Learning objectives

- A. What is compartment syndrome?
- B. What are clinical signs of compartment syndrome?
- C. What is the pathophysiology behind compartment syndrome?
- D. How do you measure compartment pressure?
- E. What would have prevented this complication?
- F. How do you manage this patient?-
Investigations, medication, surgery
- G. What are the complications of compartment syndrome?

F. Topics for Electives

1. Trauma and fractures
2. Paediatric Orthopaedics
3. Orthopaedic adult reconstruction/ Joint Replacement
4. Orthopaedic spine 5. Orthopaedic sports medicine
6. Geriatric orthopaedics
7. Musculoskeletal Oncology

G. Clinical Postings

Learner - Doctor programme (Clinical) – As per GMER 2019	
Year of Curriculum	Focus of Learner - Doctor programme
Phase I	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Phase II	History taking, physical examination, assessment of change in clinical status, communication and patient education
Phase III Part 1	All of the above and choice of investigations, basic procedures and continuity of care
Phase III Part 2	All of the above and decision making, management and outcomes

	MBBS Phase II	MBBS Phase III Part I	MBBS Phase III Part 2	Total weeks
Orthopedics - including Trauma and PMR	2 weeks	4 weeks	2 weeks	8 weeks

List of Competencies to be considered in clinical Postings

Bed Side Clinics	Case discussion	Demonstrations
OR1.5: Dislocation of joints	OR 3.4: Osteomyelitis/Septic Arthritis	AN8.4: Demonstrate important muscle attachment on the given bone

OR 2.1 to OR 2.16: Fractures	OR4.1: Tuberculosis of joints/spine	AN 10.12: Describe and demonstrate Shoulder joint for- type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply and applied anatomy
OR5,1: Inflammatory disorders of joints	OR6.1: Degenerative conditions of spine	OR13.1: Casts and Plasters
IM7.13: Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease	OR7.1,7.2: Metabolic Bone Disorders- osteoporosis, osteomalacia, rickets, Paget's disease	OR13.2: Splints and tractions
IM7.18: Enumerate the indications and interpret plain radiographs of joints	OR8.1: PPRP	PM5.3: Demonstrate the correct use of crutches in ambulation and postures to correct contractures and deformities
	OR 11.1- Peripheral Nerve injuries	
PM 4.5: Demonstrate correct assessment of muscle strength and range of movements	OR 12.1: Congenital - CTEV	
PM7.3: Perform and demonstrate a correct neurological examination in a patient with spinal injury and determine the neurologic level of injury	OR 10.1, 10.2: Tumors, swellings	

Model Time table for MBBS Phase II Clinical Postings

Day		Week 1	Week 2
Monday	Clinical case Discussion	History Taking and Basic Orthopaedic Examination (IM 7.5)	History and Examination of Shoulder Joint (IM 7.13.3)
Tuesday	Clinical case Discussion	History and Examination of bone and joint infection (PA33.1)	History and Examination of Elbow Joint (IM 7.13.4)
Wednesday	Clinical case Discussion	History and Examination of Knee Joint (IM 7.13.2)	History and Examination of Wrist Joint and Hand (IM 7.13.5)
Thursday	Clinical case Discussion	History and Examination of Ankle and Foot (IM 7.13.6)	History and Examination of Hip Joint (IM 7.13.1)
Friday	Clinical case Discussion	History taking and examination of deformed limb (OR 7.2)	History and Examination of Bone swelling/tumor (OR 10.2)
Saturday	X	X	X

Model Time table for MBBS Phase III, Part 1 Clinical Postings

Day		Week 1	Week 2	Week 3	Week 4
Monday	Clinical case Discussion	Infections -1 Osteomyelitis of long bones (PA33.1))	Osteoarthritis KNEE (IM 7.13.2, OR 2.3)	Malunion – Upper limb(OR 2.15)	Examination of Bone Tumor (OR 10.2)
Tuesday	Clinical case Discussion	Rickets/deformities (OR 7.1,7.2)	Nerve injuries – Foot drop (OR11.1)	Frozen Shoulder/ Shoulder Impingement (IM 7.13.3)	Malunion – lower limb(OR 2.15)
Wednesday	Clinical case Discussion	Rheumatoid Arthritis/ Ankylosing spondylitis (OR 5.1)	TB Hip/Knee (OR4.1)	Nerve injuries – Wrist drop/Claw Hand (OR11.1)	Septic Arthritis (OR3.4)

Thursday	Clinical case Discussion	Non- union (OR 2.15)	Ligamentous Injuries of Knee (OR1.3, AN18.6)	Hip Deformity- Abnormal Gait (IM 7.13.1)	Examination of Patient with claudication pain (OR 6.1)
Friday	Skill lab	Below and above elbow slab/cast (OR13.1)	Below and above Knee slab/cast(OR 13.1)	Reduction and cast application for Colle's Fracture. (OR 13.1) Strapping of Clavicle Fracture (OR 2.1)	ATLS – Basics (OR 1.1)
Saturday	Operating procedures / Skill Lab	Hand wash, Donning surgical gown and gloves, preparation of parts	Suturing Methods	Debridement of Osteomyelitis/ Saucerization	Tendon Repair

Model Time table for MBBS Phase III, Part 2 Clinical Postings

Day		Week 1	Week 2
Monday	Clinical case Discussion	Infections –2 Infected Non Union/ Ilizarov/external fixator (PA33.1))	CTEV (AN19,6. OR 12.1)
Tuesday	Clinical case Discussion	Quadriplegia/Paraplegia (PM 7.3)	Examination of Bone Tumor (OR 10.2)
Wednesday	Clinical case Discussion	Recurrent Shoulder Dislocation (IM 7.13.3)	Elbow- Deformity (OR7.2)
Thursday	Instruments/Specimens/X-rays	X-rays and Specimens	Instruments, Implants, orthosis and prosthesis,
Friday	Skill lab	Skin traction and Thomas splint application (OR13.1)	Shoulder dislocation reduction Techniques (OR1.6)

Saturday	Operating procedures/ Video Assisted Teaching	Intramedullary nailing	Plate Osteosynthesis
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H. Model Question Papers

Example 1

Time: 1 hour 30 minutes

Total Marks: 50

Long Essays- 10 Marks Each (2X10=20 Marks)

1. A 6 year old kid was brought to emergency department with pain swelling and in left elbow with difficulty on moving the elbow. Parents give a history of fall from height directly on elbow while playing.
 1. What is the most common pediatric elbow/distal humerus fracture?
 2. Mechanism of injury and classification
 3. Management
 4. Complications- acute and chronic **(1+3+3+3= 10Marks)**
2. A 65 year old obese individual has come to the hospital with complaints of pain in both knees. Discuss clinical examination Investigations and various treatment modalities of Osteoarthritis of knee (3+3+4=10)
 1. Osteoclastoma - definition, Histology, management
 2. Colle's fracture- definition, classification, management
 3. Tuberculosis of Spine – Pathogenesis, Classification and Management

Short Answers- 3 marks each (5X3=15 Marks)

6. Thomas Splint
7. Saturday Night Palsy
8. Deformities in CTEV
9. Bennett's Fracture ¹²¹
10. Stages of Fracture Healing

Example 2

Total Marks: 50

Time: 1 hour 30 minutes

Long Essay- 10Marks Each (2X10=20Marks)

1. A new born was brought to the hospital with CTEV of both feet. Discuss
 1. Etiology
 2. Deformities
 3. Management

4. **(3+3+4= 10Marks)**

2. A 11 year old boy was referred from a primary care center with osteosarcoma of femur. Discuss

1. Clinical features
2. Radiological and histological findings
3. Management **(3+3+4= 10**

marks) Short Essay- 5 marks each

(3X5=15

Marks)

1. Monteggia Fracture Dislocation
2. Claw hand
3. Nutritional Rickets

Short Answers- 3 marks each

(5X3=15 Marks)

6. Dennis Brown splint 9. Ant
7. Skeletal Traction eri
8. List DMARD's or

wer's Test

10. Mallet Finger

J. Recommended Text Books

1. Natarajan's Textbook of Orthopaedics and Traumatology. 8th Edition
2. Maheshwari, Essential Orthopaedics. 6th Edition
3. Crawford Adams, Outline of Orthopaedics – Fractures and dislocation. 14th Edition
4. Apley & Solomon's System Of Orthopaedics And Trauma. 10th edition
5. Das S, A Manual On Clinical Surgery. 14th Edition
6. McRae, Clinical Orthopaedic Examination. 6th Edition

**Rajiv Gandhi University of
Health Sciences
Bangalore, Karnataka**





Insert
institution
logo

Student
photo

ORTHOPAEDICS
LOGBOOK
FOR
PHASE III MBBS
AS PER

Competency-Based Medical Education
Curriculum

Name and Address of the College

ORTHOPAEDICS
Logbook

Name of the Student:

Contact Number:

Email Id:

Date of Admission to MBBS Course:

Date of Beginning of the Current Phase:

Reg. No. (College ID):

Reg. No. (University ID):

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BONAFIDE CERTIFICATE

KEMPEOWDA INSTITUTE OF MEDICAL SCIENCES

This is to certify that the candidate

Reg No. has satisfactorily completed all requirements mentioned in this Logbook for Phase III MBBS in ORTHOPAEDICS

including related AETCOM modules as per the Competency-Based

Undergraduate Medical Education Curriculum, Graduate Medical

Regulation 2019 during the period fromto

He/ She is eligible to appear for the Summative (University) Assessment.

Faculty Mentor:

Head of Department:

Name:

Name:

Signature:

Signature:

Place:

Date:

PREFACE

This logbook is designed to follow and record your academic journey through the Orthopaedics course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

Section 1 contains the **CBME competencies in Orthopaedics**. It includes the competencies that would be covered during the course.

Section 2 records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to Orthopaedics.

Section 3 consists of the **Scheme and Summary of Formative Assessments** in Orthopaedics, including the Internal Assessments.

Section 4 documents the **Clinical Postings – Learner Doctor Method**.

Section 5 documents **Additional-Curricular Activities** (Seminars, Conference, Workshops Attended, Scientific Project Presentations, Outreach Activities, etc.) and **Extracurricular Activities**.

We hope that this logbook serves as a guide and facilitates your progress through the year.

GENERAL INSTRUCTIONS

11. This logbook is a record of the Academic/Co-curricular activities in Orthopaedics of the designated student.
12. The student is responsible for getting the entries in the Logbook verified by the Faculty in-charge regularly.
13. Entries in the Logbook will reflect the activities performed by you in the Department of Orthopaedics during your course.
14. The student has to get this logbook verified by the Mentor and the Head of the Department before submitting the Application of the University Examination.
15. All signatures must be done with a date stamp.

SUMMARY OF ATTENDANCE

<i>Block/Phase</i>	<i>Percentage of Classes Attended</i>		<i>Eligible for University Examination (Yes / No)</i>	<i>Signature of Student with Date</i>	<i>Signature of Teacher with Date</i>
	<i>Theory</i>	<i>Practical</i>			

First Block	NA				
Second Block					
Third Block					
Attendance at the end of MBBS Phase III					

SUMMARY OF INTERNAL ASSESSMENT (IA)

<i>Sl. No.</i>	<i>Internal Assessment</i>	<i>Date of Assessment</i>	<i>Total Marks</i>		<i>Marks Scored</i>		<i>Signature of Student with Date</i>	<i>Signature of Teacher with Date</i>
			<i>Theory</i>	<i>Practical</i>	<i>Theory</i>	<i>Practical</i>		
1	First Phase II		NA		NA			

2	Second Phase III Part 1							
3	Third Phase III Part 2							
4	Remedial Phase III Part 2							

Note: A candidate who has not secured requisite aggregate in the Internal Assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The Remedial Assessment shall be completed before submitting the Internal Assessment marks online to the University.

SECTION: 1

Competencies in Orthopaedics

Competency-Based Medical Education (CBME) Curriculum in Orthopaedics

Competencies in Orthopaedics:

There are **39** competencies in Orthopaedics that have been listed in the CBME curriculum by the MCI (*Refer Annexure I*). They can be categorized into knowledge, skills and affect domains as given below.

There are **29** competencies in the **Knowledge Domain**.

1.A Competencies in the Knowledge Domain

Sl. No.	Topic	Competency
1	Skeletal Trauma, Poly Trauma	OR 1.1, 1.2, 1.3,1.4, 1.5

2	Fractures	OR 2.1, 2.2, 2.4 to OR 2.14, 2.16
3	Musculoskeletal Infection	OR 3.1
4	Skeletal Tuberculosis	OR 4.1
5	Rheumatoid Arthritis and Associated Inflammatory Disorders	OR 5.1
6	Degenerative Disorders	OR 6.1
7	Metabolic Bone Disorders	OR 7.1
8	Polio Myelitis	OR 8.1
9	Cerebral Palsy	OR 9.1
10	Bone Tumors	OR 10.1
11	Peripheral Nerve Injuries	OR 11.1
12	Congenital Lesions	OR 12.1

Competencies in Skills: There are 10 competencies in this domain. These are as given below.

1.B Competencies in Skills

Topics	Competency	Description
Skeletal Trauma, Poly Trauma	OR 1.6	Participate as a member in the team for Closed Reduction of Shoulder Dislocation / Hip Dislocation / Knee Dislocation
Fractures	OR 2.3	Select, Prescribe and Communicate appropriate medication for relief of Joint Pain
	OR 2.15	Plan and Interpret the Investigations to Diagnose Complications of Fractures like Malunion, Non-union, Infection, Compartment Syndrome
Musculo Skeletal Infection	OR 3.2	Participate as a member in the team for Aspiration of Joints under supervision
	OR 3.3	Participate as a member in the team for procedures like Drainage of Abscess, Sequestrectomy / Saucerisation and Arthrotomy
Procedural Skills	OR 13.1	Participate in a team for procedures in patients and demonstrating the ability to perform on mannequins / simulated patients in the following – <ul style="list-style-type: none"> i. Above Elbow Plaster ii. Below Knee Plaster iii. Above Knee Plaster iv. Thomas Splint v. Splinting for Long Bone Fractures vi. Strapping for Shoulder and Clavicle Trauma

	OR 13.2	Participate as a member in a team for Resuscitation of Poly Trauma Victim by doing all of the following – a. I.V. access Central - Peripheral b. Bladder Catheterisation c. Endotracheal Intubation d. Splintage
Counselling Skills	OR 14.1	Demonstrate the ability to Counsel the patient regarding prognosis in patients with various Orthopaedic illnesses like – a. Fracture with Disabilities b. Fracture that requires prolong bed stay c. Bone Tumors d. Congenital Disabilities
	OR 14.2	Demonstrate the ability to counsel patients to obtain consent for various Orthopaedic procedures like Limb Amputation, Permanent Fixations etc.
	OR 14.3	Demonstrate the ability to convince the patient for referral to a higher centre in various Orthopaedic illnesses, based on the detection of warning signals and need for sophisticated management

SECTION 2: **FORMAT OF AETCOM Modules Report**

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

7. What did you learn from this AETCOM session based on the objectives?
8. What change did this session make in your learning?
9. How will you apply this knowledge in future?

Remarks by Facilitator:

Signature of Facilitator with Date:

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

7. What did you learn from this AETCOM session based on the objectives?
8. What change did this session make in your learning?
9. How will you apply this knowledge in future?

Remarks by Facilitator:

Signature of Facilitator with Date:

SECTION: 3

Formative Assessment 1

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Practical	10		

Formative Assessment 2

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Theory	25		
Formative Assessment Practical	20		

Formative Assessment 3

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Theory	25		
Formative Assessment Practical	20		

Rubric for Assessing Professionalism

Phase	Areas assessed				Total (20 marks)	Signature of Student	Signature of Teacher
	Regular for Classes (5marks)	Regular in Completing Assignments (5marks)	Behaviour in Class and Discipline (5marks)	Dress Code and Presentation (5marks)			

At the end of 1 st IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

Note: Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.

Evaluation and Feedback on Self-Directed Learning (SDL)- 10 hours

Sl. No.	Date	Topic of SDL	Feedback	Signature of Faculty/Mentor
1				
2				

Posting 1:
Duration 2 weeks
Date of Posting: From:
To:

Unit:

3				
4				
5				
6				
7				
8				
9				
10				

Section 4: Clinical Postings – Learner Doctor Method

List of Clinical Cases Presented/Attended in Posting 1.

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Learner Doctor Method: Posting**1:**

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Learner Doctor Method:

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

Posting 2:
Duration 4 weeks
Date of Posting: From: To:
Unit:

List of Clinical Cases Presented/Attended in Posting 2:

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Learner Doctor Method:

Posting 2:

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Learner Doctor Method:

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

Posting 3:
Duration 2 weeks
Date of Posting: From: To:
Unit:

List of Clinical Cases Presented/Attended in Posting 3:

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			

6			
7			
8			
9			
10			

Learner Doctor Method:

Posting 3:

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Learner Doctor Method:

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

Section 5: Additional Curricular and Extracurricular Activities

5.1 Additional Curricular Activities

(Seminar, Conferences, Outreach Activities, Workshops etc.)

. No.	Date	Particulars	Signature of the Faculty	Sl

5.2 Extracurricular Activities

Sl. No.	Date	Particulars	Signature of the Faculty

5.3 Achievements/Awards

. No.	Date	Particulars	Signature of the Faculty	Sl

FINAL SUMMARY

Sl. No.	Description	Dates		Attendance in Percentage	Status*	Signature of the Teacher with Date
		From	To			
1	AETCOM Modules					
2	Internal Assessment Marks					

Signature of Head of Department

Date:

* Status: Complete/Incomplete: For Skills and AETCOM modules
Eligible/Ineligible: For Internal Marks

**Rajiv Gandhi University of Health Sciences Bangalore,
Karnataka**



Obstetrics and Gynecology Curriculum as per Competency Based Curriculum

Acknowledgements: This Obstetrics and Gynaecology Curriculum as per the new Competency based Medical education curriculum has been prepared by the following faculty

Dr Jayshree. V. Kanavi, Associate Professor, St John's Medical College, Bangalore

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Dr Rekha Gurumurthy, Professor, Shridevi Institute of Medical Sciences & Research Hospital,

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Dr Suneetha Nithyanandam, Professor, Medical Education, St John's Medical College, Bangalore

RGUHS Obstetrics and Gynaecology Curriculum as per the new Competency Based Medical Education

PREAMBLE

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME), which most of us are now aware about, is an outcomes-based training model that has become the international standard of medical education. This newly implemented curriculum is being rolled out as detailed by incorporating key principles of CBME and developing competencies for each speciality.

One of the key healthcare indicators of a country is maternal health. Reproductive health is also gaining prominence in the modern health context. The advances in obstetrics include a steady governmental push towards institutionalization of maternal care and a growing body of knowledge regarding prediction and prevention of problems, over and above the existing knowledge.

In line with this, the obstetrics and gynaecology undergraduate curriculum provides the IMG the appropriate knowledge, mandatory skills and optimal attitudes to be able to care for pregnant women and for women with reproductive tract issues and be able to identify high risk conditions and refer to specialists as appropriate.

The GMER 2019 states the following to be the competencies to be achieved by the IMG

Obstetrics and Gynaecology

(a) **Competencies in Obstetrics:** The student must demonstrate ability to:

1. Provide peri-conceptual counselling and antenatal care,
2. Identify high-risk pregnancies and refer appropriately,
3. Conduct normal deliveries, using safe delivery practices in the primary and secondary care settings,
4. Prescribe drugs safely and appropriately in pregnancy and lactation,
5. Diagnose complications of labour, institute primary care and refer in a timely manner,
6. Perform early neonatal resuscitation,
7. Provide postnatal care, including education in breast-feeding,
8. Counsel and support couples in the correct choice of contraception
9. Interpret test results of laboratory and radiological investigations as they apply to the care of the obstetric patient,
10. Apply medico-legal principles as they apply to tubectomy, Medical Termination of Pregnancy (MTP), Pre-conception and Prenatal Diagnostic Techniques (PC PNDT Act) and other related Acts.

Competencies in Gynaecology: The student must demonstrate ability to:

1. Elicit a gynaecologic history, perform appropriate physical and pelvic examinations and PAP smear in the primary care setting,
2. Recognize, diagnose and manage common reproductive tract infections in the primary care setting,
3. Recognize and diagnose common genital cancers and refer them appropriately.

(b) **Integration:** The teaching should be aligned and integrated horizontally and vertically in order to provide comprehensive care for women in their reproductive years and beyond, based on a sound knowledge of structure, functions and disease and their clinical, social, emotional, psychological correlates in the context of national health priorities.

To achieve these, NMC has given a detailed list of OBGYN competencies in the **3rd Volume (Competency based Undergraduate Curriculum in Surgery and Allied subjects)** with competencies Numbered OG1.1 and so forth) required to be gained by the IMG.

Based on the competencies mentioned in the above said document, following items have been developed and spelt out in a tabular format

- Specific learning objectives (SLO's) to achieve each competency
- Suggested Teaching-Learning methods
- Preferred assessment methods (both formative and summative)

This is only a guideline and teachers are encouraged to improvise and develop more detailed SLOs. The T-L methods can be modified based on local resources.

Also, a detailed **blueprint** showing the weightage and the assessment for particular topics. (Few topics have been grouped together to give the weightage). This blueprint is an attempt at ensuring concordance between the SLOs', TL methods and the assessment.

A **question paper layout (theory)** has also been added to ensure that there is consistency among different paper setters.

Also, a suggested **assessment format (practical)** has also been given.

List of all Obstetrics and Gynaecology Competencies with their specific learning objectives, with suggested teaching-learning and assessment methods

end

	Competencies	Specific learning objectives	Teaching learning methods with hours	When T-L will be done	Form of assessment
Topic: Demographic and Vital Statistics Number of competencies: (03) Number of procedures that require:					
OG1.1	Define and discuss birth rate, maternal mortality and morbidity	Definition of birth rate Definition of maternal mortality What is maternal mortality ratio and rate, Incidence, Causes of maternal mortality Factors affecting maternal mortality – 3 delays Interventions to prevent maternal death Definition of maternal morbidity Explain - acute, chronic, direct, indirect, non-obstetric maternal morbidity	Lecture 1hr Integration with community health	5 th term	MCQ's at the end of lecture
OG1.2	"Define and discuss perinatal mortality and morbidity including perinatal and neonatal mortality and mortality audit	Definition of perinatal mortality Incidence Factors affecting perinatal mortality Causes of perinatal mortality Strategies to reduce perinatal mortality Definition of perinatal morbidity How to audit neonatal morbidity	Lectures 1hr Integration with community health	5 th term	MCQ's at the end of lecture
OG1.3	Define and discuss still birth and abortion	Definition of stillborn Incidence, aetiology, pathology, symptoms, signs, investigations- still born infant Examination of stillborn infant Complications of IUD Management Definition of abortion Types of abortion Aetiology,	Lectures 2hr Tutorials /SGD	5 th Term	MCQ's at the end of lecture

end

		Pathophysiology, clinical features, investigations, management, differential diagnosis			
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Topic: Anatomy of the female reproductive tract (Basic anatomy and embryology) Number of competencies: (01) Number of procedures that require certification : (NIL)

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OG2.1	Describe and discuss the development and anatomy of the female reproductive tract, relationship to other pelvic organs, applied anatomy as related to Obstetrics and Gynaecology.	Development of external genital organs Development of internal genital organs Development of ovary, differentiation, descent Anatomy of external genitalia Anatomy of Internal genital organs- vagina, uterus, cervix, fallopian tubes, ovary Relationship to other pelvic organs Applied anatomy	Lecture 2hr Integration with Anatomy	5th term	MCQ / Viva
OG2.2	Define, classify and discuss the investigations and management of mullerian anomaly	classification of Mullerian anomaly, Investigation & management	Lecture 1hr	5th term	MCQ / Viva

Topic: Physiology of conception Number of competencies: (01) Number of procedures that require certification: (01)

OG3.1	Describe the physiology of ovulation, menstruation, fertilization, implantation and gametogenesis.	Gametogenesis – spermatogenesis, oogenesis Formation and maturation of ovarian follicles, structure of ovum Ovulation- mechanism, causes, timing, effects Fertilization- process, post fertilization events, implantation	Lecture 2hrs	5th term	MCQ
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Topic: Development of the fetus and the placenta Number of competencies: (01) Number of procedures that require certification: (01)

OG4.1	Describe and discuss the basic embryology of fetus, factors influencing fetal growth and development, anatomy and physiology of	Embryology – formation of 3 germ layers, amnion and chorion, placenta Phases of conceptus development Timing of appearance of different organ systems Placenta- development, gross anatomy, structure, placental circulation, functions of placenta Teratogenesis, teratogens	Lecture 1hr	6th term	MCQ
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	placenta, and teratogenesis				
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Topic: Preconception counselling Number of competencies:(02) Number of procedures that require certification:

OG5.1	Describe, discuss and identify preexisting medical disorders and discuss their management; discuss evidence-based intrapartum care	Pre-existing medical disorders- anaemia, cardiac disease, DM, chronic hypertension, bronchial asthma, seizure disorders, thyroid disorders, chronic kidney disease, Antenatal care and preconception counselling Objectives, history and examination, assessment of period of gestation, investigations and nutrition.	Lectures 1hr Tutorials 1hr Bedside clinics, Small group discussion	6th term	MCQ
OG5.2	Determine maternal high risk factors and verify immunization status	screening for high risk factors, elderly primigravida: complications during pregnancy and labour, maternal and foetal mortality, management bad obstetric history obesity: physiological changes, management grand multipara: complications, mortality, management <ul style="list-style-type: none"> - Tetanus - hepatitis B - whooping cough - influenza maternal immunization status for vaccines contraindicated in pregnancy immunization in special circumstances: rabies, yellow fever, hepatitis A,	Lectures 1hr Bedside clinic, small group discussion	6th term	MCQ

Topic: Diagnosis of pregnancy Number of competencies:(01) Number of procedures that require certification:

OG6.1	Describe, discuss and demonstrate the clinical features of pregnancy, derive and discuss its differential diagnosis, elaborate the principles underlying and interpret pregnancy tests.	Discuss the clinical features of early pregnancy Tests to confirm pregnancy - immunological test, Urine Pregnancy test. Discuss the role of ultrasound in diagnosing Pregnancy	Lectures 1hr Bedside clinic, small group discussion OPDs	6th term	MCQs
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Topic: Maternal Changes in pregnancy Number of competencies: (01) Number of procedures that require certification					
OG7.1	Describe and MCQ discuss changes in the genital tract, cardiovascular system, Renal respiratory, haematology, cervix	Haematology-blood volume, plasma volume, RBC & the haemoglobin, blood coagulation factors 1hr CVS-anatomical changes, cardiac output, BP, venous pressure clinic, small RS-respiratory rate, tidal volume, total lung capacity changes in kidney, ureter, bladder discussion Gastrointestinal changes Genital tract-changes in body of uterus, isthmus, gastrointestinal system in pregnancy	Lectures term s Bedside group renal and	6 th	
Topic: Antenatal Care Number of competencies: (08) Number of procedures that require certification					
OG8.1	Enumerate, describe and discuss the objectives of antenatal care, assessment of period of gestation; screening for high-risk factors.	Procedure at 1st visit Procedure at subsequent visits Routine Antenatal screening Antenatal hygiene Immunization Pre conceptional counselling & care Period of gestation based on pts statement, previous records, objective signs & investigations	Bedside clinic, small group discussion OPDs	6 th term	MCQ s
OG8.2	Elicit document and present an obstetric history including menstrual history, last menstrual period, previous obstetric history, comorbid conditions, past medical history and surgical history	Menstrual history in detail Negele's rule Importance of Past history Importance of Surgical history	Bedside clinic, small group discussion OPDs	6 th term	MCQ s
OG8.3	Describe, demonstrate, document and perform an obstetrical examination including a	Antepartum fetal surveillance - clinical - biochemical - biophysical Evaluation of foetal wellbeing Maternal weight gain	Lectures 1hr Bedside clinic, small group discussion OPDs	3 rd 4 th & 6 th term	MCQ s

	general and abdominal examination (and clinical monitoring of maternal and fetal wellbeing;)	Assessment of height of fundus General physical examination Per abdomen -inspection, palpation, auscultation Symphysis fundal height, abdominal girth			
OG8.4	Describe and demonstrate clinical monitoring of maternal and fetal well-being	Non stress test Biophysical profile DFMC CTG Maternal condition assessment -vital parameters -investigations - Antenatal foetal surveillance	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion	6th term	MCQs
OG8.5	Describe and demonstrate pelvic assessment in a model	Bones of pelvis, anatomical measurements of diameters assessment at brim At midcavity At outlet Plane of least pelvic diameter	Bedside clinic, small group discussion, DOAP, Labour room posting	3rd 4th 6th 8th & 9th term s	Asses
OG8.6	Assess and counsel a patient in a simulated environment regarding appropriate nutrition in pregnancy	BMI calorie requirement in pregnancy & lactation Protein requirement Folic acid requirement Vit b12 requirement Iron requirement Supplementary nutritional therapy Develop checklist for role play for nutrition in pregnancy	Lectures 1hr Bedside clinic, small group discussion, Role play OPD	3rd term	MCQs
OG8.7	Enumerate the indications for and types of vaccination in pregnancy	Contraindicated vaccines in pregnancy Safe vaccines in pregnancy Tetanus toxoid-dose, route Current guideline for antenatal vaccination including T-dap Timing of vaccination	Lectures 1hr Bedside clinic, small group discussion OPD	3rd term	MCQs
OG8.8	Enumerate the indications and describe the investigations including the use of ultrasound in the initial assessment and	Indication of 1st trimester USG Indication of 2nd trimester USG Indication of 3rd trimester USG USG markers of fetal anomalies Gestational age assessment on USG Doppler studies Routine antenatal blood and urine investigation Screening test for aneuploidy, preeclampsia and GDM Describe trimester wise blood test and ultrasound	Lectures 1hr Bedside clinic, small group discussion	3rd term	MCQs

	monitoring in pregnancy	assessment			
Topic: Complications in early pregnancy Number of competencies: (05) Number of procedures that re					
OG9.1	Classify, define and discusses the aetiology and management of abortions including threatened, incomplete, inevitable, missed and septic	Definition Etiology Classification Definition, clinical features, investigations and management of threatened, inevitable, missed, complete and incomplete abortion Septic abortion definition Clinical Features Management Prevention	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
OG9.2	Describe the steps and observe/ assist in the performance of an MTP evacuation	Enumerate the steps of suction evacuation Enumerate steps of dilatation and evacuation Enumerate steps of menstrual regulation	Tutorials 1hr Bedside clinic, small group discussion opd / ward/ minor OT	6 th & 7 th term	MCQs
OG9.3	Discuss the aetiology, clinical features, differential diagnosis of acute abdomen in early pregnancy (with a focus on ectopic pregnancy) and enumerate the principles of medical and surgical management	Differential diagnosis of acute abdomen in early pregnancy- obstetric, gynaecological, medical and surgical causes Etiology of ectopic pregnancy Classification of ectopic pregnancy Clinical features of acute and chronic ectopic Diagnosis Management options Medical management Surgical management	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
OG9.4	Discuss the clinical features, laboratory investigations, ultrasonography, differential diagnosis,	Definition of Molar pregnancy Classification Etiopathology Clinical features Investigations- blood and ultrasonography Differential diagnosis Complications- immediate and late Management- medical and surgical	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion	6 th & 7 th term	MCQs

	principles of management and follow up of gestational trophoblastic neoplasms	Follow up- history, examination, investigations, and contraceptive advice.	OPD		
OG9.5	Describe the etiopathology, impact on maternal and fetal health and principles of management of hyperemesis gravidarum	Definition of hyperemesis gravidarum Etiopathology Clinical features- symptoms and signs Investigations Complications to mother and foetus Management- hospitalization, fluids, drugs, diet, nutritional supplementation	Lectures 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
Topic: Antepartum haemorrhage Number of competencies: (02) Number of competencies that require					
OG10.1	Define, classify and describe the aetiology, pathogenesis, clinical features, ultrasonography, differential diagnosis and management of antepartum haemorrhage in pregnancy	Classification and differential diagnosis Placenta previa definition Etiology and types Clinical features Complications Management- investigations, expectant vs definitive management Definition of abruption placenta Etiology and types Clinical features and grades Management	Lectures 2hr Tutorials 2hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
OG10.2	Enumerate the indications and describe the appropriate use of blood and blood products, their complications and management.	Enumerate different types of blood components Characteristic features and storage Indications for transfusion Massive transfusion protocol Complications and their management Discuss importance of consent form	Lectures 1hr Bedside clinic, small group discussion	8 th term	MCQs
Topic: Multiple pregnancies Number of competencies: (01) Number of procedures that require certification					
OG11.1	Describe the etiopathology, clinical features; diagnosis and investigations, complications, principles of management of	Etiopathology and types Diagnosis- History, symptoms, general and abdominal examination Investigations Maternal changes Complications to mother and fetus Management- antenatal, 1st and 2nd stage of labour, including delivery of 2nd twin, third stage, puerperium	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs

	multiple pregnancies				
Topic: Medical Disorders in pregnancy Number of competencies: (08) Number of procedures that req					
OG12.1	Define, classify and describe the etiology and pathophysiology, early detection, investigations; principles of management of hypertensive disorders of pregnancy and eclampsia, complications of eclampsia.	Classification of hypertensive disorders, definition of pre-eclampsia and eclampsia Diagnostic criteria Etiopathogenesis Clinical features of pre-eclampsia and eclampsia- symptoms and signs Specific investigations Maternal and foetal complications antenatal management- supportive, fluid management, antibiotics, anti-hypertensives, anticonvulsant Monitoring and surveillance Management during labour	Lectures 3hr Tutorials 2hr Bedside clinic, small group discussion OPD	8 th term	MCQs
OG12.2	Define, classify and describe the etiology, pathophysiology, diagnosis, investigations, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy	Definition Classification Aetiology of nutritional anaemia Clinical features of nutritional anaemia Physiological changes and effects of anaemia on pregnancy and foetus Investigations of nutritional anaemia Complications during pregnancy, labour and puerperium Prevention of nutritional anaemia Management of nutritional anaemia- diet, oral and parenteral iron, blood transfusion Discuss classification, aetiology, clinical features, investigations, complications and management of non-nutritional anaemia	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
OG12.3	Define, classify and describe the etiology, pathophysiology, diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and	definition of gestational diabetes mellitus classification of diabetes mellitus in pregnancy Enumerate etiological factors Discuss pathophysiology of diabetes mellitus in pregnancy investigations for diabetes mellitus in pregnancy Screening test for gestational diabetes mellitus Describe the effects of diabetes on pregnancy complications of diabetes mellitus in pregnancy Discuss the management of diabetes in antenatal period, in labour, postnatal	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion	6 th & 7 th term	MCQs

	complications of diabetes in pregnancy				
OG12.4	Define, classify and describe the etiology, pathophysiology, diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of heart diseases in pregnancy	classification of heart disease in pregnancy Discuss etiology Describe pathophysiology of heart disease in pregnancy Discuss clinical features of heart disease in pregnancy Describe antenatal investigations diagnosis Discuss the effects of heart disease on pregnancy Discuss the effects of pregnancy on heart disease management during pregnancy, during labour, in postnatal Complications, preconceptional counselling	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
OG12.5	Describe the clinical features, detection, effect of pregnancy on the disease and impact of the disease on pregnancy complications and management of urinary tract infections in pregnancy	aetiology of UTI in pregnancy pathophysiology in pregnancy symptoms signs investigations complications management Asymptomatic bacteriuria	Lectures 1hr Bedside clinic, small group discussion OPD	7 th term	MCQs
OG12.6	Describe the clinical features, detection, effect of pregnancy on the disease and impact of the disease on pregnancy complications and management of liver disease in	Discuss classification of liver disease in pregnancy aetiology pathophysiology Describe clinical features of liver disease in pregnancy List the investigations of liver disease in pregnancy Discuss the differential diagnosis of liver disease in pregnancy List the maternal complications management of liver disease in pregnancy	Lectures 1hr Bedside clinic, small group discussion OPD	7 th term	MCQs

	pregnancy				
OG12.7	Describe and discuss screening, risk factors, management of mother and newborn with HIV	introduction of HIV and incidence routes of transmission immunopathogenesis clinical presentation diagnosis management prenatal care, antenatal care, intrapartum care, postnatal care Pre-test and post-test counselling PPTCT program TORCH infection in pregnancy	Lectures 1hr Bedside clinic, small group discussion	7 th term	MCQs
OG12.8	Describe the mechanism, prophylaxis, fetal complications, diagnosis and management of isoimmunization in pregnancy	Definition of Rh- isoimmunisation Mechanism of antibody formation in the mother Prevention of Rh-isoimmunisation Haemolytic disease of the fetus and newborn Antenatal investigations protocol of Rh-negative mother Plan of delivery in unimmunised and immunised mother Prognosis of Rh-isoimmunisation	Lectures 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCQs
Topic: Labour- Number of competencies: (05) Number of procedures that require certification : (01)					
OG13.1	Enumerate and discuss the physiology of normal labor, mechanism of labor in occipitoanterior presentation; monitoring of labor including partogram; conduct of labor, pain relief; principles of induction and acceleration of labor; management of third stage of labor.	physiology of normal labour mechanism of normal labour monitoring of labour by partogram steps of delivery labour analgesia induction of labour by natural, medical, surgical, combined acceleration of labour management of 3rd stage of labour	Lectures 3hr Tutorials 1hr Bedside clinic, small group discussion, evening labour room posting	3 rd & 4 th term	MCQs
OG13.2	Define, describe the causes, pathophysiology, diagnosis, investigations and	definition for preterm labour, PROM & post-dated pregnancy etiology pathophysiology symptoms signs	Lectures 2hr Tutorials 1hr Bedside clinic, small	6 th & 7 th term	MCQs

	management of preterm labor, PROM and postdated pregnancy	investigations diagnosis complications management	group discussion		
OG13.3	Observe/ assist in the performance of an artificial rupture of membranes	indications for ARM Enumerate the technique of procedure limitations contraindications complications	Bedside clinic, small group discussion, evening labour room posting	8 th & 9 th term	
OG13.4	Demonstrate the stages of normal labor in a simulated environment / mannequin (and counsel on methods of safe abortion).	physiology and mechanism and events of stage 1,2 and 3 of normal labour definition of abortion types of abortion indications of induced abortion medical and surgical methods MTP act complications of abortion	Bedside clinic, small group discussion, skill lab DOAP	8 th term	
OG13.5	Observe and assist the conduct of a normal vaginal delivery	Monitoring of mother and foetus in second stage of labour General management- sterile precautions Position for delivery procedures Oxytocics and analgesia in labour Management of third stage of labour Examination of placenta Fourth stage of labour	Bedside clinic, Evening labour room posting DOAP	8 th & 9 th term	
Topic: Abnormal Lie and Presentation; Maternal Pelvis Number of competencies: (04) Number of procs (NIL)					
OG14.1	Enumerate and discuss the diameters of maternal pelvis and types	Bones of female pelvis Diameters and planes of obstetric pelvis Clinical significance of each type of pelvis False and true pelvis Caldwell and Moly classification of pelvis.	Bedside clinic, DOAP	6 th 8 th & 9 th term	MCQs
OG14.2	Discuss the mechanism of normal labor, Define and describe obstructed labor, its clinical features; prevention; and management	normal labour- definition Describe cardinal movements involved in labour Explain synclitism/asynclitism Definition of obstructed labour causes Clinical features diagnosis Prevention Management Complications of obstructed labour	Lectures 1hr Bedside clinic, small group discussion, Evening labour room posting	8 th term	MCQs

OG14.3	Describe and discuss rupture uterus, causes, diagnosis and management.	incidence of Rupture Uterus causes pathology Clinical features diagnosis complications Management- general and definitive	Lectures 1hr Bedside clinic, small group discussion, Evening labour room posting	8 th term	MCQs
OG14.4	Describe and discuss the classification; diagnosis; management of abnormal labor	Definition Classification of abnormal uterine action Describe pathological retraction ring and management Management of abnormal labour Dystocia dystrophia syndrome	Lectures 1hr Bedside clinic, small group discussion	8 th term	MCQs
OG14.5	Describe and discuss causes, diagnosis and management of breech presentation, occipito posterior, transverse lie, face presentation	Breech – Etiological features Clinical Examination Management of Antenatal intrapartum Complications - Maternal Foetal OP- Aetiology Features Clinical Examination Mechanism of labour in OP, Course of labour Definition of deep transverse arrest and its management Define & discuss the management of transverse	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion , evening labour room posting	8 th term	MCQs

Topic: Operative obstetrics Number of competencies: (02) Number of procedures that require certification:

OG15.1	Enumerate and describe the indications and steps of common obstetric procedures, technique and complications: Episiotomy, vacuum extraction; low forceps; Caesarean section, assisted breech delivery; external cephalic version; cervical	Episiotomy- definition, types, timing of episiotomy, structures incised, repair, complications vacuum extraction- design, indications, contraindications, procedure, complications low forceps- description of forceps, indications, contraindications, procedure, complications caesarean section- types, indications, procedure, complications. What is caesarean hysterectomy assisted breech delivery- principles, steps, indications, delivery of after coming head, complications external cephalic version- prerequisites, indications, contraindications, procedure, complications cervical cerclage – types, indications, procedure, complications	Tutorials 2hrs Bedside clinic, Small group discussion, observation in OT, evening labour room posting	8 th & 9 th term	MCQs Skill Assessment
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	cerclage				
OG15.2	Observe and assist in the performance of an episiotomy and demonstrate the correct suturing technique of an episiotomy in a simulated environment. Observe/Assist in operative obstetrics cases – including - CS, Forceps, vacuum extraction, and breech delivery	episiotomy- suturing technique breech delivery	Bedside clinic, Small group discussion , observation in OT, DOAP Skill lab		MCQs

Topic: Complications of the third stage of labor- Number of competencies: (03) Number of procedures

OG16.1	Enumerate and discuss causes, prevention, diagnosis, management, of blood and blood products in appropriate use postpartum haemorrhage	Definition – primary and secondary PPH Aetiology incidence diagnosis Degree of shock in PPH Prevention Management- medical, appropriate use of blood and blood products Uterine compression sutures Step wise devascularisation	Lectures 1hr Tutorials 1hr Bedside clinic, Small group discussion, evening labour room posting	8th term	MCQs
OG16.2	Describe and discuss uterine inversion – causes, prevention, diagnosis and management.	uterine inversion- INCIDENCE TYPES degree aetiology Clinical features diagnosis Complications D/D ,prevention, prognosis management	Lectures 1hr Tutorials 1hr Bedside clinic, Small group discussion	8th term	MCQs
OG16.3	Describe and discuss causes, clinical features, diagnosis,	intrauterine growth restriction – definition Pathophysiology of FGR TYPES OF FGR aetiology diagnosis	Lectures 1hr Tutorials 1hr Bedside	8th term	MCQs

	investigations; monitoring of fetal well-being, including ultrasound and fetal Doppler; principles of management; prevention and counselling in intrauterine growth retardation	Management- antepartum, intrapartum and neonatal	clinic		
OG16.4	Describe and discuss macrosomia, causes, diagnosis, intrapartum complications, management	Definition of Macrosomia Causes clinical & sonological findings to diagnose & management shoulder dystocia - Causes Intrapartum Management maternal & neonatal complications	Lectures 1hr Bedside clinic, evening labour room posting Skill lab		MCQs
Topic: Lactation Number of competencies: (03) Number of procedures that require certification : (NIL)					
OG17.1	Describe and discuss the physiology of lactation	Anatomy of breast Phases of lactation Prolactin reflex Milk let down reflex Lactation inhibition and suppression			MCQs
OG17.2	Counsel in a simulated environment, care of the breast, importance and the technique of breast feeding	Care of breast Initiation of breast feeding Exclusive breast feeding Technique of breastfeeding-different position and attachment Frequency of breastfeeding Adequacy of breastfeeding Expression of breast milk			
OG17.3	Describe and discuss the clinical features, diagnosis and management of mastitis and breast abscess	Clinical presentation in mastitis Diagnosis of mastitis Complication of mastitis Treatment and prevention of mastitis Breast abscess – definition, clinical presentation, diagnosis, investigation, treatment			MCQs
Topic: Care of the new born Number of competencies: (04) Number of procedures that require certification :					
OG18.1	Describe and discuss the assessment of maturity of the newborn,	Examination of newborn Assessment of gestation age – by sole creases , breast nodule, scalp hair, ear lobe, testes and scrotum Birth asphyxia – definition, etiology, diagnosis, clinical features, management	Lectures 1hr Bedside clinic, Small	3 rd & 4 th term	MCQs

	diagnosis of birth asphyxia, principles of resuscitation, common problems.	Equipments for resuscitation principles of resuscitation Common problem in resuscitation	group discussion DOAP, Evening labour room posting Skill Lab		
OG18.2	Demonstrate the steps of neonatal resuscitation in a simulated environment	New born resuscitation algorithm Initial steps Positive pressure ventilation Endotracheal intubation, chest compression medication	Bedside clinic, DOAP, Evening labour room posting Skill Lab	6th term	
OG18.3	Describe and discuss the diagnosis of birth asphyxia	definition birth asphyxia etiopathogenesis Clinical features and diagnosis management	Lectures 1hr Bedside clinic, small group discussion	8th term	MCQs
OG18.4	Describe the principles of resuscitation of the newborn and enumerate the common problems encountered	Principles of resuscitation Steps of resuscitation Resuscitation principle in baby who is apnoeic despite tactile stimulation Resuscitation when baby is apnoeic and HR less than 100	Bedside clinic, Small group discussion	8th term	MCQs

Topic: Normal and abnormal puerperium. Number of competencies: (04) Number of procedures that r

OG19.1	Describe and discuss the physiology of puerperium, its complications, diagnosis and management; counselling for contraception, puerperal sterilization	definition of Purperium Physiological changes includes uterine changes Define lochia & types general physiological changes Puerperal sepsis – definition , causes, pathogenesis , clinical features, diagnosis, management Subinvolution , urinary problems Thromboembolic disorders – DVT, thrombophlebitis, pulmonary embolism Obstetric palsies , puerperal psychiatric disorders	Lectures 2hrs Tutorials 1hr Bedside clinic, Small group discussion	6 th & 8 th term	MCQs						
OG19.2	Counsel in a simulated environment, contraception and puerperal sterilisation	Methods of contraception Puerperal <table border="1" style="margin-left: 20px;"> <tr> <td>a.</td> <td>informed consent and pre-requisites</td> </tr> <tr> <td>b.</td> <td>timing</td> </tr> <tr> <td>c.</td> <td>methods</td> </tr> </table> sterilization -	a.	informed consent and pre-requisites	b.	timing	c.	methods	Tutorials 1hr Bedside clinic, DOAP, Role play	8 th & 9 th term	
a.	informed consent and pre-requisites										
b.	timing										
c.	methods										

		d. technique			
		e. steps			
		f. complication			
		Develop a checklist for role play including above mention SLO			
OG19.3	Observe/ assist in the performance of tubal ligation	Pre-operative preparation Type of anaesthesia Types of incision Procedure Advantages Drawbacks	DOAP & Intra operative, skill lab	8 th & 9 th term	
OG19.4	Enumerate the indications for, describe the steps in and insert and remove an intrauterine device in a simulated environment	Indications for cu-t insertions -WHO eligibility criteria Timing of insertion Technique of insertion - no touch insertion	Skill lab & OPD	8 th & 9 th term	MCQs
Topic: Medical termination of pregnancy Number of competencies: (03) Number of procedures that re					
OG20.1	Enumerate the indications and describe and discuss the legal aspects, indications, methods for first and second trimester MTP; complications and management of complications of Medical Termination of Pregnancy	Induction of Abortion- Definition MEDICAL TERMINATION OF PREGNANCY Act Indications for termination Recommendations (new changes) First trimester (Upto 12 weeks) -Medical & Surgical Second Trimester (13-24 weeks) Medical & Surgical Complications of MTP- Immediate & Remote Management of Complications	Lectures 2hr Bedside clinic, Small group discussion	3 rd term	MCQs
OG20.2	In a simulated environment administer informed consent to a person wishing to undergo Medical Termination of	Introduces oneself and verifies the patients identity and age. Explains that if minor or lunatic then parents or legal guardian consent is required Calculates the gestational age Provides information regarding the options available or the need for opinion of two medical practitioners Provides information regarding the failure rates, immediate and remote complications of the chosen procedures	Tutorials 1hr DOAP, Role play	8 th & 9 th term	

	Pregnancy	Explains that only the patients written consent is required and not the husbands Explains that it is a confidential procedure and has to be reported to the DHS in the prescribed form Develop a checklist for role play including above mentioned SLO			
OG20.3	Discuss Preconception and Pre Natal Diagnostic Techniques (PC& PNDT) Act 1994 & its amendments	Definition of the PC & PNDT act Prenatal diagnostic procedures under the act Prenatal diagnostic Tests covered by the act Qualified Personnel and Registration (of The place where USG is performed) Offences and penalties	Lectures 1hr Bedside clinic, Small group discussion	9th term	MCQS

Topic: Contraception Number of competencies: (02) Number of procedures that require certification :

OG21.1	Describe and discuss the temporary and permanent methods of contraception, indications, technique and complications; selection of patients, side effects and failure rate including Ocs, male contraception, emergency contraception and IUCD	Methods of contraception MEC criteria pearl Index Permanent – Male and Female contraceptive method Temporary Natural- Calendar, temperature, withdrawal, lactational (FAM) Barrier- Physical-male and female condoms, diaphragms ; Chemical - creams jelly and foam IUCD- types, mode of action, contraindications, complications, other uses Steroidal Contraception-oral, parenteral, devices COC- types, Mechanism of action, contraindications and non-contraceptive uses, follow up, Missed pill management Implants injectables and Emergency contraception Male contraception What is PPIUCD	Lectures 5hrs Tutorials 4hrs Bedside clinic, Small group discussion Skill lab 1	8 th & 9 th term	MCQS
OG21.2	Describe & discuss PPIUCD programme	Mode of insertion of PPIUCD Benefits Drawbacks Government Family Planning programs	Lectures 1hr Bedside clinic, Small group discussion	8 th & 9 th term	MCQS

Topic: Vaginal discharge Number of competencies: (02) Number of procedures that require certification :

OG22.1	Describe the clinical characteristics of physiological vaginal discharge	Characteristics of normal vaginal discharge Leucorrhoea Physiological excess Cervical causes Vaginal causes Enumerate the causes of physiological vaginal discharge	Lectures 1hr Bedside clinic, Small group discussion,	6th term	MCQS
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			OPD		
OG22.2	Describe and discuss the etiology (with special emphasis on Candida, T. vaginalis, bacterial vaginosis), characteristics, clinical diagnosis, investigations, genital hygiene, management of common causes and the syndromic management	Defence of the genital tract Candida- Clinical features, complications, diagnosis, treatment T. vaginalis- Clinical features, complications, diagnosis, treatment Bacterial Vaginosis- Clinical features, complications, diagnosis, treatment Gonorrhoea - Clinical features, complications, diagnosis, treatment Syphilis- Clinical features, complications, diagnosis, treatment Chlamydial infections- Clinical features, complications, diagnosis, treatment Chancroid, LGV, Granuloma Inguinale- cause, Clinical features, complications, diagnosis, treatment Herpes Genitalis- Clinical features, complications, diagnosis, treatment Syndromic Approach & kits available	Lectures 1hr Bedside clinic ,Small group discussion, OPD	6 th term	MCQs

Topic: Normal and abnormal puberty Number of competencies: (03) Number of procedures that require

OG23.1	Describe and discuss the physiology of puberty, features of abnormal puberty, common problems and their management	Puberty Definition and Morphological Changes Endocrinology of Puberty Precocious Puberty Definition, types, etiopathogenesis, diagnosis, treatment, prognosis, Delayed Puberty- Definition, types, etiopathogenesis, diagnosis, treatment, prognosis Puberty Menorrhagia - etiopathogenesis, diagnosis treatment	Lectures 1hr Bedside clinic ,Small group discussion, OPD	6 th & 7 th term	MCQs
OG23.2	Enumerate the causes of delayed puberty. Describe the investigation and management of common causes	Hypergonadotrophic Hypogonadism- Ovarian Failure, gonadal dysgenesis Hypogonadotrophic hypogonadism-primary, kallmann syndrome, tumors Eugonadism- Anatomical ; AIS	Lectures 1hr	6 th & 7 th term	MCQs
OG23.3	Enumerate the causes of precocious puberty	GnRH dependent- constitutional, intracranial lesions, juvenile primary hypothyroidism; incomplete GnRH independent – Ovarian; adrenal; Liver; iatrogenic	Lectures 1hr	6 th term	MCQs

Topic: Abnormal uterine bleeding Number of competencies: (01) Number of procedures that require

OG24.0	Discuss common disorders	Definition of dysmenorrhea clinical Features Types of dismenorrhea & management of	Lectures 1hr Bedside	6 th term	
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	associated with menstruation like irregular cycle, HMB, intermenstrual bleeding, dismenorrhea, PMS, ovulatory pain	dismenorrhea Pre menstrual syndrome Etiology Clinical Features management	clinic ,Small group discussion, OPD		
OG24.1	Define, classify and discuss abnormal uterine bleeding, its management	Old terminology- Menorrhagia; Polymenorrhagia; Metrorrhagia; Oligomenorrhagia; Hypomenorrhagia; DUB Oligomenorrhagia; Hypomenorrhagia; DUB FIGO PALM-COEIN classification Causes and its clinical features Investigations Management	Lectures 1hr Tutorials 1hr Bedside clinic	6th term	MCQs
Topic: Amenorrhea Number of competencies: (01) Number of procedures that require certification : (01)					
OG25.1	Describe and discuss the causes of primary and secondary amenorrhea, its investigation and the principles of management.	definition of primary and secondary amenorrhea clinical types of amenorrhea physiological amenorrhea pathological amenorrhea causes of primary and secondary amenorrhea history, clinical examination, when to start investigating investigations panel differential diagnosis of primary and secondary amenorrhea	Lectures 1hr Tutorials 1hr Bedside clinic, Small group discussion, OPD	6th term	MCQs
OG25.2	Describe and discuss sexual development and disorders of sexual development	Sexual Development Classification of intersex Disorder Turners Syndrome Klinefelter's syndrome	Lectures 1hr OPD	6th term	MCQs
Topic: Genital injuries and fistulae Number of competencies: (02) Number of procedures that require certification : (01)					
OG26.1	Describe and discuss the etiopathogenesis, clinical features; investigation and implications on health and fertility and management of endometriosis and adenomyosis	ENDOMETRIOSIS - definition - prevalence and sites - pathogenesis (theories) - pathology - naked eye and microscopic appearance - ovarian endometrioma - Symptoms and signs - investigations - differential diagnosis - complications - management - expectant /medical / surgical /combined	Lectures 2hr Tutorials 1hr Bedside clinic, Small group discussion, OPD	8th term	MCQs

		<p>ADENOMYOSIS</p> <ul style="list-style-type: none"> - definition - causes - pathogenesis - symptoms and signs - investigations - differential diagnosis - management - complications 			
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Topic: Genital infections Number of competencies: (04) Number of procedures that require certification:

OG27.1	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of sexually transmitted infections	<p>Discuss etiopathogenesis of each STD</p> <p>Describe the clinical features</p> <p>Discuss differential diagnosis of STD</p> <p>Discuss investigations and management of STD</p> <p>Syndromic Approach</p> <p>Discuss long term implications of STD</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6th term	MCQs
OG27.2	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of genital tuberculosis	<p>Describe aetiopathogenesis of genital TB</p> <p>Describe the clinical features</p> <p>Discuss differential diagnosis of genital TB</p> <p>Discuss investigations and management of genital TB</p> <p>Discuss long term implications of genital TB</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6th term	MCQs
OG27.3	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations,	<p>Describe etiopathogenesis of HIV</p> <p>Describe the clinical features of HIV in Gynaecology</p> <p>Discuss differential diagnosis of HIV</p> <p>Discuss investigations and management of HIV</p> <p>Discuss long term implications of HIV</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6th term	MCQs

	management and long term implications of HIV				
OG27.4	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of Pelvic Inflammatory Disease	Define PID Describe etiopathogenesis of PID Describe the clinical features of PID Discuss differential diagnosis of acute PID Discuss investigations and management of PID Discuss long term implications of PID	Lectures 1hr Tutorials 1hr Small group discussion, OPD	6th term	MCQs
OG27.5	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management of low back ache and chronic pelvic pain	Describe aetiology, clinical features, management of chronic PID Definition of chronic pelvic pain Difference between cyclic and acyclic pelvic pain Non gynaecological causes of pelvic pain Enumerate Different causes of pelvic pain (gynaecological) What is pelvic congestion syndrome and its management What is Cornett sign What is pessary test What is role of laparoscopy in diagnosis of chronic pelvic pain What is LUNA What is residual (trapped) ovarian syndrome	Lectures 1hr Small group discussion, OPD	6th term	MCQs
OG27.6	Discuss clinical features, differential diagnosis, pathogens and management of Bartholin's abscess	Causative organisms Pathology Fate of infection of Bartholin's gland Clinical features Local examination findings Treatment Recurrent Bartholinitis	Lectures 1hr Small group discussion, OPD	6th term	MCQs

Topic: Infertility Number of competencies:(04) Number of procedures that require certification : (NIL)

OG28.1	Describe and discuss the common causes, pathogenesis, clinical features, differential diagnosis; investigations; principles of management of infertility – methods of tubal patency, ovulation induction, assisted reproductive techniques	Definition of infertility Enumerate the causes and pathogenesis Clinical features Evaluation of infertile couple, Discuss the principles of management of infertility	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCQs
OG28.2	Enumerate the assessment and restoration of tubal patency	Causes for tubal factor in infertility Discuss the investigations to assess tubal patency Enumerate the methods to restore tubal patency	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCQs
OG28.3	Describe the principles of ovulation induction	Discuss ovarian factor leading to infertility Enumerate the investigations for ovarian factor in infertility Discuss the principles and different methods available for ovulation induction	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCQs
OG28.4	Enumerate the various Assisted Reproduction Techniques	Define ART Counselling for ART	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCQs
OG28.5	Describe and discuss the common causes, pathogenesis,	Male Infertility : Discuss Aetiology - Genetic Disorders of Spermatogenesis			MCQs

	clinical features, differential diagnosis; investigations; principles of management of male infertility	<p>Disorders of Sperm Anatomical defect Sexual dysfunction & explain</p> <p>History to be elicited - To find the probable causes</p> <p>Investigation - WHO guidelines for semen analysis - Testicular biopsy - Immunological test -Chromosomal assay</p> <p>Enumerate ART methods</p>			
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Topic: Uterine fibroids Number of competencies: (01) Number of procedures that require certification

OG29.1	Describe and discuss the etiology; pathology; clinical features; differential diagnosis; investigations; principles of management, complications of fibroid uterus	<p>Incidence and pathogenesis Risk factors Figo classification of types of fibroid Histological features of fibroid Clinical features Examination Investigations Differential diagnosis Management Asymptotic fibroids: Medical management : Indications Side effects Surgical management : Principles of myomectomy prerequisites Indications Contraindications Endoscopic procedures: Hysteroscopy Laprosopy Uterine artery embolization New methods: MRgFUS Abdominal hysterectomy</p>	Lectures 1hr Tutorials 1hr Small group discussion, OPD, Intra operative	8th term	MCQs
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Topic: PCOS and hirsutism Number of competencies: (02) Number of procedures that require certification

OG30.1	Describe and discuss the etiopathogenesis; clinical features; differential diagnosis; investigations; management,	<p>discuss the etiopathogenesis of PCOS Discuss clinical features of PCOS investigations , Diagnostic criteria , Differential diagnosis Treatment Long term complications</p>	Lectures 1hr Tutorials 1hr Small group discussion	8th term	MCQs
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	complications of PCOS				
OG30.2	Enumerate the causes and describe the investigations and management of hyperandrogenism	Definition of hirsutism Ovarian causes: Adrenal causes: Others: Clinical features investigations management	Lectures 1hr Small group discussion, OPD	8 th term	MCQs

Topic: Uterine prolapse Number of competencies: (01) Number of procedures that require certification:

OG31.1	Describe and discuss the etiology, classification, clinical features, diagnosis, investigations, principles of management and preventive aspects of prolapse of uterus	Definition of pelvic organ prolapse Supports of uterus Pathophysiology and causes of prolapse Classification of pelvic organ prolapse Symptoms of prolapse Clinical evaluation including history and examination Differential diagnosis of mass per vaginum investigations Factors determining the choice of treatment in pelvic organ prolapse Management of prolapse: pessary treatment in pelvic organ prolapse preventive aspects of prolapse of uterus	Lectures 1hr Tutorials 1hr Small group discussion , OPD, OT, Bed side clinics	8 th term	MCQs
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Topic: Menopause Number of competencies: (02) Number of procedures that require certification : (NIL)

OG32.1	Describe and discuss the physiology of menopause, symptoms, prevention, management and the role of hormone replacement therapy.	Definition of menopause Physiology of menopause Symptoms and investigations Management and HRT	Lectures 1hr Small group discussion , OPD	6 th term	MCQs
OG32.2	Enumerate the causes of postmenopausal bleeding and describe its management	Definition of post-menopausal BLEEDING causes investigations management	Lectures 1hr Tutorials 1hr Small group discussion, OPD, minor OT, Bed side clinics	9 th term	MCQs

Topic: Benign, Pre-malignant (CIN) and Malignant Lesions of the Cervix Number of competencies: (04) require certification : (NIL)

OG33.1	Classify, describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations and staging of cervical cancer	Risk factors Clinical features Signs and symptoms Modes of spread investigations Histological types of c a Cervix Staging of Ca cervix-FIGO	Lectures 2hr Tutorials 1hr Small group discussion , OPD	9 th term	MCQs
OG33.2	Describe the principles of management including surgery and radiotherapy of Benign, Premalignant (CIN) and Malignant Lesions of the Cervix	Benign lesions: Etiopathogenesis Clinical features Symptoms and treatment: preventive and definitive	Lectures 1hr Small group discussion , OPD	9 th term	MCQs
Premalignant lesions of cervix (CIN): Pathogenesis Etiology Symptoms Investigations Treatment of CIN: preventive and definitive					
Ca cervix: Management of Cervical Cancer according to staging Types of hysterectomy Indications for radiotherapy & Chemotherapy					
OG33.3	Describe and demonstrate the screening for cervical cancer in a simulated environment	Complications and followup counsel the patient about need for Pap smear Examination take informed consent about the procedure ensure the adequate privacy at examination area keep ready equipment needed for the procedure Perform examination under aseptic precaution Document the findings Proper disposal of gloves	Small group discussion, OPD, Skill Lab, DOAP	9 th term	MCQs
OG33.4	Enumerate the methods to prevent cancer of cervix including visual inspection with acetic acid (VIA), visual inspection of cervix with Lugol's iodine (VILI), pap smear and	Need for screening: Methods: VIA VILI PAP Colposcopy Indications Methods inference	Lectures 1hr Small group discussion, OPD	9 th term	MCQs

colposcopy

Topic: Benign and malignant diseases of the uterus and the ovaries Number of competencies: (04) Nur certification : (NIL)

OG34.1	Describe and discuss aetiology, pathology, staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer	Types of endometrial hyperplasia Incidence, aetiology of endometrial cancer Pathology – gross, microscopic features. Types of endometrial cancer Modes of spread Diagnosis Figo staging Differential diagnosis, investigations Steps of staging laparotomy Chemotherapy and radiotherapy Follow-up	Lectures 1hr Small group discussion, OPD, intra operative	9 th term	MCQs
OG34.2	Describe and discuss the etiology, pathology, classification, staging of ovarian cancer, clinical features, differential diagnosis, investigations, principal of management including staging laparotomy	Incidence, aetiology for ovarian cancer Genetics and ovarian malignancy Pathology Classification of ovarian cancer Modes of spread Clinical features Investigations Diagnosis Figo staging Differential diagnosis Screening Surgical management Chemotherapy Follow-up Germ cell tumours of ovary Discuss the role of Tumour markers	Lectures 2hr Tutorials 1hr Small group discussion, OPD, intra operative, Bed side clinics	9 th term	MCQs
OG34.3	Describe and discuss the etiology, pathology, classification, staging, clinical features, differential diagnosis, investigations and management of gestational trophoblastic	Gestational trophoblastic disease- spectrum WHO based prognostic scoring Incidence Aetiology pathology staging Spread, clinical features Investigations, management Surveillance during and after therapy	Lectures 1hr Tutorials 1hr Small group discussion, OPD, Bed side clinics	9 th term	MCQs

	disease				
OG34.4	Operative Gynaecology : Understand and describe the technique and complications: Dilatation & Curettage (D&C); EA-ECC; cervical biopsy; abdominal hysterectomy; myomectomy; surgery for ovarian tumours; staging laparotomy; vaginal hysterectomy including pelvic floor repair; Fothergill's operation, Laparoscopy; hysteroscopy; management of postoperative complications	operative gynaecology: technique and complications Dilatation and curettage: indications, steps, complications Endometrial aspiration – endocervical curettage Cervical biopsy: types, indications, steps, procedures, complications TAH: types, indications, steps, complications Myomectomy: measures to control blood loss during myomectomy, steps, complications Surgery for ovarian tumours Staging laparotomy VH+PFR: steps, complications Fothergill's operation: indications, steps, complications Laparoscopy: advantages, disadvantages, instruments, indications, contraindications, techniques, complications Hysteroscopy: instruments, distending media, anaesthesia, procedures, indications, contraindications, complications	Lectures 2hr Small group discussion, OPD, OT, Minor OT	9 th term	MCQs
OG34.5	Benign lesions of cervix, ovary	Benign disorders of cervix - cervical erosion - cervical ectropion - cervical polyp Benign disorders of ovary - -Enumerate the conditions of non-neoplastic ovarian enlargement - classification of Benign ovarian tumors -complications of Benign ovarian tumors	Lectures 2hr Small group discussion, OPD, Bed side clinics	8 th term	MCQs
Topic: Obstetrics & Gynecological skills - I Number of competencies: (17) Number of procedures that r					
OG35.1	Obtain a logical sequence of history, and perform a humane and thorough clinical examination,	Obtain a demographic data Chief complaints History of presenting complaints Obstetric and menstrual history Past and family history Treatment history Personal history General physical examination including breast and	Small group discussion, OPD, DOAP	3 rd 4 th 6 th & 8 th term	

	excluding internal examinations (perrectal and per-vaginal)	thyroid, BMI SYSTEMIC EXAMINATION- RS/CVS/CNS ABDOMEN EXAMINATION			
OG35.2	Arrive at a logical provisional diagnosis after examination.	With elicited history and detailed examination arrive at a logical provisional diagnosis	Small group discussion, OPD, DOAP	6 th 8 th & 9 th term	
OG35.3	Recognize situations, which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.	Analysis of clinical situation Identify the risk factors and need for urgent treatment Administer emergency medications Transfer to tertiary care centre	Small group discussion, OPD, DOAP	8 th & 9 th term	
OG35.4	Demonstrate interpersonal and communication skills befitting a physician in order to discuss illness and its outcome with patient and family	Counsel the patient and family members Arrive at a provisional diagnosis Explain the medical condition to family members in a language understood by them Discuss the medical and surgical management, complications, requirement of blood and blood products if needed Explain the prognosis of medical condition	Small group discussion, OPD, DOAP	8 th & 9 th term	
OG35.5	Determine gestational age, EDD and obstetric formula	Address their concerns GA; Menstrual History. Clinical methods Ultrasound examination EDD; Menstrual History Negele's Formula Clinical methods Dating scan No dating scan Then interval Scan	Small group discussion, OPD, DOAP	8 th & 9 th term	
OG35.6	Demonstrate ethical behavior in all aspects of medical practice.	Definition Gravida, Para, Living, Dead and Abortion Autonomy Justice Beneficence	Small group discussion, OPD, DOAP, role play	3 rd 4 th 6 th 8 th & 9 th term	

OG35.7	Obtain informed consent for any examination / procedure	Non malfeasance For Examination: Informed oral consent For Procedure; informed written consent Signature is must diagnosis of condition name and purpose of procedure benefits, risks, and alternative procedures benefits and risks of each alternative procedures	Small group discussion, OPD, DOAP	3 rd 4 th 6 th 8 th & 9 th term				
OG35.8	Write a complete case record with all necessary details	Demography Obstetric score with amenorrhea LMP EDD Menstrual history Chief complaint HOPI Present obstetric history, Past obstetric history Past medical and surgical history and personal history General Physical examination with Vitals. Breast and Spine examination Specific Systemic Examination Diagnosis	Small group discussion, DOAP	3 rd 4 th 6 th 8 th & 9 th term				
OG35.9	Write a proper discharge summary with all relevant information	Contents of discharge summary -name, age, sex, hospital number, address, date of admission & discharge Final diagnosis Name of the operative interventions and intraoperative findings & complications Brief history Relevant investigations and Reports Course in the hospital in brief Advice on discharge Warning signs and symptoms relevant to the case to be mentioned Timing of follow up visits	Small group discussion, DOAP	8 th & 9 th term				
OG35.10	Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details.	Definition of referral letter Patient demographics Registered general Practitioner details <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Referral Details</td> </tr> <tr> <td style="padding: 2px;">- Institute</td> </tr> <tr> <td style="padding: 2px;">- Specialty dept</td> </tr> </table> Referring Practitioner details Presenting complaints Past /Family History Assessment and examination Legal information Management to date Reason and urgency for referral	Referral Details	- Institute	- Specialty dept	Small group discussion, OPD, DOAP	8 th & 9 th term	
Referral Details								
- Institute								
- Specialty dept								
OG35.11	Demonstrate the correct use	Universal Infection Control Precautions Protective Clothing	Small group	3 rd 4 th				

	of appropriate universal precautions for self-protection against HIV and hepatitis and counsel patients	Isolation Facilities Spillage Of Blood and Body Fluids Sterilization And Disinfection Intravenous Procedures Waste Disposal Staff Protection and Immunization	discussion, OPD, DOAP	6 th 8 th & 9 th term	
OG35.12	Obtain a PAP smear in a stimulated environment	counsel the patient about need for Pap smear Examination ensure the adequate privacy at examination area keep ready equipment needed for the procedure perform examination under aseptic precaution document the findings Proper disposal of gloves	DOAP Skill lab	8 th & 9 th term	
OG35.13	Demonstrate the correct technique to perform artificial rupture of membranes in a simulated / supervised environment	Indications Complications Pelvic examination findings Colour of liquor Foetal Heart Assessment Verbal consent	DOAP, Evening labour room posting Skill lab	8 th & 9 th term	
OG35.14	Demonstrate the correct technique to perform and suture episiotomies in a simulated/ supervised environment	Define Types Advantages Disadvantages Correct technique Complications – immediate & late	DOAP, Evening labour room posting Skill lab	8 th & 9 th term	
OG35.15	Demonstrate the correct technique to insert and remove an IUD in a simulated/ supervised environment	Define Types Mechanism of action Advantages Disadvantages Indications and contra indications Criteria for selection of a client Techniques Uses Complications	Skill lab	8 th & 9 th term	
OG35.16	Diagnose and provide emergency management of antepartum and	Symptoms and signs Examination Resuscitation - Airway, breathing, circulation Vitals monitoring	Small group discussion, drills, Skill lab	8 th & 9 th term	Skill asses t

	postpartum hemorrhage in a simulated / guided environment	Conservative management, medical, balloon tamponade, brace suturing, stepwise devascularization, Emergency hysterectomy.			
OG35.17	Demonstrate the correct technique of urinary catheterization in a simulated/ supervised environment	Verbal consent after explaining to the patient Able to recognize and identify external urethral meatus with knowledge of anatomy of urethra Knows importance of aseptic precautions, proper painting and draping of the patient for the procedure Identifies foley's catheter and its parts, urosac Can demonstrate the procedure of catheterization on a mannequin	Skill lab	8 th & 9 th term	Skill asses t

Topic: Obstetrics & Gynecological skills - II Number of competencies: (03) Number of procedures that

OG36.1	Plan and institute a line of treatment, which is need based, cost effective and appropriate for common conditions taking into consideration (a) Patient (b) Disease (c) Socioeconomic status (d) Institution/ Governmental guidelines.	History taking to help to arrive at the differential diagnosis Appropriate examination of the patient to elicit signs and narrow the list of differential diagnosis Appropriate investigation to arrive at most probable diagnosis Understanding the specificity and sensitivity of an investigation and its value in arriving at a diagnosis Have idea about cost of investigations so that balance decisions can be taken. Have institutional protocols for common diseases on conditions Understand and cost involved in various treatment options and chooses the appropriate treatment based on social economic status	Small group discussion, Bed side clinics	8 th & 9 th term	
OG36.2	Organize antenatal, postnatal, wellbaby and family welfare clinics	Understands the role of conservative treatment / medical treatment / surgical treatment for various disease conditions Will understand antenatal care and its importance Know the requirements for providing ANC care Will understand the various warning symptoms during antenatal period Knowledge of puerperium Knowledge of assessing the neonatal wellbeing Importance of breast feeding Understand attachment, latching and suckling in breast feeding evaluation Value of organizing postnatal clinics along with paediatrician /neonatologist for comfort and benefit of mother and baby Able to counsel regarding family planning in the postnatal visit	Small group discussion, Bed side clinics	8 th & 9 th term	

OG36. 3	Demonstrate the correct technique of punch biopsy of Cervix in a simulated/ supervised environment	Consent for the procedure Identify the punch biopsy forceps Aseptic precautions, painting and draping for the procedure Visualize the cervix using appropriate instrument Demonstrate the procedure on a mannequin Collect the specimen for histopathological examination	Small group discussion OPD	8 th & 9 th term	
Topic: Obstetrics & Gynecological skills - III Number of competencies: (07) Number of procedures that					
OG37. 1	Observe and assist in the performance of a Caesarean section	Define caesarean section [CS] Mention the indication for CS Describe preoperative care, investigations, informed consent Appreciate the need to cross match and confirm blood Inform anaesthetist, OT staff and neonatologist Observe hand washing, safety check list, instrument counts, type of anaesthesia given Enumerate the steps of LSCS List the complications of CS and its management Describe the post-operative care	Small group discussion, OT	8 th & 9 th term	
OG37. 2	Observe and assist in the performance of Laparotomy	Appreciate the importance Documentation of all steps, events including new born details Indication for laparotomy Describe the preoperative care and investigations Informed consent, arrange blood and ICU bed Lists the steps of laparotomy, need for frozen section. Patient positioning and anaesthesia Complications of the procedure Post Operative care	Small group discussion, OT	8 th & 9 th term	
OG37. 3	Observe and assist in the performance of Hysterectomy – abdominal/vaginal	Documentation of all events Indications Assessment for route of surgery Preoperative preparation Informed consent Anaesthesia and patient positioning Steps of Hysterectomy- abdominal/vaginal Complications of the procedure Post Operative care	Small group discussion, OT	8 th & 9 th term	
OG37. 4	Observe and assist in the performance of Dilatation & Curettage (D&C)	Documentation of all events Indications and contraindications Patient evaluation and pre op preparation Informed consent and anaesthesia Steps of procedure Post procedure monitoring Complications of the procedure Documentation of all events	Small group discussion, Minor OT OPD	8 th & 9 th term	
OG37. 5	Observe and assist in the	Discharge advice Know how to take informed consent	Small group	8 th & 9 th	

	performance of Endometrial aspiration - endocervical curettage (EA/ECC)	How to perform per speculum and per vaginal examination Know about instruments used (Pipelle) and aseptic precautions How to take utero cervical length/ cervical length Procedure of EA-ECC Know how to fill the relevant clinical details in HPE /Biopsy form Postop instructions and follow up	discussion, Minor OT OPD	term	
OG37.6	Observe and assist in the performance of outlet forceps application of vacuum and breech delivery	Know how to take informed consent Identify whether there is an appropriate indication for application of outlet forceps/ vacuum/ breech delivery Assess whether all criteria for application of outlet forceps/ vacuum/ breech delivery are met Pre requisites – availability of OT, blood products, Neonatologist, Senior Obstetrician Labour analgesia/ anaesthesia Know how to perform phantom application of outlet forceps/ check equipment of vacuum and choose an appropriate cup/ manoeuvres for delivery of legs, arms, shoulders and head in assisted breech delivery Perform application of outlet forceps/ vacuum/ breech delivery Know how to give and suture episiotomy and aseptic precautions Identify maternal and neonatal complications Documentation of the procedure	Small group discussion, Evening labour room posting	8 th & 9 th term	
OG37.7	Observe and assist in the performance of MTP in the first trimester and evacuation in incomplete abortion	Counselling the patient regarding the various methods available and complications of each and taking informed consent Look for any contraindications for the method chosen Prescription of first trimester MTP pills Identifying the complications of MTP pills/Incomplete abortion/ Evacuation of retained products Know regarding equipment, instruments and drugs used (Karmans cannula, Suction apparatus) Procedure for Evacuation of retained products in incomplete abortion, under aseptic precautions Check the need for USG and Anti D Know how to fill the relevant clinical details in HPE /Biopsy form Post operative/ post pill instructions and follow up Documentation of the procedure and know which register needs to be filled for intimation to Health Department of Government	Small group discussion, Minor OT	8 th & 9 th term	
Topic: Should observe Number of competencies: (04) Number of procedures that require certification					
OG38.	Laparoscopy	Indications for laparoscopy	Small	8 th &	

1		Contraindications for laparoscopy Informed consent Anaesthesia under which it is performed and its complications Complications of laparoscopy Postoperative instructions	group discussion, OT	9 th term	
OG38. 2	Hysteroscopy	Definition of Hysteroscopy Steps of Hysteroscopy Indications of Hysteroscopy Diagnostic Hysteroscopy Operative Hysteroscopy Fluid distension Media Post Op care and advice Risks and Complications of Hysteroscopy	Small group discussion, OT	8 th & 9 th term	
OG38. 3	Lap sterilization	Sterilization procedure in women Steps of tubal sterilization done laparoscopically Effectiveness of Lap sterilization in prevention of pregnancy Risks associated with Lap tubal sterilization Benefits of Lap tubal sterilization Ideal timing for Lap tubal sterilization Reversal of Lap tubal sterilization procedure	Small group discussion	8 th & 9 th term	
OG38. 4	Assess the need for and issue proper medical certificates to patients for various purposes	Definition of Medical certificate Medical Certificate certifying illness Medical Certificate certifying fitness Assessing the patient illness and nature of work Responsibility of the issuing doctor Responsibility of the patient Responsibility of the the third party Certificate Requirements Date of Certificate	Small group discussion	8 th & 9 th term	

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Obstetrics and gynaecology

Course content

The course content been given in detail in the above Table, which includes competencies, specific learning objectives for each competency and the suggested Teaching-Learning methods and assessment methods both formative and summative. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have written by the expert committee constituted by Rajiv Gandhi University of Health Sciences.

Teaching-Learning methods and Time allotted

	Lectures (hours)	Small group discussion (hours)	Selfdirected learning (hours)	Total hours	Clinical postings (weeks)
2 nd MBBS	25			25	4weeks First posting in 3-4 th terms (15hours/week)

3rd MBBS Part 1	25	35	5	65	4weeks Second posting in 6-7 th terms (18hours/week)
3rd MBBS Part 2	70	125	15	210	8+4weeks 3 rd &4 th posting (18hours/week)
Total	120	160	20	300	20weeks (This includes maternity and family welfare and family planning) Two postings of 4 weeks each. and

Time allotted excludes time reserved for internal / University examinations, and vacation. 25% of allotted time (non-clinical time) of third Professional shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects. Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. The integration allows the student to understand the structural basis of Obstetrics and Gynaecology problems, their management and correlation with function, rehabilitation, and quality of life. Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings in Obstetrics and Gynaecology itself.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Curriculum Focus of Learner - Doctor programme	
Posting 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Posting 2	History taking, physical examination, assessment of change in clinical status, communication and patient education

Posting 3	All of the above and choice of investigations, basic procedures and continuity of care
Posting 4	All of the above and decision making, management and outcome

Attitude, Ethics & Communication Module (AETCOM module)

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, systemsbased care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship. MBBS Phase 3 Part 2, has to complete 8 modules of 5hours each. The OBG faculty will have the responsibility of conducting 2-3 modules as per the decision and logistics of each institution.

Assessment

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Obstetrics and Gynaecology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3rd professional year 3 part 2.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Obstetrics and Gynaecology.

An end of posting clinical assessment shall be conducted for each of the clinical postings in Obstetrics and Gynaecology. There will be one Theory and Clinical preliminary exams before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Obstetrics and Gynaecology to be eligible for appearing at the final University examination. Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Obstetrics and Gynaecology logbook entry completed to be eligible for appearing at the final university examination.

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

University examinations

University examinations in Third Professional Part II shall be held at end of 12 months of training in the subjects of Medicine, Surgery including Orthopedics, Obstetrics and Gynecology and Pediatrics.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

Marks allotted

Obstetrics and Gynecology	Theory	Clinical examination
Total marks	2 papers of 100 marks each for Obstetrics and Gynecology. The pattern of each question paper is given below	200 marks
	Long essay 2X10= 20	One obstetric case for 80 marks
	Short essay 8x5=40 marks	One gynaec case for 80 marks
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Dummy, pelvis and fetal skull. Station-2: Instruments Station-3: Specimens Station-4: Drugs and contraception
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

All the question papers to follow the suggested **blueprint (APPENDIX 1)**. It is desirable that the marks allotted to a particular topic are adhered to.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed. At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination. **Pass criteria**

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the seniormost internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation

External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

BLUEPRINT FOR ASSESSMENT

This section contains the following items

- a. Rationale behind the blueprinting with excerpts from NMC document on assessment.
- b. Suggested Blueprinting for Obstetrics (including contraception)
- c. Sample for a 100-mark theory question paper in Obstetrics
- d. Suggested blueprinting for Gynecology theory 100 marks paper
- e. Sample for a 100-mark theory question paper in Obstetrics
- f. Comments on the theory blueprint and samples
- g. Principles to be followed in practical assessment
- h. Schema for practical examination (200 marks)
- i. Sample examination format

RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT

As per NMC guidelines, a balance should be drawn between the action verbs which are specified in the Bloom's taxonomy along with a balance of the topics of the curriculum

Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate, Interpret, Review, Summarise
Application	Apply, Choose, Compute, Modify, Solve, Prepare, Produce, Select, Show, Transfer, Use
Analysis	Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram, Differentiate, Distinguish, Relate, Categorise
Synthesis	Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate, Organise, Plan, Produce, Propose, rewrite
Evaluation	Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict, Prioritise, Prove, Rank

The focus should be on providing clinical oriented questions rather than purely theoretical questions. All faculty and students are directed to the NMC document on Competency Based Assessment for further details.

The blueprinting provided is an estimate only. While exact adherence to the number of questions may not be perfectly possible, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on.

SUGGESTED BLUEPRINTING FOR OBSTETRICS (INCLUDING CONTRACEPTION)

Level of Bloom's taxonomy tested	Demography / Anatomy/ Physiology/ Fetus/ Placenta/ Diagnosis of pregnancy	Antenatal care/ Complications in early pregnancy/ APH/ Multiple pregnancy/ Medical disorders in pregnancy	Labour/Abnormal lie/ presentation/ Operative obstetrics / Complications in 3rd stage of labour	Lactation/Care of newborn/ Puerperium	MTP/ Contraception	Number of questions
Knowledge	1	1	1	1	2	6
Comprehension	1	2	2	1	1	7
Application	0	1	2	0	0	3
Analysis	1	1	1	1	0	4
Synthesis	0	0	0	0	1	1
Evaluation	0	1	0	0	0	1
Questions in each topic	3	6	6	3	4	Grand total 22

***Operative procedures may be incorporated into questions in the respective topics.**

Incorporating both these above concepts, a sample 100-mark theory is mentioned below.

SAMPLE FOR A 100-MARK THEORY QUESTION PAPER IN OBSTETRICS LONG ESSAYS (10 marks x 2 = 20 marks)

- 32-year-old G2P1L1 at 33 weeks of gestation presents with first episode of painless spotting per vaginum.
 - What is the clinical condition (1)
 - Enumerate the differential diagnoses. (1)

- Discuss the clinical features of this condition. (2)
 - List the investigations and their interpretation (2)
 - Discuss the temporizing management options of this patient (2)
 - Discuss the definitive management options of this patient (2)
2. Discuss the steps of lower segment cesarean section in terms of preoperative preparation, intraoperative steps and immediate postoperative care (3+4+3)

SHORT ESSAYS (5 marks x 8 =40 marks)

3. Illustrate the physiological fetal circulation in utero. Illustrate the changes that take place in fetal circulation immediately after birth. (2+3)
4. Differentiate between threatened abortion and incomplete abortion on the basis of definition, history, clinical features and management. (1+1+2+1)
5. A 21 year old primigravida comes with 7 weeks amenorrhea and excessive vomiting. Discuss the differential diagnosis, clinical examination and management of such a patient (1+2+2).
6. Illustrate the components of WHO Labour care guide. (5)
7. Primigravida who is in 2nd stage of labour for the past 2.5 hours has the following pervaginal findings. Fully dilated, fully effaced, vertex at +2 station and occiput at 2 o clock position. Choose the optimal method of delivery with justification and details.
8. Compare and contrast non-severe preeclampsia with severe preeclampsia in terms of history/ clinical examination/investigations/ management (1+1+1+2).
9. A 26-year-old P1L1 with instrumental delivery 2 days back presents with fever, chills and foul-smelling vaginal discharge.
- a. Discuss the other clinical features of this conditions (2).
 - b. Discuss the investigations and management of the condition (1.5 + 1.5)
10. Differentiate monochorionic twins and dichorionic twins in terms of embryology/ USG features and complications (1+2+2)

SHORT ANSWERS (3 marks x 10 = 30 marks)

11. Define maternal mortality. Enumerate four causes for maternal mortality. (1+2)
12. Enumerate six vaccines that are safe in pregnancy (1/2 each).
13. Justify the use of routine screening for GDM in all pregnant women. (3)
14. Enumerate the components of Active Management of Third Stage of Labour (3)
15. Describe the components of the milk ejection reflex (3)
16. Compare term and preterm newborns – three characteristics (1+1+1).

17. Enumerate 3 non-contraceptive benefits of oral contraceptive pills (1+1+1).
18. P3L3 has come seeking contraception but is not willing for permanent method of sterilization. List six options available for her contraception (1/2 each)
19. You are the district officer for Beti Bachao program. Develop 6 points to be put in a poster which is to be organized for popularizing awareness about PCPNDT act (3)
20. G2P1L1 with 34 weeks of gestation with mother's blood group O negative and husband's blood group A positive comes with ICT positive status. MCA PSV doppler and amniocentesis for bilirubin are available as options. Choose the modality with brief justification. (2+1)

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW. 10X1=10 marks

21.(i) Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;

- a) Metrorrhagia
- b) Metropathia hemorrhagica
- c) Menorrhagia
- d) Polymenorrhoea

21 (ii) A 21 year old P1L1 has delivered 45 days back. She is not breastfeeding her infant. She has tested HIV positive during her antenatal checkup. She wants a temporary method of contraception.

What are her options?

- a) Combined oral contraceptive pills
- b) Copper Intra uterine device
- c) LNG implant
- d) LNG Intrauterine device

21.(iii) The length of fallopian tube is:

- a) 8-12cm
- b) 12-15cm
- c) 15-18cm
- d) 18-20cm

21(iv) The Corpus luteum secretes:

- a) Estrogens
- b) Progesterone
- c) Both
- d) None

21.(v) Test for Tubal patency is

- a) Basal body temperature measurement
- b) Hysteroscopy
- c) Fern test
- d) Spinnbarkeit test

22(i) Contraceptive method with the highest failure rate is

- a) Combined hormonal pills
- b) Tubectomy
- c) Barrier method
- d) Intra uterine devices

22(ii) Which is the first sign of puberty in a girl?

- a) Thelarche
- b) Menarche
- c) Adrenarche
- d) Pubarche

22.(iii) Screening test for carcinoma cervix is:

- a) Visual inspection of cervix with acetic acid
- b) Conization of cervix
- c) Thermal ablation of cervix
- d) Trachelectomy

22(iv). Birth trauma is a risk factor for:

- a) Endometriosis
- b) Prolapse
- c) Abortion
- d) PID

22.(v). Which of the following are effects of increased levels of oestrogen in the follicular phase of the menstrual cycle?

- a) Hair thinning
- b) Thickening of cervical mucus
- c) Thinning of cervical mucus
- d) Thickening of the endometrium

Rajiv Gandhi University of Health Sciences

MBBS / PHASE III / PART II DEGREE EXAMINATION

TIME: THREE HOURS

MAX. MARKS: 100

MARKS

OBSTETRICS & GYNAECOLOGY - PAPER -1

LONG ESSAY

2X10=20 marks

1. A 30 year old Gravida 4, Para 3, living 3 has delivered a live baby of weight 4 kgs 10mins back. Patient complains of extreme fatigue. Her pulse is 110/mm, BP is 80/50mmHg. Uterus is flabby with excessive bleeding per vagina.

- What is your diagnosis?
(2 marks)
 - Give reasons.
(2 marks)
 - Outline the investigations & treatment of the case.
(3+3marks)
2. A Gravida 3, Para 2, living 2 with 32 weeks of pregnancy comes to Emergency ward with 2 episodes of bleeding per vagina, there is no history of pain abdomen and she had a similar episode which resolved spontaneously two days prior.
- What is your differential diagnosis?
(3 marks)
 - Outline the investigations and treatment.
(3+4 marks)

SHORT ESSAY

8X5=40 marks

3. A 30 yr old G3P1L1A1 lady has come in with 9 wks of unplanned pregnancy. She wants to terminate the pregnancy, what are the legal issues to consider?
4. Describe the mechanism of labour in breech presentation. Enumerate the foetal complications of vaginal breech delivery.
(3+2 marks)
5. Enumerate the investigations and treatment of a Primigravida with 26 weeks of gestation with Hb of 6.5gms% on routine ANC.
(2+3 marks)
6. Describe the investigations and management of a Primigravida with 37 weeks of gestation who presents to the obstetric OPD with a blood pressure of 150/100mm of Hg.
(2+3 marks)
7. A 23 yr old lady comes with 2months amenorrhoea. What signs and symptoms will diagnose pregnancy? What investigations will confirm the pregnancy?
(2+2+1 marks)
8. State the objectives of antenatal care. Enumerate the investigations & vaccinations in pregnancy. (2+2+1 marks)
9. Describe the indications and methods of medical management of ectopic pregnancy. (2+3 marks)
10. Define maternal mortality. Enumerate the causes of maternal deaths. Outline the preventive measures for the top 3 cases of maternal mortality in India.
(1+2+2 marks)

SHORT ANSWERS

10X3=30 marks

11. Describe the screening tests to diagnose Diabetes in pregnancy.
12. What are the steps of active management of third stage of labour?
13. Mention 6 causes of Shock in obstetrics.
14. Enumerate the radiological signs of fetal death.

15. What are the types & risk factors for morbidity adherent placenta
16. Describe the causes and management of Bandl's ring.
17. Discuss the investigations to diagnose HELLP syndrome 18. Write the components of modified WHO Partogram(2020)
19. Pre- requisites for ventouse delivery.
20. Enumerate the indications & contraindications of Inj.Methyl ergometrine in obstetrics.

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW.

10X1=10 marks

21. (i) A 22 year old woman Gravida4 para3 living3 with 33weeks of gestation presents to the hospital with heavy painless vaginal bleeding. Her pulse rate is 110/min. Blood pressure is 90/50 mmHg. Per abdomen uterus is relaxed, nontender. FHR is 160/min.

What is the most likely diagnosis?

- a) Concealed abruption
- b) Placenta previa
- c) Premature labour
- d) Revealed abruption
- e) Vasa previa

- 21.(ii)Which of the following is a parameter used in fetal biophysical profiling?

- a) Abdominal circumference
- b) Amniotic fluid index
- c) Biparietal diameter
- d) Head circumference
- e) Femur length

21(iii)A 32 year old Primigravida with 28 weeks of gestation presents to the emergency ward with headache, reports seeing flashing lights, her Pulse are 80beats/min, and blood pressure is 172/112mmHg. Urine dipstick shows protein 3+, nitrites negative, leucocytes trace and blood trace.

Which is the **appropriate immediate** management of the patient?

- a) Request for an obstetric ultrasound
- b) Administer I V Labetolol to lower her blood pressure
- c) Administer Ramipril
- d) Immediate cesarean delivery.
- e) Avoid antenatal steroids as it would worsen her blood pressure

- 21.(iv)Which of the following methods is the correct way to calculate the estimated date of delivery (EDD)?

- a) First day of LMP + 9 months and 1 week
- b) First day of LMP + 9 months
- c) First day of last menstrual period (LMP) + 8 months and 1 week
- d) Last day of LMP + 9 months and 1 week

21.(v) Which one of the following is the primary source of progesterone in the later stages of pregnancy?

- a) Fetus
- b) Decidua
- c) Corpus luteum
- d) Placenta

22.(i) Which of the following statements are NOT true regarding HELLP Syndrome;

- a) Diagnosis is by biochemical evaluation.
- b) Blood pressure is elevated in all cases of HELLP.
- c) Termination of pregnancy is recommended irrespective of the period of gestation.
- d) It is associated with high maternal & perinatal morbidity & mortality.

22.(ii) Which of the following statements describe the first stage of labour correctly?

- a) Starts when regular painful contractions begin and ends when the cervix is fully effaced and dilated to 5 cm.
- b) Starts when the effaced cervix is 3cm dilated and end when the cervix is fully dilated at 10cm.
- c) Onset of painful contractions to full effacement of the cervix. The membranes are still intact.
- d) Onset is at rupture of membranes and ends with expulsion of the fetus.

22.(iii) A 25 year old G3P2L2 comes to the antenatal clinic with history of 6 months amenorrhoea. She complains of easy fatigability and her Hb% is 7.5 gms%

- a) Blood transfusion
- b) Parenteral iron injections
- c) 60 mgs of elemental iron per oral thrice daily
- d) 200mgs of ferrous sulphate orally once daily

22.(iv) 23 year old Primigravida comes with history of 3 months amenorrhoea and pain abdomen. She has had two episodes of spotting per vagina. On vaginal examination, her vitals are stable, uterus corresponds to 12 weeks size and cervical os is closed.

The most probable diagnosis is

- a) Missed abortion
- b) Threatened abortion
- c) Incomplete abortion
- d) Complete abortion

22.(v) Tertiary chorionic villi consists of;

- a) Trophoblast and mesoderm
- b) Trophoblast, ectoderm and blood vessels
- c) Mesoderm ectoderm and blood vessels
- d) Trophoblast mesoderm and blood vessels

A suggested distribution of topics in obstetrics incorporated with the Levels of Bloom's taxonomy is tabulated below.

Level of Bloom's taxonomy	Vaginal discharge/Genital infections	AUB/ Fibroid/ Genital	Puberty/ Amenorrhea/ Menopause/ Prolapse	Infertility/ PCOS/ Hirsutism	CIN/ Malignancy	Number of questions
tested		Injuries/ Fistula				
Knowledge	1	1	2	2	0	6
Comprehension	1	2	2	0	2	7
Application	0	1	0	1	1	3
Analysis	0	0	0	1	1	2
Synthesis	1	0	0	0	1	2
Evaluation	0	1	0	1	0	2
Questions in each topic	3	4	4	5	5	Grand total 22

***Operative procedures may be incorporated into questions in the respective topics.**

**SAMPLE FOR A 100-MARK THEORY QUESTION PAPER IN GYNECOLOGY LONG
ESSAY (2 x 10 marks = 20 marks)**

1. 34-year-old comes with excessive menstrual bleeding with passage of clots. She is not pregnant.

- a. Discuss the PALM COEIN approach to classifying this condition. (3)
- b. Describe in detail the conditions – L and M (2+2)

She is investigated and found to have a 8x8 cm leiomyoma.

- c. Discuss the principles and steps in the operative management of such a condition. (3)

2. 15-year-old girl is brought by parents with complaints that she has not attained menstruation.
 - a. What is the condition (1). Define this condition (1).
 - b. Enumerate the various causes for the condition (3).
 - c. Describe the clinical (2) and management (3) of imperforate hymen.

SHORT ESSAY (10 x 5 marks = 50 marks)

3. Genital tuberculosis. Discuss the clinical features (2 marks). Enumerate the investigations (1 mark). Discuss the management (2 marks).
4. A 24-year-old P1L1 comes with complaints of curdy white discharge per vaginum. Apply the concept of syndromic management of Sexually Transmitted Disease and prepare a treatment plan for such a patient.
5. Discuss the etiological factors (2 marks), clinical features (1 mark) and classification (2 marks) and of uterovaginal prolapse.
6. Define menopause (1). Discuss the clinical features (2) and management options (2) for menopausal transition.
7. A couple married for 4 years comes with complaints of not being able to bear children. Classify the various causes of this condition.
8. 45-year-old woman has undergone pap smear and the report shows H-SIL. Discuss the options for management (3) and follow up (2) for the condition
9. Classify Ovarian tumours (WHO classification).
10. A 30-year-old came with raised Beta HCG and passage of grape like vesicles per vaginum. Uterus was evacuated.
 - a. What is the condition likely to be (1 mark).
 - b. Prepare a management plan (2 marks)
 - c. Follow-up plan (2 marks) for this patient.

SHORT ANSWER QUESTIONS (10 x 3 marks = 30 marks) 11.

- Enumerate the criteria for Bacterial vaginosis. (1+1+1)
12. Illustrate any one theory of endometriosis.
 13. Enumerate three etiological factors for genital fistula (1+1+1)
 14. 38-year-old comes with abnormal uterine bleeding not responding to tranexamic acid. Uterine curettage shows endometrial hyperplasia without atypia. She is willing for regular follow-up and is not willing for major operative procedure. Choose the best treatment modality (1) and describe the modality. (2)
 15. List three options for conservative management of prolapse (1 each)

16. An obese hirsute 33-year-old woman presents with irregular menstrual cycles and ultrasonography suggestive of peripherally arranged follicles. Choose three pharmacological management options for her. (1 each)
17. Enumerate the parameters of semen analysis with their normal range (1 each)
18. A 56-year-old woman with endometrial curettage showing Carcinoma Endometrium has an MRI showing spread to serosa of corpus uteri but no invasion of other pelvic organs or vagina. Paraaortic and pelvic lymph nodes appear negative. What is the presumptive stage of this patient (1.5). What is the next step (1.5)?
19. Justify the usage of tranexamic acid as the first line of management of AUB. (3)
20. You are the district officer in-charge for popularizing routine early cancer screening for genital malignancy. Develop 6 points which can be put in a poster for encouraging patients to undergo early cancer screening.

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW.
10X1=10 marks

21.(i) Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;

- e) Metrorrhagia
- f) Metropathia hemorrhagica
- g) Menorrhagia
- h) Polymenorrhoea

21.(ii) A 21 year old P1L1 has delivered 45 days back. She is not breastfeeding her infant. She has tested HIV positive during her antenatal checkup. She wants a temporary method of contraception.

What are her options?

- e) Combined oral contraceptive pills
- f) Copper Intra uterine device
- g) LNG implant
- h) LNG Intrauterine device

21.(iii) The length of fallopian tube is:

- e) 8-12cm
- f) 12-15cm
- g) 15-18cm
- h) 18-20cm

21.(iv) The Corpus luteum secretes:

- e) Estrogens
- f) Progesterone

- g) Both
- h) None

21.(v) Test for Tubal patency is

- e) Basal body temperature measurement
- f) Hysteroscopy
- g) Fern test
- h) Spinnbarkeit test

22.(i) Contraceptive method with the highest failure rate is

- e) Combined hormonal pills
- f) Tubectomy
- g) Barrier method
- h) Intra uterine devices

22.(ii) Which is the first sign of puberty in a girl?

- e) Thelarche
- f) Menarche
- g) Adrenarche
- h) Pubarche

22.(iii) Screening test for carcinoma cervix is:

- e) Visual inspection of cervix with acetic acid
- f) Conization of cervix
- g) Thermal ablation of cervix
- h) Trachelectomy

22.(iv) Birth trauma is a risk factor for:

- e) Endometriosis
- f) Prolapse
- g) Abortion
- h) PID

22.(v) Which of the following are effects of increased levels of oestrogen in the follicular phase of the menstrual cycle?

- e) Hair thinning
- f) Thickening of cervical mucus
- g) Thinning of cervical mucus
- h) Thickening of the endometrium

Rajiv Gandhi University of Health Sciences – Sample question paper

MBBS / PHASE III / PART II DEGREE EXAMINATION

TIME: THREE HOURS

MAX. MARKS: 100

MARKS

OBSTETRICS & GYNAECOLOGY – PAPER -2

LONG ESSAY

2X10=20 marks

1. A 54 year old woman presents with bleeding per vagina after 2 years of cessation of regular menstruation. She is diabetic and hypertensive on treatment since 4 years with a BMI of 30.
 - What is the most likely diagnosis?
(2 marks)
 - What is the differential diagnosis of postmenopausal bleeding?
(2 marks)
 - Outline the investigations & treatment of the case
(3+3marks)
2. A couple married for 2 yrs, unable to conceive despite staying together.
 - What are the probable causes?
(3 marks)
 - How will you investigate the couple?
(3 marks)
 - Wife has irregular cycles with BMI of 32 and coarse facial hair. Outline the treatment plan for her. (4 marks)

SHORT ESSAYS

8X5=40

MARKS

3. A parous woman of age 42 yrs is having regular cycles is experiencing an increase in the amount and duration of bleeding. She also complains of easy fatigability and weakness. Enumerate the differential diagnosis and how do you work up this case?
(2+3 marks)
4. 48yr old multiparous lady is having irregular menstrual periods since one year. She complains of several bouts of hot flushes and night sweats since 6 months.
What is your diagnosis and treatment? (1+4 marks)
5. 65 yr old woman, P6L6, complains of something coming out through the vagina since 4 yrs. Since past 3 months she is complaining of occasional bloody discharge and development of a wound over the exposed part. What is the diagnosis. How do you manage the case?
(2+3 marks)
6. Discuss the Clinical features and management of genital tuberculosis. (2+3 marks)
7. Indications & contra indications of combined oral contraceptive pills.
(3+2 marks)

8. Describe causes, clinical features and enumerate the surgeries for Vesico-vaginal fistula. (2+3 marks)
9. Indications for Endoscopy in gynecology. Enumerate the complications of Hysteroscopy. (2+3 marks)
10. Discuss the diagnosis and treatment of Vaginal Trichomoniasis. (3+2 marks)

SHORT ANSWERS

10X3=30MARKS

11. Describe the course and branches of internal iliac artery. (1+2 marks)
12. Indications and dosage of Methotrexate in gynecology (2+1 marks)
13. Describe the American fertility society classification of uterine anomalies.
14. Indications & complications of cervical biopsy. (1+2 marks)
15. Bethesda classification of Pap smear.
16. Discuss the complications of Radiotherapy in gynecology.
17. What are the causes of precocious puberty?
18. What are the hormonal methods of treatment of endometriosis
19. PALM – COEIN classification.
20. What is Pearl index?

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW.

10X1=10 marks

21. Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;
 - i) Metrorrhagia
 - j) Metropathia hemorrhagica
 - k) Menorrhagia
 - l) Polymenorrhoea
22. A 21 year old P1L1 has delivered 45 days back. She is not breastfeeding her infant. She has tested HIV positive during her antenatal checkup. She wants a temporary method of contraception. What are her options?
 - i) Combined oral contraceptive pills
 - j) Copper Intra uterine device
 - k) LNG implant
 - l) LNG Intrauterine device
23. The Length of fallopian tube is:
 - i) 8-12cm
 - j) 12-15cm
 - k) 15-18cm
 - l) 18-20cm

24. The Corpus luteum secretes:

- i) Estrogens
- j) Progesterone
- k) Both
- l) None

25. Test for Tubul patency is

- i) Basal body temperature measurement
- j) Hysterolaparascopy
- k) Fern test
- l) Spimbarkeit test

26. Contraceptive method with the highest failure rate is

- i) Combined hormonal pills
- j) Tubectomy
- k) Barrier method
- l) Intra uterine devices

27. Which is the first sign of puberty in a girl?

- i) Thelarche
- j) Menarche
- k) Adrenarche
- l) Pubarche

28. Screening test for carcinoma cervix is:

- i) Visual inspection of cervix with acetic acid
- j) Conization of cervix
- k) Thermal ablation of cervix
- l) Trachelectomy

29. Birth trauma is a risk factor for:

- i) Endometriosis
- j) Prolapse
- k) Abortion
- l) PID

30. Which of the following are effects of increased levels of oestrogen in the follicular phase of the menstrual cycle?

- i) Hair thinning
- j) Thickening of cervical mucous
- k) Thinning of cervical mucous
- l) Thickening of the endometrium

PRACTICAL/CLINICAL EXAMINATION

Principles to be adhered to in practical/clinical examination

- The practical/ clinical examination should include assessment in psychomotor and affective domain.
- **Assessment of clinical and procedural skills should be based on direct observations by the examiners.**
- AETCOM competencies should also be assessed.
- **Practical tests should not become simply tests of knowledge. Avoid making assessment mainly targeted to knowledge domain only.**

Examples

1. **Asking a learner in a room away from actual patient, “how history was taken” is to be avoided. Instead, learner should be observed while he/she is taking history.**
2. **Asking a learner in a room away from the actual patient “Tell us how the obstetric abdominal examination is done” is to be avoided. Instead, learner should be observed when the examination is being performed, and evaluated objectively using checklists/ other suitable scales”**

Tools to be used in practical examination

It is suggested that practical examination should include a combination of the following tools

- Clinical examination using long case – one each in Obstetrics and Gynecology, 80marks each
- Objective Structured Clinical Examination (OSCE) – Observed 4 stations 10marks each

SCHEMA FOR PRACTICAL EXAMINATION (200 MARKS)

	Topic header	Obstetrics	Gynaecology
I	Eliciting history (1 Obs / 1 Gyn)	25	25
II	Performing examination (1 Obs/ 1 Gyn)	25	25
III	Discussion (1 Obs / 1 Gyn) of management	30	30
IV	4 Viva voce stations with examiner presence (10 marks eachx4=40)	Station-1: Dummy, pelvis and fetal skull. Station-2: Instruments Station-3: Specimens Station-4: Drugs and contraception	

SAMPLE PRACTICAL EXAMINATION FORMAT

I. ELICITING HISTORY

A. ELICITING HISTORY IN AN OBSTETRIC PATIENT [15 MARKS]

Role of examiner: To create a simulated patient (For example, an intern or a PG or an SR may be trained to become a simulated patient – as much details as possible to be provided). Role of student: To elicit detailed obstetric history from a provided simulated patient with all elements

Role of examiner: To **observe and assess the student while student is eliciting history** from the simulated patient and observe regarding arrival at a suitable clinical interpretation/ conclusion based on the history elicited. Checklist for clear schema of marking may be developed locally.

Time duration is around 5-7 minutes.

B. ELICITING HISTORY IN A GYNECOLOGICAL PATIENT [15 MARKS]

Role of examiner: To create a simulated patient (For example, an intern or a PG or an SR may be trained to become a simulated patient – as much details as possible to be provided). Role

of student: To elicit detailed gynaecological history from a provided simulated patient with all elements

Role of examiner: To **observe and assess the student while student is eliciting history** from the simulated patient and observe regarding arrival at a suitable clinical interpretation/ conclusion based on the history elicited. Checklist for clear schema of marking may be developed locally.

Time duration is around 5-7 minutes.

II. EXAMINATION

A. OBSTETRIC EXAMINATION ASSESSMENT (25 marks)

Role of the examiner: A gravid / puerperal woman (with any suitable diagnosis, preferable late 2nd or 3rd trimester) should be provided for examination by the student.

The brief history of the obstetric patient should be provided to the student.

Student should be allowed to introduce himself/herself and gain confidence of the patient.

Role of the student:

Demonstration of **general physical examination should be observed by the examiner** using a locally developed checklist. (Annexure) [5 marks]

Demonstration of **abdominal obstetric examination should be observed by the examiner** using a locally developed checklist. (Annexure) [10 marks]

Further **discussion** based on the examination findings should be done with focus on the techniques and **nuances of performance on examination** rather than theoretical perspectives on management. [10 marks] Time duration is around 5-7 minutes.

B. GYNECOLOGY EXAMINATION ASSESSMENT (25 MARKS)

Role of the examiner: A woman with gynaecological pathology should be provided for examination by the student.

The brief history of the gynaecological patient should be provided to the student.

Student should be allowed to introduce himself/herself and gain confidence of the patient.

Role of the student:

Demonstration of general **physical examination should be observed by the examiner** using a locally developed checklist. [5 marks]

Demonstration of abdominal **examination should be observed by the examiner** using a locally developed checklist. [10 marks]

Local examination (such as perineal / speculum and vaginal examination) findings should be provided by the examiner to the student.

Further **discussion based on the examination findings** should be done with focus on the techniques and nuances of **performance on examination** rather than theoretical perspectives on management. [10 marks]

Time duration is around 5-7 minutes.

Discussion on the management of the cases presented

Rajiv Gandhi University of Health Sciences

Sciences



UNDERGRADUATE LOGBOOK

DEPARTMENT OF OBSTETRICS & GYNAECOLOGY

Purpose of this logbook

The log book is a verified record of the progression of the learner documenting the Acquisition of there quisite knowledge, skills, attitude and competencies. It is a record of the academic/co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.

Entries in the logbook will reflect the activities undertaken in the department and has to be scrutinized by the head of the concerned department.

The logbook is a record of various activities by the student like:

- Overall participation & performance
- attendance
- participation in sessions
- record of completion of pre-determined activities
- acquisition of selected competencies

The logbook is the record of work done by the candidate in the department and shall be verified by the college before submitting the application of the students for the university examination.

The purposes of this logbook are:

- f. To orient the students to holistic patient management by completing the case record, observing and recording procedures and discussing patient treatment in the therapeutics section.

- g. To facilitate the student's learning process, document the learning process and assist in student assessment
- h. To keep a record of the student's progressing development of the desired skills and attitudes
- i. To ensure that the time spent in the department is well utilized
- j. To form a basis for continual assessment of the student

This log book is a documentation of cases seen, clerked and witnessed by you during your posting in OBG .It is also a record of various seminars, case-based learning, simulation exercises and other academic activities that the learner has been a part of during course. Though efforts are made to cover as much as possible, in no way should this be considered the syllabus.

Please carry this book whenever you attend the non-lecture academic activities of the department and get it duly signed by the concerned staff at the end of the academic activity. We expect discipline, honesty, sincerity and punctuality.

The responsibility of completing the logbook and getting it verified/assessed by the faculty lies with the student. The logbook must be carried by the student as per the given instructions.

General Instructions

11. It is expected that the students will adhere to the highest ethical standards and Professionalism.
12. Shall maintain punctuality in respect to arrival and completion of the assigned work
13. Maintain a cordial relationship with peers, unit staff and hospital staff
14. Not indulge in any act which would bring disrepute to the institution.
15. You should wear a clean apron and follow the dress regulations as laid down by the college and maintain proper hygiene with wearing respective identification badge while in college and hospital.
16. You should carry the following with you for the clinics
 - a. Clinical textbook
 - b. Stethoscope
 - c. Clinical kit for examination
17. Respect the patient as an individual and recognize that she also has rights.
18. Cases that are discussed only have to be documented and not the dummy cases.
19. **Loss of this logbook at any time may affect the formative assessment results and Impair the student appearing in the summative assessment.**
20. **Student is solely responsible for maintaining the Logbook and the records. If the student loses the logbook, he/she would be withheld from appearing for the University examination unless Suitable back up proof is provided.**

Objectives of learning in OBG Department:

A. KNOWLEDGE

At the end of course, the student should be able to:

1. Outline the anatomy, Physiology and pathophysiology of the reproductive system and the common conditions affecting it.
2. Detect normal pregnancy, labour, puerperium and manage the problems likely to be encounter therein.
3. List the leading causes of maternal and perinatal morbidity and mortality.
4. Understand the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their complications.
5. Identify the use, abuse and side effects of drugs in pregnancy, Pre-menopausal and post menopausal periods.
6. Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
7. Identify the common gynecological diseases and describe principles of their management.
8. State the indications, techniques and complications of surgeries like Caesarian section, laprotomy, abdominal and vaginal hysterectomy , Fothergill's operation and vacuum aspiration for MTP

B. SKILLS:

At the end of course, the student should be able to:

1. Examine a pregnant woman: recognize high risk factors.
2. Conduct a normal delivery, recognize complications and early referral. Provide post-natal care.
3. Resuscitate the newborn and recognize congenital anomalies.
4. Advise a couple on the use of various available contraceptive devices and assist in insertion and removal of intra uterine contraceptive devices
5. Perform pelvic examination, diagnose and manage common gynaecological problems including early detection of genital malignancies
6. Make a vaginal cytological smear.
7. Interpretation of data of investigations like biochemical, histopathological, radiological, ultrasound etc.

Name of the student	
Roll No	
University Registration Number	
Batch	
Contact No	
E mail Id	
Guardian/Parent Name Contact Number	
Signature of the student	

Signature of the HOD	
----------------------	--

LOGBOOK CERTIFICATE

This is to certify that the candidate

**Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for OBG including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019 during the period from
.....to**

He/ She is eligible to appear for the summative (University) assessment.

Head of Department:

Faculty Name:

Name:

Signature:

Signature:

Date:

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13.	Seminars presented	72
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ATTENDANCE EXTRACT

Theory classes

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD

Second Profession al				
Third Professional Part I				
Third Professional Part II				

Bedside clinics:

Professional Year	Unit From (date) To (date)	Number attended	Number conducted	Percentage of Attendance	Signature of Unit Head	Signature of HOD
Second Professional year Posting 1						
Third Professional year Part I Posting 2						
Third Professional Part II Posting 3						
Third Professional year Part II Posting 4						

Note:

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and self-directed learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day in each of the subjects prescribed to be eligible to appear for the university examination.

SUMMARY OF INTERNAL ASSESSMENT (IA)

<i>Sl.</i>		<i>Date of</i>	<i>Total marks</i>	<i>Marks scored</i>		
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No.	Internal Assessment	Assessment	Theory	Practical	Theory	Practical	Signature of student with date	Signature of teacher with date
1	First							

2	Second							
3	Third							
4	Remedial							

Total marks obtained on a total of 200 is -----

A student will be permitted to appear for final university exams only if he/she obtains more than 100 marks in the assessments.

Final remarks if any -

Note: A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The remedial assessment shall be completed before submitting the internal assessment marks online to the University.

Formative Assessment at the end of each posting:

MCQ marks obtained	Second Professional year	Third Professional year Part I	Third Professional year Part II

		1 Posting	2 Posting	3 Posting	4 Posting
		Date	Date	Date	Date
Academic Performance					
(Case Presentation & Viva Voce) (25+10)					
Marks Obtained					
Feedback Provided	Positive				
	Could be improved				
Professionalism					
Timely submission of record Book (5)					
Behaves respectfully with peers and teachers (5)					
Grooming and adherence to Dress code (5)					
Total (out of 35+15)					
Signature of Student					
Signature of Teacher					

Guidelines for scoring (to be shown to the student and discussed with them)

Attendance – 95 -100% - 5 ; 90-94%-4;85-89%-3 80-84%-2;> 80%-1

Timely submission of record – Always submits the record on time – 5; Often submits the record on time -4; Sometimes submits the record on time -3 ; Rarely submits the record on time – 2 ; Never submits the record on time -1

Behaves respectfully with peers and teachers - Always speaks politely and demonstrates the appropriate body language with peers and teachers -5; Often speaks politely and demonstrates the appropriate body language with peers and teachers -4; Sometimes speaks politely and demonstrates the appropriate body language with peers and teachers – 3 ; Rarely speaks politely and demonstrates the appropriate body language with peers and teachers – 2; Never speaks politely and demonstrates the appropriate body language with peers and teachers -1

Clinical posting 1
Duration 4 weeks
Date of posting From To
Unit

Competency to be achieved

- 1) Obstetric History taking & examination
- 2) Gynaecological History taking & examination
- 3) Assessment of postnatal mother
- 4) Monitoring of labour
- 5) Active management of 3rd stage of labour

Clinical Posting 1

SLNO	ACTIVITY
1.	Obstetric history taking(OG.8.2) Determine gestational age, EDD and obstetric formula(OG35.5)
2.	Obstetric examination(OG 8.3)

3.	Gynec history taking(OG 24.1)
4.	Gynec examination (OG 24.1)
5.	Monitoring of labour(OG 13.1)
6.	Active Management of third stage of labour(OG 16.1)
7.	History taking and examination of postnatal mother(OG 19.1)

Competen cy # addressed	Name of Activity	Date completed dd-mm- yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedba ck Receive d
OG 8.2 OG35.5	Obstetric history taking Determine gestational age, EDD and obstetric formula						Initial of learner

OG 8.3	Obstetrics examination						Initial of learner
OG 24.1	Gynae history						Initial of learner
OG 13.1	Monitoring of Labour						
OG 16.1	Active management 3 rd stage of labour						
OG 19.1	History taking and examination of postnatal mother						

Learner doctor method 1

Posting 1

A. Competency to be achieved- 1.

History taking

2. Examination - General physical examination - Systemic examination

- Obstetrics examination

3. Communication skills-

One antenatal patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till

discharge has to be entered. The students will communicate with the patient and doctor about the patient care.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method

Learner doctor method Learner doctor method Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty :Date :

Learner doctor method 2

B. Competency to be achieved

1. History taking
- Examination - General physical examination
- Systemic examination
 - Gynaecological examination

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about the patient care.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method

Learner doctor method Learner doctor method Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty: Date :

Posting 2
Duration 8 weeks
Date of posting From To
Unit :

Competency to be achieved

- 1) Diagnosis of early pregnancy
- 2) Antenatal care and advice
- 3) Identify the high risk factors in pregnancy
- 4) Methods of Induction of labour
- 5) Develop a partogram
- 6) Postnatal care & Advice
- 7) Pre & Post operative care

Clinical posting 2

SLNO	ACTIVITY (Case Presentation)
1.	Diagnosis of early pregnancy (OG 6.1)
2.	Antenatal care and advice (OG 8.1,8.6)
3.	Diagnosis of high risk (OG 8.1)
4.	Partogram (OG 13.1)

5.	Postnatal care and advice (OG 19.1)
6.	Pre and postoperative care including consent for surgery (OG 34.4, 35.7)

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG6.1	Diagnosis of early pregnancy						Initial of students
OG 8.1, OG 8.6	Antenatal care and advice						Initial of students
OG 8.1	Diagnosis of high risk						Initial of students
OG 13.1	Partogram						Initial of students
OG 19.1	Postnatal care and advice						Initial of students
OG 34.4, OG 35.7	Pre and postoperative care including consent for surgery						Initial of students

Learner doctor method.

Posting 2

Competency to be achieved

1. History taking
2. Examination - General physical examination - Systemic examination
- Obstetrics examination
3. Identifying High Risk factors
4. Communication & patients education
5. Selection of appropriate investigation
6. Approach towards the diagnosis

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about the patient health.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Learner doctor method.

Lerner doctor method.

Learner doctor method Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

Posting 3
Duration 8 weeks
Date of posting From To
Unit :

Competency to be achieved

- 1) Obstetric History taking and complete examination
- 2) Gynaecological History taking and complete examination
- 3) Management of medical and obstetric disorders in pregnancy
- 4) Management of Gynaecological disorder

Clinical Posting 3

SLNO	ACTIVITY (Case Presentation)
1.	Describe clinical features; diagnosis and investigations, complications, principles of management of multiple pregnancies (OG11.1)
2.	Define, classify and describe the aetiology, clinical features, ultrasonography, differential diagnosis and management of antepartum haemorrhage in pregnancy (OG10.1)
3.	Define, classify and describe the early detection, investigations; principles of management of hypertensive disorders of pregnancy and eclampsia , complications of eclampsia.(OG12.1)
4.	Define, classify and describe the diagnosis, investigations, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy . (OG12.2)
5.	Define, classify and describe diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of diabetes in pregnancy (OG12.3)
6.	Define, classify and describe the etiology, diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of heart diseases in pregnancy (OG12.4)
7.	Describe the mechanism, prophylaxis, fetal complications, diagnosis and management of isoimmunization in pregnancy (OG12.8)
8.	Describe and discuss causes, clinical features, diagnosis, investigations; monitoring of fetal well-being, including ultrasound and fetal Doppler; principles of management; prevention and counselling in intrauterine growth retardation (OG16.3)
9.	Define, classify and discuss abnormal uterine bleeding , its aetiology, clinical features, investigations, diagnosis and management (OG24.1)
10.	Describe and discuss the clinical features; differential diagnosis; investigations; principles of management, complications of fibroid uterus (OG29.1)
11.	Describe and discuss the etiology, classification, clinical features, diagnosis, investigations, principles of management and preventive aspects of prolapse of uterus (OG31.1)

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG11.1	Describe the clinical features; diagnosis and investigations, complications, principles of management of multiple pregnancies						Initial of students
OG10.1	Define, classify and describe the aetiology, clinical features, ultrasonography, differential diagnosis and management of antepartum haemorrhage in pregnancy						Initial of students
OG12.1	Define, classify and describe the early detection, investigations; principles of management of hypertensive disorders of pregnancy and eclampsia , complications of eclampsia						Initial of students

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG12.2	Define, classify and describe the diagnosis, investigations, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy						Initial of students
OG12.3	Define, classify and describe the diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of diabetes in pregnancy						Initial of students

OG12.4	Define, classify and describe the etiology, diagnosis, investigations, criteria, adverse effects on the mother and foetus and						
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Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG12.8	Describe the mechanism, prophylaxis, fetal complications, diagnosis and management of isoimmunization in pregnancy						Initial of students
OG16.3	Describe and discuss causes, clinical features, diagnosis, investigations; monitoring of fetal well-being, including ultrasound and fetal Doppler; principles of management; prevention and counselling in intrauterine growth retardation						Initial of students

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG29.1	Describe and discuss the clinical features; differential diagnosis; investigations; principles of management, complications of fibroid uterus						Initial of students

OG31.1	Describe and discuss the etiology, classification, clinical features, diagnosis, investigations, principles of						
OG24.1	Define, classify and discuss abnormal uterine bleeding , its aetiology, clinical features, investigations, diagnosis and management						Initial of students

Learner doctor method.

Posting 3

management and preventive aspects of prolapse of uterus						Initial of students
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Competency to be achieved

1. History taking
2. Examination - General physical examination
 - Systemic examination
 - Obstetrics examination
3. Identifying High Risk factors
4. Communication & patients education
5. Selection of appropriate investigation
6. Approach towards the diagnosis
7. Plan of Management.

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor, about the patient care & plan of management

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Learner doctor method.

Learner doctor method.

Learner doctor method

Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

Posting 4

Duration 4 weeks
Date of posting From To
Unit :

Competency to be achieved

- 1) Gynaecological history taking and complete examination
- 2) Early detection of genital malignancies
- 3) Document and maintain a case record
- 4) Write a discharge summary for the given case
- 5) Write a Referral note for the given case
- 6) Take an informed consent for the given procedure

Clinical posting 4

SLNO	ACTIVITY (Case Presentation)
1.	Classify, describe and discuss the etiology, clinical features, differential diagnosis, investigations and staging of cervical cancer (OG33.1)
2.	Describe and discuss aetiology, staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer (OG34.1)
3.	Describe and discuss the etiology, classification, staging of ovarian cancer , clinical features, differential diagnosis, investigations, principal of management including staging laparotomy (OG34.2)
4.	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and pervaginal) (OG35.1)
5.	Arrive at a logical provisional diagnosis after examination. (OG35.2)
6.	Write a complete case record with all necessary details (OG35.8)
7.	Write a proper discharge summary with all relevant information (OG35.9)
8.	Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details (OG35.10)
9.	Take an informed consent from the patient and family for Staging laprotomy (OG34.4, OG35.7)

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG33.1	Classify, describe and discuss the etiology, , clinical features, differential diagnosis, investigations and staging of cervical cancer						Initial of students
OG34.1	Describe and discuss aetiology,staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer						Initial of students
OG34.2	Describe and discuss the etiology, classification, staging of ovarian cancer , clinical features, differential diagnosis, investigations, principal of management including staging laparotomy						Initial of students

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG35.1	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal)						Initial of students
OG35.2	Arrive at a logical provisional diagnosis after examination.						Initial of students
OG35.8	Write a complete case record with all necessary details						Initial of students

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG35.9	Write a proper discharge summary with all relevant information						Initial of students
OG35.10	Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details						Initial of students
OG34.4, OG 35.7	Take an informed consent from the patient and family for Staging laprotomy						Initial of students

Learner doctor method.

Posting 4

Competency to be achieved

1. Arriving at diagnosis
2. Planning management
3. Taking consent from the patient for the procedure
4. Assessing post procedure complication
5. Writing discharge summary
6. Advise on discharge

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about patient care and plan of management.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Learner doctor method.

Learner doctor method Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

LABOUR ROOM PROCEDURES

SLNO	ACTIVITY
1.	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal) (OG35.1)
2.	Arrive at a logical provisional diagnosis after examination. (OG35.2)
3.	mechanism of labor in occipito-anterior presentation (OG13.1)
4.	monitoring of labor including partogram (OG13.1)
5.	Induction of Labour

6.	acceleration of labor(OG13.1)
7.	Amniotomy (OG 13.3)
8.	Enumerate and describe the indications, steps and complications of Caesarean Section (OG15.1)
9.	Observe/Assist in operative obstetrics case – Forceps/ vacuum extraction (OG15.2)
10	Describe and discuss the classification; diagnosis; management of abnormal labor (OG 14.4)

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Observed	Assisted	Initial of faculty and date	Feedback Received
OG35.1	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal)					Initial of students
OG35.2	Arrive at a logical provisional diagnosis after examination.					Initial of students
OG13.1	mechanism of labor in occipito-anterior presentation					Initial of students
Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Observed	Assisted	Initial of faculty and date	Feedback Received

OG13.1	monitoring of labor including partogram					Initial of students
OG13.1	Induction of labour					Initial of students
OG13.1	acceleration of labor					Initial of students
OG 13.3	Amniotomy					Initial of students
OG15.1	Caesarean section,					Initial of students
OG15.2	Instrumental delivery					Initial of students
OG14.4	diagnosis; management of abnormal labor					Initial of students

Checklist for assessment of skills in Skill lab

Sl. no	Skills
1	Speculum Examination /Pap Smear
2	Prevaginal examination
3	Normal Delivery
4	Episotomy
5	Female Urinary Catheterization

1. Speculum Examination / Pap Smear

Sl No	Step/Task	Yes 1	No 0
1	Introduce yourself		
2	Verbal consent		
3	Explain procedure to woman		
4	Ask to empty bladder		
5	Provide adequate privacy		
6	Place in dorsal position		
7	Scrub hands		
8	Wear sterile gloves		
9	Encourage the woman to take deep breath and relax during examination		
10	Separate the labia with left hand, introduce cuscus speculum into vagina with right hand.		
11	Points to observe:		
	a) Direction of cervix		
	B)Cervical lips		

	c) External os		
	d) abnormal discharge or bleeding from any side		
	e) abnormal growth from any side		
12	Take Pap Smear using Ayre's spatula from the cervix \, rotate in a 360 ⁰ movement. The longer projection of the spatula is inserted into the endocervix and shorter end to the ecto cervix		
13	Another sample is collected from the posterior fornix with the flat end of the spatula		
14	The material collected is immediately spread over 2 slides and at once put into the fixative ethyl alcohol 95% before drying or fixed with confixative spray.		
15	The slides are labelled and send to the lab with brief patient history and examination findings and proper patient identification number.		
16	Proper disposal of the gloves		
17	Documentation of findings		

Level of expertise expected - advanced / beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session – Yes/ No

Repeat session: level of expected expertise attained- Yes/ No.

2.Prevaginal examination

Sl No	Step/Task	Yes 1	No 0
1	Introduce yourself		
2	Verbal consent		
3	Ask to empty bladder		
4	Provide adequate privacy		
5	Explain procedure to woman		
6	Place in dorsal position		
7	Scrub hands		
8	Wear sterile gloves		
9	Lubricate fingers with jelly		
10	Separate the labia with left hand, introduce index and middle finger of right hand into vagina,		
11	Encourage the woman to take deep breath and relax during examination		
12	Bimanual examination – to note down a) Direction of the cervix		
	b) consistency of the cervix (firm / hard)		

	c)cervical motion tenderness (tenderness present / absent)		
	d)Whethercervix bleeds on touch		
	e)Uterus - anteverted/ retroverted		
	f)Size of uterus		
	g)Consistency of uterus		
	h)Mobility of uterus		
	i)Surface of Uterus –regular/ irregular		
	j) Palpation of Adnexa – appendages / fornices / describe the mass if palpable		
13	Proper disposal of gloves		
14	Document findings		

Level of expertise expected- advanced/ beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session – Yes/ No

Repeat session: level of expected expertise attained- Yes/ No.

3. Normal delivery

Sl. No.	Procedure	Yes	No	Comments if any
1.	Put on personal protective barriers. (Wear Goggles, Mask, Cap, Shoe cover, Plastic Apron).			
2.	Perform hand hygiene and put on sterile glove			
3.	Empty the bladder			
4.	Paint & drape the parts			
5.	Talk to the woman and encourage woman for breathing & small pushes with contractions			
6.	Once crowning give liberal episiotomy after infiltrating lignocaine			
7.	Control the birth of the head with the fingers of one hand to maintain flexion, allow natural stretching of the perineal tissue, ask the assistant to support perineum			
8.	Feel around the baby's neck for the cord and respond appropriately if the cord is present.			

9.	Allow the baby's head to turn spontaneously and with the hands on either side of the baby's head, delivers the anterior shoulder			
10.	Pull the head upward as the posterior shoulder is born over the perineum			
11.	Support the rest of the baby's body as it slides out and place the baby on the mother's abdomen over the clean towels			
12.	Note the time of birth and sex of the baby			
13	Active management of third stage of labor (AMTSL) a) Administer uterotonic Drug – Inj. oxytocin 10 IU IM or tab. Misoprostol (600ug) orally			
	b) Perform controlled cord Traction during a contraction by placing one hand on the lower abdomen to support the uterus and gently pulling the clamped cord by the other hand close to perineum			
14.	Examine the vagina and perineum			
15.	Examine the placenta, membranes, and umbilical cord <ul style="list-style-type: none"> ● Maternal surface of placenta ● Foetal surface ● Membranes Umbilical cord			

Level of expertise expected – advanced / beginner

Level of expected expertise attained – Yes / No

Needs to repeat the session – Yes / No

Repeat session: level of expected expertise attained- Yes/ No

4. Episiotomy

Sl No	Step/Task	Yes 1	No 0
1	Informs patient about need for episiotomy and local infiltration		
2	Gives local Inj. Xylocaine in fan shaped manner after checking for inadvertent needle in vessel		

3	Performs the incision with fingers guarding the fetus from injury		
4	Confirms integrity of rectum		
5	Changes gloves		
6	Identifies the apex of the mucosal layer		
7	Ask for appropriate suture material		
8	<i>Sutures vaginal mucosa first</i> by continuous suturing		
9	Sutures muscle layer intermittently after vaginal mucosa		
10	Sutures skin after muscular layer		
11	Confirms haemostasis, looks for any forgotten gauze		
12	Do a per rectal examination to feel for any suture passing through rectal mucosa		

Level of expertise expected- advanced/ beginner

Level of expected expertise-attained- Yes/no

Needs to repeat the session - Yes/ No

Repeat session : level of expected expertise attained- Yes/ No.

5. Female Urinary Catheterization

Sl No	Step/Task	Yes 1	No 0
1	Self-Introduce, Explain procedure & take consent		
2	Arrange Catheter set		
3	Paint external genitalia upto mid-thigh		
4	Painting- separate labia minora & clean urethral & vaginal region		
5	Draping		

6	Keep kidney tray over drape		
7	Lubricate the tip of the foley 's Catheter with xylocaine gel		
8	Separate labia minora with left hand		
9	Introduce the catheter into the urethra		
10	Drain the urine into the kidney tray		
11	Foley bulb to be inflated with 5 ml distilled water		
12	Connecting the urosac bag		
13	Dispose appropriately (yellow linen – gauze, paper) (red linen – glove)		

Level of expertise expected- advanced/ beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session – Yes/ No

Repeat session : level of expected expertise attained- Yes/ No.

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of Internal Medicine

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of Internal Medicine

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

Integrated sessions :

	Date of session	Topics covered	Competency numbers addressed	Departments involved in the conduct of the session	Signature of the student	Signature of the faculty
1						
2						
3						
4						
5						

Sl. No.	Date	Topic	Competency number	Signature of The Faculty
1.				
2.				
3.				
4.				
5.				
6				
7				
8				
9				
10				

Self-directed learning sessions:

Seminars presented

Date	Topic	Content(5)	Clarity of presentation (5)	Interaction (5)	Knowledge (5)	Use of Audio Video aid (5)	Total

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Research projects and publications

Sl.no	Name of the topic	Date	Signature of the faculty
1			
2			
3			

4			
5			

Co curricular activities –(quiz, poster, debates, essays, skit)

Sl.no	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			

5			
6			
7			
8			
9			
10			

Participation in CME, conference, workshops

Sl.no	Name of the topic	Date	Signature of the faculty
1			

2			
3			
4			
5			

Awards and recognition

Sl. no	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			
5			

**Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka**



Paediatrics Curriculum as per Competency-Based Medical Education Curriculum

Abbreviations

NMC	-	National Medical Council
IMG	-	Indian Medical Graduate
CBME -		Competency Based Medical Education
SLO	-	Specific Learning Objectives
TL	-	Teaching Learning
P	-	performed

Y/N	-	yes / no
SGD	-	Small group discussion
OSCE	-	Objective structured clinical examination
AETCOM	-	Attitude, Ethics and communication
SAQ	-	short answer question
MCQ	-	multiple choice question

RGUHS Paediatrics Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Paediatrics is an interesting branch of medicine dealing with health and medical care of children. It encompasses a broad spectrum of services ranging from preventive health care to the diagnosis and treatment of acute and chronic childhood illnesses. It is an ever-evolving branch requiring compassion, dedication and precision of care. The Paediatrics undergraduate curriculum provides the IMG the requisite knowledge, essential skills and appropriate attitudes to be able to diagnose and treat common paediatric disorders and also to be able to recognise serious conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of paediatric competencies required for an IMG and these have been included in this curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods.

Following this is a detailed **blueprint** showing the weightage and the assessment tool for a particular chapter. This blueprint will ensure that there is an alignment between the SLOs', TL methods and the assessment. A **question paper layout** has also been added to ensure that there is consistency among

different paper setters. Finally, the list of practical skills along with the most appropriate TL and assessment methods has been laid out.

Goals and Objectives of the RGUHS Paediatrics Curriculum

Goals:

The course includes systematic instructions in management of common diseases of infancy and childhood, evaluation of growth and development, nutritional needs, and immunization schedule in children, social pediatrics and counseling is also dealt in the course. The aim of teaching undergraduate medical students is to impart appropriate knowledge and skills to optimally deal with major health problems and also to ensure optimal growth and development of children.

Objectives:

(A) Knowledge

At the end of the course, the student shall be able to:

- 1. Describe normal growth and development during fetal, neonatal, child and adolescence period.*
- 2. Describe the common pediatric disorders and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation.*
- 3. State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease.*
- 4. Describe preventive strategies for common infectious disorders, poisonings, accidents and child abuse.*
- 5. Outline national programmes relating to child health including immunization programmes.*

(B) Skills

At the end of the course, the student shall be able to:

1. *Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.*
2. *Distinguish between normal newborn babies and those requiring special care and institute early care to all newborn babies including care of preterm and low birth weight babies.*
3. *Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, perform venesection, start an intravenous line and provide nasogastric feeding.*
4. *Would have observed procedures such as lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap.*
5. *Provide appropriate guidance and counseling in breast feeding.*
6. *Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.*
7. *Be aware and analyse ethical problems that arise during practice and deal with them in an acceptable manner following the code of ethics.*

(C) Attitude and communication skills

At the end of the course, the student shall be able to:

1. Communicate effectively with patients, their families and the public at large.
2. Communicate effectively with peers and teachers and demonstrate the ability to work effectively with peers in a team.
3. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
4. Appreciate the issues of equity and social accountability while undergoing early clinical exposure

Number	Competency&LearningObjective(s)			Core	Suggested Teaching Learning Method
Topic: Normal Growth and Development					
Number of competencies: (7)					
Number)					

(D) Integration

The training in pediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of a team in an integrated form with other disciplines.

List of all Paediatrics competencies with their specific learning objectives, with suggested teaching-learning and assessment methods:

PE1.1	Define the terminologies Growth and Development and Discuss the factors affecting normal growth and development			Y	Lecture/SGD
1.1.1	Define Growth and Development			Y	Lecture/SGD
1.1.2	Enumerate the factors affecting normal growth and development			Y	Lecture/SGD
PE1.2	Discuss and Describe the patterns of growth in infants, children and adolescents			Y	Lecture/SGD
1.2.1	Describe the patterns of growth in infants, children and adolescents			Y	Lecture/SGD
PE1.3	Discuss and Describe the methods of assessment of growth including use of WHO and Indian national standards. Enumerate the parameters used for assessment of physical growth in infants children and adolescents			Y	Lecture/SGD
1.3.1	Describe the methods of assessment of growth including use of WHO and Indian national standards.			Y	Lecture/SGD
1.3.2	Describe WHO and Indian national standards for growth of infants, children and adolescents.			Y	Lecture/SGD
1.3.3	Enumerate the parameters used for assessment of physical growth in infants, children and adolescents.			Y	Lecture/SGD
PE1.4	Perform Anthropometric measurements, document in growth charts and interpret			Y	SGD
1.4.1	Perform anthropometric measurements in children of different age groups.			Y	Clinical teaching/skill lab
1.4.2	Document the measured parameters in growth charts and interpret the findings on growth charts.			Y	Clinical teaching/skill lab
PE1.5	Define development and Discuss the normal developmental milestones with respect to motor, behavior, social, adaptive and language			Y	Lecture/SGD
1.5.1	Define development.			Y	Lecture/SGD
1.5.2	Describe the normal developmental milestones with respect to motor, behavior, social, adaptive and language domains.			Y	Lecture/SGD
PE1.6	Discuss the methods of assessment of development.			Y	Lecture/SGD
1.6.1	Discuss the methods of assessment of development			Y	Lecture/SGD

PE1.7	Perform Developmental assessment and interpret			N	Bedside/skills lab
1.7.1	Perform Developmental assessment in infants and children and interpret the findings.			N	Bedside/skills lab

Topic: Common problems related to Growth		Number of competencies: (6)			Number (L)
PE2.1	Discuss the etiopathogenesis, clinical features and management of a child who fails to thrive			Y	Lecture/SGD
2.1.1	Discuss the etiopathogenesis of a child who fails to thrive.			Y	Lecture/SGD
2.1.2	Describe the clinical features of a child who fails to thrive.			Y	Lecture/SGD
2.1.3	Discuss the management of a child who fails to thrive.			Y	Lecture/SGD
PE2.2	Assessment of a child with failure to thrive including eliciting an appropriate history and examination			Y	Bedside clinics
2.2.1	Elicit an appropriate history in a child with failure to thrive.			Y	Bedside clinics
2.2.2	Perform a complete physical examination in a child with failure to thrive.			Y	Bedside clinics
PE2.3	Counseling a parent with a failing to thrive child			Y	OSCE
2.3.1	Counsel a parent of a child with failure to thrive.			Y	Skill lab/roleplay
PE2.4	Discuss the etiopathogenesis, clinical features and management of a child with short stature			Y	Lecture/SGD
2.4.1	Enumerate causes of short stature in children.			Y	Lecture/SGD
2.4.2	Describe the clinical features of a child with short stature.			Y	Lecture/SGD
2.4.3	Discuss the management of a child with short stature.			Y	Lecture/SGD
PE2.5	Assessment of a child with short stature: Elicit history; perform examination, document and present.			Y	Bedside/skill lab
2.5.1	Elicit history in a child with short stature.			Y	Bedside/skill lab
2.5.2	Perform a complete physical examination in a child with short stature.			Y	Bedside/skill lab

2.5.1	Document and present assessment of a child with short stature.			Y	Bedside/skill lab
PE2.6	Enumerate the referral criteria for growth related			Y	Lecture/SGD

	problems				
2.6.1	Enumerate the referral criteria for growth related problems			Y	Lecture/SGD
Topic: Common problems related to Development-1					
(Developmental delay, Cerebral palsy)					
Number of competencies: (8) Number of					
PE.3.1	Define, Enumerate and Discuss the causes of developmental delay and disability including intellectual disability in children			Y	Lecture,SGD
3.1.1	Define developmental delay.			Y	Lecture/SGD
3.1.2	Enumerate causes of developmental delay.			Y	Lecture/SGD
3.1.3	Define disability as per WHO.			Y	Lecture/SGD
3.1.4	Define Intellectual disability in children.			Y	Lecture/SGD
3.1.5	Grade intellectual disability in terms of intelligence quotient (IQ).			Y	Lecture/SGD
PE3.2	Discuss the approach to a child with developmental delay			Y	Lecture,SGD
3.2.1	Discuss clinical presentation of common causes of developmental delay.			Y	Lecture,SGD
3.2.2	Enumerate investigations for developmental delay.			Y	Lecture,SGD
3.2.3	Based on clinical presentation, make an investigation plan for a child with developmental delay.			Y	Lecture,SGD
3.2.4	Discuss differential diagnosis of developmental delay.			Y	Lecture,SGD
PE3.3	Assessment of a child with developmental delay - elicit document and present history			Y	Bedside, Skillslab
3.3.1	Elicit developmental history from a parent/care taker.			Y	Bedside, Skillslab
3.3.2	Elicit the current developmental milestones of the child.			Y	Bedside, Skillslab
3.3.3	Interpret developmental status of a child based on the history and examination.			Y	Bedside, Skillslab
3.3.4	Document and present the developmental assessment.			Y	Bedside, Skillslab
PE3.4	Counsel parent of a child with developmental delay			Y	DOAP Session

3.4.1	Communicatethedevelopmentalstatusofthechild tothe parent.			Y	DOAPSession
3.4.2	Counseltheparentsofachildwithdevelopmentald elay.			Y	DOAPSession

PE3.5	Discuss the role of the child developmental unit in management of developmental delay			N	Lecture,SGD
3.5.1	Enumerate the structure and composition of staff at a child development unit.			N	Lecture/SGD
3.5.2	Describe roles of a child development unit.			N	Lecture/SGD
PE3.6	Discuss the referral criteria for children with developmental delay			Y	Lecture,SGD
3.6.1	Enumerate clinical criteria for referral of a child with developmental delay.			Y	Lecture/SGD
PE3.7	Visit a Child Developmental Unit and Observe its functioning			Y	Lecture,SGD
3.7.1	Observe and list the activities in the child developmental unit.			Y	Lecture,SGD
PE3.8	Discuss the etiopathogenesis, clinical presentation and multidisciplinary approach in the management of cerebral palsy			Y	Lecture/SGD
3.8.1	Define cerebral palsy.			Y	Lecture/SGD
3.8.2	Enumerate common causes of cerebral palsy.			Y	Lecture/SGD
3.8.3	Describe the etiopathogenesis of cerebral palsy.			Y	Lecture/SGD
3.8.4	Classify cerebral palsy with respect to function and topography.			Y	Lecture/SGD
3.8.5	Describe common clinical presentations of different types of cerebral palsy.			Y	Lecture/SGD
3.8.6	List some common co-morbidities in a child with cerebral palsy.			Y	Lecture/SGD
3.8.7	Describe common interventions for management of a child with cerebral palsy.			Y	Lecture/SGD
Topic: Common problems related to Development-2 (Scholastic backwardness, Learning Disabilities, Autism, ADHD) Number of competencies: (6) Number of					
PE4.1	Discuss the causes and approach to a child with scholastic backwardness			N	Lecture,SGD
4.1.1	Define scholastic backwardness.			N	Lecture,SGD
4.1.2	List common causes of scholastic backwardness.			N	Lecture,SGD
4.1.3	Discuss clinical assessment of a child with scholastic backwardness.			N	Lecture,SGD

PE4.2	Discuss the etiology, clinical features, diagnosis and management of a child with learning disabilities			N	Lecture,SGD
4.2.1	Define learning disabilities.			N	Lecture,SGD

4.2.2	Enumerate causes of learning disabilities.			N	Lecture,SGD
4.2.3	Describe clinical presentation of a child with learning disabilities.			N	Lecture,SGD
4.2.4	Discuss assessment of a child with learning disabilities.			N	Lecture,SGD
4.2.5	Discuss management options for a child with learning disabilities.			N	Lecture,SGD
PE4.3	Discuss the etiology, clinical features, diagnosis and management of a child with Attention Deficit Hyperactivity Disorder (ADHD)			N	Lecture,SGD
4.3.1	Define ADHD.			N	Lecture,SGD
4.3.2	Describe clinical features of ADHD.			N	Lecture,SGD
4.3.3	Discuss diagnostic assessment of a child with suspected ADHD.			N	Lecture,SGD
4.3.4	Enumerate drugs for treatment of ADHD.			N	Lecture,SGD
PE4.4	Discuss etiology, clinical features, diagnosis and management of a child with autism			N	Lecture,SGD
4.4.1	Define Autism Spectrum Disorders (ASD).			N	Lecture,SGD
4.4.2	Discuss causes of ASD.			N	Lecture,SGD
4.4.3	Describe clinical features of ASD.			N	Lecture,SGD
4.4.4	Discuss clinical assessment of ASD.			N	Lecture,SGD
4.4.5	Discuss management options for a child with ASD.			N	Lecture,SGD
PE4.5	Discuss the role of Child Guidance Clinic in children with Developmental problems			N	Lecture,SGD
4.5.1	Describe the structure of a Child Guidance Clinic with respect to staff and facilities.			N	Lecture,SGD
4.5.2	Enumerate the functions of a child guidance clinic.			N	Lecture,SGD
PE4.6	Visit to the Child Guidance Clinic			N	Lecture,SGD
4.6.1	Describe the functioning of child guidance clinic in their institutions.			N	Lecture,SGD
Topic: Common problems related to behaviour		Number of competencies: (3)		Number (L)	

PE 5.1	Describe the clinical features, diagnosis and management of thumb sucking			N	Lecture, SGD
5.1.1	Describe clinical features of thumb sucking.			N	Lecture, SGD

5.1.2	Describe diagnosis of thumb sucking.			N	Lecture,SGD
5.1.3	Discuss management strategies for a child with thumb sucking.			N	Lecture,SGD
PE 5.2	Describe the clinical features, diagnosis and management of feeding problems			N	Lecture,SGD
5.2.1	Enumerate common feeding problems.			N	Lecture,SGD
5.2.2	Discuss clinical presentations of feeding problems.			N	Lecture,SGD
5.2.3	Discuss management strategies for a child with feeding problems.			N	Lecture,SGD
PE 5.3	Describe the clinical features, diagnosis and management of nail-biting			N	Lecture,SGD
5.3.1	Describe features of nail biting.			N	Lecture,SGD
5.3.2	Discuss management of nail biting.			N	Lecture,SGD
PE 5.4	Describe the clinical features, diagnosis and management of breath holding spells.			N	Lecture,SGD
5.4.1	Describe a breath holding spell.			N	Lecture,SGD
5.4.2	Describe the types of breath holding spells.			N	Lecture,SGD
5.4.3	Discuss causes of breath holding spells.			N	Lecture,SGD
5.4.4	Discuss management of breath holding spells.			N	Lecture,SGD
PE 5.5	Describe the clinical features, diagnosis and management of temper tantrums			N	Lecture,SGD
5.5.1	Describe presentation of a temper tantrum.			N	Lecture,SGD
5.5.2	Discuss causes of temper tantrum.			N	Lecture,SGD
5.5.3	Discuss management of temper tantrums.			N	Lecture,SGD
PE 5.6	Describe the clinical features, diagnosis and management of pica			N	Lecture,SGD
5.6.1	Define pica.			N	Lecture,SGD
5.6.2	Discuss causes of pica.			N	Lecture,SGD
5.6.3	Discuss treatment of pica.			N	Lecture,SGD
PE 5.7	Describe the clinical features, diagnosis and management of fussy infant			N	Lecture,SGD
5.7.1	Describe a fussy infant.			N	Lecture,SGD
5.7.2	Enumerate causes of fussiness in children.			N	Lecture,SGD
5.7.3	Discuss management of fussiness in a child.			N	Lecture,SGD
PE 5.8	Discuss the etiology, clinical features and management of enuresis.			N	Lecture,SGD

5.8.1	Define primary and secondary enuresis for boys and girls.			N	Lecture,SGD
5.8.2	Discuss etiology of primary and secondary enuresis.			N	Lecture,SGD
5.8.3	Discuss pharmacological and non-pharmacological management strategies for enuresis.			N	Lecture,SGD
PE 5.9	Discuss the etiology, clinical features and management of Encopresis.			N	Lecture,SGD
5.9.1	Describe Encopresis.			N	Lecture,SGD
5.9.2	Discuss causes of Encopresis.			N	Lecture,SGD
5.9.3	Describe management of Encopresis.			N	Lecture,SGD
PE 5.10	Discuss the role of child guidance clinic in children with behavioural problems and the referral criteria			N	Lecture,SGD
5.10.1	Describe the role of a child guidance clinic in children with behavioural problems.			N	Lecture,SGD
5.10.2	Enumerate referral criteria for behavioural problems in children.			N	Lecture,SGD
PE 5.11	Visit to Child Guidance Clinic and observe functioning			N	Lecture,SGD
5.11.1	Describe functioning of a Child Guidance Clinic.			N	Lecture,SGD
Topic: Adolescent Health & common problems related to Adolescent Health					
Number of competencies: (13) Number of					
PE 6.1	Define Adolescence and stages of adolescence			Y	Lecture,SGD
6.1.1	Define adolescence.			Y	Lecture,SGD
6.1.2	Enumerate the stages of adolescence.			Y	Lecture,SGD
PE 6.2.	Describe the physical, physiological and psychological changes during adolescence (Puberty)			Y	Lecture,SGD
6.2.1	Describe the physical changes during adolescence.			Y	Lecture,SGD
6.2.2	Describe the physiological changes during adolescence.			Y	Lecture,SGD
6.2.3	Describe the psychological changes during adolescence.			Y	Lecture,SGD
PE 6.3	Discuss the general health problems during adolescence			Y	Lecture,SGD

6.3.1	Enumeratethegeneralhealthproblemsofadolescence			Y	Lecture,SGD
6.3.2	Describethethegeneralhealthproblemsofadolescence			Y	Lecture,SGD

PE6.4	Describe adolescent sexuality and common problems related to it			N	Lecture,SGD
6.4.1	Describe adolescent sexuality.			N	Lecture,SGD
6.4.2	Enumerate common problems related to adolescent sexuality.			N	Lecture,SGD
PE6.5	Explain the Adolescent Nutrition and common nutritional problem			Y	Lecture,SGD
6.5.1	Describe the nutritional requirements of adolescents.			Y	Lecture,SGD
6.5.2	Discuss the nutritional problems in adolescents.			Y	Lecture,SGD
PE6.6	Discuss the common Adolescent eating disorders (Anorexia nervosa, Bulimia)			N	Lecture,SGD
6.6.1	Describe the common adolescent eating problems like Anorexia nervosa and Bulimia nervosa.			N	Lecture,SGD
PE6.7	Describe the common mental health problems during adolescence			Y	Lecture,SGD
6.7.1	Describe the common mental health problems during adolescence.			Y	Lecture,SGD
PE6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence			Y	Bedside
6.8.1	Interact with an adolescent in privacy and maintaining confidentiality.			Y	Bedside
PE6.9	Perform routine Adolescent Health checkup including eliciting history, performing examination including SMR (Sexual Maturity Rating), growth assessments (using Growth charts) and systemic exam including thyroid and Breast exam and the HEADSS screening			Y	Bedside clinic
6.9.1	Elicit the history from an adolescent.			Y	Bedside
6.9.2	Assess sexual maturity rating (SMR) in an adolescent.			Y	Bedside
6.9.3	Evaluate the growth of an adolescent using growth charts.			Y	Bedside
6.9.4	Examine the thyroid gland of an adolescent.			Y	Bedside
6.9.5	Perform a breast examination of an adolescent.			Y	Bedside
6.9.6	Apply HEADSS screening in adolescent workup.			Y	Bedside
PE6.10	Discuss the objectives and functions of AFHS (Adolescent Friendly Health Services) and the referral criteria			N	Lecture,SGD
6.10.1	Discuss the objectives of adolescent friendly health services (AFHS).			N	Lecture,SGD

6.10.2	Enumerate the functions of adolescent friendly health services (AFHS).			N	Lecture, SGD
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PE6.11	Visit to the Adolescent Clinic			Y	DOAP session
6.11.1	Visit an adolescent clinic at least once.			Y	DOAP session
PE6.12	Enumerate the importance of obesity and other NCD in adolescents			Y	Lecture, SGD
6.12.1	Define obesity in adolescence and Enumerate the complications.			Y	Lecture, SGD
6.12.2	Analyze the importance of non-communicable diseases in adolescence.			Y	Lecture, SGD
PE6.13	Enumerate the prevalence and the importance of recognition of sexual drug abuse in adolescents and children			N	Lecture, SGD
6.13.1	State the prevalence of sexual and drug abuse among adolescents and children.			N	Lecture, SGD
6.13.2	Discuss the importance of recognition of sexual and drug abuse in adolescents and children.			N	Lecture, SGD
Topic: To promote and support optimal Breastfeeding for					
Number of competencies: (11) Number (01)					
Infants					
PE7.1	Awareness on the cultural beliefs and practices of breastfeeding			N	Lecture, SGD
7.1.1	Explain the harmless and harmful cultural beliefs and practices of breastfeeding.			N	Lecture, SGD
PE7.2	Explain the Physiology of lactation			Y	Lecture, SGD
7.2.1	Describe the Anatomy of breast.			Y	Lecture, SGD
7.2.2	Explain the Physiology of lactation.			Y	Lecture, SGD
PE7.3	Describe the composition and types of breast milk and Discuss the differences between cow's milk and Human milk			Y	Lecture, SGD
7.3.1	Describe the composition of breast milk.			Y	Lecture, SGD,
7.3.2	Describe the composition of cow's milk.			Y	Lecture, SGD
7.3.3	Enumerate the differences between breast milk and cow's milk.			Y	Lecture, SGD,
7.3.4	Describe the various types of breast milk and their characteristic composition.			Y	Lecture, SGD,
PE7.4	Discuss the advantages of breast milk			Y	Lecture, SGD

7.4.1	Enumerate the advantages of breast milk.			Y	Lecture, SGD
PE7.5	Observe the correct technique of breastfeeding and			Y	Bedside, Skills lab

	distinguish right from wrong technique				
7.5.1	Observe correct technique of breastfeeding noting signs of good attachment and correct positioning of mother and baby.			Y	Bedside teaching/video/Skilllab
7.5.2	Distinguish correct feeding technique from wrong one on the mother baby dyad.			Y	Bedside, skilllab
PE7.6	Enumerate the baby friendly hospital initiatives			Y	Lecture, SGD
PE7.6.1	Enumerate components of the baby friendly hospital initiative.			Y	Lecture, SGD
PE7.7	Perform breast examination and Identify common problems during lactation such as retracted nipples, cracked nipples, breast engorgement, breast abscess			Y	Bedside, Skilllab
7.7.1	Enumerate common problems in the mother during lactation.			Y	Lecture, Bedside, skilllab
7.7.2	Examine breast of a lactating mother in an appropriate manner.			Y	Bedside, skilllab
7.7.3	Identify the common problems after examining the breast in lactating mother viz retracted nipples, cracked nipples, breast engorgement, breast abscess.			Y	Bedside, skilllab
PE7.8	Educate mothers on antenatal breast care and prepare mothers for lactation			Y	DOAP session
7.8.1	Educate and counsel pregnant woman during antenatal period in preparation for breastfeeding.			Y	DOAP session/Clinical session
7.8.2	Educate the pregnant woman for antenatal breast care.			Y	DOAP session/Clinical Session
PE7.9	Educate and counsel mothers for best practices in Breastfeeding			Y	DOAP session
7.9.1	Enumerate the best breastfeeding practices.			Y	Lecture, SGD
7.9.2	Educate mothers for the best breastfeeding practices.			Y	DOAP session
PE7.10	Respect patient privacy			Y	DOAP session
7.10.1	Demonstrate respect for a mother's privacy.			Y	DOAP session

PE7.11	ParticipateinBreastfeedingWeekCelebration			Y	DOAPsession
7.11.1	Participateactivelyin			Y	ActiveParticipat ionin

	breastfeeding week celebrations.				the activities
Topic: Complementary Feeding		Number of competencies: (5)			Number (NIL)
PE8.1	Define the term Complementary Feeding			Y	Lecture, SGD
PE 8.1.1	Define complementary feeding.			Y	Lecture, SGD
PE8.2	Discuss the principles, the initiation, attributes, frequency, technique and hygiene related to complementary feeding including IYCF			Y	Lecture, SGD
8.2.1	Describe the principles of complementary feeding.			Y	Lecture, SGD
8.2.2	Narrate the types and attributes of good complementary foods.			Y	Lecture, SGD
8.2.3	Describe the initiation of complementary feeding in different situations.			Y	Lecture, SGD
8.2.4	Describe the frequency of complementary feeding in different situations.			Y	Lecture, SGD
8.2.5	Describe the correct technique of complementary feeding.			Y	Lecture, SGD
8.2.6	Enumerate the hygienic practices to be followed during complementary feeding.			Y	Lecture, SGD
PE8.3	Enumerate the common complimentary foods			Y	Lecture, SGD
PE 8.3.1	Enumerate common locally available complementary foods.			Y	Lecture, SGD
PE8.4	Elicit history on the Complementary Feeding habits			Y	BEDSIDE, SKILL LAB
PE 8.4.1	Elicit a focused and detailed history for complementary feeding.			Y	Bedside
PE8.5	Counsel and educate mothers on the best practices in complementary feeding			Y	DOAP session
8.5.1	Counsel the mother for the best practices in complementary feeding.			Y	DOAP session
Topic: Normal nutrition, assessment and monitoring		Number of competencies: (7)			Number (NIL)
PE9.1	Describe the age-related nutritional needs of infants, children and adolescents including micronutrients and vitamins			Y	Lecture, SGD
9.1.1	List the macronutrients and micronutrients required for growth.			Y	Lecture, SGD
9.1.2	Describe the nutritional needs (calorie, protein, micronutrients, minerals and vitamins) of an infant.			Y	Lecture, SGD

9.1.3	Describe the nutritional needs (calorie, protein, micronutrients, minerals and vitamins)			Y	Lecture, SGD
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	ins)forchildrenof differentages.				
9.1.4	Describe the nutritional needs (calorie, protein,micronutrientsmineralsandvitamin s)ofadolescentsofboth genders.			Y	Lecture,SGD
PE9.2	Describe the tools and methods for assessment andclassificationofnutritionalstatusofinfants ,children andadolescents			Y	Lecture,SGD
9.2.1	Listthetoolsrequiredforanthropometricmeasurements viz.weight,length/height,headcircumference,midarmcircumference.			Y	Lecture,SGD
9.2.2	Describethemethodofassessmentindetailfordifferentanthropometricmeasurementsforallagegroups.			Y	Lecture,SGD
9.2.3	ClassifythenutritionalstatusasperWHOclassification basedonanthropometricmeasurementdataforallagegroups.			Y	Lecture,SGD
PE9.3	ExplainthecalorificvalueofcommonIndianfoods			Y	Lecture,SGD
9.3.1	Explainthecalorieandproteincontentofcommonlyuseduncookedand cooked cereals.			Y	Lecture,SGD
9.3.2	Explain the calorie and protein content of commonuncookedfooditemsslikedairyproducts,eggs,fruits, vegetablesetc.			Y	Lecture,SGD
9.3.3	ExplainthecalorieandproteincontentofcommonIndiancooked food items e.g. dalia, roti, chapati, khichdi, dal,rice,idli.			Y	Lecture,SGD
PE9.4	Elicit,documentandpresentanappropriate nutritionalhistoryandperformadietaryrecall			Y	Bedside,skilllab
9.4.1	Takefocusseddietaryhistorybasedonrecallmethodfrom thecaregiver.			Y	Bedside,skilllab
9.4.2	Documentthedietaryhistory andcalculatecalorieandproteincontent.			Y	Bedside,skilllab
9.4.3	Presentthedietaryhistory.			Y	Bedside,skilllab
PE9.5	Calculate the age appropriate calorie requirement inhealthanddiseaseandIdentifygaps			Y	Bedsideclinic,SGD

9.5.1	Calculatetherecommendedcalorieandproteinrequirementforchildrenofallagegroups.			Y	Bedsideclinic,SGD
9.5.2	Calculatethecalorieandproteincontentof24hourdietary			Y	Bedsideclinic,SGD

	intake by a child.				GD
9.5.3	Calculate the gap (deficit) between recommended intake of calorie and protein and actual intake.			Y	Bedside clinic, SGD
PE9.6	Assess and classify the nutrition status of infants, children and adolescents and recognize deviations			Y	Bedside clinic, SGD
9.6.1	Assess nutritional status from anthropometric parameters for children of all age groups.			Y	Bedside clinic, SGD
9.6.2	Interpret the anthropometric measurement data by plotting in appropriate WHO growth charts for children of all age groups and gender.			Y	Bedside clinic, SGD
9.6.3	Classify the type and degree of undernutrition using the WHO charts.			Y	Bedside clinic, SGD
9.6.4	Identify overnutrition (overweight and obesity) by using WHO charts.			Y	Bedside clinic, SGD
PE9.7	Plan an appropriate diet in health and disease			N	Bedside clinic, SGD
9.7.1	Plan a diet for a healthy child of all age groups.			N	Bedside clinic, SGD
9.7.2	Plan an age appropriate diet for child of different age groups with undernutrition/overnutrition.			N	Bedside clinic, SGD
9.7.3	Plan an age appropriate diet for child of different age groups with few common diseases viz. Lactose intolerance, Celiac disease, Chronic Kidney disease			N	SGD
Topic: Provide nutritional support, assessment and monitoring for common nutritional problems					
				Number of competencies: (6) Number (NIL)	
P E10.1	Define and Describe the etiopathogenesis, classify including WHO classification, clinical features, complication and management of severe acute malnourishment (SAM) and moderate acute Malnutrition (MAM)			Y	Lecture, SGD
10.1.1	Define malnutrition as per WHO.			Y	Lecture, SGD
10.1.2	Describe the aetiology of malnutrition.			Y	Lecture, SGD

10.1.3	Discuss the pathophysiology of malnutrition.			Y	Lecture,SGD
10.1.4	Classify the malnutrition as per WHO.			Y	Lecture,SGD
10.1.5	Describe the criteria for severe acute malnutrition (SAM) and moderate acute malnutrition (MA)			Y	Lecture,SGD

	M)asperWHO.				
10.1.6	Describe the clinical features of MAM and SAM including marasmus and kwashiorkor.			Y	Lecture,SGD
10.1.7	Describe the complications of SAM.			Y	Lecture,SGD
10.1.8	Describe the steps of management of SAM involving stabilization and rehabilitation phase.			Y	Lecture,SGD
10.1.9	Describe the domiciliary management of moderate acute malnutrition (MAM).			Y	Lecture,SGD
P E10.2	Outline the clinical approach to a child with SAM and MAM			Y	Lecture,SGD
10.2.1	Describe the clinical approach (algorithmic approach including clinical history, examination and investigations) to a child with SAM and MAM.			Y	Lecture,SGD
P E10.3	Assessment of a patient with SAM and MAM, diagnosis, classification and planning management including hospital and community-based intervention, rehabilitation and prevention			Y	Bedside, Skills Lab
10.3.1	Take clinical history including focused dietary history from the caregiver.			Y	Bedside
10.3.2	Examine the child including anthropometry and signs of vitamin deficiency.			Y	Bedside
10.3.3	Diagnose and classify the patient as having SAM or MAM based on clinical history, examination and anthropometry.			Y	Bedside
10.3.4	Plan the individualised home based management in a child with MAM or uncomplicated SAM.			Y	Bedside
10.3.5	Plan the hospital based management of complicated SAM in a child.			Y	Bedside
10.3.6	Plan the hospital based rehabilitation phase management of complicated SAM in a child.			Y	Bedside
10.3.7	Plan prevention of malnutrition at all levels.			Y	Bedside
P E10.4	Identify children with undernutrition as per IMNCI criteria and plan referral			Y	DOAP session
10.4.1	Identify undernutrition as per IMNCI criteria.			Y	DOAP session
10.4.2	Describe pre-referral treatment as per IMNCI.			Y	DOAP session

10.4.3	Planreferralforchildrenwith undernutritionasperIMNClguidelines.			Y	DOAPsession
P E10.5	CounselparentsofchildrenwithSAM andMAM			Y	Bedsideclinic, SkillsStation

10.5.1	Counsel the parents on rehabilitation of children with SAM and MAM.			Y	Bedside clinic, skill station
10.5.2	Address the queries raised by the parents.			Y	Bedside clinic, skill station
P E 10.6	Enumerate the role of locally prepared therapeutic diets and ready to use therapeutic diets			N	Lecture, SGD
10.6.1	Enumerate the composition of Ready to use therapeutic foods (RUTF).			N	Lecture, SGD
10.6.2	Enumerate the locally available home food prepared with cereals, pulses, sugar, oil, milk and/or egg etc.			N	Lecture, SGD
10.6.3	Discuss the role of RUTF/locally prepared food to achieve catch up growth in malnourished child.			N	Lecture, SGD
Topic: Obesity in children		Number of competencies: (6)			Number (01)
P E 11.1	Describe the common etiology, clinical features and management of obesity in children			Y	Lecture/SGD
11.1.1	Define Obesity and overweight as per WHO guidelines.			Y	Lecture, SGD
11.1.2	Enumerate common causes of Obesity among children.			Y	Lecture, SGD
11.1.3	Describe clinical features of obesity including comorbidities.			Y	Lecture, SGD
11.1.3	Outline principles of management of Obesity in children.			Y	Lecture, SGD
P E 11.2	Discuss the risk approach for obesity and Discuss the prevention strategies			Y	Lecture, SGD
11.2.1	Enumerate risk factors for Obesity among children.			Y	Lecture, SGD
11.2.2	Describe strategies for prevention of Obesity.			Y	Lecture, SGD
P E 11.3	Assessment of a child with obesity with regard to eliciting history including physical activity, charting and dietary recall			Y	Bedside, Standardized patients
11.3.1	Elicit a detailed history in a child with obesity including activity charting.			Y	Bedside skill lab
11.3.2	Obtain detailed dietary history by recall method.			Y	Bedside clinics, skill lab

PE 11.4	Examination including calculation of BMI, measurement of waist:hip ratio, identifying external markers like acanthosis, striae, pseudogynecomastia etc			Y	Bedside, Standardize patients, Videos
11.4.1	Perform anthropometry in an obese child including calculation of BMI and Waist:Hip Ratio.			Y	Bedside /Multimedia based tutorial
11.4.2	Identify physical markers of obesity like acanthosis, striae, pseudogynecomastia.			Y	Videos/patients
PE 11.5	Calculate BMI, document in BMI chart and interpret			Y	Bedside, SGD
11.5.1	Calculate and Chart BMI accurately.			Y	Clinical postings
11.5.2	Interpret BMI for a given patient.			Y	Bedside clinic
PE 11.6	Discuss criteria for referral			Y	Lecture, SGD
11.6.2	Enumerate criteria for referral in an obese child.			Y	Lecture/SGD

Topic: Micronutrients in Health and Disease-

Number of competencies: (21) Number

1 (Vitamins

NIL) A, D, E, K, B Complex and C)

PE 12.1	Discuss the RDA, dietary sources of Vitamin A and their role in health and disease			Y	Lecture, SGD	Written/
12.1.1	Recall the RDA and dietary sources of Vitamin A for children of different ages.			Y	Lecture, SGD	Written/vi
12.1.2	Describe the physiology and role of Vitamin A in health and disease.			Y	Lecture, SGD	Written/vi
PE 12.2	Describe the causes, clinical features, diagnosis and management of Deficiency/excess of Vitamin A			Y	Lecture, SGD	Written/Vo
12.2.1	Enumerate the causes of Vitamin A deficiency/excess in children.			Y	Lecture, SGD	Written/vi
12.2.2	Describe the clinical features of Vitamin A deficiency/excess in children.			Y	Lecture, SGD	Written/vi voce
12.2.3	Describe the diagnosis and management of Vitamin A deficiency/excess in children.			Y	Lecture, SGD	Written/vi
PE 12.3	Identify the clinical features of dietary deficiency/excess of Vitamin A			Y	Bedside, SGD	Document Logbook

12.3.1	Identify the clinical features of Vitamin A deficiency/excess in children.			Y	SGD/clinical photographs/ bedside teaching	OSCE/case n
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PE 12.4	Diagnose patients with Vitamin A deficiency (VAD), classify and plan management			N	Bedside, Skill Station	Document Logbook
12.4.1	Diagnose patients with VAD.			N	Bedside	Document
12.4.2	Classify the patient with VAD as per WHO.			N	Skill Station, Bedside	Skill station, Logbook
12.4.3	Plan management of a child with VAD.			N	Skill Station, Bedside	Skill station, Logbook
PE 12.5	Discuss the Vitamin A prophylaxis program and their Recommendations			Y	Lecture, SGD	Written/Voice
12.5.1	Enumerate the components of the National vitamin A prophylaxis program.			Y	Lecture, SGD	Written/vi
PE 12.6	Discuss the RDA, dietary sources of Vitamin D and its role in health and disease			Y	Lecture, SGD	Written/Voice
12.6.1	Describe the RDA and dietary sources of vitamin D for the pediatric age groups.			Y	Lecture, SGD	Written/vi
12.6.2	Describe the role of vitamin D in health and disease.				Lecture, SGD	Written/vi voce
PE 12.7 Rickets	Describe the causes, clinical features, diagnosis and management of vitamin D deficiency (VDD)/ excess (Rickets & Hypervitaminosis D)			Y	Lecture, SGD	Written /
12.7.1	List the causes of Rickets/Hypervitaminosis D in children.			Y	Lecture, SGD	Written/vi voce
12.7.2	Describe the clinical features and describe the underlying pathophysiology of Rickets/Hypervitaminosis D.			Y	Lecture, SGD	Written/vi
12.7.3	Describe the diagnosis and management of Rickets /Hypervitaminosis D.			Y	Lecture, SGD	Written/vi
PE 12.8	Identify the clinical features of dietary deficiency of Vitamin D			Y	Bedside, Skills lab	Document
12.8.1	Identify the clinical features of Rickets (VDD).			Y	Clinical case or photographs/bedside teaching	OSCE/ clin
PE 12.9	Assess patients with Vitamin D deficiency, diagnose, classify and plan management			Y	Bedside, skill lab	Document

12.9.1	Diagnosepatientswith Rickets.			Y	Bedside	Documen Logbook/C
12.9.2	ClassifythepatientwithRickets.			Y	SkillStation,Be dside	Skill statio inLogbook

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12.9.3	Plan management and follow-up of patient with Rickets.			Y	Skill station	Logbook
12.9.4	Identify non-responses to VDD management and identify need for referral.			Y	Skill station	Logbook
PE 12.10	Discuss the role of screening for Vitamin D deficiency			Y	Lecture, SGD	Written/voice
12.10.1	List the sociodemographic factors associated with vitamin D deficiency.			Y	Lecture, SGD	Written/voice
12.10.2	Describe the prevalence and pattern of VDD in the region/country.			Y	Lecture, SGD	Written/voice
12.10.3	Discuss the role of screening for VDD in different groups (high-risk/population).			Y	Lecture/SGD	Written/voice
PE 12.11	Discuss the RDA, dietary sources of Vitamin E and its role in health and disease			N	Lecture, SGD	Written/Voice
12.11.1	Describe the RDA and dietary sources of vitamin E for the pediatric age.			N	Lecture, SGD	Written/voice
12.11.2	Describe the role of vitamin E in health and disease.			N	Lecture, SGD	Written/voice
PE 12.12	Describe the causes, clinical features, diagnosis and management of deficiency of Vitamin E			N	Lecture, SGD	Written/Voice
12.12.1	List the causes of deficiency of Vitamin E in children.			N	Lecture, SGD	Written/voice
12.12.2	Describe the clinical features of deficiency of Vitamin E.			N	Lecture, SGD	Written/voice
12.12.3	Describe the diagnosis and management of deficiency of Vitamin E.			N	Lecture, SGD	Written/voice
PE 12.13	Discuss the RDA, dietary sources of Vitamin K and their role in health and disease			N	Lecture, SGD	Written/Voice
12.13.1	Describe the RDA and dietary sources of vitamin K for the pediatric age.			N	Lecture, SGD	Written/voice
12.13.2	Describe the role of vitamin K in health and disease.			N	Lecture, SGD	Written/voice
PE 12.14	Describe the causes, clinical features, diagnosis, management & prevention of deficiency of Vitamin K			N	Lecture group, Small Discussion	Written/Voice
12.14.1	List the causes of deficiency of Vitamin K in children of different ages.			N	Lecture/SGD	Written/voice
12.14.2	List the clinical features of deficiency of Vitamin K.			N	Lecture/SGD	Written/voice

12.14.3	Describe the diagnosis and management of deficiency of Vitamin K.			N	Lecture/SGD	Written/voice
PE 12.15	Discuss the RDA, dietary sources of Vitamin B and its				Lecture,SGD	Written/Voice

	role in health and disease					
12.15.1	Describe the RDA and dietary sources of various vitamins B for the pediatric age group.			Y	Lecture/SGD	Written/vivo
12.15.2	Describe the role of vitamin B in health and disease.			Y	Lecture/SGD	Written/vivo
PE 12.16	Describe the causes, clinical features, diagnosis and management of deficiency of B complex vitamins			Y	Lecture,SGD	Viva/SAQ/
12.16.1	List the causes of deficiency of B complex vitamins in children			Y	Lecture/SGD	Written/vivo
12.16.2	Describe the clinical features of deficiency of B complex vitamins			Y	Lecture/SGD	Written/vivo
12.16.3	Describe the diagnosis and management of deficiency of B complex vitamins			Y	Lecture/SGD	Written/vivo
PE 12.17	Identify the clinical features of Vitamin B complex Deficiency			Y	Bedside, Skills lab	Document Logbook
12.17.1	Identify the clinical features of deficiency of B complex vitamins			Y	Clinical case /slides/bedside teaching	OSCE
PE 12.18	Diagnose patients with vitamin B complex deficiency and plan management			Y	Bedside, Skills lab	Document Logbook
12.18.1	Diagnose patients with vitamin B complex deficiency			Y	Bedside, Clinical photographs	Document
12.18.2	Plan management for a child with vitamin B complex deficiency			Y	Skill Station, Bedside, Case based learning	Skill station, Logbook
PE 12.19	Discuss the RDA, dietary sources of vitamin C and their role in health and disease			N	Lecture,SGD	Written/Vivo
12.19.1	List the RDA and dietary sources of vitamin C for the pediatric age			N	Lecture,SGD	Written/vivo
12.19.2	Describe the role of vitamin C in health and disease			N	Lecture,SGD	Written/vivo
PE 12.20	Describe the causes, clinical features, diagnosis and management of deficiency of vitamin C (scurvy)			N	Lecture,SGD	Written/Vivo

12.20.1	List the causes of deficiency of Vitamin C in children			N	Lecture, SGD	Written/voice
12.20.2	Describe the clinical features of deficiency of vitamin C			N	Lecture, SGD	Written/voice
12.20.3	Describe the diagnosis and management of deficiency of vitamin C			N	Lecture, SGD	Written/voice
PE 12.21	Identify the clinical features of vitamin C deficiency			N	Bedside, Skill lab	Document Logbook
12.21.1	Identify the clinical features of deficiency of vitamin C.			N	Clinical case / slides / bedside teaching	Document in Logbook
12.21.2	Differentiate the clinical features of deficiency of vitamin C (scurvy) from those due to VDD (rickets).			N	Clinical case or photograph / bedside teaching	Document in Logbook,
Topic: Micronutrients in Health and disease- 2: Iron, Iodine, Calcium, Magnesium						
					Number of competencies: (14)	Number (NIL)
PE 13.1	Discuss the RDA, dietary sources of Iron and their role in health and disease			Y	Lecture, SGD	Written/voice
13.1.1	Recall the RDA of Iron in children of all age groups.			Y	Lecture, SGD	Written/voice
13.1.2	Enumerate the dietary sources of Iron and Discuss their role in health and disease.			Y	Lecture, SGD	Written/voice
PE 13.2	Describe the causes, diagnosis and management of Iron deficiency			Y	Lecture, SGD	Written/voice
13.2.1	Enumerate the causes of iron deficiency.			Y	Lecture, SGD	Written/voice
13.2.2	Describe the diagnosis of iron deficiency.			Y	Lecture, SGD	Written/voice
13.2.3	Describe management of iron deficiency.			Y	Lecture, SGD	Written/voice
PE 13.3	Identify the clinical features of dietary deficiency of Iron and make a diagnosis			Y	Bedside/skill lab	Document Logbook
13.3.1	Identify the clinical features of dietary iron deficiency.			Y	Bedside/skill lab	Document in Logbook al case

13.3.2	Make a clinical diagnosis of dietary deficiency of Iron after appropriate history and examination.			Y	Bedside/skill lab	Document in Logbook al case
PE 13.4	Interprethe hemogram and Iron Panel			Y	Bedside clinic/Small group discussion	Skill Asses

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13.4.1	Identify the features of iron deficiency anemia in a blood film.			Y	Bedside clinic / Small group discussion	Skill Assess OSCE
13.4.2	Identify abnormal hematological indices on a hemogram.			Y	Bedside clinic / Small group discussion	Skill Assess
13.4.3	Interpret the hemogram.			Y	Bedside clinic / Small group discussion	Skill Assess OSCE
13.4.4	Interpret abnormal values of the iron panel.			Y	Bedside clinic / Small group discussion	Skill Assess OSCE
PE 13.5	Propose a management plan for IRON deficiency Anemia			Y	Bedside/skill lab	Skill assessment
13.5.1	Make a management plan for Iron deficiency anemia in children of different ages.			Y	Bedside/skill lab	Skill assess
PE 13.6	Discuss the National anemia control program and its recommendations			Y	Lecture, SGD	Written/voice
13.6.1	Describe the components of National anemia control program and its recommendations.			Y	Lecture, SGD	Written/voice
PE 13.7	Discuss the RDA, dietary sources of Iodine and its role in Health and disease			Y	Lecture, SGD	Written/voice
13.7.1	Recall the RDA of Iodine in children.			Y	Lecture, SGD	Written/voice
13.7.2	Enumerate the dietary sources of Iodine and their role in Health and disease.			Y	Lecture, SGD	Written/voice
PE 13.8	Describe the causes, diagnosis and management of deficiency of Iodine			Y	Lecture, SGD	Written/voice
13.8.1	Enumerate the causes of Iodine deficiency.			Y	Lecture, SGD	Written/voice
13.8.2	Discuss the diagnosis of Iodine deficiency.			Y	Lecture, SGD	Written/voice
13.8.3	Describe the management of Iodine deficiency.			Y	Lecture, SGD	Written/voice
PE 13.9	Identify the clinical features of Iodine deficiency disorders			N	Bedside clinic	Clinical assessment
13.9.1	Identify the clinical features of Iodine deficiency disorders.			N	Bedside clinic	Clinical assessment

PE 13.10	Discuss the National Goiter Control program and its recommendations			Y	Lecture/ Small group discussion	Written/v
13.10.1	Discuss the National Goiter Control program and			Y	Lecture/Small group discuss	Written/vi

	theRecommendations.				ion	
PE 13.11	Discuss the RDA, dietary sources of Calcium and itsroleinhealthanddisease			Y	Lecture/ Smallgro up discussion	Written/v
13.11.1	RecalltheRDAofCalciuminchildren.			Y	Lecture/Small group discussion	Written/vi voce
13.11.2	Enumeratethedietarysourcesofcalcium.			Y	Lecture/Smal lgroupdiscuss ion	Written/vi
13.11.3	Explaintheroleofcalciuminhealthanddiseas e.			Y	Lecture/Smal lgroupdiscuss ion	Written/vi
PE 13.12	Describe the causes, clinical features, diagnosis andmanagementofCalciumDeficiency			Y	Lecture/ Smallgro up discussion	Written/v
13.12.1	EnumeratethecausesofCalciumDeficiency.			Y	Lecture/Smal lgroupdiscuss ion	Written/vi
13.12.2	DescribetheclinicalfeaturesofCalciumDefici ency.			Y	Lecture/Smal lgroupdiscuss ion	Written/vi
13.12.3	DiscussthedagnosisofCalciumDeficiency.			Y	Lecture/Small group discussion	Written/vi voce
13.12.4	DiscussthemangementofCalciumDeficienc y.			Y	Lecture/Smal lgroupdiscuss ion	Written/vi
PE 13.13	Discuss the RDA, dietary sources of Magnesium andtheirroleinhealthanddisease			N	Lecture/ Smallgro up discussion	Written/v
13.13.1	RecalltheRDAofMagnesiumin children.			N	Lecture/Small group discussion	Written/vi voce
13.13.2	ListthedietarysourcesofMagnesiumandt heirroleinhealthand disease.			N	Lecture/Smal lgroupdiscuss ion	Written/vi
PE 13.14	Describe the causes, clinical features, diagnosis andmanagementofMagnesium Deficiency			N	Lecture/Small group discus sion	Written/v
13.14.1	EnumeratethecausesofMagnesiumDeficien cy.			N	Lecture/Small group discussion	Written/vi voce

13.14.2	Describe the clinical features of Magnesium Deficiency.			N	Lecture/Small group discussion	Written/voice
13.14.3	Discuss the diagnosis of Magnesium Deficiency.			N	Lecture/Small group discussion	Written/voice

13.14.4	Discuss the management of Magnesium Deficiency.			N	Lecture/Small group discussion	Written/vi voce
Topic: Toxic elements and free radicals and oxygen toxicity		Number of competencies: (5)			Number (NIL)	
PE 14.1	Discuss the risk factors, clinical features, diagnosis and management of Lead Poisoning				Lecture/Small Group discussion	Written/v voce
14.1.1	Enumerate the risk factors for lead poisoning in children.			N	Lecture/Small group discussion	Written/vi voce
14.1.2	Describe the clinical features of lead poisoning.			N	Lecture/Small group discussion	Written/vi voce
14.1.3	Discuss the diagnosis of lead poisoning.			N	Lecture/Small group discussion	Written/vi voce
14.1.4	Describe the management of a child with lead poisoning including prevention.			N	Lecture/Small group discussion	Written/vi voce
PE 14.2	Discuss the risk factors, clinical features, diagnosis and management of Kerosene aspiration			N	Lecture/Small group discussion	Written/vi voce
14.2.1	Enumerate the risk factors for kerosene aspiration.			N	Lecture/Small group discussion	Written/vi voce
14.2.2	Describe the clinical features of kerosene aspiration.			N	Lecture/Small group discussion	Written/vi voce
14.2.3	Discuss the diagnosis of kerosene aspiration.			N	Lecture/Small group discussion	Written/vi voce
14.2.4	Describe the management of a child with kerosene aspiration.			N	Lecture/Small group discussion	Written/vi voce
PE 14.3	Discuss the risk factors, clinical features, diagnosis and management of Organophosphorus poisoning			N	Lecture/Small group discussion	Written/v voce
14.3.1	Enumerate the risk factors for organophosphorus poisoning.			N	Lecture/Small group discussion	Written/vi voce
14.3.2	Describe the clinical features of organophosphorus poisoning.			N	Lecture/Small group discussion	Written/vi voce
14.3.4	Discuss the diagnosis of organophosphorus poisoning.			N	Lecture/Small group discussion	Written/vi voce

14.3.5	Describe the management of a child with organophosphorus poisoning.			N	Lecture/Small group discussion	Written/voice
PE 14.4	Discuss the risk factors, clinical features, diagnosis and management of para			N	Lecture/Small group	Written/v

	cetamol poisoning				discussion	
14.4.1	Enumerate the risk factors for paracetamol poisoning.			N	Lecture/Small group discussion	Written/voice
14.4.2	Describe the clinical features of paracetamol poisoning.			N	Lecture/Small group discussion	Written/voice
14.4.3	Discuss the diagnosis of paracetamol poisoning.			N	Lecture/Small group discussion	Written/voice
14.4.4	Discuss the management of a child with paracetamol poisoning including prevention.			N	Lecture/Small group discussion	Written/voice
PE 14.5	Discuss the risk factors, clinical features, diagnosis and management of Oxygen toxicity			N	Lecture/Small group discussion	Written/voice
14.5.1	Enumerate the risk factors for oxygen toxicity.			N	Lecture/Small group discussion	Written/voice
14.5.2	Describe the clinical features of oxygen toxicity.			N	Lecture/Small group discussion	Written/voice
14.5.3	Discuss the diagnosis of oxygen toxicity.			N	Lecture/Small group discussion	Written/voice
14.5.4	Discuss the management of a child with oxygen toxicity.			N	Lecture/Small group discussion	Written/voice
Topic: Fluid and electrolyte balance				Number of competencies: (7) (Number NIL)		
PE 15.1	Discuss the fluid and electrolyte requirements in health and disease			Y	Lecture/Small group discussion	
15.1.1	State the fluid requirements of a healthy neonate.			Y	Lecture/Small group discussion	
15.1.2	Describe the fluid and electrolyte requirements of healthy children of different ages.			Y	Lecture/Small group discussion	
15.1.3	Describe the fluid requirements in common diseases of children.			Y	Lecture/Small group discussion	
PE 15.2	Discuss the clinical features and complications of fluid and electrolyte imbalance and outline the management				Lecture/Small group discussion	

15.2.1	Define hyponatremia and hypernatremia.			Y	Lecture/Small group discussion
15.2.2	Define hypokalemia and hyperkalemia.			Y	Lecture/Small group

					discussion
15.2.3	Describe the clinical features of a child who has dehydration or fluid overload.			Y	Lecture/Small group discussion
15.2.4	Outline the management of a child who has dehydration or fluid overload.			Y	Lecture/Small group discussion
15.2.5	Enumerate the symptoms and signs of hyponatremia and Hypernatremia.			Y	Lecture/Small group discussion
15.2.6	Enumerate the symptoms and signs of hypokalemia and hyperkalemia.			Y	Lecture/Small group discussion
15.2.7	Outline the management of a child with hyponatremia / hypernatremia.			Y	Lecture/Small group discussion
15.2.8	Outline the management of a child with hypokalemia or Hyperkalemia.			Y	Lecture/Small group discussion
PE 15.3	Calculate the fluid and electrolyte requirement in health			Y	Bedside,SGD
15.3.1	Calculate fluid requirement in healthy child ren of different ages.			Y	Bedside,SGD
15.3.2	Calculate electrolyte requirement in healthy children of different ages.			Y	Bedside,SGD
PE 15.4	Interpret electrolyte report			Y	Bedside/SGD
15.4.1	Interpret reports of dyselectrolytemia.			Y	Bedside/SGD
PE 15.5	Calculate fluid and electrolyte imbalance			Y	Bedside/SGD
15.5.1	Calculate fluid requirement of the child to correct fluid imbalance.			Y	Bedside/SGD
15.5.2	Calculate electrolyte correction for a given scenario.			Y	Bedside/SGD
PE 15.6	Demonstrate the steps of inserting an IV cannula in a model			Y	Skilllab
15.6.1	Demonstrate inserting an intravenous cannula on a model in a skill laboratory.			Y	Skilllab
PE 15.7	Demonstrate the steps of inserting an interosseous line in a mannequin			Y	Skilllab
15.7.1	Demonstrate inserting an intraosseous cannula in a mannequin.			Y	Skilllab

Topic: Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Guideline

Number of competencies: (3)

(NIL)

PE16.1	Explain the components of Integrated Management of Neonatal and Childhood Illnesses (IMNCI) guidelines and method of Risk stratification			Y	Lecture, SGD
16.1.1	State the components of IMNCI approach.			Y	Lecture /SGD, IMNCI videos
16.1.2	Explain the risk stratification as per IMNCI.			Y	Lecture /SGD
PE16.2	Assess children <2 months using IMNCI guidelines			Y	DOAP
16.2.1	Demonstrate assessment of the young infant <2 months age as per IMNCI guidelines.			Y	DOAP, Video
16.2.2	Classify the young infants <2 months age as per the IMNCI classification.			Y	DOAP, Video
16.2.3	Identify the treatment in young infants <2 months as per IMNCI.			Y	DOAP, SGD
16.2.4	Counsel parents as per IMNCI guidelines.			Y	DOAP, SGD, roleplay, Video
PE16.3	Assess children >2 months to 5 years using IMNCI guidelines and stratify risk			Y	DOAP
16.3.1	Demonstrate assessment of the child >2 months to 5 years as per IMNCI format.			Y	DOAP, Video
16.3.2	Classify the children >2 months to 5 years as per the IMNCI classification.			Y	DOAP, Video

16.3.3	Identify the treatment in children > 2 months to 5 years as per IMNCI guidelines.			Y	O A P, SG D
16.3.4	Counsel parents as per IMNCI guidelines.			Y	DOAP, SGD, roleplay, Video
Topic: The National Health programs, NHM					
Number of competencies: (02)					NIL
PE17.1	State the vision and outline the goals, strategies and plan of action of NHM and other important national programs pertaining to maternal and child health including RMNCHA+, RBSK, RKSK, JSSK, mission Indradhanush and ICDS			Y	Lecture/SGD
17.1.1	List the national health programs pertaining to maternal and child health.			Y	Lecture/SGD
17.1.2	Outline the vision, goals, strategies and plan of action of NHM.			Y	Lecture/SGD
17.1.3	Outline the vision, goals, strategies and plan of action of other important national programs for maternal and child health – RMNCHA+, RBSK, RKSK, JSSK, mission Indradhanush and ICDS.			Y	Lecture/SGD
PE17.2	Analyze the outcomes and appraise the monitoring and evaluation of NHM			Y	Debate
17.2.1	Critically analyze the impact of NHM and other national health programs on maternal and child health.			Y	Debate, SGD
17.2.2	Appraise the monitoring and evaluation of NHM and other health programs.			Y	Debate, SGD
Topic: The National Health Programs: RCH					
Number of competencies: (8)					NIL
PE18.1	List and explain the components, plan, outcome of Reproductive Child Health (RCH) program and appraise its monitoring and evaluation			Y	Lecture/SGD
18.1.1	State the components, strategy and targeted outcome of RCH program.			Y	Lecture/SGD

18.1.2	List the prerequisites and role of accredited social health activist (ASHA).			Y	Lecture/SGD
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18.1.3	Analyze the monitoring and evaluation of RCH program.			Y	Lecture/SGD	Written/viva voce			
PE 18.2	Explain preventive interventions for child survival and safe motherhood			Y	Lecture/SGD	Written/viva voce		ComMed	OBG
18.2.1	List the preventive interventions for child survival and safe motherhood.			Y	Lecture/SGD	Written/viva voce			
18.2.2	Explain the preventive interventions for child survival and safe motherhood.			Y	Lecture/SGD	Written/viva voce			
PE 18.3	Conduct antenatal examination of women independently and apply a risk approach in antenatal care			Y	Bedside	Skill station		ComMed	OBG
18.3.1	Conduct antenatal examination of women independently.			Y	Bedside, Video	Skill station			
18.3.2	Apply a risk approach in antenatal care.			Y	Bedside, Video	Skill station			
PE 18.4	Provide intranatal care and conduct a normal delivery in a simulated environment			Y	DOAP session, Skills lab	Document in Logbook		ComMed	OBG
18.4.1	Demonstrate the steps of intranatal monitoring in a simulated environment.			Y	DOAP session, Skills Lab, Video	Document in Logbook			
18.4.2	Demonstrate the use of a partogram.			Y	DOAP session, Skills Lab, Video	Document in Logbook			

18.4.3	Conduct a normal delivery in a simulated environment.			Y	DOAP session, Skillslab, Video	Document in Logbook			
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PE 18.5	Provide intra-natal care and observe the conduct of a normal delivery			Y	DOAP session	Document in Logbook			OBG
18.5.1	Demonstrate the preparation of various components of intranatal care.			Y	DOAP session	Document in Logbook			
18.5.2	Observe and assist in the conduct of a normal delivery.			Y	DOAP session	Document in Logbook			
PE 18.6	Perform Postnatal assessment of newborn and mother, provide advice on breastfeeding, weaning and family planning			Y	Bedside, Skill Lab	Skill Assessment		Com Med	OBG

18.6.1	Perform postnatal assessment of newborn.			Y	Bedside, Skill Lab	Skill Assessment			
18.6.2	Perform postnatal assessment of mother.			Y	Bedside, Skill Lab	Skill Assessment			
18.6.3	Give advice to the mother on initiation and maintenance of exclusive breastfeeding, common problems seen during breastfeeding, weaning and family planning.			Y	Bedside, Skill Lab	Skill Assessment			
PE 18.7	Educate and counsel caregivers of children			Y	roleplay	OSCE/Skill Assessment		AETCOM	
18.7.1	Educate and counsel caregivers of children on newborn care including providing warmth, feeding, and prevention of infection, immunization and danger signs.			Y	Role play Video	Skill Assessment OSCE			
PE 18.8	Observe the implementation of the program by visiting the Rural Health Center			Y	Bedside, Skill Lab	Document in Logbook		Com Med	OBG
18.8.1	Make observations on the implementation of the program by visiting the Rural Health Center.			Y	Rural health center visit	Document in Logbook			
Topic: National Programs, RCH-Universal Immunization program									
				Number of competencies: (16)			Number of procedures that require certification: (01)		
PE 19.1	Explain the components of the Universal Immunization Program (UIP) and the National Immunization Program (NIP)			Y	Lecture /SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.1.1	Explain the components of UIP and NIP.			Y	Lecture/ SGD	Written/viva voce			

19.1.2	List the vaccines covered under UIP and NIP.			Y	Lecture/SGD	Written/viva voce			
PE 19.2	Explain the epidemiology of vaccine preventable diseases (VPDs)			Y	Lecture/SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.2.1	Describe the epidemiology of individual VPDs.			Y	Lecture/SGD	Written/viva voce			
PE 19.3	Vaccine description with regard to classification of vaccines, strain used, dose, route, schedule, risks,			Y	Lecture/SGD	Written/viva voce		Com Med, Micro,	

	benefits and side effects, indications and contraindications							Biochemistry	
19.3.1	Classify vaccines according to type of vaccine.			Y	Lecture/SGD	Written/viva voce			
19.3.2	Describe the composition of the NIP vaccines including the strain used.			Y	Lecture/SGD	Written/viva voce			
19.3.3	State the dose, route and schedule of all vaccines under NIP.			Y	Lecture/SGD	Written/viva voce			
19.3.4	Recall the risks, benefits, side effects, indications and contraindications of vaccines under NIP.			Y	Lecture/SGD	Written/viva voce			
PE 19.4	Define cold chain and discuss the methods of safe storage and handling of vaccines			Y	Lecture/SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.4.1	Define cold chain and discuss its importance for vaccines.			Y	Lecture/SGD	Written/viva voce			
19.4.2	List the various cold chain equipment.			Y	Lecture/SGD	Written/viva voce			
19.4.3	Describe the appropriate storage of vaccines in domestic refrigerator, icelined refrigerator (ILR) and vaccine carriers.			Y	Lecture/SGD	Written/viva voce			
19.4.4	Enumerate the precautions for maintaining vaccines at appropriate temperature including the use of vaccine vial monitor (VVM).			Y	Lecture/SGD	Written/viva voce			
19.4.5	Explain the method of cold chain maintenance during a vaccine session.			Y	Lecture/SGD	Written/viva voce			

PE 19.5	Discuss immunization in special situations - HIVpositive children, immunodeficiency, pre-term, organtransplants, those who received blood and bloodproducts,splenectomisedchildren,adol escents, and travelers			Y	Lecture/ SGD	Written/vi vavoce	Com Med, Micro , Biochemis try	
19.5.1	Explain immunization in special situations - HIV positivechildren,immunodeficiency,preterm,organtransplants,thosewhoreceivedblo odandblood products, splenectomisedchildren,adolescents,travelers.			Y	Lecture/SGD	Written/v ivavoce		

PE 19.6	Assess patient for fitness for immunization and prescribe an age appropriate immunization schedule			Y	Out Patient clinics, Skillslab	Skill Assessment	5		
19.6.1	Assess patient fitness for immunization.			Y	Out Patient clinics, Skillslab	Skill Assessment OSCE	5		
19.6.2	Make an age appropriate plan for immunization including catchup doses.			Y	Out Patient clinics, Skillslab	Skill Assessment OSCE	5		
19.6.3	Prescribe the correct vaccine, dose, route of administration for the child.			Y	Out Patient clinics, Skillslab	Skill Assessment	5		
PE 19.7	Educate and counsel a patient for immunization			Y	DOAP session	Document in Logbook			
19.7.1	Educate the parents about the importance of vaccines.			Y	DOAP session, Role play	Document in Logbook			
19.7.2	Counsel parents for age appropriate vaccines, the schedule and timing and the expected side effects.			Y	DOAP session, Role play	Document in Logbook, OSCE			
PE 19.8	Demonstrate willingness to participate in the national and subnational immunization days			Y	Lecture/ small group discussion	Document in Logbook		ComMed	
19.8.1	Participate in the national (NIDs) and subnational immunization days (SNIDs).			Y	Small group, NIDs and SNIDs	Document in Logbook			
PE 19.9	Describe the components of safe vaccine practice – Patient education/ counselling; adverse events following immunization, safe injection practices, documentation and medico-legal implications			Y	Lecture/ small group discussion/ Immunization on clinic	Written/ viva voce		AETCOM	

19.9.1	Describe the components of safe vaccine practices patient			Y	Lecture/SGD	Written/viva voce		AETCOM	
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	education/counseling.								
19.9.2	Describe adverse events following immunization and standard precautions to prevent them.			Y	Lecture/SGD	Written/viva voce			
19.9.3	List safe injection practices and documentation during immunization.			Y	Lecture/SGD	Written/viva voce			
19.9.4	Demonstrate necessary documentation and medicolegal implications of immunization.			Y	Lecture/SGD	Written/viva voce			

PE 19.10	Observe the handling and storing of vaccines			Y	DOAP session	Written/viva voce			
19.10.1	Observe and note the correct handling and storing of vaccines.			Y	DOAP session, Videos	Viva voce/OSCE			
PE 19.11	Document Immunization in an immunization record			Y	Out Patient clinic, Skillslab	Skill assessment			
19.11.1	Document Immunization in an immunization record.			Y	Out Patient clinics, Skillslab	Skill assessment OSCE			
PE 19.12	Observe the administration of UIP vaccines			Y	DOAP session	Document in Logbook		ComMed	
19.12.1	Observe and document the administration of vaccines.			Y	DOAP session	Document in Logbook			
PE 19.13	Demonstrate the correct administration of different vaccines in a mannequin			Y	DOAP session	Document in Logbook		ComMed	
19.13.1	Prepare vaccines by maintaining hand hygiene and skin sterilization.			Y	DOAP session, Skill station	Document in Logbook, OSCE			
19.13.2	Administer a vaccine in the mannequin by correct route (IM, SC, ID) for the correct vaccine.			Y	DOAP session, Skill station	Document in Logbook, OSCE			
PE 19.14	Practice Infection control measures and appropriate handling of the sharps			Y	DOAP session	Document in Logbook		ComMed	
19.14.1	Practice Infection control measures.			Y	DOAP session	Document in Logbook			
19.14.2	Practice appropriate handling of the sharps.			Y	DOAP session	Document in Logbook			

PE 19.15	Explain the term implied consent in Immunization services			Y	Small group discussion	Written/viva voce			
19.15.1	Explain the term implied consent in Immunization services.			Y	Small group discussion	Written/viva voce			
PE 19.16	Enumerate available newer vaccines and their indications including pentavalent pneumococcal, rotavirus, JE, typhoid IPV & HPV			N	Lecture/ small group discussion	Written/viva voce			
19.16.1	Enumerate newer vaccines (pneumococcal, rotavirus, JE typhoid, IPV, influenza & HPV vaccines).			N	Lecture/SGD	Written/viva voce			

19.16.2	List the indications for new vaccines such as pneumococcal, JE, typhoid, influenza & HPV vaccines			N	Lecture/SGD	Written/viva voce			
Topic: Care of the Normal Newborn and High Risk Newborn Number of competencies: (20) Number of procedures that require certification: (NIL)									
PE 20.1	Define the common neonatal nomenclatures including the classification and describe the characteristics of a Normal Term Neonate and High Risk Neonates			Y	Lecture/SGD	Written/viva voce			
20.1.1	Define the Neonatal and Perinatal period.			Y	Lecture/SGD	Written/Viva voce			
20.1.2	Define live birth and stillbirth.			Y	Lecture/SGD	Written/Viva voce			
20.1.3	Classify the neonate according to birth weight into different categories.			Y	Lecture/SGD	Written/Viva voce			
20.1.4	Classify the neonate according to period of gestation.			Y	Lecture/SGD	Written/Viva voce			
20.1.5	Classify the neonate as per intrauterine growth percentiles.			Y	Lecture/SGD	Written/Viva voce			
20.1.6	Define Neonatal Mortality Rate (NMR) and Perinatal Mortality Rate.			Y	Lecture, SGD.	Written/Viva voce			
20.1.7	Describe the characteristics of a normal term neonate.			Y	Lecture, SGD.	Written/Viva voce			
20.1.8	Describe the characteristics of the high-risk neonate.			Y	Lecture, SGD.	Written/Viva voce			
PE 20.2	Explain the care of a normal neonate			Y	Lecture, SGD	Written/Viva voce			
20.2.1	Enumerate the components of Essential Newborn Care			Y	Lecture, SGD	Written/Viva voce			
20.2.2	Enumerate the steps of care of the normal neonate at birth.			Y	Lecture, SGD.	Written/Viva voce			

20.2.3	Explain the care of the normal neonate during the postnatal period.			Y	Lecture, SGD.	Written /Viva voce			
20.2.4	List the criteria for discharge of a normal neonate from the Hospital			Y	Lecture, SGD.	Written/Viva voce			
PE 20.3	Perform Neonatal resuscitation in a manikin			Y	DOAP/SKILLLAB	Logbook			
20.3.1	Perform all the steps of routine care on a manikin.			Y	DOAP/skilllab	Logbook/OSCE			

20.3.2	Demonstrate the initial steps of neonatal resuscitation in a manikin in the correct sequence.			Y	DOAP	Logbook entry/OSCE			
20.3.3	Demonstrate the method of counting the heart rate of the neonate during resuscitation.			Y	DOAP	Skilllab/OSCE			
20.3.4	Demonstrate the method of administering free flow oxygen during resuscitation.			Y	DOAP	Skill station/OSCE			
20.3.5	Check the functions of all parts of the self-inflating bag.			Y	DOAP	Logbook entry/OSCE			
20.3.6	Demonstrate the method of positive pressure ventilation (PPV) in a manikin using appropriate size of bag and mask.			Y	DOAP	Logbook entry/OSCE			
20.3.7	Check the signs of effective positive pressure ventilation.			Y	DOAP	Logbook/OSCE			
20.3.8	Initiate corrective steps in correct sequence for ineffective ventilation in simulated settings.			Y	DOAP	Logbook entry/OSCE			
20.3.9	Demonstrate the method of placement of orogastric tube during prolonged PPV in a manikin.			Y	DOAP	Logbook entry			
20.3.10	Demonstrate the 'thumb technique' and 'two finger technique' of providing chest compression in a manikin.			Y	DOAP	Logbook entry/skill station/OSCE			
20.3.11	Prepare correct dilution of adrenaline injection.			Y	DOAP	Logbook			
20.3.12	Identify the correct size of Laryngoscope and endotracheal tube based on given birth weight/gestation correctly.			Y	DOAP	Logbook entry/OSCE			
20.3.13	Demonstrate the technique of endotracheal intubation in a manikin correctly.			Y	DOAP	Logbook entry			
PE 20.4	Assessment of a normal neonate			Y	Bedside/Skilllab	Skill assessment			

20.4.1	Elicit the relevant general, antenatal, natal and postnatal history of the mother.			Y	Bedside/Skilllab	Skillassessment			
20.4.2	Demonstrate the touch method of assessment of temperature in a newborn.			Y	Bedside/Skilllab	Skillassessment			
20.4.3	Demonstrate the method of recording axillary and rectal temperature in a neonatal manikin.			Y	Bedside/Skilllab	Skillassessment			
20.4.4	Demonstrate the counting of respiratory rate in a neonate.			Y	Bedside/Skilllab	Skillassessment			
20.4.5	Demonstrate the eliciting of capillary refill time CRT in a newborn.			Y	Bedside/Skilllab	Skillassessment			

20.4.6	Demonstrate counting the heart rate in a neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.7	Measure weight, length, head circumference and chest circumference in a neonate/manikin accurately.			Y	Bedside/Skilllab	Skill assessment			
20.4.8	Perform a gestational assessment by physical and neurological criteria in a neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.9	Perform a head-to-toe examination of the neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.10	Elicit common neonatal reflexes like rooting, sucking, grasp, and Moro's reflex correctly.			Y	Bedside/Skilllab	Skill assessment			
20.4.11	Perform a relevant systemic examination of a neonate			Y	Bedside/Skilllab	Skill assessment			
PE 20.5	Counsel/educate mothers on the care of neonates			Y	DOAP	Logbook entry			
20.5.1	Counsel mothers using the GALPAC technique (Greet, Ask, Listen, Praise, Advise, Check for understanding) appropriately.			Y	DOAP	Logbook documentation/ OSCE			
20.5.2	Educate mothers regarding care of the eyes, skin and cord stump of the neonate.			Y	DOAP	Logbook documentation			
20.5.3	Educate the mother for prevention of infections.			Y	DOAP	Logbook documentation/ OSCE			
20.5.4	Educate mothers regarding bathing routine and cleanliness.			Y	DOAP	Logbook documentation/ OSCE			
20.5.5	Counsel the mother regarding her own nutrition and health.			Y	DOAP	Logbook documentation			

PE 20.6	Explain the follow-up care for neonates including Breastfeeding, Temperature maintenance, immunization, importance of growth monitoring and red flags.			Y	DOAP	Logbook documentation			
20.6.1	Counsel the mothers about the importance of exclusive breastfeeding appropriately.			Y	DOAP	Logbook documentation			
20.6.2	Educate the mother regarding harmful effects of pre-lacteals and non-human milk.			Y	DOAP	Logbook documentation			
20.6.3	Explain to the mother the importance of frequent breastfeeding including night feeds.			Y	DOAP	Logbook documentation			

20.6.4	Educate the mother regarding common lactation problems			Y	DOAP	Logbook documentation			
20.6.5	Explain to the mother the methods of keeping the baby warm at home.			Y	DOAP	Logbook documentation/ OSCE			
20.6.6	Demonstrate the technique of Kangaroo Mother Care in a manikin and simulated mother.			Y	DOAP	Logbook documentation/ OSCE			
20.6.7	Explain the schedule of immunization as per the national immunization schedule correctly.			Y	DOAP	Logbook documentation/ OSCE			
20.6.8	Counsel the parents on importance of regular visits to the well baby clinic for growth monitoring.			Y	DOAP	Logbook documentation/ OSCE			
20.6.9	Explain to the parents the red flag signs for urgent visit to hospital.			Y	DOAP	Logbook documentation/ OSCE			
PE 20.7	Discuss the etiology, clinical features and management of Birth asphyxia			Y	Lecture/ SGD	Written/ Viva voce			
20.7.1	Define birth asphyxia as per NNF (National Neonatology Forum) and WHO, AAP guidelines.			Y	Lecture/SGD	Written/ Viva voce			
20.7.2	Enumerate the etiology of birth asphyxia based on antenatal, natal and postnatal factors.			Y	Lecture, SGD	Written/ Viva voce			
20.7.3	Describe the clinical features of birth asphyxia.			Y	Lecture, SGD	Written/ Viva voce			
20.7.4	List the complications of hypoxic ischaemic encephalopathy.			Y	Lecture, SGD	Written/ Viva voce			
20.7.5	Describe the post-resuscitation management of the asphyxiated neonate.			Y	Lecture, SGD	Written/ Viva voce			

PE 20.8	Discuss the etiology, clinical features and management of respiratory distress in Newborn including meconium aspiration and transient tachypnea of newborn.			Y	Lecture, SGD	Written /Vivavoce			
20.8.1	Define Respiratory Distress in a neonate (as per NN F guidelines).			Y	Lecture, SGD	Written /Vivavoce			

20.8.2	Enumerate the common etiologies of respiratory distress based on time of onset and gestation.			Y	Lecture,SGD	Written /Viva voce			
20.8.3	Enumerate the parameters of the Downesscore for assessment of severity of respiratory distress.			Y	Lecture,SGD	Written/Viva voce			
20.8.4	Describe the clinical features and complications of Meconium Aspiration Syndrome (MAS).			Y	Lecture,SGD	Written /Viva voce			
20.8.5	Discuss the management of MAS.			Y	Lecture,SGD	Written/Viva voce			
20.8.6	Discuss the clinical features and management of Transient Tachypnea of Newborn.			Y	Lecture,SGD	Written /Viva voce			
20.8.7	Describe the etiology and clinical features of Hyaline Membrane Disease.			Y	Lecture,SGD	Written /Viva voce			
20.8.8	Discuss the management including prevention of HMD.			Y	Lecture,SGD	Written/Viva voce			
PE 20.9	Discuss the etiology, clinical features and management of birth injuries.			Y	Lecture,SGD	Written/Viva voce			
20.9.1	Define birth injury (as per National Vital Statistics Report).			Y	Lecture,SGD	Written /Viva voce			
20.9.2	Enumerate the common birth injuries in neonates			Y	Lecture,SGD	Written /Viva voce			
20.9.3	Discuss the etiology and risk factors of birth injuries			Y	Lecture,SGD	Written/Viva voce			
20.9.4	Discuss the clinical features of common birth injuries like, cephalhematoma, subgaleal hemorrhage, brachial plexus and facial nerve injury, bone and soft tissue injuries and intra-abdominal injuries, fractures.			Y	Lecture,SGD	Written /Viva voce			

20.9.5	Discuss the management including prevention of common birth injuries			Y	Lecture,SGD	Written /Viva voce			
PE 20.10	Discuss the etiology, clinical features and management			Y	Lecture,SGD	Written/Viva voce			

	of hemorrhagic disease of newborn								
20.10.1	Enumerate the causes of hemorrhagic disease of newborn according to time of onset.			Y	Lecture,SGD	Written/Viva voce			
20.10.2	Discuss the role of vitamin K deficiency in hemorrhagic disease of newborn.			Y	Lecture,SGD	Written /Viva voce			

20.10.3	Describe the clinical features of early, classical and late onset hemorrhagic disease of newborn.			Y	Lecture,SGD	Written /Vivavoce			
20.10.4	Outline the steps of management and prevention of hemorrhagic disease of newborn.			Y	Lecture,SGD	Written/Vivavoce			
PE 20.11	Discuss the clinical characteristics, complications and management of low birth weight (preterm and small for gestation).			Y	Lecture,SGD	Written /Vivavoce			
20.11.1	Describe the clinical characteristics of preterm, small for gestation and low birth weight newborns.			Y	Lecture,SGD	Written /Vivavoce			
20.11.2	Enumerate the complications in the preterm, small for gestation and low birth weight newborns			Y	Lecture,SGD	Written/Vivavoce			
20.11.3	Describe the management of the preterm, small for date and low birth weight newborns.			Y	Lecture,SGD	Written /Vivavoce			
20.11.4	Enumerate the criteria for discharge of low birth weight babies from hospital-based care.			Y	Lecture,SGD	Written /Vivavoce			
20.11.5	List the follow-up advice for low birth weight newborns.			Y	Lecture,SGD	Written/Vivavoce			
PE 20.12	Discuss the temperature regulation in neonates, clinical features and management of Neonatal Hypothermia.			Y	Lecture,SGD	Written /Vivavoce			
20.12.1	Enumerate the modes of heat loss in a newborn.			Y	Lecture,SGD	Written/Vivavoce			
20.12.2	Describe the mechanism of thermoregulation in the newborn.			Y	Lecture,SGD	Written/Vivavoce			
20.12.3	Classify hypothermia in newborns as per NNF criteria.			Y	Lecture,SGD	Written /Vivavoce			

20.12.4	Describe the clinical features of a newborn with cold stress, moderate hypothermia and severe hypothermia.			Y	Lecture, SGD	Written /Viva voce			
20.12.5	Discuss the management of cold stress, moderate hypothermia and severe hypothermia.			Y	Lecture, SGD	Written/Viva voce			
20.12.6	Outline the prevention of hypothermia in newborn by 'ten steps of the warm chain'.			Y	Lecture, SGD	Written /Viva voce			
20.12.7	Explain the Kangaroo Mother Care for prevention of hypothermia in newborns.			Y	Lecture, SGD	Written/Viva voce			

PE 20.13	Discuss the etiology, clinical features and management of Neonatal hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.1	Define hypoglycemia in newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.2	Enumerate the etiology of hypoglycemia in the newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.3	Enumerate the “at risk newborns” needing routine blood sugar monitoring for hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.4	Describe the clinical features of hypoglycemia in the newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.5	Discuss the management of a newborn with asymptomatic and symptomatic hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.6	Enumerate the measures for prevention of hypoglycemia in newborn.			Y	Lecture,SGD	Written/Viva voce			
PE 20.14	Discuss the etiology, clinical features and management of Neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.1	Define neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.2	Enumerate the risk factors for early and late onset hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.3	Describe the clinical features of neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.4	Outline the management of neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
PE 20.15	Discuss the etiology, clinical features and management of neonatal seizures.			Y	Lecture,SGD	Written/Viva voce			

20.15.1	Enumerate the clinical types of seizures in the newborn.			Y	Lecture, SGD	Written /Vivavoce			
20.15.2	Enumerate the key differentiating features between seizures and jitteriness.			Y	Lecture, SGD	Written/Viva voce			
20.15.3	Describe the common causes of neonatal seizures according to time of onset of seizure.			Y	Lecture, SGD	Written /Vivavoce			
20.15.4	Discuss the clinical features of the common causes of neonatal seizures.			Y	Lecture, SGD	Written /Vivavoce			

20.15.5	List the primary diagnostic tests indicated in neonatal seizures.			Y	Lecture,SGD	Written /Viva voce			
20.15.6	Elaborate the stepwise algorithmic approach for the management of neonatal seizures.			Y	Lecture,SGD	Written/Viva voce			
PE 20.16	Discuss the etiology, clinical features and management of neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.1	Define neonatal sepsis, probable sepsis, severe sepsis, septic shock			Y	Lecture,SGD	Written /Viva voce			
20.16.2	Classify Early and late neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.3	Enumerate the organisms responsible for causing early and late onset sepsis.			Y					
20.16.4	Enumerate the risk factors of early and late onset neonatal sepsis correctly.			Y	Lecture,SGD	Written /Viva voce			
20.16.5	Describe the clinical features of early onset and late onset neonatal sepsis			Y	Lecture,SGD	Written/Viva voce			
20.16.6	Enumerate the commonly used laboratory tests for diagnosis of neonatal sepsis.			Y	Lecture,SGD	Written /Viva voce			
20.16.7	Recall the interpretation of a positive sepsis screen.			Y	Lecture/SGD	Written /Viva voce			
20.16.8	Describe the approach to a newborn with suspected early onset sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.9	Describe the approach to a newborn with suspected late onset sepsis.			Y	Lecture,SGD	Written /Viva voce			
20.16.8	List the commonly used antibiotics (with dosage and duration of therapy) in the management of neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			

20.16.9	Describe the supportive and adjunctive therapy in management of neonatal sepsis.			N	Lecture/SGD	Written/vivo			
20.16.9	Discuss the measures for prevention of early onset			Y	Lecture,SGD	Written			

	and late onset sepsis.					/Vivo			
PE 20.17	Discuss the etiology, clinical features and management of Perinatal infections.			Y	Lecture,SGD	Written/Vivo			
20.17.1	Define Perinatal infection.			Y	Lecture,SGD	Written/Vivo			

20.17.2	Discuss the etiology and risk factors for acquisition of common Perinatal infections like Herpes, Cytomegalovirus, Toxoplasmosis, Rubella, HIV, Varicella, Hepatitis B virus and syphilis.			Y	Lecture, SGD	Written /Viva voce			
20.17.3	Describe the clinical features of the common Perinatal infections.			Y	Lecture, SGD	Written /Viva voce			
20.17.4	Outline the management of the common Perinatal infections.			Y	Lecture, SGD	Written /Viva voce			
20.17.5	Enumerate the measures for prevention of common Perinatal infections.			Y	Lecture, SGD	Written /Viva voce			
PE 20.18	Identify and stratify risk in a sick neonate using IMNCI guidelines			Y	DOAP	Document in Logbook			
20.18.1	Identify possible serious bacterial infection/ jaundice and stratify the sick neonate as per IMNCI.			Y	DOAP	Document in Logbook			
20.18.2	Identify and stratify dehydration in a sick neonate with diarrhea as per IMNCI.			Y	DOAP	Document in Logbook			
20.18.3	Classify diarrhea into severe persistent diarrhea and severe dysentery as per IMNCI guidelines.			Y	DOAP	Document in Logbook			
20.18.4	Check for feeding problem and malnutrition and stratify.			Y	DOAP	Document in Logbook			
20.18.5	Assess breastfeeding and check for signs of good attachment to the breast in a neonate.			Y	DOAP	Document in Logbook			
20.18.6	Interpret and classify the neonate on the basis of weight for age z scores weight categories accurately.			Y	DOAP	Document in Logbook			
PE 20.19	Discuss the etiology, clinical features and management of Neonatal hyperbilirubinemia.			Y	Lecture/SGD	Written/Viva voce			

20.19.1	Describe the etiology of neonatal hyperbilirubinemia			Y	Lecture/SGD	Written/Viva voce			
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20.19.2	Differentiate the causes of neonatal jaundice based on age of onset and duration of jaundice.			Y	Lecture/SGD	Written/Viva voce			
20.19.3	Enumerate the common causes of unconjugated and conjugated hyperbilirubinemia in the newborn.			Y	Lecture/SGD	Written/Viva voce			
20.19.4	Differentiate between physiological and pathological jaundice in the newborn.			Y	Lecture/SGD	Written/Viva voce			

20.19.5	Discuss the clinical features of common causes of neonatal jaundice			Y	Lecture/SGD	Written/Vivavoce			
20.19.6	Describe the important clinical features of acute bilirubin encephalopathy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.7	List the investigations to be performed in the evaluation of neonatal hyperbilirubinemia.			Y	Lecture/SGD	Written/Vivavoce			
20.19.8	Categorize the risk in neonatal hyperbilirubinemia based on the American Academy of Pediatrics Bilirubin Nomogram.			Y	Lecture/SGD	Written/Vivavoce			
20.19.9	Identify a neonate requiring phototherapy as per the American Academy of Pediatrics Bilirubin Nomogram.			Y	Lecture/SGD	Written/Vivavoce			
20.19.10	Identify a neonate requiring exchange transfusion as per the American Academy of Pediatrics Bilirubin Nomogram correctly.			Y	Lecture/SGD	Written/Vivavoce			
20.19.11	Describe the care of the baby receiving phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.12	Explain the mechanism of phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.13	Detail the method of administering phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
PE 20.20	Identify clinical presentations of common surgical conditions in the newborn including TEF, esophageal atresia, anal atresia, cleft lip and palate, congenital diaphragmatic hernia and causes of acute abdomen.			Y	Lecture/SGD	Written/vivavoce			

Topic:Genito-Urinarysystem		Numberofcompetencies:(17)			Numberofprocedureshatrequirecertification:(NIL)				
PE21.1	Enumeratetheetiopathogenesis,clinicalfeatures,complicationsandmanagementofUrinary Tract infection(UTI)inchildren			Y	Small groupdiscussion	Written/Vivavoce		Micro	
21.1.1	DefineUTIasperstandardcriteria.			Y	Lecture/SGD	Written/Vivavoce			
21.1.2	EnumeratetheorganismscausingUTIinchildrenofdifferentsites.			Y	Lecture/SGD	Written/Vivavoce			
21.1.3	Describetheclinicalfeaturesofsimple&complicatedUTI.			Y	Lecture/SGD	Written/Vivavoce			
21.1.4	OutlinediagnosticworkupforchildrenwithUTIat differentsites.			Y	Lecture/SGD	Written/Vivavoce			
21.1.5	Describe the treatment including the choice of antibiotics anddurationofantibiotic therapyfortreating simple& complicatedUTI.			Y	Lecture/SGD	Written/Vivavoce			
21.1.6	EnumeratethecomplicationsofUTIinchildren.			Y	Lecture/SGD	Written/Vivavoce			
PE21.2	Enumeratetheetiopathogenesis,clinicalfeatures, complications and management of acute post-streptococcalGlomerularNephritisin children			Y	Lecture/SGD	Written/Vivavoce		Path	
21.2.1	Defineacuteglomerulonephritis.			Y	Lecture/SGD	Written/Vivavoce			
21.2.2	Elaboratepathogenesisofimmunemediated nephritissyndrome			Y	Lecture/SGD	Written/Vivavoce			

21.2.3	Describe the clinical features of Post-Streptococcal Glomerulonephritis (PSGN)			Y	Lecture/SGD	Written/Vivavoce			
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21.2.4	Enumerate the complications of PSGN.			Y	Lecture/SGD	Written/Vivavoce			
21.2.5	Enumerate the investigations for PSGN.			Y	Lecture/SGD	Written/Vivavoce			
21.2.6	Enumerate indications of kidney biopsy in PSGN.			Y	Lecture/SGD	Written/Vivavoce			
21.2.7	Outline management of PSGN.			Y	Lecture/SGD	Written/Vivavoce			

PE21.3	Discuss the approach and referral criteria to a child with Proteinuria			Y	Lecture/ SGD	Written/ Viva voce		Path	
21.3.1	List causes of glomerular & non-glomerular Proteinuria.			Y	Lecture/SGD	Written /Viva voce			
21.3.2	Define nephrotic syndrome.			Y	Lecture/SGD	Written/Viva voce			
21.3.3	Enumerate causes of nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.4	Outline the approach to a child with first episode of nephrotic syndrome.			Y	Lecture/SGD	Written/Viva voce			
21.3.5	List the complications of nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.6	List indications of kidney biopsy in nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.7	Outline the management of initial episode nephrotic syndrome and subsequent relapse.			Y	Lecture/SGD	Written/Viva voce			
21.3.8	List the Criteria for referral of a child with proteinuria.			Y	Lecture/SGD	Written /Viva voce			
PE21.4	Discuss the approach and referral criteria to a child with hematuria			Y	Lecture/ SGD	Written/ Viva voce		Anat	
21.4.1	Enumerate causes of hematuria in children of different ages			Y	Lecture/SGD	Written/Viva voce			
21.4.2	Outline differences between glomerular & non-glomerular hematuria			Y	Lecture/SGD	Written /Viva voce			
21.4.3	List investigations for a child with hematuria			Y	Lecture/SGD	Written /Viva voce			

21.4.4	List indication of kidney biopsy in hematuria			Y	Lecture/SGD	Written/Viva voce			
21.4.5	List criteria for referral for a child with hematuria			Y	Lecture/SGD	Written/Viva voce			
PE21.5	Enumerate the etiopathogenesis, clinical features, complications and management of Acute Renal Failure in children			Y	Lecture/SGD	Written/Viva voce		Path	
21.5.1	Define acute kidney injury (AKI) as per KDIGO.			Y	Lecture/SGD	Written/Viva voce			

21.5.2	OutlineclassificationofAKI.			Y	Lecture/SGD	Written /Vivavoce			
21.5.3	EnumeratecausesofAKI.			Y	Lecture/SGD	Written/Viva voce			
21.5.4	ListinvestigationsforAKIinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.5.5	DescribethemanagementofAKI.			Y	Lecture/SGD	Written/Viva voce			
21.5.6	ListindicationsofrenalreplacementtherapyinAKI.			Y	Lecture/SGD	Written /Vivavoce			
21.5.7	EnumeratecomplicationsofAKI.			Y	Lecture/SGD	Written /Vivavoce			
PE21.6	Enumerate the etiopathogenesis, clinical features, complications and management of chronickidney disease in children.			Y	Lecture/ SGD	Written /Vivavoce		Path	
21.6.1	Definechronickidneydisease(CKD)&itsstaginginchildren.			Y	Lecture/SGD	Written/Viva voce			
21.6.2	OutlinetheclinicalfeaturesofCKDinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.6.3	ListcausesofCKDinchildren.			Y	Lecture/SGD	Written/Viva voce			
21.6.4	EnumeratecomplicationsofCKDinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.6.5	OutlinemanagementofCKD &itscomplications.			Y	Lecture/SGD	Written /Vivavoce			
PE21.7	Enumeratetheetiopathogenesis,clinicalfeatures, complicationsandmanagementofWilmsTumor .			Y	Lecture/ SGD	Written/Viva voce		Path	
21.7.1	DescribeEtiopathogenesisofWilmstumor.			Y	Lecture/SGD	Written/Viva voce			

21.7.2	Describe clinical features of Wilms tumor.			Y	Lecture/SGD	Written /Vivavoce			
21.7.3	List investigations for a patient with Wilms tumor.			Y	Lecture/SGD	Written/Viva voce			
21.7.4	Outline the management of Wilms tumor.			Y	Lecture/SGD	Written /Vivavoce			

PE21.8	Elicit, document and present a history pertaining to diseases of the Genitourinary tract			Y	Bedside, Skillslab	Skill Assessment			
21.8.1	Elicit clinical history pertaining to genitourinary diseases in children.			Y	Bedside, Skillslab	Skill Assessment			
21.8.2	Perform a complete physical examination for a child with genitourinary diseases.			Y	Bedside, Skillslab	Skill Assessment			
21.8.4	Document the complete history in the Logbook.			Y	Bedside, Skillslab	Skill Assessment			
PE21.9	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca			Y	Bedside, Skillslab	Document in Logbook			
21.9.1	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca.			Y	Bedside, Skillslab	Document in Logbook			
PE21.10	Analyze symptom and interpret the physical findings and arrive at an appropriate provisional differential diagnosis			Y	Bedside, Skillslab	Logbook			
21.10.1	Analyze symptoms and interpret the physical finding and arrive at an appropriate provisional differential diagnosis.			Y	Bedside, Skillslab	Logbook			
PE21.11	Perform and interpret the common analytes in a Urine examination			Y	Bedside, Skillslab	Skill assessment		Biochemistry, Path	
21.11.1	Perform at least one test to elicit Proteinuria.			Y	Bedside, Skillslab	Skill assessment			
21.11.2	Interpret the tests for proteinuria and their significance.			Y	Bedside, Skillslab	Skill assessment			
21.11.3	Perform test for evaluating Urine PH.			Y	Bedside, Skillslab	Skill assessment			
21.11.4	Perform urine microscopy.			Y	Bedside, Skillslab	Skill assessment			

21.11.5	IdentifytheabnormaldepositsandInterprettheurinemicroscopyfindings.			Y	Bedside,Skillslab	Skillassessment			
21.11.6	Testtheurineforglucosuria.			Y	Bedside,Skillslab	Skillassessment			
21.11.7	Interprettheurinesugarresults.			Y	Bedside,Skillslab	Skillassessment			
PE21.12	InterpretreportofPlainXRayofKUB			Y	Bedside,Skillslab	Logbook			Radi o D
21.12.1	Identifyany abnormalitiesonX-Ray KUB.			Y	Bedside,Skillslab	Logbook			
PE21.13	Enumeratetheindicationsfor andInterpretthewrittenreportofUltrasonogramofKUB			Y	Bedside,Skillslab	Logbook			Radi o D

21.13.1	Enumerate indications for Ultrasound KUB.			Y	Bedside, Skillslab	Logbook			
21.13.2	Interpret the written report of ultrasound of KUB.			Y	Bedside, Skillslab	Logbook			
PE21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosis, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechiae			Y	Bedside, Skillslab	Bedside, Skillslab			Surg
21.14.1	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosis, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechiae.			Y	Bedside, Skillslab	Bedside, Skillslab			
PE21.15	Discuss and enumerate the referral criteria for children with genitourinary disorder			Y	Lecture/ SGD	Written/ viva voce			
21.15.1	Enumerate referral criteria in a child with Genitourinary disorder.			Y	Lecture/SGD	Written/ viva voce			
PE21.16	Counsel/educate a patient for referral appropriately			Y	DOAP	Logbook		AETCOM	
21.16.1	Counsel/educate a patient for referral appropriately.			Y	DOAP	Logbook			
PE21.17	Describe the etiology, pathogenesis, grading, clinical features and management of hypertension in children			Y	Lecture/ SGD	Written/ viva voce			

21.17.1	Define Hypertension (HTN) & its staging as per AAP 2017 guidelines.			Y	Lecture/SGD	Written/ viva voce			
21.17.2	Enumerate causes of hypertension in children.			Y	Lecture/SGD	Written/viva voce			
21.17.3	Describe the clinical presentation of a child with HT.			Y	Lecture/SGD	Written/ viva voce			
21.17.4	List complications of HT in children.			Y	Lecture/SGD	Written/ viva voce			
21.17.5	Enumerate investigations for hypertension in children.			Y	Lecture/SGD	Written/viva voce			

21.17.6	Outline treatment of hypertension (as per guidelines) in children.			Y	Lecture/SGD	Written/vivo voce			
Topic: Approach to and recognition of a child with possible Rheumatologic problem									
				Number of competencies: (3)			Number of procedures that require certification: (NIL)		
PE 22.1	Enumerate the common Rheumatological problems in children. Discuss the clinical approach to recognition and referral of a child with Rheumatological problem			Y	Lecture/SGD	Written / vivo voce			
22.1.1	Enumerate the common Rheumatological problems in children.			Y	Lecture/SGD	Written/vivo voce			
22.1.2	Describe the clinical approach to a child with Rheumatological problem.			Y	Lecture/SGD	Written/vivo voce			
22.1.3	Enumerate the indications for referral of a child with Rheumatological problem.			Y	Lecture/SGD	Written/vivo voce			
PE 22.2	Counsel a patient with Chronic illness			N	Bedside clinic/skill lab	Logbook			
22.2.1	Counsel a child /parent of a child with a chronic illness.			N	Bedside clinic/skill lab	Logbook			
PE 22.3	Describe the diagnosis and management of common vasculitic disorders including Henoch Schonlein Purpura, Kawasaki Disease, SLE, JIA			N	Lecture/SGD	Written / vivo voce			
22.3.1	List the common causes of vasculitis in children.			Y	Lecture/SGD	Written/Vivo voce			

22.3.2	Enumerate Clinical features suggestive of vasculitis in a child			N	Lecture/SGD	Written/viva voce			
22.3.3.	List the clinical features of Henoch Schonlein Purpura (HSP).			N	Lecture/SGD	Written/viva voce			
22.3.4	List the diagnostic criteria of HSP.			N	Lecture/SGD	Written/viva voce			
22.3.5	Outline the management of a child with HSP.			N	Lecture/SGD	Written/viva voce			
22.3.6	Enumerate the clinical features of Kawasaki disease (KD).			N	Lecture/SGD	Written/viva voce			

22.3.7	DefinediagnosticcriteriaofKawasakidisease.			N	Lecture/SGD	Written/vi vavoce			
22.3.8	Outlinethemanagementofa childwithKawasaki Disease.			N	Lecture/SGD	Written/viva voce			
22.3.9	DefinediagnosticcriteriaofSLE.			N	Lecture/SGD	Written/vi vavoce			
22.3.10	Outlinethemanagementofachild withSLE.			N	Lecture/SGD	Written/viva voce			
22.3.11	DefinediagnosticcriteriaofJIA.			N	Lecture/SGD	Written/vi vavoce			
22.3.12	OutlinethemanagementofachildwithJIA.			N	Lecture/SGD	Written/vi vavoce			
Topic:Cardiovascularsystem-HeartDiseases									
				Numberofcompetencies:(18)		Numberofprocedureshatrequirecertification:(NIL)			
PE 23.1	Discuss the Hemodynamic changes, clinicalpresentation, complications and management ofacyanoticHeartDiseasesVSD,ASDandPDA			Y	Lecture/SGD	Written/ Vivavoce		Physio,Path	
23.1.1	Explain and illustrate diagrammatically the hemodynamicchangesseeninacyanoticcongenitalheart diseases viz VSD,ASD,PDA.			Y	Lecture/SGD	Written/V ivaVoce		Physio,Path	
23.1.2	Describethesignsandsymptoms,timingofpresen tationofaboveacyanotic congenitalheart diseases.			Y	Lecture/SGD	Written/V ivaVoce			
23.1.3	Enumeratethecomplicationsofacyanoticconge nitalheartdiseases.			Y	Lecture/SGD	Written/V ivaVoce			
23.1.4	Outlinethemedicalmanagementofcongenitalacyan otic heartdiseaseasabove.			Y	Lecture/SGD	Written/Viva Voce			

23.1.5	Enumerate the surgical treatments for VSA, ASD, PDA.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.2	Discuss the Hemodynamic changes, clinical presentation, complications and management of Cyanotic Heart Diseases – Fallot Physiology			Y	Lecture/SGD	Written/Viva Voce		Physio, Path	
23.2.1	Enumerate the essential components of Fallot Physiology and List the cardiac conditions with the Fallot Physiology.			Y	Lecture/SGD	Written/Viva Voce			
23.2.2	Describe and illustrate diagrammatically the hemodynamic changes seen in Fallot Physiology cyanotic congenital heart diseases.			Y	Lecture/SGD	Written/Viva Voce			

23.2.3	Explain the clinical presentation and complication of Fallot Physiology cyanotic congenital heart diseases.			Y	Lecture/SGD	Written/Viva Voce			
23.2.5	Describe a cyanotic spell and the pharmacological and non-pharmacological management of cyanotic spells.			Y	Lecture/SGD	Written/Viva Voce			
23.2.6	Describe the treatment options for lesions with Fallot Physiology.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.3	Discuss the etiopathogenesis, clinical presentation and management of cardiac failure in infant and children			Y	Lecture/SGD	Written/Viva Voce			Physio, Path
23.3.1	Enumerate causes of congestive heart failure in children as per the age of presentation.			Y	Lecture/SGD	Written/Viva Voce			
23.3.2	Describe the hemodynamic changes in congestive heart failure.			Y	Lecture/SGD	Written/Viva Voce			
23.3.3	Describe the signs and symptoms of left side, right side and combined congestive heart failure.			Y	Lecture/SGD	Written/Viva Voce			
23.3.4	Enumerate the various management options available for congestive heart failure.			Y	Lecture/SGD	Written/Viva Voce			
23.3.5	Explain the role of diuretics, inotropes, inodilators, and afterload reducing agents in treatment of CCF.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.4	Discuss the etiopathogenesis, clinical presentation and management of Acute Rheumatic Fever in children			Y	Lecture/SGD	Written/Viva Voce			Physio, Path
23.4.1	Explain the etiopathogenesis of Acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			

23.4.2	Describe the modified Jones criteria to diagnose the Acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.4.3	Describe laboratory changes in Acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.5	Discuss the clinical features, complications, diagnosis, management and prevention of Acute Rheumatic Fever			Y	Lecture/SGD	Written/Viva Voce		Physio, Path	
23.5.1	Describe the clinical features of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.5.2	List the long term complications of Acute Rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			

23.5.3	Outline the medical management of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.5.4	Discuss strategies for the primary and secondary prevention of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.6	Discuss the etiopathogenesis, clinical features and management of Infective endocarditis in children			Y	Lecture/SGD	Written/Viva Voce		Physio, Path, Micro	
23.6.1	Enumerate the common predisposing conditions and etiopathogenesis of Infective endocarditis in children			Y	Lecture/SGD	Written/Viva Voce			
23.6.2	List criteria used to diagnose Infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
23.6.3	Describe the clinical features of infective endocarditis in children.			Y	Lecture/SGD	Written/Viva Voce			
23.6.4	Outline the management of infective endocarditis in children.			Y	Lecture/SGD	Written/Viva Voce			
23.6.5	State the long-term complications of Infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
23.6.6	Enumerate the conditions requiring prophylaxis for infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.7	Elicit appropriate history for a cardiac disease, analyze the symptoms e.g. breathlessness, chest pain, tachycardia, feeding difficulty, failing to thrive, reduced urinary output, swelling, syncope, cyanotic spells, Suck rest cycle, frontal swelling in infants.			Y	Bedside, Skills lab	Bed side/skills assessment			

23.7.1	Elicit appropriate history relevant to the cardiac disease and analyze the importance of symptoms e.g. breathlessness, chest pain, tachycardia, feeding difficulty, failing to thrive, reduced urinary output, swelling, syncope, cyanotic spells, Suck rest cycle, frontal swelling in infants.			Y	Bedside, skills lab	Bed side/skill assessment			
23.7.2	Document and present the history taken in appropriate manner.			Y	Bedside, skills lab	Bedside/skill assessment			
PE 23.8	Identify external markers of a cardiac disease e.g. Cyanosis, Clubbing, dependent edema, dental caries arthritis, erythema rash, chorea, subcutaneous nodules, Osler node, Janeway lesions and document			Y	Bedside, Skills Lab	Bed side/skill assessment			

23.8.1	Identify and document the external markers of heart disease in general physical examination e.g. Cyanosis, Clubbing, dependent edema, dental caries, arthritis, erythema rash, chorea, subcutaneous nodules, Osler node, Janeway lesions.			Y	Bedside, skills lab	Bed side/skills assessment			
PE 23.9	Record pulse, blood pressure, temperature and respiratory rate and interpret as per the age			Y	Bedside, Skills lab	Bedside/skills assessment			
23.9.1	Record and demonstrate various parameters of the pulse.			Y	Bedside, Skills lab	OSCE/bedside assessment			
23.9.2	Record correctly the systolic and diastolic blood pressure using appropriate equipment.			Y	Bedside/skills lab	OSCE /bedside assessment			
23.9.3	Use the age specific nomogram to interpret the BP readings.			Y	Bedside, Skills lab	OSCE/bedside assessment			
23.9.4	Measure body temperature using a thermometer.			Y	Bedside, Skills lab	OSCE /bedside assessment			
23.9.5	Count the respiratory rate and interpret as per the age			Y	Bedside, Skills lab	OSCE /bedside assessment			

PE 23.10	Perform independently examination of the cardiovascular system – look for precordial bulge, pulsations in the precordium, JVP and its significance in children and infants, relevance of percussion in Pediatric examination, Auscultation and other system examination and document			Y	Bedside, Skillslab	Bed side/skill assessment			
23.10.1	Perform independent CV examination looking for precordial bulge and pulsations, auscultation of areas of precordium.			Y	Bedside, Skillslab	Bedside, OSCE			
23.10.2	Look for and measure JVP.			Y	Bedside, Skillslab	bedside assessment			
23.10.3	Describe relevance of percussion in the cardiovascular examination.			Y	SGD	Viva			
23.10.4	Document the findings of the cardiovascular and other system exam.			Y	Bedside, Skillslab	Logbook			
PE 23.11	Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti-failure drugs, and inotropic agents			Y	Bedside, Skillslab	written/Viva voce			
23.11.1	Make an appropriate treatment plan for a child with cardiac disease including anti-failure drugs, inotropes and fluids.			Y	Bedside class/paper cases	OSCE/Logbook			
PE 23.12	Interpret chest X-ray and recognize Cardiomegaly			Y	Bedside, Skillslab	Logbook entry		RadioD	
23.12.1	Calculate cardiothoracic ratio and interpret accordingly.			Y	Bedside, Skillslab	viva voce, OSCE		RadioD	
23.12.2	State features of cardiomegaly on the chest X-ray.			Y	Bedside, Skillslab	OSCE, viva voce		RadioD	

23.12.3	Identify the pathognomonic radiological features of various congenital heart diseases on chest xray.			Y	Bedside, Skillslab	OSCE, vivavoce			
23.12.4	Identify pleural effusion and the pulmonary edema on chest X-ray.			Y	Bedside, Skillslab	OSCE, vivavoce			
PE 23.13	Choose and Interpret blood reports in Cardiac illness			Y	Bedside, SGD	Logbook entry			
23.13.1	List blood tests relevant for the cardiac diseases.			Y	Bedside, Skillslab	vivavoce			
23.13.2	Interpret the blood test reports for the cardiac disease.			Y	Bedside, Skillslab	vivavoce, OSCE			

PE 23.14	Interpret Pediatric ECG			Y	Bedside, Skillslab	Logbook entry			
23.14.2	Interpret few common ECG abnormalities in children.			Y	SGD, skilllab	OSCE, vivavoce			
PE 23.15	Use the ECHO reports in management of cases			Y	Bedside	Logbook entry		Cardio	
23.15.1	Use the ECHO reports in management of cases.			Y	Bedside, Skillslab	Logbook entry			
PE 23.16	Discuss the indications and limitations of Cardiac catheterization			Y	Lecture/ SGD	Written/ Viva Voce			
23.16.1	Enumerate the indications of Cardiac catheterization.			Y	Lecture/SGD	Written/ VivaVoce			
23.16.2	List the limitations of Cardiac catheterization.			Y	Lecture/SGD	Written/ Viva Voce			
PE 23.17	Enumerate some common cardiac surgeries like BT shunt, Potts and Waterston's and corrective surgeries			Y	Lecture/ SGD	Written/ Viva Voce			
23.17.1	Enumerate common cardiac surgeries and their indications in children.			Y	Lecture/SGD	Written/ VivaVoce			

PE23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter			Y	SGD, Bedside, Skillslab	Document in Logbook, Direct observation, OSCE		AETCOM	
23.18.1	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter.			Y	Bedside, Skillslab	Direct observation, OSCE		AETCOM	
23.18.2	Demonstrate empathy while dealing with parents of children with cardiac diseases in every contact.			Y	Bedside, Skillslab	Direct observation, OSCE		AETCOM	

Topic: Diarrhoeal diseases and Dehydration **Number of competencies: (17)** **Number of procedures that require certification: (0)**

3)									
PE 24.1	Discuss the etiopathogenesis, clinical presentation and management of diarrheal diseases in children.			Y	Lecture/SGD	Written / vivavoce		Path Micro	
24.1.1	Explain etiopathogenesis of Diarrheal diseases in children.			Y	Lecture/SGD	Written/ VivaVoce		Path Micro	
24.1.2	Classify Diarrheal disease based on duration and etiology.			Y	Lecture/SGD	Written/Viva Voce		Path Micro	
24.1.3	Describe symptoms and signs of Diarrheal disease in children.			Y	Lecture/SGD	Written/ VivaVoce			
24.1.4	Enumerate investigations required for Diarrheal disease in children.			Y	Lecture/SGD	Written/ VivaVoce		Path Micro	
24.1.5	Outline the treatment plan of Diarrheal disease in children.			Y	Lecture/SGD	Written/Viva Voce			

PE 24.2	Discuss the classification and clinical presentation of various types of diarrheal dehydration			Y	Lecture/SGD	Written/viva voce		Path, Micro	
24.2.1	Enumerate all the signs and symptoms of dehydration in children.			Y	Lecture/Small group activity	Written/VivaVoce			
24.2.2	Classify dehydration as per WHO guidelines.			Y	Lecture/SGD	Written/Viva Voce			
24.2.3	Enumerate the clinical features of dehydration of different severity.			Y	Lecture/SGD	Written/VivaVoce			
PE 24.3	Discuss the physiological basis of ORT, types of ORS and the composition of various types of ORS in children			Y	Lecture/SGD	Written/viva voce			

24.3.1	Explain pathophysiology of fluid and electrolyte loss in Diarrheal diseases.			Y	Lecture/SGD	Written/Viva voce			
24.3.2	State the basis of fluid and electrolyte replacement in Diarrheal diseases.			Y	Lecture/SGD	Written/Viva voce			
24.3.3	Recall composition of WHO standard ORS.			Y	Lecture/SGD	Written/Viva voce			
24.3.4	Recall composition of other type of ORS viz ResoMal, Low osmolarity ORS.			Y	Lecture/SGD	Written/Viva voce			
PE 24.4	Discuss the types of fluids used in Pediatric diarrheal diseases and their composition			Y	Lecture/SGD	Written/viva voce			
24.4.1	Enumerate the types of fluids used in management of dehydration in children.			Y	LectureSGD	Written/Viva voce			
24.4.2	Describe the composition of Ringer lactate and Normal saline and rationale of their use in correction of dehydration.			Y	LectureSGD	Written/Viva voce			

PE 24.5	Discuss the role of antibiotics, antispasmodics, antisecretory drugs, probiotics, antiemetics in acute diarrheal diseases			Y	Lecture/SGD	Written / vivavoce		Phar m, Micro	
24.5.1	Describe harmful practices in treatment of diarrheal diseases in children			Y	LectureSGD	Written/Vivavoce			
24.5.2	Enumerate the indications of antibiotic therapy in diarrheal diseases in children			Y	LectureSGD	Written/Vivavoce			
24.5.3	Describe role, dosage and duration of Zinc therapy in Diarrheal diseases in children			Y	LectureSGD	Written/Vivavoce			
24.5.4	Interpret selective role of probiotics, antisecretory drugs, antispasmodics and antiemetics in acute diarrheal diseases.			Y	LectureSGD	Written/Vivavoce			

PE 24.6	Discuss the causes, clinical presentation and management of persistent diarrheal diseases in children			Y	Lecture/SGD	Written/vivavoce	Nil	Micro	
24.6.1	Define Persistent diarrheal diseases in children.			Y	LectureSGD	Written and vivavoce			
24.6.2	Enumerate causes of persistent diarrheal diseases in children.			Y	SGD	Written and vivavoce			
24.6.3	Describe clinical presentation in child with persistent diarrheal diseases.			Y	LectureSGD	Written and vivavoce			
24.6.4	List investigations in persistent diarrheal diseases.			Y	LectureSGD	Written and vivavoce			
24.6.5	Outline the treatment plan in persistent diarrheal diseases.			Y	LectureSGD	Written and vivavoce			

PE 24.7	Discuss the causes, clinical presentation and management of chronic diarrhoea in children.			Y	Lecture/SGD	Written/ viva voce			
24.7.1.	Define chronic diarrhoea in children.			Y	Lecture/SGD	Written/viva			
24.7.2	Enumerate the common causes of chronic diarrhoea in children.			Y	Lecture/SGD	Written and viva voce			
24.7.3	Describe symptoms and signs of chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			
24.7.4	Enumerate investigations for chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			
24.7.5	Outline treatment of chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			
24.7.6	Identify need of referral in a case of chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			
PE 24.8	Discuss the causes, clinical presentation and management of dysentery in children			Y	Lecture/SGD	Written/viva voce	Nil	Pharm, Micro	

24.8.1	Define dysentery in children.			Y	Lecture/SGD	Written, Viva voce			
24.8.2	Enumerate the etiological agents causing dysentery in children.			Y	Lecture/SGD	Written/viva		Micro	
24.8.3	Describe symptoms and signs of dysentery in children.			Y	Lecture/SGD	Written, Viva voce			
24.8.4	Outline the antibiotic therapy in children with dysentery.			Y	Lecture/SGD	Written/viva		Pharm	

PE 24.9	Elicit, document and present history pertaining to diarrheal diseases			Y	Bedside, Skilllab	Clinical case/OSCE/skill assessment			
24.9.1	Elicit history for diarrheal diseases in children.			Y	Bedside, Skilllab	Clinical case/OSCE/skill assessment			
24.9.2	Document gathered information in history sheet.			Y	Bedside, Skilllab	clinical case/skill assessment			
24.9.3	Present the history pertaining to diarrheal diseases.			Y	Bedside, Skilllab	Clinical case, skill assessment,			
PE 24.10	Assess for signs of dehydration, document and present			Y	Bedside, skilllab	Skill Assessment			
24.10.1	Assess clinical signs of dehydration.			Y	Bedside, skilllab	Skill Assessment			
24.10.2	Correlate clinical signs to severity of dehydration.			Y	Bedside, skilllab	Skill Assessment			
24.10.3	Document and present the signs of dehydration pertaining to diarrheal diseases.			Y	Bedside, skilllab	Skill Assessment			

PE 24.11	Apply the IMNCI guidelines in risk stratification of children with diarrheal dehydration and refer			Y	Bedside/skilllab	Document in Logbook			
24.11.1	Apply risk stratification of children with diarrheal dehydration as per IMNCI guidelines.			Y	Bedside/skilllab	Document in Logbook			

24.11.2	Identify need for referral in a case of diarrhoea and dehydration based on risk stratification as per IMNCI.			Y	Bedside, Skilllab	Document in Logbook			
PE 24.12.1	Perform and interpret stool examination including Hanging Drop			N	Bedside, Skilllab	Document in Logbook		Micro	
24.12.1	Prepare slide for stool examination under microscope.			N	Bedside, Skilllab	Document in Logbook			
24.12.2	Correctly identify pathogen after microscopic examination of stool.			N	Bedside, Skilllab	Document in Logbook			
24.12.3	Correctly perform hanging drop preparation from stool sample given.			N	Bedside, Skilllab	Document in Logbook			
PE 24.13	Interpret RFT and electrolyte report			Y	Bedside/skilllab / SGD	Document in Logbook			
24.13.1	Interpret the given reports for values of urea, creatinine, sodium and potassium.			Y	Bedside/skilllab/SGD	Document in Logbook			
PE 24.14	Plan fluid management as per the WHO criteria			Y	Bedside, Small group activity	Skilllab			
24.14.1	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan A, for a given age and weight of a child.			Y	Bedside, Small group activity	Skilllab			
24.14.2	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan B, for a given age and weight of a child.			Y	Bedside, Small group activity	Skilllab			

24.14.3	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan C for age and weight of a child.			Y	Bedside, Small group activity	Skill lab			
PE 24.15	Perform NG tube insertion in a manikin			Y	DOAP session	Document in Logbook	2		
24.15.1	Identify size of nasogastric tube as per age of child.			Y	DOAP session	Document in Logbook	2		
24.15.2	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin.			Y	DOAP session	Document in Logbook	2		
24.15.3	Correctly measure the length of NG tube to be inserted.			Y	DOAP session	Document in Logbook	2		
24.15.4	Insert the tube and check its position.			Y	DOAP session	Document in Logbook	2		
24.15.5	Demonstrate all the steps to check correct position of NG tube and fix NG tube.			Y	DOAP session	Document in Logbook	2		
PE 24.16	Perform IV cannulation in a model			Y	DOAP session	Document in Logbook	2		
24.16.1	Identify size of IV cannula as per age of child.			Y	DOAP session	Document in Logbook	2		
24.16.2	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe.			Y	DOAP session	Document in Logbook	2		
24.16.3	Demonstrate common sites for IV cannulation in child and preparation of site.			Y	DOAP session	Document in Logbook	2		

24.16.4	Correctly insert IV cannula in a model and look for free flow of blood.			Y	DOAP session	Document in Logbook	2		
24.16.5	Properly fix IV cannula and correctly demonstrate disposal of biomedical waste.			Y	DOAP session	Document in Logbook	2		
PE 24.17	Perform Interosseous insertion model			Y	DOAP session	Document in Logbook	2		
24.17.1	Identify site for intraosseous insertion in children based on landmarks.			Y	DOAP session	Document in Logbook	2		
24.17.2	Demonstrate all steps of infection control.			Y	DOAP session	Document in Logbook	2		
24.17.3	Insert the Intraosseous cannula and demonstrate how to check its proper insertion in model.			Y	DOAP session	Document in Logbook	2		
24.17.4	Fix Intraosseous cannula and correctly demonstrate disposal of biomedical waste.			Y	DOAP session	Document in Logbook	2		
Topic: Malabsorption Number of competencies: (1) Number of procedures that require certification: (NIL) 									
PE 25.1	Discuss the etiopathogenesis, clinical presentation and management of Malabsorption in Children and its causes including celiac disease.			N	Lecture/SGD	Written/ viva voce		Path	
25.1.1	Define malabsorption in children.			N	Lecture/SGD	Written/Viva Voce			
25.1.2	Enumerate causes of malabsorption in children.			N	Lecture/SGD	Written/Viva Voce			
25.1.3	Describe etiopathogenesis of malabsorption in children.			N	Lecture/SGD	Written/Viva Voce			

25.1.4	Describe common symptoms and signs of malabsorption in children.			N	Lecture/SGD	Written/Viva Voce			
25.1.5	Describe presentations of celiac disease in children.			N	Lecture/SGD	Written/Viva Voce			
25.1.6	Enumerate investigations in case of celiac disease.			N	Lecture/SGD	Written/Viva Voce			
25.1.7	Enumerate steps of treatment plan in case of celiac disease.			N	Lecture/SGD	Written/Viva Voce			
Topic: Acute and chronic liver disorders Number of competencies: (13) Number of procedures that require certification: (NIL) 									
PE26.1	Discuss the etiopathogenesis, clinical features and management of acute hepatitis in children			Y	Lecture/SGD	Written/Viva Voce		Path Micro	
26.1.1	Define Acute Hepatitis in children.			Y	Lecture/SGD	Written/Viva Voce			

26.1.2	Enumerate common causes of Acute Hepatitis in children.			Y	Lecture/SGD	Written/Viva Voce			
26.1.3	Describe pathogenesis of Acute Hepatitis in children.			Y	Lecture/SGD	Written/Viva Voce			
26.1.4	Describe the clinical features and complications of Acute Hepatitis.			Y	Lecture/SGD	Written/Viva Voce			
26.1.5	List the investigations required for diagnosis of Acute Hepatitis.			Y	Lecture/SGD	Written/Viva Voce			
26.1.6	Describe the management and prevention of Acute Hepatitis.			Y	Lecture/SGD	Written/Viva Voce			
PE 26.2	Discuss the etiopathogenesis, clinical features and management of Fulminant Hepatic Failure in children			Y	Lecture/SGD	Written/Viva Voce		Path Micro	
26.2.1	Define Fulminant Hepatic Failure in Children.			Y	Lecture/SGD	Written/Viva Voce			
26.2.2	Enumerate the factors which precipitate Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.3	Describe the pathogenesis of Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.4	Describe the clinical features of Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.5	Enumerate the investigations for a child with Fulminant Hepatic Failure.			Y	Lecture/Small group activity	Written/Viva Voce			
26.2.6	Describe the management of Fulminant Hepatic Failure.			Y	Lecture/Small group activity	Written/Viva Voce			

PE 26.3	Discuss the etiopathogenesis, clinical features and management of chronic liver diseases in children			Y	Lecture/ SGD	Written/ Viva voce		Path Micro	
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26.3.1	Define Chronic Liver Disease in children.			Y	Lecture/SGD	Written/Viva voce			
26.3.2	Enumerate the causes of chronic liver diseases in children.			Y	Lecture/SGD	Written/Viva voce			
26.3.3	Discuss the pathogenesis of common chronic Liver Diseases.			Y	Lecture/SGD	Written/Viva voce			
26.3.4	Describe the clinical features of chronic liver disease.			Y	Lecture/SGD	Written/Viva voce			

26.3.5	Enumerate the investigations for diagnosis of Chronic Liver Disease.			Y	Lecture/SGD	Written/Viva voce			
26.3.6	Describe the management of Chronic liver disease.			Y	Lecture/SGD	Written/Viva voce			
PE 26.4	Discuss the etiopathogenesis, clinical features and management of Portal Hypertension in children			Y	Lecture/SGD	Written/Viva voce		Path	
26.4.1	Define Portal Hypertension in children.			Y	Lecture/SGD	Written/Viva voce			
26.4.2	Classify different types of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.3	Enumerate the causes of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.4	Explain the pathogenesis of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.5	Describe the clinical features of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.6	Outline the management of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
PE 26.5	Elicit document and present the history related to diseases of Gastrointestinal system			Y	Bedside, Skills Lab	Skills station/bedside/OSCE			
26.5.1	Elicit the history for diseases of Gastrointestinal system.			Y	Bedside, Skills Lab	Skills station/bedside/OSCE			
26.5.2	Document the history.			Y	Bedside, Skills Lab	Skills station			
26.5.3	Present the history related to Gastrointestinal system.			Y	Bedside, Skills Lab	Skills station/bedside			

PE 26.6	Identify external markers for Gland Liver disorders e.g. Jaundice, Pallor, Gynecomastia, Spider angioma, Palmar erythema, Ichthyosis, Caput			Y	Bedside, Skills Lab	Skill Assessment/OSCE			
	medusa, Clubbing, Failing to thrive, Vitamin A and D deficiency								
26.6.1	Detect Jaundice, pallor, Gynecomastia, Spider angioma, clubbing, Caput medusa, Ichthyosis and failure to thrive, signs of vitamin deficiency.			Y	Bedside, Skills Lab	Skill Assessment/OSCE			

PE26.7	Perform examination of the abdomen, demonstrate organomegaly, ascites etc.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.1	Perform an examination of the abdomen in children of different ages.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.2	Detect organomegaly on abdominal examination giving details of the affected organ/s.			Y	Bedside clinic, Skills Lab	Bedside/skill lab/OSCE			
26.7.3	Examine for ascites in children.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.4	Examine for other palpable masses in abdomen.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE 26.8	Analyze symptoms and interpret physical signs to make a provisional/differential diagnosis			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.1	Analyze the symptoms in a child with gastrointestinal disorder.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.2	Interpret the physical signs in a child with gastrointestinal disorder.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.3	Formulate a provisional and differential diagnosis related to clinical presentation.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE26.9	Interpret Liver Function Tests, viral markers, Ultrasound sonogram report			Y	Bedside/skill lab	Bedside/OSCE		Path Biochemistry	
26.9.1	Interpret the given reports of liver function tests.			Y	Bedside/skill lab	Bedside/OSCE			

26.9.2	Interpret the viral markers related to viral hepatitis.			Y	Bedside/skill lab	Bedside/OSCE			
26.9.3	Interpret the given report of abdominal/liver Ultrasonography.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE 26.10	Demonstrate the technique of liver biopsy in a simulated environment			Y	DOAP	Document in Logbook			
26.10.1	Demonstrate the technique of liver biopsy in a simulated environment.			Y	DOAP	Document in Logbook			
PE 26.11	Enumerate the indications for Upper Glendoscopy			Y	Lecture/SGD	Written, Viva voce			
26.11.1	Enumerate the indications of upper Glendoscopy in children.			Y	Lecture/SGD	Written, Viva voce			

PE26.12	Discuss the prevention of HepB infection- Universal precautions and Immunization			Y	Lecture/SGD	Written, Viva voce		Micro	
26.12.1	Enumerate different preventive measures against the hepatitis B virus infection.			Y	Lecture/SGD	Written, Viva voce			
26.12.2	List universal precautions.			Y	Lecture/SGD	Written, Viva voce			
26.12.3	Describe the immunization schedule of Hepatitis B.			Y	Lecture/SGD	Written/ Viva voce			
PE 26.13	Counsel and educate patients and their family appropriately on liver diseases			Y	Bedside clinic, Skills Lab	Document in Logbook			
26.13.1	Counsel the family on liver disease in the child.			Y	Bedside clinic Skills Lab	Document in Logbook			
26.13.2	Educate the family about prevention of liver disease.			Y	Bedside clinic, Skills Lab	Document in Logbook			
Topic: Pediatric Emergencies – Common Pediatric Emergencies									
				Number of competencies: (35)			Number of procedures that require certification: (10)		
PE 27.1	List the common causes of morbidity and mortality in the under five children			Y	Lecture/SGD	Written/ viva-voce			
27.1.1	Enumerate the common causes of morbidity and mortality in under five children.			Y	Lecture/SGD	Written/ viva			
PE 27.2	Describe the etiopathogenesis, clinical approach and management of cardiorespiratory arrest in children			Y	Lecture/SGD	Written/ Viva voce			
27.2.1	Enumerate the causes of cardiorespiratory arrest in children.			Y	Lecture/SGD	Written/ Viva voce			
27.2.2	Discuss the pathogenesis of respiratory and cardiac failure leading to cardiorespiratory arrest.			Y	Lecture/SGD	Written/ Viva voce			

27.2.3	Describe the clinical approach to a child in cardiorespiratory arrest.			Y	Lecture/SGD	Written/Viva voce			
27.2.4	Describe the management of a child in cardiorespiratory arrest.			Y	Lecture/SGD	Written/Viva voce			
PE 27.3	Describe the aetiology of respiratory distress in children			Y	Lecture/SGD	Written/Viva voce			
27.3.1	Enumerate the causes of respiratory distress in children of different age groups.			Y	Lecture/SGD	Written/Viva voce			

27.3.2	Explain the pathogenesis of respiratory distress in children.			Y	Lecture/SGD	Written/Viva voce			
PE 27.4	Describe the clinical approach and management of respiratory distress in children			Y	Lecture/SGD	Written/Viva voce			
27.4.1	Discuss the clinical approach based on history, examination and investigational algorithm of children of different ages presenting with respiratory distress.			Y	Lecture/SGD	Written/Viva voce			
27.4.2	Outline the treatment in children with respiratory distress.			Y	Lecture/SGD	Written/Viva voce			
PE 27.5	Describe the etiology, pathogenesis, clinical approach and management of Shock in children			Y	Lecture/SGD	Written/Viva voce			
27.5.1	Define shock including different types of shock.			Y	Lecture/SGD	Written/Viva voce			
27.5.2	Enumerate the causes leading to different types of shock viz hypovolemic, septic and cardiogenic shock.			Y	Lecture/SGD	Written/Viva voce			
27.5.3	Explain pathogenesis of different types of shock in children.			Y	Lecture/SGD	Written/Viva voce			
27.5.4	Describe clinical approach to identify different types of shock.			Y	Lecture/SGD	Written/Viva voce			
27.5.4	Outline an algorithm approach to the management of different types of shock in children.			Y	Lecture/SGD	Written/Viva voce			
PE 27.6	Describe the etiology, pathogenesis, clinical approach and management of Status epilepticus			Y	Lecture/SGD	Written/Viva voce			
27.6.1	Define Status epilepticus.			Y	Lecture/SGD	Written/Viva voce			

27.6.2	Discuss the pathogenesis of status epilepticus in children.			Y	Lecture/SGD	Written/ Vivavoce			
27.6.3	Discuss the underlying diagnosis based on clinical history, examination and investigational algorithm in a child with status epilepticus.			Y	Lecture/SGD	Written/ Vivavoce			
27.6.4	Outline the treatment algorithm as per recent guideline in a child with status epilepticus.			Y	Lecture/SGD	Written/ Vivavoce			
PE 27.7	Describe the etiology, pathogenesis, clinical approach and management of an unconscious child			Y	Lecture,SGD	Written/Viv a voce			

PE27.7.1	Define different levels of consciousness in children.			Y	Lecture/SGD	Written/Viva voce			
27.7.2	Enumerate the causes of altered sensorium/coma in children.			Y	Lecture/SGD	Written/Viva voce			
27.7.3	Explain pathogenesis of altered sensorium/coma.			Y	Lecture/SGD	Written/Viva voce			
27.7.4	Describe the clinical approach based on clinical history, examination in a child with altered sensorium/coma.			Y	Lecture/SGD	Written/Viva voce			
27.7.5	List the investigations as guided by the clinical assessment of the patient.			Y	Lecture/SGD	Written/Viva voce			
27.7.4	Outline the treatment plan for a comatose child.			Y	Lecture/SGD	Written/Viva voce			
PE 27.8	Discuss the common types, clinical presentation and management of poisoning in children			Y	Lecture, Small group discussion	Written/Viva voce			
27.8.1	Enumerate the common poisoning in children.			Y	Lecture/SGD	Written/Viva voce			
27.8.1	Elaborate on the clinical signs and symptoms of common poisoning in children (kerosene, organophosphorus, paracetamol and corrosive).			Y	Lecture/SGD	Written/Viva voce			
27.8.1	Discuss the management of common poisoning in children (kerosene, organophosphorus, paracetamol and corrosive).			Y	Lecture/SGD	Written/Viva voce			
PE 27.9	Discuss oxygen therapy, in Pediatric emergencies and modes of administration			Y	Lecture/SGD	Written/Viva voce			
27.9.1	Enumerate the indications of oxygen therapy in pediatric emergencies.			Y	Lecture/SGD	Written/Viva voce			

27.9.2	Describedifferentmodalitiesforoxygendelivery.			Y	Lecture/SGD	Written/ Vivavoce			
PE 27.10	ObservethevariousmethodsofadministeringOxygen			Y	Demonstration	Documentin Logbook			
27.10.1	Observedandnotedvariousmethodsofoxygendelivery.			Y	Demonstration Bedside	Document inLogbook			
27.10.2	Monitoroxygen deliveryinapatient.			Y	Demonstration Bedside	Document inLogbook			

PE 27.11	Explain the need and process of triage of sick children brought to health facility			Y	Lecture,SGD	Written/Viva voce			
27.11.1	Discuss the need of triage of sick child especially in resource limited setting.			Y	Lecture,SGD	Written/Viva voce			
27.11.2	Explain the process of triage of sick children.			Y	Lecture,SGD	Written/Viva voce			
PE 27.12	Enumerate emergency signs and priority signs			Y	Lecture,SGD	Written/Viva voce			
27.12.1	Enumerate various emergency and priority signs in a sick child.			Y	Lecture,SGD,	Written/Viva voce			
PE 27.13	List the sequential approach of assessment of emergency and priority signs			Y	Lecture,SGD	Written/Viva voce			
27.13.1	Discuss the systematic approach for assessing a sick child based on emergency and priority signs as per WHO-ETAT guidelines.			Y	Lecture,SGD	Written/Viva voce			
PE 27.14	Assess emergency signs and prioritize			Y	DOAP session, Skills lab	Skills Assessment			
27.14.1	Assess and recognize emergency signs in a sick child and prioritize treatment.			Y	Bedside, skill lab	Skill assessment			
PE 27.15	Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting			Y	DOAP session, Skills lab	Skills Assessment			
27.15.1	Recognize signs of severe respiratory distress by assessing cyanosis, severe chest indrawing and grunting.			Y	Bedside, DOAP session	skill assessment, OSCE with video	3		

PE 27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment			Y	DOAP session, Skills Lab	Skills Assessment	3		
27.16.1	Demonstrate the methods of opening the airway in infants and children by head tilt-chin lift and jaw thrust methods on mannequin.			Y	BL training session using mannequin	OSCE using mannequin	3		
PE 27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate			Y	DOAP session, Skills Lab	Skills Assessment	3		

27.17.1	Demonstrate the appropriate use of various oxygen delivery systems in different clinical scenarios along with recommended flow rate of oxygen			Y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
PE 27.18	Assess airway and breathing; perform assisted ventilation by Bag and mask in a simulated environment			y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
27.18.1	Demonstrate assisted ventilation using bag and mask in a simulated environment			y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
PE 27.19	Check for signs of shock i.e. pulse, Blood pressure, CRT			y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.1	Check pulse as a sign of shock.			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.2	Measure blood pressure to check for shock.			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.3	Assess CRT for checking for shock.			Y	DOAP session, Skills Lab	Skill assessment	3		
PE 27.20	Secure an IV access in a simulated environment			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.20.1	Collect all the necessary items for IV access.			Y	DOAP session, Skills Lab	Skill assessment	3		
27.20.2	Identify an appropriate site and vein.			Y	DOAP session, Skills	Skill assessment	3		

					Lab				
27.20.3	ObtainIVaccessinthemanikin.			Y	DOAPsession,S killsLab	Skillassessment	3		
27.20.4	SecuretheIVlineappropriately.			Y	DOAPsession,S killsLab	Skillassessment	3		
27.20.5	Maintainasepsisthroughouttheprocedure.			Y	DOAPsession,Skill s Lab	Skillassessment	3		

PE 27.21	Choose the type of fluid and calculate the fluid requirement in shock			Y	DOAP session, Skills Lab	Skill assessment	3		
27.21.1	Choose appropriate fluid according to different types of shock.			Y	DOAP session, Skills Lab	Skill assessment	3		
27.21.2	Calculate the fluid for managing different types of shock at different age/size of the child.			Y	DOAP session, Skills Lab	Skill assessment	3		
PE 27.22	Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma - Position an unconscious child - Position a child with suspected trauma - Administer IV/per rectal Diazepam for a convulsing child in a simulated environment			Y	DOAP session, Skills Lab	Skill assessment	3		
27.22.1	Assess level of consciousness			Y	DOAP session, Skills Lab	Skill assessment	3		
27.22.2	Provide emergency treatment to a child with convulsions/ coma including ABCDE			Y	DOAP session, Skills Lab	Skill assessment	3		
27.22.3	Administer IV/per rectal Diazepam for a convulsing child in a simulated environment			Y	DOAP session, Skills Lab	Skill assessment	3		
27.22.4	Position an unconscious child appropriately.			Y	DOAP session, Skills Lab	Skill assessment	3		
27.22.5	Position a child with suspected trauma keeping the necessary precautions.			Y	DOAP session, Skills Lab	Skill assessment	3		
PE 27.23	Assess signs of severe dehydration			Y	DOAP session, Skills Lab	Skill assessment	3		
27.23.1	Identify signs of severe dehydration			Y	DOAP session, Skills Lab	Skill assessment	3		

PE 27.24	Monitoring and maintaining temperature: define hypothermia. Describe the clinical features, complications and management of H			Y	Lecture/SGD	Written/Vivavoce			
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	ypothermia								
27.24.1	Define Hypothermia.			Y	Lecture/SGD	Written/Viva voce			
27.24.2	Describe clinical features of Hypothermia.			Y	Lecture/SGD	Written/Vivavoce			

27.24.3	Enumerate complications of hypothermia.			Y	Lecture/SGD	Written/ Viva voce			
27.24.4	Describe management of Hypothermia.			Y	Lecture/SGD	Written/Viva voce			
PE 27.25	Describe the advantages and correct method of keeping an infant warm by skin to skin contact			Y	Lecture/SGD	Written/Viva voce			
27.25.1	Describe the correct method of keeping infant warm by skin to skin contact			Y	Lecture/SGD	Written/ Viva voce			
27.25.2	Enumerate the advantages of providing warmth by skin to skin contact			Y	Lecture/SGD	Written/Viva voce			
PE 27.26	Describe the environmental measures to maintain temperature			Y	Lecture/SGD	Written/Viva voce			
27.26.1	Describe the environmental measures to maintain temperature in sick children.			Y	Lecture/SGD	Written/ Viva voce			
PE 27.27	Assess for hypothermia and maintain temperature			Y	Skills Lab	Skill assessment			
27.27.1	Assess a sick child for hypothermia.			Y	Skills Lab	Skill assessment			
27.27.2	Apply measures to maintain temperature in sick children.			Y	Skills Lab	Skill assessment			
PE 27.28	Provide BLS for children in manikin			Y	Skills Lab	Skill assessment	3		
27.28.1	Perform all the steps of BLS in children.			Y	Skills Lab	Skill assessment	3		
PE 27.29	Discuss the common causes, clinical presentation, medico-legal implications of abuse			Y	Lecture/SGD	Written/Viva voce			

27.29.1	Enumerate common causes of child abuse.			Y	Lecture/SGD	Written/Viva voce			
27.29.2	Describe clinical presentations of child abuse.			Y	Lecture/SGD	Written/			
						Vivavoce			
27.29.3	Discuss medicolegal implications of child abuse.			Y	Lecture/SGD	Written/Viva voce			
PE 27.30	Demonstrate confidentiality with regard to abuse			Y	Skill lab, simulated patients	Skill assessment			
27.30.1	Maintains confidentiality with regard to child abuse in a simulated setting			Y	Skill lab, simulated patients	Skill assessment			

PE 27.31	Assess child for signs of abuse			Y	DOAP, Skills Lab	Logbook,			
27.31.1	Elicit appropriate history for suspected child abuse.			Y	DOAP, Skills Lab	Logbook			
27.31.2	Examine the child for evidence of child abuse.			Y	DOAP, Skills Lab	Logbook			
27.31.3	Based on history and examination make a provisional diagnosis of specific type of child abuse			Y	DOAP, Skills Lab	Logbook			
PE 27.32	Counsel parents of dangerously ill/terminally ill child to break a bad news			Y	DOAP, Skills Lab	Logbook,			
27.32.1	Communicate with empathy and counsel parents of dangerously ill/terminally ill child to break a bad news using an appropriate technique			Y	DOAP, Skills Lab	Logbook			
27.32.2	Answer the queries/questions of parents appropriately			Y	DOAP, Skills Lab	Logbook			
27.32.3	Provide emotional support to parents			Y	DOAP, Skills Lab	Logbook			
PE 27.33	Obtain Informed Consent			Y	DOAP, Skills Lab	Logbook,			
27.33.1	Provide adequate information as per the need in a language understood by the consent giver			Y	DOAP, Skills Lab	Logbook			
27.33.2	Answer queries/questions appropriately			Y	DOAP, Skills Lab	Logbook			
27.33.3	Obtain the consent on an appropriated document.			Y	DOAP, Skills Lab	Logbook			
PE 27.34	Willing to be a part of the ER team			Y	DOAP, Skills Lab	Logbook,			
27.34.1	Takes an active part in the ER team performing the assigned role and responsibilities			Y	DOAP, Skills Lab	Logbook			

PE 27.35	Attendstoemergencycalls promptly			Y	DOAP,SkillsLab	Logbook,			
27.35.1	Respondspromptlytoemergencycalls			Y	DOAP,SkillsLab	Logbook,			

Topic:Respiratorysystem		Numberofcompetencies:(20)			Numberofprocedureshatrequirecertification:(NIL)				
PE28.1	Discuss the etiopathogenesis, clinical features andmanagementofNasopharyngitis			Y	Lecture,SGD	Written/Vivavoce		ENT	
28.1.1	EnumeratetheetiologifactorsforNasopharyngiti s.			Y	lectur e,SGD	Written/Vivavoce			
28.1.2	DescribethelclinicalfeaturesofNasopharyngitis			Y	lecture, SGD	Written/Viva voce			
28.1.3	OutlinethemanagementofNasopharyngitis			Y	lectur e,SGD	Written/Vivavoce			
PE28.2	DiscusstheetiopathogenesisofPharyngotonsill itis			Y	Lecture,SGD	Written/Viv a voce		ENT	
28.2.1	EnumeratetheetiologifactorscausingPharyngotonsillitis.			Y	lecture,SGD	Written/Vivavoce			
PE28.3	Discusstheclinicalfeaturesandmanagementof Pharyngotonsillitis			Y	Lecture,SGD	Written/Viv a voce		ENT	
28.3.1	DescribethelclinicalfeaturesofPharyngotonsillitis.			Y	lectur e,SGD	Written/V ivavoce			
28.3.2	OutlinethemanagementofacutePharyngotonsillitis.			Y	lectur e,SGD	Writte n/Viva voce			
PE28.4	Discusstheetiopathogenesis,clinicalfeaturesan d managementofAcuteOtitisMedia(AOM)			Y	Lecture,SGD	Written/Viv a voce		ENT	

28.4.1	List the common etiologic agent causing Acute Otitis Media (AOM)			Y	lecture, SGD	Written/Viva voce			
28.4.2	Discuss the pathogenesis of Acute Otitis Media (AOM)			Y	lecture, SGD	Written/Viva voce			
28.4.3	Enumerate the clinical features of Acute Otitis Media (AOM), recurrent AOM and OM with effusion			Y	lecture, SGD	Written/Viva voce			
28.4.4	Outline the management of Acute Otitis Media (AOM), recurrent AOM and OM with effusion			Y	lecture, SGD	Written/Viva voce			
PE28.5	Discuss the etiopathogenesis, clinical features and management of Epiglottitis			Y	Lecture, SGD	Written/Viva voce		ENT	
28.5.1	Describe the etiopathogenesis of Epiglottitis			Y	Lecture, SGD	Written/Viva voce			
28.5.2	Enumerate the clinical features of Epiglottitis			Y	Lecture, SGD	Written/Viva voce			

28.5.3	Outline the management of Epiglottitis including acute care			Y	Lecture,SGD	Written/ Vivavoce			
PE28.6	Discuss the etiopathogenesis, clinical features and management of Acute laryngo tracheo bronchitis			Y	Lecture, Small group Discussion	Written/ Vivavoce		ENT	
28.6.1	Describe the etiopathogenesis of Acute laryngo tracheo-bronchitis (croup)			Y	Lecture,SGD	Written/ Vivavoce			
28.6.2	Describe the clinical features of Acute laryngo-tracheo-bronchitis			Y	Lecture,SGD	Written/ Vivavoce			
28.6.3	Outline the management of Acute laryngo-tracheo-bronchitis.			Y	Lecture,SGD	Written/Viva voce			
PE28.7	Discuss the etiology, clinical features and management of Stridor in children			Y	Lecture,SGD	Written/Viva a voce		ENT	
28.7.1	Enumerate the etiology of stridor in children			Y	lecture, SGD	Written/ Vivavoce			
28.7.2	Describe the clinical features of stridor in children			Y	Lecture,SGD	Written/ Vivavoce			
28.7.3	Discuss the differential diagnosis of stridor			Y	Lecture,SGD	Written/Viva voce			
28.7.4	Outline the management of stridor.			Y	Lecture,SGD	Written/ Vivavoce			
PE28.8	Discuss the types, clinical presentation, and management of foreign body aspiration in infants and children			Y	Lecture,SGD	Written/ Vivavoce		ENT	
28.8.1	List the objects commonly aspirated by children			Y	Lecture,SGD	Written/Viva voce			
28.8.2	Enumerate the clinical features of FB aspiration			Y	Lecture,SGD	Written/ Vivavoce			

28.8.3	Describe 'Heimlich maneuver' for a child and '5 backslaps			Y	Lecture, SGD	Written/Viva voce			
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	and 5 chest thrust' for an infant								
28.8.5	Outline the management of FB aspiration			Y	Lecture, SGD	Written/Viva voce			

PE28.9	Elicit, document and present age appropriate history of a child with upper respiratory problem including Stridor			Y	Bedside, skilllab	Skill Assessment		ENT	
28.9.1	Elicit detailed history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.9.2	Document the history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	Logbook			
28.9.3	Present the history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	Logbook			
PE28.10	Perform otoscopic examination of the ear			Y	DOAP session	Skills Assessment		ENT	
28.10.1	Counsel the parent and child to prepare for otoscopic examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.10.2	Position the child and perform otoscopic examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
PE28.11	Perform throat examination using tongue depressor			Y	DOAP session	Skills Assessment		ENT	
28.11.1	Counsel the parent and child to prepare for throat examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.11.2	Position the child and perform throat examination using a tongue depressor			Y	Bedside, skilllab	OSCE/Skills Assessment			
PE28.12	Perform examination of the nose			Y	DOAP session	Skills Assessment		ENT	
28.12.1	Position the child and perform nose examination			Y	Bedside, skilllab	OSCE/Skills Assessment			

PE 28.13	Analyze the clinical symptoms and interpret physical findings and make a provisional/differential diagnosis in a child with ENT symptoms			Y	Bedside	Skills Assessment			
28.13.1	Discuss the provisional/differential diagnosis in a child with ENT symptoms after analysis of history and physical examination.			Y	Bedside	Skills Assessment/OSCE/Clinical Case			
PE 28.14	Develop a treatment plan and document appropriately in a child with upper respiratory symptoms			Y	Bedside	Skills Assessment			

28.14.1	Plantreatmentinachildwithupperrespiratorysymptoms			Y	Bedside	OSCE/SkillsAssessment			
28.14.2	Prescribesupportiveandsymptomatictreatmentforupperrespiratorysymptoms			Y	Bedside	OSCE/SkillsAssessment			
PE 28.15	StratifyriskinchildrenwithstridorusingIMNCIguidelines			Y	Bedside	Logbookdocumentation			
28.15.1	ClassifythechildwithstridorasperIMNCIguidelines			Y	Bedside	Logbookdocumentation/clinicalcase			
PE 28.16	Interpretbloodtestsrelevanttoupperrespiratory problems			N	Bedside,SGD	Logbook			
28.16.1	Planandinterprettherelevantbloodtestinapatientwithupperrespiratory problems			N	Bedside,SGD	Logbook			
PE 28.17	Interpret X-ray of the paranasal sinuses and mastoid;and /or use, written report in case of aspiration and lowerrespiratorytractinfection,understandthesignificance ofhymicshadow inpediatricchestX-rays			Y	Bedside,SGD	SkillsAssessment		ENT,Radio D	
28.17.1	InterprettheX-rayofparanasalsinusesandmastoidforvariouscommon diseases			Y	Bedside,SGD	OSCE/SkillsAssessment			

28.17.2	Interpret the chest X-ray for identifying suspected FB aspiration and lower respiratory tract infection			Y	Bedside,SGD	Skills Assessment/OSCE			
28.17.3	Identify thymic shadow in chest X-ray.			Y	Bedside,SGD	Skills Assessment/OSCE			
28.17.4	Plan the treatment after interpreting X-ray and/or its written report.			Y	Bedside,SGD	Skills Assessment/OSCE			
PE 28.18	Describe the etiology, diagnosis, clinical features, management and prevention of lower respiratory infections including bronchiolitis, wheeze associated LRTI pneumonia and empyema			Y	SGD, Lecture	Written, Viva voce			
28.18.1	Enumerate the common organisms causing LRTI			Y	Lecture,SGD,	Written/Viva voce			
28.18.2	Discuss the pathogenesis of LRTI including bronchiolitis, WALRI, pneumonia and empyema.			Y	Lecture,SGD,	Written/Viva voce			
28.18.3	Describe the clinical features of LRTI including bronchiolitis, WALRI, pneumonia and empyema			Y	Lecture,SGD,	Written/Viva voce			
28.18.4	Discuss the diagnosis of LRTI including bronchiolitis, WALRI, pneumonia and empyema after taking relevant clinical history and examination.			Y	Lecture,SGD,	Written/Viva voce			
28.18.5	Describe relevant investigations in a child with LRI			Y	Lecture,SGD,	Written, Viva voce			
28.18.6	Discuss the treatment of LRTI including bronchiolitis, WALRI, pneumonia and empyema			Y	Lecture,SGD,	Written, Viva voce			

28.18.7	Discuss the preventive strategies for LRTI			Y	Lecture,SGD,	Viva voce,SA Q/MCQ			
PE 28.19	Describe the etiology, diagnosis, clinical features, management and prevention of			Y	Lecture,SGD	Written/ Vivavoce		Resp Med	

	asthma in children								
28.19.1	Define Asthma in children as per ATM guidelines.			Y	Lecture,SGD,	Written, Viva voce			
28.19.2	Discuss the pathophysiology of asthma in children.			Y	Lecture,SGD,	Written test, Viva voce			
28.19.3	Describe the clinical features of asthma			Y	Lecture,SGD,	Written test, Viva voce			
28.19.4	Discuss the diagnosis of asthma based on relevant clinical history, family history and physical examination.			Y	Lecture,SGD,	Vivavoce			
28.19.5	Enumerate the investigations in a child with Asthma			Y	Lecture,SGD,	Vivavoce			
28.19.6	List the drugs used for treating asthma in children			Y	Lecture,SGD,	Written test, Viva voce			
28.19.7	Describe the treatment of acute attack of asthma			Y	Lecture,SGD,	Written test, Vivavoce			
28.19.8	Describe the stepwise approach of preventive therapy for asthma as per ATM/GINA guidelines			Y	Lecture,SGD,	Written test, Viva voce			
28.19.9	Describe various drug delivery devices for asthma			Y	Lecture,SGD	Written, Vivavoce			

28.19.10	Enumerate asthma triggers			Y	Lecture,SGD,	Written, Viva voce			
PE 28.20	Counsel the child with asthma on the correct use of inhalers in a simulated environment			Y	Bedside, SGD, Lecture	Skills Assessment Written Viva voce		Resp Med	
28.20.1	Counsel the child and the caretaker for correct use of MDI and spacer at initiation of therapy and on follow up			Y	Skill lab, clinics, lecture	OSCE			

Topic: Anemia and other Hemato-oncologic disorders in Children									
				Number of competencies: (20)		Number of procedures that require certification: (NIL)			
PE 29.1	Discuss the etiopathogenesis, clinical features, classification and approach to a child with anemia			Y	Lecture, SGD	Written, viva-voce		Path, Physio	
29.1.1	Define anemia as per WHO GUIDELINES			Y	Lecture, SGD	Written, viva-voce			
29.1.2	Enumerate the causes of anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.3	Describe the pathogenesis of anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.4	Enumerate clinical features of anemia			Y	Lecture, SGD	Written, viva-voce			
29.1.5	Classify Anemia according to red cell morphology			Y	Lecture, SGD	Written, viva-voce			
29.1.6	Describe the approach to a child with Anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.7	List the investigations in a child with anemia.			Y	Lecture, SGD	Written, viva-voce			
PE 29.2	Discuss the etiopathogenesis, clinical features and management of iron deficiency anemia.			Y	Lecture, SGD	Written/Viva-voce		Path, Physio	

29.2.1	Enumerate the causes of iron deficiency anemia in children.			Y	Lecture,SGD	Written, viva-voce			
29.2.2	Describe the pathogenesis of iron deficiency anemia.			Y	Lecture,SGD	Written, viva-voce			
29.2.3	Describe clinical features of iron deficiency anemia in children.			Y	Lecture,SGD	Written, viva-voce			
29.2.4	List the investigations in a child with iron deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.2.5	Describe the treatment of iron deficiency anemia in children.			Y	Lecture,SGD	Written, viva-voce			

PE 29.3	Discuss the etiopathogenesis, clinical features and management of Vitamin B-12, Folate deficiency anemia.			Y	Lecture,SGD	Written/Viva-voce		Path,Physio	
29.3.1	Enumerate the causes of vitamin B-12 and folic acid deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.2	Describe the pathogenesis of Vitamin B12 deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.3	Describe the pathogenesis of folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.4	Describe the clinical features of vitamin B-12 and Folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.5	Enumerate the investigations for a child of Vitamin B-12 and Folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.6	Describe the treatment for a child suffering from Vitamin B-12 and Folic acid deficiency.			Y	Lecture,SGD	Written, viva-voce			

PE29.4	Discuss the etiopathogenesis, clinical features and management of Hemolytic anemia, Thalassemia Major, Sickle cell anemia, Hereditary spherocytosis, Autoimmune hemolytic anemia and hemolytic uremic syndrome.			Y	Lecture,SGD	Written, viva-voce		Path,Physio	
29.4.1	Define Hemolytic Anemia.			Y	Lecture,SGD	Written, viva-voce			
29.4.2	Enumerate the causes of hemolytic anemia in children.			Y	Lecture,SGD	Written, viva-voce			
29.4.3	Describe the pathogenesis of different types of hemolytic anemia.			Y	Lecture,SGD	Written, viva-voce			
29.4.4	Describe the clinical features of hemolytic anemia, Thalassemia Major, Sickle cell anemia, Hereditary			Y	Lecture,SGD	Written, viva-voce			

	mia, Hereditary								
	spherocytosis, Auto-immune hemolytic anemia and hemolytic uremic syndrome								
29.4.5	List the investigations for diagnosis of hemolytic anemia.			Y	Lecture,SGD	Written, viva-voce			
29.4.6	Differentiate various types of hemolytic anemia based on clinical features and investigations.			Y	Lecture,SGD	Written, viva-voce			
29.4.7	Describe treatment of hemolytic anemia Thalassemia Major, Sickle cell anemia, Hereditary spherocytosis, Auto-immune hemolytic anemia and hemolytic uremic syndrome.			Y	Lecture,SGD	Written, viva-voce			

29.4.8	Describe the role of chelation therapy and recall the drugs, dosages and side-effects of the drugs.			Y	Lecture,SGD	Written, viva-voce			
PE29.5	Discuss the National Anemia Control Program.			Y	Lecture,SGD	Written, viva-voce		ComMed	
29.5.1	Describe National Anemia Control Program.			Y	Lecture,SGD	Written, viva-voce			
PE29.6	Discuss the cause of thrombocytopenia in children: describe the clinical features and management of idiopathic Thrombocytopenic Purpura.			Y	Lecture,SGD	Written, viva-voce		Path	
29.6.1	Define thrombocytopenia			Y	Lecture,SGD	Written, viva-voce			
29.6.2	Enumerate the causes of thrombocytopenia in children.			Y	Lecture,SGD	Written, viva-voce			
29.6.3	Describe the pathogenesis of ITP.			Y	Lecture,SGD	Written, viva-voce			
29.6.4	Describe the clinical features of ITP.			Y	Lecture,SGD	Written, viva-voce			

29.6.5	Outline the investigations of ITP			Y	Lecture,SGD	Written, viva-voce			
29.6.6	Outline the management of ITP.			Y	Lecture,SGD	Written, viva-voce			
PE29.7	Discuss the etiology, classification, pathogenesis and clinical features of Hemophilia in children.			Y	Lecture,SGD	Written, viva-voce		Path	
29.7.1	Describe the etiology of hemophilia.			Y	Lecture,SGD	Written, viva-voce			
29.7.2	Classify hemophilia.			Y	Lecture,SGD	Written, viva-voce			
29.7.3	Describe the pathogenesis of hemophilia.			Y	Lecture,SGD	Written, viva-voce			

29.7.4	Enumerate the clinical features of hemophilia.			Y	Lecture,SGD	Written, viva-voce			
PE29.8	Discuss the etiology, clinical presentation and management of Acute Lymphoblastic Leukemia in Children.			N	Lecture,SGD	Written, Viva-voce		Path	
29.8.1	State the etiologies of Acute Lymphoblastic Leukemia (ALL).			N	Lecture,SGD	Written, viva-voce			
29.8.2	Enumerate risk factors for childhood leukemia.			N	Lecture,SGD	Written, viva-voce			
29.8.3	Describe the clinical presentation of ALL.			N	Lecture,SGD	Written, viva-voce			
29.8.4	Outline the investigations for diagnosis of ALL.			N	Lecture,SGD	Written, viva-voce			
29.8.5	Outline the treatment for ALL.			N	Lecture,SGD	Written, viva-voce			
PE29.9	Discuss the etiology, clinical presentation and management of Lymphoma in children.			N	Lecture,SGD	Written, Viva - Voce		Path	
29.9.1	Define lymphoma.			N	Lecture,SGD	Written, viva-voce			

29.9.2	State the etiology of Lymphoma and its types.			N	Lecture,SGD	Written, viva-voce			
29.9.3	Describe the pathology of lymphomas.			N	Lecture,SGD	Written, viva-voce			
29.9.4	Recall the clinical features of Lymphomas.			N	Lecture,SGD	Written, viva-voce			
29.9.5	Outline the investigations (diagnostic workup) for Lymphomas.			N	Lecture,SGD	Written, viva-voce			

29.9.6	Enumerate the treatment modalities for Lymphomas.			N	Lecture, SGD	Written, viva-voce			
PE29.10	Elicit, document and present the history related to Hematology.			Y	Bedside, Skillslab	Skill Station			
29.10.1	Elicit the history related to a hematological disorder.			Y	Bedside, Skillslab	Skill Station			
29.10.2	Document the history.			Y	Bedside, Skillslab	Skill Station			
29.10.3	Present the history			Y	Bedside, Skillslab	Skill Station			
PE29.11	Identify external markers for hematological disorders e.g. Jaundice, Pallor, Petechiae, Purpura, Ecchymosis, Lymphadenopathy, bone tenderness, loss of weight, Mucosal and large joint bleed.			Y	Bedside, SkillsLab	Skill assessment			
29.11.1	Identify jaundice, pallor, petechial spots, purpura, ecchymosis, lymphadenopathy, bone tenderness, Mucosal and large joint bleed in a patient of hematological disorder.			Y	Bedside, SkillsLab	Skill assessment			
PE29.12	Perform examination of the abdomen, demonstrate Organomegaly.			Y	Bedside, SkillsLab.	Skill assessment			
29.12.1	Perform per abdomen examination.			Y	Bedside, SkillsLab	Skill assessment			

29.12.2	Demonstrate organomegaly in a child after abdominal examination.			Y	Bedside, SkillsLab	Skill assessment			
PE29.13	Analyze symptoms and interpret physical signs to make a provisional/differential diagnosis.			Y	Bedside, SkillsLab	Skill assessment			
29.13.1	Analyze symptoms related to hematological conditions.			Y	Bedside, SkillsLab	Skill assessment			

29.13.2	interpret physical signs to make a provisional diagnosis			Y	Bedside, Skills Lab	Skill assessment			
29.13.3	Produce differential diagnosis keeping in mind the symptoms and signs related to haematological conditions.			Y	Bedside, Skills Lab	Skill assessment			
PE29.14	Interpret CBC, LFT			Y	Bedside, Skills Lab	Skill assessment			
29.14.1	interpret Complete Blood Count Report			Y	Bedside, Skills Lab	Skill assessment			
29.14.2	Interpret Liver Function Tests Report.			Y	Bedside, Skills Lab	Skill assessment			
PE29.15	Perform and Interpret peripheral smear.			Y	DOAP session	Document in Logbook			
29.15.1	Prepare a peripheral blood film.			Y	DOAP session	Document in Logbook			
29.15.2	Interpret the peripheral blood film.			Y	DOAP session	Document in Logbook			
29.15.3	Make diagnosis of peripheral blood film.			Y	DOAP session	Document in Logbook			
PE29.16	Discuss the indications for Hemoglobinelectrophoresis and interpret the report.			N	Lecture, SGD	Written/Viva-voce		Biochemistry	
29.16.1	Enumerate the indications for Hemoglobinelectrophoresis			N	Lecture, SGD	Written/Viva-voce			
29.16.2	interpret the report of Hemoglobinelectrophoresis			N	Lecture, SGD	Written/Viva-voce			

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PE29.17	Demonstrate performance of bone marrow aspiration in mannequin.			Y	Skillslab	Document in Logbook			
29.17.1	Identify the sites of bone marrow aspiration			Y	SkillsLab	Document in Logbook			
29.17.2	Demonstrate the correct steps of bone marrow aspiration under aseptic conditions on a mannequin.			Y	SkillsLab	Document in Logbook			
PE29.18	Enumerate the referral criteria for Hematological conditions.			Y	Bedside, Small group activity	Written/Viva-voce			
29.18.1	Enumerate the criteria for referring a patient with Hematological conditions			Y	Small group activity	Written/Viva-voce			
PE29.19	Counsel and educate patients about prevention and treatment of anemia.			Y	Bedside, SkillsLab	Document in Logbook			
29.19.1	Counsel the parent sympathetically about the diet and preventive measures for anemia.			Y	Bedside, SkillsLab	Document in Logbook			
29.19.2	Educate the patients/parents about the correct usage of drugs.			Y	Bedside, SkillsLab	Document in Logbook			
PE29.20	Enumerate the indications for splenectomy and precautions			N	Small group activity	Written/Viva-voce			
29.20.1	Enumerate the indications for splenectomy			N	Small group activity	Written/Viva-voce			
29.20.2	Explain about the immunization and antibiotic prophylaxis			N	Small group activity	Written/Viva-voce			

Topic: Systemic Pediatrics-Central Nervous system		Number of competencies: (23)			Number of procedures that require certification: (NIL)					
PE 30.1	Discuss the etiopathogenesis, clinical features, complications, management and prevention of meningitis in children			Y	Lecture, SGD	Written/ Vivavoce			Micro	
30.1.1	Enumerate all common causes of meningitis in children.			Y	Lecture, SGD	Written/Viva voce				
30.1.2	Describe pathogenesis of meningitis in children.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.3	Describe all the clinical features of meningitis in children.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.4	Enumerate all the complications of meningitis in children.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.6	Enumerate all the investigations to diagnose meningitis in children.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.7	Describe the CSF picture diagnostic of pyogenic meningitis.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.8	Describe the standard treatment of meningitis based on age of patient and organism if identified.			Y	Lecture, SGD	Written/ Vivavoce				
30.1.9	Enumerate various preventive measures for meningitis.			Y	Lecture, SGD	Written/ Vivavoce				
PE 30.2	Distinguish bacterial, viral and tuberculous meningitis			Y	Lecture, SGD	Written/ Vivavoce			Micro	
30.2.1	Differentiate the clinical features of bacterial, viral and tubercular meningitis in a child			Y	Lecture, SGD	Written/ Vivavoce				
30.2.2	Differentiate the cerebrospinal fluid (CSF) picture of bacterial, viral and tubercular meningitis in a child			Y	Lecture, SGD	Written/ Vivavoce				

PE 30.3	Discuss the etiopathogenesis, classification, clinical features, complication and management of Hydrocephalus in children			Y	Lecture,SGD	Written/ Vivavoce			
30.3.1	Define hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			
30.3.2	Enumerate all causes of hydrocephalus.			Y	Lecture,SGD	Written/Viva voce			
30.3.3	Describe normal CSF circulation and pathogenesis of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.4	Classify types of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.5	Describe all the clinical features of hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			
30.3.6	Enumerate all the complications of hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			
30.3.7	Describe the radiological picture (USG, CT scan or MRI) diagnostic of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.8	Enumerate the investigations required to make an etiological diagnosis of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.9	Describe the standard treatment for hydrocephalus including medical and surgical modalities.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.4	Discuss the etiopathogenesis, classification, clinical features, and management of Microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.1	Define microcephaly.			Y	Lecture,SGD	Written/ Vivavoce			

30.4.2	Enumerate all causes of microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.3	Describe pathogenesis of microcephaly in children			Y	Lecture,SGD	Written/Viva voce			
30.4.4	Classify types of microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.5	Describe all the clinical features of microcephaly			Y	Lecture,SGD	Written/ Vivavoce			
30.4.6	Describe treatment for microcephaly.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.5	Enumerate the Neural tube defects. Discuss the causes, clinical features, types, and management of Neural Tube defect			Y	Lecture,SGD	Written/ Vivavoce			
30.5.1	Define Neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.2	Enumerate all causes of Neural tube defects.			Y	Lecture,SGD	Written/Viva voce			
30.5.3	Describe pathogenesis of Neural tube defects.			Y	Lecture,SGD	Written/Viva voce			
30.5.4	Classify types of Neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.5	Describe all the clinical features of the common types of Neural tube defects			Y	Lecture,SGD	Written/ Vivavoce			
30.5.6	Describe radiological investigations (USG local and USG Head, CT scan and MRI) and the relevant findings to diagnose Neural tube defects and associated conditions			Y	Lecture,SGD	Written/ Vivavoce			
30.5.7	Outline medical and surgical management including immediate treatment of neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			

30.5.8	Enumerate indications and contraindications of conservative and surgical modalities to treat neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.9	Enumerate steps for prevention of neural tube defects.			Y	Lecture,SGD	Written/Viva voce			

PE 30.6	Discuss the etiopathogenesis, clinical features, and management of Infantile hemiplegia			Y	Lecture,SGD	Written/ Vivavoce			
30.6.1	Define infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.2	Enumerate all causes of infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.3	Describe pathogenesis of infantile hemiplegia.			Y	Lecture,SGD	Written/Viva voce			
30.6.4	Describe all the clinical features of infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.5	Enumerate investigations to diagnose infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.6	Describe all the treatment modalities for infantile hemiplegia including medical management, occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.7	Discuss the etiopathogenesis, clinical features, complications and management of Febrile seizures in children			Y	Lecture,SGD	Written/ Vivavoce			
30.7.1	Define Febrile seizures.			Y	Lecture,SGD	Written/Viva voce			
30.7.2	Enumerate causes of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			

30.7.3	Describe the pathogenesis of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.4	Classify types of Febrile seizures.			Y	Lecture,SGD	Written/Viva voce			
						voce			
30.7.5	Describe the clinical features of different types of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.6	Enumerate complications of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.7	Enumerate the investigations for diagnosis of Febrile seizures and the cause of the underlying fever.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.8	Describe the standard treatment for Febrile seizures in children including intermittent prophylaxis and treatment of cause of fever.			KH	Lecture,SGD	Written/ Vivavoce			
PE 30.8	Define epilepsy. Discuss the pathogenesis, clinical types, presentation and management of Epilepsy in children			K	Lecture,SGD	Written/ Vivavoce			
30.8.1	Define Epilepsy.			KH	Lecture,SGD	Written/ Vivavoce			
30.8.2	Describe the pathogenesis of Epilepsy.			Y	Lecture,SGD	Written/Viva voce			
30.8.3	Classify clinical types of Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.4	Describe the various presentations of Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.5	Enumerate and Describe the investigations required to diagnose Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			

30.8.6	Outline the medical and surgical management of Epilepsy			Y	Lecture,SGD	Written/ Vivavoce			
30.8.7	Enumerate common Antiepileptic drugs and the type of Epilepsy in which they are indicated.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.8	Enumerate the side effects of commonly used Antiepileptic drugs.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.9	Define Status Epilepticus. Discuss the clinical presentation and management			Y	Lecture,SGD	Written/ Vivavoce			
30.9.1	Define Status epilepticus.			Y	Lecture,SGD	Written/ Vivavoce			
30.9.2	Describe the clinical presentation of status epilepticus			Y	Lecture,SGD	Written/ Vivavoce			
30.9.4	Enumerate investigations required for diagnosis of status			Y	Lecture,SGD	Written/Viva			

	epilepticus					voce			
30.9.5	Describe management of status epilepticus in a step wise manner based on the standard algorithm of management of status epilepticus of the PICU			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.10	Discuss the etiopathogenesis, clinical features and management of Mental retardation in children			Y	Lecture,SGD	Written/ Vivavoce			
30.10.1	Define Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/Viva voce			
30.10.2	Enumerate the causes of Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/ Vivavoce			
30.10.3	Describe the pathogenesis of Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/ Vivavoce			
30.10.4	Classify Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.5	Enumerate and Describe clinical features of Mental Retardation (Intellectual disability) including dysmorphic features.			Y	Lecture,SGD	Written/ Vivavoce			
30.10.6	Describe the investigations for diagnosis of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.7	Describe the investigations (including genetic tests) required for identifying the etiology of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.8	Describe the multidisciplinary approach to management of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			

30.10.9	Describe the treatment of preventable and treatable causes of Mental Retardation (Intellectual disability).			Y	Lecture, SGD	Written/ Vivavoce			
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PE 30.11	Discuss the etiology, pathogenesis, clinical features and management of children with cerebral palsy			Y	Lecture, SGD	Written/ Vivavoce			
30.11.1	Define Cerebral Palsy			Y	Lecture, SGD	Written/ Vivavoce			
30.11.2	Enumerate the causes of Cerebral Palsy			Y	Lecture, SGD	Written/Viva voce			
30.11.3	Describe the pathogenesis of Cerebral Palsy			Y	Lecture, SGD	Written/Viva voce			
30.11.4	Classify Cerebral Palsy.			Y	Lecture, SGD	Written/Viva			

						voce			
30.11.5	EnumerateandDescribeclinicalfeaturesofdifferent types ofCerebralPalsy			Y	Lecture,SGD	Written/ Vivavoce			
30.11.6	Describetheinvestigationsrequiredforidentifyingt he etiologyofCerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.11.7	Describethemultidisciplinary approachtomanagementof CerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.11.8	Describethetreatmentofpreventableandtreatable causes ofCerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.12	Enumerate the causes of floppiness in an infant anddiscusstheclinicalfeatures,differentialdiag nosisand management			Y	Lecture,SGD	Written/ Vivavoce			
30.12.1	Definefloppinessinaninfant.			Y	Lecture,SGD	Written/Viva voce			
30.12.2	Enumeratethecausesoffloppinessinaninfant.			Y	Lecture,SGD	Written/ Vivavoce			
30.12.3	Describethepathogenesisoffloppinessinaninfant			Y	Lecture,SGD	Written/ Vivavoce			
30.12.4	Describetheclinicalfeaturesoffloppinessinaninfan t			Y	Lecture,SGD	Written/Viva voce			
30.12.5	Describethedifferentialdiagnosisof floppinessinaninfant			Y	Lecture,SGD	Written/ Vivavoce			
30.12.6	Enumeratetheinvestigationsforfloppinessinaninfa nt			Y	Lecture,SGD	Written/ Vivavoce			

30.12.7	Describe treatment approach to a floppy infant, including occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
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PE30.13	Discuss the etiopathogenesis, clinical features, management and prevention of Polio myelitis in children			Y	Lecture,SGD	Written/ Vivavoce		Micro	
30.13.1	Define acute flaccid paralysis (AFP).			Y	Lecture,SGD	Written/ Vivavoce			
30.13.2	List causes of Acute Flaccid Paralysis.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.3	Enumerate the viruses causing Poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce		Micro	
30.13.4	Describe the pathogenesis of Poliomyelitis			Y	Lecture,SGD	Written/Viva			

						voce			
30.13.5	Describe all the clinical features of Poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.6	Discuss the differential diagnosis of AFP.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.7	Describe all the treatment modalities for Poliomyelitis/AFP including medical management, occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.8	Describe the various available Polio vaccines and their role in prevention of poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.14	Discuss the etiopathogenesis, clinical features and management of Duchenne muscular dystrophy			Y	Lecture,SGD	Written/ Vivavoce			
30.14.1	Define Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.2	Describe the etiopathogenesis of Duchenne muscular dystrophy			Y	Lecture,SGD	Written/ Vivavoce			
30.14.3	Describe the clinical features of Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.4	Enumerate investigations required including genetic testing to diagnose Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.5	Describe the treatment modalities for Duchenne muscular dystrophy including occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.15	Discuss the etiopathogenesis, clinical features and management of Ataxia in children			Y	Lecture,SGD	Written/ Vivavoce			

30.15.1	DefineAtaxiainchildren.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.2	EnumerateallcausesofAtaxiainchildren.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.3	DescribethepathogenesisofAtaxiainchildren.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.4	DescribealltheclinicalfeaturesofAtaxiainchildren.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.5	EnumeratetheinvestigationsinevaluationofAtaxiain children.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.7	Describethe treatmentavailableforthevariouscausesof			Y	Lecture,SGD	Written/Viva voce			

	Ataxia in children.								
PE30.16	Discuss the approach to and management of a child with headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.1	Enumerate causes of headache in children			Y	Lecture,SGD	Written/Viva voce			
30.16.2	Enumerate the types of headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.3	Describe the clinical features of various types of headaches in children			Y	Lecture,SGD	Written/ Vivavoce			
30.16.4	Enumerate all investigations to diagnose cause and type of headache.			Y	Lecture,SGD	Written/ Vivavoce			
30.16.5	Analyse the history and interpret the examination findings and investigations using an algorithm to come to a differential diagnosis/diagnosis of headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.6	Discuss approach to management of headache based on history, examination and investigations			Y	Lecture,SGD	Written/ Vivavoce			
30.16.7	Describe treatment of a child with headache.			Y	Lecture,SGD	Written/Viva voce			
PE30.17	Elicit, document and present an age appropriate history pertaining to the CNS			Y	Bedside, Skills lab	Skill Assesment			
30.17.1	Elicit age appropriate detailed history pertaining to CNS			Y	Bedside,Skills lab	Clinical case/OSC E			
30.17.2	Write down age appropriate history including history pertaining to CNS under appropriate headings			Y	Bedside,Skills lab	Logbook			
30.17.3	Present the documented age appropriate history pertaining to CNS			Y	Bedside,Skills lab	Logbook			

PE30.18	Demonstrate the correct method for physical examination of CNS including identification of external markers. Document and present clinical findings			Y	Bedside, Skills lab	Skill Assessment			
30.18.1	Measure head circumference accurately.			Y	Bedside, Skills lab	OSCE			
30.18.2	Recognize neurocutaneous markers.				Bedside/skilllab/pictures/video	OSCE			
30.18.3	Do a complete CNS examination in children of different				Bedside/skilllab	Skilllab			

	ages.								
30.18.4	Recognize involuntary movements.				Bedside/skilllab/ pictures/video	OSCE			
30.18.5	Examine for signs of meningeal irritation.				Bedside/skilllab	Skilllab			
30.18.6	Document and present clinical findings.				Bedside/skilllab	Clinical case			
PE30.19	Analyse symptoms and interpret physical findings and propose a provisional/differential diagnosis			Y	Bedside, Skillslab	Skill Assessment			
30.19.1	Analyse symptoms and propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinical case			
30.19.2	Interpret physical findings and propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinical case			
30.19.3	Combine analysis of symptoms and interpretation of physical findings to propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinical case			
PE30.20	Interpret and explain the findings in a CSF analysis			Y	SGD	Logbook		Micro	
30.20.1	Interpret the findings (cells, proteins and sugar levels) in a CSF analysis.			Y	Skilllab	OSCE			
30.20.2	Explain the significance of findings (cells, proteins and sugar levels) in a CSF analysis			Y	SGD	SAQ/viva			
PE30.21	Enumerate the indication and discuss the limitations of EEG, CT, MRI			N	Bedside	Logbook			
30.21.1	Enumerate the indications of EEG.			N	Bedside	Logbook			
30.21.2	Discuss the limitations of EEG.			N	Bedside	Logbook			
30.21.3	Enumerate the indications of CT scan			N	Bedside	Logbook			
30.21.4	Discuss the limitations of CT scan.			N	Bedside	Logbook			
30.21.5	Enumerate the indications of MRI.			N	Bedside	Logbook			

30.21.6	Discuss the limitations of MRI.			N	Bedside	Logbook			
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PE30.22	Interpret the reports of EEG, CT, MRI			Y	Bedside, Skills lab	Logbook		RadioD	
30.22.1	Interpret EEG reports			Y	Bedside, Skillslab	Logbook			
30.22.2	Interpret CT scan (Brain and Spine) reports			Y	Bedside, Skillslab	Logbook		RadioD	
30.22.3	Interpret MRI (Brain & Spine) reports			Y	Bedside, Skillslab	Logbook		RadioD	

PE30.23	Perform in a mannequin lumbar puncture. Discuss the indications, contraindication of the procedure			Y	Bedside, Skills lab	Skill Assessment			
30.23.1	Perform lumbar puncture on a mannequin.			Y	Skill lab	SKILL assessment			
30.23.2	Enumerate all indications of lumbar puncture.			Y	SGD	OSCE/VIVA			
30.23.3	Enumerate contraindications of lumbar puncture			Y	SGD	OSCE/VIVA			
Topic: Allergic Rhinitis, Atopic Dermatitis, Bronchial Asthma, Urticaria Angioedema Number of competencies: (12) Number of procedures that require certification: (NIL) 									
PE 31.1	Describe the etiopathogenesis, management and prevention of Allergic Rhinitis in Children			Y	Lecture, SGD	Written/ Vivavoce		ENT	
31.1.1	Define allergic rhinitis in children			Y	Lecture, SGD	Written/ Vivavoce		ENT	
31.1.2	Enumerate risk factors and describe pathogenesis of allergic rhinitis in children			Y	Lecture, SGD	Written and vivavoce		ENT	
31.1.3	Describe treatment and prevention for allergic rhinitis in children			Y	Lecture, SGD	Written and vivavoce		ENT	
PE 31.2	Recognize the clinical signs of Allergic Rhinitis			Y	Bedside, Skill Lab	Skill assessment		ENT	
31.2.1	Identify clinical signs of allergic rhinitis in children			Y	Bedside, Skill Lab	Skill assessment		ENT	
PE 31.3	Describe the etiopathogenesis, clinical features and management of Atopic dermatitis in Children			Y	Lecture, SGD	Written/ Viva voce		Derm	
31.3.1	Describe etiopathogenesis of atopic dermatitis in children.			Y	Lecture, SGD	Written/ Viva voce		Derm	

31.3.2	Describe clinical features of atopic dermatitis in children.			Y	Lecture, SGD	Written and vivav			
						oce			
31.3.3	Describe treatment for prevention and control of atopic dermatitis in children			Y	Lecture, SGD	Written and vivavoce			
PE 31.4	Identify clinical features of atopic dermatitis and manage			Y	Bedside, skilllab	Skill assessment		Derm	
31.4.1	Identify clinical features of atopic dermatitis			Y	Bedside, skilllab	Skill assessment		Derm	

31.4.2	Make a plan for local and supportive therapy for children with atopic dermatitis			Y	Bedside, skill lab	Skill assessment			
31.4.3	Plan appropriate systemic therapy for children with atopic dermatitis			Y	Bedside, skill lab	Skill assessment			
PE 31.5	Discuss the etiopathogenesis, clinical types, presentations, management and prevention of childhood Asthma			Y	Lecture/SGD	Written / vivavoce			
31.5.1	Describe etiopathogenesis of childhood asthma			Y	Lecture/SGD	Written/Viva voce			
31.5.2	Describe types/patterns of childhood asthma as per ATM module.			Y	Lecture/SGD	Written and vivavoce			
31.5.3	Enumerate common triggers in childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.4	Describe clinical presentations of childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.5	Enumerate investigations in childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.6	Discuss treatment options for childhood asthma.			Y	Lecture/SGD	Written and vivavoce			
31.5.7	Discuss prevention for childhood asthma.			Y	Lecture/SGD	Written and vivavoce			
PE 31.6	Recognizes symptoms and signs of asthma in a child			Y	Bedside, skill lab	Skill assessment			

31.6.1	Recognize symptoms and signs of asthma in a child			Y	Bedside, skill lab	Skill assessment			
PE 31.7	Develop a treatment plan for a child with appropriate to the severity and clinical presentation			Y	Bedside, skill lab	Skill assessment			
31.7.1	Develop a treatment plan appropriate for the severity and clinical presentation of a child with asthma			Y	Bedside, skill lab	Skill assessment			
31.7.2	Make a treatment plan for a child with acute severe asthma (status asthmaticus)			Y	Bedside, skill lab	Skill assessment			
31.7.3	Observe and document steps of use of metered dose inhaler with spacer in a child with asthma.			Y	Bedside, skill lab	Skill assessment			
PE 31.8	Enumerate the criteria for referral in a child with asthma			Y	Lecture, SGD	Written/Viva voce			
31.8.1	Enumerate the criteria for referral in a child with Asthma.			Y	Lecture, SGD	Written/Viva voce			
PE 31.9	Interpret CBC and CX Ray in Asthma			Y	Bedside clinic, SGD	Skill assessment/OSCE			
31.9.1	Interpret CBC findings in relation to asthma from given case report.			Y	Bedside clinic, SGD	Skill assessment/OSCE			
31.9.2	Interpret findings on a given X Ray of a child with asthma			Y	Bedside clinic,	Skill assessment			
PE 31.10	Enumerate the indications for PFT.			N	Lecture, SGD	Written/Viva voce		Pulmonary medicine	
31.10.1	Enumerate the indications of pulmonary function Test (PFT) in childhood asthma			N	Lecture, SGD	Written/Viva voce		Pulmonary	

								medicine	
PE 31.11	Observe administration of Nebulization			Y	DOAP	Document in Logbook			
31.11.1	Observe and document steps of administration of			Y	DOAP	Document			

	Nebulization to a child with asthma					in Logbook			
PE 31.12	Discuss the etiopathogenesis, clinical features, complications and management of Urticaria/Angioedema.			Y	Lecture, SGD	Written/Vivavoce			
31.12.1	Describe etiopathogenesis of urticaria/angioedema in children			Y	Lecture/SGD	Written/Vivavoce			
31.12.2	Describe clinical features of urticaria/angioedema			Y	Lecture/SGD	Written and vivavoce			
31.12.3	Enumerate common complications of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			
31.12.4	Enumerate investigations in case of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			
31.12.5	Describe treatment plan of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			

Topic: Chromosomal Abnormalities **Number of competencies: (13) Number of procedures that require certification: (NIL)**

PE32.1	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counselling in Down Syndrome			Y	Lecture, Small group discussion	Written		Human Anat	
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32.1.1	Describe the genetic basis of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce		Anat, Bi ochemi stry	OBG
32.1.2	Enumerate the risk factors for Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.1.3	Enumerate the complications of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.1.4	Describe the prenatal diagnosis of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.1.5	Describe the management of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.1.6	Describe the genetic counseling for Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
PE 32.2	Identify the clinical features of Down Syndrome			Y	Bedside, Skillslab	Logbook		Med	
32.2.1	Identify common clinical features in a child with Down syndrome			Y	Bedside clinic	Bedside/OSCE			
PE 32.3	Interpret normal Karyotype and recognize Trisomy 21			Y	Bedside, Skillslab	Logbook			Med
32.3.1	Read a normal Karyotype and recognize true Trisomy 21			Y	Skilllab	OSCE/Logbook			
32.3.2	Recognize different types of Karyotype abnormalities in Down Syndrome			N	Skilllab	OSCE		Anat/Path	Med
PE 32.4	Discuss the referral criteria and Multidisciplinary approach to management			Y	Lecture, SGD	Written/Vivavoce			
32.4.1	Enumerate the referral criteria for Down syndrome.			Y	SGD	SAQ/Viva		Anat Bi ochemi stry	Med

32.4.2	Describe a multidisciplinary approach to management of a child with Down syndrome			Y	Lecture/SGD	MCQ/SAQ			
PE 32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy			N	Bedside, Skills lab	Logbook			
32.5.1	Counsel the parents of a child with Down syndrome in a comprehensive manner including care, possible complications, future outcomes			Y	DOAP/bedside/skill lab/roleplay	Logbook/roleplay			
32.5.2	Counsel parents for risk in future pregnancies			Y	Simulation, Roleplay	OSCE/Logbook			
PE 32.6	Discuss the genetic basis, risk factors, clinical features, complications, prenatal diagnosis, management and			N	Lecture, SGD	Written/Vivavoce		Med, OBG	

	genetic counseling in Turner Syndrome								
32.6.1	Describe the genetic basis of Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce		Anat, Biochemistry	OBG
32.6.2	Enumerate the risk factors for Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.6.3	Describe the clinical features of Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.6.4	Enumerate the complications of Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.6.5	Describe the prenatal diagnosis of Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.6.6	Describe the management of Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.6.7	Describe the genetic counseling for Turner syndrome			N	Lecture/SGD	MCQ/SAQ, Vivavoce			

PE 32.7	Identify the clinical features of Turner Syndrome			N	Bedside, Skillslab	Logbook		Med	
32.7.1	Identify clinical features of Turner syndrome			N	Bedside, Photo	Bedside / Logbook			
PE 32.8	Interpret normal Karyotype and recognize Turner Karyotype			N	Bedside, Skillslab	Logbook			Med
32.8.1	Read a normal Karyotype and recognize Turner karyotype			N	Skilllab	Logbook			
PE 32.9	Discuss the referral criteria and Multidisciplinary approach to management			N	Lecture, SGD	Written/Viva voce			
32.9.1	Enumerate the referral criteria for Turner syndrome.			N	SGD	SAQ/Viva		Anat Biochemistry	Med
32.9.2	Describe a multidisciplinary approach to management of a child with Turner syndrome			N	Lecture/SGD	MCQ/SAQ			

PE 32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy			N	Bedside, Skillslab	Logbook			Med, ObsGyna
32.10.1	Counsel the parents of a child with Turner syndrome in a comprehensive manner including care, possible complications, future outcomes			N	DOAP/bedside/skilllab/roleplay	Logbook/roleplay			
32.10.2	Counsel parents for risk in future pregnancies			N	Simulation, Roleplay	Logbook			
PE 32.11	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counselling in Klinefelter Syndrome			Y	Lecture/SGD	Written/viva			Med

32.1.1	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counseling in Klinefelter Syndrome			Y	Lecture/SGD	Written/viva			
PE 32.12	Identify the clinical features of Klinefelter Syndrome			N	Bedside/ photo	LOGBOOK			Med
	Identify the clinical features of Klinefelter Syndrome			N	Bedside/photo/	LOGBOOK			
PE 32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype			N	Bedside/ photo	LOGBOOK			Med
Topic: Endocrinology Number of competencies: (11) Number of procedures that require certification: (02)									
PE33.1	Describe the etiopathogenesis clinical features, management of Hypothyroidism in children			Y	Lecture, SGD	written/viva voce			
33.1.1	Describe the pathogenesis of hypothyroidism in children			Y	Lecture/ SGD	Written/viva			
33.1.2	Enumerate the causes of congenital and acquired hypothyroidism in children.			Y	Lecture, SGD	Written/viva			
33.1.4	Describe the clinical features of congenital and acquired hypothyroidism			Y	Lecture, SGD	Written/viva			
33.1.5	Discuss the approach to a case of congenital/acquired hypothyroidism in children			Y	Lecture, SGD	Written/viva			
33.1.6	Outline the treatment of hypothyroidism in children.			Y	Lecture, SGD	Written/viva			
PE33.2	Recognize the clinical signs of Hypothyroidism and refer			Y	Bedside, Skill Lab	Skill Assessment			
33.2.1	Recognize hypothyroidism by taking appropriate history and focused physical examination			Y	Bedside	Skill assessment			
33.2.2	Identify the need to refer the child to higher center			Y	Bedside, skill lab	OSCE with SP			

PE33.3	Interpret and explain neonatal thyroid screening report			Y	Bedside,SGD	Skill Assessment			
33.3.1	Interpret the given neonatal thyroid screening report			Y	SGD, Bedside	OSCE/vivavoce			
33.3.2	Explain the given thyroid screening report			Y	Bedside,SGD	OSCE			
PE33.4	Discuss the etiopathogenesis, clinical types, presentations, complication and management of Diabetes mellitus in children			Y	Lecture,SGD	Written/Vivavoce			
33.4.1	Explain the etiopathogenesis of Diabetes mellitus in children.			Y	Lecture/SGD	Written/viva		Biochemistry, Physio	
33.4.2	Discuss clinical types of DM in children.			Y	Lecture/SGD	Written/viva			
33.4.4	Describe the clinical features of DM in children.			Y	Lecture/SGD	Written/viva			
33.4.5	Enumerate the complications of DM.			Y	Lecture/SGD	Written/viva			
33.4.6	Describe the comprehensive management for children with DM.			Y	Lecture/SGD	Written/viva			
PE33.5	Interpret Blood sugar reports and explain the diagnostic criteria for Type 1 Diabetes			Y	Bedside clinic, small group activity	Skill Assessment			

33.5.1	Identify Type 1 Diabetes from a given blood report as per latest diagnostic criteria of DM (American Diabetes Association, 2016)			Y	Bedside,SGD	OSCE			
PE33.6	Perform and interpret Urine Dipstick for Sugar			Y	DOAP session	Skill Assessment	3	Biochemistry	
33.6.1	Perform urine dipstick test for sugar and interpret it correctly			Y	DOAP session	OSPE			

PE33.7	PerformgenitalexaminationandrecognizeAmbiguous Genitaliaandreferappropriately			Y	Bedside,skilllab	Skill Assessment			
33.7.1	Identifythedeviationfromnormalwhileperforminggenital examinationmaintainingfulldignityofthepatient			Y	Bedside,skilllab	OSCE			
33.7.2	Counseltheparentsforreferraltospecialistafterrecognizingambiguousgenitalia			Y	Bedside,skilllab	OSCEstati onwithSP			
PE33.8	DefineprecociousanddelayedPuberty			Y	Lecture,SGD	Written/Viva voce			
33.8.1	DiscussnormalPhysiologyofpubertyanddefineprecociousanddelayed puberty			Y	Lecture,SGD	Written/viva			
PE33.9	PerformSexualMaturityRating(SMR)and interpret			Y	Bedside,skilllab	Skill Assessment			
33.9.1	PerformSMR stagingmaintainingfulldignityoftheadolescentpatientandinterpretitcorrectly			Y	Bedside,skilllab	OSCE			
PE33.10	RecognizeprecociousanddelayedPubertyandrefer			Y	Bedside,skilllab	Logbook			

33.10.1	Recognize featuresofprecociousanddelayedpubertyin achild			Y	Bedside/skilllab	Logbook			
33.10.2	Counseltheparentsforneedtoreferthechildtohigher centerafterdiagnosingprecociousordelayedPuberty			Y	Bedside,skilllab	OSCEwithSP			
PE33.11	Identifydeviationsingrowthandplanappropriate referral			Y	Bedside,skilllab	Logbook	2		
33.11.1	Identifytheabnormalgrowthpatternin achild			Y	Bedside,skilllab	OSCE	2		

33.11.2	Plan the referral of a child with abnormal growth to a specialist and counsel the parents accordingly			Y	Bedside, skill lab	OSCE with SP	2		
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Topic: Vaccine preventable Diseases- Tuberculosis	Number of competencies: (20)	Number of procedures that require certification: (03)
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PE 34.1	Discuss the epidemiology, clinical features, clinical types, complications of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce		Micro	Res pMed
34.1.1	discuss the epidemiology of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.2	Describe the clinical features of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.3	Enumerate the clinical types of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.4	List the complications of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
PE 34.2	Discuss the various diagnostic tools for childhood tuberculosis			Y	Lecture/SGD	Written/ viva voce		Micro	Res pMed
34.2.1	Describe the various diagnostic tools for childhood tuberculosis			Y	Lecture/SGD	Written/ viva voce			

PE 34.3	Discuss the various regimens for management of Tuberculosis as per National Guidelines			Y	Lecture/SGD	Written/ viva voce		Micro, ComMed, Pharm	Res pMed
34.3.1	Describe the various regimens for management of Tuberculosis as per National Guidelines			Y	Lecture/SGD	Written/ viva voce			

PE 34.4	Discuss the preventive strategies adopted and the objectives and outcome of the National Tuberculosis Program			Y	Lecture/ SGD	Written/ viva voce		Micro, Com Med, Pharm	Res pMed
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34.4.1	Describe the preventive strategies adopted under the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
34.4.2	List the objectives of the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
34.4.3	Discuss the outcome of the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
PE 34.5	Able to elicit, document and present history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			Resp Med
34.5.1	Elicit history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
34.5.2	Document history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
34.5.3	Present history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
PE 34.6	Identify a BCG scar			Y	Bedside, Skillslab	Skill Assessment	3	Micro	Resp Med
34.6.1	Identify a BCG scar in a child			Y	Bedside, Skillslab	Skill Assessment	3		
PE 34.7	Interpret a Mantoux Test			Y	Bedside	Skill Assessment	3	Micro	Resp Med
34.7.1	Read a Mantoux Test			Y	Bedside	Skill Assessment	3		
34.7.2	Interpret a Mantoux Test			Y	Bedside	Skill Assessment	3		
PE 34.8	Interpret a chest radiograph			Y	Bedside	Skill Assessment		Radiod	Resp Med
34.8.1	Identify abnormalities caused by tuberculosis in a chest radiograph			Y	Bedside	Skill Assessment			

PE 34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis			N	Bedside,SGD	Logbook		Micro	Resp Med
34.9.1	interpret blood tests in the context of laboratory evidence for tuberculosis			N	Bedside,SGD	Logbook			
PE 34.10	Discuss the various samples for demonstrating the organism e.g. Gastric Aspirate, Sputum, CSF, FNAC			Y	Bedside,SGD	Written/viva voce		Micro	Resp Med
34.10.1	Describe the various samples for demonstrating the mycobacteriae.g. Gastric Aspirate, Sputum, CSF, FNAC			Y	Bedside,SGD	Written/viva voce			

PE 34.11	PerformAFBstaining			Y	DOAPsession	Logbook/Journal	3	Micro	Resp Med
34.11.1	PerformAFB staining			Y	DOAPsession	Logbook/Journal	3		
PE 34.12	Enumeratetheindicationsanddiscussthelimitations ofmethodsofculturingM.Tuberculosis			Y	SGD	Written/viva voce		Micro	Resp Med
34.12.1	EnumeratetheindicationsofculturingM.tuberculosis			Y	SGD	Written/viva voce			
34.12.2	EnumeratethemethodsofculturingM. tuberculosis			Y	SGD	Written/viva voce			
34.12.3	DescribethelimitationsofdifferentmethodsofculturingM.tuberculosis			Y	SGD	Written/viva voce			
PE 34.13	EnumeratethenewerdiagnostictoolsforTuberculosis includingBACTECBNAATandtheirindications			N	Lecture/ SGD	Written/viva voce			
34.13.1	EnumeratethenewerdiagnostictoolsforTuberculosis includingBACTECandCBNAAT			N	Lecture/SGD	Written/viva voce			
34.13.2	recalltheindicationsforusingthenewerdiagnostictoolsforTuberculosisincludingBACTECand CBNAAT			N	Lecture/SGD	Written/viva voce			
PE 34.14	Enumerate the common causes of fever and discusstheetiopathogenesis,clinicalfeatures, complications andmanagementoffeverinchildren			Y	Lecture/ SGD	Written/viva voce		Micro	
34.14.1	Enumeratethecommoncausesoffeverinchildren.			Y	Lecture/SGD	Written/viva voce			
34.14.2	Describethepathophysiologyoffeverinchildren.			Y	Lecture/SGD	Written/viva voce			
34.14.3	List the clinical features associated with fever in childrenwhich aidindiagnosis.			Y	Lecture/SGD	Written/viva voce			

34.14.4	Recall the complications of fever in children.			Y	Lecture/SGD	Written/viva voce			
34.14.5	Elaborate the management of fever in children.			Y	Lecture/SGD	Written/viva voce			
PE 34.15	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with exanthematous illness like Measles, Mumps, Rubella & Chickenpox			Y	Lecture/SGD	Written/viva voce		Micro	

34.15.1	Enumerate the common causes of exanthematous illness (fever with rash) in children			Y	Lecture/SGD	Written/viva voce			
34.15.2	discuss the pathogenesis of Measles, Mumps, Rubella & Chickenpox			Y	Lecture/SGD	Written/viva voce			
34.15.3	Describe the clinical features of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.15.4	Enumerate the complications of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.15.5	outline the management of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
PE 34.16	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Diphtheria, Pertussis, Tetanus			Y	Lecture/SGD	Written/viva voce		Micro	
34.16.1	discuss the pathogenesis of Diphtheria, Pertussis and Tetanus			Y	Lecture/SGD	Written/viva voce			
34.16.2	Describe the clinical features of Diphtheria, Pertussis and Tetanus in children and adolescents.			Y	Lecture/SGD	Written/viva voce			
34.16.3	Enumerate the complications of Diphtheria, Pertussis and Tetanus in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.16.4	outline the management of Diphtheria, Pertussis and Tetanus in children and adolescents			Y	Lecture/SGD	Written/viva voce			
PE 34.17	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Typhoid			Y	Lecture/SGD	Written/viva voce		Micro	-

34.17.1	discussthepathophysiologyofTyphoidfever			Y	Lecture/SGD	Written/v ivavoce			
34.17.2	DescribethetheclinicalfeaturesofTyphoidfeverinchildren			Y	Lecture/SGD	Written/viva voce			
34.17.3	EnumeratethecomplicationsofTyphoidfeverinchildren			Y	Lecture/SGD	Written/v ivavoce			
34.17.4	outlinethemanagementofTyphoidfeverinchildren			Y	Lecture/SGD	Written/v ivavoce			


PE 34.18	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Dengue, Chikungunya and other vectorborne diseases			Y	Lecture/ SGD	Written/ viva voce		Micro	-
34.18.1	Enumerate common causes of fever resulting from vectorborne diseases in children (Eg Dengue, Chikungunya and others)			Y	Lecture/SGD	Written/ viva voce			
34.18.2	discuss the pathophysiology of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/ viva voce			
34.18.3	list the clinical features of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/ viva voce			
34.18.4	recall the complications of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/ viva voce			
34.18.5	elaborate the management of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/ viva voce			
PE 34.19	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of children with Common Parasitic Infections, malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis, giardiasis			Y	Lecture/SGD	Written/ viva voce		Micro	-
34.19.1	Enumerate the common causes of fever resulting from parasitic infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/ viva voce			

34.19.2	Discuss the pathophysiology of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.3	List the clinical features of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.4	Recall the complications of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.5	Elaborate the management of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
PE 34.20	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Rickettsial diseases			Y	Lecture/SGD	Written/viva voce		Micro	-
34.20.1	Enumerate the common causes of fever resulting from Rickettsial diseases			Y	Lecture/SGD	Written/viva voce			
34.20.2	Discuss the pathophysiology of Rickettsial diseases			Y	Lecture/SGD	Written/viva voce			
34.20.3	List the clinical features of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			
34.20.4	Recall the complications of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			

34.20.5	Elaborate the management of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			
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Topic: The role of the physician in the community	Number of competencies: (1) Number of procedures that require certification: (NIL)
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PE 35.1	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as they pertain to healthcare in children (including parental rights and right to refuse treatment)			Y	Small group discussion	Written/Viva voce			
35.1.1	List common medicolegal issues related to healthcare in children			Y	Interactive lecture	Written/viva	-	Forensic	
35.1.2	List common socio-cultural issues related to healthcare in children			Y	Interactive lecture/community visit	Written/viva	-	ComMed	
35.1.3	Identify the important socio-cultural and ethical issues related to healthcare in children in a clinical case during bedside teaching			Y	Bedside teaching	Long case OSCE Reflective writing			
35.1.4	Discuss the common medico-legal, sociocultural and ethical issues related to healthcare in children			Y	Case-based learning/SGD	OSCE Reflective writing			



Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Paediatrics

Course content

The course content has been given in detail in the above Table, which includes competencies, specific learning objectives for each competency and the suggested Teaching-Learning methods and assessment methods. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have been written by the expert committee constituted by Rajiv Gandhi University of Health Sciences, with inputs taken from IAP Taskforce.



Teaching-Learning methods and Time allotted


	Clinics	Lectures	Small group discussion	Selfdirected learning	No. of hours	Total hours
Professional year II	2 weeks (3 hours per day, 6 days a week)	-	-	-	36 hours	300 hours
Professional year III Part I	4 weeks (3 hours per day, 6 days a week)	20	30	5	127 hours	
Professional year III Part II	4 weeks (3 hours per day, 6 days a week)	20	35	10	137 hours	

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. Integration allows the student to understand the structural basis of paediatric problems, their management and correlation with function, rehabilitation and quality of life.

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates is desirable.

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings itself. The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and



participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical postings the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing procedures, if any, till patient is discharged.

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, system based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship.

Assessment



Eligibility to appear for University examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment

marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Paediatrics. 75% attendance in AETCOM Module is required for eligibility to appear for final examination in Professional year III part II.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

There shall be no less than three internal assessment examinations in Paediatrics. An end of posting clinical assessment shall be conducted for each of the Paediatric clinical postings.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Paediatrics in order to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

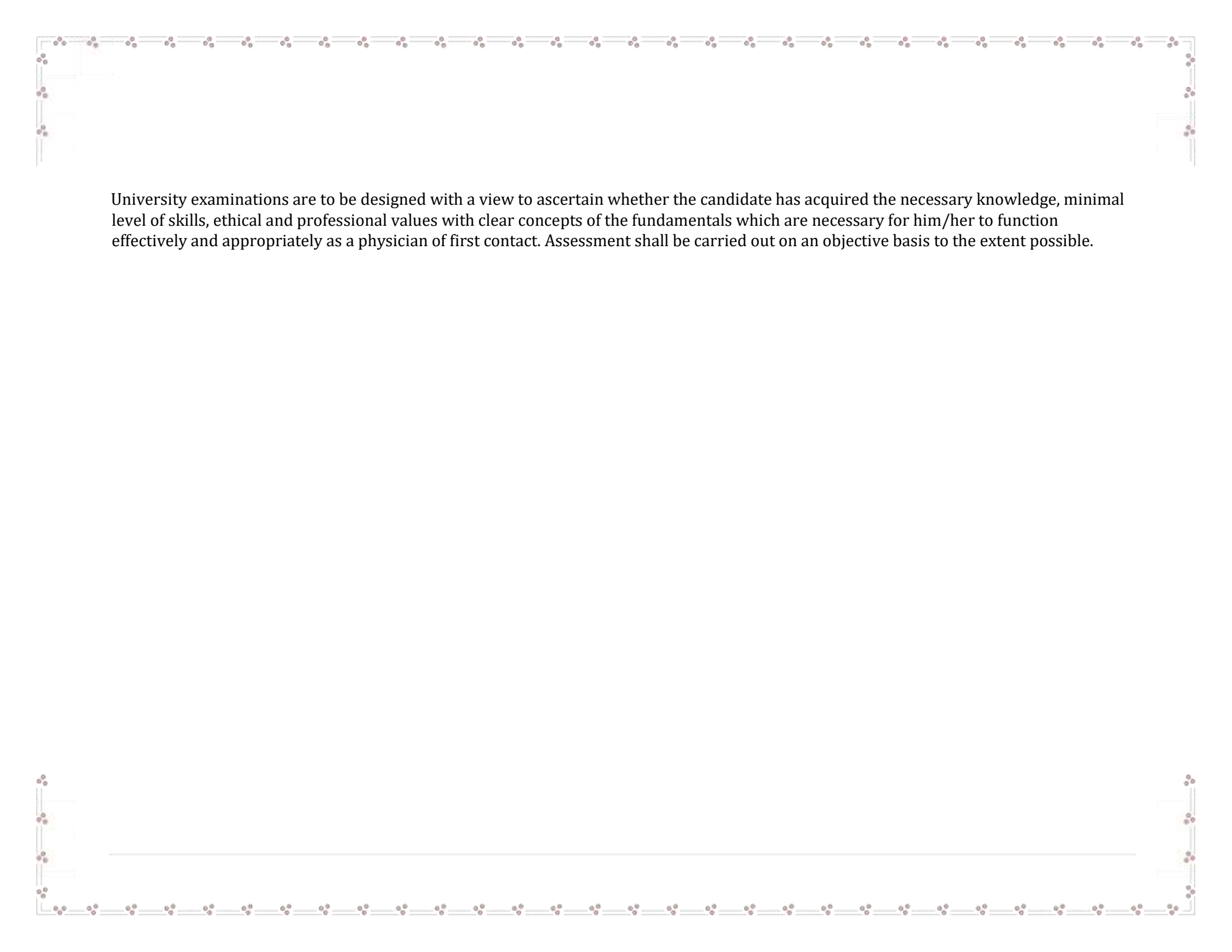
Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Paediatric logbook entry completed to be eligible for appearing at the final university examination.

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

University examinations

University exam shall be held at the end of Professional year III part II of training (Final year MBBS) in the subjects of Paediatrics, General Medicine, Obstetrics and gynaecology and General Surgery.



University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.



Marks allotted:

Paediatrics	Theory	Clinical examination
Total marks	100 marks	100 marks
	Long essay 2X10= 20	Two cases x40marks=80marks
	Short essay 8x5=40 marks	Viva voce 4 x 5=20marks
	Short answer question 10x3=30marks	
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.


All the question papers to follow the suggested **blueprint(APPENDIX 1)**. **It is desirable that** the marks allotted to a particular topic are adhered to.

A minimum of **80%** of the marks should be from the **must know (core)** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component.

All **main essay questions** to be from the **must know component** of the curriculum.

Main essay questions to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.


Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.



Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.



Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation. External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

APPENDIX 1: Blueprint for Paediatric theory Examinations

Topics	Marks allotted
<ul style="list-style-type: none">• Growth, development & Adolescent health• Nutrition and micronutrients	15
Neonatology	10
Fluid & Electrolytes	3
<ul style="list-style-type: none">• Immunity & Immunization• Infections & Infestation	15
Gastrointestinal system	5
Hematology including malignancies	10
<ul style="list-style-type: none">• Respiratory system• Cardiovascular system	15
Endocrine, metabolic & genetic disorders	3

Central Nervous system, neuromuscular disorders	10
Disorders of kidney & urinary tract	5
Pediatric emergencies	3
Miscellaneous – Eye, ENT, skin, Rheumatology, Psychiatry & social paediatrics	6
Total	100

Sample Paediatrics Question Paper

Paediatrics Paper –MBBS , Phase III Part

2 Time: 3 hours Marks: 100

Your answers should be specific to the questions asked. Draw neat, labelled diagrams wherever necessary.

Long essays (2 X 10 = 20 marks)

1. 3 year old female child from low socio economic background presented with 3 days history of watery diarrhea and vomiting. There was no fever or other complaints. There was history of similar illness in many children in neighbourhood. On Examination, child was irritable and thirsty.

Weight was 10 kg. Vitals were normal and systemic examination was non contributory.

i) Assess and classify dehydration in this child. ii) Plan fluid & nutritional therapy for this child.

2. A 6 month old boy was brought to the emergency room with complaints of fever for the last 2 days and excessive crying and vomiting for the last 12 hours. He also had an episode of stiffening of body. Discuss the differential diagnosis and justify the most likely diagnosis. Add a note on management.

Short essays (8x5=40marks)

3. A 34 week male baby delivered by caesarean section developed fast breathing soon after birth and was taken to the NICU. There was history of PROM 24 hours before delivery. Birth weight of the baby was 1.5 kg. On examination, respiratory rate was 80/min. with retractions and grunting. Discuss the causes for distress in this newborn.
4. 4 year old girl presented with epistaxis of one day duration. On examination she was afebrile, echymotic patches were seen over lower limbs and trunk, otherwise clinical examination was unremarkable. How do you approach and manage this child ?
5. Complicated malaria
6. Clinical features and management of hypothyroidism
7. Management of cyanotic spell
8. Define failure to thrive and outline management
9. WHO classification of vitamin A deficiency
10. Nocturnal enuresis

Short answer questions (10x3=30)

11. APGAR score components

12. Urine examination in Nephrotic syndrome
13. Classify Hydrocephalus
14. Age independent anthropometric indices
15. Genetic patterns in Down Syndrome
16. HPV vaccine – Age and schedule
17. Advantages of breast feeding
18. Management of hyperkalemia
19. Normal Moro's reflex
20. Mantoux test

Multiple choice questions (10x1=10marks, with no negative marking)

21. While examining 2 days old infant, small vesicles on erythematous base are noted on face and chest. Wright stain of the lesions revealed sheets of Eosinophils. Diagnosis of this rash is
 - E) miliaria rubra
 - F) milia
 - G) neonatal acne
 - H) erythema toxicum

22. A 2 year old, active, asymptomatic boy is examined by a physician for the first time. His blood pressure is 130/86 in the right arm with a barely palpable right femoral pulse. The most likely diagnosis is
 - E) Coarctation of aorta
 - F) Tetralogy of Fallot
 - G) Aortic stenosis

H) Pulmonary stenosis

23. Which of the following hemolytic anemias is associated with an extracorporeal defect?

- E) Hereditary spherocytosis
- F) Sickle cell anemia
- G) Autoimmune hemolytic anemia
- H) Glucose-6-phosphate dehydrogenase (G6PD) deficiency

24. Calorie requirement in a 3 year old is (kcal/day)

- E) 1000 F) 1100 G) 1200
- H) 1300

25. A 6 week old infant presents with a history of noisy breathing. The noise was first noted shortly after birth, is inspiratory in nature, is worse now that the infant has a viral respiratory illness, and remits almost completely when the child is asleep. The most likely etiology of this child's noisy breathing is

- E) asthma
- F) bronchopulmonary dysplasia
- G) cystic fibrosis
- H) laryngomalacia

26. A 10 year old develops nephrotic syndrome. Several urinalyses reveal the presence of red blood cell casts. The creatinine is 2.8 mg/dl and the blood pressure is 146/96 mm Hg. The next best course of action is

- E) begin a course of oral prednisone
- F) follow the child and see if the nephrotic syndrome resolves
- G) perform a diagnostic renal biopsy

H) collect a 24 hour urine for creatinine clearance and protein excretion

27. All the following conditions are characterized by hypochromic, microcytic red cells EXCEPT

- E) iron deficiency anemia
- F) thalassemia major
- G) glucose-6-phosphate dehydrogenase
- H) anemia of chronic disease

28. Drug used for treatment of autonomic storm due to scorpion sting is

- E) Adrenaline
- F) Propranolol
- G) Prazosin
- H) Noradrenaline

29. An 8 month old girl is noted to have asymmetric use of her arms. The right arm is held in a flexed position with the hand in a fist. The neurologic examination also reveals increased tone in the right ankle and hyper reflexia on the right side. The past history is significant for premature delivery at 28 weeks gestation. The most likely diagnosis for this child is

- a) Duchenne muscular dystrophy
- b) Spinomuscular atrophy
- c) Brachial palsy
- d) Cerebral palsy

30. 2 year old child was brought with history of fever, cough and cold for 1 day and 1 episode of generalized tonic clonic seizure. Temperature was 102°F. What information would like to elicit?

- a) Duration of seizure

- 
- b) Any features suggestive of meningitis
- c) Is she developmentally normal?

d) All of the above



Acknowledgement of contributors

IAP task force CBME curriculum for Paediatrics

Ophthalmology curriculum prepared by faculty from St Johns

RGUHS CBME curriculum for RS 4 Batch

NMC Document - Regulations on Graduate Medical Education

Dr. K. Shreedhara Avabratha, Professor & HOD, Dept. of Paediatrics, Father Muller Medical College Hospital, Mangalore

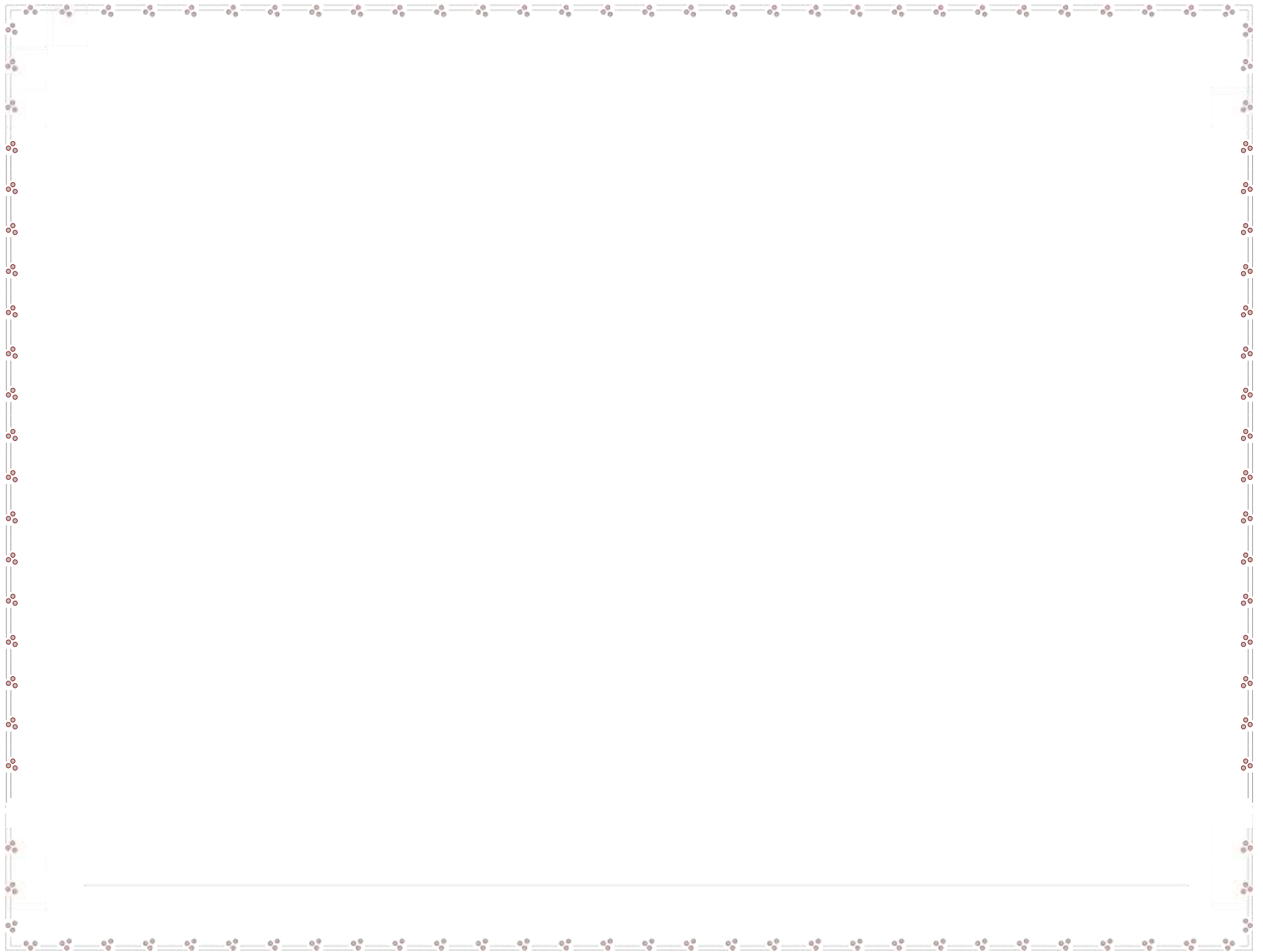
Dr. Sweta Shanbhag, Senior Resident, Dept. of Paediatrics, Father Muller Medical College Hospital, Mangalore

Rajiv Gandhi University of Health Sciences





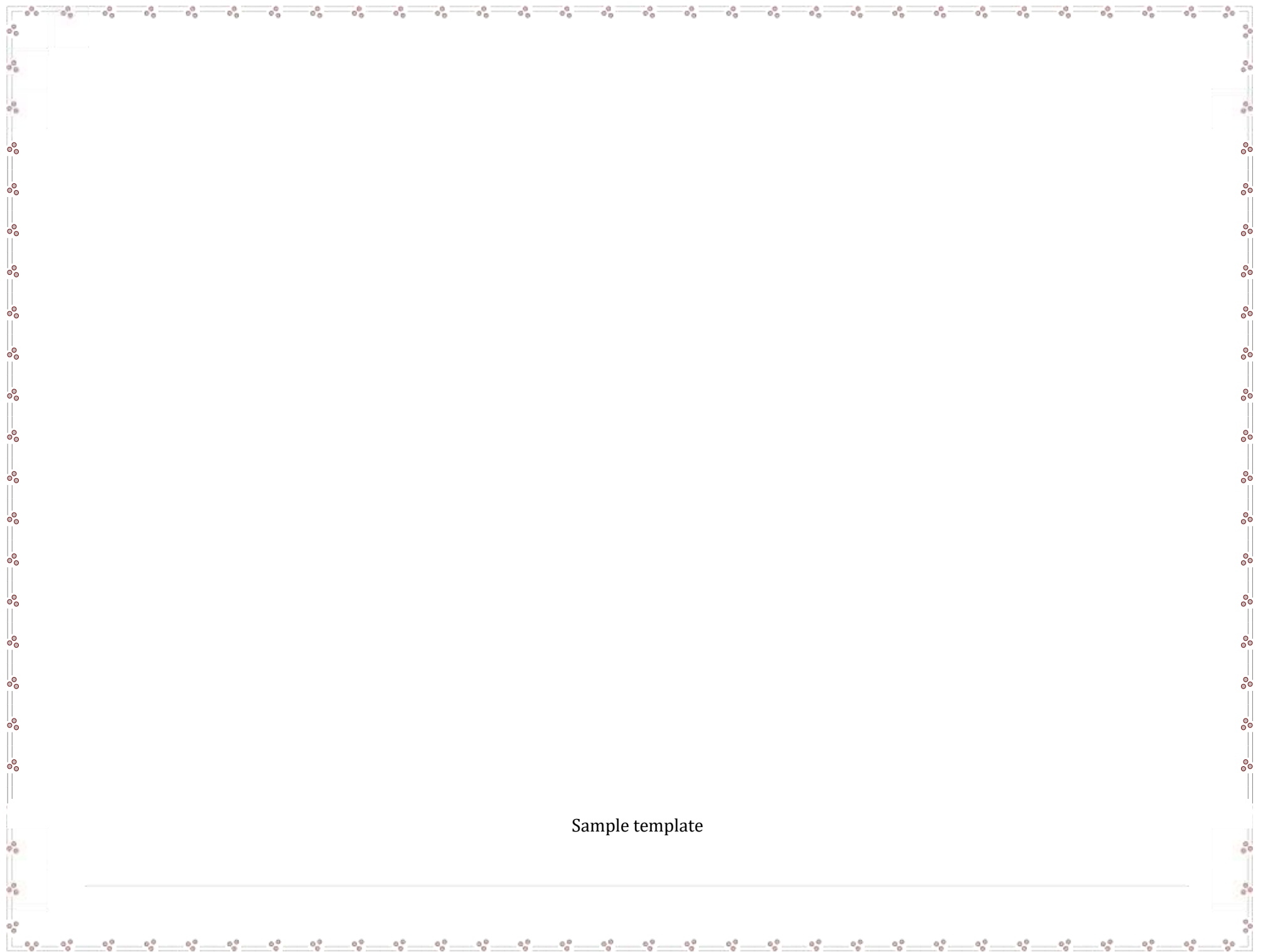
Bangalore, Karnataka





UNDER GRADUATE PAEDIATRIC LOG BOOK

As per Competency-Based Medical Education Curriculum



Sample template

College Logo

(Name of the medical college)

Student's
Stamp size
photo

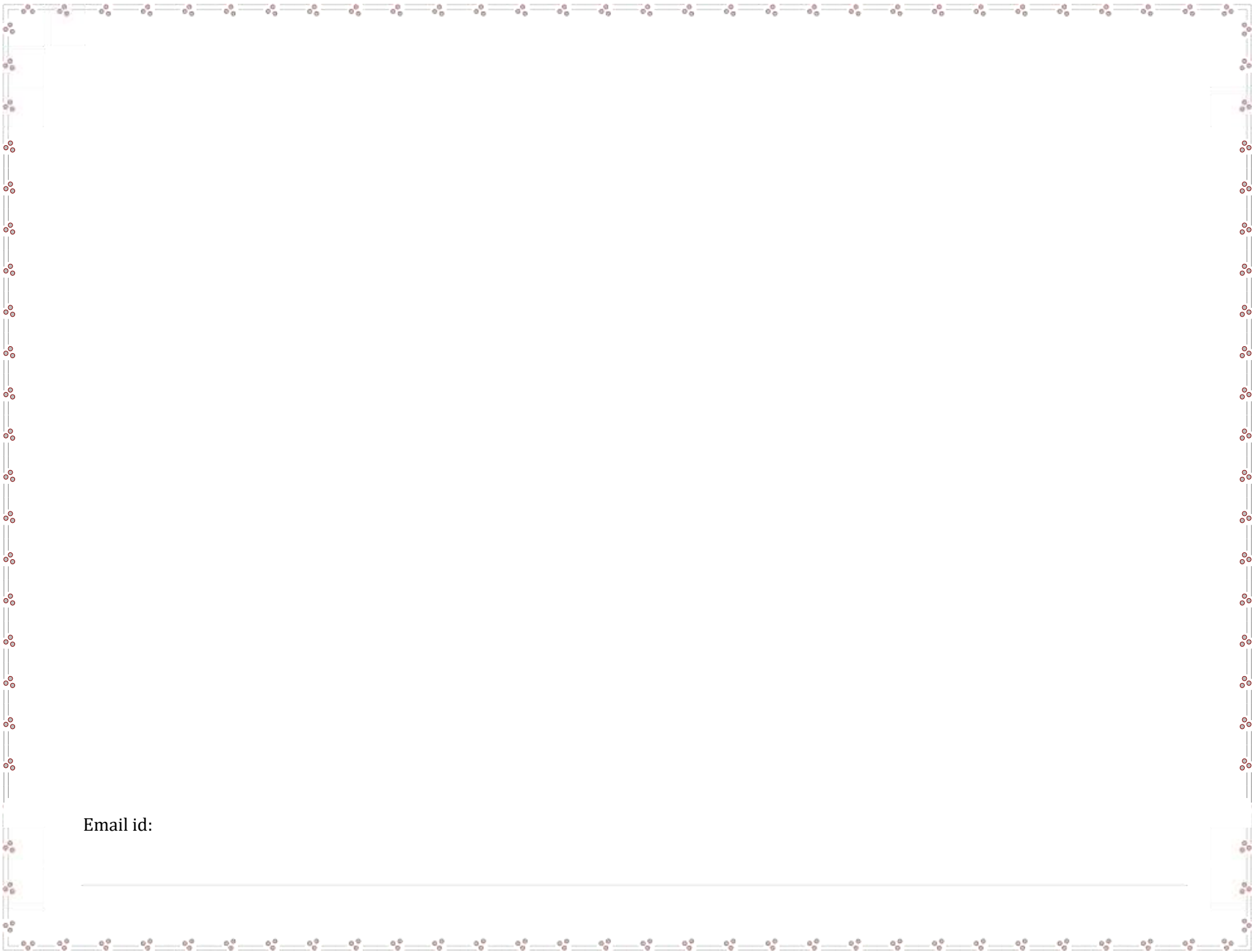
DEPARTMENT OF PAEDIATRICS

UNDERGRADUATE PAEDIATRIC

LOG BOOK


Name of the student:

Contact Number:



Email id:

Date of admission to MBBS course:
Date of beginning of the current phase:
Reg. No. (College ID):
Reg. No. (University ID):



Sample template

DEPARTMENT OF PAEDIATRICS

(Name of the medical college)

LOG BOOK CERTIFICATE

Certified that this is a bonafide record of the work done by _____ in the department during his/her



clinical postings. He/she will be appearing for the Final M.B.B.S.(Phase 3, part 2) examination of Rajiv Gandhi University of Health Sciences,

Karnataka, in February/August 20

Signature of faculty

Signature of Head of the department

Name :

Reg No. : Batch :

Posting in the Dept :

From

To

I

II

III



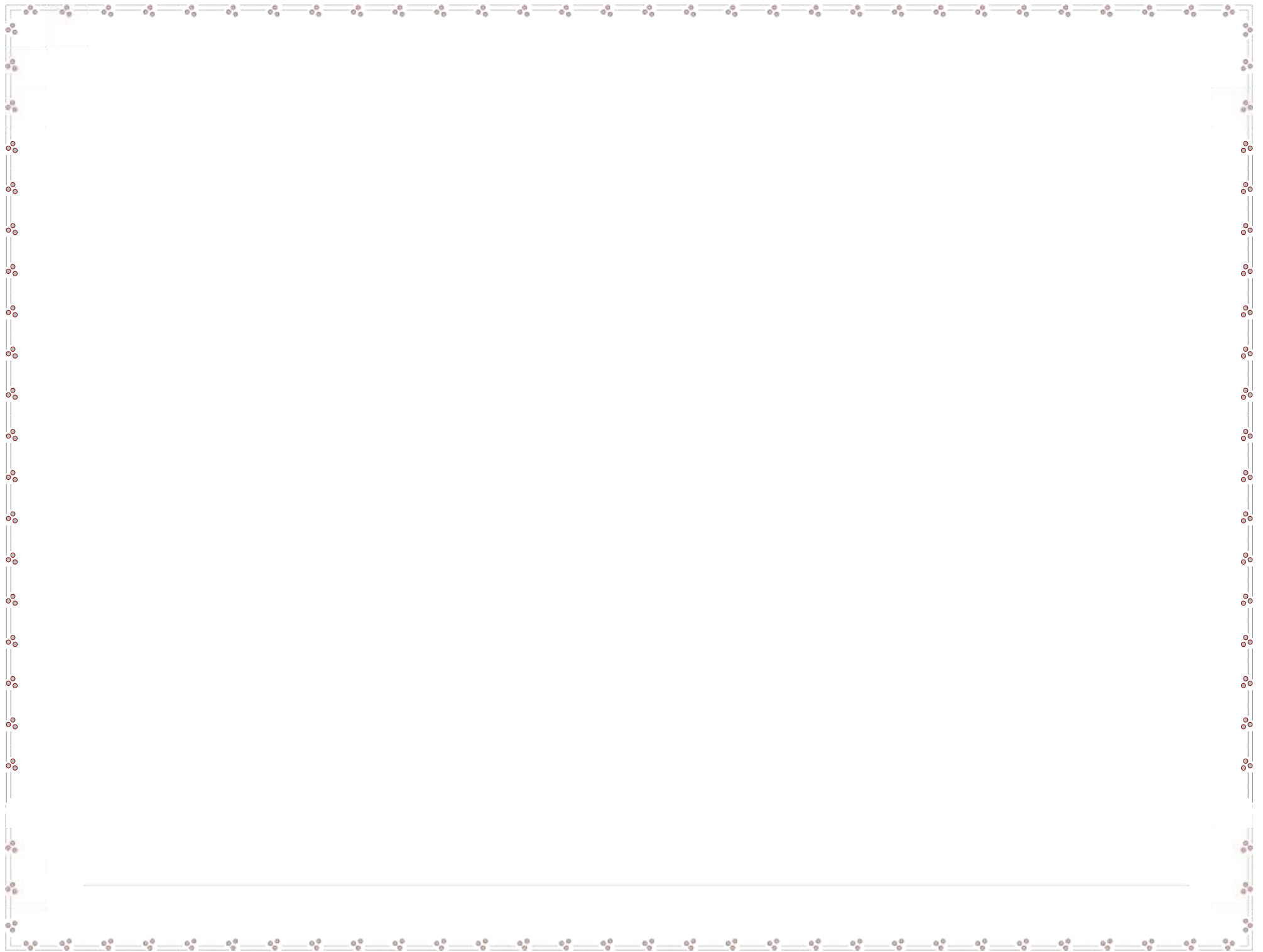
ATTENDANCE

		Classes held	Classes attended	Percentage	Faculty sign
Clinical Posting	I				
	II				
	III				
Theory Attendance	PY3P1				
	PY3P2				
Small group discussions	PY3P1				
	PY3P2				

INTERNAL ASSESSMENT MARKS

	Theory	Clinicals
--	---------------	------------------

	1st test:	1st :
	2nd test:	2nd:
		3rd:
Final Internal Assessment Marks		





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ABBREVIATIONS

F / R / RE – First or Only / Repeat / Remedial

- First or only – Student completed the task in the first attempt
- Repeat – Student completed the task in multiple attempts
- Remedial – Student completed the task after remedial measures

B / M / E – Below expectation / Meets expectation / Exceeds expectation

- Below expectation – Student did not complete the task
- Meets Expectation – Student completed the task with minimal prompts
- Exceeds expectation – Student completed the task without any prompts

C / R / RE – Completed / Repeat / Remedial

- Completed – Student has successfully completed the task

- Repeat – Student had to repeat the task in the same briefing
- Remedial – Student needs to undergo briefing again and repeat the task



AETCOM – Attitude, Ethics and Communication Module

SUMMARY OF CERTIFIABLE COMPETENCIES

Competency no.	Competency details	No required to certify	Date completed	Reference page no
PE1.4	Perform anthropometric measurements, document in growth charts and interpret	3		8
PE1.7	Perform developmental assessment and interpret	3		14
PE 7.5	Observe the correct technique of breast feeding and distinguish right from wrong techniques	3		23
PE11.5	Calculate BMI, document in BMI chart and interpret	3		15
PE19.6	Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule	5		18
PE24.15	Perform NG tube insertion in a manikin	2		25
PE24.16	Perform IV cannulation in a model	2		43
PE24.17	Perform intraosseous insertion model	2		44
PE27.15	Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting	3		45

PE27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment	3		46
PE27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate	3		47
PE27.18	Assess airway and breathing: perform assisted ventilation by bag and mask in a simulated environment	3		48
PE27.19	Check for signs of shock i.e. pulse, blood pressure, CRT	3		49
PE27.20	Secure an IV access in a simulated Environment	2		43
PE27.21	Choose the type of fluid and calculate the fluid requirement in shock	3		50
PE27.22	Assess level of consciousness & provide emergency treatment to a child with convulsions/coma Position an unconscious child Position a child with suspected trauma Administer IV/per rectal Diazepam for a convulsing child in a simulated environment	3		51
PE27.23	Assess for signs of severe dehydration	3		52
PE27.28	Provide BLS for children in manikin	3		53

PE33.6	Perform and interpret urine dip stick for sugar	3		26
PE33.11	Identify deviations in growth and plan appropriate referral	2		13
PE34.6	Identify a BCG scar	3		27
PE34.7	Interpret a Mantoux test	3		28
PE34.11	Perform AFB staining	3		29




Student's Signature


Signature of Faculty
(Name and Designation) **DOCUMENTATION OF**


CASE PRESENTATIONS






S. No	Date	Patient Name and ID	Diagnosis	Case Presented/ Attended (P/A)	Year/ Phase	Grade (B/M/E)	Teacher's Signature






**PROFESSIONAL YEAR II
LEARNING OBJECTIVES 1st CLINICAL POSTING (2 WEEKS)**

At the end of the first posting, students are expected to:

1. Perform, interpret and document anthropometric measurements in children
 2. Use the appropriate growth chart for a child and interpret them correctly
-
- 



- 
3. Perform, interpret and document nutritional history taking and development of a dietary plan for all children
 4. Perform, interpret and document developmental history taking in all children
 5. Conduct a developmental assessment in children and interpret them correctly
 6. Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

PE 1.4 Perform anthropometric measurements, document in growth charts and Interpret

Minimum number required to certify-3*



Anthropometric values to be given here for each batch. They have to mark the values on the chart and interpret the growth pattern (No. Required - 3)

0 to 5 Years : WHO Boys Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____

Interpretation:

1.2.



3.

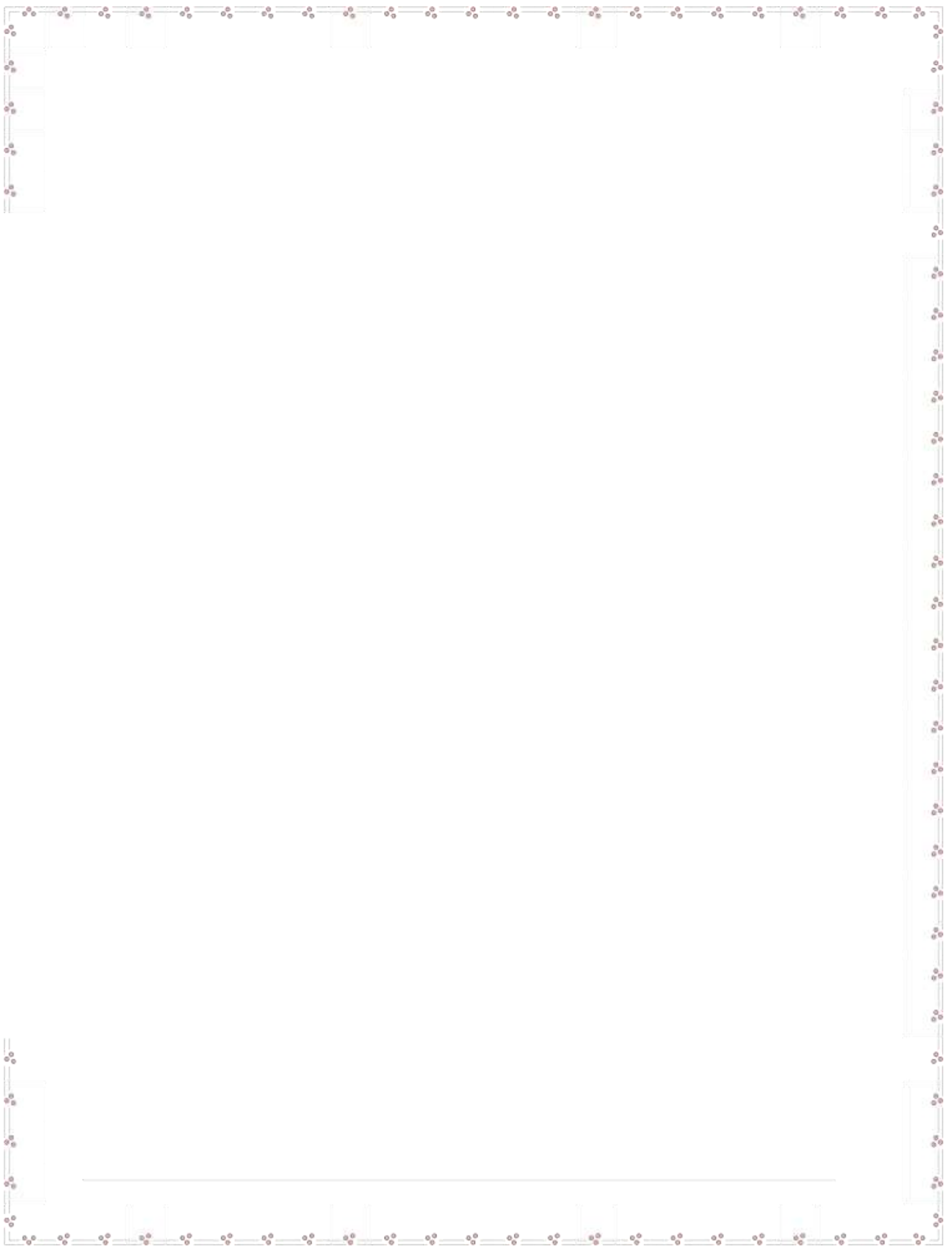


0 to 5 Years : WHO Girls Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____

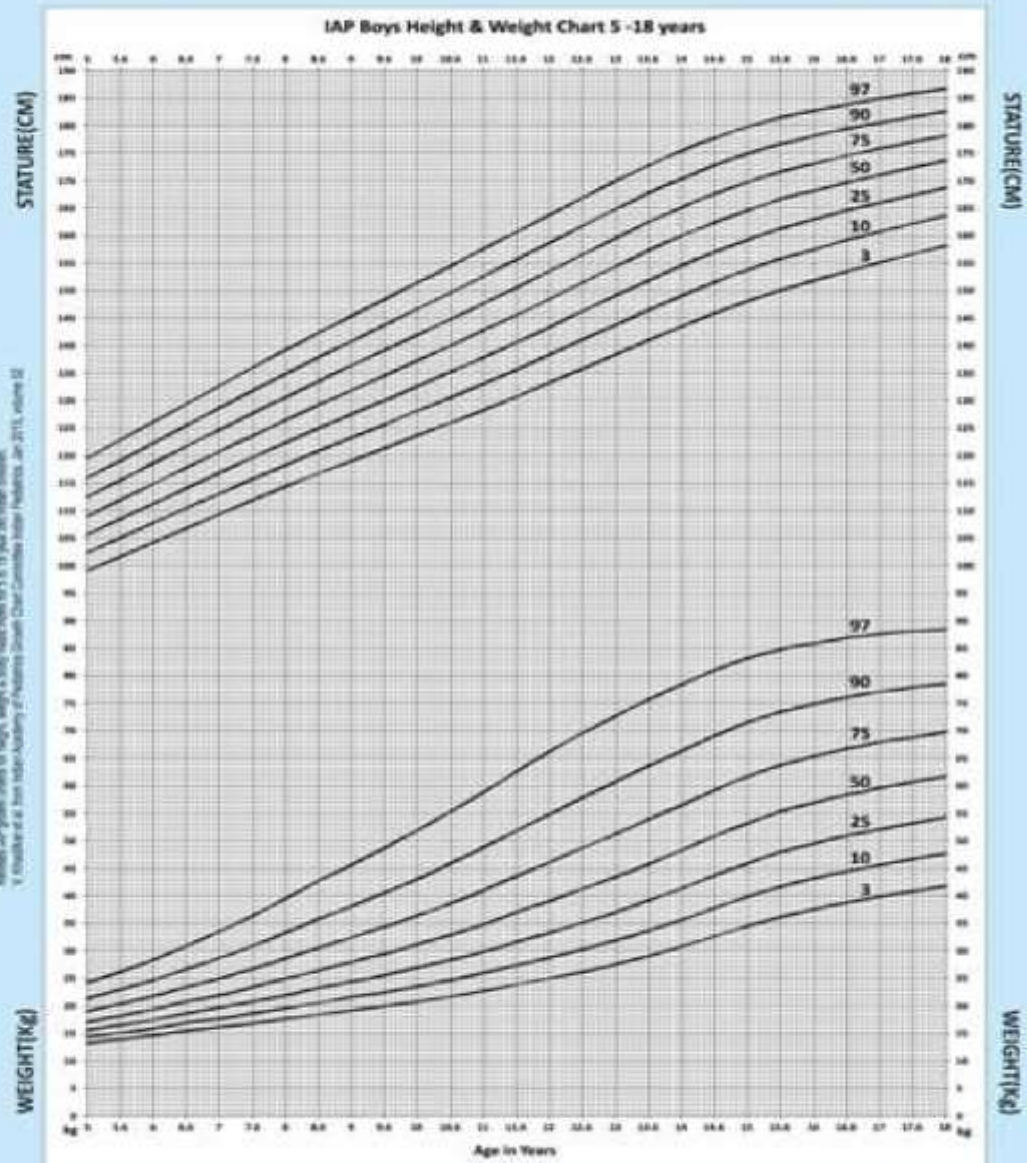






5 to 18 Years : IAP Boys Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____



Interpretation:

- 1.
- 2.
- 3.





Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE33.11 Identify deviations in growth (Using the above growth charts) and plan appropriate referral.

Minimum number required to

certify-2

If requiring referral, mention the reasons for referral

(Case 1)

1.

- 2.
- 3.
- 4.
- 5.

(Case 2)

- 1.
- 2.
- 3.
- 4.
- 5.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE1.7 Perform developmental assessment and interpret

Minimum number required to

certify-3

Take a detailed developmental history and perform developmental assessment. Indicate the present milestone attained in each category. Calculate the developmental age for each domain

S. No	Name	Age	Sex	Gross Motor	Fine Motor	Language	Social	Developmental age				Inference
								GM	FM	L	S	
1												
2												
3												
4												
5												
Date Completed		Attempt at Competency (F/R/Re)		Rating (B/M/E)		Decision of Faculty (C/R/Re)		Initial of Faculty & Date		Feedback Received Initial of Learner with Date		

PE11.5 Calculate BMI, document in BMI chart and interpret

Minimum number required to



5 to 18 Years : IAP Boys Body Mass Index Charts

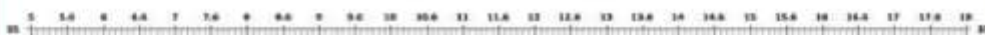
Name _____
DOB _____

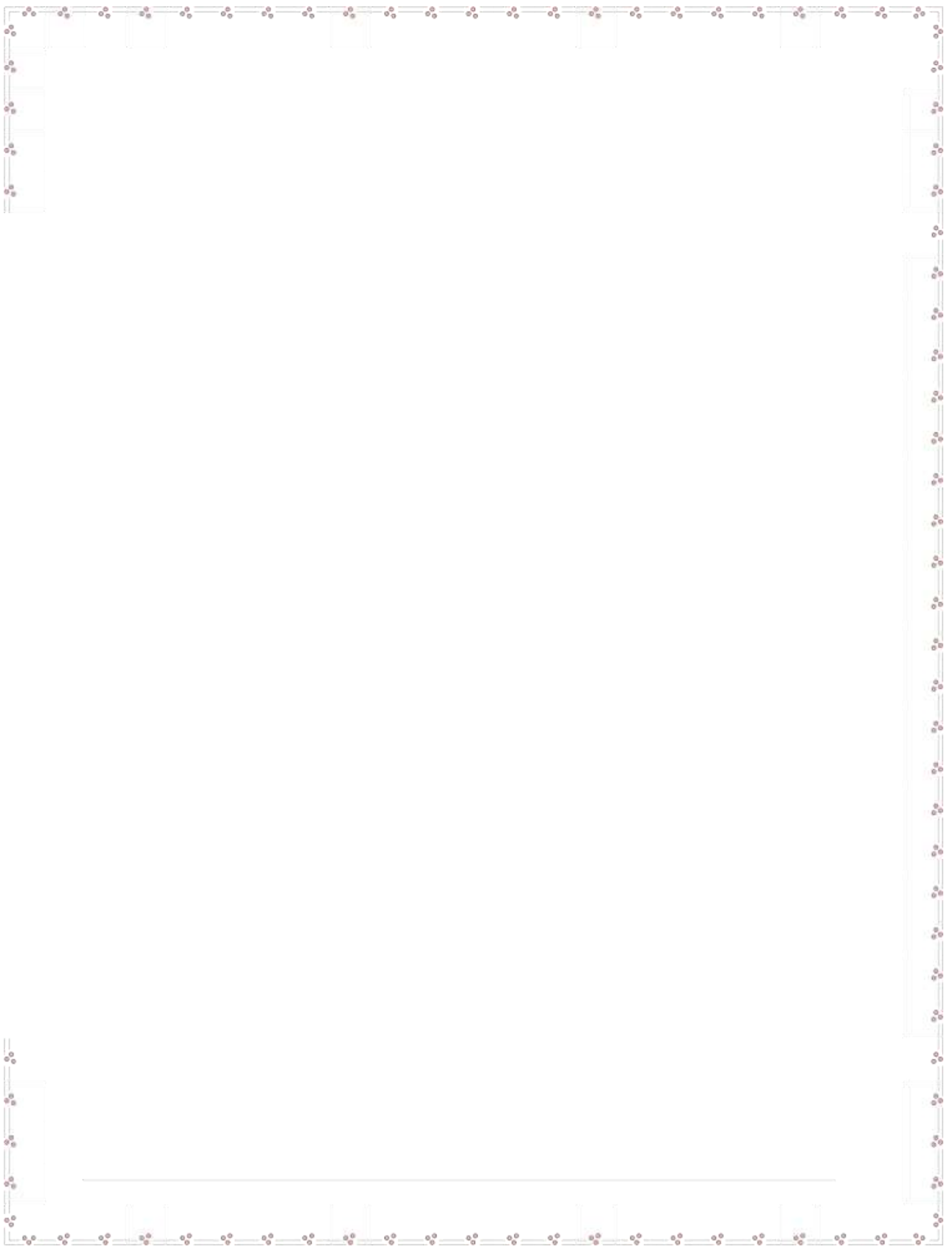
3.

5 to 18 Years : IAP Girls Body Mass Index Charts

Name _____
DOB _____

IAP Girls BMI Chart 5 - 18 Years





Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE19.6 Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

certify-5

Minimum number required to

Assessment of immunization status:

S. No	Name	Age	Sex	Vaccines received till date	Plan for further immunisation
1					
2					
3					
4					
5					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)



PROFESSIONAL YEAR III PHASE I

LEARNING OBJECTIVES

1. Observe the correct technique of breast feeding and distinguish right from wrong techniques
2. Perform NG tube insertion in a manikin correctly
3. Perform and interpret urine dip stick for sugar correctly
4. Identify a BCG scar accurately
5. Interpret a Mantoux test correctly
6. Perform AFB staining correctly



7. Write 4 Paediatric and 1 neonatal case sheets

PE7.5 Observe the correct technique of breast feeding and distinguish right from wrong techniques

Minimum number required to certify-3

Observe the process of breast feeding (under supervision and a chaperone being present) and note the following points

Position of mother and baby.

Cradle. The baby is held in the crook or elbow area of the arm on same side as breast to be used for feeding; mother supports breast with opposite hand; baby's body is rolled in toward mother's body so they are belly-to-belly.

Cross-cradle. The baby's head is supported by the hand opposite the breast to be used for feeding; mother supports breast with hand; baby is rolled in toward mother's body belly-to-belly.

Football or clutch. Baby's head is supported by the hand on the same side as breast to be used for feeding; baby's body is supported on a pillow and tucked under the arm on the same side as breast to be used for feeding.

Side-lying using modified cradle. In this position, the baby lies next to the mother with their

bodies facing each other. If a pillow under the arm is uncomfortable, try placing the baby in the crook of the arm. This way, it is unlikely for the mother to roll over on the baby should the mother doze off. This position also keeps the baby's head at a good angle to bring baby and breast together, with the baby's head higher than his or her tummy, which can be helpful for babies who are more likely to spit up.

Laid-back breastfeeding. In this position, the mother is leaning back in a recliner or reclining in bed. The baby is lying on his or her stomach and is pressed against the mother's body. She can support the side of her baby's head if baby cannot hold it by him- or herself. In this position, both mother and baby can relax. She can allow her baby to explore her breast and latch on at his or her leisure. This is a great position if mother has had a cesarean delivery.

Latching.

The latch should be comfortable and pain free.

The baby's chest and stomach rest against the mother's body, so that baby's head is straight, not turned to the side.

Baby's chin touches her breast.

Baby's mouth opens wide around her breast, not just the nipple.

Baby's lips turn out.

Baby's tongue cups under her breast.

Mother hears or sees swallowing.

S. No	Position of mother	Position of child	Attachment (latching)	Comments
1				
2				



3				
4				
5				





Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.15 Perform NG tube insertion in a manikin

Minimum Number required to certify-2

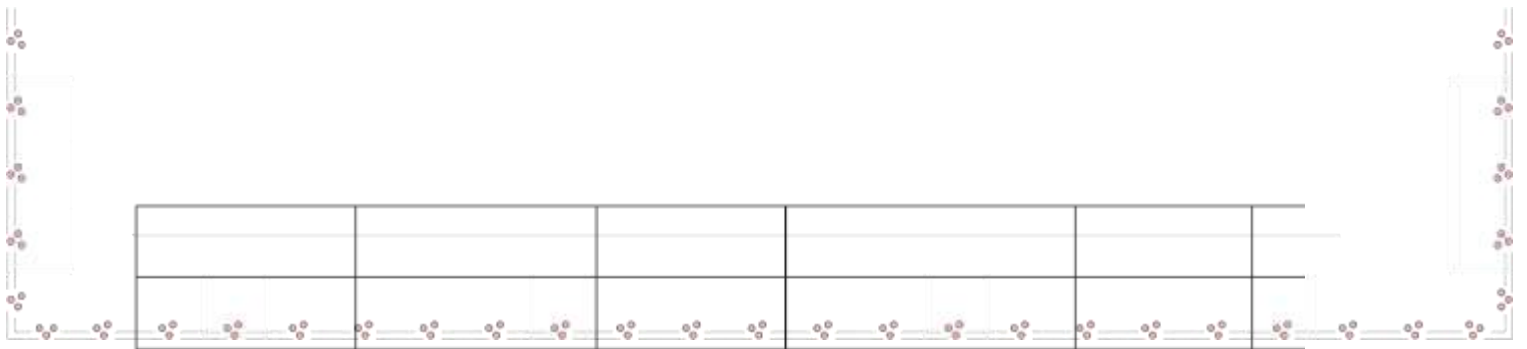
Demonstrate the following steps in inserting a NG tube in a manikin

S. No	Identify size of nasogastric tube as per age of child.	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin	Correctly measure the length of NG tube to be inserted	Insert the tube and check its position
-------	--	--	--	--



1				
2				
3				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date



PE34.7 Interpret a Mantoux test

certify- 3

Minimum number required to

Demonstrate the following steps to interpret a Mantoux test



S. No	Age	Measure induration (horizontal/transverse)	Interpretation
1			
2			
3			
4			
5			

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE34.11 Perform AFB staining

****Shared with Microbiology**

Minimum number required to certify- 3

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.5	Provide intra-natal care and observe the conduct of a normal delivery	3		
2	27.10	Observe the various methods of administering Oxygen	3		
3	31.11	Observe administration of Nebulization	3		



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

**SUMMARY OF COMPETENCIES REQUIRING DOCUMENTATION
(to be observed in ward/PICU/NICU/LT)**

**Competencies requiring documentation
(to be done as part of seminar, demonstration, case presentation)**

S.no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Fi si
1	9.7	Plan an appropriate	3			



			management				
--	--	--	-------------------	--	--	--	--

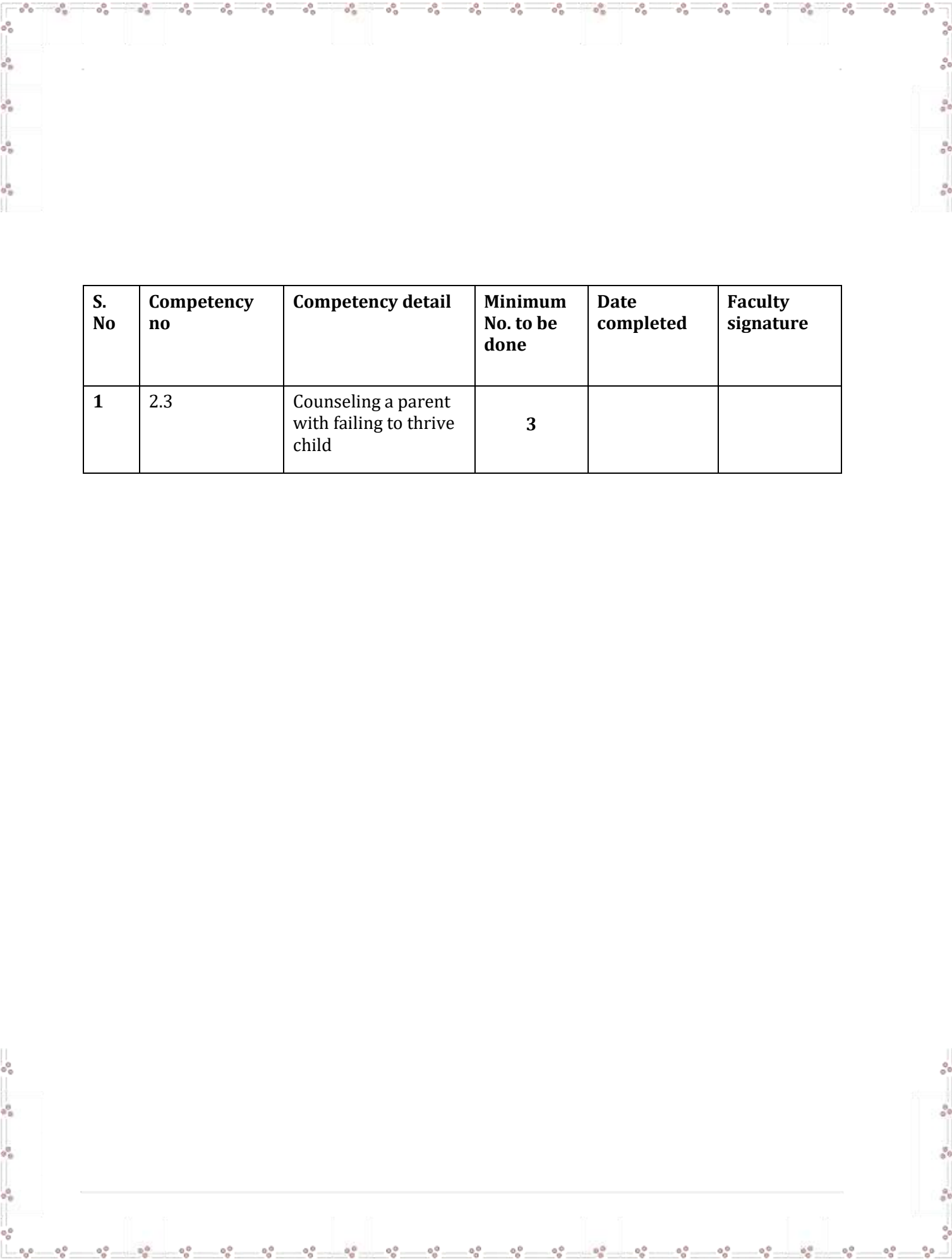
15	32.12	Identify the clinical features of Klinefelter Syndrome	2			
16	33.10	Recognize				

1	28.16	Interpret blood tests relevant to upper respiratory problems	3			
2	29.15	Perform and Interpret peripheral smear.	3			
3	32.3	Interpret normal Karyotype and recognize Trisomy 21	2			
4	32.8	Interpret normal Karyotype and recognize Turner Karyotype	2			
5	32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype	2			

6	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	2			
----------	------	--	----------	--	--	--

AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION

(To be done as part of AETCOM)



S. No	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	2.3	Counseling a parent with failing to thrive child	3		

2	3.4	Counsel a parent of a child with developmental delay	3		
3	6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence	3		
4	7.8	Educate mothers on antenatal breast care and prepare mothers for lactation	3		
5	7.9	Educate and counsel mothers for best practices in Breastfeeding	3		
6	7.10	Respect patient privacy	3		
7	8.5	Counsel and educate mothers on the best practices in complementary feeding	3		
8	10.5	Counsel parents of children with SAM and MAM	3		
9	19.7	Educate and counsel a patient for immunization	3		

10	19.8	Demonstrate willingness to participate in the national and subnational immunization days	3		
11	20.5	Counsel/educate mothers on the care of neonates	3		



12	21.16	Counsel / educate a patient for referral appropriately	3		
13	22.2	Counsel a patient with Chronic illness	3		
14	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
15	29.19	Counsel and educate patients about prevention and treatment of anemia.	3		
16	32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Down syndrome)	2		
17	32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Turner syndrome)	2		

SELF- DIRECTED LEARNING



List of Self-Directed Learning Topics

1.

2.



3.

4.

5.

6.

7.

8.

9.

10.

11.

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SELF- DIRECTED LEARNING:

1) T
opic:

Objectives:

Task:

Impressions:

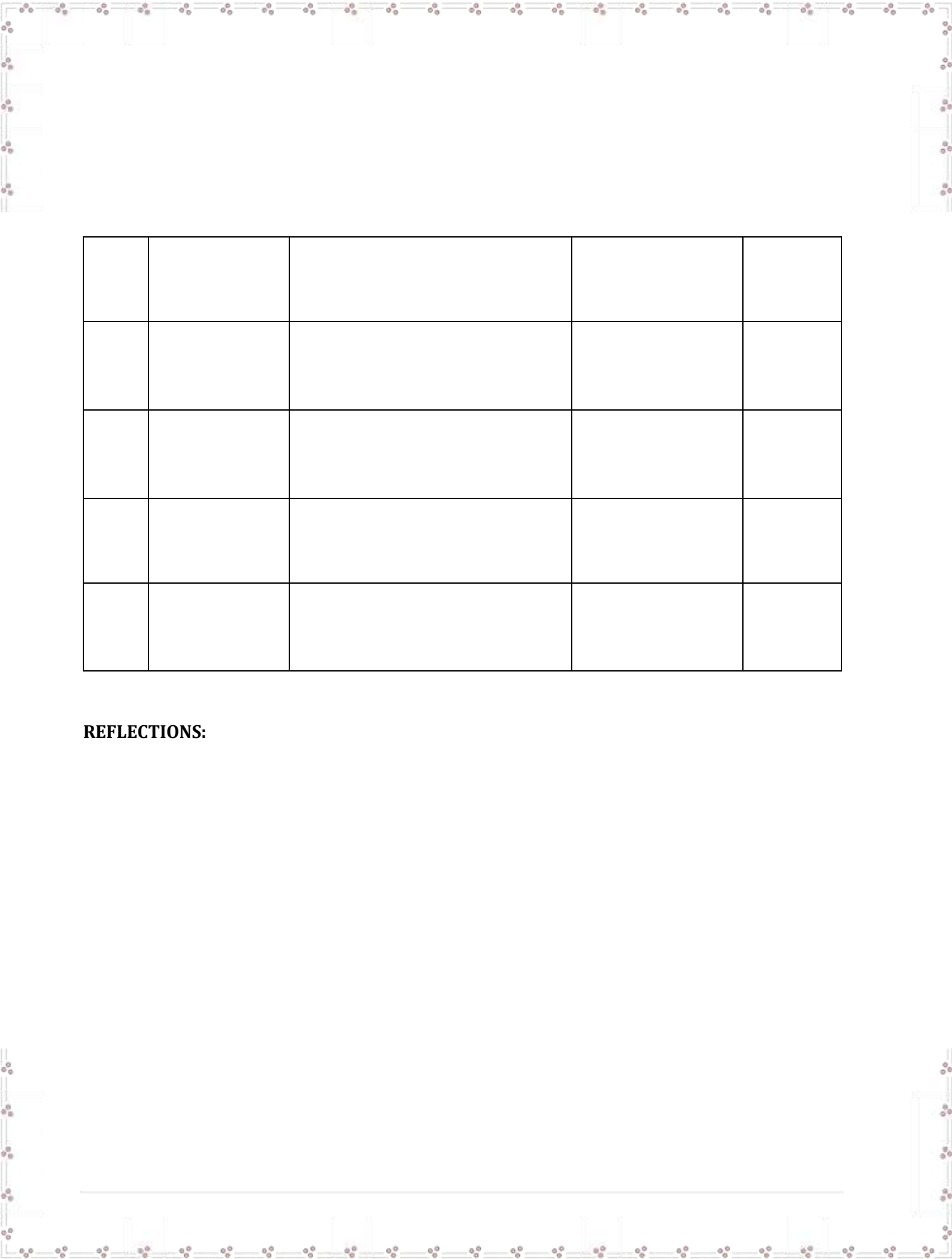
2) T
opic:



Objectives:

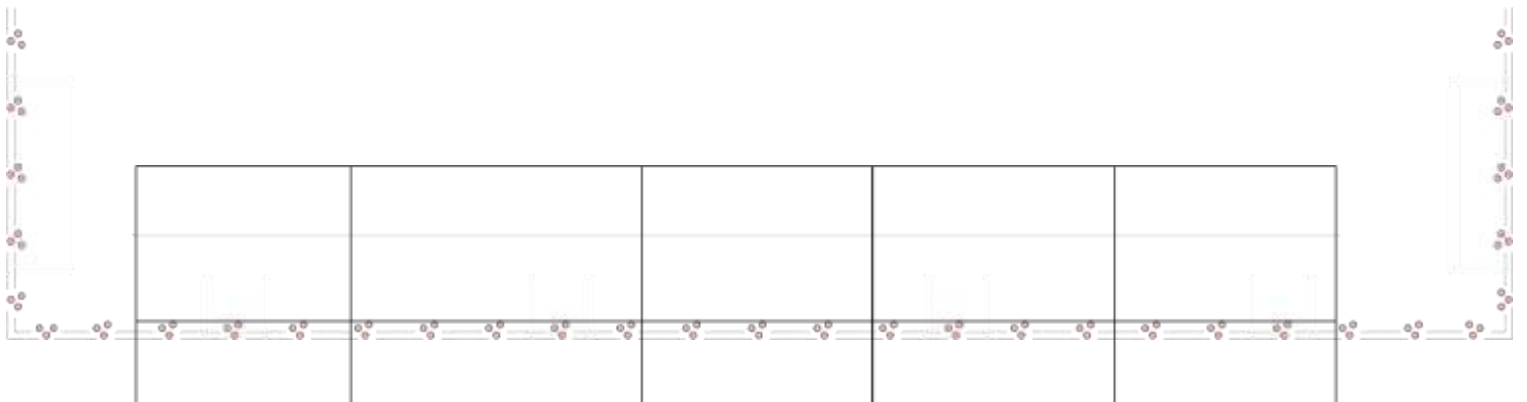
Task:

Impressions:



REFLECTIONS:









PROFESSIONAL YEAR III PHASE II

LEARNING OBJECTIVES

1. Perform IV cannulation in a simulated environment
2. Perform intraosseous insertion in a simulated environment
3. Assess airway, breathing and circulation in a sick child, give appropriate and accurate treatment
4. Choose the type of fluid and calculate the fluid requirement in shock in children
5. Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma
6. Assess for signs of severe dehydration
7. Provide BLS for children in a manikin
8. Write 4 Paediatric and 1 neonatal case sheet



PE24.16 / PE 27.20 Perform IV cannulation in a model

Minimum number required to certify-2

Perform IV cannulation in a manikin by observing the following steps

S.no	Identify size of IV cannula as per age of child.	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe	Choose and prepare the site	Correctly insert the cannula and look for free flow of blood	Fix the cannula and properly dispose the biomedical waste
1					
2					
3					



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.17 Perform intraosseous insertion in a model

Minimum number required to

certify-2

Perform intraosseous insertion in a model in these following steps

S.no	Identify site for intraosseous insertion in children based on landmarks.	Demonstrate all steps of infection control	Insert the Intraosseous cannula and demonstrate how to check its proper insertion in model	Fix Intraosseous cannula and correctly demonstrate disposal of biomedical waste
1				
2				
3				



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

**PE27.15 Assess airway and breathing: recognize signs of severe respiratory distress.
Check for cyanosis, severe chest indrawing, grunting**

Minimum number required to

certify- 3

Check for the following signs in a child with respiratory distress

S.no	Respiratory rate	Intercostal retractions	Alae nasi flaring	Drowsiness	Grunt or stridor	Cyanosis

1						
2						
3						



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.16 Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment

Minimum number required to certify- 3

Assess whether the student performs the steps in a correct manner

2				
3				
S.no	Head tilt manoeuvre performed	Chin lift manoeuvre performed	Jaw thrust manoeuvre performed	Remarks of the facilitator
1				



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.17 Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate

certify- 3

Minimum number required to

Demonstrate the various methods of administering oxygen and at specific rates

S. no	Head box	Nasal cannula	High flow nasal cannula	Face mask	Non rebreathing mask	Rate of delivery of oxygen
1						
2						

3						
---	--	--	--	--	--	--

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date



PE27.18 Assess airway and breathing: perform assisted ventilation by Bag and mask in a simulated environment

Minimum number required to certify- 3

Demonstrate assisted ventilation using bag and mask in a simulated environment

S. no	Chosen the correct size mask	Chosen the correct bag	Head and neck in proper position	Used the correct pressure to inflate	Looked for chest rise	Used the correct rate of ventilation
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date







PE27.19 Check for signs of shock i.e., Pulse, Blood Pressure, Capillary Refill time

Minimum number required to certify- 3

Check for the signs of shock

S. no	Check for volume of pulse	Check BP	Check for saturation	Check for CRT	Check for skin colour and temperature	Check for sensorium
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.21 Choose the type of fluid and calculate the fluid requirement in shock

Minimum number required to certify- 3

Choose appropriate fluid according to different types of shock. Calculate the fluid for managing different types of shock at different age/size of the child.



S.no	Type of shock	Assess weight of child	Choose the appropriate fluid for bolus administration	Calculate the amount of fluid to be administered for bolus and continuation	Remarks
1	Hypovolemic				
2	Septic				
3	Cardiogenic				
4	Obstructive				
5	Burns				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Fee Rec Initi Lea witl

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.28 Provide BLS for children in manikin

Minimum number required to certify- 3

Either a certificate that they have attended a formal BLS course or a modified BLS session has to be attached



S.No	Check for response	Call for help	Check pulse and breathing simultaneously	Start chest compression	Make airway patent and give 2 rescue breaths	Repeat above CPR
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

common
surgical
conditions of
the abdomen
and
genitourinary

S. no	Competency no	Competency detail	Minimum No.to be done	Date completed	Faculty signature
1	10.4	Identify children with under nutrition as per IMNCI criteria and plan referral	3		
2	16.2	Assess children <2 months using IMNCI guidelines	3		
3	16.3	Assess children >2 months to 5 years using IMNCI guidelines and stratify risk	3		
4	20.18	Identify and stratify risk in a sick neonate using IMNCI guidelines	3		
5	24.11	Apply the IMNCI guidelines in risk stratification of children with diarrhoeal dehydration and refer	3		

6	28.15	Stratify risk in children with stridor using IMNCI guidelines	3		
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Competencies requiring documentation

(to be done in a simulated environment)

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature

1	18.4	Provide intra-natal care and conduct a normal delivery in a simulated environment	3		
2	19.13	Demonstrate the correct administration of different vaccines in a mannequin	3		
3	20.3	Perform Neonatal resuscitation in a manikin	3		
4	26.10	Demonstrate the technique of liver biopsy in a manikin Perform Liver Biopsy in a simulated environment	2		
5	29.17	Demonstrate performance of bone marrow aspiration in mannequin.	2		

Competencies requiring documentation

(to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI/EEG/ECG reports)

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	21.12	Interpret report of Plain X Ray of KUB	3			
2	21.13	Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB	3			
3	23.12	Interpret a chest X ray and recognize Cardiomegaly	3			
4	23.13	Choose and Interpret blood reports in Cardiac illness	3			
5	23.14	Interpret Pediatric ECG	3			
6	23.15	Use the ECHO reports in management of cases	3			

7	24.13	Interpret RFT and electrolyte report	3			
8	30.20	Interpret and explain the findings in a CSF analysis	3			
9	30.21	Enumerate the indication and discuss the limitations of EEG, CT, MRI	3			
10	30.22	Interpret the reports of EEG, CT, MRI	3			
11	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	3			



AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION
(To be done as part of AETCOM)



S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
2	26.13	Counsel and educate patients and their family appropriately on liver diseases	3		
3	27.32	Counsel parents of dangerously ill/ terminally ill child to break a bad news	2		
4	27.33	Obtain Informed Consent	2		
5	27.34	Willing to be a part of the ER team	3		
6	27.35	Attends to emergency calls promptly	3		



SELF-DIRECTED LEARNING

List of Self-Directed Learning Topics

- 1.**
- 2.**
- 3.**
- 4.**
- 5.**
- 6.**
- 7.**
- 8.**
- 9.**
- 10.**

12.

13.

14.

15.

SELF-DIRECTED LEARNING:

**1) T
opic:**

Objectives:

Task:

Impressions:

**2) T
opic:**

Objectives:



Task:

Impressions:

INTEGRATED LEARNING

Summary of integrated learning sessions

S.No	Competency No	Topic	Departments involved	Date



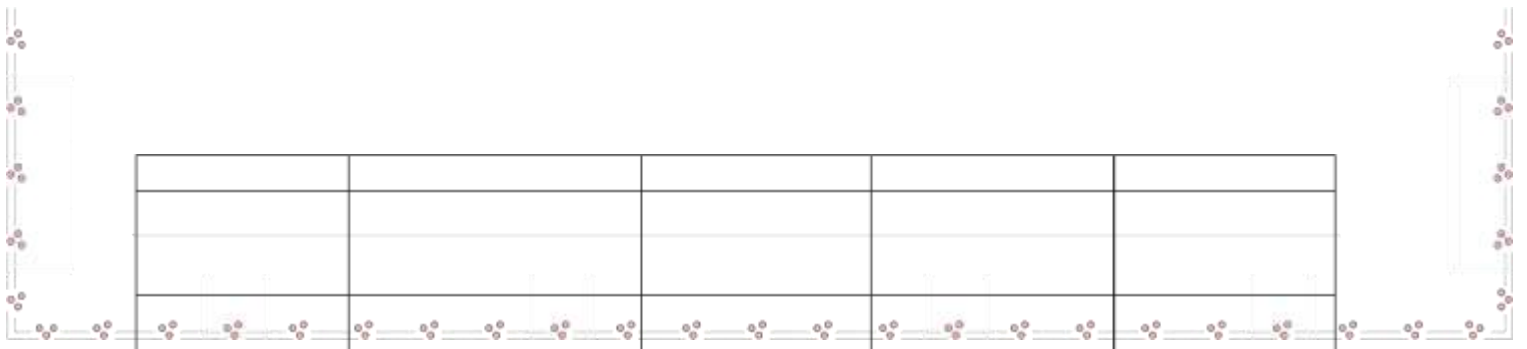




REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks





		Common problems related to behaviour				
Adolescent	6-11	Visit to the				



NOTES




NOTES









Rajiv Gandhi University of Health
Sciences
Bangalore, Karnataka







UNDER GRADUATE PAEDIATRIC LOG

BOOK

As per Competency-Based Medical Education Curriculum

Sample template



College Logo

Student's
Stamp size
photo

(Name of the medical college)

DEPARTMENT OF PAEDIATRICS

UNDERGRADUATE PAEDIATRIC

LOG BOOK

Name of the student:

Contact Number:

Email id:

Date of admission to MBBS course:

Date of beginning of the current phase:

Reg. No. (College ID):

Reg. No. (University ID):

Sample template

DEPARTMENT OF PAEDIATRICS

(Name of the medical college)

LOG BOOK CERTIFICATE

Certified that this is a bonafide record of the work done by

_____ in the department during his/her clinical postings. He/she

will be appearing for the Final M.B.B.S.(Phase 3, part 2) examination of Rajiv Gandhi University
of Health Sciences, Karnataka, in February/August 20



Signature of faculty

Signature of Head of the department

Name :

Reg No. : Batch :

Posting in the Dept :

From

To

II

III

ATTENDANCE

		Classes held	Classes attended	Percentage	Faculty sign
Clinical Posting	I				
	II				
	III				
Theory Attendance	PY3P1				
	PY3P2				
Small group discussions	PY3P1				
	PY3P2				

INTERNAL ASSESSMENT MARKS		
	Theory	Clinicals
	1st test:	1st :
	2nd test:	2nd:
		3rd:

**Final Internal
Assessment
Marks**

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INDEX

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6.	Documentation of Case Presentations	5
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5.	Certifiable competencies	8-19
6.	Reflections	20
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ABBREVIATIONS

F / R / RE – First or Only / Repeat / Remedial

- First or only – Student completed the task in the first attempt
- Repeat – Student completed the task in multiple attempts
- Remedial – Student completed the task after remedial measures

B / M / E – Below expectation / Meets expectation / Exceeds expectation

- Below expectation – Student did not complete the task
- Meets Expectation – Student completed the task with minimal prompts
- Exceeds expectation – Student completed the task without any prompts

C / R / RE – Completed / Repeat / Remedial

- Completed – Student has successfully completed the task
- Repeat – Student had to repeat the task in the same briefing
- Remedial – Student needs to undergo briefing again and repeat the task

AETCOM – Attitude, Ethics and Communication Module

SUMMARY OF CERTIFIABLE COMPETENCIES

Competency no.	Competency details	No required to certify	Date completed	Reference page no

PE1.4	Perform anthropometric measurements, document in growth charts and interpret	3		8
PE1.7	Perform developmental assessment and interpret	3		14
PE 7.5	Observe the correct technique of breast feeding and distinguish right from wrong techniques	3		23
PE11.5	Calculate BMI, document in BMI chart and interpret	3		15
PE19.6	Assess patient for fitness for immunization and prescribe an ageappropriate immunization schedule	5		18
PE24.15	Perform NG tube insertion in a manikin	2		25
PE24.16	Perform IV cannulation in a mode	2		43
PE24.17	Perform intraosseous insertion model	2		44
PE27.15	Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting	3		45
PE27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment	3		46
PE27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate	3		47
PE27.18	Assess airway and breathing: perform assisted ventilation by bag and mask in a simulated environment	3		48
PE27.19	Check for signs of shock i.e. pulse, blood pressure, CRT	3		49
PE27.20	Secure an IV access in a simulated Environment	2		43
PE27.21	Choose the type of fluid and calculate the fluid requirement in shock	3		50

PE27.22	Assess level of consciousness & provide emergency treatment to a child with convulsions/coma 3 Position an unconscious child 3 Position a child with suspected trauma Administer IV/per rectal Diazepam for a convulsing child in a simulated environment	3		51
PE27.23	Assess for signs of severe dehydration	3		52
PE27.28	Provide BLS for children in manikin	3		53
PE33.6	Perform and interpret urine dip stick for sugar	3		26
PE33.11	Identify deviations in growth and plan appropriate referral	2		13
PE34.6	Identify a BCG scar	3		27
PE34.7	Interpret a Mantoux test	3		28
PE34.11	Perform AFB staining	3		29

Student's Signature

Signature of Faculty
(Name and Designation)

PROFESSIONAL YEAR II

LEARNING OBJECTIVES 1st CLINICAL POSTING (2 WEEKS)

At the end of the first posting, students are expected to:

7. Perform, interpret and document anthropometric measurements in children
 8. Use the appropriate growth chart for a child and interpret them correctly
 9. Perform, interpret and document nutritional history taking and development of a dietary plan for all children
 10. Perform, interpret and document developmental history taking in all children
 11. Conduct a developmental assessment in children and interpret them correctly
 12. Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule
-

PE 1.4 Perform anthropometric measurements, document in growth charts and Interpret

Minimum number required to certify-3*

Growth assessment

No	Name	Age	Sex	Weight			Height/Length			MAC			HC			Wt for Ht		
				A	E	I	A	E	I	A	E	I	A	E	I	A	E	I
1																		
2																		
3																		
4																		
5																		

A - Actual E - Expected I - Inference

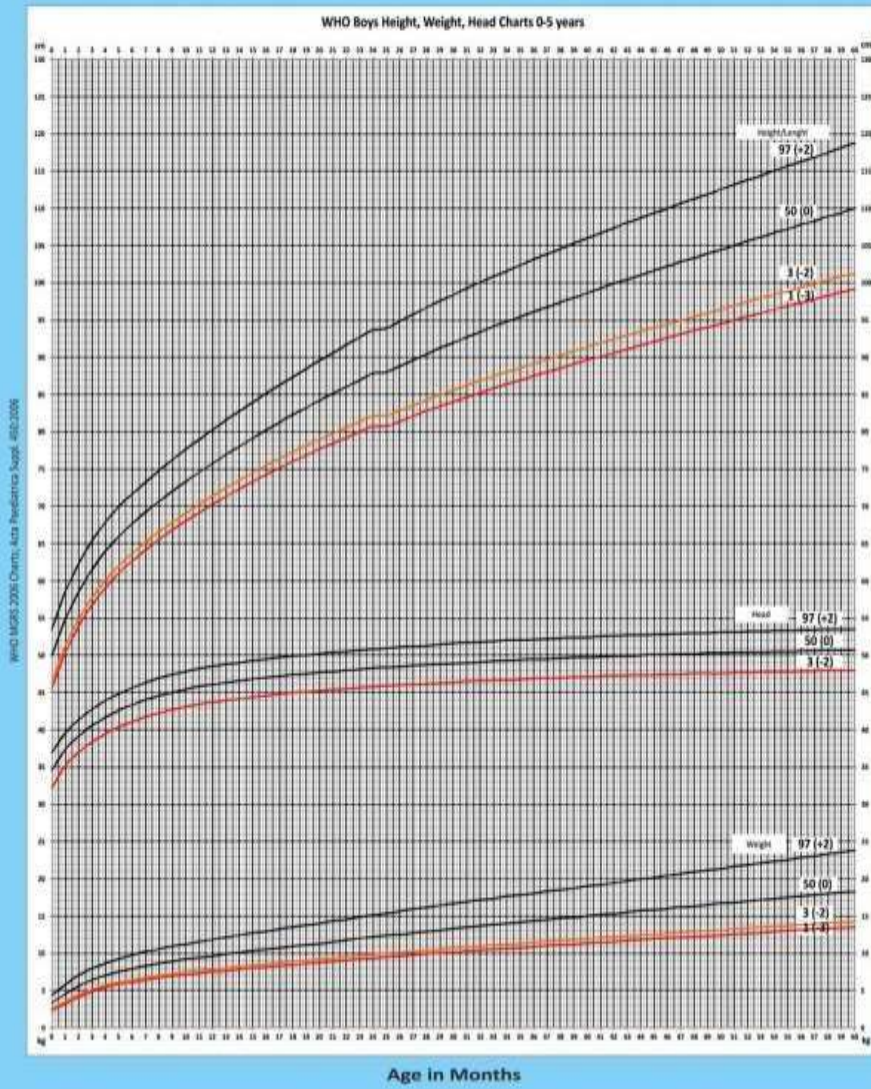
Using growth charts

Anthropometric values to be given here for each batch. They have to mark the values on the chart and interpret the growth pattern (No. Required - 3)

0 to 5 Years : WHO Boys Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____



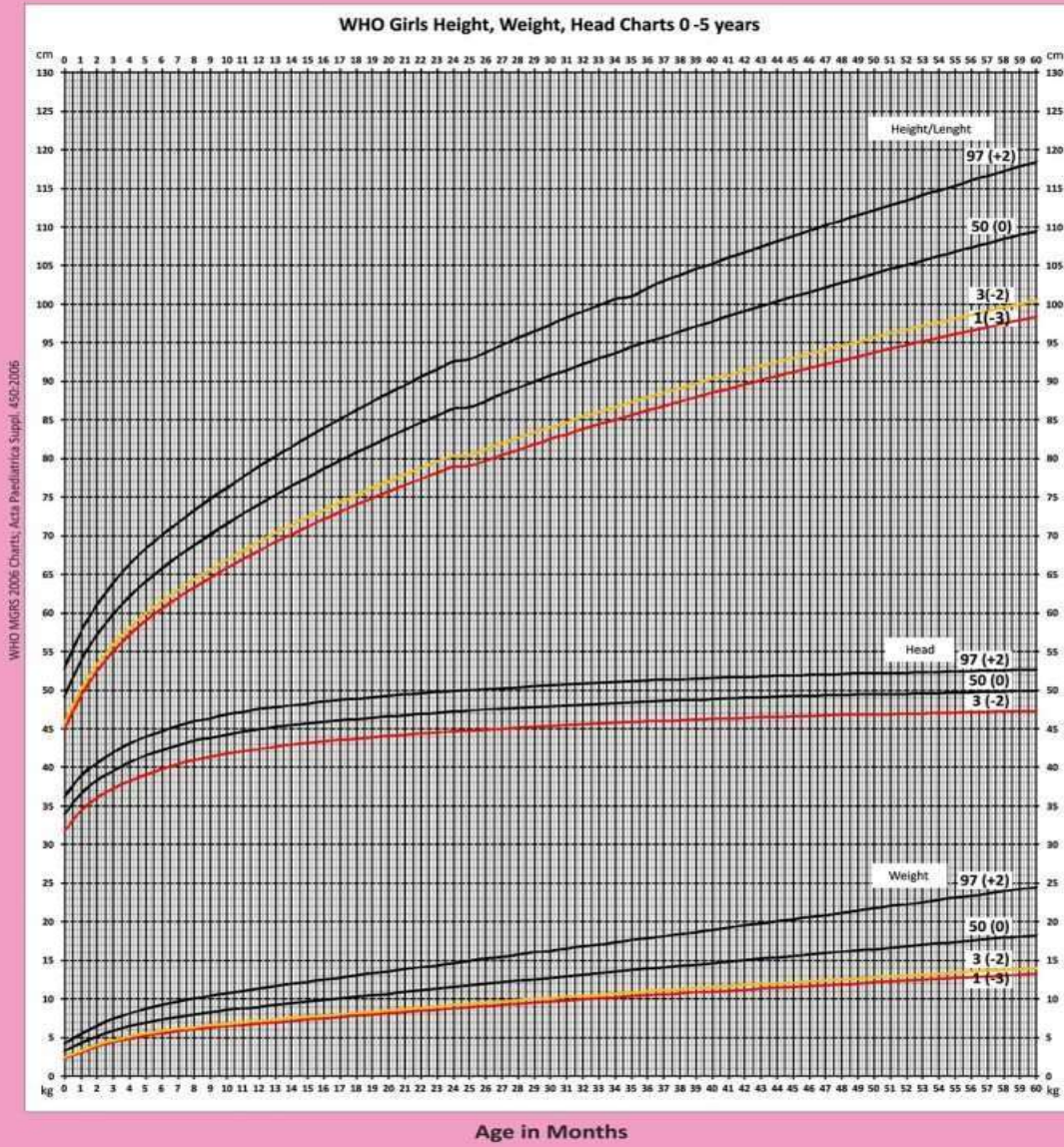
Interpretation:

- 1.
- 2.
- 3.

0 to 5 Years : WHO Girls Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____

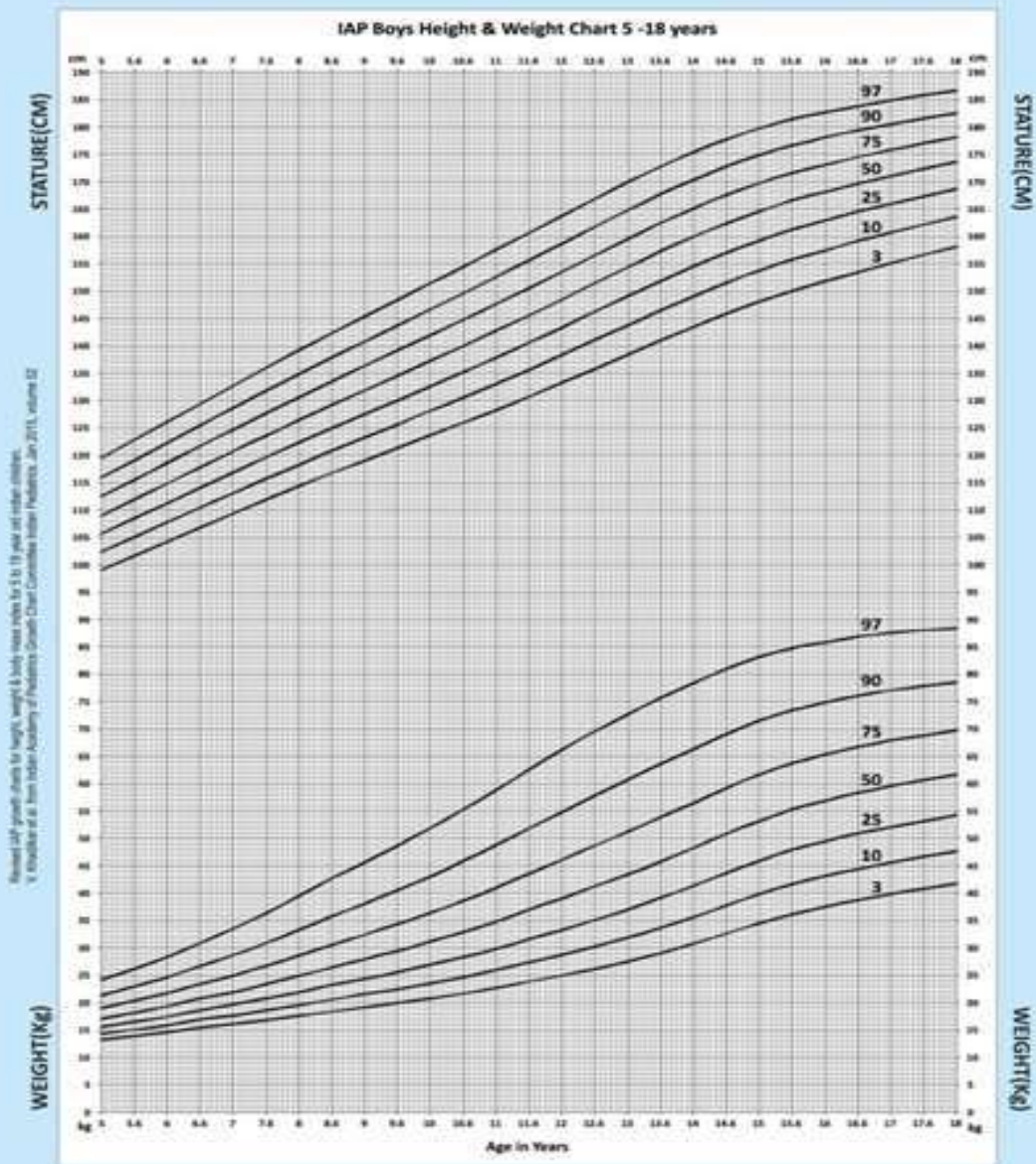


Interpretation:

1. 2.
- 3.

5 to 18 Years : IAP Boys Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____

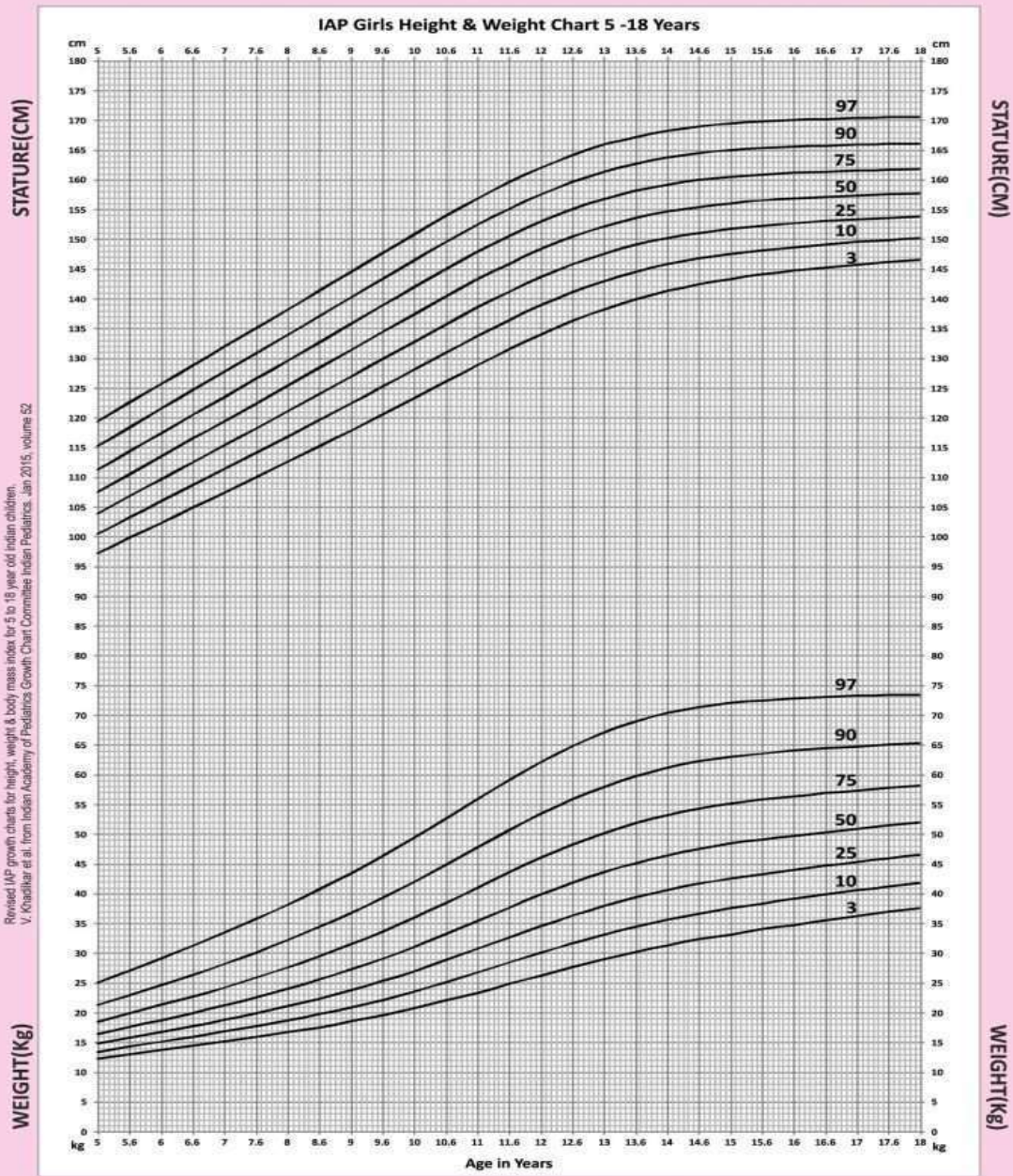


Interpretation:

- 1.
- 2.
- 3.

5 to 18 Years : IAP Girls Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____



Interpretation:

1. 2.
- 3.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date
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PE33.11 Identify deviations in growth (Using the above growth charts) and plan appropriate referral.

Minimum number required to certify-2

If requiring referral, mention the reasons for referral

(Case 1)

- 1.
- 2.
- 3.
- 4.
- 5.

(Case 2)

- 1.
- 2.
- 3.
- 4.
- 5.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE1.7

Perform developmental assessment and interpret

Minimum number required to certify-3

Take a detailed developmental history and perform developmental assessment. Indicate the present milestone attained in each category. Calculate the developmental age for each domain

Minimum number required to certify-3

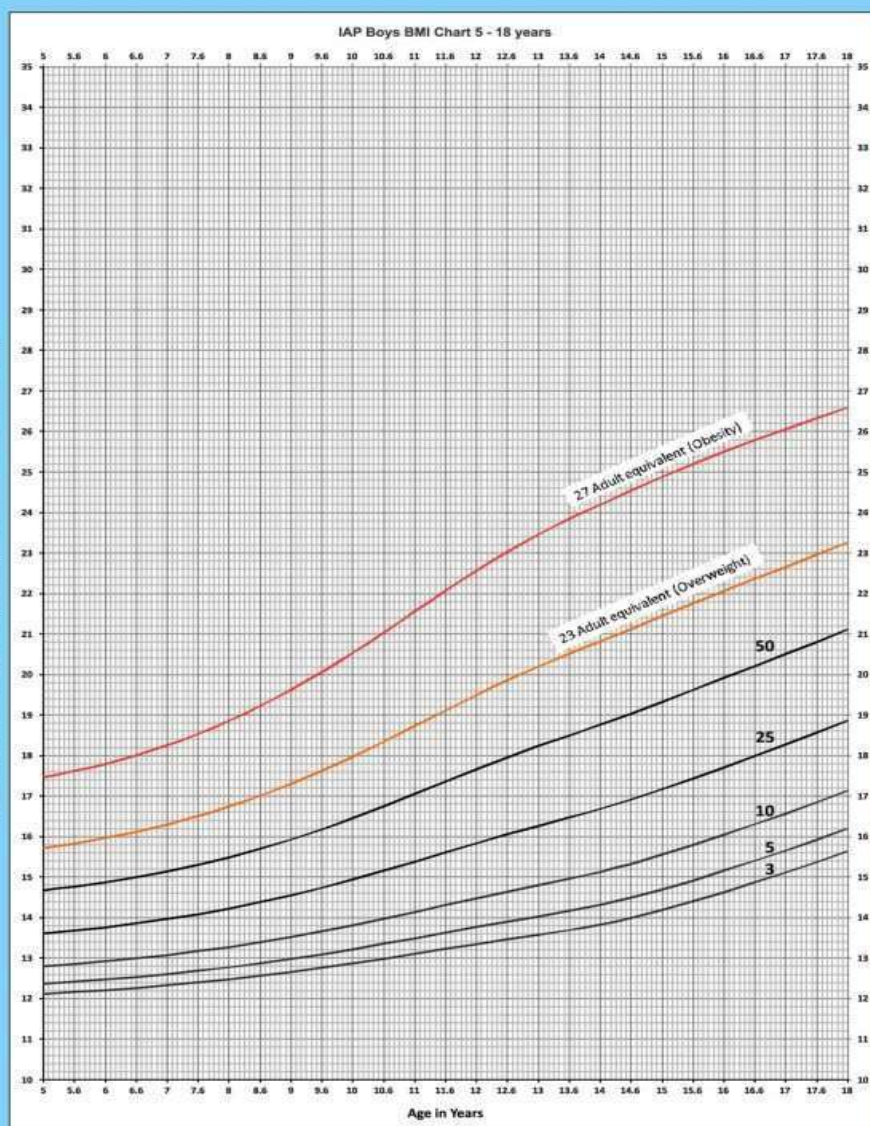
2								
3								
4								
5								

5 to 18 Years : IAP Boys Body Mass Index Charts

Name _____

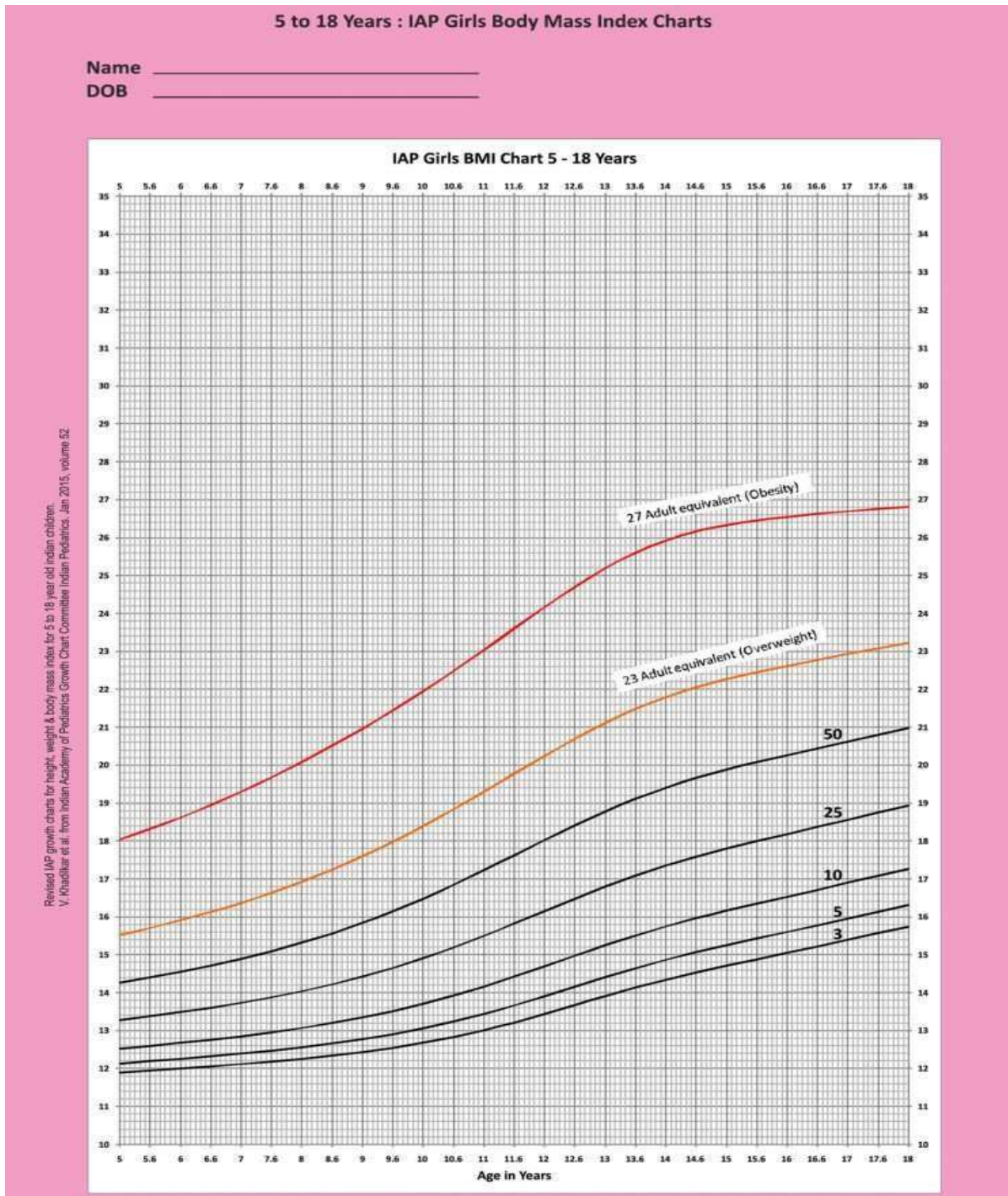
DOB _____

Revised IAP growth charts for height, weight & body mass index for 5 to 18 year old Indian children.
 V. Phadnis et al. from Indian Academy of Pediatrics Growth Chart Committee Indian Pediatrics, Jan 2015, volume 52



Interpretation:

1. 2.
- 3.



Interpretation:

1. 2.
- 3.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE19.6 Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

Minimum number required to certify-5

Assessment of immunization status:

S. No	Name	Age	Sex	Vaccines received till date	Plan for further immunisation
1					
2					
3					
4					
5					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PROFESSIONAL YEAR III PHASE I

EARNING OBJECTIVES

1. Observe the correct technique of breast feeding and distinguish right from wrong techniques
 2. Perform NG tube insertion in a manikin correctly
 3. Perform and interpret urine dip stick for sugar correctly
 4. Identify a BCG scar accurately
 5. Interpret a Mantoux test correctly
 6. Perform AFB staining correctly
 7. Write 4 Paediatric and 1 neonatal case sheets
-

PE7.5 Observe the correct technique of breast feeding and distinguish right from wrong techniques

Minimum number required to certify-3

Observe the process of breast feeding (under supervision and a chaperone being present) and note the following points

Position of mother and baby.

Cradle. The baby is held in the crook or elbow area of the arm on same side as breast to be used for feeding; mother supports breast with opposite hand; baby's body is rolled in toward mother's body so they are belly-to-belly.

Cross-cradle. The baby's head is supported by the hand opposite the breast to be used for feeding; mother supports breast with hand; baby is rolled in toward mother's body belly-to-belly.

Football or clutch. Baby's head is supported by the hand on the same side as breast to be used for feeding; baby's body is supported on a pillow and tucked under the arm on the same side as breast to be used for feeding.

Side-lying using modified cradle. In this position, the baby lies next to the mother with their bodies facing each other. If a pillow under the arm is uncomfortable, try placing the baby in the crook of the arm. This way, it is unlikely for the mother to roll over on the baby should the mother doze off. This position also keeps the baby's head at a good angle to bring baby and breast together, with the baby's head higher than his or her tummy, which can be helpful for babies who are more likely to spit up.

Laid-back breastfeeding In this position, the mother is leaning back in a recliner or reclining in bed. The baby is lying on his or her stomach and is pressed against the mother's body. She can support the side of her baby's head if baby cannot hold it by him- or herself. In this position, both mother and baby can relax. She can allow her baby to explore her breast and latch on at his or her leisure. This is a great position if mother has had a cesarean delivery.

Latching.

The latch should be comfortable and pain free.

The baby's chest and stomach rest against the mother's body, so that baby's head is straight, not turned to the side.

Baby's chin touches her breast.

Baby's mouth opens wide around her breast, not just the nipple.

Baby's lips turn out.

Baby's tongue cups under her breast.

Mother hears or sees swallowing.

S. No	Position of	Position of child	Attachment	Comments mother	(latching)
1					
2					

3				
---	--	--	--	--

4
<hr/>
<hr/>

5					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.15 Perform NG tube insertion in a manikin

Minimum Number required to certify-2

Demonstrate the following steps in inserting a NG tube in a manikin

S. No	Identify size of nasogastric tube as per age of child.	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin	Correctly measure the length of NG tube to be inserted	Insert the tube and check its position
1				
2				
3				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE33.6 Perform and interpret urine dip stick for sugar

Minimum number required to certify- 3

Demonstrate the steps to perform and interpret the urine dip stick for sugar

S. no	Urine sugar by dipstick	Interpretation
1		
2		

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

3		
---	--	--

S.No	Age of the child	Size of BCG scar	Quality of the scar
1			
2			
3			
4			

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Demonstrate the following steps to identify a BCG scar

S. No	Age	Measure induration (horizontal/transverse)	Interpretation
1			
2			
3			
4			
5			

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Minimum number required to certify- 3

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Demonstrate the following steps to interpret a Mantoux test

PE34.11 Perform AFB staining

****Shared with Microbiology**

Minimum number required to certify- 3

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.5	Provide intra-natal care and observe the conduct of a normal delivery	3		
2	27.10	Observe the various methods of administering Oxygen	3		
3	31.11	Observe administration of Nebulization	3		

S.no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	9.7	Plan an appropriate diet in health and disease	3			

(to be observed in ward/PICU/NICU/LT)

Competencies requiring documentation

(to be done as part of seminar, demonstration, case presentation)

2	11.3	Assessment of a child with obesity with regard to eliciting history including physical activity, charting and dietary recall	3			
3	12.3	Identify the clinical features of dietary deficiency /excess of Vitamin A	3			
4	12.4	Diagnose patients with Vitamin A deficiency (VAD), classify and plan management	3			
5	12.8	Identify the clinical features of dietary deficiency of Vitamin D	3			
6	12.9	Assess patients with Vitamin D deficiency, diagnose, classify and plan management	3			
7	12.17	Identify the clinical features of Vitamin B complex deficiency	3			
8	12.18	Diagnose patients with vitamin B complex deficiency and plan management	3			
9	12.21	Identify the clinical features of Vitamin C deficiency	3			

10	13.3	Identify the clinical features of dietary deficiency of Iron and make a diagnosis	3			
11	24.12	Perform and interpret stool examination including Hanging Drop	2			
12	27.31	Assess child for signs of abuse	2			
13	32.2	Identify the clinical features of Down Syndrome	3			
14	32.7	Identify the clinical features of Turner Syndrome	2			
15	32.12	Identify the clinical features of Klinefelter Syndrome	2			
16	33.10	Recognize precocious and delayed Puberty and refer	2			
17	20.6	Explain the follow-up care for neonates including Breastfeeding, Temperature maintenance, immunization, importance of growth monitoring and red flags.	3			

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	28.16	Interpret blood tests relevant to upper respiratory problems	3			
2	29.15	Perform and Interpret peripheral smear.	3			
3	32.3	Interpret normal Karyotype and recognize Trisomy 21	2			
4	32.8	Interpret normal Karyotype and recognize Turner Karyotype	2			
5	32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype	2			
6	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	2			

(to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI /EEG/ECG reports)

S. No	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	2.3	Counseling a parent with failing to thrive child	3		
2	3.4	Counsel a parent of a child with developmental delay	3		
3	6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence	3		
4	7.8	Educate mothers on antenatal breast care and prepare mothers for lactation	3		
5	7.9	Educate and counsel mothers for best practices in Breastfeeding	3		
6	7.10	Respect patient privacy	3		
7	8.5	Counsel and educate mothers on the best practices in complementary feeding	3		
8	10.5	Counsel parents of children with SAM and MAM	3		
9	19.7	Educate and counsel a patient for immunization	3		

(To be done as part of AETCOM)

10	19.8	Demonstrate willingness to participate in the national and subnational immunization days	3		
11	20.5	Counsel/educate mothers on the care of neonates	3		
12	21.16	Counsel / educate a patient for referral appropriately	3		
13	22.2	Counsel a patient with Chronic illness	3		
14	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
15	29.19	Counsel and educate patients about prevention and treatment of anemia.	3		
16	32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Down syndrome)	2		
17	32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Turner syndrome)	2		

List of Self-Directed Learning Topics

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- 15.

SELF- DIRECTED LEARNING:

1) Topic:

Objectives:

Task:

Impressions:

2) Topic:

Objectives:

Task:

Impressions:

INTEGRATED LEARNING

Summary of integrated learning sessions:

REFLECTIONS:

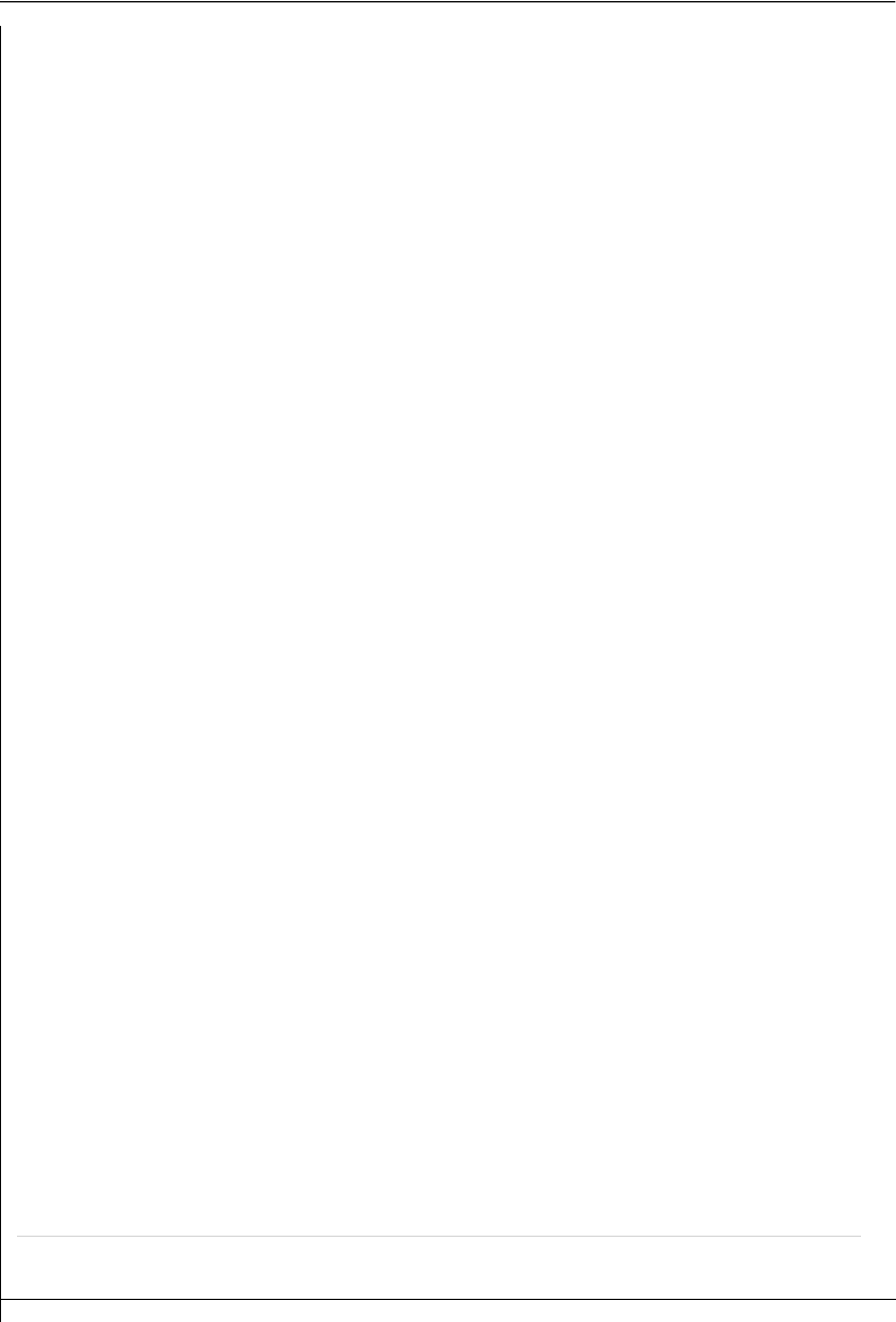
Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

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ELECTIVE POSTINGS (If done in Paediatrics)

Name of elective	Location of elective	Name of internal preceptor	Attendance	Daily rounds	Assignments	Case presentation	Remarks of the preceptor	

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PROFESSIONAL YEAR III PHASE II

EARNING OBJECTIVES

9. Perform IV cannulation in a simulated environment
 10. Perform intraosseous insertion in a simulated environment
 11. Assess airway, breathing and circulation in a sick child, give appropriate and accurate treatment
 12. Choose the type of fluid and calculate the fluid requirement in shock in children
 13. Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma
 14. Assess for signs of severe dehydration
 15. Provide BLS for children in a manikin
 16. Write 4 Paediatric and 1 neonatal case sheet
-

S.no	Identify size of IV cannula as per age of child.	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe	Choose and prepare the site	Correctly insert the cannula and look for free flow of blood	Fix the cannula and properly dispose the biomedical waste
1					
2					
3					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

S.no	Respiratory rate	Intercostal retractions	Alae nasi flaring	Drowsiness	Grunt or stridor	Cyanosis
------	------------------	-------------------------	-------------------	------------	------------------	----------

1						
2						
3						
Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date	

Minimum number required to certify-2

Perform intraosseous insertion in a model in these following steps

PE27.15 Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting

Minimum number required to certify- 3

Check for the following signs in a child with respiratory distress

S.no	Head tilt manoeuvre performed	Chin lift manoeuvre performed	Jaw thrust manoeuvre performed	Remarks of the facilitator
1				
2				
3				

a	Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date	open airway in

simulated environment

Minimum number required to certify- 3

Assess whether the student performs the steps in a correct manner

S. no	Head box	Nasal cannula	High flow nasal cannula	Face mask	Non rebreathing mask	Rate of delivery of oxygen
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date	flow rate

Minimum number required to certify- 3

Demonstrate the various methods of administering oxygen and at specific rates

S. no	Chosen the correct size mask	Chosen the correct bag	Head and neck in proper position	Used the correct pressure to inflate	Looked for chest rise	Used the correct rate of ventilation
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

environment

Minimum number required to certify- 3

Demonstrate assisted ventilation using bag and mask in a simulated environment

S. no	Check for volume of pulse	Check BP	Check for saturation	Check for CRT	Check for skin colour and temperature	Check for sensorium
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Minimum number required to certify- 3

Check for the signs of shock

S.no	Type of shock	Assess weight of child	Choose the appropriate fluid for bolus administration	Calculate the amount of fluid to be administered for bolus and continuation	Remarks
1	Hypovolemic				
2	Septic				
3	Cardiogenic				
4	Obstructive				
5	Burns				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.21 Choose the type of fluid and calculate the fluid requirement in shock

Minimum number required to certify- 3

Choose appropriate fluid according to different types of shock. Calculate the fluid for managing different types of shock at different age/size of the child.

PE27.22 Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma

Minimum number required to certify- 3

S.no	Assess level of consciousness (Glasgow or AVPU)	Position a child in coma correctly	Position a child with head/spine trauma correctly	Assess ABCD	Demonstrate how to give rectal diazepam	Calculate how much IV diazepam and give it correctly in a manikin	Administer nasal midazolam spray
1							
2							
3							

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

S.No	Check for response	Call for help	Check pulse and breathing simultaneously	Start chest compression	Make airway patent and give 2 rescue breaths	Repeat above CPR
1						

Minimum number required to certify- 3

Either a certificate that they have attended a formal BLS course or a modified BLS session has to be attached

2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

SUMMARY OF COMPETENCIES REQUIRING DOCUMENTATION
(to be done as part of seminar, demonstration, case presentation)

S.no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	21.9	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca	3			

2	21.10	Analyze symptom and interpret the physical findings and arrive at an appropriate provisional	3			
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		differential diagnosis				
3	21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosi, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechia	3			
4	21.16	Counsel / educate a patient for referral appropriately	3			

5	23.11	Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti failure drugs, and inotropic agents	3			
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**Competencies requiring documentation
(To be done as part of IMNCI assessment)**

S. no	Competency no	Competency detail	Minimum No.to be done	Date completed	Faculty signature
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1	10.4	Identify children with under nutrition as per IMNCI criteria and plan referral	3		
2	16.2	Assess children <2 months using IMNCI guidelines	3		
3	16.3	Assess children >2 months to 5 years using IMNCI guidelines and stratify risk	3		
4	20.18	Identify and stratify risk in a sick neonate using IMNCI guidelines	3		
5	24.11	Apply the IMNCI guidelines in risk stratification of children with diarrhoeal dehydration and refer	3		

6	28.15	Stratify risk in children with stridor using IMNCI guidelines	3		
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**Competencies requiring documentation
(to be done in a simulated environment)**

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.4	Provide intra-natal care and conduct a normal delivery in a simulated environment	3		

2	19.13	Demonstrate the correct administration of different vaccines in a mannequin	3		
3	20.3	Perform Neonatal resuscitation in a manikin	3		
4	26.10	Demonstrate the technique of liver biopsy in a manikin Perform Liver Biopsy in a simulated environment	2		
5	29.17	Demonstrate performance of bone marrow aspiration in mannequin.	2		

Competencies requiring documentation

(to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI/ EEG/ECG reports)

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	21.12	Interpret report of Plain X Ray of KUB	3			
2	21.13	Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB	3			
3	23.12	Interpret a chest X ray and recognize Cardiomegaly	3			

4	23.13	Choose and Interpret blood reports in	3			
		Cardiac illness				
5	23.14	Interpret Pediatric ECG	3			
6	23.15	Use the ECHO reports in management of cases	3			
7	24.13	Interpret RFT and electrolyte report	3			
8	30.20	Interpret and explain the findings in a CSF analysis	3			
9	30.21	Enumerate the indication and discuss the limitations of EEG, CT, MRI	3			
10	30.22	Interpret the reports of EEG, CT, MRI	3			
11	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	3			

AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION
(To be done as part of AETCOM)

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
2	26.13	Counsel and educate patients and their family appropriately on liver diseases	3		
3	27.32	Counsel parents of dangerously ill/ terminally ill child to break a bad news	2		
4	27.33	Obtain Informed Consent	2		
5	27.34	Willing to be a part of the ER team	3		
6	27.35	Attends to emergency calls promptly	3		

SELF-DIRECTED LEARNING

List of Self-Directed Learning Topics

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SELF-DIRECTED LEARNING:

1) T
opic:

Objectives:

Task:

Impressions:

2) T
opic:

Objectives:

Task:

Impressions:

INTEGRATED LEARNING

Summary of integrated learning sessions

S.No	Competency No	Topic	Departments involved	Date

REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks

Other activities :

- 5. Participation in departmental activities- children's day, breast feeding week, ORS week, disease specific days (if being celebrated)**
 - 6. STS/ college grant project submitted**
 - 7. Participation in IAP quiz competition**
 - 8. Participation in any research projects/student conference**
-
-

S. no	Visit to	Competency no	Competency	Year/Phase	Date completed	Report submitted	Faculty signature
1	Child development unit	3.7	Visit a Child Developmental Unit and Observe its functioning Topic: Developmental delay and cerebral palsy				
2	Child guidance clinic	4.6	Visit to the Child guidance clinic Topic: Scholastic backwardness, learning disabilities, Autism, ADHD				
		5.11	Visit to Child guidance clinic and observe functioning Topic: Common problems related to behaviour				
3	Adolescent clinic	6.11	Visit to the Adolescent clinic				
4	Rural health centre	18.8	Observe the implementation of the program by visiting the Rural Health Center				

5	Immunization clinic	19.10	Observe the handling and storing of vaccines				
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CLINIC/FIELD VISITS

		19.11	Document Immunization in an immunization record				
		19.12	Observe the administration of UIP vaccines				
		19.14	Practice Infection control measures and appropriate handling of the sharps				

NOTES

NOTES

Acknowledging the Contributors to the development of Curriculum of 3rd MBBS Part 2

Subject	Contributors
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Paediatrics	IAP task force CBME curriculum for Paediatrics RGUHS CBME curriculum for RS 4 Batch NMC Document - Regulations on Graduate Medical Education Dr. K. Shreedhara Avabratha, Dr K Varadaraj Shenoy, Dr Riya Tharakan, Dr Sujonitha John and Dr Sweta Shanbhag. Father Muller Medical College Hospital, Mangalore

**Revised Ordinance Governing
MBBS DEGREE COURSE AND CURRICULUM of
Phase III Part 2 Subjects- RS4**



RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA

4th T Block, Jayanagar, Bengaluru- 560041



ರಾಜೀವ್ ಗಾಂಧಿ ಆರೋಗ್ಯ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ, ಬೆಂಗಳೂರು
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4th T Block, Jayanagar, Bengaluru - 560 041

RGU/AUTH/MBBS-UG/176th/164/2018-19

Date: 15/12/2022

NOTIFICATION

Sub: - Ordinance pertaining to Regulations and Curriculum of MBBS
Phase III Part 1 and Part 2 as per CBNIE Guidelines for RS4 Batch.

Ref:- 1. No. MCI-34(41)/2019-Med/161726, Dated 04/11/2019
2. Proceedings of 176th meeting of Syndicate held on 24/11/2022.
**

In exercise of the powers vested under section 35(2) of RGUHS Act, 1994, the Revised Ordinance pertaining to Regulations and Curriculum of MBBS Phase III Part 1 and Part 2 as per CBME guidelines for RS4 batch is notified herewith as per Annexure.

Copy to:

1. The Principal Secretary to Governor, Raj Bhavan, Bangalore — 560001
2. The Principal Secretary Medical Education, Health & Family Welfare Dept. M S Building, Dr. B R Ambedkar Veedhi, Bangalore -560001.
3. The Principals of All affiliated Medical College of RGUHS, Bangalore
4. PA to Vice-chancellor/ PA to Registrar/ Registrar (Eva.)/Finance Officer, Rajiv Gandhi University of Health Sciences, Bangalore.
5. All Officers of the University Examination Branch/ Academic Section.
6. Guard File/ Office copy.

GMER - SECTION I7/15/2022

PREAMBLE

Introduction to CBME based curriculum

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate is able to recognize "health for all" as a national goal and should be able to fulfill his/her societal obligations. The revised curriculum has attempted to enunciate the competencies the student must be imparted and should have learnt, with clearly defined teaching-learning strategies and effective methods of assessment. Communicating effectively and sympathetically with patients and their relatives has been visualized as a core area of the revised curriculum. These and other goals identified in the curriculum are to be implemented in all medical colleges under the ambit of Medical Council of India from August 2019 and to smoothen this process Guidelines have been prepared for its effective implementation. In response to the need for a seamless introduction of the curriculum into the Undergraduate system, all medical colleges need to upgrade the teaching-learning skills of their faculty. Earlier experience with implementation of curricular changes suggests that a carefully managed, sustainable approach is necessary to ensure that every college has access to the new skills and knowledge enunciated in the new curriculum. Faculty training and development thus assumes a key role in the effective implementation and sustenance of the envisaged curricular reforms.

INTRODUCTION

The undergraduate medical curriculum of the medical council of India is created to ensure that the medical doctor who emerges from the MBBS training program is capable of assisting the nation to achieve its goal of health for all. In addition, it aspires to ensure that the “graduate” meets or exceeds global bench-mark in knowledge, attitude, skills and communication. This intent is at the core of the Graduate Medical Regulations, 2019.

The Graduate Medical Regulations, 2019 represents the first major revision to the medical curriculum since 1997 and hence incorporates changes in science and thought over two decades. A significant advance is the development of global competencies and subject-wise outcomes that define the roles of the “Indian Medical Graduate”. Learning and assessment strategies have been outlined that will allow the learner to achieve these competencies/outcomes. Effective appropriate and empathetic communication, skill acquisition, student-doctor method of learning, aligned and integrated learning and assessment are features that have been given additional emphasis in the revised curriculum.

The revised curriculum is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

This document represents a compilation of the resource material that was used in the Curricular Implementation Support Program (CISP) and has attempted to provide a stepwise and comprehensive approach to implement the curriculum. It details the philosophy and the steps required in a simple and richly illustrated manner. Teaching slide decks, faculty guides and online resource material supplement this document. The document is to be used in conjunction with the Competency document, AETCOM module and the GMR document.

Indian Medical Graduate Training Programme

The undergraduate medical education programme is designed with a goal to create an “Indian Medical Graduate” (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that she or he may function appropriately and effectively as a physician of first contact of the community while being globally relevant. To achieve this, the following national and institutional goals for the learner of the Indian Medical Graduate training programme are hereby prescribed: -

National Goals

At the end of undergraduate program, the Indian Medical Graduate should be able to:

- (a) Recognize “health for all” as a national goal and health right of all citizens and by undergoing training for medical profession to fulfill his/her social obligations towards realization of this goal.
- (b) Learn every aspect of National policies on health and devote her/him to its practical implementation.
- (c) Achieve competence in practice of holistic medicine, encompassing promotive, preventive, curative and rehabilitative aspects of common diseases.
- (d) Develop scientific temper, acquire educational experience for proficiency in profession and promote healthy living.
- (e) Become exemplary citizen by observance of medical ethics and fulfilling social and professional obligations, so as to respond to national aspirations.

Institutional Goals

(1) In consonance with the national goals each medical institution should evolve institutional goals to define the kind of trained manpower (or professionals) they intend to produce. The Indian Medical Graduates coming out of a medical institute should:

- (a) be competent in diagnosis and management of common health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant investigations.
- (b) be competent to practice preventive, promotive, curative, palliative and rehabilitative medicine in respect to the commonly encountered health problems.
- (c) appreciate rationale for different therapeutic modalities; be familiar with the administration of “essential medicines” and their common adverse effects.
- (d) be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude towards the patients in discharging one's professional responsibilities.
- (e) possess the attitude for continued self-learning and to seek further expertise or to pursue research in any chosen area of medicine, action research and documentation skills.
- (f) be familiar with the basic factors which are essential for the implementation of the National Health Programmes including practical aspects of the following:
 - (i) Family Welfare and Maternal and Child Health (MCH)
 - (ii) Sanitation and water supply
 - (iii) Prevention and control of communicable and non-communicable diseases
 - (iv) Immunization
 - (v) Health Education
 - (vi) Indian Public Health Standards (IPHS), at various levels of service delivery
 - (vii) Bio-medical waste disposal
 - (viii) Organizational and/or institutional arrangements.
- (g) acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, hospital management, inventory skills and counseling.
- (h) be able to identify community health problems and learn to work to resolve these by designing, instituting corrective steps and evaluating outcome of such measures.
- (i) be able to work as a leading partner in health care teams and acquire proficiency in communication skills.
- (j) be competent to work in a variety of health care settings.
- (k) have personal characteristics and attitudes required for professional life such as personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals.

All efforts must be made to equip the medical graduate to acquire the skills as detailed in Table 11 Certifiable procedural skills – A Comprehensive list of skills recommended as desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate.

In order to fulfil the goal of the IMG training programme, the medical graduate must be able to function in the following roles appropriately and effectively

- Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.
- Leader and member of the health care team and system with capabilities to collect analyze, synthesize and communicate health data appropriately.
- Communicator with patients, families, colleagues and community.
- Lifelong learner committed to continuous improvement of skills and knowledge.
- Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

Competency Based Training Programme of the Indian Medical Graduate

Competency based learning would include designing and implementing medical education curriculum that focuses on the desired and observable ability in real life situations. In order to effectively fulfil the roles as listed in clause 2, the Indian Medical Graduate would have obtained the following set of competencies at the time of graduation:

Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion

- Demonstrate knowledge of normal human structure, function and development from a molecular, cellular, biologic, clinical, behavioural and social perspective.
- Demonstrate knowledge of abnormal human structure, function and development from a molecular, cellular, biological, clinical, behavioural and social perspective.
- Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence health care.
- Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is contextual to gender, age, vulnerability, social and economic status, patient preferences, beliefs and values.
- Demonstrate ability to perform a physical examination that is complete and relevant to disease identification, disease prevention and health promotion.
- Demonstrate ability to perform a physical examination that is contextual to gender, social and economic status, patient preferences and values.
- Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals.
- Maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.
- Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context.

- Demonstrate ability to prescribe and safely administer appropriate therapies including nutritional interventions, pharmacotherapy and interventions based on the principles of rational drug therapy, scientific validity, evidence and cost that conform to established national and regional health programmes and policies for the following:
 - (i) Disease prevention,
 - (ii) Health promotion and cure, (iii) Pain and distress alleviation, and (iv) Rehabilitation.
- Demonstrate ability to provide a continuum of care at the primary and/or secondary level that addresses chronicity, mental and physical disability.
- Demonstrate ability to appropriately identify and refer patients who may require specialized or advanced tertiary care.
- Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

Leader and member of the health care team and system

- Work effectively and appropriately with colleagues in an inter-professional health care team respecting diversity of roles, responsibilities and competencies of other professionals.
- Recognize and function effectively, responsibly and appropriately as a health care team leader in primary and secondary health care settings.
- Educate and motivate other members of the team and work in a collaborative and collegial fashion that will help maximize the health care delivery potential of the team.
- Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyze and utilize health data.
- Participate appropriately and effectively in measures that will advance quality of health care and patient safety within the health care system.
- Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition: in a) life style diseases and b) cancers, in collaboration with other members of the health care team.

Communicator with patients, families, colleagues and community

- Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health care outcomes.
- Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trustworthy.
- Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality and privacy.
- Demonstrate ability to communicate with patients, colleagues and families in a manner that encourages participation and shared decision-making.

Lifelong learner committed to continuous improvement of skills and knowledge

- Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills.
- Demonstrate ability to apply newly gained knowledge or skills to the care of the patient.

- Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
- Demonstrate ability to search (including through electronic means), and critically evaluate the medical literature and apply the information in the care of the patient.
- Be able to identify and select an appropriate career pathway that is professionally rewarding and personally fulfilling.

Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

- Practice selflessness, integrity, responsibility, accountability and respect.
- Respect and maintain professional boundaries between patients, colleagues and society.
- Demonstrate ability to recognize and manage ethical and professional conflicts.
- Abide by prescribed ethical and legal codes of conduct and practice.
- Demonstrate a commitment to the growth of the medical profession as a whole.

Broad Outline on training format

In order to ensure that training is in alignment with the goals and competencies listed in sub-clause 2 and 3 above:

- There shall be a "Foundation Course" to orient medical learners to MBBS programme, and provide them with requisite knowledge, communication (including electronic), technical and language skills.
- The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible in order to enhance learner's interest and eliminate redundancy and overlap.
- Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning.

- Clinical training shall emphasize early clinical exposure, skill acquisition, certification in essential skills; community/primary/secondary care-based learning experiences and emergencies.
- Training shall primarily focus on preventive and community-based approaches to health and disease, with specific emphasis on national health priorities such as family welfare, communicable and noncommunicable diseases including cancer, epidemics and disaster management.
- Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.
- The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics and communication.
- Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Appropriate Faculty Development Programmes shall be conducted regularly by institutions to facilitate medical teachers at all levels to continuously update their professional and teaching skills, and align their teaching skills to curricular objectives.

SECTION II

Admission to the Indian Medical Graduate Programme

NATIONAL ELIGIBILITY-CUM-ENTRANCE TEST AND COMMON COUNSELLING

SECTION III

Migration

AS PER MCI GUIDELINES

SECTION IV

REGULATIONS GOVERNING MBBS DEGREE COURSE

[Eligibility for Admission, Duration, Attendance and Scheme of Examination]

1. ELIGIBILITY

As per guidelines of National Medical Council of India

2. DURATION OF THE COURSE

Every learner shall undergo a period of certified study extending over 4 ½ academic years, divided into nine semesters from the date of commencement of course to the date of completion of examination which shall be followed by one year of compulsory rotating internship.

Each academic year will have at least 240 teaching days with a minimum of eight hours of working on each day including one hour as lunch break The period of 4 ½ years is divided as follows:

- **Pre-Clinical Phase [(Phase I) - First Professional phase of 13 months]** preceded by Foundation Course of one month]: will consist of preclinical subjects – Human Anatomy, Physiology, Biochemistry, Introduction to Community Medicine, Humanities, Professional development including Attitude, Ethics & Communication (AETCOM) module and early clinical exposure, ensuring both horizontal and vertical integration.
- **Para-clinical phase [(Phase II) - Second Professional of 12 months]**: will consist of Para-clinical subjects namely Pathology, Pharmacology, Microbiology, Community Medicine, Forensic Medicine and Toxicology, Professional development including Attitude, Ethics & Communication (AETCOM) module and introduction to clinical subjects ensuring both horizontal and vertical integration.

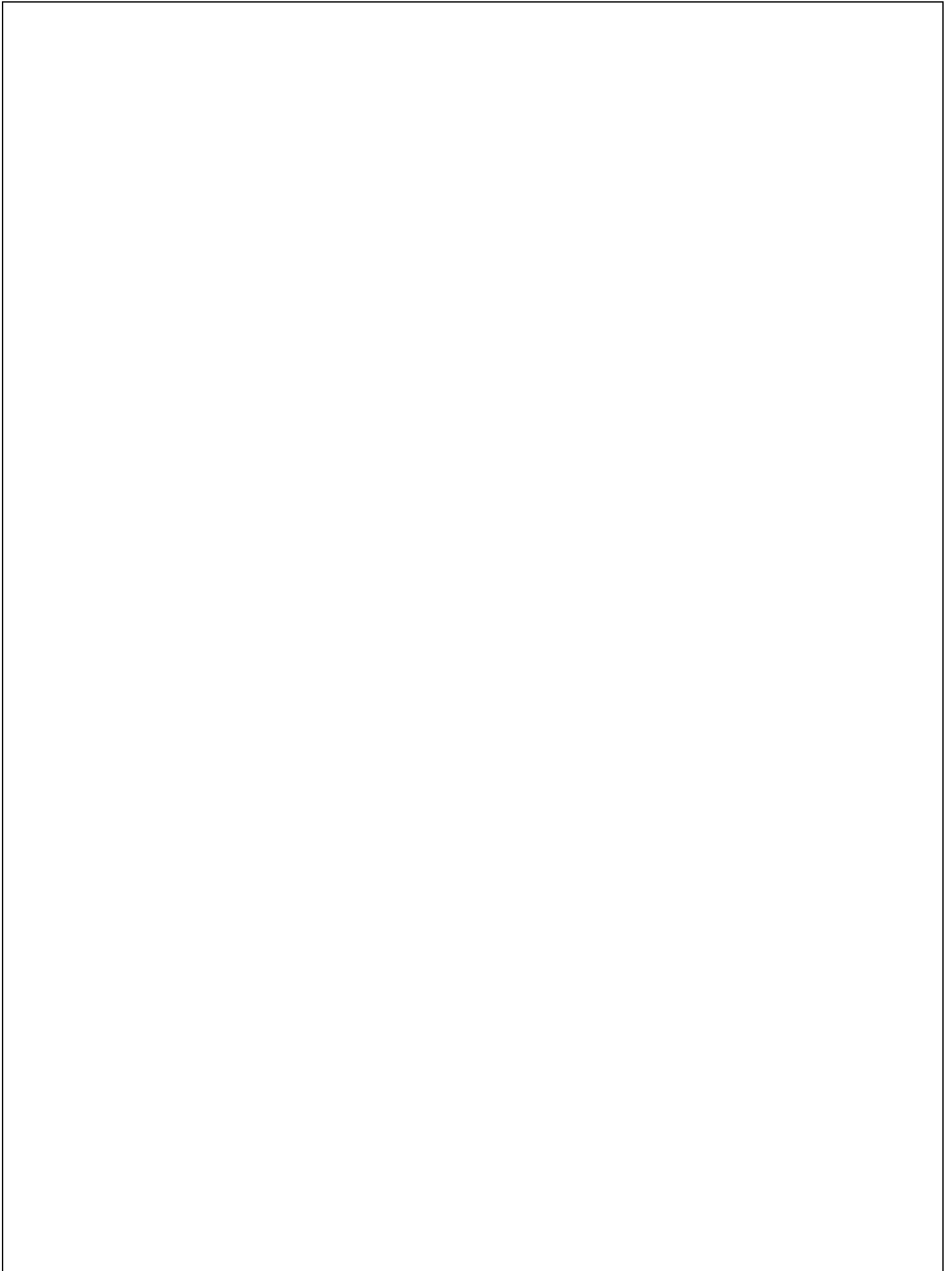
- **Clinical Phase – [(Phase III) Third Professional (28 months)]**

- (a) **Part I (13 months)** - The clinical subjects include General Medicine, General Surgery, Obstetrics & Gynaecology, Pediatrics, Orthopaedics, Dermatology, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Psychiatry, Respiratory Medicine, Radiodiagnosis & Radiotherapy and Anaesthesiology & Professional development including AETCOM module.
- (b) **Electives (2 months)** - To provide learners with opportunity for diverse learning experiences, to do research/community projects that will stimulate enquiry, self-directed experimental learning and lateral thinking [9.3].
- (c) **Part II (13 months)** - Clinical subjects include:
 - i. Medicine and allied specialties (General Medicine, Psychiatry, Dermatology Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis)
 - ii. Surgery and allied specialties (General Surgery, Orthopedics [including trauma]), Dentistry, Physical Medicine and rehabilitation, Anaesthesiology and Radiodiagnosis)
 - iii. Obstetrics and Gynecology (including Family Welfare) iv. Pediatrics
 - v. AETCOM module

The clinical exposure to learners will be in the form of learner-doctor method of clinical training in all phases. The emphasis will be on primary, preventive and comprehensive health care. A part of training during clinical postings should take place at the *primary level* of health care. It is desirable to provide learning experiences in secondary health care, wherever possible. This will involve:

- (a) Experience in recognizing and managing common problems seen in outpatient, inpatient and emergency settings,
- (b) Involvement in patient care as a team member,
- (c) Involvement in patient management and performance of basic procedures.

- **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course**



Calendar for the MBBS Course for the new CBME curriculum

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Founda tion course	I MBBS			
I MBBS								Phase I exam	II MBBS		
II MBBS								Phase II exam	III MBBS PART 1		
III MBBS PART 1									Phase III part 1 exam	Electives and skills	
III MBBS PART 2											
Phase III part 2 exam	Internship										
Internship											

DISTRIBUTION OF SUBJECTS BY PROFESSIONAL PHASE

Phase and Year of MBBS Training	Subjects and new teaching elements	Duration	University examination
First professional MBBS	<ul style="list-style-type: none"> • Foundation course (1month) • Human Anatomy, Physiology & Biochemistry • Introduction of Community Medicine, Humanities • Early Clinical Exposure • Attitude, Ethics and Communication Module (AETCOM) 	1+13 months	1 st Professional

Second professional MBBS	<ul style="list-style-type: none"> • Pathology, Microbiology, Pharmacology, Forensic Medicine And Toxicology • Introduction to clinical subjects including community Medicine • Clinical postings • AETCOM 	12 months	II nd Professional
Third professional MBBSpart I	<ul style="list-style-type: none"> • General Medicine ,General Surgery, OBG, Paediatrics, Orthopaedics, Dermatology, Psychiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory Medicine, Radiodiagnosis & Radiotherapy, Anaesthesiology • Clinical Subjects /postings • AETCOM 	12 months	III rd Professional Part I
Electives	<ul style="list-style-type: none"> • Electives ,skills and assessment 	2 months	
Third professional MBBSpart II	<ul style="list-style-type: none"> • General Medicine ,Paediatrics, General Surgery, Orthopaedics, Obstetrics and Gynaecology, including Family welfare and allied specialties • Clinical Postings /subjects • AETCOM 	13 months	III rd Professional Part II

3. ATTENDANCE

- Every candidate should have **attendance not less than 75% of the total classes conducted in theory and not less than 80% of the classes conducted in practical** in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examination.
 - Seventy five percent (**75%**) **attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year** (vide Medical Council of India Notification on Graduate Medical Education (Amendment) Regulations 2019, published in the Gazette of India Part III, Section 4, Extraordinary issued on 4th November 2019)
 - In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
 - If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.
-

The Principal should notify at the College the attendance details at the end of each term without fail under intimation to this University.

A candidate lacking in the prescribed attendance and progress in any subject(s) in theory or practical should not be permitted to appear for the examination in that subject(s).

4. TEACHING HOURS: Third Professional Part 2

Subjects	Teaching hours - lectures	Tutorials/seminars Integrated teaching	Self-directed learning	Total
General Medicine	70	125	15	210
General surgery	70	125	15	210
Obstetrics & Gynecology	70	125	15	210
Pediatrics	20	35	10	65
Orthopedics	20	25	5	50
AETCOM	28		15	43
Electives				200
Total	250	435	60	1780

- Teaching and learning shall be aligned and integrated across specialties both vertically and horizontally for better learner comprehension. Learner centered learning methods should include problem oriented learning, case studies, community-oriented learning, self- directed and experiential
- Didactic lectures shall not exceed one third of the schedule; two third of the schedule shall include interactive sessions, practicals, clinical or/and group discussions. The learning process should include clinical experiences, problem-oriented approach, case studies and community health care activities.

Table : Clinical postings for all clinical Subjects

Subjects	Period of training in weeks			Total (weeks)
	II MBBS	III MBBS Part 1	III MBBS Part 2	
Electives			8(4weeks clinical postings to continue)	
General Medicine	4	4	8+4	20
General Surgery	4	4	8+4	20
Obstetrics and Gynecology	4	4	8+4	20
Pediatrics	2	4	4	10
Orthopaedics including Trauma	2	4	2	8
Community Medicine	4	6	-	10
Otorhinolaryngology	4	4	-	8
Ophthalmology	4	4	-	8
Dermatology	2	2	2	6
Psychiatry	2	2	-	4
Respiratory Medicine	2	-	-	2
Radiodiagnosis	2	-	-	2
Dentistry & Anesthesiology	-	2	-	2
Casualty	-	2	-	2
Total	36	42	44	126

AETCOM modules in 3rd MBBS Part 2

AETCOM Module number	Title	Department
4.1	The foundations of communication - 5	General Surgery
4.2	Case studies in medico-legal and ethical situations	Obstetrics and Gynaecology
4.3	Case studies in medico-legal and ethical situations	Internal Medicine
4.4	Case studies in ethics empathy and the doctor-patient relationship	General Surgery
4.5	Case studies in ethics: the doctor-industry relationship	Paediatrics
4.6	Case studies in ethics and the doctor - industry relationship	Orthopaedics
4.7	Case studies in ethics and patient autonomy	Paediatrics
4.8	Dealing with death	Internal Medicine
4.9	Medical Negligence	Obstetrics and Gynaecology

SCHEME OF EXAMINATION INTERNAL ASSESSMENT:

- Regular periodic examinations shall be conducted throughout the course. There shall be no less than three examinations in each clinical subject in the final professional year (3rd MBBS Part2) and one in each of the other years that the clinical subjects are taught in.
- The **third internal examination** should be conducted on the lines of the university examination(Preliminary examination).
- An end of posting clinical assessment shall be conducted for each clinical posting in each professional year.
- When subjects are taught in more than one phase, the internal assessment must be done in each phase and must contribute proportionately to final assessment. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently.
- Day to day records and log book (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.
- The final internal assessment in a broad clinical specialty (e.g., Surgery and allied specialties etc.) shall comprise of marks from all the constituent specialties. The proportion of the marks for each constituent specialty shall be determined by the time of instruction allotted to each.

- An **average of the marks scored in all internal assessment examinations and the** average of all marks scored in the end of posting clinical assessment will be considered as the final internal assessment scores and eligibility for University examinations.
- Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject.
- **Internal assessment marks will reflect under separate head in the marks card of the university examination. The internal assessment marks (theory and practical) will not be added to the marks secured (theory/practical) in the university examination for consideration of pass criteria, pass percentage, award of first class/distinction/gold medal.**
- The results of internal assessment should be displayed on the notice board within a 1-2 weeks of the test.
- Colleges should formulate policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
- Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

5. UNIVERSITY EXAMINATION

Examination schedule

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
							Foundatio n course	I MBBS			
I MBBS								Phase I exam	II MBBS		
II MBBS								Phase II exam	III MBBS PART 1		
III MBBS PART 1									Phase III part 1 exam	Electives and skills	
III MBBS PART 2											
Phase III part 2 exam		Internship									
Internship											

General guidelines

- University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with

clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

- Nature of questions will include different types such as structured essays (Long Answer Questions - LAQ), Short Essays, Short Answers Questions (SAQ) and Multiple-choice questions (MCQs). Marks for each part should be indicated separately.
- The learner **must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together) to pass, in subjects with more than one paper.**
- In subjects with one question paper the learner must secure a minimum of 50% marks to pass.
- Clinical examinations will be conducted at the bedside in the hospital wards. The objective will be to assess proficiency and skills to elicit a detailed history, perform clinical examination, interpret data and form logical conclusion, wherever applicable.
- **There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.**
- **A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.**
- **A maximum number of four permissible attempts would be available to clear the first Professional University examination, whereby the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.**
- **THIRD PROFESSIONAL PART 2 EXAMINATION:**
This examination shall be held at the end of the fourth-year of training (13 months), in the subjects of Internal medicine, General Surgery including Orthopaedics, Obstetrics and Gynaecology, and Paediatrics.

Table: Examination components, Subjects and Distribution of Marks

THEORY	Internal Medicine	Surgery & Orthopedics	Obstetrics & Gynecology	Pediatrics
Written Paper				
No. of Papers & Maximum Marks for each paper.	2×100=200	2×100=200	2×100=200	1×100=100
Total theory	200	200	200	100
PRACTICAL				
1. Practical exam	160	160	160	80
2. Viva-voce	40	40	40	20
Total practical	200	200	200	100
Internal assessment*				
Internal Assessment (Theory)	200	200	200	100

Internal assessment (Practical)	200	200	200	100
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* **Internal assessment marks will reflect under separate head in the marks card of the university examination.**

Type, number of questions and distribution of marks for written paper

TYPES OF QUESTION	NUMBER OF QUESTIONS	MARKS FOR EACH QUESTION
Long essay	2	10
Short essay	8	5
Short answers	10	3
MCQs	10	1
Total		100

A blueprint for theory paper indicating the topics and marks allotted for each are given for each of the subjects below. The blueprint provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions.

The distribution of topics in paper 1 and paper 2, are also given in clinical subjects with more than one theory paper. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

6. SUBMISSION OF LOGBOOK

- a. At the time of Clinical Examination each candidate shall submit to the Examiners his/her logbook record duly certified by the Head of the Department as a bona fide record of the work done by the candidate.

7. ELIGIBILITY TO APPEAR FOR EXAMINATION

The following criteria to be met by the students to be eligible for the university exams:

- a. Shall have undergone satisfactorily the approved course of study in the subject/subjects for the prescribed duration.

- b. Shall have attended not less than 75% of the total classes conducted in theory and not less than 80% of the total classes conducted in practical separately to become eligible to appear for examination in that subject/subjects.
- c. Minimum of 40% marks to be obtained **separately** in theory and practical AND at least 50% marks of the total marks **combined** in theory and practical assigned for internal assessment is to be obtained in a particular subject to appear for university exam. (average of 3 internal assessments theory and practical separately)
- d. Learners must have completed the required certifiable competencies for that phase of training and completed the logbook appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

8. CRITERIA FOR PASS

For declaration of pass in any subject in the University examination, a candidate shall pass both in Theory and Practical examination components separately as stipulated below:

- The Theory component consists of marks obtained in University Written papers only. For a pass in theory, a candidate must secure at least 40% marks in each of the two papers with minimum 50% of marks in aggregate (both papers together).
- For a pass in practical examination, a candidate shall secure not less than 50% marks in aggregate, i.e., marks obtained in university practical examination and viva voce added together.
- **Internal assessment marks will reflect as a separate head of passing at the university examination.**
- **The IA marks will not be added to the marks obtained in the University examination and will NOT be used to calculate pass percentage, award of class, distinction and GOLD medal.**
- A candidate not securing 50% marks in aggregate in Theory or Practical examination + viva in a subject shall be declared to have failed in that subject and is required to appear for both Theory and Practical again in the subsequent examination in that subject.

9. DECLARATION OF CLASS

- a. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of **grand total marks (Only university examination)** prescribed will be declared to have passed the examination with distinction.
- b. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 65% of marks or more but less than 75% of **grand total marks (Only university examination)** prescribed will be declared to have passed the examination in First Class.
- c. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 50% of marks or more but less than 65% of

grand total marks (Only university examination) prescribed will be declared to have passed the examination in Pass Class.

- d. A candidate passing a university examination in more than one attempt shall be placed in Pass class irrespective of the percentage of marks secured by him/her in the examination.

Note: Please note fraction of marks will not be rounded off for clauses (a), (b) and (c)

Appointment of Examiners

- a. Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.
- b. For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained. Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.
- c. External examiners may not be from the same University.
- d. The internal examiner in a subject shall not accept external examinership for a college from which external examiner is appointed in his/her subject.
- e. A University having more than one college shall have separate sets of examiners for each college, with internal examiners from the concerned college.
- f. External examiners shall rotate at an interval of 2 years.
- g. There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.
- h. All eligible examiners with requisite qualifications and experience can be appointed internal examiners by rotation in their subjects.
- i. All theory paper assessment should be done as central assessment program (CAP) of concerned university.
- j. Internal examiners should be appointed from same institution for unitary examination in same institution. For pooled examinations at one centre approved internal examiners from same university may be appointed.

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



Internal Medicine Curriculum including Respiratory Medicine
as per

Competency Based Curriculum

RGUHS Internal Medicine Curriculum as per the new Competency Based Curriculum

Preamble

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each specialty with the input from expert groups under each specialty. The NMC, in the Graduate medical regulations 2019, has provided the list of internal medicine competencies required for an IMG and these have been included in this document.

The document begins with the goals and objectives of the medicine curriculum, then a summary of phase wise hours allotted to internal medicine and their distribution across didactic lecture, small group discussion and self-directed learning. Subsequently, this document suggests phase wise topics in the 4 clinical postings, directory of minimum cases to be seen, and suggested clinical assessment methods for the postings. The blueprint for theory exams and sample question paper is also included.

This is followed by the competencies to be delivered, along with the SLOs, suggested TL methods, and suggested assessment methods.

The document also includes the competencies of Respiratory medicine. They have been divided into the three main domains of teaching-learning.

Goals and Objectives of the medicine curriculum

Goals

The broad goal of the medicine curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common disorders affecting the adult population.

Objectives

A) Knowledge

At the end of the course student should be able to:

- a. Describe the pathophysiology of common diseases of adults
- b. Describe the clinical features, diagnosis and management of the above
- c. Be well versed with the preventive aspects of the internal medical curriculum, specifically patient education, lifestyle modification and adult vaccination. **(B) Skills**

At the end of the course the student should be able to:

- a. Demonstrate the ability to elicit a detailed clinical history and perform a general physical and systemic examination, in outpatient and inpatient settings.
- b. Demonstrate the ability to apply the elicited history and examination to arrive at correct diagnosis and plan treatment.
- c. Demonstrate the ability to deliver immediate care to commonly seen emergencies prior to referral to higher centre.

C) Attitude and communication skills

At the end of the course the student should be able to:

- a. Communicate effectively with patients, their families and the public at large
- b. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- c. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- d. Appreciate the issues of equity and social accountability

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Internal medicine –

Distribution of hours :

Phase	Lecture	Small group discussion	Self-directed learning
Phase 2	25		
Phase 3, part 1	25	35	5
Phase 3, part 2	70	125	15

Time allotted excludes time reserved for internal / University examinations, and vacation.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. 25% of allotted time (non-clinical time) of third Professional shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects.

The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap.

Small group discussion (SGD) may include the following

1. Tutorials
2. Case based discussion
3. Skill lab sessions

Unless otherwise mentioned, in the TL methods suggested in the competency table, SGD sessions are for 2 hours, and lectures for 1 hour and skill lab sessions are for 4 hours

Phase wise competencies suggested

Phase 2 : Introduction to history taking, introduction to systems

Phase 3 part 1 : 4,6,9,11,12,16,25

Phase 3 part 2 : remaining competencies and pandemic module

Suggested SDL topics, both Phases together. The individual institutions can modify according to their need.

Topics for self-directed learning in Phase 1 (1 hour each)

1. KFD/ JE
2. Acromegaly & hyperprolactinemia
3. Posterior pituitary disorders
4. Sideroblastic anemia
5. Haemolytic anemias

Topics for SDL in phase 2

1. Introduction to cardiovascular disease in adults
2. Cardiomyopathies
3. Pneumoconiosis
4. Nephrotic syndrome
5. Epilepsy
6. Drug induced liver injury
7. Hepatic transplantation
8. physiologic effects of acute blood and volume loss
9. therapy of bee sting allergy
10. Heat stroke
11. medico legal aspects of suspected suicidal or homicidal poisoning
12. multiple endocrine neoplasia syndrome
13. Autoimmune hepatitis
14. Systemic sclerosis
15. Primary biliary cirrhosis

Clinical posting, certifiable skills, case matrix, clinical skills assessment , clerkship , skill lab topics

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)
The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Acquisition and certification of skills shall be through bedside clinics, clerkship (student doctor) , diagnostic and skill laboratories.

Clinical postings – phase wise objectives

Posting 1 : The student , at the end of the posting, would have practiced the following

A. Building a rapport with the patient

Eliciting history in native language of patient

Examining vital signs – pulse, blood pressure, temperature, jugular venous pressure

General physical examination – pallor, icterus, cyanosis, lymphadenopathy, edema Observation
of systemic examination

Posting 2

Practice of skills attained in posting 1

Systemic examination (inspection, palpation, percussion, auscultation) of cardiovascular system, respiratory system, abdomen, and central nervous system Posting
3

Practice of skills attained in posting 1 and 2

Fluent, confident systemic examination

Ability to distinguish between normal and abnormal physical findings

Collating history and examination findings to arrive at differential diagnoses

Posting 4

Practice and refinement of skills attained in postings 1, 2 and 3



Certifiable skills

	Perform and interpret a capillary blood glucose test	IM 11.12
2	Perform and interpret a urinary ketone estimation with a dipstick	IM 11.13
3	Describe and discuss the indications for and insert a peripheral intravenous catheter	IM10.21
4	Perform and interpret a 12 lead ECG	IM 1.18, IM 2.10, IM 8.17
5	Describe and discuss the indications to perform an ABG and to interpret the results. to perform arterial blood gas analysis: interpret the data	IM 10.20
6	Perform and demonstrate in a mannequin BLS	IM 2.22
7	Perform and interpret a gram stain and AFB stain	IM 3.14, IM6.14
8	Describe, perform and interpret a peripheral smear and stool occult blood	IM 9.10

Case matrix

Sl. No.	Topic/System	Case
1.	Cardiovascular system	Heart Failure Coronary Artery Disease Hypertension Valvular heart disease
2.	Respiratory System	Pneumonia Pleural effusion Fibrosis COPD
3.	Gastrointestinal and hepatobiliary System	Hepatitis GI Bleed Diarrheal disorders
4.	Central Nervous System	Cerebrovascular accident Movement disorders Peripheral Neuropathy Spinal Cord Disorders
5.	Endocrine system	Diabetes Mellitus Thyroid disorders Obesity
6.	Infectious diseases	Fever and febrile disorders HIV Miscellaneous Infections
7.	Musculoskeletal System	Rheumatological disorders

8.	Nutrition	Anemia Nutrition and vitamin deficiencies
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9.	Geriatrics	Comprehensive geriatric assessment
10.	Renal System	Acute kidney injury and chronic kidney disease
11.	Miscellaneous	Common Malignancies Envenomation Poisoning

Clerkship: should be mandatorily implemented, from 1st clinical postings in Medicine .

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Goal: To provide learners with experience in:

- (a) Longitudinal patient care,
- (b) Being part of the health care team,
- (c) Hands-on care of patients in outpatient and inpatient setting.
- (d) No learner will be given independent charge of the patient
- (e) The supervising physician will be responsible for all patient care decisions

The learner will function as a part of the health care team with the following responsibilities:

Be part of the unit's outpatient services on admission days,

Remain with the admission unit until 6 PM except during designated class hours,

Be assigned patients admitted during each admission day for whom he/she will undertake responsibility, under the supervision of a senior resident or faculty member,

Participate in the unit rounds on its admission day and will present the assigned patients to the supervising physician,

Perform simple tasks, including nebulisation, patient education

Follow the patient's progress throughout the hospital stay until discharge,

Participate, under supervision, in procedures, surgeries, deliveries etc. of assigned patients

Participate in unit rounds on at least one other day of the week excluding the admission day, Discuss ethical and other humanitarian issues during unit rounds,

Attend all scheduled classes and educational activities,

Document his/her observations in a prescribed log book / case record.

Clerkship phase wise

Year of Curriculum	Focus of Learner - Doctor programme
Year 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Year 2	History taking, physical examination, assessment of change in clinical status, communication and patient education
Year 3	All of the above and choice of investigations, basic procedures and continuity of care
Year 4	All of the above and decision making, management and outcomes

Eligibility to appear for Professional examinations

(a) Attendance

1. Attendance requirements are 75% in theory and 80% in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
2. If an examination comprises more than one subject (for e.g., Internal Medicine and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting.
3. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

(b) Internal Assessment:

Theory assessment

A 100-mark question paper covering the topics of part 1 may be conducted. Mark division will be as follows:

100 marks
Long essay 2X10= 20
Short essay 8x5=40 marks
Short answer question 10x3=30marks
MCQs 10x1=10marks

A minimum of 80% of the marks should be from the must know component of the curriculum. A maximum of 20% can be from the desirable to know component. All main essay questions to be from the must know component of the curriculum.

One main essay question to be of the modified variety containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Log book

1. (a) A designated faculty member in each unit will coordinate and facilitate the activities of the learner, monitor progress, provide feedback and review the log book/ case record.
2. (b) The log book/ case record must include the written case record prepared by the learner including relevant investigations, treatment and its rationale, hospital course, family and patient discussions, discharge summary etc.
3. (c) The log book should also include records of patients assigned. Submission of the log book/ case record to the department is required for eligibility to appear for the final examination of the subject.

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Medicine. An end of posting clinical assessment shall be conducted for each of the clinical postings in Medicine. Internal assessment may be conducted as follows

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce

The competencies to be delivered in AETCOM have been summarized at the end of the competency table. The question paper must include a least one question based on AETCOM competencies covered in that phase. AETCOM competencies must also be tested in the viva voce.

Internal assessment at the end of clinical postings

Internal assessment marks at the end of each posting will be a sum of log book (documentation of skills practiced, clerkship, assessment of behaviour in posting) and clinical internal assessment marks. Internal assessment may be conducted as follows in postings Posting 1 – long case focusing on history, vital signs and general physical examination Posting 2 – OSCE with the following stations – history, vital signs, general physical examination, CVS, RS, Abdomen, CNS, diagnostic skills, communication Posting 3 – Long case or OSLER (Objective Structured Long Examination Record) Posting 4 – short case and/or long case

There will be one Theory and Clinical preliminary exam before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Medicine to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Medicine logbook entry completed to be eligible for appearing at the final university examination.

University examinations

University examinations Third Professional Part II - (Final Professional) examination shall be at the end of training (14 months including 2 months of electives) in the subjects of General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics.

The discipline of Psychiatry and Dermatology, Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis will constitute 25% of the total theory marks in General Medicine incorporated as a separate section in paper II of General Medicine.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.



Marks allotted

Medicine	Theory	Clinical examination
Total marks	2 papers of 100 marks each for Medicine . The pattern of each question paper is given below	200 marks
	Long essay 2X10= 20	One long case for 80 marks
	Short essay 8x5=40 marks	Two short cases for 40 marks each
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Xray & ECG Station-2: Instruments Station-3: Specimens Station-4: Drugs & case scenarios
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions. All theory paper assessment should be done as central assessment program (CAP) of concerned university.

BLUEPRINT FOR ASSESSMENT

RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT

As per NMC guidelines, a balance should be drawn between the action verbs which are specified in the Bloom's taxonomy along with a balance of the topics of the curriculum

Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate, Interpret, Review, Summarise
Application	Apply, Choose, Compute, Modify, Solve, Prepare, Produce, Select, Show, Transfer, Use
Analysis	Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram, Differentiate, Distinguish, Relate, Categorise
Synthesis	Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate, Organise, Plan, Produce, Propose, rewrite
Evaluation	Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict, Prioritise, Prove, Rank

The blueprint for Internal Medicine theory paper indicating the topics and marks allotted for each are given below. The blueprinting provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions

The distribution of topics in paper 1 and paper 2 in Internal Medicine is also given below. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

Number	Topic	Marks on 200
1	Heart failure	10
2	Acute Myocardial infarction	9
3	Pneumonia	9
4	Basic sciences including Pharmacology	10
5	Fever and febrile syndromes (miscellaneous infections)	12
6	Liver disease	6
7	HIV	4
8	Rheumatological disease	6
9	HTN	10
10	Anaemia and other blood disorders	8
11	AKI/CKD	8
12	DM	10
13	Thyroid and other endocrine disorders	5
14	Common malignancies	4

15	obesity	5
16	GI bleeding	4

17	Diarrhoeal diseases	5
18	Headache	6
19	Cerebrovascular accidents	10
20	Envenomation	4
21	Movement disorder	2
22	Poisonings	7
23	Mineral, Fluid Electrolyte and Acid base Disorder	10
24	Nutritional and Vitamin Deficiencies	5
25	Geriatrics	6
26	Chronic respiratory diseases	10
27	Dermatology	7
28	Psychiatry	8
	Total marks	200

Distribution of topics In Paper 1 and Paper 2 for University Examination

Internal Medicine Paper 1		Internal Medicine paper 2	
	Topic		Topic
1	Basic sciences including pharmacology	1	Psychiatry
2	Nutrition including obesity	2	Dermatology
3	Cardiovascular disorders	3	Respiratory diseases including Pneumonia and Tuberculosis
4	Gastrointestinal disorders including diarrheal diseases	4	Geriatrics
5	Immunology including rheumatology	5	Central nervous system including Headache, movement disorder
6	Diabetes and other endocrine disorders	6	Infectious diseases including PUO and HIV

7	Hypertension	7	Nephrology
8	Poisoning, envenomation and environmental disorders	8	Haematology- oncology including Anemia and other malignancies

General Medicine- Paper 1

2 ×10 =20 Marks

LONG ESSAYS

1. Discuss the aetiology, clinical features and management of Acute ischemic stroke. (2+3+5)
2. A 45 year old man undertook an 18 hour air flight. After his flight he noticed swelling of right lower limb swelling. Two days later he developed sudden onset of left sided chest pain and hemoptysis. What is the most probable diagnosis? How would you confirm the diagnosis and manage the patient. (2+3+5)

SHORT ESSAYS

8×5 =40 marks

3. Secondary hypertension
4. Infective endocarditis
5. Management of acute STEMI
6. Atypical pneumonia
7. Pyrexia of unknown origin
8. Spontaneous bacterial peritonitis
9. Microangiopathic hemolytic anemia
10. Dengue shock syndrome

SHORT ANSWERS

10×3=30 Marks 11.

Paradoxical split

12. Variceal bleed acute management
13. Integrase inhibitors
14. Falls in the elderly
15. Dermatological manifestations in HIV
16. Pseudohyperkalemia
17. Chorea
18. Non alcoholic steatohepatitis
19. Bedaquiline
20. Lupus nephritis



MULTIPLE CHOICE QUESTIONS

10×1=10 Marks Choose

one single answer. There is no negative marking.

21. Which of the following antimicrobials is associated with prolongation of QT intervals A) Isoniazid B) Co- amoxiclav c) **Erythromycin** d) Gentamicin
22. Which one of the following trace elements is implicated as a cause of cardiomyopathy
A)Copper B) **Selenium** C) Magnesium D)Zinc
23. A 54-year-old man presents with central crushing chest pain. Examination is normal. 12-lead ECG shows ST segment elevation in leads II, III, aVF, and ST depression in V1, V2 and V3. Which coronary artery is occluded?
A Circumflex B) **Right coronary artery** C) Left anterior descending
D) Obtuse marginal
24. A 26-year-old professional footballer collapses while playing football. He is rushed to the Emergency Department, and is found to be in ventricular tachycardia. He is defibrillated successfully and his 12 lead ECG following resuscitation demonstrates left ventricular hypertrophy. Ventricular tachycardia recurs and despite prolonged resuscitation he dies. Which of the following is the most likely diagnosis?
A **Hypertrophic cardiomyopathy** B) Pulmonary embolism C) Myocardial infarction D) Aortic stenosis
25. Which of the following statements is true of infections with Mycobacterium tuberculosis?
A) A positive tuberculin test indicates active disease B) In pregnant women treatment should not be given until after delivery C) Lymph node positive disease requires longer treatment than pulmonary disease D) **Non-sputum producing patients are non-infectious**
26. A 45-year-old woman was diagnosed with bacterial endocarditis. What is the characteristic fundoscopic feature of this disease?
A) Janeway lesions B) Macular star C) Retinal artery aneurysms D) **Roth's spots**
27. To which of the following drug classes does the oral hypoglycaemic agent pioglitazone belong?
A) biguanide B) A peroxisome proliferator activated receptor (PPAR)-alpha agonist C) **A peroxisome proliferator activated receptor (PPAR)-gamma agonist** D) A sulphonylurea
28. A 64-year-old man comes to the clinic for review of his type 2 diabetes. He is currently managed with metformin 1 g BD and sitagliptin 100 mg. On examination his blood pressure is 156/90 mmHg, his pulse is 80 and his BMI is 30. Of note on routine investigations is a raised triglyceride level. Which of the following is associated with elevated triglycerides?
A) Decreased hepatic fat B) **Increased insulin resistance** C) Increased subcutaneous fat D) Reduced cardiovascular risk
29. Which of the following is activated by cholera toxin?
A) **Adenylate cyclase** B) Guanylate cyclase C) Peroxisome proliferator receptor (PPAR) gamma D) Sodium/potassium ATPase
30. A 55-year-old male is admitted with vomiting. He has a long history of alcohol abuse, appears slightly jaundiced, and is dishevelled and unkempt. He was started on an intravenous glucose infusion and diazepam and he symptomatically improved. One day later he became confused, developed vomiting and diplopia, and was unable to stand. What is the most likely diagnosis?
A) Delirium tremens B) Hepatic encephalopathy C) Subdural haematoma D) **Vitamin B deficiency**

General Medicine- Paper 2

2 ×10 =20 Marks

LONG ESSAYS

1. Describe the aetiology, clinical features and investigation of bronchial asthma. Discuss briefly the management of and acute severe asthma. (1+2+2+5)
2. Discuss the aetiopathogenesis, clinical examination, and management of Pyogenic Meningitis. (2+3+5)

SHORT ESSAYS

8×5 =40 marks

3. Psoriatic arthritis
4. Temporal arteritis
5. Management of DKA
6. Thyrotoxic crisis
7. Obstructive sleep apnea
8. Cobra bite
9. Yellow phosphorus poisoning
10. Falls in the elderly

SHORT ANSWERS

10×3=30 Marks

11. Renal replacement therapy
12. SGLT 2 inhibitors
13. Philadelphia chromosome
14. Chronic diarrhea
15. Migraine prophylaxis
16. Metabolic acidosis
17. Hypophosphatemia
18. Scabies
19. Post traumatic stress disorder
20. Erythema nodosum leprosum



MULTIPLE CHOICE QUESTIONS

10×1=10 Marks

21. A 29-year-old woman who is known to have one episode of severe allergy to egg protein in childhood comes to the vaccination clinic for review. She is travelling with her partner to South America and inquires about which vaccinations she is able to have. Which of the following vaccinations should definitely be avoided? A)MMR B)Recombinant influenza vaccine C) Typhoid D) **Yellow fever**
22. A 19-year old student is diagnosed with bipolar disorder and is started on olanzapine. Which of the following is the most common side effect that she may experience? A)Elevated transaminases B)Thrombocytopenia C)Urinary retention D)**Weight gain**
23. A 27-year-old patient presented to his GP with persistent cough and weight loss. He had night sweats. He was diagnosed with TB and referred to the respiratory clinic. He was started on treatment. His urine became orange in colour. Which one of the following drugs causes this? A)Ethambutol B) Isoniazide C) Pyrazinamide D) **Rifampicin**
24. A patient is prescribed warfarin for prophylaxis of DVT. Which vitamin does warfarin antagonise? a)B6 B)C C)D D)**K**
25. A 23-year-old man with known peanut allergy presented to the Emergency department with anaphylaxis. He has a swollen face and lips. His BP is 90/60 mmHg, pulse 110 bpm and he is wheezy. Which of the following formulations of adrenaline should be given? A)0.5 ml of 1:10000 adrenaline IM B) **0.5 ml of 1:1000 adrenaline IM** C) 5 ml of 1:1000 adrenaline IM D)10 ml of 1:10000 adrenaline IV
26. A patient is suspected of having taken a substance with anticholinesterase effects. Which of the following combinations of signs, if present, would be the most likely to confirm this effect? A)**Bradycardia and miosis** B)Bradycardia and mydriasis C) Bradycardia and urinary retention D)Tachycardia and diarrhoea
27. A 52-year-old woman with a three year history of sero-positive erosive rheumatoid arthritis has recently commenced methotrexate therapy initiated at the rheumatology clinic. Which one of the following agents should she also be receiving in conjunction with her methotrexate? A) Omeprazole B)Thiamine C)VitaminC D)**Folic Acid**
28. A 62-year-old female with colonic carcinoma is treated with chemotherapy and is receiving ondansetron for intractable nausea and vomiting. Which of the following best describes the pharmacological actions of ondansetron? A) Dopaminergic antagonists B)H1 antihistamine C)**5-HT₃ antagonist** D) Anticholinergic
29. A 51-year-old man presents with wheals and urticaria. He takes a variety of medications. Which drug is the most likely to have caused this reaction? A) **Aspirin** B) Glyceryl trinitrate C)Omeprazole D)Paracetamol
- 30 A 72-year-old man presents with painful lumps in his feet and is diagnosed with gout. Following initial treatment with non-steroidal anti-inflammatory agents he is started on allopurinol. How does allopurinol work? A) Inhibits cyclooxygenase II B) Inhibits macrophage tubular formation C)Inhibits nitric oxide synthase D)**Inhibits xanthine oxidase**

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
Topic: Heart Failure					
IM1.1	Introduction to cardiovascular disease in adults	1. Describe and discuss the epidemiology of common causes of heart disease including: rheumatic/valvular, ischemic, hypertrophic inflammatory	SDL	Short essay	Pathology, Physiology
IM1.2,1.4,1.5 1.6	Heart failure	1. Describe and discuss the genetic basis of forms of heart failure 2. Stage heart failure 3. Describe ,discuss and differentiate the processes involved in heart failure with reduced Vs preserved ejection fraction 4. Describe and discuss the compensatory mechanisms involved in heart failure including cardiac remodeling and neurohormonal adaptations	Lecture	EQ	Pathology, Physiology

1.7,1.23,1.26 1.27	Treatment of heart failure	<ol style="list-style-type: none"> 1. Develop management plan for patient with heart failure 2. Enumerate, describe and discuss the factors that exacerbate heart failure 3. Describe, prescribe and communicate non pharmacologic management of heart failure including sodium restriction, physical activity and limitations 	Case based discussion	MEQ	
1.24	Pharmacotherapy of heart failure	<ol style="list-style-type: none"> 1. Describe and discuss the pharmacology of drugs including indications, contraindications in the management of heart failure including diuretics, ACE inhibitors, Beta blockers, 	Small group discussion	Short essay Viva voce	

Competency & SLO table : competencies in 3rd MBBS Part 1 : 4,6,9,11,12,16,25. All others in 3rd MBBS Part 2. The following are guidelines, and modifications may be made in SLOs, TL

methods and assessment based on institution infrastructure and practices.

		aldosterone antagonists and cardiac glycosides			
IM1.3,1.9,1.27	Rheumatic fever	<ol style="list-style-type: none"> 1. Describe and discuss the etiopathogenesis & clinical evolution of rheumatic fever, modified Jones criteria, and rheumatic valvular heart disease and its complications including infective endocarditis 2. Describe and discuss the clinical presentation and features, diagnosis, recognition and management of acute rheumatic fever 3. Describe and discuss the role of penicillin prophylaxis in the prevention of rheumatic heart disease 	Lecture	SEQ Viva voce	Pathology
IM1.8	Arrhythmias	<ol style="list-style-type: none"> 1. Describe and discuss the pathogenesis and development of common arrhythmias 2. Discuss the classification, etiopathogenesis, clinical features diagnosis and management of atrial fibrillation 	Lecture	<ol style="list-style-type: none"> 1. Short essay question 2. ECG interpretation in OSCE station 3. Viva voce 	Pathology, Physiology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.10,1.11	History and examination in cardiovascular disease	<ol style="list-style-type: none"> 1. Elicit document and present an appropriate history that will establish the diagnosis, cause and severity of heart failure including: presenting complaints, precipitating and exacerbating factors, risk factors exercise tolerance, changes in sleep patterns, features suggestive of infective endocarditis 2. Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and estimate its severity including 	Small group discussion followed by Bedside clinic	Long case	
IM1.12,1.13,1.14,1.15	Vital signs and their interpretation in CVS case Cardiovascular examination	<ol style="list-style-type: none"> 1. Demonstrate peripheral pulse, volume, character, quality and variation in various causes of heart failure 2. Measure the blood pressure accurately, recognize and discuss alterations in blood pressure in valvular heart disease and other causes of heart failure and cardiac tamponade 3. Demonstrate and measure jugular venous distension 4. Identify and describe the timing, pitch quality conduction and significance of precordial murmurs and their variations 	Small group discussion Bedside clinic	Physical examination station in OSCE Short case	

IM1.16,1.17,1.19	Investigations in heart disease	<ol style="list-style-type: none"> 1. Generate a differential diagnosis based on the clinical presentation and prioritize it based on the most likely diagnosis 2. Order and interpret diagnostic testing based on the clinical diagnosis including 12 lead ECG, Chest radiograph, blood cultures 3. Enumerate the indications for and describe the findings of heart 	Clerkship Small group discussion	Documentation in logbook Problem based short essay question	
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		failure with the following conditions including: 2D echocardiography, brain natriuretic peptide, exercise testing, nuclear medicine testing and coronary angiogram			
IM1.18,2.10	Perform and interpret a 12 lead ECG		Small group discussion Clerkship	Documentation in logbook	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.20, 1.25	Introduction to Valvular heart disease	<ol style="list-style-type: none"> Determine the severity of valvular heart disease based on the clinical and laboratory and imaging features and determine the level of intervention required including surgery Enumerate the indications for valvuloplasty, valvotomy, coronary revascularization and cardiac transplantation 	Lecture	Short case Examination station in OSCE	
	Mitral valve disease	<ol style="list-style-type: none"> Discuss the haemodynamics, etiopathogenesis, clinical features of mitral stenosis Discuss the haemodynamics, etiopathogenesis, clinical features of mitral regurgitation 	Lecture		
	Aortic valve disease	<ol style="list-style-type: none"> Discuss the haemodynamics, etiopathogenesis, clinical features of aortic stenosis Discuss the haemodynamics, etiopathogenesis, clinical features of aortic regurgitation 	Lecture		
IM1.21	Infective endocarditis	<ol style="list-style-type: none"> Describe the clinical features of acute and subacute endocarditis, echocardiographic findings, blood culture and sensitivity and therapy 	Lecture	SEQ	

IM1.22	Phlebotomy and collecting specimen for culture	Assist and demonstrate the proper technique in collecting specimen for blood culture	DOAP session Clerkship	Skill assessment in OSCE station	Microbiology
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IM1.28	Congenital heart disease in adults	<ol style="list-style-type: none"> 1. Enumerate common adult presentations of congenital heart disease and describe the distinguishing features between cyanotic and acyanotic heart disease 2. Discuss etiopathogenesis and prevention of congenital heart disease 	Lecture	Short essay Short answer	
	ASD	<ol style="list-style-type: none"> 1. Discuss the embryology, haemodynamics , pathophysiology of ASD 2. Discuss the management of ASD 	Lecture		
	VSD,	<ol style="list-style-type: none"> 1. Discuss the embryology, haemodynamics , pathophysiology of VSD <p>Discuss the management of VSD</p>	Lecture		
IM 1.29	PDA	<ol style="list-style-type: none"> 1. Describe haemodynamics, clinical features, complications and management of patent ductus arteriosus 	Lecture	Short essay Viva voce	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM1.30	Intramuscular injection	1. Administer an intramuscular injection with aseptic precautions and appropriate explanation to the patient	Task trainer	Log book	Pharmacology
IM2.1,2,2.2.4,2.5,2.9	Ischemic heart disease	1. Discuss the epidemiology of coronary artery disease 2. Discuss the aetiology of risk factors - modifiable & non-modifiable - of atherosclerosis and IHD 3. Discuss and describe the pathogenesis natural history, evolution and complications of atherosclerosis and IHD 4. Describe the approach to a case of stable angina	Lecture	Short essay	Pathology, Physiology, Community Medicine
IM2.3	Lipid cycle	Discuss and describe the lipid cycle and the role of dyslipidemia in the pathogenesis of atherosclerosis	Lecture	Viva voce	Physiology, Biochemistry
IM2.6,2.7,2.8	Examination of patient with IHD	1. Elicit appropriate history including onset evolution, presentation risk factors, family history, comorbid conditions, complications, medication 2. Perform, demonstrate and document a physical examination including a vascular and cardiac examination that is appropriate for the clinical presentation 3. Generate and present a differential diagnosis based on clinical presentation and prioritize based on "cannot miss", most likely diagnosis and severity	Small group discussion followed by bedside clinics	Physical examination station in OSCE Short case	

IM2.9		1. Distinguish and differentiate between stable and unstable angina and AMI based on the clinical presentation 2. Discuss emergent management of a case of acute coronary syndrome prior to referral to a tertiary centre	Case based discussion	History station in OSCE	
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM2.11,2.12, 2.13	Investigations in IHD	<ol style="list-style-type: none"> 1. Order and interpret markers of acute myocardial infarction 2. Choose and interpret a lipid profile and identify the desirable lipid profile in the clinical context 3. Discuss and enumerate the indications for and findings on echocardiogram, stress testing and coronary angiogram 	<p>Small group discussion Case based discussion</p>	<p>Data interpretation station I OSCE Viva voce</p>	
IM2.14,2.15, 2.16, 2.18, 2.19, 2.20 ,2.23	Acute coronary syndrome	<ol style="list-style-type: none"> 1. Discuss pathogenesis, recognition and management of ACS & its complications 2. Discuss indications for admission to a CCU 3. Discuss indications for acute thrombolysis, PTCA and CABG 4. Discuss indications, formulations, doses, side effects and monitoring for drugs used in the management of dyslipidemia 5. Describe indications for nitrates, antiplatelet agents, gpIIb IIIa inhibitors, beta blockers, ACE inhibitors etc. in the management of coronary syndromes 	Lecture	<p>SEQ MEQ</p>	

IM2.17	Discuss and describe the indications and methods of cardiac rehabilitation		Small group discussion Interdisciplinary learning with physiotherapy team	Short answer	
IM2.20	Discuss and describe the assessment and relief of pain in acute coronary syndromes		Lecture	Short answer	Pharmacology
IM2.21	Observe and participate in a		Skill lab session	NA	

	controlled environment an ACLS program				
IM2.22	Perform and demonstrate in a mannequin BLS		Skill lab session	Skill assessment	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM2.24	Counselling	1. Counselling patient with IHD 2. Communication with empathy of lifestyle changes in patients with atherosclerosis	Small group discussion Clerkship	Counselling station in OSCE	AETCOM
IM3.1,3.2,3.3,	Pneumonia	1. Define community acquired pneumonia, nosocomial pneumonia and ventilator associated pneumonia 2. Discuss etiology of pneumonia depending on setting and patient immune status 3. Describe pathogenesis, clinical features and complications of pneumonia	Lecture	Short essay	Human Anatomy, Pathology, Microbiology

3.11, 3.12, 3.13, 3.15, 3.16	Investigations and treatment of pneumonia	<ol style="list-style-type: none"> 1. Enumerate indications for HRCT, Viral cultures, PCR 2. Select appropriate empirical antimicrobial based on the likely etiology 3. Describe and enumerate the indications for hospitalization in patients with pneumonia 4. Describe and enumerate the indications for isolation and barrier nursing in patients with pneumonia 	Lecture	Case based MCQ Short answer	
IM3.4,3.5.3.6,3.7	History and examination in pneumonia	1.Elicit document and present an appropriate history including the	Small group discussion Bedside clinic	Short case	

		evolution, risk factors including immune status and occupational risk 2. Demonstrate general & systemic examination to confirm diagnosis, severity and complications 3. Generate differential diagnosis based on history and examination 4. Order and interpret diagnostic tests based on the clinical presentation			
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM3.8	Perform ABG	Demonstrate in a mannequin & interpret results of an arterial blood gas examination	Skill lab	Skill assessment	
IM3.9	Perform pleural aspiration	Demonstrate in a mannequin and interpret results of a pleural fluid aspiration	Skill lab	Skill assessment	
IM3.10	Blood culture	Demonstrate the correct technique in a mannequin and interpret results of a blood culture	DOAP session	Skill assessment	Microbiology
IM3.14	Gram stain & AFB	Perform and interpret a sputum gram stain and AFB	Clerkship (side lab)	Documentation in logbook	Microbiology
IM3.17	Oxygen therapy	Discuss advantages & disadvantages of methods of supplemental oxygen delivery Choose method of supplemental oxygen delivery	Lecture	Short answer	

IM3.18 IM3.19	Counselling	Communicate and counsel patient and family on the diagnosis and therapy of pneumonia Educate and motivate patients for pneumococcal and influenza vaccine	Small group discussion Clerkship	Documentation in logbook	
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Number	COMPETENCY The student should be able to	SLOs: By the end of the session the student will be able to describe/discuss/demonstrate	TL methods	Suggested Assessment methods	Vertical Integration
IM4.1,4.2,4.4 4.5	Describe and discuss the febrile response	<ol style="list-style-type: none"> 1. The influence of host immune status, risk factors and comorbidities on the febrile response 2. The influence of special populations on the febrile response including: the elderly, immune suppression, malignancy and neutropenia, HIV 3. The pathophysiology and manifestations of inflammatory causes of fever 4. The pathophysiology and manifestations of malignant causes of fever including hematologic and lymph node malignancies 	Lecture	1. LEQ 2. MEQ	Microbiology
IM4.3	Discuss and describe the common causes, pathophysiology and manifestations of fever in various regions in India	<ol style="list-style-type: none"> 1. Pathophysiology, clinical features of Dengue 2. Pathophysiology, clinical features of Chikungunya 3. Pathophysiology, clinical features of typhus 	Lecture	SEQ	Microbiology, Community Medicine

IM4.6, 4.23,4.26	Discuss and describe the pathophysiology clinical features, diagnosis and treatment of malaria	<ol style="list-style-type: none"> 1. Epidemiology, etiopathogenesis of malaria 2. Diagnosis of malaria 3. Complications and treatment of malaria 4. Prescribe drugs for malaria based on the species identified, prevalence of drug resistance and national programs. Discuss the pharmacology, indications, drug reactions, and basis of resistance in antimalarial drugs 5. Counsel the patient on malarial prevention 6. 	Lecture followed by Case based learning	SEQ	Microbiology Pharmacology
IM4.7	Discuss and describe the pathophysiology and manifestations of the sepsis syndrome	<ol style="list-style-type: none"> 1. Etiopathogenesis of sepsis 2. Clinical features and Diagnosis of sepsis 3. Management of sepsis : antibiotics, vasopressors, mechanical ventilation 	Lecture	EQ	
IM4.8, 4.16	Discuss and describe the pathophysiology, aetiology and clinical manifestations of fever of unknown origin (FUO) including in a normal host, neutropenic host, nosocomial host and a host with HIV disease	<ol style="list-style-type: none"> 1. Definition of FUO 2. Causes of PUO, as relevant to India 3. Investigation and Diagnosis of PUO 4. Enumerate the indications and describe the findings in tests of inflammation and specific rheumatologic tests, serologic testing for pathogens including HIV, bone marrow aspiration and biopsy 	Lecture followed by Small group discussion	Written	Microbiology
IM4.9,4.10,	History and examination in fever case	<ol style="list-style-type: none"> 1. evolution and pattern of fever 2. associated symptoms 3. immune status, comorbidities, risk factors, exposure 4. Perform physical examination in a case of fever : including skin mucosae, lymph node examination, chest, liver, spleen 	Case based discussion Bedside clinic	History station in OSCE	Microbiology

Number	COMPETENCY The student should be able to	SLOs	TL methods	Suggested Assessment methods	Vertical Integration
IM4.11,4.21,4.24,4.25	Generate a differential diagnosis and prioritize based on clinical features that help distinguish between infective, inflammatory, malignant and rheumatologic causes	<ol style="list-style-type: none"> 5. List differentials for PUO after history and examination 6. Develop and present an appropriate diagnostic plan based on the clinical presentation, most likely diagnosis in a prioritized and cost-effective manner 7. Develop an appropriate empiric treatment plan based on the patient's clinical and immune status pending definitive diagnosis 	Case based discussion Bedside clinic	EQ Viva Communication station in OSCE	
		8. Communicate diagnosis and treatment to patient family			
IM4.12,4.18	Order and interpret the following diagnostic tests based on the differential diagnosis	<ol style="list-style-type: none"> 1. CBC with differential, peripheral smear, urinary analysis with sediment, Chest X ray, blood and urine cultures, sputum gram stain and cultures, sputum AFB and cultures, CSF analysis, pleural and body fluid analysis, stool routine and culture and QBC 2. Enumerate the indications for use of imaging in the diagnosis of febrile syndromes 	Small group discussion Clerkship(learner doctor)	SEQ Viva Log book	Pathology, Microbiology

IM4.13,4.14, 4.15, 4.17,4.19 ,4.20	Perform and interpret relevant investigations in case of fever	1.sputum gram stain 2. sputum AFB 3. malarial smear 4. Observe & assist in performance of bone marrow aspiration & biopsy in simulated environment 5. Assist in the collection of blood and wound cultures 6. Interpret a PPD	Clerkship(learner doctor)	Log book	Microbiology
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM5.1	Hyperbilirubinemia	Describe and discuss the physiologic and biochemical basis of hyperbilirubinemia	Lecture	Written/viva voce	
IM5.2 IM5.3	Hepatic injury	1.Describe and discuss the aetiology and pathophysiology of liver injury 2.Describe and discuss the pathologic changes in various forms of liver disease	Lecture	Written/viva voce	
IM5.4	Hepatitis	1.Describe and discuss the epidemiology, microbiology, immunology and clinical evolution of infective (viral) hepatitis 2. Discuss the management of Hepatitis B & C	Lecture	Written/viva voce	
IM5.5	Alcoholic liver disease	Discuss the etiopathogenesis, clinical features, diagnosis & management of alcoholic liver disease	Lecture	Written/viva voce	

IM5.6	Cirrhosis & PHT	Describe and discuss the pathophysiology, clinical evolution and complications of cirrhosis and portal hypertension including ascites, spontaneous bacterial peritonitis, hepatorenal syndrome and hepatic encephalopathy	Lecture	Written/viva voce	
IM5.16	Management of cirrhosis with PHT	Describe management of hepatitis, cirrhosis, portal hypertension, ascites spontaneous, bacterial peritonitis and hepatic encephalopathy	Lecture	Written/viva voce	
IM5.7	Drug induced liver injury	Enumerate and describe the causes and pathophysiology of drug induced liver injury	SDL	Short answer	
IM5.8	Cholecystitis, cholelithiasis	Describe and discuss the pathophysiology, clinical evolution and complications cholelithiasis and cholecystitis	Lecture	Essay Viva voce	General Surgery
IM5.9 5.10 5.11	History & examination in liver disease	1. Elicit medical history in a case of liver disease including clinical presentation, risk factors, drug use, sexual history, vaccination history and family history 2.Perform a systematic examination that establishes the diagnosis and severity and complications of liver disease 3.Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology for the presenting symptom	Small group discussion Bedside clinic	Skill assessment	

IM5.12 5.13 5.14	Investigations in liver disease	Choose and interpret appropriate diagnostic tests including: CBC, bilirubin, function tests, Hepatitis serology and ascitic fluid examination in patient with liver diseases. Enumerate modalities of investigations in liver disease and discuss indications , advantages and disadvantages of each Outline a diagnostic approach to liver disease based on hyperbilirubinemia, liver function changes and hepatitis serology	Lecture	Skill assessment	Pathology
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	Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical In
	IM5.15	Ascitic tap	1. Assist in the performance of an ascitic fluid analysis interpret the findings of ascitic fluid analysis	DOAP session Clerkship	documentation in log book	
	IM5.17	Vaccination in liver disease	1. Enumerate the indications for vaccination in liver disease 2. counsel patients for vaccination in liver disease	1. Visit to immunization clinic 2. Clerkship	1. Viva voce 2. documentation in log book	Microbiolog
	IM5.18	Hepatic transplantation	Enumerate the indications for hepatic transplantation	Lecture SDL	Written/ Viva voce	

Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods
IM6.8,6.9, , 6.10, 6.11,6.16, 6.12, 6.17, 6.18,6.13	Diagnosis and management of HIV AIDS , and opportunistic infections	1.Enumerate the indications and describe the findings for CT , MRI, ABG, CXR 2. Describe and enumerate the indications and side effects of drugs for bacterial, viral and other types of diarrhoea 3. Discuss and describe the principles of HAART, the classes of antiretrovirals used, adverse reactions and interactions 4.Discuss and describe the principles and regimens used in post exposure prophylaxis	Lecture

Suggested Assessment methods	Vertical Integ
Short answer MCQ	

		5.Enumerate the indications and discuss prophylactic drugs used to prevent HIV related opportunistic infections			
IM6.14	Perform and interpret AFB sputum		DOAP session	Skill assessment	Microbiology
IM6.15	Demonstrate in a model the correct technique to perform a lumbar puncture		Simulation	Skill assessment	Microbiology
Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM6.19,6.20,6.21,6.22,6.23	Counsel patients at diagnosis of HIV, and prevention of HIV transmission	<ol style="list-style-type: none"> 1. Communicate diagnosis, treatment plan and subsequent follow up plan to patients 2. Communicate with patients on the importance of medication adherence 3. Demonstrate understanding of ethical and legal issues regarding patient confidentiality and disclosure in patients with HIV 4. Demonstrate a non-judgmental attitude to patients with HIV and to their lifestyles 	<p>Small group discussion Clinical clerkship Tag along</p>	Communication station of OSCE	AETCOM

	Competencies	SLOs	Suggested TL methods	Suggested assessment	Vertical Integration
IM7.1 IM7.2 7.15	Introduction to autoimmunity	<ol style="list-style-type: none"> 1. Describe the pathophysiology of autoimmune disease 2. Describe the genetic basis of autoimmune disease 3. Enumerate the indications for and interpret the results of : CBC, anti- CCP, RA, ANA, DNA and other tests of autoimmunity 	Lecture	Short essay Viva voce	Pathology
7.22 7.23 7.19	Rheumatoid arthritis	<ol style="list-style-type: none"> 1. Describe the systemic manifestations of rheumatoid arthritis 2. Etiopathogenesis, clinical features, diagnosis of rheumatoid arthritis 3. Select, prescribe and communicate treatment option for rheumatoid arthritis 4. Describe the basis for biologic and disease modifying therapy in rheumatoid arthritis 5. Develop an appropriate treatment plan for patients with rheumatoid arthritis 	Lecture	Essay question MEQ	Pathology
	SLE	<ol style="list-style-type: none"> 1. Describe the systemic manifestations of Systemic Lupus Erythematosus 2. Etiopathogenesis, clinical features, diagnosis of Systemic Lupus Erythematosus 3. Select, prescribe and communicate treatment option for Systemic Lupus Erythematosus 4. Describe the therapy of Systemic Lupus Erythematosus 5. Develop an appropriate treatment plan for patients with Systemic Lupus Erythematosus 	Lecture		

	Systemic sclerosis	Etiopathogenesis, clinical features & management of systemic sclerosis	Lecture		
IM7.3 7.4 7.5 7.6 7.7	Approach to joint pain	1.Classify cause of joint pain based on the pathophysiology 2.Develop a systematic clinical approach to joint pain 3.Describe and discriminate acute, subacute and	Lecture	Written/ Viva voce	

7.8 7.10		chronic causes of joint pain 4.Discriminate, describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain 5.Discriminate articular from periarticular complaints 6.Determine the potential causes of join pain based on the presenting features of joint involvement 7.Describe the common signs and symptoms of articular and periarticular diseases			
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM7.11 IM7.12 IM7.13 7.14	History & examination in Rheumatoid arthritis	Elicit document and present a medical history that will differentiate the etiologies of disease 2. Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease 3. Generate a differential diagnosis and prioritize based on clinical features that suggest a specific aetiology 4. the appropriate diagnostic work up based on the presumed aetiology	Bedside clinic Small group discussion	Physical examination station in ISCE Short case	
IM7.16,7.17	Investigations in rheumatologic disease	Enumerate the indications for arthrocentesis Enumerate the indications and interpret plain radiographs of joints	Case based discussion	Written/ Viva voce	
IM7.18-7.27	Management & counselling in autoimmune diseases	1.Communicate diagnosis, treatment plan and subsequent follow up plan to patients 2.Select, prescribe and communicate appropriate medications for relief of joint pain 3.Select, prescribe and communicate preventive therapy for crystalline arthropathies 4.Communicate and incorporate patient preferences in the choice of therapy 5.Develop and communicate appropriate follow up and monitoring plans for patients with rheumatologic conditions 6. Demonstrate an understanding of the impact of rheumatologic conditions on quality of	Clerkship Case based discussion	Communication station in OSCE Short answer	

		life, well-being, work and family 7.. Determine the need for specialist consultation				
	Competency	SLOs	Suggested TL	Suggested assessment	Integration	
IM8.1, IM8.2 IM8.3 IM8.4 IM8.5 8.7	Hypertension	1. Discuss the epidemiology, aetiology and the prevalence of primary and secondary hypertension 2. Discuss the pathophysiology of hypertension 3.define and classify hypertension and discuss the differences between primary and secondary hypertension	Lecture	Long essay	Pathology, physiology	
						50
IM8.20 8.14		4. discuss etiology and clinical features of secondary HTN 5. Develop an appropriate treatment plan for essential hypertension 6..determine the need for specialist consultation				
IM8.6 IM8.8 IM 8.15	Acute & chronic complications of HTN	1. Discuss and recognize hypertensive urgency and emergency 2. Manage hypertensive emergencies 3. Discuss and identify target organ damage due to hypertension	Lecture	Clinical scenario based short essay		

Number	Competency The student should be able to	SLOs	Suggested learning methods	Suggested assessment methods	Vertical integration
IM8.9 IM8.10 IM8.11 IM8.12	Examination of a case of hypertension	1.elicit medical history in a case of HTN 2.perform systematic including measurement of bp, fundus, examination of vasculature and heart 3. Generate a differential diagnosis 4. Describe the appropriate diagnostic work up based on the presumed aetiology	Small group discussion Bedside clinics	Short case	
IM8.16 IM8.18 IM8.19		1.develop and communicate to the patient lifestyle modification including weight reduction, moderation of alcohol intake, physical activity and sodium intake 2. Incorporate patient preferences in the management of HTN 3. Demonstrate understanding of the impact of hypertension on quality of life, well-being, work and family	Small group discussion Clerkship	Documentation in log book	
IM8.17	Perform and interpret a 12 lead ECG		DOAP session	Documentati on in log book/ skills station	

IM9.1, 9.2, ,9.6, 9.7,9.8, 9.9,9.12 9.13	Iron deficiency anemia	<ol style="list-style-type: none"> 1. Define & classify anemia 2. Describe morphology, aetiology and prevalence of various causes of anemia 3. Describe the diagnostic work up of anemia 4. describe the interpretation of the hemogram and the tests for iron deficiency 	Lecture	Essay question	Pathology
IM9.3	Elicit, document and present medical history in a case of anemia	<ol style="list-style-type: none"> 1. Enquire for symptoms of anemia 2. Possible causes : GI bleeding, prior history, medications, menstrual history, and family history 	Bed side clinic	OSCE history station	
IM9.4	Perform a general physical and relevant systemic examination in a case of anemia	<ol style="list-style-type: none"> 1. examination for pallor, icterus, lymphadenopathy, sternal tenderness, evidence of CTD 2. check for hyper dynamic circulation, spleen, liver 	Bedside clinic	OSCE – physical examination station – general physical examination/abdomen	
IM9.5,9.11	Generate a differential diagnosis in a case of anemia in order of likelihood and prioritize based on clinical features that suggest a specific aetiology	<ol style="list-style-type: none"> 1. given clinical features and hemogram in a case of anemia , to generate a differential diagnosis in order of likelihood 	Small group discussion Case based learning	Modified essay question Data interpretation question	Pathology
IM9.9,9.13	Macrocytic anemia	<ol style="list-style-type: none"> 1. list causes of macrocytic anemia describe 2. pathogenesis of various types of macrocytic anemia 3. Order and interpret for diagnosis of macrocytic anemia 4. Describe treatment of different causes of macrocytic anemia 	Lecture class	SEQ	Pathology

IM9.10	Perform bedside investigations in a case of anemia	<ol style="list-style-type: none"> 1. Perform and interpret peripheral blood smear 2. Check stool for occult blood 	Clerkship(learner doctor)	Log book	Pathology
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Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods	Suggested Assessment methods	Vertical Integration
IM9.11	Bone marrow biopsy	<ol style="list-style-type: none"> 1. Student should be able to enumerate the indications for bone marrow biopsy and describe the procedure of bone marrow biopsy 	Small group discussion	Written/ Viva voce/ Skill assessment	Pathology
IM9.14	Describe the national programs for anemia prevention		Lecture	Written/ Viva voce	Pharmacology, Community Medicine
IM9.15,9.16 9.20	Patient counselling in anemia	<ol style="list-style-type: none"> 1. Communicate the diagnosis and the treatment appropriately to patients 2. Incorporate patient preferences in treatment of anemia Communicate and counsel patients with methods to prevent nutritional anemia 	DOAP session	Skill assessment	
IM9.17,9.18	Blood transfusion	Describe the indications for blood transfusion and the appropriate use of blood components Describe the precautions required necessary when performing a blood transfusion	Lecture, Small group discussion	Viva voce	Pathology
IM9.19	Assist in a blood transfusion		Clerkship (learner doctor)	document in log book	
	Polycythemia	<ol style="list-style-type: none"> 1.define and classify polycythemia 2. discuss clinical features and differentiation of primary and secondary polycythemia 3.describe investigations and management of polycythemia rubra vera 	Lecture		

	Leukemia	<ol style="list-style-type: none"> 1. Enumerate leukemias common in adults 2. Describe clinical features of leukemia in adults 3. Discuss diagnosis and management of leukemia 	Lecture		
	Multiple myeloma	Describe the clinical features, diagnosis and management of multiple myeloma	Lecture		

		SLOs	Suggested TL method	Suggested assessment	Vertical integration
IM10.1 IM10.2 IM10.3 IM10.4 IM10.25	AKI	<ol style="list-style-type: none"> 1. Define renal insufficiency. Distinguish between acute & chronic renal insufficiency 2. Describe the pathophysiology & causes of pre renal, renal and post renal AKI 3. Describe the evolution, natural history and treatment of AKI 4. Identify and describe the priorities in the management of ARF including diet, volume management, alteration in doses of drugs, monitoring and indications for dialysis 	Lecture	Essay question	Pathology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM10.5 IM10.6 IM10.7 IM10.8 IM 10.27 IM 10.28	CKD	<ol style="list-style-type: none"> 1. Discuss the aetiology of CKD 2. Stage Chronic Kidney Disease 3. discuss the pathophysiology & clinical features of uremia 4. discuss the significance of proteinuria in CKD 5. discuss the indications for hemodialysis 6. discuss renal replacement therapy 	Lecture	Short essay	Pathology
IM10.9 IM10.10 IM10.11 IM10.26	Complications of CKD	<ol style="list-style-type: none"> 1. discuss pathophysiology of anemia & hyperparathyroidism in CKD 2. discuss association between CKD glycemia and hypertension 3. discuss relationship between CAD risk factors and CKD 4. discuss supportive therapy in CKD 	Lecture	Short answer	Pathology
IM10.12 IM10.13 IM10.14	Examination of patient with renal disease	<ol style="list-style-type: none"> 1. Elicit history to differentiate between AKI & CKD and to suggest aetiology of renal disease 2. Perform systematic examination to establish diagnosis and stage of CKD, and features of uremia 3. Generate differential diagnosis to suggest specific etiology 	Small group discussion Bedside clinic	Short case	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Number required to certify	Vertical Integration
IM10.15 IM10.16 IM10.17 IM10.18 IM10.19 IM10.20	Investigations in renal disease	<ol style="list-style-type: none"> 1. Describe the appropriate diagnostic work up based on presumed aetiology 2. Enumerate indications for and interpret the results of : renal function tests, calcium, phosphorus, PTH, urine electrolytes, osmolality, Anion gap 3. Describe and calculate indices of renal function 4. Identify ECG findings in hyperkalemia 5. Enumerate indications and describe findings in renal ultrasound 6. discuss indications to perform arterial blood gas analysis: interpret the data 	Lecture	Skill assessment / Written/ Viva voce		
IM10.21 IM10.22	Femoral/jugular catheterization	<ol style="list-style-type: none"> 1. discuss indications for and insert a peripheral intravenous catheter 2. discuss the indications, demonstrate in a model and assist in the insertion of a central venous or a dialysis catheter 	DOAP session, skill lab	documentation in logbook		

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM10.24 IM10.29 IM10.30 IM10.31 IM10.23	Patient counselling & ethical issues	1.Counsel patients on a renal diet 2.discuss and communicate the ethical and legal issues involved in renal replacement therapy	Small group discussion Clerkship	Documentation in logbook	
		3. Recognize the impact of CKD on patient's quality of life wellbeing work and family 4.Incorporate patient preferences in to the care of CKD 5. Communicate diagnosis treatment plan and subsequent follow up			

Number	COMPETENCY The student should be able to	SLOs	Suggested TL methods	Suggested Assessment methods	Vertical Integration

IM11.1 IM11.2 IM11.3 IM11.4	Diabetes	1. Define and classify diabetes 2. Discuss the epidemiology and pathogenesis and risk factors and clinical evolution of type 1 diabetes 3. Discuss the epidemiology, pathogenesis and risk factors economic impact and clinical evolution of type 2 diabetes 4. Describe and discuss the genetic background and the influence of the environment on diabetes	Lecture		
IM11.5 IM11.6	Complications of diabetes	1. Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes 2. Describe and discuss the pathogenesis and precipitating factors, recognition and management of diabetic emergencies	Lecture		
IM11.7,11.8	History and examination of a patient with diabetes	1. Elicit document and present a medical history that will differentiate the aetiologies of diabetes including risk factors, precipitating factors, lifestyle,	Bedside clinic	History station in OSCE Examination station in OSCE (
		nutritional history, family history, medication history, co-morbidities and target organ disease 2. Perform a systematic examination that establishes the diagnosis and severity that includes skin, peripheral pulses, blood pressure measurement, fundus examination, detailed examination of the foot (pulses, nervous and deformities and injuries)		GPE, foot examination, checking for DPN)	

IM 11.12,11.13	Bedside investigations in a patient with diabetes	1.Perform and interpret a capillary blood glucose test 2. Perform and interpret a urinary ketone estimation with dipstick	Small group discussion Clerkship – learner doctor	Skill assessment	Pathology, Biochemistry
IM11.11,11.16,11.17 11.18, 11.22	Management of diabetes	1. Order and interpret laboratory tests to diagnose diabetes and its complications 2.Discuss and describe the pharmacologic therapies for diabetes their indications, contraindications, adverse reactions and interactions	Lecture followed by small group discussion	Short essay	Pharmacology
		3.Outline a therapeutic approach to therapy of T2Diabetes based on presentation, severity and complications in a cost-effective manner 4. Describe and discuss the pharmacology, indications, adverse reactions and interactions of drugs used in the prevention and treatment of target organ damage and complications of Type II Diabetes including neuropathy, nephropathy, retinopathy, hypertension, dyslipidemia and cardiovascular disease 4.Enumerate the causes of hypoglycemia and describe the		MEQ	

		counter hormone response and the initial approach and treatment			
Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM11.19,11.20, 11.21	Education and counselling of patient with diabetes	<ol style="list-style-type: none"> 1. Demonstrate and counsel patients on the correct technique to administer insulin 2. Demonstrate to and counsel patients on the correct technique of self-monitoring of blood glucoses 3. Recognise the importance of patient preference while selecting therapy for diabetes 	Small group discussion Clerkship – learner doctor	OSCE – communication station	Pharmacology
IM12.1,12.2,12.3, 12.4,12.12, 12.13, 12.14, 12.15	Etiopathogenesis, diagnosis and management of thyroid disorders	<ol style="list-style-type: none"> 1. Discuss the etiopathogenesis if hypothyroidism and hyperthyroidism 2. Describe and discuss the physiology of the hypothalamopituitary - thyroid axis, principles of thyroid function testing 3. Describe and discuss the principles of radio iodine uptake in the diagnosis of thyroid disorders 4. Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs 5. Discuss iodization programs of GOI 6. Write and communicate to the patient appropriately a prescription for thyroxine based on age, sex, and clinical and biochemical status 	Lecture	Essay question, short essay	Pathology, Physiology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM,12.6 12.7,12.8,	History, examination and bedside diagnosis of thyroid disorders	1.Elicit document and present an appropriate history that will establish the diagnosis cause of thyroid dysfunction and its severity 2. Perform and demonstrate examination of thyroid, including signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	Bedside clinic	OSCE Short case	
		3.Generate a differential diagnosis based on the clinical presentation and prioritize it based on the most likely diagnosis			
IM12.9,12.10, 12.11,		1.Order and interpret diagnostic testing for thyroid disease 2. Identify atrial fibrillation, pericardial effusion and bradycardia 3.Interpret TFT	Small group discussion	Short essay question Modified essay question	
	Etiopathogenesis, diagnosis and management of Cushing's syndrome	<ol style="list-style-type: none"> 1. Discuss the etiopathogenesis of Cushing's syndrome 2. Describe the clinical features of Cushing's syndrome 3. Describe the diagnosis and management of Cushing's syndrome 	Lecture		

	Etiopathogenesis, diagnosis and management of Addison's disease	<ol style="list-style-type: none">1. Discuss the etiopathogenesis of Addison's disease2. Describe the clinical features of Addison's disease3. Describe the diagnosis and management of Addison's disease	Lecture		
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	Competency	SLOs	TL method	Assessment	Integration
IM13.1 IM13.2 IM13.3 IM13.4	Introduction to cancer	<ol style="list-style-type: none"> 1. Describe clinical epidemiology , inherited & modifiable risk factors for common malignancies in India 2. Describe the genetic basis of selected cancers 3. Describe the relationship between infection and cancers 4. Describe the natural history, presentation, course, complications and cause of death for common cancers 	Lecture	Short note	Pathology, Biochemistry
IM13.5 IM13.6 IM13.16 IM13.17 IM13.18 IM13.19	Palliative care & pain relief	<ol style="list-style-type: none"> 1. Describe common issues encountered in patients at the end of life and principles of management 2. distinguish between curative and palliative care in patients with cancer 3. Demonstrate an understanding of needs and preferences of patients when choosing curative and palliative therapy 4. Discuss indications, use, side effects of narcotics in pain alleviation in patients with cancer 5. Discuss ethical & medico legal issues involved in end-of-life care 6. Describe therapies used in alleviating suffering in patients at the end of life 	Lecture	Short note/ Viva voce	

IM13.7 IM13.8 IM13.10	History & examination in a case of cancer	1.Elicit history that will help establish aetiology of cancer 2. Perform physical examination	Small group discussion Bedside clinic	Skill assessment/ Short case	
		including general and local examination to identify diagnosis, extent of spread and complications of cancer 3.Generate a differential diagnosis based on the presenting symptoms and clinical features			
IM13.9		Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Skill lab	Skill assessment/ Short case	Human Anatomy

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM13.11 IM13.12 IM13.13 IM13.14 IM13.15	Investigation & management in cancer	<ol style="list-style-type: none"> 1. Order and interpret diagnostic testing based on clinical diagnosis including CBC and stool occult blood and prostate specific antigen 2. Describe indications and interpret results of Chest X Ray, mammogram, skin and tissue biopsies and tumor markers used in common cancers 3. Describe and assess pain and suffering objectively in a patient with cancer 4. Describe the indications for surgery, radiation and chemotherapy for common malignancies 5. Describe the need, tests involved, their utility in the prevention of common malignancies 	Small group discussion	Short note/ Viva voce	Radiodiagnosis
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	Competency	SLOs	TL methods	Assessment	Integration
IM14.1 IM14.2 IM14.3 IM14.5	Overview	<p>Define and measure obesity as it relates to the Indian population</p> <p>Describe and discuss the aetiology of obesity including modifiable and nonmodifiable risk factors and secondary causes</p> <p>Describe and discuss the monogenic forms of obesity</p> <p>Describe and discuss the natural history of obesity and its complications</p>	Lecture	Written/viva voce	

<p>IM14.6 IM14.7 IM14.8</p>	<p>Examination</p>	<p>Elicit and document and present an appropriate history that includes the natural history, dietary history, modifiable risk factors, family history, clues for secondary causes and motivation to lose weight Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities</p>	<p>Small group discussion Bedside clinic</p>	<p>Short case</p>	
<p>IM14.9 IM14.10</p>	<p>Investigation of obesity</p>	<p>Order and interpret diagnostic tests based on the clinical diagnosis including blood glucose, lipids, thyroid function tests etc. Perform, document and demonstrate a physical examination based on the history that includes general examination, measurement of abdominal obesity, signs of secondary causes and comorbidities</p>	<p>Lecture</p>	<p>Written/viva voce</p>	

<p>IM14.11 IM14.12</p>	<p>Counselling & education</p>	<p>Communicate and counsel patient on behavioural, dietary and lifestyle modifications Demonstrate an understanding of patient's inability to adhere to lifestyle instructions and counsel them in a non-judgmental way</p>	<p>Clerkship Case based discussion</p>	<p>Documentation in logbook</p>	
<p>IM14.13 IM14.14 IM14.15</p>	<p>Management of obesity</p>	<p>Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for obesity Describe and enumerate the indications and side effects of bariatric surgery Describe and enumerate and educate patients, health care workers and the public on measures to prevent obesity and promote a healthy lifestyle</p>	<p>Lecture</p>	<p>Written/viva voce</p>	

	Competency	SLOs	TL methods	Assessment	Integration
IM15.1 IM15.2	GI bleed	<ol style="list-style-type: none"> 1. Discuss the aetiology of upper and lower GI bleeding 2. Discuss the evaluation & stabilization of patient who presents with GI bleed 	Lecture	Short essay	Pathology
IM15.3		Discuss the physiologic effects of acute blood and volume loss	SDL – pre reading	Viva voce	Pathology, Physiology
IM15.4 IM15.5 IM15.6 IM15.8	Examination of patient with GI bleed	<ol style="list-style-type: none"> 1. Elicit history to identify source of GI bleed, amount of bleed & hemodynamic compromise 2. Perform physical examination including general examination, volume assessment and abdominal examination 3. Distinguish between upper & lower GI bleed 4. Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritize based on the most likely diagnosis 	Small group discussion Bedside clinic	Long case	
IM15.7		Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent	DOAP session	Skill assessment	

	Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration

<p>IM15.9 IM15.10 IM15.11 IM15.12 IM15.14 IM15.16 IM15.17 IM15.15</p>	<p>Investigation & management of GI bleed</p>	<p>Choose and interpret diagnostic tests : CBC, PT and PTT, stool occult blood, LFT H.pylori test. Enumerate the indications for endoscopy, colonoscopy Develop treatment plan including fluid resuscitation, blood and blood component transfusion and arresting bleed Enumerate indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion Discuss pharmacotherapy of acute GI bleed Enumerate the indications for endoscopic interventions and Surgery Determine appropriate level of specialist consultation Describe pharmacotherapy of acid peptic disease including Helicobacter pylori</p>	<p>Case based discussion</p>	<p>Modified essay Question</p>	
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	IM15.13	Observe cross matching and blood / blood component transfusion		Small group discussion Clerkship	Documentation in logbook	Pathology
	IM15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options		Small group discussion Clerkship	Documentation in logbook	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM16.3 16.6 16.12 16.13 16.14	Diarrhoea	<ol style="list-style-type: none"> 1. Describe and discuss the chronic effects of diarrhoea including malabsorption 2. Distinguish between diarrhoea and dysentery based on clinical features 3. Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhoea 4. Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for parasitic causes of diarrhoea 5. Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for bacterial and viral diarrhoea 	Lecture	Short note	

IM16.4 16.5 16.7 16.8	History, examination and diagnosis in a case of diarrhoea	1.Elicit and document and present an appropriate history that includes the natural history, dietary history, travel , sexual history and other concomitant illnesses 2.Perform, document and demonstrate a physical examination based on the history that includes GPE & abdomen exam 3. Generate a differential diagnosis based on the presenting symptoms and clinical features 4.Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination	Bedside clinic	Short case OSCE history station	Microbiology, Pathology
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IM16.9 16.10 16.11	Investigations in diarrhoea	Identify common parasitic causes of diarrhoea under the microscope in a stool specimen Identify vibrio cholera in a hanging drop specimen Enumerate the indications for stool cultures and blood cultures in patients with acute diarrhoea	DOAP session (1 hour)	Skill assessment	Microbiology
Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration

IM16.15 16.16 16.17	IBD	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, and stool examination Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy including immunotherapy Describe and enumerate the indications for surgery in inflammatory bowel disease	Lecture followed by casebased discussion	Short note	Pathology
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	Competency	SLOs	TL methods	Assessment	
IM17.1 IM17.3 IM17.10	Headache - introduction	<ol style="list-style-type: none"> 1. Define & classify headache & describe clinical features of various types of headache 2. Classify migraine and describe the distinguishing features between classical and non-classical forms of migraine 3. Enumerate indications for emergency care, admission and 	Lecture	Short essay Viva voce	

		immediate supportive care in patients with headache			
IM17.11 IM17.12	Vascular headache	1. Describe indications, pharmacology, dose, side effects of abortive therapy in migraine 2. Describe the indications, pharmacology, dose, side effects of prophylactic therapy in migraine	Lecture	Short essay	
IM17.2 IM17.4 IM17.5 IM17.6	History & examination in headache case	1. Elicit history including aura, precipitating aggravating and relieving factors, associated symptoms to identify the cause 2. Perform neurologic examination & look for signs of raised ICT 3. Generate differential diagnosis based on clinical features, & prioritize the diagnosis based on the presentation 4. Choose & interpret diagnostic testing based on clinical diagnosis including imaging	Small group discussion Bedside clinic	History station in OSCE	
17.9 IM17.7 IM17.13	Meningitis	1. Etiopathogenesis & clinical features of meningitis 2. describe the findings in the CSF in patients with meningitis 3. Describe the pharmacology, dose, adverse reactions and regimens of drugs used in the treatment of	Lecture	Short essay Viva voce	

		bacterial, tubercular and viral meningitis			
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Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM17.8	Lumbar puncture	Demonstrate in a mannequin or equivalent the correct technique for performing a lumbar puncture	Skill lab	Skill assessment	Microbiology, Pathology
IM17.9	CSF analysis	Interpret the CSF findings when presented with various parameters of CSF fluid analysis	Case based discussion	Problem based short essay question	Microbiology, Pathology
IM17.14	Counselling	Counsel patients with migraine and tension headache on lifestyle changes and need for prophylactic therapy	Small group discussion Clerkship	Documentation in logbook	Pharmacology
	Competency	SLOs			
IM18.1	Neuroanatomy	Describe the functional and the vascular anatomy of the brain	Lecture	Short answer Diagram	Human Anatomy

IM18.2	Cerebrovascular accident	Classify cerebrovascular accidents & describe aetiology, predisposing risk factors & pathogenesis of hemorrhagic and non-hemorrhagic stroke	Lecture	SEQ	Pathology
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM18.3 IM18.4 IM18.5 IM18.6 IM18.7 IM18.8	History & examination of a case of stroke	<ol style="list-style-type: none"> 1. Elicit history including onset, progression, precipitating and aggravating relieving factors, associated symptoms that help identify the cause of stroke 2. Identify the nature of stroke based on the temporal evolution and resolution of the illness 3. Perform physical examination including general and a detailed neurologic examination as appropriate, based on the history 4. Distinguish lesion based on upper vs lower motor neuron, side, site and most probable nature of the lesion 5. Describe clinical features and distinguish, based on clinical examination, the various disorders of speech 6. Describe and distinguish, based on the clinical presentation, the types of bladder dysfunction seen in CNS disease 	Small group discussion Bedside clinic	<ol style="list-style-type: none"> 1. Long case 2. Physical examination station in OSCE 	

IM18.9 IM18.10 IM18.11 IM18.12 IM18.13 IM18.14 IM18.15	Investigations & treatment of stroke	1.Choose and interpret appropriate diagnostic & imaging tests to delineate site & underlying cause of lesion 2. Choose and interpret appropriate diagnostic testing in young patients with a cerebrovascular accident (CVA) 3. Describe the initial supportive management of a patient presenting with a cerebrovascular accident (CVA) 4. Enumerate the indications for and describe acute therapy of nonhemorrhagic stroke including the use of	Lecture	1. data interpretation station in osce 2. Short answer	Radiodiagnosis
		thrombolytic agents 5.Enumerate the indications for and describe the role of anti-platelet agents in non-hemorrhagic stroke 6.Describe the initial management of a hemorrhagic stroke 7. Enumerate the indications for surgery in a hemorrhagic stroke			
IM18.16	Rehabilitation of stroke	observe the multidisciplinary rehabilitation of patients with a CVA	DOAP session		
IM18.17	Counselling	Counsel patient and family about the diagnosis and therapy in an empathetic manner	Small group discussion Clerkship	Documentation in logbook	

	Competency	SLOs			
IM19.1	Neuroanatomy basal ganglia	Describe the functional anatomy of the locomotor system of the brain	Lecture	Written/ Viva voce	Human Anatomy, Physiology
IM19.2	Movement disorders and Parkinson's disease	3. Classify movement disorders based on distribution, rhythm, repetition, exacerbating and relieving factors 4. Describe the clinical features of Parkinson's disease	Lecture	Written/ Viva voce	
IM19.3 IM19.4 IM19.5 IM19.6	History & examination of movement	1.Elicit history including onset, progression precipitating and aggravating relieving factors, associated symptoms to identify cause of	Small group discussion Bedside clinic	Short case Examination station in OSCE	
		movement disorders disorder 3.Perform physical examination that includes a general and detailed neurologic examination 4.Generate differential diagnosis & prioritize based on history & physical examination 5.Reach clinical diagnosis of location, nature and cause of lesion based on clinical presentation			

IM19.7 IM19.8 IM19.9	Investigation & management of movement disorders	Choose and interpret diagnostic and imaging tests in the diagnosis of movement disorders Discuss pharmacology, dose, side effects and interactions used in the drug therapy of Parkinson's syndrome Enumerate the indications for use of surgery and botulinum toxin in the treatment of movement disorders	Lecture	Skill assessment/ Written/ Viva voce	Radiodiagnosis
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM20.1 IM20.3 IM20.6 IM20.7	Snake bite	1.Enumerate local poisonous snakes & describe the distinguishing marks of each 2. Choose & interpret appropriate diagnostic testing in patients with snake bite 3.Describe initial approach to stabilization of patient with snake bite 4. Describe pharmacology, dose, adverse reactions, hypersensitivity	Lecture	Essay question Viva voce	Forensic Medicine, Pharmacology
		reactions of anti-snake venom			
IM20.2	Patient Education	Demonstrate and educate (to other health care workers / patients) the correct initial management of patient with a snake bite in the field	DOAP session Role play for patient education	Viva voce	Forensic Medicine

IM20.4 IM20.5	Examination of snake bite case	1. Elicit history including circumstance, time, kind of snake, evolution of symptoms in a patient with snake bite 2. Perform general, local, appropriate cardiac and neurologic examination in case of snake bite	Small group discussion Bedside clinic	OSCE examination station on simulated patient	Forensic Medicine
IM20.8		Describe the diagnosis, initial approach, stabilization and therapy of scorpion envenomation	Lecture	Written/ Viva voce	Pharmacology
IM20.9		Describe the diagnosis initial approach stabilization and therapy of bee sting allergy	SDL	Written/ Viva voce	Pharmacology
		Clinical features, stabilization , management of attempted hanging	Lecture		
		Clinical features, stabilization , management of attempted drowning	Lecture		
		Heat stroke	SDL		

Number	COMPETENCY The student should be able to		Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM21.1 IM21.2	Poisoning	1.Describe the initial approach to the stabilization of the patient who presents with poisoning 2.describe toxicology, clinical features and management of common plant poisons	Lecture	Viva voce Structured essay	
IM21.3 IM21.4		1.describe toxicology, clinical features and management of common corrosive poisons 2.describe toxicology, clinical features and management of patients admitted with common drug overdose	Lecture	Short answer	
	Hepatotoxic poisons	1.Describe toxicology, clinical features, management in a patient admitted with paracetamol/rodenticide poisoning 2.Discuss the role of liver transplant in. these cases	Lecture	Short essay	
IM21.8		1.describe the precautions to be taken in a patient with suspected suicidal ideation / gesture	Small group discussion	viva	

IM21.5		Observe and describe the functions and role of a poison center in suspected poisoning	DOAP session	document in log book	Forensic Medicine, Pharmacology
IM21.6		Describe the medico legal aspects of suspected suicidal or homicidal poisoning and demonstrate the correct procedure to write a medico legal report on a suspected poisoning	SDL – revision & pre reading	Viva voce	Forensic Medicine, Pharmacology
IM21.7	Counselling	Counsel family members of a patient with suspected poisoning about the clinical and medico legal aspects with empathy	Small group discussion Clerkship	Communication station in osce	Forensic Medicine, Pharmacology
	Competency	SLOs	TL method	Assessment method	Integration
IM22.1 IM22.2 IM22.3	Hypercalcemia	Enumerate causes of hypercalcemia ; distinguish features of PTH vs non PTH mediated hypercalcemia Describe etiology, clinical features, diagnosis and approach to primary hyperparathyroidism Describe the approach to the management of hypercalcemia	Lecture	Short essay	Pathology, Physiology
	Hypocalcemia	Clinical features, diagnosis and treatment of hypocalcemia	Lecture	Short essay	
IM22.4		Enumerate the components and describe the genetic basis of the multiple endocrine neoplasia syndrome	SDL	Viva voce	Pathology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM22.5 IM22.6	Abnormalities of sodium metabolism	Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hyponatremia Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hypernatremia	Lecture	Short answer Viva voce	
IM22.7 IM22.8	Abnormalities of potassium metabolism	Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hypokalemia Enumerate the causes , describe clinical features & lab and approach to diagnosis and management of hyperkalemia	Lecture		
IM22.9 IM22.10 IM22.11 IM22.12	Acidosis & alkalosis	1. Discuss the clinical and laboratory features of metabolic acidosis and alkalosis 2. Discuss the clinical and laboratory features of respiratory acidosis and alkalosis	Lecture	Short essay MCQs	Physiology
IM22.13		Identify the underlying acid base disorder based on ABG report and clinical situation	Assignments Problem solving	Problem based short essay question	Physiology

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM23.1 IM23.2	Nutrition in illness	Discuss and describe the methods of nutritional assessment in an adult and calculation of caloric requirements during illnesses Discuss and describe the causes and consequences of protein caloric malnutrition in the hospital	Lecture	Short answer	
IM23.3	Vitamins	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	Lecture	Short answer	Physiology, Biochemistry
IM23.4	Nutrition in the critically ill	Enumerate the indications for enteral and parenteral nutrition in critically ill patients	Lecture	Short answer	Physiology, Biochemistry
IM23.5		Counsel and communicate to patients in a simulated environment with illness on an appropriate balanced diet	DOAP session Clerkship	Documentation in logbook	
	Competency	SLOs	TL methods	Assessment	Integration

IM24.17 IM24.1 IM24.4 IM24.8 IM24.9 IM24.10	Common illnesses in the elderly	1.Describe the impact of demographic changes in ageing on the population 2.Describe the epidemiology, pathogenesis, clinical evolution, presentation and course of common diseases in the elderly: vascular events, osteoporosis, CVA, COPD	Lecture	Long essay	
IM24.2	Examination of the elderly	Perform multidimensional geriatric assessment that includes medical, psycho-social and functional components	Small group discussion	Short case	Psychiatry
			Bedside clinic		
IM24.3 IM24.6 IM24.22 IM24.5 IM24.7	Delirium , dementia and depression	Discuss etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of acute confusional states, nutritional disorders dementia in the elderly depression in the elderly personality changes in the elderly	Lecture	Long essay	

Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
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IM24.11 IM24.12 IM24.13 IM24.14 IM24.15	Multidisciplinary care of the elderly	Describe etiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of elderly with : degenerative joint disease, falls, fractures,, visual & hearing loss Describe and discuss the etiopathogenesis , clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	Multidisciplinary panel discussion Team teaching	Short answer	
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
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IM24.16 IM24.19 IM24.20 IM24.21	Physical & mental rehabilitation of elderly	<ol style="list-style-type: none"> 1. discuss principles of physical & social rehabilitation, functional assessment, role of physiotherapy and occupational therapy in the management of disability in the elderly 2. Enumerate & describe social problems in the elderly including isolation, abuse, change in family structure and their impact on health. 3.Enumerate and describe social interventions in the care of elderly including domiciliary services, rehabilitation facilities, old age homes and state interventions 4.Enumerate and describe ethical issues in the care of the elderly 	Case based discussion	Written/ Viva voce	
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Number	COMPETENCY The student should be able to	SLOs	Suggested Learning methods	Suggested Assessment methods	Vertical Integration
IM25.4	Leptospirosis	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of leptospirosis 2. Clinical features of leptospirosis 3. Diagnosis and management of leptospirosis 	lecture	SEQ	

IM25.5	Enteric fever	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of enteric fever Clinical 2. features of enteric fever Diagnosis and management of 3. enteric fever 	lecture	Short answer	
	Tuberculosis	<ol style="list-style-type: none"> 1. Epidemiology & Etiopathogenesis of Tuberculosis 2. Clinical features of Tuberculosis 3. Diagnosis and management of Tuberculosis 	lecture		

Pandemic Module

	Competency	Hours	TL method
4.1	Care of patients	6	Small group discussion
4.2	Emergency procedures	8	Small group discussion
4.3	Death related management	2	Small group discussion
4.4	Communications & media management	4	Small group discussion
4.5	Intensive care	4	Small group discussion
4.6	Palliative care	4	

Competencies to be covered in AETCOM sessions

	Competency
IM26.1	Enumerate and describe professional qualities and roles of a physician
IM27.1	Describe and discuss the commitment to lifelong learning as an important part of physician growth
IM26.3	Describe and discuss the role of non-maleficence as a guiding principle in patient care
IM26.4	Describe and discuss the role of autonomy and shared responsibility as a guiding principle in patient care
IM26.5	Describe and discuss the role of beneficence of a guiding principle in patient care
IM26.6	Describe and discuss the role of a physician in health care system
IM26.7	Describe and discuss the role of justice as a guiding principle in patient care
IM26.8	Identify discuss medicolegal, socioeconomic and ethical issues as it pertains to organ donation
IM26.9	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as it pertains to rights, equity and justice in access to health care
IM26.10	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to confidentiality in patient care

Number	COMPETENCY The student should be able to
IM26.11	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to patient autonomy, patient rights and shared responsibility in health care
IM26.12	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to decision making in health care including advanced directives and surrogate decision making
IM26.13	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the capability or capacity to give consent
IM26.14	Identify, discuss and defend medicolegal, sociocultural and ethical issues as it pertains to research in human subjects
IM26.15	Identify, discuss and defend, medicolegal, sociocultural and ethical issues as they pertain to consent for surgical procedures
IM26.16	Identify, discuss and defend medicolegal, sociocultural, professional and ethical issues as it pertains to the physician patient relationship (including fiduciary duty)
IM26.17	Identify, discuss physician's role and responsibility to society and the community that she/ he serves
IM26.18	Identify, discuss and defend medicolegal, sociocultural, professional and ethical issues in physician- industry relationships
IM26.19	Demonstrate ability to work in a team of peers and superiors
IM26.20	Demonstrate ability to communicate to patients in a patient, respectful, non-threatening, non-judgmental and empathetic manner
IM26.21	Demonstrate respect to patient privacy

Numb er	COMPETENCY The student should be able to
IM26. 22	Demonstrate ability to maintain confidentiality in patient care
IM26. 23	Demonstrate a commitment to continued learning
IM26. 24	Demonstrate respect in relationship with patients, fellow team members, superiors and other health care workers
IM26. 25	Demonstrate responsibility and work ethics while working in the health care team
IM26. 26	Demonstrate ability to maintain required documentation in health care (including correct use of medical records)
IM26. 27	Demonstrate personal grooming that is adequate and appropriate for health care responsibilities
IM26. 28	Demonstrate adequate knowledge and use of information technology that permits appropriate patient care and continued learning
IM26. 29	Communicate diagnostic and therapeutic options to patient and family in a simulated environment
IM26. 30	Communicate care options to patient and family with a terminal illness in a simulated environment
IM26. 31	Demonstrate awareness of limitations and seeks help and consultations appropriately
IM26. 32	Demonstrate appropriate respect to colleagues in the profession
IM26. 33	Demonstrate an understanding of the implications and the appropriate procedures and response to be followed in the event of medical errors

IM26. 34	Identify conflicts of interest in patient care and professional relationships and describe the correct response to these conflicts
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Number	COMPETENCY The student should be able to
IM26.35	Demonstrate empathy in patient encounters
IM26.36	Demonstrate ability to balance personal and professional priorities
IM26.37	Demonstrate ability to manage time appropriately
IM26.38	Demonstrate ability to form and function in appropriate professional networks
IM26.39	Demonstrate ability to pursue and seek career advancement

IM26. 40	Demonstrate ability to follow risk management and medical error reduction practices where appropriate
IM26. 41	Demonstrate ability to work in a mentoring relationship with junior colleagues
IM26. 42	Demonstrate commitment to learning and scholarship
IM26. 43	Identify, discuss and defend medicolegal, sociocultural, economic and ethical issues as they pertain to in vitro fertilization donor insemination and surrogate motherhood
IM26. 44	Identify, discuss and defend medicolegal, socio-cultural professional and ethical issues pertaining to medical negligence
IM26. 46	Identify, discuss and defend medicolegal, sociocultural professional and ethical issues in dealing with impaired physicians
IM26. 47	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as they pertain to refusal of care including do not resuscitate and withdrawal of life support

IM26. 48	Demonstrate altruism
IM26. 49	Administer informed consent and appropriately address patient queries to a patient being enrolled in a research protocol in a simulated environment

Respiratory Medicine – Knowledge Competencies

Topic - Tuberculosis					
	Competency	Teaching learning method	Formative assessment	Summative assessment	Integration
CT1.1	Describe and discuss the epidemiology of tuberculosis and its impact on the work, life and economy of India	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine
CT1.2	Describe and discuss the microbiology of tubercle bacillus, mode of transmission, pathogenesis, clinical evolution and natural history of pulmonary and extra pulmonary forms (including lymph node, bone and CNS)	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.3	Discuss and describe the impact of co-infection with HIV and other co-morbid conditions. Like diabetes on the natural history of tuberculosis	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology

CT1.4	Describe the epidemiology, the predisposing factors and microbial and therapeutic factors that determine resistance to drugs	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine, Microbiology, Pharmacology
CT1.12	Enumerate the indications for tests including: serology, special cultures and polymerase chain reaction and sensitivity testing	Small group discussion, Lecture	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.13	Describe and discuss the origin, indications, technique of administration, efficacy and complications of the BCG vaccine	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Microbiology
CT1.14	Describe and discuss the pharmacology of various anti-tuberculous agents, their indications, contraindications, interactions	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Pharmacology, Microbiology

	and adverse reactions				
CT1.16	Describe the appropriate precautions, screening, testing and indications for chemoprophylaxis for contacts and exposed health care workers	Bedside clinic, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Community Medicine
Topic – Obstructive airway disease					
CT2.1	Define and classify obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Physiology
CT2.2	Describe and discuss the epidemiology, risk factors and evolution of obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Physiology
CT2.3	Enumerate and describe the causes of acute episodes in patients with obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Physiology
CT2.4	Describe and discuss the physiology and pathophysiology of hypoxia and hypercapnea	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Physiology
CT2.5	Describe and discuss the genetics of alpha 1 antitrypsin deficiency in emphysema	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	

CT2.6	Describe the role of the environment in the cause and exacerbation of obstructive airway disease	Lecture, Small group	MCQs/Drills	Essay/SAQ/ MCQs	
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		discussion			
CT2.7	Describe and discuss allergic and non-allergic precipitants of obstructive airway disease	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.16	Discuss and describe therapies for OAD including bronchodilators, leukotriene inhibitors, mast cell stabilisers, theophylline, inhaled and systemic steroids, oxygen and immunotherapy	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.17	Describe and discuss the indications for vaccinations in OAD	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.20	Describe and discuss the principles and use of oxygen therapy in the hospital and at home	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
CT2.25	Discuss and describe the impact of OAD on the society and workplace	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	

CT2.26	Discuss and describe preventive measures to reduce OAD in workplaces	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	
	Integration Topics				
PH1.32	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in bronchial asthma and COPD	Lecture, Small group	MCQs/Drills	Essay/SAQ/ MCQs	Physiology

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		discussion			
PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/ mucolytics)	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology
PH1.44	Describe the first line antitubercular drugs, their mechanisms of action, side effects and doses.	Lecture	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology
PH1.45	Describe the drugs used in MDR and XDR Tuberculosis	Lecture	MCQs/Drills	Essay/SAQ/ MCQs	Pharmacology
IM24.10	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of COPD in the elderly	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Internal medicine

PE28.19	Describe the etio-pathogenesis, clinical features, diagnosis, management and prevention of asthma in children	Bedside clinics, Small group discussion , Lecture	Skill Assessment / Written/ Viva voce		Paediatrics
PE34.1	Discuss the epidemiology, clinical features, clinical types, complications of Tuberculosis in Children and Adolescents	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics
PE34.2	Discuss the various diagnostic tools for childhood tuberculosis	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/MCQs	Paediatrics

PE34.3	Discuss the various regimens for management of Tuberculosis as per National Guidelines	Lecture, Small group	MCQs/Drills	Essay/SAQ/ MCQs	Paediatrics	
PE34.4	Discuss the preventive strategies adopted and the objectives and outcome of the National Tuberculosis Control Program	Lecture, Small group discussion	MCQs/Drills	Essay/SAQ/ MCQs	Paediatrics	Psychomotor competencies
PE34.10	Discuss the various samples for demonstraing the Aspirate, Sputum , CSF, FNAC MCQs	Bed side clinics, organism eg Gastric Small group discussion	MCQs/Drills	Essay/SAQ/	Paediatrics	
PE34.12	Enumerate the indications and discuss the M.Tuberculi group MCQs	Small group discussion	MCQs/Drills	Essay/SAQ/	Paediatrics	limitations of methods of culturing

Topic – Tuberculosis

CT1.5	Elicit, document and present an appropriate that includes risk factor, contacts, symptoms including cough and fever CNS and other manifestations	Bed side clinic, DOAP session		Skill assessment	medical history
CT1.6	Demonstrate and perform a systematic examination that establishes the diagnosis based on the clinical presentation that includes a a) general examination, b) examination of the chest and lung including loss of volume, mediastinal shift, percussion and auscultation (including	Bed side clinic, DOAP session		Skill assessment	

	DOAP session of lung sounds and added sounds) c) examination of the lymphatic system and d) relevant CNS examination				
CT1.7	Perform and interpret a PPD (mantoux) and describe and discuss the indications and pitfalls	DOAP session log book of the test		Maintenance of	
CT1.10	Perform and interpret an AFB stain	DOAP session			
CT1.11	Assist in the performance, outline the correct tests that require to be performed and interpret the results of a pleural fluid aspiration	DOAP session			
CT1.15	Prescribe an appropriate antituberculosis regimen based on the location of disease, smear positivity and negativity and co-morbidities based on current national guidelines including directly observed tuberculosis therapy (DOTS)	Bedside clinic, Small group discussion, Lecture			
CT1.17	Define criteria for the cure of Tuberculosis; describe and recognise the features of drug resistant tuberculosis, prevention and therapeutic regimens	S	P	Y	
CT1.8	Generate a differential diagnosis based on the clinical history and evolution of the disease that prioritises the most likely diagnosis	Bedside clinic, Small group discussion	Bedside clinic/ Viva voce		
CT1.9	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.8	Elicit document and present a medical history that will differentiate the aetiologies of obstructive airway disease, severity and precipitants	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.9	Perform a systematic examination that establishes the diagnosis and severity that includes measurement of respiratory rate, level of respiratory distress, effort tolerance, breath sounds, added sounds, identification of signs of consolidation pleural effusion and pneumothorax	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.10	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.11	Describe, discuss and interpret pulmonary function tests	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.12	Perform and interpret peak expiratory flow rate	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.13	Describe the appropriate diagnostic work up based on the presumed aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.14	Enumerate the indications for and interpret the results of : pulse oximetry, ABG, Chest Radiograph	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.15	Generate a differential diagnosis and prioritise based on clinical features that suggest a specific aetiology	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.18	Develop a therapeutic plan including use of bronchodilators and inhaled corticosteroids	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.19	Develop a management plan for acute exacerbations including bronchodilators, systemic steroids, antimicrobial therapy	Bedside clinic, DOAP session	OSCE	Long case/short case	
Integration topics					
PY6.8	Demonstrate the correct technique to perform & interpret Spirometry	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.5	Able to elicit, document and present history of contact with tuberculosis in every patient encounter	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.6	Identify a BCG scar	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.7	Interpret a Mantoux test	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.8	Interpret a Chest Radiograph	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE34.1 1	Perform AFB staining	DOAP	Logbook		

Respiratory medicine – Communication competencies

CT1.18	Educate health care workers on National Program of Tuberculosis and administering and monitoring the DOTS program	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT1.19	Communicate with patients and family in an empathetic manner about the diagnosis, therapy	Bedside clinic, DOAP session	OSCE	Long case/short case	

CT2.21	Describe discuss and counsel patients appropriately on smoking cessation	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.22	Demonstrate and counsel patient on the correct use of inhalers	Bedside clinic, DOAP session	OSCE /logbook	Long case/short case	
CT2.23	Communicate diagnosis treatment plan and subsequent follow up plan to patients	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.24	Recognise the impact of OAD on patient's quality of life, well being, work and family	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.27	Demonstrate an understanding of patient's inability to change working, living and environmental factors that influence progression of airway disease	Bedside clinic, DOAP session	OSCE	Long case/short case	
CT2.28	Demonstrate an understanding for the difficulties faced by patients during smoking cessation	Bedside clinic, DOAP session	OSCE	Long case/short case	
PE28.20	Counsel the child with asthma on the correct use of inhalers in a simulated environment	Bedside clinic, DOAP session	OSCE/ logbook	Long case/short case	

List of certifiable competencies

CT2.12	Perform and interpret peak expiratory flow rate	Bedside clinic, DOAP session	Logbook	
PE34.11	Perform AFB staining	DOAP	Logbook	

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**Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka**



General Medicine Allied Subjects Curriculum
Including Psychiatry and Dermatology as
per
Competency-Based Medical Education Curriculum

Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka



Psychiatry Curriculum as per Competency-Based Medical Education Curriculum

RGUHS Psychiatry Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Mental health is essential to overall health and the well-being of individuals and societies. Mental health affects the individual's ability to function, to be productive, to establish and maintain positive relationships, and to experience a state of well-being. This is the reason we say, "There is no health without mental health." Mental disorders, a highly prevalent group of non-communicable diseases, affect the lives of 1 out of 5 persons. Factors related to mental illness can interfere with the treatment of other illnesses and frequently co-occur with CVS, diabetes, cancer, and other non-communicable diseases, and communicable diseases like HIV and TB. Therefore, training undergraduate medical students in mental health is vital. Knowledge of Psychiatry, Mental health, and Behavioral Sciences equips the students to deal with various difficult and complex situations during medical practice. Additionally, it will help them to develop proper communication skills and to empathize with their patients and their suffering. Moreover, since psychiatric problems are common among patients seen in general practice (about 25%) and specialty clinics (about 15%), adequate training in Psychiatry during UG course makes the student a better doctor.

The Psychiatry undergraduate curriculum provides the IMG the requisite knowledge, essential skills and appropriate attitudes to be able to diagnose and treat common psychiatric disorders and also to be able to recognize serious conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of competencies in Psychiatry, required for an IMG and these have been included in this Psychiatry curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods. The topics have been segregated under three heads: Lecture topic, integrated topics and clinical posting topics. A suggested scheme for teaching Clinical skills topics as posting one and posting two has been made.

Competency Based Medical Education
Suggested Lecture schedule plan (IIIRD MBBS, Part 1)

No	Topic	Competencies	Time	T/L method	Assessment
1	Doctor patient relationship	<ul style="list-style-type: none"> • Components of communication • breaking bad news • importance of confidentiality PS1.2	1 hour	Lecture/ Small Group	Viva/written/MCQs
2	Mental health	<ul style="list-style-type: none"> • Stress, components and cause • time-management, study skills, balanced diet, sleep wake cycle PS2.1, PS2.2	1 hour	Lecture/ Small Group	Viva/written/MCQs
3	Mental health	<ul style="list-style-type: none"> • Components of memory, learning and emotions • Principles of personality development and motivation • Define and distinguish between normality and abnormality PS2.3, PS2.4, PS2.5	1 hour	Lecture/small groups	Written/Viva/MCQs

4	Introduction to psychiatry	<ul style="list-style-type: none"> • Growth, history, development of psychiatry as specialty • Brain and behaviour <p>PS3.1</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
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5	Introduction to psychiatry	<ul style="list-style-type: none"> • Signs and symptoms of common mental disorders • Biological, psychological and social factors and their interactions in causation of mental disorders • Distinguish psychotic and non-psychotic disorders <p>PS3.2, PS3.6, PS3.12</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
6	Introduction to psychiatry	<ul style="list-style-type: none"> • Pharmacological basis and side-effects of drugs used in psychiatric disorders <p>PS3.10</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
7	Substance Use disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS4.1, PS4.4, PS4.6, PS4.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
8	Psychotic disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS5.1, PS5.3, PS5.5, PS5.6</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs

9	Depression	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs 	1 hour	Lecture/ Small Group	Viva/written/MCQs
		<ul style="list-style-type: none"> • Conditions for specialist referral PS6.1, PS6.4, PS6.6, PS6.7			
10	Bipolar disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS7.1, PS7.4, PS7.6, PS7.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
11	Assessment		1 hour		
12	Anxiety disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS8.1, PS8.4, PS8.6, PS8.7	1 hour	Lecture/ Small Group	Viva/written/MCQs

13	OCD	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-1-hour effects of drugs • Conditions for specialist referral <p>PS8.1, PS8.4, PS8.6, PS8.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
14	Stress related disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS9.1, PS9.4, PS9.6, PS9.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
15	Personality disorders	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS11.1, PS11.4, PS11.6, PS11.7</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs

16	Psychosexual and Gender Identity disorders (Psychosexual disorders)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS13.1, PS13.4, PS13.6, PS13.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
17	Psychosexual and Gender Identity disorders (Gender Identity disorders)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS13.1, PS13.4, PS13.6, PS13.7	1 hour	Lecture/ Small Group	Viva/written/MCQs
18	Emotional & Behavioral problems in Child and Adolescence (ADHD, ODD, CD)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral PS14.1, PS14.3, PS14.5, PS14.6	1 hour	Lecture/ Small Group	Viva/written/MCQs

19	Other specific childhood psychiatric disorders (enuresis)	<ul style="list-style-type: none"> • Magnitude & aetiology • Treatment • Pharmacological basis and side-effects of drugs • Conditions for specialist referral <p>PS14.1, PS14.3, PS14.5, PS14.6</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
20	Psychiatric disorders in elderly	<ul style="list-style-type: none"> • Common psychiatric disorders including dementia, depression & psychosis • Magnitude & aetiology • Therapy in elderly • Conditions for specialist referral <p>PS16.1, PS16.2, PS16.3, PS16.5</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
21	Psychiatric emergencies	<ul style="list-style-type: none"> • Describe recognition of psychiatric emergencies like suicide, deliberate self-harm and aggressive <p>PS17.1, PS17.2, PS17.3</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
22	Therapeutics	<ul style="list-style-type: none"> • Describe principles of psychosocial interventions in psychiatric illness including psychotherapy, rehabilitation and behavioural therapy <p>PS18.3</p>	1 hour	Lecture/ Small Group	Viva/written/MCQs
23	Assessment	<ul style="list-style-type: none"> • Second assessment 	1 hour	Lecture/ Small Group	Viva/written/MCQs

24	Review and Feedback				
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Competency Based Medical Education Suggested
Integrated Lecture/Tutorials schedule plan

No	Topic	Competencies	Posting & Integration	Time	T/L method	Assessment
1	Introduction to psychiatry	<ul style="list-style-type: none"> • Enumerate, describe common psychiatric disorders, magnitude, aetiology and clinical features in patients with organic psychiatric disorders • Essential investigations in patients with organic psychiatric disorders <p>PS3.7, PS3.8</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs

2	Alcohol and substance disorders use	<ul style="list-style-type: none"> • Magnitude and aetiology of alcohol use disorders • Treatment of alcohol use disorders including pharmacotherapy and psychotherapy • Pharmacological basis and side-effects of drugs in alcohol use disorders • Appropriate conditions for specialist referrals in alcohol use disorders <p>PS4.1, PS4.4, PS4.6, PS4.7</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs
3	Psychosomatic disorders	<ul style="list-style-type: none"> • Magnitude and aetiology of psychosomatic disorders • Treatment of psychosomatic disorders • Pharmacological basis of treatment and side-effects of psychosomatic disorders • Appropriate conditions for specialist referral <p>PS12.1, PS12.4, PS12.6, PS12.7</p>	3 rd year General Medicine	1 hour	Lecture/ Small Group	Viva/written/MCQs

4	Psychosomatic disorders	<ul style="list-style-type: none"> • Magnitude and aetiology of psychosomatic disorders • Treatment of psychosomatic disorders • Pharmacological basis of treatment and side-effects of psychosomatic disorders • Appropriate conditions for specialist referral <p>PS12.1, PS12.4, PS12.6, PS12.7</p>	3 rd year Dermatology	1 hour	Lecture/ Small Group	Viva/written/MCQs
5	Mental retardation, scholastic backwardness, neurodevelopmental disorders, autism	<ul style="list-style-type: none"> • Magnitude & aetiology • Intelligence quotient and assessment 	3 rd year Pediatrics	1 hour	Lecture/ Small Group	Viva/written/MCQs
		<ul style="list-style-type: none"> • Psychosocial treatments and interventions <p>PS15.1, PS15.3, PS15.4</p>				

6	Miscellaneous	<ul style="list-style-type: none"> • Relevance and role of community psychiatry • Objectives, strategies and contents of National Mental Health Program • Enumerate and describe salient features of MHCA 2017 • Describe the concept principles of preventive mental health promotion (positive mental health); and community education • Enumerate and describe the identifying features and the principles of participatory management of mental illness occurring during and after disasters <p>PS19.1, PS19.2, PS19.4, PS19.5, PS19.6</p>	3 rd year Community psychiatry	1 hour	Lecture/ Small Group	Viva/written/MCQs
7	Miscellaneous	<ul style="list-style-type: none"> • Describe and discuss basic legal and ethical issues in psychiatry <p>PS19.3, PS19.4</p>	3 rd year Forensic	1 hour	Lecture/ Small Group	Viva/written/MCQs

8	Risk assessment for suicide	<ul style="list-style-type: none"> Enumerate and describe recognition of suicide risk in individuals PS17.1	3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs
9	ECT and other modalities like RTMS	<ul style="list-style-type: none"> Indications of modified ECT Indications of other modalities PS 18.2	3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs
10	Psychological assessments		3 rd year	1 hour	Lecture/ Small Group	Viva/written/MCQs

**PSYCHIATRY CLINICAL
POSTINGS**

POSTING 1- II MBBS

No	Topic	Competencies	SLOs	Domain /Level	T/L method	Assessment
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1	Doctor patient relationship	Developing rapport & empathy (PS1.1, PS3.4) Importance of confidentiality (PS1.4)	Define and describe the meaning of terms rapport and empathy. Demonstrate comfort with communicating with patient, use modes of communication enabling patient to feel safe and comfortable to participate in a dialogue. Enumerate the ethical principles of confidentiality including safeguarding of information, and consent to disclose information. Enumerate conditions under which confidentiality can be breached.	K/K H S/S H K/K H K/K H	Small group discussion Small group discussion, guided observation of consultants, role-plays, demonstrations Small group discussion Small group discussion	MCQ MCQ, OSCE MC Q MC Q
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2	Breaking bad news	Breaking bad news (PS1.3)	Demonstrate breaking bad news to a patient or their family.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ/ OSCE
3	Introduction to psychiatry	Eliciting, presenting & documenting psychiatric history (PS3.3)	Interview a patient to elicit onset, course, duration and progress of illness with respect to present illness, past history, medical history, family history, personal history and premorbid history relevant to present illness.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ, OSCE
4	Introduction to psychiatry	Performing mini mental state examination (PS3.5)	Examine a patient to elicit consciousness, orientation, attention and registration, recent and remote memory, affect and mood, speech, form and content of thought, perception, insight into mental illness.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations	MCQ, OSCE
5	Alcohol use disorders	Describe, elicit & document clinical features of alcohol use disorders (PS4.2)	Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment
6	Substance use disorders-tobacco	Describe, elicit & document clinical features of substance use disorders-tobacco (PS4.2)	Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.	S/SH	Small group discussion, guided observation of consultants, role-plays, demonstration, portfolio	MCQ, OSCE, Portfolio assessment

7	Depression	Describe, elicit & document clinical features in patients with depression (PS6.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression. Perform a mental status examination to assess thought, perception and affect in a patient with depression.	S/SH S/SH	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment MCQ, OSCE, Portfolio assessment
8	Anxiety disorders (excluding OCD)	Describe, elicit & document clinical features in patients with anxiety (PS8.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with anxiety disorders.	S/SH S/SH	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided	MCQ, OSCE, Portfolio assessment

			Perform a mental status examination to assess thought, perception and affect in a patient with anxiety disorders.		observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment
9	Bipolar and Psychotic disorders	Describe, elicit & document clinical features in patients with bipolar disorders (PS7.2) Describe, elicit & document clinical features in patients with psychotic disorders (PS5.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with bipolar disorder/ schizophrenia. Perform a mental status examination to assess thought, perception and affect in a patient with bipolar disorder/ schizophrenia.	S/S H S/S H	Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio Small group discussion, guided observation of consultants, role- plays, demonstrations, portfolio	MCQ, OSCE, Portfolio assessment MCQ, OSCE, Portfolio assessment
10		End-of-postings assessment with feedback				MCQ, OSCE

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two case records in their logbook.
- 50% marks in the end-of posting assessment.

	TOPIC	COMPETENCIES	SPECIFIC LEARNING OBJECTIVE	T/L METHODS	ASSESSMENT
1	Recap of psychiatric history and examination	Eliciting, presenting & documenting psychiatric history and examination (PS3.3, PS6.2, PS7.2, PS5.2, PS8.2)	Document and present a history in patients with mental disorder including current illness, past history, medical history, family history, personal history and premorbid history. Perform a mental status examination to assess general appearance, psychomotor activity, speech, affect, thought and perception	S/SH Small group discussion, guided observation of consultants, role-plays, demonstrations	CBD, Portfolio assessment
2	Organic Psychiatry	Eliciting delirium using the criteria and describe the higher mental functions. PS3.5	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history in a patient with delirium. Perform a mental status examination to assess higher mental functions in a patient with delirium	K/KH Role play, guided observation, demonstration	MCQ, OSCE
3	Family education Part 1	Describe the steps of family education in a simulated environment in a patient with substance use disorder, Depression, Anxiety disorders (PS4.5, PS6.5, PS8.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists	S/SH Guided observation of consultants, role-plays, demonstrations, simulations, Audio-visual aid	OSCE, DOPS OSCE, DOPS
	Family education part 2	Describe steps of family education in a simulated environment in a patient with severe mental illness and elderly with psychiatric illnesses (PS5.4, PS7.5, PS16.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists	S/SH Guided observation of consultants, role-plays, demonstrations, simulations, Audio-visual aid	

4	Stress related/ Dissociative disorders	Describe, elicit & document clinical features of stress related/dissociative disorders. Enumerate, describe and interpret their laboratory investigations PS9.2, PS9.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with stress	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS
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			related disorders. Perform a mental status examination to assess thought, perception and affect in a patient with stress related/dissociative disorder		
5	Somatof orm disorder	Describe, elicit & document clinical features of somatoform disorders. Enumeration, describe and interpret laboratory investigations PS10.2, PS10.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with somatoform disorders. Perform a mental status examination to assess thought, perception and affect in a patient with somatoform disorder	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS
6	Personal ity disorder and gender related issues	Describe, elicit & document clinical features of personality disorders and gender related issues. Enumeration, describe and interpret laboratory investigations in such patients PS11.2, PS11.3, P13.2, P13.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with personality disorders and gender related issues. Perform a mental status examination to assess general appearance, speech, thought, perception and affect in a patient with personality disorder and gender identity issues.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ

7	Psychosomatic disorder	Describe, elicit & document clinical features in patients with psychosomatic disorders. Discuss the psychological factors associated with worsening of underlying medical conditions. Enumeration, describe and interpret laboratory	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with psychosomatic disorder. Perform a mental status examination to assess thought,	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, DOPS, CBD
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		investigations in such patients PS12.2, PS12.3	perception and affect in a patient with Psychosomatic disorder		
8	Child and adolescent Psychiatric disorders	Describe, elicit & document clinical features in patients with child and adolescent psychiatric disorders. Enumeration, describe and interpret laboratory investigations in such patients PS14.2	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, affect and thought.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, OSCE, CBD

9	Mental retardation	Describe, elicit & document clinical history in child with mental retardation. Perform adequate physical examination in such children. Choose appropriate investigations in child with mental retardation PS15.4	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, thought and intelligence including adaptive functioning.	K/KH Guided observation of consultants, role-plays, demonstrations, simulations	MCQ, CBD, OSCE
10	Lab investigation in alcohol use disorders, other substance use disorders, depression, bipolar disorder, anxiety disorder	Enumeration, describe and interpret laboratory investigations in such patients (PS4. 3, PS6.3, PS7.3,PS8.2, PS8.3)	Enumerate and describe at least two indications of laboratory tests used in alcohol use disorders and other substance use disorders, depression and bipolar disorder, anxiety disorder	K/KH Small group discussion	MCQ
	on, bipolar disorder, anxiety disorder				

11	Depression and bipolar disorder	Suicide risk assessment PS6.3, PS7.3	Interview a patient and enumerate risk factors for suicide in the patient. Elicit components of intentionality and lethality	S/SH Demonstration, small group discussion	MCQ, Portfolio assessment, OSCE, DOPS
		Assessment and feedback			

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two cases in their logbook.
- 50% marks in the end-of posting assessment.

Acknowledgements

- 1) This curriculum was adapted from the draft document prepared by the Indian Psychiatry Society UG education subcommittee 2021-2022: Chairperson: Dr Ravi Gupta,
Co-chairperson: Dr Vinay H R, Convenor: Dr Priya Sreedaran, Advisor: Dr Anil Nischal and EC Co-ordinator: Dr Adarsh Tripathi
- 2) Dr Luke Salazar and Dr Bhuvaneshwari Sethuraman, from Department of Psychiatry, St John's Medical College, Bangalore

**RAJIV GANDHI UNIVERSITY OF
HEALTH SCIENCES
BANGALORE, KARNATAKA**



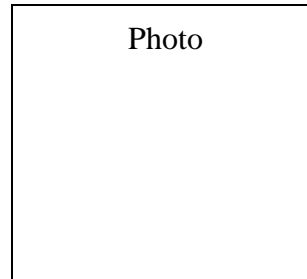
**Psychiatry Logbook
For Undergraduates**

As Per

Competency-Based Medical Education Curriculum

BASIC PROFORMA OF
THE STUDENT

PARTICULARS OF
THE STUDENT:



**Name of the
student :**

MBBS Batch :

Father's name

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

PREFACE

This booklet has been adopted from the guidelines of the Indian Psychiatry Society UG education subcommittee 2021-2022 and complies with the “**Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019**” as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress

of an undergraduate student through the specified 18 competencies in Dermatology. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

This model logbook is with an aim to create a standard protocol for documenting the achievement of competencies allotted to Psychiatry as per the **Competency Based UG Curriculum (2018)** and the **Regulations on Graduate Medical Education, 2019, Part II**.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner's stay in the Department of Psychiatry. This logbook would be a verifiable record of the learner's progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Completion of specified activities, and submission of certified logbook is necessary for clearing Formative Assessment in Psychiatry. **Successful documentation and submission of the logbook should be a prerequisite for being allowed to take the final summative examination.**

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4. PHASE III PART 1 <ul style="list-style-type: none"> • Clinical Case Presentation Record during 2nd posting • Case records with reflections during 2nd posting 	
5. SCIENTIFIC PROJECT LIKE ICMR/PRESENTATIONS/ OUTREACH ACTIVITIES	
6. ACHIVEMENETS	
7. EXTRACURRICULAR ACTIVITIES	
8. ASSESSMENT RECORD	
9. ATTENDANCE EXTRACT	
10. FINAL SUMMARY	

(Name of College)

Department of Psychiatry

BONAFIDE CERTIFICATE

This is to certify that the candidate Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for undergradutes in Psychiatry including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019.

He/ She is eligible to appear for the University assessment.

Faculty Incharge:

Head of Department:

Name:

Name:

Signature:

Signature:

Place:

Place:

Date:

Date:

2. GENERAL INSTRUCTIONS

- 1.** This logbook is a record of academic and other activities of the student during his/ her designated clinical posting in the Department of DVL.
- 2.** Entries in the logbook reflect the activities undertaken by the student during the posting and are certified by the faculty.
- 3.** The student is responsible for maintaining his/her logbook regularly.
- 4.** The student is responsible for getting the logbook entries verified by concerned faculty regularly. They will not be signed/ verified/ certified after 15 days have elapsed after the end of posting.
- 5.** The logbook should be verified by the Head of Department before forwarding the application of the student for the University Examination. This is mandatory requirement for appearing for University Examinations
- 6.** The reflections should demonstrate the learning of the student that has taken place during the period of clinical posting. Please do not simply repeat the activities performed. A note on the learning experience, what was learnt and how it is going to be useful in the future, is expected. Reflections will be a useful document and assess learning for many competencies where formal assessment is not being done. Student needs to write academically useful reflections as per the prescribed format and within the time frame of the posting. These will be assessed by the teachers.

A. COMPETENCIES to be acquired during clinical postings 1, Phase 2

No	Topic	Competencies	SLOs
1	Doctor patient relationship	Developing rapport & empathy (PS1.1, PS3.4) Importance of confidentiality (PS1.4)	Define and describe the meaning of terms rapport and empathy. Demonstrate comfort with communicating with patient, use modes of communication enabling patient to feel safe and comfortable to participate in a dialogue. Enumerate the ethical principles of confidentiality including safeguarding of information, and consent to disclose information. Enumerate conditions under which confidentiality can be breached.
2	Breaking bad news	Breaking bad news (PS1.3)	Demonstrate breaking bad news to a patient or their family.
3	Introduction to psychiatry	Eliciting, presenting & documenting psychiatric history (PS3.3)	Interview a patient to elicit onset, course, duration and progress of illness with respect to present illness, past history, medical history, family history, personal history and premorbid history relevant to present illness.
4	Introduction to psychiatry	Performing mini mental state examination (PS3.5)	Examine a patient to elicit consciousness, orientation, attention and registration, recent and remote memory, affect and mood, speech, form and content of thought, perception, insight into mental illness.
5	Alcohol use disorders	Describe, elicit & document clinical features of alcohol use disorders (PS4.2)	Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.

6	Substance use disorders- tobacco	Describe, elicit & document clinical features of substance use disorders- tobacco (PS4.2)	Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.
7	Depression	Describe, elicit & document clinical features in patients with depression (PS6.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression. Perform a mental status examination to assess thought, perception and affect in a patient with depression.
8	Anxiety disorders (excluding OCD)	Describe, elicit & document clinical features in patients with anxiety (PS8.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with anxiety disorders. Perform a mental status examination to assess thought, perception and affect in a patient with anxiety disorders.
9	Bipolar and Psychotic disorders	Describe, elicit & document clinical features in patients with bipolar disorders (PS7.2) Describe, elicit & document clinical features in patients with psychotic disorders (PS5.2)	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with bipolar disorder/ schizophrenia. Perform a mental status examination to assess thought, perception and affect in a patient with bipolar disorder/ schizophrenia.
10		End-of-postings assessment with feedback	

DAILY WORKFLOW (Suggested):

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.
- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two case records in their logbook.
- 50% marks in the end-of posting assessment.

1st Posting

CLINICAL CASE PRESENTATION RECORD

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases per clinical posting

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

1st Posting Phase II

REFLECTIONS: CLINICAL CASE PRESENTATION

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA (Alcohol/Tobacco)

Student name: Roll no.:

Session date:

Session objectives: (SLOs) Interview a patient to elicit history of present illness with regards to presenting complaints, onset of harmful use, onset of dependence, history of withdrawal symptoms, history of seizures, history of delirium tremens and history of other medical complications; past

history, family history, medical history, personal history and premorbid history in individuals with alcohol use disorders.

OR Interview a patient to elicit history of present illness with regards to onset of harmful use, onset of dependence, history of any withdrawal symptoms; past history, family history, medical history, personal history and premorbid history in individuals with tobacco use disorders.

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature:

Date:

**U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA
(Depression/Anxiety)**

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with depression/ anxiety.
2. Perform a mental status examination to assess thought, perception and affect in a patient with depression/ anxiety.

P Patient initials :

Age:

Sex:

Hist

ory:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature:

Date:

Phase II
End of posting Assessment

Suggested Methods

- 1. Viva Voce**
- 2. CA-OSCE/ Short case**
- 3. Bedside assessment**
- 4. MCQs**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

**Phase III Part 1
CLINICAL CASE PRESENTATION RECORD**

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases per clinical posting. Competencies to be addressed is given next)

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

	TOPIC	COMPETENCIES	SPECIFIC LEARNING OBJECTIVE

1	Recap of psychiatric history and examination	Eliciting, presenting & documenting psychiatric history and examination (PS3.3, PS6.2, PS7.2, PS5.2, PS8.2)	Document and present a history in patients with mental disorder including current illness, past history, medical history, family history, personal history and premorbid history. Perform a mental status examination to assess general appearance, psychomotor activity, speech, affect, thought and perception
2	Organic Psychiatry	Eliciting delirium using the criteria and describe the higher mental functions. PS3.5	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history in a patient with delirium. Perform a mental status examination to assess higher mental functions in a patient with delirium
3	Family education Part 1	Describe the steps of family education in a simulated environment in a patient with substance use disorder, Depression, Anxiety disorders (PS4.5, PS6.5, PS8.5)	Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis and need for treatment for a specific diagnosis and referral to specialists
	Family education part 2	Describe steps of family education in a simulated environment in a patient with severe mental illness and elderly with psychiatric illnesses (PS5.4, PS7.5, PS16.5)	
4	Stress related/Dissociative disorders	Describe, elicit & document clinical features of stress related/dissociative disorders. Enumerate, describe and interpret their laboratory investigations PS9.2, PS9.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with stress related disorders. Perform a mental status examination to assess thought, perception and affect in a patient

			with stress related/dissociative disorder
5	Somatoform disorder	Describe, elicit & document clinical features of somatoform disorders. Enumeration, describe and interpret laboratory investigations PS10.2, PS10.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with somatoform disorders. Perform a mental status examination to assess thought, perception and affect in a patient with somatoform disorder
6	Personality disorder and gender related issues	Describe, elicit & document clinical features of personality disorders and gender related issues. Enumeration, describe and interpret laboratory investigations in such patients PS11.2, PS11.3, P13.2, P13.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with personality disorders and gender related issues. Perform a mental status examination to assess general appearance, speech, thought, perception and affect in a patient with personality disorder and gender identity issues.
7	Psychosomatic disorder	Describe, elicit & document clinical features in patients with psychosomatic disorders. Discuss the psychological factors associated with worsening of underlying medical conditions. Enumeration, describe and interpret laboratory investigations in such patients PS12.2, PS12.3	Interview a patient to elicit history of present illness with regards to onset, duration, progress and course of illness and clinical features; past history, medical history, family history, personal history and premorbid history in a patient with psychosomatic disorder. Perform a mental status examination to assess thought, perception and affect in a patient with Psychosomatic disorder

8	Child and adolescent Psychiatric disorders	Describe, elicit & document clinical features in patients with child and adolescent psychiatric disorders. Enumeration, describe and interpret laboratory investigations in such patients PS14.2	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including
			systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, affect and thought.
9	Mental retardation	Describe, elicit & document clinical history in child with mental retardation. Perform adequate physical examination in such children. Choose appropriate investigations in child with mental retardation PS15.4	Interview a child/adolescent patient to elicit history of present illness with regards to onset, duration, progress and course of illness, family history, family structure, birth and developmental history, school history, temperament. Perform a head-to-toe physical examination including systemic examination. Perform interview with the child to assess general appearance, psychomotor activity, thought and intelligence including adaptive functioning.
10	Lab investigation in alcohol use disorders, other substance use disorders, depression, bipolar disorder, anxiety disorder	Enumeration, describe and interpret laboratory investigations in such patients (PS4. 3, PS6.3, PS7.3,PS8.2, PS8.3)	Enumerate and describe at least two indications of laboratory tests used in alcohol use disorders and other substance use disorders, depression and bipolar disorder, anxiety disorder
11	Depression and bipolar disorder	Suicide risk assessment PS6.3, PS7.3	Interview a patient and enumerate risk factors for suicide in the patient. Elicit components of intentionality and lethality
		Assessment and feedback	

DAILY WORKFLOW:

- 9.45am-10.30am: Classroom teaching- suggested TL methods are small group discussion, role-plays guided by scripts and observer checklists, clinical demonstrations and use of AV teaching aides.

- 10.30am-12.30pm: Students will tag with their clinical guides- suggested TL methods are guided observation of consultants and clinical demonstrations with patients in the OPD or on ward rounds, and formative assessment based on the student's portfolio.

END-OF-POSTING ASSESSMENT:

- 10 MCQs (10 marks)
- 1 OSCE skills station (20 marks)

CRITERIA FOR POSTING COMPLETION:

- Each student will be required to complete two cases in their logbook.
- 50% marks in the end-of posting assessment.

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA

(Family education in a patient with substance use /anxiety/depression/severe mental illness/elderly with psychiatric illness)

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview patients' family and enumerate and demonstrate the steps of communicating the diagnosis, need for treatment for a specific diagnosis and referral to specialists

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

Supervisor signature and Date:

U.G. PSYCHIATRY PORTFOLIO- SESSION NOTES PROFORMA
(Suicidal risk assessment)

Student name:

Roll no.:

Session date:

Session objectives: (SLOs) 1. Interview a patient and enumerate risk factors for suicide in the patient

2. Elicit components of intentionality and lethality

Patient initials:

Age:

Sex:

History:

Mental status examination:

Reflections: (What were the strategies used to achieve the objectives? What went well? What did not go well? How did you feel?)

Supervisor feedback: (Identify better strategies to achieve the objectives)

9. ASSESSMENT RECORD

Phase	Duration (From-To)	Assessment score (marks obtained)	Total marks	Assessment (%)	Remarks	Faculty Signature
Phase II						
Phase III Part I						
Total						

10. SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
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1 st	Phase II	2 weeks					
2 nd	Phase III Part I	2 weeks					
Total						Cumulative attendance n/%	

Rajiv Gandhi University of Health Sciences
Bengaluru, Karnataka



Dermatology, Venereology & Leprosy
Curriculum as per
Competency-Based Medical Education Curriculum

RGUHS Dermatology, Venereology & Leprosy Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate (IMG), should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Dermatology is the branch of medicine dealing with the skin and its appendages. It is a speciality which deals with diseases of skin including leprosy and sexually transmitted diseases, hair, nails, and cosmetic problems and encompasses both medical and surgical modalities. The dermatology undergraduate curriculum provides the IMG the requisite knowledge, essential skills, and appropriate attitudes to be able to diagnose and treat common skin disorders and to be able to recognise and refer other cutaneous conditions.

The NMC, in the Graduate medical regulations 2019, has provided the list of dermatology competencies required for an IMG and these have been included in this dermatology curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods both formative and summative.

Since dermatology doesn't have a separate dermatology exam paper for undergraduate, model division of marks for dermatology under medicine papers has been highlighted. Also, model questions for the same has been attached.

Goals and Objectives of the RGUHS Dermatology, Venereology & Leprosy Curriculum

Goals

Specific goal for IMG in dermatology is to identify and treat common dermatology disease and to refer as appropriate.

Objectives

A) Knowledge

At the end of the course student should be able to:

- c. Describe the applied anatomy, physiology and biochemical attributes of the normal skin and its appendages.
- d. Understanding of the principles of diagnosis of diseases of the skin and its appendages.
- e. Demonstrate the ability to apply the knowledge in a clinical setting.

(B) Skills

At the end of the course the student should be able to:

- a. Ability to recognize, diagnose, order appropriate investigations and treat common diseases of the skin including leprosy in the primary care setting and refer as appropriate
- b. A syndromic approach to the recognition, diagnosis, prevention, counselling, testing and management of common sexually transmitted diseases including HIV based on national health priorities.
- c. Ability to recognize and treat emergencies including drug reactions and refer as appropriate.

C) Attitude and communication skills

At the end of the course the student should be able to:

- e. Communicate effectively with patients, their families and the public at large.
- f. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- g. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- h. Appreciate the issues of equity and social accountability while undergoing all clinical encounters.

Teaching hours (Third professional, Part-I)				
Subject	Teaching hours	Tutorials/Seminars/Integrated teaching (Hours)	Self directed learning (Hours)	Total (Hours)
Dermatology	20	5	5	30

Clinical postings (Total : 6 weeks)
2 weeks: II MBBS 2 weeks: III MBBS Part I 2 weeks: III MBBS Part II

Theory teaching hours (Third professional, Part-I)

THEORY				
Sl. No.	Topic	Competencies	Time	T/L method
1	Structure & function of skin with its appendages	AN 4.2	1 hour	Lecture
2	Acne	DR 1.1, DR 1.3	1 hour	Lecture
3	Vitiligo	DR 2.2	1 hour	Lecture
4	Papulosquamous disorders: Psoriasis	DR 3.3	1 hour	Lecture
5	Lichen Planus	DR 4.2	1 hour	Lecture
6	Scabies	DR.5.1, DR5.3	1 hour	Lecture
7	Pediculosis	DR 6.1	1 hour	Lecture
8	Fungal infections	DR 7.1, DR 7.3	1 hour	Lecture
9	Viral Infections	DR 8.1, DR 8.7	1 hour	Lecture
10	Leprosy Part I	DR 9.1, DR 9.4, DR 9.5	1 hour	Lecture
11	Leprosy Part II	DR 9.6, DR 9.7	1 hour	Lecture
12	STD's Part I	DR 10.3, DR 10.4	1 hour	Lecture
13	STD's Part I	DR 10.6, 10.8, DR 10.9, DR 10.10 ,DR 10.11	1 hour	Lecture
14	HIV	DR 11.1, DR 11.3	1 hour	Lecture
15	Dermatitis & Eczema	DR 12.1, DR 12.3, DR 12.4	1 hour	Lecture
16	Urticaria & angioedemo	DR 14.1, 14.5	1 hour	Lecture
17	Bacterial Infections/ Pyoderma	DR 15.3	1 hour	Lecture
18	Nutritional Disorders & Skin	DR 17.1, 17.2, 17.3, 17.4	1 hour	Lecture
19	Systemic Diseases & Skin	DR 18.1, DR 18.2	1 hour	Lecture
20	Drugs in skin diseases	PH 1.57	1 hour	Lecture
	Total		20 hours	

List of all Dermatology Competencies with their specific learning objectives, with suggested teaching-learning and assessment methods

	Competencies	Specific learning objectives	Teaching learning methods	Assessment
Topic: Structure & function of skin with its appendages				
AN 4.2	Structure & function of skin with its appendages	Structure & function of Skin Structure & function of Hair Structure & function of Nail	Lecture	MCQs at the end of lecture
Topic: Acne				
DR1.1	Enumerate the causative and risk factors of acne	Composition of sebum Functions of sebaceous glands Etiopathogenesis of acne Risk factors for development acne	Lecture	MCQs at the end of lecture
DR1.3	Describe the treatment and preventive measures for various kinds of acne	Preventive measures to control Topical therapeutics in acne Systemic therapeutics in acne Lasers in management of acne	Lecture	MCQs at the end of lecture
Topic: Vitiligo				
DR2.2	Describe the treatment of vitiligo Clinical types of	Etiopathogenesis of vitiligo vitiligo lecture Topical modalities in vitiligo Systemic modalities of vitiligo Phototherapy in of vitiligo	Lecture MCQs treatment of in treatment management	at the end of
Topic: Papulosquamous disorders				
DR 3.3 the end for and	Enumerate the indications of describe the various modalities of treatment of topical, Diagnosis of Topical therapy and its	Etiopathogenesis of Clinical features and types psoriasis psoriasis psoriasis psoriasis systemic and indications Phototherapy and its Systemic therapy and its Biologicals in psoriasis	psoriasis of lecture including phototherapy indications indications	Lecture MCQs at
Topic: Lichen planus				

of DR 4.2	Enumerate and describe treatment modalities for lichen planus Clinical	the Etiopathogenesis of planus lecture features and types of lichen planus Diagnosis of lichen planus systemic modalities of	lichen Lecture Topical and lichen planus	MCQs at the end
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Topic: Scabies

DR 5.1	Describe the etiology, microbiology, pathogenesis, natural history, clinical features, presentations and complications of scabies in adults and children	Structure and life cycle of scabies mite Clinical types and presentations of scabies Complications of scabies	Lecture	MCQs at the end of lecture
DR 5.3	Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Diagnosis of scabies General measures of treatment Topical scabidical agents and method of administration Systemic drugs for treatment	Lecture	MCQs at the end of lecture

		Adverse effects of scabidical agents Preventive measures to reduce transmission		
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Topic: Pediculosis

DR 6.1	Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Etiopathogenesis of pediculosis Clinical features of pediculosis Complications of pediculosis Diagnosis of pediculosis Treatment modalities and method of administration	Lecture	MCQs at the end of lecture
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Topic: Fungal Infections

DR 7.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adult and children	Etiopathogenesis of Dermatophytosis Clinical manifestations and types of dermatophytosis Laboratory diagnosis of dermatophytosis	Lecture	MCQs at the end of lecture
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DR 7.3	Describe the pharmacology and action of antifungal (systemic and topical) agents. Enumerate side effects of antifungal therapy	Mechanism of action, indications and side effect profile of systemic antifungals Mechanism of action, indications and side effect profile of topical antifungals	Lecture	MCQs at the end of lecture
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Topic: Viral infections

DR 8.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Etiopathogenesis and clinical features of herpes virus infections Etiopathogenesis and clinical features of human papilloma virus infections Etiopathogenesis and clinical features of molluscum contagiosum	Lecture	MCQs at the end of lecture
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DR 8.7	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for common viral illnesses of the skin	Mechanism of action, indications and side effect profile of antiviral therapy	Lecture	MCQs at the end of lecture
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Topic: Leprosy

DR 9.1	Classify describe the epidemiology etiology, microbiology, pathogenesis, clinical presentations and diagnostic features of Leprosy	History and epidemiology of Hansen's disease Microbiology and ultrastructure of M. Leprae Etiopathogenesis and clinical presentations of leprosy Laboratory diagnosis of leprosy	Lecture	MCQs at the end of lecture
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DR 9.4	Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	Etiopathogenesis, types and clinical features of lepra reactions Management of lepra reactions	Lecture	MCQs at the end of lecture
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DR 9.5	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	Mechanism of action, administration, indications and side effect profile of anti leprosy medication.	Lecture	MCQs at the end of lecture
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DR 9.6	Describe the treatment of Leprosy based on the WHO guidelines	Multi drug therapy	Lecture	MCQs at the end of lecture
DR 9.7	Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	Complications of Hansen's disease Management of deformities in Hansen's disease	Lecture	MCQs at the end of lecture

Topic: Sexually Transmitted Diseases

DR 10.3	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	Etiology, pathogenesis and microbiology of syphilis Clinical features, types of syphilis Laboratory diagnosis of syphilis Treatment of syphilis	Lecture	MCQs at the end of lecture
DR 10.4	Describe the prevention of congenital syphilis	Laws and clinical manifestations of congenital syphilis Preventive aspects of congenital syphilis	Lecture	MCQs at the end of lecture
DR 10.6	Describe the etiology, diagnostic and clinical features of non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Etiopathogenesis, types and clinical features of chancroid Etiopathogenesis, types and clinical features of Donovanosis Etiopathogenesis, types and clinical features of LGV	Lecture	MCQs at the end of lecture

DR 10.8	Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Management of chancroid Management of donovanosis Management of LGV	Lecture	MCQs at the end of lecture
DR 10.9	Describe the syndromic approach to ulcerative sexually transmitted disease	Syndromic management of genital ulcer disease	Lecture	MCQs at the end of lecture
DR 10.10	Describe the etiology, diagnostic and clinical features and management of gonococcal and nongonococcal urethritis	Etiopathogenesis of gonococcal urethritis and non-gonococcal urethritis Laboratory diagnosis of gonococcal urethritis and non-gonococcal urethritis Treatment of gonococcal and non gonococcal urethritis	Lecture	MCQs at the end of lecture

DR 10.11	Describe the etiology, diagnostic and clinical features and management of vaginal discharge	Differential diagnosis of vaginal discharge Clinical features, risk factors and diagnosis of trichomoniasis Predisposing factors, clinical features and diagnosis of candidiasis Clinical features and diagnosis of bacterial vaginosis	Lecture	MCQs at the end of lecture
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Topic: HIV

DR 11.1	Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	Structure of HIV Etiopathogenesis and stages of HIV Cutaneous manifestations of AIDS Complications of AIDS	Lecture	MCQs at the end of lecture
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DR 11.3	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	Antiretroviral therapy:- Pharmacology, route of administration, indications and adverse reactions of ART.	Lecture	MCQs at the end of lecture
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Topic: Dermatitis and Eczema

DR 12.1	Describe the aetiopathogenesis of eczema	Definition of eczema Etiology and predisposing factors of eczema.	Lecture	MCQs at the end of lecture
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DR 12.3	Classify and grade eczema	Various classification and grading eczema	Lecture	MCQs at the end of lecture
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DR 12.4	Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the treatment of eczema	General measures in management of eczema Indications for topical therapy Indications for systemic therapy	Lecture	MCQs at the end of lecture
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Topic: Urticaria Angioedema

DR 14.1	Describe the etiology, pathogenesis and clinical precipitating features and classification of Urticaria and angioedema	Classification of urticaria and angioedema Etiopathogenesis and precipitating factors of urticarial Clinical features of urticaria and angioedema	Lecture	MCQs at the end of lecture
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DR 14.5	Enumerate the indications and describe the pharmacology indications and adverse reactions of drugs used in the urticaria and angioedema	Diagnostic tests for urticaria and angioedema Treatment of urticaria and angioedema	Lecture	MCQs at the end of lecture
Topic: Pyoderma				
DR 15.3	Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	Classify pyoderma Etio-pathogenesis of pyodermas Clinical features of staphylococcal pyoderma Clinical features of streptococcal pyodermas Clinical features of other bacterial infections Management of pyoderma	Lecture	MCQs at the end of lecture
Topic: Nutritional Deficiencies and Skin				
DR 17.1	Enumerate and identify the cutaneous findings in vitamin A deficiency	Cutaneous manifestations of Vitamin A deficiency Treatment of Vitamin A deficiency	Lecture	MCQs at the end of lecture
DR 17.2	Enumerate and describe the various skin changes in Vitamin B complex deficiency	Cutaneous manifestations of Vitamin B complex deficiency Treatment of Vitamin B complex deficiency	Lecture	MCQs at the end of lecture
DR 17.3	Enumerate and describe the various changes in Vitamin C deficiency	Cutaneous manifestations of Vitamin C deficiency Treatment of Vitamin C deficiency	Lecture	MCQs at the end of lecture
DR 17.4	Enumerate and describe the various changes in Zinc deficiency	Cutaneous manifestations of Zinc deficiency Treatment of Zinc deficiency	Lecture	MCQs at the end of lecture
Topic: Systemic diseases and the skin				
DR 18.1	Enumerate the cutaneous features of Type 2 diabetes	Cutaneous manifestations of Type 2 diabetes	Lecture	MCQs at the end of lecture
DR 18.2	Enumerate the cutaneous features of hypo/hyperthyroidism	Cutaneous manifestations of Hypothyroidism Cutaneous manifestations of Hyperthyroidism	Lecture	MCQs at the end of lecture
Topic: Drugs in skin diseases				

PH 1.57	Drugs in skin disease	Topical agents in dermatology Systemic agents in dermatology	Lecture	MCQs at the end of lecture
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Self- Directed learning:

Duration: 5 hours

Students will be given clinical case scenarios. Reference books and E material will be suggested to them beforehand. Discussion regarding the case scenarios including approach to diagnosis and management will be done.

Self- Directed learning		
Sl. No.	Topics	Competencies
1	Vesiculobullous disorders	DR 13.1-13.3
2	Cutaneous adverse reaction	DR 12.7
3	Leprosy	DR 9.1-9.7
4	Collagen vascular disorders	DR 16.1
5	STDs – Genital ulcer diseases	DR 10.9
Duration	5 hours	

SGD (Small Group Discussion):

A small group of 25 students will be done. A topic is given to each group and same will be discussed among the group.

Sl No.	Topic	Competencies	Duration (Hours)
1	Cutaneous manifestations in Diabetes Mellitus	DR18.1	1
2	Cutaneous manifestations in Thyroid disorders	DR18.2	1
3	Cutaneous manifestations in HIV	DR11.1,11.3	1
4	Psychocutaneous disorders	DR 9.7	1
5	Collagen vascular disorders	DR16.1,16.2	1
Total: 5 hours			

Integration: The teaching should be aligned and integrated horizontally and vertically in order to emphasize the biologic basis of diseases of the skin, sexually transmitted diseases and leprosy and to provide an understanding that skin diseases may be a manifestation of systemic disease.

Topics for vertical integration

SI No	Integrated teaching	Integrated with (Department)
1	AN4.2 Describe structure & function of skin with its appendages	Anatomy
2	AN4.4 Describe modifications of deep fascia with its function	Anatomy
3	AN4.5 Explain principles of skin incisions	Anatomy
4	DR5.3 Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Pharmacology
5	DR6.1 Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Microbiology
6	DR7.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adults and children	Microbiology
7	DR7.2 Identify Candida species in fungal scrapings and KOH mount	Microbiology
8	DR7.3 Describe the pharmacology and action of antifungal (systemic and topical) agents. Enumerate side effects of antifungal therapy	Microbiology, Pharmacology
9	DR8.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Microbiology
10	DR8.7 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for common viral illnesses of the skin	Pharmacology
11	DR9.1 Classify describe the epidemiology etiology microbiology pathogenesis, clinical presentations and diagnostic features of Leprosy	Microbiology, Community medicine
12	DR9.4 Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	Pharmacology
13	DR9.5 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	Pharmacology, Community medicine
14	DR9.6 Describe the treatment of Leprosy based on the WHO guidelines	Pharmacology,

		Community medicine
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15	DR9.7 Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	Pharmacology, Psychiatry
16	DR10.1 Identify and classify syphilis based on the presentation and clinical manifestations	Microbiology
17	DR10.2 Identify spirochete in a dark ground microscopy	Microbiology
18	DR10.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	Microbiology, Pharmacology
19	DR10.6 Describe the etiology, diagnostic and clinical features of nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology
20	DR10.7 Identify and differentiate based on the clinical features non-syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology
21	DR10.8 Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non- syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	Microbiology, Pharmacology
22	DR11.1 Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	Microbiology
23	DR11.2 Identify and distinguish the dermatologic manifestations of HIV, its complications, opportunistic infections and adverse reactions	Microbiology
24	DR11.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	Microbiology, Pharmacology
25	DR12.7 Identify and distinguish fixed drug eruptions and Steven Johnson syndrome from other skin lesions	Microbiology, Pathology
26	DR14.1 Describe the etiology, pathogenesis and clinical precipitating features and classification of Urticaria and angioedema	Microbiology, Pathology
27	DR15.2 Identify staphylococcus on a gram stain	Microbiology
28	DR15.3 Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	Microbiology, Pharmacology
29	PH1.46 Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antileprotic drugs	Pharmacology
30	DR16.2 Identify and distinguish Raynaud's phenomenon	Pathology

31	DR17.1 Enumerate and identify the cutaneous findings in vitamin A deficiency	Biochemistry
32	DR17.2 Enumerate and describe the various skin changes in Vitamin B complex deficiency	Biochemistry
33	DR 17.3 Enumerate and describe the various changes in Vitamin C deficiency	Biochemistry
34	DR17.4 Enumerate and describe the various changes in Zinc deficiency	Biochemistry
35	PA34.1 Describe the risk factors, pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	Pathology
36	PA34.2 Describe the risk factors, pathogenesis, pathology and natural history of basal cell carcinoma of the skin	Pathology
37	PA34.3 Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors, morphology clinical features and metastases of melanoma	Pathology
38	MI4.3 Describe the etio-pathogenesis of Skin and soft tissue infections and discuss the clinical course, and the laboratory diagnosis.	Microbiology
39	MI7.2 Describe the etio-pathogenesis and discuss the laboratory diagnosis of sexually transmitted infections. Recommend preventive measures, wherever relevant.	Microbiology
40	PH1.57 Describe drugs used in skin disorders	Pharmacology
41	DR14.5 Enumerate the indications and describe the pharmacology indications and adverse reactions of drugs used in the urticaria and indications and adverse reactions of drugs used in the urticaria and angioedema	Pharmacology

Topics for horizontal integration

SI No	Integrated teaching	Integrated with (Department)
1	DR5.1 Describe the etiology, microbiology, pathogenesis, natural history, clinical features, presentations and complications of scabies in adults and children	Pediatrics
2	DR5.2 Identify and differentiate scabies from other lesions in adults and children	Pediatrics

3	DR5.3 Enumerate and describe the pharmacology, administration and adverse reaction of pharmacotherapies for scabies	Pediatrics
4	DR6.1 Describe the etiology pathogenesis and diagnostic features of pediculosis in adults and children	Pediatrics
5	DR6.2 Identify and differentiate pediculosis from other skin lesions in adults and children	Pediatrics
6	DR7.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adults and children	Pediatrics
7	DR8.1 Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Pediatrics
8	PE31.4 Identify Atopic dermatitis and manage	Pediatrics
9	DR9.1 Classify describe the epidemiology etiology microbiology pathogenesis, clinical presentations and diagnostic features of Leprosy	General Medicine
10	DR9.2 Demonstrate (and classify based on) the clinical features of leprosy including an appropriate neurologic examination	General Medicine
11	DR9.4 Enumerate, describe and identify lepra reactions and supportive measures and therapy of lepra reactions	General Medicine
12	DR9.5 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for various classes of leprosy based on national guidelines	General Medicine
13	DR9.6 Describe the treatment of Leprosy based on the WHO guidelines	General Medicine
14	DR9.7 Enumerate and describe the complications of leprosy and its management, including understanding disability and stigma.	General Medicine
15	DR10.1 Identify and classify syphilis based on the presentation and clinical manifestations	General Medicine
16	DR10.2 Identify spirochete in a dark ground microscopy	General Medicine
17	DR10.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis	General Medicine
18	DR10.4 Describe the prevention of congenital syphilis	General Medicine

19	DR10.5 Counsel in a non-judgemental and empathetic manner patients on prevention of sexually transmitted disease	General Medicine
20	DR10.6 Describe the etiology, diagnostic and clinical features of nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
21	DR10.7 Identify and differentiate based on the clinical features nonsyphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
22	DR10.8 Enumerate the indications and describe the pharmacology, indications and adverse reactions of drugs used in the non- syphilitic sexually transmitted diseases (chancroid, donovanosis and LGV)	General Medicine
23	DR10.9 Describe the syndromic approach to ulcerative sexually transmitted disease	General Medicine
24	DR10.10 Describe the etiology, diagnostic and clinical features and management of gonococcal and non-gonococcal urethritis	General Medicine
25	DR11.1 Describe the etiology, pathogenesis and clinical features of the dermatologic manifestations of HIV and its complications including opportunistic infections	General Medicine
26	DR11.2 Identify and distinguish the dermatologic manifestations of HIV, its complications, opportunistic infections and adverse reactions	General Medicine
27	DR11.3 Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for dermatologic lesions in HIV	General Medicine
28	DR12.7 Identify and distinguish fixed drug eruptions and Steven Johnson syndrome from other skin lesions	General Medicine
29	DR16.1 Identify and distinguish skin lesions of SLE	General Medicine
30	DR16.2 Identify and distinguish Raynaud's phenomenon	General Medicine
31	DR17.1 Enumerate and identify the cutaneous findings in vitamin A deficiency	General Medicine/Pediatrics
32	DR17.2 Enumerate and describe the various skin changes in Vitamin B complex deficiency	General Medicine/Pediatrics
33	DR 17.3 Enumerate and describe the various changes in Vitamin C deficiency	General Medicine/Pediatrics

34	DR17.4 Enumerate and describe the various changes in Zinc deficiency	General Medicine/Pediatrics
35	DR18.1 Enumerate the cutaneous features of Type 2 diabetes	General Medicine
36	DR18.2 Enumerate the cutaneous features of hypo/hyper-thyroidism	General Medicine
37	DR15.3 Enumerate the indications and describe the pharmacology, indications and adverse reactions of topical and systemic drugs used in treatment of pyoderma	General Surgery
38	DR15.4 Enumerate the indications for surgical referral	General Surgery
39	DR10.11 Describe the etiology, diagnostic and clinical features and management of vaginal discharge	Obstetrics & Gynaecology

Assessment

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings which will be added to General Medicine for eligibility to appear for the examinations.

Internal Assessment

There won't be separate internal assessment but 10% of total internal exams marks in general medicine should include questions from dermatology in consultation with department of Dermatology.

University examinations

Dermatology doesn't have a separate paper for third Professional Part II. But discipline of Dermatology, venereology and Leprosy (DVL) in combination with Psychiatry and Respiratory medicine including Tuberculosis should constitute 25% of theory marks in Paper II of General Medicine as separate section. So, 10% of questions must be incorporated from Dermatology in Paper II of General Medicine.

Marks allotted

Dermatology	Theory
Total marks	8-10 marks
	Short answer question 2x3 = 6 marks
	MCQs 4x1=4 marks

Clinical examination/ Practical's:

It is desirable to include one short cases in practical examination in General Medicine examination.

Sample Questions to be incorporated in General Medicine paper II as separate section

Sample short answers (3 marks each)

1. Describe special lesions in Dermatology with examples?
2. Describe in detail Cardinal signs of leprosy?
3. Discuss clinical variants of scabies?
4. Discuss syndromic management of genital ulcer disease?
5. Classify vitiligo based on morphology and distribution?

6. Discuss etiopathogenesis of acne?

Sample MCQs (1 marks each)

1. Which of the following types of psoriasis can be life threatening?

a. Guttate psoriasis b. Unstable psoriasis c. Localized pustular psoriasis d. Erythrodermic psoriasis

2. Nikolsky sign is positive in:

a. Bullous pemphigoid b. Herpes simplex c. Pemphigus vulgaris d. Epidermolysis bullosa

3. All of the following is manifestation of scurvy, except:

a. Hemorrhagic signs b. Hyperkeratosis of hair follicles c. Hyperpigmentation d. Hypochondriasis

4. Ecthyma gangrenosum is caused by:

a. Streptococcus pyogenes b. Pseudomonas aeruginosa c. Staphylococcus aureus d. Proteus vulgaris

5. One finger tip unit ointment (FTU) is equivalent to

a. 0.25g b. 0.75g c. 0.5g d. 1.0g

6. The isomorphic phenomenon is seen all except:

a. Lichen planus b. Psoriasis c. Vitiligo d. Lichen spinulosus

Acknowledgement of contributors

Dr Shashi Kumar BM, Associate Professor, Department of Dermatology, Mandya Institute of Medical Sciences.

Dr Deepadarshan K, Assistant professor in Department of Dermatology, Mandya Institute of Medical Sciences, Mandya for his contribution in preparation of this curriculum.

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES

BANGALORE, KARNATAKA



**Dermatology, Venereology & Leprosy
LOGBOOK
For Undergraduates**

As Per
Competency-Based Medical Education Curriculum

NAME OF THE CANDIDATE :

NAME OF THE COLLEGE :

UNIVERSITY REGISTER NUMBER:

ACADEMIC YEAR :

BASIC PROFORMA OF THE STUDENT

Photo

PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

This booklet has been adopted from the book prepared by an Expert Group of IADVL Academy and complies with the “**Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019**” as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress of an undergraduate student through the specified 18 competencies in Dermatology. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

These guidelines for recording logbook entries are recommended for the MBBS students from the academic year 2019-20 onwards. This model logbook is with an aim to create a standard protocol for documenting the achievement of competencies allotted to DVL as per the **Competency Based UG Curriculum (2018)** and the **Regulations on Graduate Medical Education, 2019, Part II**.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner’s stay in the Department of Dermatology and STD. This logbook would be a verifiable record of the learner’s progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Completion of specified activities, and submission of certified logbook is necessary for clearing Formative Assessment in Dermatology and STD. **Successful documentation and submission of the logbook should be a prerequisite for being allowed to take the final summative examination.**

Glossary of terms

1. **Number** of Competency- addressed as per Volume of the UG Curriculum e.g. DR2.1
2. **Name of the activity**- To specify seminar/ Live or Group discussion/ Session/ Clinical Interaction/ Demonstration etc.
3. **Date the activity gets completed**
4. **Attempt at each activity by the learner**
 - a. First attempt (or) only attempt
 - b. Repeat (R) of a previously done activity
 - c. Remedial activity (Re) based on the determination by the faculty
5. **Rating upon completion of activity**
 - a. Below expectations (B);
 - b. Meets expectations (M)
 - c. Exceeds expectations (E)
6. **Decision of faculty**
 - a. **C (closed)**: activity is completed, therefore closed. It can be certified, if needed.
 - b. **R (repeat)**: activity needs to be repeated without any further intervention.
 - c. **Re (remedial)**: activity needs remedial action (usually done after repetition did not lead to satisfactory completion)
7. Initials (Signature) of faculty indicating the completion or other determination
8. Initial (Signature) of the learner, if feedback has been received.

A numerical score may also be used if deemed necessary by the Department

Three posting of 2 weeks each as per GMER document. Competencies have been divided accordingly.

Method of teaching-learning advised.

Method of assessment advised.

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(Name of Institution)

DEPARTMENT OF Dermatology, Venereology & Leprosy (DVL)

BONAFIDE CERTIFICATE

This is to certify that the candidate Reg No.....
has satisfactorily completed all requirements mentioned in this Logbook for undergraduates
in DVL including related AETCOM modules as per the Competency-Based Undergraduate
Medical Education Curriculum, Graduate Medical Regulation 2019.
He/ She is eligible to appear for the University assessment.

Faculty Incharge:

Head of Department:

Name:

Name:

Signature:

Signature:

Place: Place: Date: Date:

2. GENERAL INSTRUCTIONS

1. This logbook is a record of academic and other activities of the student during his/her designated clinical posting in the Department of DVL.
2. Entries in the logbook reflect the activities undertaken by the student during the posting and are certified by the faculty.
3. The student is responsible for maintaining his/her logbook regularly.
4. The student is responsible for getting the logbook entries verified by concerned faculty regularly. They will not be signed/ verified/ certified after 15 days have elapsed after the end of posting.
5. The logbook should be verified by the Head of Department before forwarding the application of the student for the University Examination. This is mandatory requirement for appearing for University Examinations
6. The reflections should demonstrate the learning of the student that has taken place during the period of clinical posting. Please do not simply repeat the activities performed. A note on the learning experience, what was learnt and how it is going to be useful in the future, is expected. Reflections will be a useful document and assess learning for many competencies where formal assessment is not being done. Student needs to write academically useful reflections as per the prescribed format and within the time frame of the posting. These will be assessed by the teachers.

3. COMPETENCIES: PHASE II

B. Psychomotor Competencies that are required to be complete during the Clinical postings

Competency Addressed	Date of completion	Suggested Activity
DR-A1: Identify and differentiate the primary, secondary and special skin lesions		CASE PRESENTATION <i>Any of the following cases:</i>
DR-A3: Elicit and present medical history of a common dermatology case		

DR-A2: Present and describe basics of dermatological examination of a common dermatology case.		<i>Pediculosis, scabies, herpes labialis, herpes zoster and varicella, viral warts, molluscum contagiosum, folliculitis impetigo and carbuncle, Leprosy, Psoriasis, Tinea.</i>
DR5.2: Identify and differentiate scabies from other lesions in adults and children		
DR6.2: Identify and differentiate pediculosis from other skin lesions in adults and children		
DR8.2: Identify and distinguish herpes simplex and herpes labialis from other skin lesions		
DR8.3: Identify and distinguish herpes zoster and varicella from other skin lesions		
DR8.4: Identify and distinguish viral warts from other skin lesions		
DR8.5: Identify and distinguish molluscum contagiosum from other skin lesions		
DR8.6: Enumerate the indications, describe the procedure and perform a Tzanck smear		
DR15.1: Identify and distinguish folliculitis impetigo and carbuncle from other skin lesions		
DR 7.2 Identify candida species in fungal scrapings and KOH mount		In the side laboratory observe each at least once
DR 10.2 Identify spirochete in a dark ground microscopy		
DR 15.2 Identify staphylococcus on a gram stain		

Phase II
CLINICAL CASE PRESENTATION RECORD

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases) **At least 3 cases per clinical posting**

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

Phase II
REFLECTIONS: CLINICAL CASE PRESENTATION

*(Students should preferably reflect on cases which they themselves have presented): **At least one Reflection per Clinical Posting***

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				
What Next?				
Signature of Faculty			Date	

Phase II
End of posting Assessment

Suggested Methods

- 5. Viva Voce**
- 6. CA-OSCE / OSCE / OSPE**
- 7. Bedside assessment**
- 8. Communication skill (Counselling)**
- 9. Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

Phase III Part 1

REFLECTIONS: CLINICAL CASE PRESENTATION

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				
What Next?				
Signature of Faculty			Date	

End of posting Assessment

Phase III Part 1

Suggested Methods

10. Viva Voce

11. CA-OSCE / OSCE / OSPE

12. Bedside assessment

13. Communication skill (Counselling)

14. Psychomotor skill- Smear preparation, slide preparation, speculum examination

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

**Phase III Part II
CLINICAL CASE PRESENTATION RECORD**

Summary of Clinical Case Presentations/Spotters*

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases per clinical posting

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

REFLECTIONS: CLINICAL CASE PRESENTATION

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase III Part 2

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				
What Next?				
Signature of Faculty			Date	

End of posting Assessment

Suggested Methods

- 1. Viva Voce**
- 2. CA-OSCE / OSCE / OSPE**
- 3. Bedside assessment**
- 4. Communication skill (Counselling)**
- 5. Psychomotor skill- Smear preparation, slide preparation, speculum examination**

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

6. SCIENTIFIC PROJECT PRESENTATIONS/REPORTS/OUTREACH ACTIVITIES/UG QUIZ

SL NO	DATE	PARTICULARS	SIGNATURE OFSTAFF

7. EXTRACURRICULAR ACTIVITIES

Phase	Duration (From-To)	Assessment score (marks obtained)	Total marks	Assessment (%)	Remarks	Faculty Signature
Phase II						

Phase III Part I						
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Sl no	Date	Particulars	Signature of the faculty

8. ACHIEVEMENTS/AWARDS

Sl no	Date	Particulars	Signature of the faculty

9. ASSESSMENT RECORD

Phase III Part 2						
Total						

10. SUMMARY OF ATTENDANCE

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1st	Phase II	2 weeks					

2nd	Phase III Part I	2 weeks					
3rd	Phase III Part II	2 weeks					
Total						Cumulative attendance n/%	

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



General Surgery Curriculum for
Competency Based Curriculum

RGUHS General Surgery Curriculum as per the new Competency Based Curriculum

Preamble

The NMC envisages that the Indian Medical Graduate should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this, the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each specialty with the input from expert groups under each specialty.

The NMC, in the Graduate medical regulations 2019, has provided the list of General Surgery medicine competencies required for an IMG and these have been included in this document.

The document begins with the goals and objectives of the Surgery curriculum, then a summary of phase wise hours allotted to general surgery and their distribution across didactic lecture, small group discussion and self-directed learning. Subsequently, this document suggests phase wise topics in the 4 clinical postings, directory of minimum cases to be seen, and suggested clinical assessment methods for the postings.

This is followed by the competencies to be delivered, along with the SLOs, suggested TL methods, and suggested assessment methods. The competencies have been divided according the three main domains which is Knowledge, Psychomotor skills and Communication skills. The competency tables also indicate the phase they should be taught in. This will be helpful for the faculty and students.

Goals and Objectives of the medicine curriculum

Goals

The broad goal of the General Surgery curriculum is to equip the IMG with sufficient knowledge, skills and attitude to diagnose and appropriately treat common surgical disorders affecting the adult population.

Objectives

A) Knowledge

At the end of the course student should be able to:

- f. Describe the pathophysiology of common diseases of adults
- g. Describe the clinical features, diagnosis and management of the above
- c. Be well versed with the preventive aspects of the surgery curriculum, specifically patient education and lifestyle modification.

(B) Skills

At the end of the course the student should be able to:

- d. Demonstrate the ability to elicit a detailed clinical history and perform a general physical and systemic examination, in outpatient and inpatient settings.
- e. Demonstrate the ability to apply the elicited history and examination to arrive at correct diagnosis and plan treatment.
- f. Demonstrate the ability to deliver immediate care to commonly seen emergencies prior to referral to higher centre.

C) Attitude and communication skills

At the end of the course the student should be able to:

- i. Communicate effectively with patients, their families and the public at large
- j. Communicate effectively with peers and teachers demonstrate the ability to work effectively with peers in a team.
- k. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
- l. Appreciate the issues of equity and social accountability

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in General Surgery

Distribution of Teaching hours :

Phase	Lecture	Small group discussion	Self-directed learning	Total
Phase 2	25			25
Phase 3, part 1	25	35	5	65
Phase 3, part 2	70	125	15	210

Time allotted excludes time reserved for internal / University examinations, and vacation.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. In the third Professional year both Part1& Part2, 25% of allotted time (non-clinical time) shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects. Horizontal integration between the Final MBBS Part 2 subjects is necessary wherever feasible

The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap.

Small group discussion (SGD) may include the following

- 1.Tutorials
- 2.Case based discussion
3. Skill lab sessions

Unless otherwise mentioned, in the TL methods suggested in the competency table, SGD sessions are for 2 hours, and lectures for 1 hour and skill lab sessions are for 4 hours

Suggested Topics for Theory classes for each MBBS Phase

2 nd MBBS	
Competency number	Topic
SU1	Metabolic response to injury
SU2	Shock

SU3	Blood and blood components
SU4	Burns

SU8	Ethics
SU10	Pre-op, intra-op and post-op care
SU12	Nutrition and fluid therapy
SU18	Skin and subcutaneous tissue
SU27	Vascular disorders

3rd MBBS Part 1

Competency number	Topic
SU5	Wound healing and wound care
SU6	Surgical infections
SU7	Surgical audit and research
SU11	Anaesthesia and pain management
SU14	Basic surgical skills
SU17	Trauma
SU19	Congenital facial anomalies
SU20	Oropharyngeal carcinoma
SU21	Salivary Gland
SU22	Thyroid gland and Adrenal gland
SU 23	Adrenal glands and other endocrine glands
SU25	Breast

3rd MBBS Part 2

Competency number	Topic
SU13	Transplantation
SU15	Biohazard disposal
SU16	Minimally invasive surgery

SU24	Pancreas
SU26	Cardio thoracic surgery
SU28	Abdomen
SU29	Urinary system
SU30	Male reproductive system
	Neurosurgery

Clinical posting, certifiable skills, case matrix, clinical skills assessment , clerkship , skill lab topics

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Acquisition and certification of skills shall be through bedside clinics, clerkship (student doctor), diagnostic and skill laboratories.

Clinical postings – phase wise objectives

Posting 1: The student , at the end of the posting, would have practiced the following

- A. Building a rapport with the patient
- B. Eliciting history in native language of patient
- C. Examining vital signs – pulse, blood pressure, temperature, jugular venous pressure
- D. General physical examination – pallor, icterus, cyanosis, lymphadenopathy, edema
- E. Observation of systemic examination

Posting 2

- A. Practice of skills attained in posting 1
- B. Systemic examination (inspection, palpation, percussion, auscultation) of cardiovascular system, respiratory system, abdomen, and central nervous system

Posting 3

- A. Practice of skills attained in posting 1 and 2
- B. Fluent, confident systemic examination
- C. Ability to distinguish between normal and abnormal physical findings
- D. Collating history and examination findings to arrive at differential diagnoses

Posting 4

Practice and refinement of skills attained in postings 1, 2 and 3

Suggested topics for Clinical postings for each MBBS Phase

1st posting - 2nd MBBS, (4 weeks)	
1	History taking in a surgical patient
2	Examination of ulcer
3	Clinical examination of a swelling
4	Examination of abdomen
5	Examination of the vascular system
6	Examination of the lymphatic system
7	Hand wash and draping patients in OT
8	Basic instruments in surgical operation theatre
2nd Posting 3rd MBBS Part 1 (4weeks)	
1	Wound care
2	BLS
3	Airway maintenance
4	Thyroid examination
5	Breast examination
6	Examination of Abdomen
7	Hernia
8	Disorders of Stomach
9	Submandibular region and salivary glands
9	Revise and review all topics in 1 st posting
3rd and 4th Posting 3rd MBBS Part 2 (8+4weeks)	

1	Investigations in a surgical patient	
2	Pre-op and post-op care	
3	Anaesthesia and pain management	
4	Transplant	
5	Revisit, review and revise all topics in 1 st and 2 nd postings	

Suggested topics for Skills lab in Surgery

	To perform breast examination
	To perform per rectal examination to palpate the prostate
	To administer an appropriate dose of local anaesthetic and incise and drain abscess
	To appropriately apply dressing for injuries and burns
	To clean and suture superficial skin wounds
	To insert an intercostal needle/drainage

Learner-doctor method (Clerkship): should be mandatorily implemented, from 1st clinical postings in Surgery.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Goal: To provide learners with experience in:

- (a) Longitudinal patient care,
- (b) Being part of the health care team,
- (c) Hands-on care of patients in outpatient and inpatient setting.

- (d) No learner will be given independent charge of the patient
- (e) The supervising physician will be responsible for all patient care decisions

The learner will function as a part of the health care team with the following responsibilities:

Be part of the unit’s outpatient services on admission days, Remain with the admission unit until 6 PM except during designated class hours,

Be assigned patients admitted during each admission day for whom he/she will undertake responsibility, under the supervision of a senior resident or faculty member,

Participate in the unit rounds on its admission day and will present the assigned patients to the supervising physician,
 Perform simple tasks, including nebulisation, patient education

Follow the patient’s progress throughout the hospital stay until discharge,

Participate, under supervision, in procedures, surgeries, deliveries etc. of assigned patients

Participate in unit rounds on at least one other day of the week excluding the admission day, Discuss ethical and other humanitarian issues during unit rounds, Attend all scheduled classes and educational activities,

Document his/her observations in a prescribed log book / case record.

Learner-doctor method phase wise

Year of Curriculum	Focus of Learner - Doctor programme
Year 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Year 2	History taking, physical examination, assessment of change in clinical status, communication and patient education
Year 3	All of the above and choice of investigations, basic procedures and continuity of care
Year 4	All of the above and decision making, management and outcomes

Eligibility to appear for Professional examinations

(b) Attendance

1. Attendance requirements are 75% in theory and 80% in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase – the learner must have 75% attendance in theory and 80% in practical in each phase of instruction in that subject.
2. If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have 75% attendance in each subject and 80% attendance in each clinical posting.
3. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

Log book

4. A designated faculty member in each unit will coordinate and facilitate the activities of the learner, monitor progress, provide feedback and review the log book/ case record.
5. The log book/ case record must include the written case record prepared by the learner including relevant investigations, treatment and its rationale, hospital course, family and patient discussions, discharge summary etc.
6. The log book should also include records of patients assigned. Submission of the log book/ case record to the department is required for eligibility to appear for the final examination of the subject.

Theory assessment

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Surgery. An end of posting clinical assessment shall be conducted for each of the clinical postings in Surgery.

A 100-mark question paper covering the relevant topics of the MBBS Phase may be conducted. Mark division will be as follows:

100 marks
Long essay 2X10= 20
Short essay 8x5=40 marks
Short answer question 10x3=30marks
MCQs 10x1=10marks

A minimum of 80% of the marks should be from the must know component of the curriculum. A maximum of 20% can be from the desirable to know component. All main essay questions to be from the must know component of the curriculum.

One main essay question to be of the modified variety containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Internal assessment at the end of clinical postings

Internal assessment marks at the end of each posting will be a sum of log book (documentation of skills practiced, clerkship, assessment of behaviour in posting) and clinical internal assessment marks. Internal assessment may be conducted as follows in postings Posting 1 – long case focusing on history, vital signs and general physical examination

Posting 2 – OSCE with the following stations – history, vital signs, general physical examination, examination of specific system/structure, diagnostic skills, communication

Posting 3 – Long case/short case

Posting 4 – short case and/or long case

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce

The competencies to be delivered in AETCOM have been summarized at the end of the competency table. The question paper must include a least one question based on AETCOM competencies covered in that phase. AETCOM competencies must also be tested in the viva voce.

There will be one Theory and Clinical preliminary exam before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills. Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Surgery to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Medicine logbook entry completed to be eligible for appearing at the final university examination.

University examinations

University examinations Third Professional Part II - (Final Professional) examination shall be at the end of training (14 months including 2 months of electives) in the subjects of General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics.

The discipline of Orthopaedics, Anaesthesiology, Dentistry and Radiodiagnosis will constitute 25% of the total theory marks incorporated as a separate section in paper II of General Surgery. The discipline of Psychiatry and Dermatology, Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis will constitute 25% of the total theory marks in General Medicine incorporated as a separate section in paper II of General Medicine.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible. **Marks allotted**

Medicine	Theory	Clinical examination
Total marks	2 papers of 100 marks each for General surgery (including orthopaedics and other surgery allied subjects). The pattern of each question paper is given below. As indicated above adequate	200 marks
	weightage to be given to surgery allied subjects	
	Long essay 2X10= 20	One long case for 80 marks
	Short essay 8x5=40 marks	Two short cases for 40 marks each
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Xray & ECG Station-2: Instruments Station-3: Specimens Station-4: Drugs & case scenarios
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum.

One main essay question to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.

There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the seniormost internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed. All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

BLUEPRINT FOR ASSESSMENT

RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT

As per NMC guidelines, a balance should be drawn between the action verbs which are specified in the Bloom's taxonomy along with a balance of the topics of the curriculum **Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.**

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
------------------	---

Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate, Interpret, Review, Summarise
Application	Apply, Choose, Compute, Modify, Solve, Prepare, Produce, Select, Show, Transfer, Use
Analysis	Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram, Differentiate, Distinguish, Relate, Categorise
Synthesis	Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate, Organise, Plan, Produce, Propose, rewrite
Evaluation	Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict, Prioritise, Prove, Rank

The blueprint for General surgery theory paper indicating the topics and marks allotted for each are given below. The blueprinting provided is an estimate only, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on. The focus should be on providing clinical oriented questions rather than purely theoretical questions

The distribution of topics in paper 1 and paper 2 in General surgery is also given below. The given division of topics is only a guideline, as the topics are often a continuum, making clear demarcation difficult.

Blue print for General surgery

Competency number	Topic	Marks
	Applied basic sciences	6
SU1	Metabolic response to injury	2
SU2	Shock + its management	5

SU3	Blood and blood components	4
SU4	Burns	4
SU5	Wound healing and wound care	5
SU6	Surgical infections	5
SU7 +SU8	Surgical audit and research+ Ethics	2
SU19	Congenital facial anomalies	2
SU20	Oropharyngeal carcinoma	3
SU21	Salivary Gland+ neck cysts+ cervical lymphadenitis	4
	Skin lesions including ulcers, sinuses, fistulas and malignancies	5
SU9	Investigations in a surgical patient	5
SU10	Pre-op, intra-op and post-op care	6
SU12	Nutrition and fluid therapy	5
SU13	Transplantation	4
SU14	Basic surgical skills	3
SU15	Biohazard disposal	2
SU16	Minimally invasive surgery	5
SU17	Trauma	5
SU22	Thyroid gland	6
SU 23	Adrenal glands and other endocrine glands	4
SU24	Pancreas	5
SU25	Breast	8
SU26	Cardio thoracic surgery and Neurosurgery	7
SU27	Vascular system	10
SU28	Abdomen including hernias	12
SU29	Urinary system	10
SU30	Male reproductive system	6
Total		150

Distribution of topics In General surgery Paper 1 and Paper 2 for University Examination

Paper 1 – Section A and B 100marks		
1	Applied basic sciences	
2	Metabolic response to injury	
3	Shock + its management	
4	Blood and blood components	
5	Burns	
6	Wound healing and wound care	
7	Surgical infections	
8	Surgical audit and research+ Ethics	
9	Congenital facial anomalies	
10	Oropharyngeal carcinoma	
11	Salivary Gland+ neck cysts+ cervical lymphadenitis	
12	Skin lesions including ulcers, sinus, fistulas and malignancies	
13	Investigations in a surgical patient	
14	Pre-op, intra-op and post-op care	
15	Nutrition and fluid therapy	
17	Transplantation	
18	Basic surgical skills	
19	Biohazard disposal	
20	Minimally invasive surgery	
21	Trauma	
22	Thyroid gland	
23	Adrenal glands and other endocrine glands	
24	Breast	
Paper 2 – Section A 50marks		

1	Pancreas	
2	Cardio thoracic surgery and neurosurgery	
3	Vascular system	
4	Abdomen including hernias	
5	Urinary system	
6	Male reproductive system	
Paper 2 – Section B 50marks, Orthopedics and surgery allied subjects Anaesthesia, Radiology and dentistry		

MODEL QUESTION PAPER SURGERY -1

Section A

Long Essays (10x1)

- 1) 56y/o woman presented with history of lump in right breast since 4 months, 6*8cm in in upper outer quadrant, hard in consistency with 2*3 cm ulcer over the lump and bloody discharge from nipple. Clinical examination revealed 2*2 cm lymph node in right axillary region. Opine regarding possible diagnosis, clinical staging, management for this patient. Add a note on BRCA 1 and 2. **(2+2+4+2 marks)**

Short Essays (5x4=20) 1)

- Buerger's disease
- 2) Discuss the complications of inguinal hernia
- 3) Mesenteric cyst
- 4) Surgical management of portal hypertension

Short Answers (3x5=15)

- 5) Premalignant conditions of oral cavity
- 3) Courvoisier's law
- 6) Le Fort classification of maxillofacial injuries
- 7) Rodent ulcer

8) Advantages of USG

9) Pilonidal sinus

10) Circumcision

MCQ'S (1x5 = 5)

1. 35 years old male presents with fever , jaundice ,Right upper quadrant pain, septic shock & mental status change , likely diagnosis

1. Cholangitis

2. Hepatitis

3. Cholecystitis

4. Pancreatitis

2. 30 years old female presents with diffuse thyroid swelling ,on investigations TSH levels raised. Postoperative HPE shows intense lymphocytic infiltration & Hurthle cells , likely diagnosis

1. Grave's disease

2. Hashimoto's thyroiditis

3. Follicular carcinoma

4. Medullary carcinoma of thyroid

3. Most common site of development of ca prostate ?

1. Central zone

2. Peripheral zone

3. Transition zone

4. Fibromuscular stroma

4. 26 years old male presents with 4 days history of pain in right sided lower abdomen with frequent vomiting. Patient's general condition is good and tender mass felt in right iliac fossa. Most appropriate management in this case would be

1. Exploratory laparotomy

2. Immediate appendectomy
3. Ochsner – Sherren regimen
4. External drainage
6. Mercedes Benz sign on x-ray seen in

- a) Ureteric stone
- b) Renal stone
- c) Gall stone
- d) Pancreatic stone

SECTION B (Orthopedics)

Long Essays (10x1)

- 1) Write in detail about classification , pathology, clinical features and management of shoulder dislocation.

Short Essays (5x4=20)

- 2) Malunion
- 3) Colles fracture
- 4) Acute osteomyelitis
- 5) Spinal anaesthesia

Short Answers (3x5=15)

- 6) Potts spine
- 7) Carpal tunnel syndrome
- 8) CTEV
- 9) Mallet Finger

10) Dupuytren's fracture

MCQ'S (1x5 = 5)

11) 32 years old female sustained injury after fall on an out-stretched hand . On evaluation there was fracture of upper one-third of ulna with dislocation of head of radius. Likely diagnosis

- a) Colles fracture
- b) Monteggia fracture dislocation
- c) Galeazzi fracture dislocation
- d) Smith fracture

12) 40 years old male patient comes to casualty with fracture of femur, which splint used to stabilize the fracture?

- 1. Dennis brown splint
- 2. Thomas splint
- 3. Volkmann splint
- 4. Cock-up splint

13) Medial meniscus is more vulnerable to injury because of its

- a) Attachment to tibial collateral ligament
- b) Semicircular shape
- c) Action of adductor magnus
- d) Attachment to fibrous capsule

14) March fracture affects

- a) Neck of 1st metatarsal
- b) Body of 1st metatarsal
- c) Neck of 2nd metatarsal
- d) Body of calcaneus

15) Carpal bone which fractures most commonly

- a) Scaphoid
- b) Lunate
- c) Hamate
- d) Pisiform

Surgery Model Paper

Total marks=100

Long essay question (2 x10 marks)

1. A 42 year old woman presents with dysphagia for both solids and liquids since several months. She describes a feeling of food sticking in the lower chest. She tries to use liquids to wash it down and also tries different positions. She may then get sudden relief. She has noticed some effortless regurgitation. She has lost about 10 pounds unintentionally in the last three months.

- A. In view of the history in this patient, what is the differential diagnosis? (2 Marks)
- B. List additional history that should be obtained? (2 Marks)
- C. Discuss the pathophysiology seen in achalasia? (1 Mark)
- D. What is the diagnostic test that should be done and why? (2 Marks)
- E. Discuss the management options recommended to this patient? (3 Marks)

2. A 48 year old woman noticed a lump in her left breast about 2 months ago. She thinks that it may be slightly larger now. There is no pain. She has never had a mammogram. On examination there is a 3 cm hard mobile mass superiorly in the left breast.

- A. List additional history do you need in this patient? (2 Marks)
- B. What are other important things to note in the physical exam? (2 Marks)

C. Name the diagnostic test to be done to diagnose this lesion? (3 Marks) D. Discuss the treatment approach to be take in the case ? (3 Marks)

Short Answer questions (8 x 5 marks)

1. Discuss the risk factors, pathophysiology and options for management of cholelithiasis? (2+2+1Marks)
2. Cite the predisposing factors,diagnostic workup and the surgical options in a patient with ventral or incisional hernia? (2+1+2Marks)
3. Enumerate the clinical manifestations, investigation and the treatment for pheochromocytoma? (2+2+1Marks)
4. Describe the clinical history and physical finding, investigation and the treatment of wilm's tumor ? (2+2+1Marks)
5. Discuss the diagnostic tests and treatment of peripheral arterial occlusive disease? (2+3Marks)
6. What are the clinical features, investigation and treatment of BPH? (2+1+2Marks)
7. Describe the Clinical features and treatment modality of varicose vein? (2+3 Marks)
8. Enumerate the complications of blood transfusion (Regular and Massive)? (3+2 Marks)

Short Answers (10 x 3 Marks)

1. List the operations that can be performed to treat hemorrhoids? (3Marks)
2. State the options for treating pseudocyst? (3Marks)
3. Write in sequence the potential complications of inguinal hernias making it important to repair them? (3Marks)

4. Write the Significance and boundaries of Calots triangle.(1 + 2 Marks)
5. State the various regulators of calcium metabolism in the body and how do they work? (3Marks)
6. Define paradoxical aciduria and how does it happen? (1 + 2 Marks)
7. Explain intermittent claudication and how is it graded? (1 + 2 Marks)
8. Characterise the different kinds of stones in the urinary tract based on composition? (3 Marks)
9. Enumerate the causes for Intestinal Obstruction. (3 Marks)
- 10.Enumerate the complications of Sebaceous cyst. (3 Marks)

MCQs (10x 1 Mark)

1. A 28-year-old man while working on a building site sustained a fracture of his tibia and fibula having fallen from a ladder. This was promptly treated by open reduction and internal fixation. On the second postoperative day, he developed severe pain in his leg exacerbated by passive movement and sensory loss. A) Compartment syndrome. b) Leg ulcer c) Necrotising soft-tissue infection D) Pressure sore
2. A prenatal ultrasound scan alerted the paediatricians to a congenital abnormality affecting the abdomen and chest. The premature neonate has been born with severe respiratory compromise and is on ventilatory support in the neonatal ICU.
a) Biliary atresia b)2 Congenital diaphragmatic hernia c) Duodenal atresia
d) Hirschsprung's disease
3. 65-year-old woman had a hip replacement 10 days ago. She is ready to be discharged. She went to the toilet just prior to leaving the ward for home. She collapsed in the toilet.
a) Deep vein thrombosis (DVT) b) Hypovolaemic shock c) Pulmonary embolus d) Fat embolism
4. A patient presents following a fall from a third-story window and on primary survey is not maintaining adequate oxygen saturation on high-flow oxygen, is hypotensive, has a raised JVP with left tracheal deviation and the right hemi-thorax is hyper-resonant with no air entry.
a) Cardiac tamponade b) Haemothorax c) Myocardial infarction d) Tension pneumothorax

5. There is a pigmented skin lesion on the scalp that has recently changed in colour and become itchy and started to bleed. There are a few small black spots irregularly scattered around the lesion.

a) Basal cell carcinoma b) Extramammary Paget's disease c) Malignant melanoma (MM) d) Squamous cell carcinoma (SCC)

6. A 78-year-old man presents with a rapidly enlarging mass in the right parotid. The skin overlying the mass is erythematous and the facial nerve function is affected. a) Bacterial parotitis b) Parotid gland cancer c) Pleomorphic adenoma d) Salivary calculus

7. An elderly woman with previous history of Hashimoto's thyroiditis presents with an irregular, hard nodule in her right thyroid lobe a) Anaplastic carcinoma b) Lymphoma c) Medullary Carcinoma d) Papillary Carcinoma

8. A 46-year-old woman has been readmitted to the surgical unit complaining of numbness around her mouth with paresthesia and numbness in her fingers. She has had a few episodes of muscle spasms in her forearms. One week ago she underwent total thyroidectomy with bilateral lymph node dissection for papillary thyroid carcinoma. a) Primary hypoparathyroidism b) Secondary hyperparathyroidism c) Tertiary hyperparathyroidism d) Tetany

9. A 26-year-old breast-feeding mother presents as an emergency with pain, swelling in the right breast and fever for 2 days. a) Breast abscess b) Breast cyst c) Fibroadenoma d) Galactocele

10. A 68-year-old woman underwent an amputation of her right leg following severe crush injury. Three days postoperatively she has pyrexia and tachycardia and looks toxic. The amputation site looks red and brawny with the limb swollen with crepitus in the intermuscular planes.

a) Bacteremia and sepsis b) Cellulitis and lymphangitis. c) Clostridium tetani d) Gas gangrene e) Synergistic spreading gangrene

GENERAL SURGERY MODEL QUESTION PAPER

Long questions 2x10 = 20 marks

1. Describe the etio-pathogenesis, clinical features and management of multi-nodular goiter. Add a note on Plummer's disease. **(2+2+4+2 marks)**
2. A 50-year-old male came with complaints of pain in the right iliac fossa for 1 week, 2-3 episodes of vomiting and intermittent fever. On examination per abdomen is tender, smooth firm swelling noted in right iliac fossa, resonant on percussion, all borders made out. What is your diagnosis? Comment on etiology, signs, management, and give your differential diagnosis.

Short essays 8x5 = 40 marks

3. Classify salivary gland tumours. Describe the histopathology, clinical features and management of pleomorphic adenoma
4. Explain the indications, composition and complications of TPN.
5. Write a note on types of hospital biohazard waste, colour coding and methods of disposal of the same.

6. Explain anatomy of the blood supply of liver and add a note on surgical management options for portal hypertension
7. 35 year old man came with blackening discoloration of right great toe with crampy pain in calf muscles on walking for 100metres relieved on rest and on hanging the limb at the edge of the bed. Patient also is a known smoker since 10years. What is the likely diagnosis. What is Shyanoya criteria?
8. 28 y/o Patient came with complains of inability to retract foreskin with painful erections with sclerosis at the edge of the prepuce. There's no history of multiple sexual partners in past. What is the likely diagnosis and the management of the condition?
9. During a routine elective appendicectomy, there was inadvertent breach of the wall of distal ileum with spillage of its contents into the peritoneal cavity. What type of surgical wound is this? Add a note on types of surgical wounds and need for antibiotic prophylaxis in each.
10. What is massive blood transfusion? What are the possible complications of routine blood transfusion.

Short notes 3x10 = 30 marks

11. Hasselbach's triangle and it's clinical importance
12. Peutz j
Jheger's syndrome
13. PEG(Percutaneous endoscopic gastrostomy)
14. Reynolds Pentad
15. External hemorrhoids
16. Extradural vs subdural hemorrhage
17. Beck's triad
18. Patient came with history of road traffic accident with blunt trauma abdomen. Which is the preliminary radiological examination to rule out hemoperitoneum. Add a note on e-FAST.
19. Bisgard's regimen
20. Alvarado's scoring for acute appendicitis

MCQ's 1x10 = 10 marks

21. Patient came with multiple dilated veins along calf and medial aspect of leg. There was 2*2cm healing ulcer over medial malleolus. What is the clinical stage of the disease? a. C4b b. C4c c.C5 d.C6
22. Caudate lobe of liver belongs to which Couinaud segment? a. II. B. VII c. X. d. I
23. 18y/o male came with history of pain in right lower abdomen and right testis, vomiting. Relieved on scrotal elevation. What is the possible diagnosis? a. Acute Epididymo orchitis. B. Acute appendicitis. C. Torsion testis. D. Torsion of appendix of testis
24. 28 yo man comes to ER with road traffic accident with injury to right side of chest, has laboured breathing. PR- 120bpm, BP-80/50mm Hg, SpO2 70pc absent breath sounds over right hemithorax with hyper-resonance on percussion. What is your Immediate line of management?

a. ICD at 5th intercostal space. B. Needle aspiration over 2nd intercostal space. C. Needle aspiration over 5th intercostal space. D. Connect oxygen via facial mask and Plan for emergency CT thorax

25. Which is not a component of skin involvement of breast cancer?

a. Satellite nodules. B. Peau de orange. C. Puckering and dimpling. D. Ulceration

26. Which swelling does not move on deglutition?

a. Pretracheal lymph node. B. Right solitary nodule thyroid. C. Subhyoid bursitis. D. Suprasternal dermoid cyst.

27. Which is a component of saints triad?

a. Altered mental status. B. Right hypochondriac pain. C. Jaundice. D. Diverticulitis

28. Patient in emergency room post assault with head injury is randomly screaming out bad words and moaning. What is the Verbal component of GCS a. V1. B. V2. C. V3. D. V4

29. Which of the these PDS suture materials is of the narrowest caliber

a. Number 1. B. 1-0. C. 0-2. D. 3-0.

30. Which is a staghorn calculus?

a. CaSO₄. B. Phosphate. C. Uric acid. D. Calcium oxalate

General Surgery Model Question paper

Total marks: 100

LONG ESSAY

2x10= 20

1. Write briefly about Cholecystitis- types, etiopathogenesis, clinical features and management.
2. A 50-year-old male came with complaints of difficulty in swallowing of solids since 5months and to liquids also since 1month. Associated episodes of vomiting and weight loss. On examination per abdomen is soft, non-tender with no palpable mass or lymph nodes. What is the most likely diagnosis? Discuss the approach to management of this patient.

SHORT ESSAY

8X5= 40

3. Classify ulcers and explain in detail about trophic ulcer.
4. A 49 years of diabetic male came with complaints swelling over the nape of neck on examination- 4X4 cm swelling with local rise of temperature, redness present, tenderness present, brawny induration with yellow discharge present. What is your diagnosis? Comment on etiology, symptoms, complication and management.

5. A 45 yr chronic smoker comes with pain and black discoloration of his left great toe since 3 month. He is not able to walk even in house. On examination, his toe is gangrenous and shriveled with cold left lower leg and absent dorsalis pedis pulsations. What might be the condition, the patient is suffering from? Explain the pathology and management of this condition.
6. Write briefly about Solitary nodule of thyroid and its management.
7. A 35yr male has presented with Right upper quadrant abdominal pain with fever. On examination, he is febrile, tachycardic and has right hypochondrium tenderness with right lower intercostal tenderness. What is your diagnosis? Write briefly about the pathogenesis, management & complications of this condition.
8. Complications of acute pancreatitis.
9. Intussusception – types, etiology, clinical features and management.
10. A 55 year perimenopausal lady noticed a lump in her right breast while taking bath. She gives history it has progressed faster recently. On clinical examination, she has 5x6cm irregular, hard, nontender lump which moves along with surrounding breast tissue. Her axilla has 2 enlarged lymph nodes enlarged. What is your diagnosis? Add a note on the types, clinical features, management of this patient.

SHORT ANSWER

10x3= 30

11. Eye signs of toxic goiter
12. Types of abdominal tuberculosis
13. Complications of acute pancreatitis
14. Classification of hernia
15. Complication of gastric ulcer
16. Fissure in ano -types, clinical features and management
17. Branchial cyst
18. Ganglion cyst
19. Erysipelas
20. Malignant melanoma

MCQs

10x1= 10

21. Wound over the bony prominences are called as

- a) Traumatic ulcer b) Tropical ulcer c) Trophic ulcer d) Venous ulcer

22. Moulding sign seen in

- a) Lipoma b) Dermoid cyst c) Pyogenic abscess d) Sebaceous cyst

23. Painful constriction of base of toe is called

- a) Dry gangrene b) Frost bite c) Ainhum d) Acrocyanosis

24. X-ray showing honeycomb/multiloculated feature of mandible

- a) Dentigerous cyst b) Adamantinoma c) Osteoporosis d) Fibrous dysplasia of jaw

25. Swelling in front of the ear which does not move above zygomatic bone

- a) Submandibular abscess b) Pre-auricular lymph node c) Pleomorphic adenoma d) Carotid body tumor

26. Sistrunk operation is done for

- a) Ranula b) Branchial cyst c) Laryngocele d) Thyroglossal cyst

27. Popcorn calcification seen in

- a) Fibrocystic disease b) Traumatic fat necrosis c) Fibroadenoma d) CA breast

28. Raspberry tumor is also called as

- a) Umbilical granuloma b) Carotid body tumor c) Umbilical adenoma d) Omphalitis

29. Rat tail in barium swallow is seen in

- a) Diffuse esophageal spam b) CA Stomach c) Achalasia cardia d) Pyloric stenosis

30. CT brain shows biconvex lesion which indicates

- a) SAH b) SDH c) EDH d) Intracranial abscess

Surgery competencies - Knowledge

Metabolic response to injury					
SU1.1	Describe Basic concepts of homeostasis, enumerate the metabolic changes in injury and their mediators.	Lecture	3, 4 term	MCQs, Quiz, Drills	Theory
SU1.2	Describe the factors that affect the metabolic response to injury.	Lecture	3, 4 term	Quiz	Theory
SU1.3	Describe basic concepts of perioperative care.	Lecture	3, 4 term	Quiz	Theory
Shock					
SU2.1	Describe Pathophysiology of shock, types of shock & principles of resuscitation including fluid replacement and monitoring.	Lecture	3, 4 term	Quiz	Theory

SU2.2	Describe the clinical features of shock and its appropriate treatment.	Lecture	3, 4 term	Quiz	Theory
Blood and blood components					
SU3.1	Describe the Indications and appropriate use of blood and blood products and complications of blood transfusion.	Lecture	3, 4 term	Quiz	Theory
Burns					
SU4.1	Elicit document and present history in a case of Burns and perform physical examination. Describe Pathophysiology of Burns.	Lecture	3, 4 term	Quiz	Theory
SU4.2	Describe Clinical features, Diagnose type and extent of burns and plan appropriate treatment.	Lecture	3, 4 term	Quiz	Theory
SU4.3	Discuss the Medicolegal aspects in burn injuries.	Lecture	3, 4 term	Quiz	Theory
Wound healing and wound care					
SU5.1	Describe normal wound healing and factors affecting healing.	Lecture	5 term	Quiz	Theory
SU5.3	Differentiate the various types of wounds, plan and observe management of wounds.	Lecture	5 term	Quiz	Theory
SU5.4	Discuss medico legal aspects of wounds	Lecture	5 term	Quiz	Theory
Surgical infections					
SU6.1	Define and describe the aetiology and pathogenesis of surgical Infections	Lecture	5 term	Quiz	Theory
SU6.2	Enumerate Prophylactic and therapeutic antibiotics	Lecture	5 term	Quiz	Theory
Surgical Audit and Research					
SU7.1	Describe the Planning and conduct of Surgical audit	Lecture	8,9 ter,	Theory	Theory
SU7.2	Describe the principles and steps of clinical research in General Surgery	Lecture	8,9 term	Theory	Theory
Ethics					

SU8.1	Describe the principles of Ethics as it pertains to General Surgery	Lecture	3, 4 term	Quiz	Theory
Pre, intra and post- operative management.					
SU10.1	Describe the principles of perioperative management of common surgical procedures	Lecture	3,4 term	Quiz	Theory
Anaesthesia and pain management					
SU11.1	Describe principles of Preoperative assessment.	Lecture	6 term	Theory	Theory
SU11.2	Enumerate the principles of general, regional, and local Anaesthesia.	Lecture	6 term	Theory	Theory
SU11.4	Enumerate the indications and principles of day care General Surgery	Lecture	6 term	Theory	Theory
SU11.5	Describe principles of providing post-operative pain relief and management of chronic pain.	Lecture	6 term	Theory	Theory
SU11.6	Describe Principles of safe General Surgery	Lecture	6 term	Theory	Theory
Nutrition and fluid therapy					
SU12.1	Enumerate the causes and consequences of malnutrition in the surgical patient	Lecture	3, 4 term	Quiz	Theory
SU12.2	Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patient	Lecture	3, 4 term	Quiz	Theory
SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications	Lecture	3, 4 term	Quiz	Theory
Transplantation					
SU13.1	Describe the immunological basis of organ transplantation	Lecture	8, 9 term	Theory	Theory
SU13.2	Discuss the Principles of immunosuppressive therapy. Enumerate Indications, describe surgical principles, management of organ transplantation	Lecture	8, 9 term	Theory	Theory
SU13.3	Discuss the legal and ethical issues concerning organ donation	Lecture	8, 9 term	Theory	Theory
Basic Surgical Skills					

SU14.1	Describe Aseptic techniques, sterilization and disinfection.	Lecture	5 term	Quiz	Theory
SU14.2	Describe Surgical approaches, incisions and the use of appropriate instruments in Surgery in general.	Lecture	5 term	Quiz	Theory
SU14.3	Describe the materials and methods used for surgical wound closure and anastomosis (sutures, knots and needles)	Lecture	5 term	Quiz	Theory
Biohazard disposal					
SU15.1	Describe classification of hospital waste and appropriate methods of disposal.	Lecture	9 term	Quiz	Theory
Minimally invasive General Surgery					
SU16.1	Minimally invasive General Surgery: Describe indications advantages and disadvantages of Minimally invasive General Surgery	Lecture	8, 9 term	Theory	Theory
Trauma					
SU17.3	Describe the Principles in management of mass casualties	Lecture	5 term	Quiz	Theory
SU17.4	Describe Pathophysiology, mechanism of head injuries	Lecture	5 term	Quiz	Theory
SU17.5	Describe clinical features for neurological assessment and GCS in head injuries	Lecture	5 term	Quiz	Theory
SU17.6	Chose appropriate investigations and discuss the principles of management of head injuries	Lecture	5 term	Quiz	Theory
SU17.7	Describe the clinical features of soft tissue injuries. Chose	Lecture	5 term	Quiz	Theory

	appropriate investigations and discuss the principles of management.				
SU17.8	Describe the pathophysiology of chest injuries.	Lecture	5 term	Quiz	Theory

SU17.9	Describe the clinical features and principles of management of chest injuries.	Lecture	5 term	Quiz	Theory
Skin and subcutaneous tissue					
SU18.1	Describe the pathogenesis, clinical features and management of various cutaneous and subcutaneous infections.	Lecture	4 term	Quiz	Theory
SU18.2	Classify skin tumors Differentiate different skin tumors and discuss their management.	Lecture	4 term	Quiz	Theory
Developmental anomalies of face, mouth and jaws					
SU19.1	Describe the etiology and classification of cleft lip and palate	Lecture	6 term	Theory	Theory
SU19.2	Describe the Principles of reconstruction of cleft lip and palate	Lecture	6 term	Theory	Theory
Oropharyngeal cancer					
SU20.1	Describe etiopathogenesis of oral cancer symptoms and signs of oropharyngeal cancer.		6 term	Theory	
SU20.2	Enumerate the appropriate investigations and discuss the Principles of treatment.	Lecture	6 term	Theory	Theory
Disorders of salivary glands					
SU21.1	Describe surgical anatomy of the salivary glands, pathology, and clinical presentation of disorders of salivary glands	Lecture	6 term	Theory	Theory
SU21.2	Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands	Lecture	6 term	Theory	Theory
Endocrine General Surgery: Thyroid and parathyroid					
SU22.1	Describe the applied anatomy and physiology of thyroid	Lecture	7 term	Theory	Theory
SU22.2	Describe the etiopathogenesis of thyroidal swellings	Lecture	7 term	Theory	Theory

SU22.4	Describe the clinical features, classification and principles of management of thyroid cancer	Lecture	7 term	Theory	Theory
SU22.5	Describe the applied anatomy of parathyroid	Lecture	7 term	Theory	Theory
SU22.6	Describe and discuss the clinical features of hypo - and hyperparathyroidism and the principles of their management	Lecture	7 term	Theory	Theory
Adrenal glands					
SU23.1	Describe the applied anatomy of adrenal glands	Lecture	7 term	Theory	Theory
SU23.2	Describe the etiology, clinical features and principles of management of disorders of adrenal gland	Lecture	7 term	Theory	Theory
	Describe the clinical features, classification and principles of management of thyroid cancer	Lecture	7 term	Theory	Theory
SU23.3	Describe the clinical features, principles of investigation and management of Adrenal tumors	Lecture	7 term	Theory	Theory
Pancreas			7 term		
SU24.1	Describe the clinical features, principles of investigation, prognosis and management of pancreatitis.	Lecture	7 term	Theory	Theory
SU24.2	Describe the clinical features, principles of investigation, prognosis and management of pancreatic endocrine tumours	Lecture	9 term	Quiz	Theory
SU24.3	Describe the principles of investigation and management of Pancreatic disorders including pancreatitis and endocrine tumors.	Lecture	9 term	Quiz	Theory
Breast					
SU25.1	Describe applied anatomy and appropriate investigations for breast disease	Lecture	7 term	Theory	Theory
SU25.2	Describe the etiopathogenesis, clinical features and principles of management of benign breast disease including infections of the breast	Lecture	7 term	Theory	Theory

SU25.3	Describe the etiopathogenesis, clinical features, Investigations and principles of treatment of benign and malignant tumours of breast.	Lecture	7 term	Theory	Theory
Cardio-thoracic General Surgery- Chest - Heart and Lungs					
SU26.1	Outline the role of surgery in the management of coronary heart disease, valvular heart diseases and congenital heart diseases	Lecture	9 term	Quiz	Theory
SU26.3	Describe the clinical features of mediastinal diseases and the principles of management	Lecture	9 term	Quiz	Theory
SU26.4	Describe the etiology, pathogenesis, clinical features of tumors of lung and the principles of management	Lecture	9 term	Quiz	Theory
Vascular diseases					
SU27.1	Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease.	Lecture	4 term	Quiz	Theory
SU27.3	Describe clinical features, investigations and principles of management of vasospastic disorders	Lecture	4 term	Quiz	Theory
SU27.4	Describe the types of gangrene and principles of amputation	Lecture	4 term	Quiz	Theory
SU27.5	Describe the applied anatomy of venous system of lower limb	Lecture	4 term	Quiz	Theory
SU27.6	Describe pathophysiology, clinical features, Investigations and principles of management of DVT and Varicose veins	Lecture	4 term	Quiz	Theory
SU27.7	Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis and Lymphomas	Lecture	4 term	Quiz	Theory
Abdomen					

SU28.1	Describe pathophysiology, clinical features, Investigations and principles of management of Hernias	Lecture	5 term	Quiz	Theory
SU28.3	Describe causes, clinical features, complications and principles of mangament of peritonitis	Lecture	9 term	Quiz	Theory
SU28.4	Describe pathophysiology, clinical features, investigations and principles of management of Intra-abdominal abscess, mesenteric cyst, and retroperitoneal tumors	Lecture	9 term	Quiz	Theory
SU28.5	Describe the applied Anatomy and physiology of esophagus	Lecture	9 term	Quiz	Theory
SU28.6	Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus	Lecture	9 term	Quiz	Theory
SU28.7	Describe the applied anatomy and physiology of stomach	Lecture	9 term	Quiz	Theory
SU28.8	Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinoma stomach	Lecture	9 term	Quiz	Theory
SU28.10	Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess, hydatid disease, injuries and tumors of the liver	Lecture	9 term	Quiz	Theory
SU28.11	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenic injuries. Describe the post-splenectomy sepsis - prophylaxis	Lecture	9 term	Quiz	Theory

SU28.12	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system	Lecture	9 term	Quiz	Theory
SU28.13	Describe the applied anatomy of small and large intestine	Lecture	9 term	Quiz	Theory

SU28.14	Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome	Lecture	9 term	Quiz	Theory
SU28.15	Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications.	Lecture	9 term	Quiz	Theory
SU28.16	Describe applied anatomy including congenital anomalies of the rectum and anal canal	Lecture	9 term	Quiz	Theory
SU28.17	Describe the clinical features, investigations and principles of management of common anorectal diseases	Lecture	9 term	Quiz	Theory

Urinary System					
SU29.1	Describe the causes, investigations and principles of management of Hematuria	Lecture	8 term	Theory	Theory
SU29.2	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system	Lecture	8 term	Theory	Theory
SU29.3	Describe the Clinical features, Investigations and principles of management of urinary tract infections	Lecture	8 term	Theory	Theory
SU29.4	Describe the clinical features, investigations and principles of management of hydronephrosis	Lecture	8 term	Theory	Theory
SU29.5	Describe the clinical features, investigations and principles of management of renal calculi	Lecture	8 term	Theory	Theory

SU29.6	Describe the clinical features, investigations and principles of management of renal tumours	Lecture	8 term	Theory	Theory
SU29.7	Describe the principles of management of acute and chronic retention of urine	Lecture	8 term	Theory	Theory
SU29.8	Describe the clinical features, investigations and principles of management of bladder cancer	Lecture	8 term	Theory	Theory
SU29.9	Describe the clinical features, investigations and principles of management of disorders of prostate	Lecture	8 term	Theory	Theory

SU29.11	Describe clinical features, investigations and management of urethral strictures	Wound healing and Wound care	Lecture	8 term	Theory	Theory
Penis, Testis, Scrotum						
SU30.1	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis and carcinoma penis.	Lecture	8 term	Theory	Theory	
SU 30.2	Describe the applied anatomy clinical features, investigations and principles of management of undescended testis.	Lecture	8 term	Theory	Theory	
SU30.3	Describe the applied anatomy clinical features, investigations and principles of management of epididymo-orchitis	Lecture	8 term	Theory	Theory	
SU30.4	Describe the applied anatomy clinical features, investigations and principles of management of varicocele	Lecture	8 term	Theory	Theory	
SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele	Lecture	8 term	Theory	Theory	
SU30.6	Describe classification, clinical features, investigations and principles of management of tumours of testis	Lecture	8 term	Theory	Theory	

Surgery competencies – Psychomotor skills

SU5.2	Elicit, document and present a history in a	Clinics	5 term	OSCE/Short	Long

patient presenting with wounds.

case

case/short
case

Ethics

SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery	DOAP	3,4 term	OSCE/Short case	Long case/short case
SU8.3	Discuss Medico-legal issues in surgical practice	Lecture	3, 4 term	OSCE/Short case	Long case/short case

Investigation of surgical patient

Su9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient	Clinics	8, 9 term	OSCE/Short case	Long case/short case
SU9.2	Biological basis for early detection of cancer and multidisciplinary approach in management of cancer	Lecture	8, 9 term	OSCE/Short case	Long case/short case
SU9.3	Communicate the results of surgical investigations and counsel the patient appropriately	DOAP	8, 9 term	OSCE/Short case	Long case/short case
Pre, intra and post- operative management.					
SU10.2	Describe the steps and obtain informed consent in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
SU10.3	Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.	DOAP	8, 9 term	OSCE/Short case	Long case/short case
SU10.4	Perform basic surgical Skills such as First aid including suturing and minor surgical procedures in simulated environment	DOAP	8, 9 term	OSCE/Short case	Long case/short case

Anesthesia and Pain management					
SU11.3	Demonstrate maintenance of an airway in a mannequin or equivalent	DOAP	8, 9 term	OSCE/Short case	Long case/short case
Transplantation					
SU13.4	Counsel patients and relatives on organ donation in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Basic Surgical skills					
SU14.4	Demonstrate the techniques of asepsis and suturing in a simulated environment	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Trauma					

SU17.1	Describe the Principles of FIRST AID	Clinics	5 term	OSCE/Short case	Long case/short case
SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment	DOAP	5 term	OSCE/Short case	Long case/short case
SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.	DOAP	5 term	OSCE/Short case	Long case/short case
Skin and subcutaneous tissue					
SU18.3	Describe and demonstrate the clinical examination of surgical patient including swelling and order relevant investigation for diagnosis. Describe and discuss appropriate treatment plan.	Clinics	3, 4 term	OSCE/Short case	Long case/short case

Endocrine General Surgery: Thyroid and parathyroid					
SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management	Clinics	7 term	OSCE/Short case	Long case/short case
IM12.6	Perform and demonstrate a systematic examination based on the history that will help establish the diagnosis and severity including systemic signs of thyrotoxicosis and hypothyroidism, palpation of the pulse for rate and rhythm abnormalities, neck palpation of the thyroid and lymph nodes and cardiovascular findings	Clinics	7th term	OSCE/Short case	Long case/short case
IM12.7	Demonstrate the correct technique to palpate the thyroid	Clinics	term	OSCE/Short case	Long case/short case
Breast					

SU24.5	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent	Clinics	7 term	OSCE/Short case	Long case/short case
Vascular Diseases					
SU27.2	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease	Clinics	4 term	OSCE/Short case	Long case/short case
SU27.8	Demonstrate the correct examination of the lymphatic system	Clinics	4 term	OSCE/Short case	Long case/short case
Abdomen					

SU28.2	Demonstrate the correct technique to examine the patient with hernia and identify different types of hernias.	Clinics	5 term	OSCE/Short case	Long case/short case
SU28.9	Demonstrate the correct technique of examination of a patient with disorders of the stomach	Clinics	8, 9 term	OSCE/Short case	Long case/short case
SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatment plan	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Urinary System					
SU29.10	Demonstrate a digital rectal examination of the prostate in a mannequin or equivalent	Clinics	8, 9 term	OSCE/Short case	Long case/short case
Blood and blood components					
SU3.2	Observe blood transfusion	Bedside	3,4 th term	OSCE/Short case	Long case/short case
Integration – Paediatric surgery					
PE21.8	Elicit, document and present a history pertaining to diseases of the Genitourinary tract00	Bedside	6,7 term	OSCE/Short case	Bedside clinics, Skills lab

PE21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis pancreatitis perforation intussusception, Phimosis, undescended testis, Chordee, hypospadiasis, Torsion testis, hernia Hydrocele, Vulval Synechiae	Clinics	6,7 term	OSCE/Short case	Bed side clinics, Skills lab
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Skills lab	6,7 term	OSCE	Long case/short case
IM15.7	Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent				DOAP session

Surgery competencies – Communication skills

Shock					
SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Blood and Blood components					
SU3.3	Counsel patients and family/ friends for blood transfusion and blood donation.	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Burns					

SU4.4	Communicate and counsel patients and families on the outcome and rehabilitation demonstrating empathy and care.	Clinics	3, 4 term	OSCE/Short case	Long case/short case
Breast					
SU24.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast	Clinics	8, 9 term	OSCE/Short case	Long case/short case

Horizontal Integration Topics – Internal medicine, Orthopedics, Obstetrics and Gynecology and Anaesthesiology

Internal Medicine					
IM5.8	Describe and discuss the pathophysiology, clinical evolution and complications of cholelithiasis and cholecystitis	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM5.13	Enumerate the indications for ultrasound and other imaging studies including MRCP and ERCP and describe the findings in liver disease	Bed side clinic, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM5.16	Describe and discuss the management of hepatitis, cirrhosis, portal hypertension, ascites, spontaneous, bacterial peritonitis and hepatic encephalopathy	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ / MCQ

IM5.18	Enumerate the indications for hepatic transplantation	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ / MCQ
IM12.8	Generate a differential diagnosis based on the clinical presentation and prioritise it based on	Bed side clinic, Small	6 th and 7 th term	OSCE/short case	Essay/sort essay/SAQ

	the most likely diagnosis	group discussion			/ MCQ
IM12.9	Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radio iodine uptake and scan	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/
IM12.10	Identify atrial fibrillation, pericardial effusion and bradycardia on ECG	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/
IM12.11	Interpret thyroid function tests in hypo-and hyperthyroidism	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/
IM12.13	Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs	Lecture, Small group discussion	6 th and 7 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ
IM12.15	Describe and discuss the indications of thionamide therapy, radio iodine therapy and Surgery in the management of thyrotoxicosis	Bed side clinic, Small group discussion	6 th and 7 th term	OSCE/short case	Longcase/short case/

IM13.7	Elicit document and present a history that will help establish the aetiology of cancer and includes the appropriate risk factors, duration and evolution	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.8	Perform and demonstrate a physical examination that includes an appropriate general and local examination that excludes the diagnosis, extent spread and complications of cancer	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.9	Demonstrate in a mannequin the correct technique for performing breast exam, rectal examination and cervical examination and pap smear	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.10	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.13	Describe and assess pain and suffering objectively in a patient with cancer	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM13.14	Describe the indications for General Surgery, radiation and chemotherapy for common malignancies	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM14.14	Describe and enumerate the indications and side effects of bariatric surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.1	Enumerate, describe and discuss the aetiology of upper and lower GI bleeding	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ

IM15.2	Enumerate describe and discuss the evaluation and steps involved in stabilizing a patient who presents with acute volume loss and GI bleed	DOAP session, Small group discussion, Lecture	8 th and 9 th term	OSCE/short case	Longcase/s hort case/
IM15.3	Describe and discuss the physiologic effects of acute blood and volume loss	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.4	Elicit document and present an appropriate history that identifies the route of bleeding, quantity, grade, volume loss, duration, etiology, comorbid illnesses and risk factors	DOAP session, Small group discussion, Lecture	8 th and 9 th term	MCQs/Quiz/Drill	Longcase/sh ort case/

IM15.5	Perform, demonstrate and document a physical examination based on the history that includes general examination, volume assessment and appropriate abdominal examination	Bedside clinics	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.6	Distinguish between upper and lower gastrointestinal bleeding based on the clinical features	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.8	Generate a differential diagnosis based on the presenting symptoms and clinical features and prioritise based on the most likely diagnosis	Bedside clinic	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.9	Choose and interpret diagnostic tests based on the clinical diagnosis including complete blood count, PT and PTT, stool examination, occult blood, liver function tests, H.pylori test.	Bedside clinic, DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/
IM15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.11	Develop, document and present a treatment plan that includes fluid resuscitation, blood and blood component transfusion, and specific therapy for arresting blood loss	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion	Lecture, Small group discussion	8 th and 9 th term	OSCE/short case	Essay/sort essay/SAQ/MCQ
IM15.13	Observe cross matching and blood / blood component transfusion	Bedside clinic	8 th and 9 th term		Longcase/short case/

IM15.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of pressors used in the treatment of Upper GI bleed	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/ MCQ
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E M	IM15.15	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy of acid peptic disease including <i>Helicobacter pylori</i>	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM15.16	Enumerate the indications for endoscopic interventions and Surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM15.17	Determine appropriate level of specialist consultation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
L c	IM15.18	Counsel the family and patient in an empathetic non-judgmental manner on the diagnosis and therapeutic options	DOAP session	8 th and 9 th term	OSCE/short case
E M	IM16.12	Enumerate and discuss the indications for further investigations including antibodies, colonoscopy, diagnostic imaging and biopsy in the diagnosis of chronic diarrhea	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM16.15	Distinguish, based on the clinical presentation, Crohn's disease from ulcerative colitis	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM16.17	Describe and enumerate the indications for Surgery in inflammatory bowel disease	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM18.15	Enumerate the indications for Surgery in a hemorrhagic stroke	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM19.9	Enumerate the indications for use of Surgery and botulinum toxin in the treatment of movement disorders	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
E M	IM22.2	Describe the aetiology, clinical manifestations, diagnosis and clinical approach to primary hyperparathyroidism	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill
M	IM24.11	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of the elderly undergoing surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill

L r	Obstetrics & Gynecology				
E M	OG26.2	Describe the causes, prevention, clinical features, principles of management of genital injuries and fistulae	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill

Orthopaedics					
OR1.1	Describe and discuss the principles of pre-hospital care and casualty management of a trauma victim including principles of triage	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OR1.2	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of shock	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OR1.4	Describe and discuss the principles of management of soft tissue injuries	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of Bone and Joint infections a) Acute Osteomyelitis b) Subacute osteomyelitis c) Acute Suppurative arthritis d) Septic arthritis & HIV infection e) Spirochaetal infection f) Skeletal Tuberculosis	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OR3.3	Participate as a member in team for procedures like drainage of abscess, sequestrectomy/ saucerisation and arthrotomy	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/

EOR4.1 e M	Describe and discuss the clinical features, Investigation and principles of management of Tuberculosis affecting major joints (Hip, Knee) including cold abscess and caries spine	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	Essay/sort essay/SAQ/MCQ
OG33.2	Describe the principles of management including Surgery and radiotherapy of benign, pre-malignant (CIN) and malignant Lesions of the Cervix	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz/Drill	

OR10.1	Describe and discuss the aetiopathogenesis, clinical features, Investigations and principles of management of benign and malignant bone tumours and pathological fractures	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
OR11.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerve injuries in diseases like foot drop, wrist drop, claw hand, palsies of Radial, Ulnar, Median, Lateral Popliteal and Sciatic Nerves	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
Anaesthesiology					
AS3.1	Describe the principles of preoperative evaluation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
AS3.2	Elicit, present and document an appropriate history including medication history in a patient undergoing Surgery as it pertains to a preoperative anaesthetic evaluation	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/
AS3.3	Demonstrate and document an appropriate clinical examination in a patient undergoing General Surgery	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/
AS3.4	Choose and interpret appropriate testing for patients undergoing Surgery	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
AS3.5	Determine the readiness for General Surgery in a patient based on the preoperative evaluation	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ

AS5.6	Observe and describe the principles and steps/ techniques involved in common blocks used in Surgery(including brachial plexus blocks)	DOAP	8 th and 9 th term	OSCE/short case	Longcase/short case/
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AS6.3	Describe the common complications encountered by patients in the recovery room, their recognition and principles of management	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
AS9.3	Describe the principles of fluid therapy in the preoperative period	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
AS9.4	Enumerate blood products and describe the use of blood products in the preoperative period	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ
AS10.3	Describe the role of communication in patient safety	Lecture, Small group discussion	8 th and 9 th term	MCQs/Quiz /Drill	Essay/sort essay/SAQ/MCQ

Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka



UNDERGRADUATE LOGBOOK (CBME)

DEPARTMENT OF GENERAL SURGERY

Purpose of this logbook

The logbook is a verified record of the progression of the learner documenting the acquisition of the requisite knowledge, skills, attitude, and/or competencies in order to function as an Indian Medical Graduate. It is a record of the academic/cocurricular activities of the designated student, who would be responsible for maintaining his/her logbook.

Entries in the logbook will reflect the activities undertaken in the department and has to be scrutinized by the head of the concerned department.

The logbook is a record of various activities by the student like:

- Overall participation & performance
- Attendance
- Participation in sessions
- Record of completion of pre-determined activities
- Acquisition of selected competencies

The logbook is the record of work done by the candidate in the department and shall be verified by the college before submitting the application of the students for the university examination.

The purposes of this logbook are:

- a. To orient the students to holistic patient management by completing the case record, observing and recording procedures and discussing patient treatment in the therapeutics section.
- b. To facilitate the student's learning process, document the learning process and assist in student assessment
- c. To keep a record of the student's progress in development of the desired skills and attitudes
- d. To ensure that the time spent in the department is well utilized
- e. To form a basis for continual assessment of the student

This log book is a documentation of cases seen, clerked and witnessed by you during your posting in General Surgery. It is also a record of various seminars, case-based learning, simulation exercises and other academic activities that the learner has been a part of during course. Though efforts are made to cover as much as possible, in no way should this be considered the syllabus.

Please carry this book whenever you attend the non-lecture academic activities of the department and get it duly signed by the concerned staff at the end of the academic activity. We expect discipline, honesty, sincerity and punctuality.

The responsibility of completing the logbook and getting it verified/assessed by the faculty lies with the student. The logbook must be carried by the student as per the given instructions.

General Instructions

1. It is expected that the students will adhere to the highest ethical standards and professionalism.
2. Shall maintain punctuality in respect to arrival and completion of the assigned work
3. Maintain a cordial relationship with peers, unit staff and hospital staff
4. Not indulge in any act which would bring disrepute to the institution.
5. You should wear a clean apron and follow the dress regulations as laid down by the college and maintain proper hygiene with wearing respective identification badge while in college and hospital.
6. You should carry the following with you for the clinics
 - a. Clinical text book
 - b. Stethoscope
 - c. Clinical kit for examination as prescribed by the department of surgery.
7. Respect the patient as an individual and recognize that he/she also has rights.
8. Cases that are discussed only have to be documented and not the dummy cases.
9. **Loss of this logbook at any time may affect the formative assessment results and impair the student appearing in the summative assessment.**
10. **The student is solely responsible for maintaining the log book record. If the student loses the logbook, he/she would be withheld from appearing for the University examination unless suitable backup proof is provided.**

Student details

Name of the student	
Roll No (College ID)	
University Registration Number	
Batch	
Contact No	
E mail Id	
Guardian/Parent Name Contact Number	
Faculty Mentor	
Name Department	

BONAFIDE CERTIFICATE

**This is to certify that the candidate Mr/Ms, Reg
No., admitted in the year..... in
College Hospital, has satisfactorily completed / has not completed all requirements
mentioned in this logbook for MBBS course in the subject**

of GENERAL SURGERY including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum,

Graduate Medical Regulation during the period from to.....

He/She is / is not eligible to appear for the University examination as on the date given below.

Signature of Faculty Mentor

Name and Designation

Countersigned by Head of the Department

Date

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S. No.	Content	Page No.
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7.	Clinical posting 2	
8.	Clinical posting 3	
9.	Clinical posting 4	
10.	Check lists for skills assessments	
11.	AETCOM modules	
12.	Integrated sessions	
13.	Small group learning sessions	
14.	Self- Directed Learning sessions	
15.	Seminars presented	
16.	Research projects/publications	
17.	Co - Curricular Activities (Quiz, Poster, Debate, Essay, Skits)	
18.	CME/ Conference / Workshop	
19.	Awards / recognition	

ATTENDANCE EXTRACT

Theory classes

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD

Second Professional				
Third professional- part I				
Third Professional Part II				

Small Group sessions

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD
Third professional- part I				
Third Professional Part II				

Bedside clinics:

Professional Year	Unit From (date) To (date)	Number attended	Number conducted	Percentage of Attendance	Signature of Unit Head	Signature of HOD
Second Professional Posting 1						

Third Professiona I Part I Posting 2						
Third Professiona I Part II Posting 3						
Posting 4						

Note:

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and self-directed learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day in each of the subjects prescribed to be eligible to appear for the university examination.

Overall assessment of the student

	Posting 1	Posting 2	Posting 3	Posting 4
Attendance	/5	/5	/5	/5
Discipline	/5	/5	/5	/5

Middle of posting assessment	/5	/10	/20	/30
End of posting assessment	/5	/15	/20	/30
Student doctor method of learning	/5	/10	/10	-----
Total (/200)	/ 25	/45	/60	/70
Remarks if any				

Total marks obtained on a total of 200 is -----

A student will be permitted to appear for final university exams only if he/she obtains more than 100 marks in the assessments.

Final remarks if any -

Posting 1

Duration: 4 weeks

Date of Posting: From: To:
Unit:

Bedside Clinics in Surgery II MBBS

1	History taking surgery in surgery
2	General Physical examination
3	Eliciting vital signs
4	Examination of an ulcer
5	Examination of a swelling

6	Examination of abdomen
7	Hand wash and draping patients in OT
8	Basic instruments in surgical operation theatre

Learner doctor method

Posting 1

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 1:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/ Observed	Faculty signature
1					

2					
3					
4					
5					
6					
7					
8					
9					
10					

Posting 2
Duration: 4 weeks
Date of Posting: From: To:

Unit:

Learner doctor method

Posting 2

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 2:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
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List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/ Observed	Faculty signature
1					
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Bedside Clinics in Surgery III MBBS Part I

S no.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty* **	Initial of faculty and date	Feedback Received Initial of learner
1	SU22.2	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential diagnosis and their management						
2	SU25.5	Demonstrate the correct technique to palpate the breast for breast lump on a patient						
3	SU27.8	Demonstrate the correct examination of the lymphatic system						
4	SU21.2	Demonstrate and document the correct clinical examination of swelling in the submandibular region and discuss the differential diagnosis and management						

*First or Only (F) Repeat (R) Remedial (Re)

**Below(B) expectations Meets(M) expectations Exceeds (E)expectations

*** Completed (C) Repeat (R) Remedial (Re)

TUTORIALS in Surgery for MBBS Professional –III PART 1

SL No.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty***	Initial of faculty and date	Feedback Received Initial of learner
1	SU2.3	Communicate and counsel patients and families about the treatment and prognosis of shock demonstrating empathy and care						
2	SU4.4	Burns: Communicate and counsel patients and families on the outcome and rehabilitation demonstrating empathy and care.						
3	SU5.2	Elicit, document and present a history in a patient presenting with wounds.						
4	SU6.2	Enumerate Prophylactic and therapeutic antibiotics Plan appropriate management						
5	SU11.5	Describe the steps and obtain informed consent in a simulated environment						

6	SU12.2	Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patient						
7	SU8.2	Demonstrate Professionalism and empathy to the patient undergoing General Surgery						
8	SU3.2	Observe blood transfusions.						
9	SU3.3	Counsel patients and family/ friends for blood transfusion and blood donation.						
1	SU17.2	Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment						
1	SU17.10	Demonstrate Airway maintenance. Recognize and manage tension pneumothorax, hemothorax and flail chest in simulated environment.						

SEMINARS

1	SU4.2	Burns assessment						
1	SU8.3	Discuss Medico-legal issues in surgical practice						
1	SU17.1	Principles of FIRST AID						
1	SU14.3	Surgical Wound Closure and Anastomosis(Sutures , Knots And Needles)						
1	17.3	Mass casualties						
1	17.9	Chest Injuries						
1	SU19.2	Cleft Lip and Palate						
1	SU22.4	Thyroid Cancer						

2	SU22.6	Hyperparathyroidism						
2	SU26.1	Congenital Heart Diseases						
2	SU17.1	Basic life support						
2	SU27.3	Principles of Amputation						

Posting 3
Duration: 8 weeks
Date of Posting: From: To:
Unit:

Clinical postings (8+4*WEEKS)

OPD	Observe and record new and follow up cases in OPD(3hrs)
Post Admission day ward rounds	Follow up of assigned cases(1hr), Bedside clinics SGD,DOAP(1hr), SDL, Discussion and closure (1hr)
OT	Observe OT procedures and document in the logbook with Discussion(3hrs)
Ward	Follow up of assigned cases(1hr), Bedside clinics (SGD, DOAP(1hr), SDL, Discussion and closure (1hr)

Learner doctor method

Posting 3

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 3:

	<u>Diagnosis</u>	Presented/Attended	Signature
1			
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List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/Observed	Faculty signature
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Bedside Clinics in General Surgery for MBBS Third Professional year - Part 2

Bedside Clinics in Surgery For MBBS-PHASE 3

S no.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	At te m pt at ac tiv ity *	Rat ing **	Deci sion of facul ty***	Initial of faculty and date	Feedba ck Receiv ed Initial of learner
	SU21.1	Salivary gland examination						
Abdomen	SU28.9	Demonstrate the correct technique to examine the patient with disorders of stomach						
Abdomen	SU28.18	Describe and demonstrate clinical examination of abdomen. Order relevant investigations. Describe and discuss appropriate treatment plan						
Thyroid	SU22.3	Demonstrate and document the correct clinical examination of thyroid swellings and discuss the differential						

		diagnosis and their management						
Vascular diseases	SU27.2	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease						
Penis, Testis and scrotum	SU30.5	Describe the applied anatomy, clinical features, investigations and principles of management of Hydrocele						
Breast	SU25.5 SU25.4	Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						
Abdomen	SU28.2	Demonstrate the correct technique to examine the patient with hernia and identify different types of hernias						

*First or Only (F) Repeat (R) Remedial (Re)

**Below(B) expectations Meets(M) expectations Exceeds (E)expectations

*** Completed (C) Repeat (R) Remedial (Re)

List of Tutorials and seminars MBBS Part 3

SL No.	Competency No.	Competency addressed	Date completed Dd/m m/yyyy	Attempt at activity*	Rating**	Decision of faculty ***	Initial of faculty and date	Feedback Received Initial of learner
1	SU19.2	Principles of reconstruction of cleft lip and palate						
2	SU20.2	Principles of treatment – Oropharyngeal cancer						
3	SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						
4	SU29.10	Digital rectal examination of the prostate in a mannequin or equivalent						
5	SU9.3	Communicate the results of surgical investigations and counsel the patient appropriately						

6	SU9.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient						
7	SU10.2	Describe the steps and obtain informed consent in a simulated environment						
8	SU10.4	Perform basic surgical Skills such as First aid including suturing and minor surgical procedures in simulated environment						
9	SU11.3	Demonstrate maintenance of an airway in a mannequin or equivalent						
1	SU13.4	Counsel patients and relatives on organ donation in a simulated environment						
1	SU14.4	Demonstrate the techniques of asepsis and suturing in a simulated environment						
1	SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast						

SEMINARS

1	SU28.11	post-splenectomy sepsis - prophylaxis						
1	SU28.4	Short gut syndrome						

Posting 4
Duration: 4 weeks
Date of Posting: From: To:
Unit:

Learner doctor method

Posting 4

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education. A brief summary is to be written at the end of the patient's stay in hospital.

Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty:

Date :

List of Clinical Cases Presented/Attended in Posting 4:

	<u>Diagnosis</u>	Presented/Attended	Signature
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List of Cases observed/assisted in OT/Minor OT:

	<u>Date</u>	Diagnosis	Operative procedure	Assisted/Observed	Faculty signature
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Observe common surgical procedures and assist in minor surgical procedures; Observe emergency lifesaving surgical procedures.

List of Minor Procedures

S.No.	Procedure (Minimum number - 2)	Number observed	Date	Faculty signature
1	ICD insertion			
2	Ryles tube insertion			
3	Foleys catheter insertion			
4	Central line insertion			
5	Swelling excision			
6	Lymph node biopsy			
7	Toe nail excision			
8	Paronychia drainage			
9	Toe disarticulation			
10	Bedside debridement			

List of common surgical procedures

S.No.	Procedure (Minimum number 2)	Number observed	Date	Faculty signature
1	Inguinal Hernia repair			
2	Appendectomy			
3	Fibroadenoma excision			
4	Circumcision			
5	Thyroidectomy			
6	Modified Radical Mastectomy			
7	Varicose vein surgery			

8	Laparotomy			
9	Laparoscopic cholecystectomy			
10	Ventral hernia repair			

TUTORIALS (60 HRS)

SL NO.	COMPETENCY NO.	TOPIC	Date of activity	Faculty feedback	Signature of Faculty
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SEMINAR (40 Hours)

SL NO.	COMPETE NCY NO.	TOPIC	Date of activit y	Faculty feedback	Signatur e of Faculty
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38					
39					
40					

Competency Acquisition: Suggested Log Book pattern

Name of student	Roll number	Year of joining
Specific competency no.		
Competency required to graduate	Universal competency no.	
Administer informed consent to a patient undergoing surgery in a simulated environment (Dreyfus level advanced beginner)		
Competency must be acquired at the end of professional year	IV	
Is the acquisition of this competency a prerequisite to advancement to the next phase	Yes/ No	
Does this competency require performance in a patient	Yes/ No	
Number of times the student must have performed the skill		
	Date Completed	Supervisor
Certified by Faculty: Name, Date and UID		
Student's descriptive narrative of skill acquired		
Faculty only: If the student has not completed the competency, write down the reasons and remedial measures suggested		

Communication skills rating scale adapted from Kalamazoo consensus statement

Rating 1-3 - Poor, 4 -6 Satisfactory, 6 -10 Superior

Criteria	Score
Builds relationship	
Opens the discussion	
Gathers information	
Understands the patient's perspective	
Shares information	
Manages flow	
Overall rating	

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of General surgery

Reflection

Competencies
The student should be able to :

Feedback

Signature of the student:

Assessment:

Signature of the faculty

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of General surgery

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

Competencies
The student should be able to :

--

AETCOM MODULES

Module number:

Date:

--

Name of the activity:

Department of General Surgery

Reflection

Feedback

Signature of the student:

--

Assessment:

Signature of the faculty

	List of AETCOM competency			
Competency No.	Competency	Domain	Date	Signature
8	Identify and discuss medico-legal, socioeconomic and ethical issues as it pertains to organ donation	K/KH		

14	Identify, discuss and defend medico-legal, socio-cultural and ethical issues as it pertains to decision making in emergency care including situations where patients do not have the	K/KH		
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	capability or capacity to give consent			
18	Identify, discuss and defend, medico-legal, socio-cultural and ethical issues as they pertain to consent for surgical procedures	K/KH		

23	Demonstrate ability to communicate to patients in a patient, respectful, nonthreatening, nonjudgemental and empathetic manner	S/SH		
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32	Demonstrate respect and follows the correct procedure when handling cadavers and other biologic tissues	S/SH		
33	Administer informed consent and appropriately address patient queries to a patient undergoing a surgical procedure in a simulated environment	S/SH		

34	Communicate diagnostic and therapeutic options to patient and	S/SH		
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	family in a simulated environment			
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Integrated sessions

	Date of session	Topics covered	Competency numbers addressed	Departments involved in the conduct of the session	Signature of the student	Signature of the faculty
1						
2						
3						
4						

5						
6						

Small group discussions Phase 3, part 1

	Topic	Type of SGD	Date	Observed/Presented	Faculty Sign

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Self-directed learning sessions:

Sl. No.	Date	Topic	Competency number	Signature of the Faculty
11				
12				
13				
14				

15				
16				
17				
18				
19				
20				

	Name of the topic	Date	Signature of the faculty
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1			
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Seminars
presented - phase 3 part 1

	Name of the topic	Date	Signature of the faculty
1			
2			
3			

4			
2			
3			
4			
5			

Seminars presented Phase 3 part 2

5			
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Research projects and publications

	Name of the topic	Date	Signature of the faculty
1			

2			
3			
4			
5			

Co curricular activities -(quiz, poster, debates, essays, skit)

	Name of the topic	Date	Signature of the faculty
1			
2			
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	Name of the topic	Date	Signature of the faculty
1			
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**Participation in CME,
conference, and
workshops.**

6			
7			
8			
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Awards and recognition

	Name of the Award	Date	Signature of the faculty

1			
2			
3			
4			

5			
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Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



Surgery Allied Subjects including
Anaesthesiology
Radiodiagnosis and Radiotherapy
Curriculum as per
Competency-Based Medical Education Curriculum

Theory teaching hours				
Subject	Small group discussions	Interactive Lectures	Self directed learning (Hours)	Total (Hours)
Anaesthesiology	10	8	2	20
Clinical posting				
Anaesthesiology	One week			

THEORY (20 hours) and CLINICS (1 week)					
Sl number	Topic	Competency number	T-L method	Time	Integration

1	Anaesthesiology as a specialty	AS 1.1, 1.2, 1.3, 1.4	Lecture	1 hour	
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**Anesthesiology CBME
Curriculum of Phase-III Part I
MBBS**

Self- Directed learning:

2	Cardiopulmonary resuscitation	AS 2.1, 2.2	Small group discussion, simulation	2 hours	
3	Preoperative evaluation and medication	AS 3.1,3.2,3.3,3.4,3.5,3.6	Lecture Clinics	1 hour	Surgery
4	General Anaesthesia	AS 4.1, 4.2	Lecture	1 hour	
		AS 4.3,4.4,4.5,4.6,4.7	Small group discussion Clinics	2 hours	
5	Regional anaesthesia	AS 5.1, 5.2	Lecture	1 hour	
		AS 5.3,5.4,5.5,5.6	Small group discussion Clinics	2 hours	
6	Intensive Care Management	AS 7.1,7.2	Lecture	1 hour	
		AS 7.3,7.4,7.5	Small group discussion Clinics	2 hours	Medicine
7	Pain and its management	AS 8.1,8.2,.3,8.4,8.5	Lecture	1 hour	
8	Fluids	AS 9.1,9.2	Small group discussion, skills lab	2 hours	
		AS 9.3,9.4	Lecture	1 hour	

9	Patient safety	AS 10.1,10.2,10.3,10.4	Lecture	1 hour	
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Duration: 2 hours Students will be given clinical case scenarios and will be told to work in groups. Reference books and E material will be suggested to them beforehand. Discussion regarding monitoring, identification of high-risk patients, resuscitation and discharge criteria will be done.

Self-Directed Learning - 2 hours				
Sl no	Topic	Competencies	T-L method	Assessment
1	Postanaesthesia recovery	AS 6.1,6.2,6.3	Self-Directed Learning	Formative assessment Recording of team work contribution in Log Book

Assessment and Feedback of Anaesthesia:
Theory paper – 50 marks, Short

essay, MCQs – 1 hour Monitoring Log Book and Feedback

Radiodiagnosis and Radiotherapy CBME Curriculum

<i>Theory teaching hours</i>				
<i>Subject</i>	<i>Teaching hours</i>	<i>Tutorials/Seminars/Integrated teaching (Hours)</i>	<i>Self directed learning (Hours)</i>	<i>Total (Hours)</i>
<i>Radiodiagnosis</i>	<i>10</i>	<i>8</i>	<i>2</i>	<i>20</i>
<i>Clinical posting</i>				
<i>Radiodiagnosis</i>	<i>2 weeks in 2nd MBBS</i>			

THEORY

<i>Blocks</i>	<i>Sl. No.</i>	<i>Topic</i>	<i>Competencies</i>	<i>Time</i>	<i>T/L method</i>
<i>I</i>	<i>1</i>	<i>Definition of radiation; Interaction of radiation with matter;</i>	<i>RD 1.1</i>	<i>1 hour</i>	<i>Lecture</i>
	<i>2</i>	<i>Radiation protection</i>	<i>RD 1.1</i>	<i>1 hour</i>	<i>Lecture</i>
	<i>3</i>	<i>Introduction to imaging modalities</i>	<i>RD 1.2</i>	1 hour	Lecture
	<i>4</i>	<i>X ray and related investigations like fluoroscopy & Mammography</i>	<i>RD 1.2</i>	1 hour	Lecture

	5	<i>Ultrasonography and color doppler</i>	<i>RD 1.2</i>	1 hour	Lecture
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	6	<i>Computed Tomography</i>	<i>RD 1.2</i>	1 hour	Lecture
	7	<i>Magnetic Resonance Imaging</i>	<i>RD 1.2</i>	1 hour	Lecture
	8	<i>Contrast Media and contrast reactions.</i> Management of contrast reactions.	<i>RD 1.2</i>	1 hour	Lecture
	3	<i>Imaging modalities in common malignancies</i>	<i>RD 1.8</i>	1 hour	Lecture
	4	<i>Interventional Radiology in common clinical conditions</i>	<i>RD 1.9</i>	1 hour	Lecture
	5	<i>Pre-procedural Patient preparation for imaging.</i>	<i>RD 1.11</i>	1 hour	Lecture
	6	<i>Effects of radiation on pregnancy and the methods of prevention/minimization of radiation exposure.</i>	<i>RD 1.12</i>	1 hour	Lecture

II	7	<i>Components of PC & PNDT act and its medico-legal implications</i>	<i>RD 1.13</i>	1 hour	Lecture
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Self-Directed learning: Duration: 2 hours

Students will be given clinical case scenarios and asked to suggest the imaging modality of choice. Reference books and E material will be suggested to them beforehand. Discussion regarding the imaging modalities including patient preparation will be done.

Compet Number	Competency	T-L method	Assessment	Integration
PE21.12	Interpret report of Plain radiograph of KUB	DOAP	OSCE	Pediatrics
PE21.13	Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB	DOAP	OSCE	Pediatrics

PE23.13	Interpret a chest radiograph and recognize Cardiomegaly	DOAP	OSCE	Pediatrics
PE23.16	Use the ECHO reports in management of cases	DOAP	OSCE	Pediatrics
PE28.17	Interpret X-ray of the paranasal sinuses	DOAP	OSCE	Pediatrics

weeks in 2nd MBBS

Most of the Show/Shows how competencies are integrated with other clinical subjects

	8	Assessment and feedback (50 marks)		1 hour	Short essay, short answers, MCQs
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**Clinical
posting
-
2**

Self- Directed learning		
Sl. No.	Topics	Competencies
1	Emergency Radiology	RD 1.10
2	Selection of imaging modalities in various common clinical conditions with advantages and disadvantages	RD1.2, RD1.3, RD1.4, RD1.5, RD1.6, RD1.7, RD1.8.

	and mastoid; and /or use written report in case of management Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in Pediatric chest X-rays			
PE30.23	Interpret the reports of EEG, CT, MRI	DOAP	OSCE	Pediatrics
PE34.8	Interpret a Chest radiograph	DOAP	OSCE	Pediatrics
IM3.7	Order and interpret diagnostic tests based on the clinical presentation including: CBC, Chest X ray PA view, Mantoux, sputum gram stain, sputum culture and sensitivity, pleural fluid examination and culture, HIV testing and ABG	DOAP	OSCE	Internal medicine

Tutorials/Seminars/Integrated teaching:

Sl No.	Topic	Competencies	Integration with	Duration (Hours)
1	Imaging and Radiological investigations in common ENT disorders	RD 1.3	ENT	1 hour
2	Imaging and Radiological investigations in common disorders of Obstetrics and Gynecology	RD 1.4	Ob & Gy	1 hour
3	Imaging and Radiological investigations in common disorders related to internal medicine	RD 1.5	Medicine	1 hour
4	Imaging and Radiological investigations in common disorders related to surgery	RD1.6	Surgery	1 hour
5	Imaging and Radiological investigations in common disorder related to Pediatrics	RD1.7	Paediatrics	1 hour
6	Imaging and Radiological investigations in common conditions pertaining to common malignancies	RD1.8, RD 1.3, RD1.4, RD1.5, RD1.6, RD1.7	Oncology	1 hour
7	Effects of Radiation on pregnancy and methods of prevention / minimization of radiation exposure	RD1.12, RD1.4	Ob & Gy	1 hour
8	Components of PC & PNDT act and its medicolegal implications	RD1.13, RD1.4	Forensic PSM	1 hour
		Total		8

Compet	Competency	T-L method	Assessment
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Number			
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Radiotherapy – Competencies

RT1.1	Describe and discuss definition of radiation, mechanism of action of radiation, types of radiation	Lecture/SDL	MCQs/SAQ
RT1.2	Describe and discuss interaction of radiation with matter & measurement of radiation	Lecture/SDL	MCQs/SAQ
RT1.3	Enumerate, describe and discuss classification and staging of cancer (AJCC, FIGO etc.)	Lecture/SDL	MCQs/SAQ
RT2.1	Describe and discuss radiation protection and personnel monitoring during radiation treatment	Lecture/SDL	MCQs/SAQ
RT3.1	Describe and discuss cell cycle and cell survival curve, principles of radiobiology	Lecture/SDL	MCQs/SAQ
RT3.2	Describe and discuss synergism of radiation and chemotherapy	Lecture/SDL	MCQs/SAQ
RT4.1	Describe and discuss teletherapy machine (Co60/LINAC)	Lecture/SDL	MCQs/SAQ
RT4.2	Enumerate, describe and discuss types of treatment plan, basic workflow of 2D/3DCRT/IMRT/IGRT	Lecture/SDL	MCQs/SAQ
RT4.3	Describe and discuss Brachytherapy machine (remote after loading)	Lecture /SDL	MCQs/SAQ
RT4.4	Describe and discuss different radioactive isotopes and their use in cancer patients	Lecture/SDL	MCQs/SAQ
RT4.5	Describe and discuss role of radiation in management of common malignancies in India (region specific)	Lecture/SDL	MCQs/SAQ
RT4.6	Describe and discuss radiotherapy for benign disease	Lecture/SDL	MCQs/SAQ

RT4.7	Counsel patients regarding acute and late effects of radiation and supportive care	DOAP	OSCE
RT4.8	Describe oncological emergencies and palliative care	Lecture/SDL	MCQs/SAQ
RT4.9	Display empathy in the care of patients with cancer	DOAP	OSCE

RAJIV GANDHI UNIVERSITY OF

HEALTH SCIENCES

BANGALORE, KARNATAKA



Anesthesia and Radiodiagnosis
(General Surgery Allied Subjects)

LOGBOOK

For Undergraduates

As Per
Competency-
Based Medical
Education
Curriculum

BASIC PROFORMA OF THE STUDENT

Photo

PARTICULARS OF THE STUDENT:

Name of the student :

MBBS Batch :

Father's name :

Mother's name :

Roll No :

RGUHS Reg No :

Address :

Contact number :

Email-ID :

Signature of the student:.....

PREFACE

This booklet has been adopted from the book prepared by an Expert Group constituted by the university and complies with the “**Guidelines for preparing Logbook for Undergraduate Medical Education Program- 2019**” as per **CBME (Competency Based Medical Education) Guidelines- 2019**. It is for use by faculty members, institutions, and Universities to track and record the progress of an undergraduate student through the specified competencies in Anaesthesia and Radiodiagnosis including Radiotherapy. The model logbook can be used as a guideline by Medical Colleges and Universities, and can be adapted / modified as per requirement.

The Competency based curriculum places emphasis on acquisition of defined knowledge, skills, attitudes and values by the learner so as to be a capable physician of first contact in community. This logbook aims to document the acquisition of these milestones during the learner’s stay in the Departments of Anaesthesia and Radiodiagnosis. This logbook would be a verifiable record of the learner’s progression step-by-step. It has to be maintained as an essential document and filled in a timely manner, to enable progression to the next stage of learning.

Successful documentation and submission of the logbook is a prerequisite for being allowed to take the final summative examination.

Summary of Clinical Case Presentations/Spotters in Anaesthesia

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases in a clinical posting

End of posting Assessment

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

Suggested Methods

- 15. Viva Voce**
- 16. CA-OSCE / OSCE / OSPE**
- 17. Bedside assessment**
- 18. Communication skill (Counselling)**
- 19. Psychomotor skill- Smear preparation, slide preparation, speculum examination**

SUMMARY OF ATTENDANCE

Date	Marks obtained	Total Marks	Feedback Student	Feedback Faculty

Rotation	Phase	Duration (Weeks)	From	To	Total classes held	Number of classes attended	Faculty Signature
1 st	Phase II	2 weeks					

Anaesthesia

**REFLECTIONS: CLINICAL
CASE PRESENTATION**

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase II

Serial Number	Patient Name	Age/Sex	Diagnosis	Date
Student Presenter				
What Happened?				
So What?				

What Next?	
Signature of Faculty	Date

Summary of Clinical Case Presentations/Spotters in Radiodiagnosis

(*Departments may create/continue with a case record book for documentation of cases)

At least 3 cases per clinical posting

Serial No.	Date	Patient Name & ID	Diagnosis	Case Presented/ Attended Write P/A	Facilitator's Signature

End of posting Assessment

Suggested Methods

1. Viva Voce
2. CA-OSCE / OSCE / OSPE
3. Bedside assessment
4. Communication skill (Counselling)
5. Psychomotor skill- Smear preparation, slide preparation, speculum examination

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1st	Phase II	2 weeks					

Radiodiagnosis

REFLECTIONS: CLINICAL CASE PRESENTATION

(Students should preferably reflect on cases which they themselves have presented):

At least one Reflection per Clinical Posting

Phase II

What Happened?	
So What?	
What Next?	
Signature of Faculty	Date

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Orthopedics Curriculum
as per
Competency Based Medical Education

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Goals and Objectives for the undergraduate MBBS curriculum in Orthopaedics (As per Graduate Medical Education Regulations (GMR), 1997 Part II)

GOAL

The aim of teaching the undergraduate student in Orthopaedics (including Trauma) and Physical Medicine and Rehabilitation is to impart such knowledge and skills that may enable him to diagnose and treat common ailments. He/she shall have ability to diagnose and suspect presence of fracture, dislocation, acute osteomyelitis, acute poliomyelitis and common congenital deformities such as Congenital Talipes Equino Varus (CTEV) and Developmental Dysplasia of Hip (DDH).

(a) **COMPETENCIES:** The student must demonstrate:

1. Ability to recognize and assess bone injuries, dislocation and poly-trauma and provide first contact care prior to appropriate referral,
2. Knowledge of the medico-legal aspects of trauma,
3. Ability to recognize and manage common infections of bone and joints in the primary care setting,
4. Recognize common congenital, metabolic, neoplastic, degenerative and inflammatory bone diseases and refer appropriately,
5. Ability to perform simple orthopaedic techniques as applicable to a primary care setting,
6. Ability to recommend rehabilitative services for common orthopaedic problems across all ages.

(b) **INTEGRATION:** The teaching should be aligned and integrated horizontally and vertically in order to allow the student to understand

the structural basis of orthopaedic problems, their management and correlation with function, rehabilitation and quality of life.

List of Topics and Competencies in Phase II MBBS, Phase III Part 1 and Part 2 MBBS			
Sl.No	Topics	Competencies	Procedures requiring certification
1	Skeletal trauma, poly trauma	06	Ni I
2	Fractures	16	Ni I
3	Musculoskeletal Infection	03	Ni I
4	Skeletal Tuberculosis	01	Ni I
5	Rheumatoid Arthritis and associated inflammatory disorders	01	Ni I
6	Degenerative disorders	01	Ni I

7	Metabolic bone disorders	01	Ni I
8	Poliomyelitis	01	Ni I
9	Cerebral Palsy	01	Ni I
10	Bone Tumors	01	Ni I
11	Peripheral nerve injuries	01	Ni I
12	Congenital lesions	01	Ni I
13	Procedural Skills	02	Ni I
14	Counselling Skills	03	Ni I
	Total	39	Ni I

Period of Training in Phase II and Phase III				
	Phase II	Phase III Part 1	Phase III Part 2	Total
Theory	NONE	40 hours	50 hours	90 hours
Clinicals	2 weeks	4 weeks	2 weeks	8 weeks

Minimum Teaching Hours in MBBS Phase II, Phase III Part 1 and Part 2

Term	Lectures (hours)	Small group discussions (SGD) (Tutorials / Seminars) /Integrated learning (hours)	Self Directed Learning (SDL) (hours)	Total (hours)
Phase II	NONE	NONE	NONE	
Phase III Part 1	15	20	05	40
Phase III Part 2	20	25	05	50*
Total				90
<i>* 25% of allotted time shall be utilized for integrated learning</i>				
AETCOM (OR14.1, 14.2, 14.3)				
Phase II				
Phase III Part 1				
Phase III Part 2		2 hours (OR 14.1, 14.2, 14.3)		

Total				
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Specific Learning Objectives

Number	COMPETENCY The student should be able to:	Domain K/S/A/C	Level K/KH /SH/ P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Vertical integration	Horizontal integration
TOPIC : SKELETAL TRAUMA, Poly trauma								
OR1.1	Describe and discuss the Principles of prehospital care and Causality management of a trauma victim including principles of triage.	K	K/KH	Y	Lecture with video, Small group discussion	Written/ Viva voce/ OSCE/ Simulation		GENERAL SURGERY ANESTHESIOLOGY
Specific learning objectives:								
1.1.1	Discuss prehospital trauma care in a polytrauma patient.							
1.1.2	Enumerate interventions that may be performed by emergency personnel prior to transport to hospital in a polytrauma patient.							
1.1.3	Differentiate polytrauma and multiple fracture patients.							
1.1.4	Enumerate the steps in primary survey of a polytrauma patient in Emergency Department (ED).							

1.1.5	Discuss BLS and ATLS.							
1.1.6	Discuss secondary and tertiary survey.							
1.1.7	Discuss the concept of "GOLDEN HOUR"							
1.1.8	Discuss the principles of "TRIAGE"							

1.1.9	List the diagnostic tests done in poly trauma patient in ED.							
1.1.10	Discuss the management of polytrauma patient in ED.							9

OR1. 2	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of shock	K	K/KH	Y	Lecture	Written/ Viva voce/ OSCE/ Simulation		GERERA L SURGER Y
Specific learning objectives:								
1.2.1	Define shock.							
1.2.2	Enumerate the various causes of shock.							

1.2.3	Describe the pathophysiology as a basis for signs and symptoms associated with progression through various stages of shock.							
1.2.4	Classify hemorrhagic shock.							
1.2.5	Discuss the investigative work up in patients with various causes of shock.							
1.2.6	Describe the principles of management of hemorrhagic shock in a poly trauma patient in emergency department.							
1.2.7	Discuss the role of pharmacotherapy in various shock states.							
1.2.8	Discuss massive blood transfusion protocol in hemorrhagic shock.							
1.2.9	Discuss the ideal fluid resuscitation in shock.							

OR1.3	Describe and discuss the aetiopathogenesis, clinical features, investigations, and principles of management of soft tissue injuries	K	K/KH	Y	Lecture, Small group discussion	Written/OSCE		GENERAL SURGERY
Specific learning objectives:								
1.3.1	Enumerate the tissues involved in soft tissue injuries (STI)							
1.3.2	Classify soft tissue injuries							
1.3.3	Discuss the common causes of soft tissue injuries							
1.3.4	Discuss the clinical features of soft tissue injuries							
1.3.5	Discuss the treatment of sprains depending on grading							
1.3.6	Discuss the common investigations to diagnose soft tissue injuries							
1.3.7	List common ligaments which are injured. Knee Joint/ Ankle							
1.3.8	Enumerate the sports which puts athletes in risk for soft tissue injuries with examples.							

1.3.9	List common causes for overuse soft tissue injuries							
1.3.10	Discuss the principles of management of soft tissue injuries.							

OR1.4	Describe and discuss the Principles of management of soft tissue injuries.	K	K/KH	Y	Lecture, small group discussion	Written/ Assessment/ Viva voice		GENERAL SURGERY
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Specific learning objectives:

1.4.1	Discuss the principles of management of soft tissue injuries							
1.4.2	Describe "RICE" protocol in soft tissue injuries.							
1.4.3	Discuss "NO HARM" protocol in soft tissue injuries.							
1.4.4	Discuss the management of chronic overuse soft tissue injuries (tendinitis and bursitis)							

1.4.5	Discuss how will you give prevention tips on avoiding soft tissue injuries for your nonmedical friends.							
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OR1.5	Describe and discuss the aetiopathogenesis , clinical features, investigations, and principles of management of dislocation of major joints, shoulder, knee ,hip.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ Viva voce/ OSCE/ Simulation		
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Specific learning objectives:

1.5.1	Define dislocation and subluxation.							
1.5.2	Discuss etiology and pathoanatomy of shoulder dislocation.							
1.5.3	Classify shoulder dislocations.							
1.5.4	Discuss clinical features of anterior and posterior shoulder dislocation.							
1.5.5	Discuss relevant investigations in shoulder dislocations.							
1.5.6	Define recurrent shoulder dislocations.							
1.5.7	Enumerate the essential lesions of recurrent anterior dislocation.							

1.5.8	Discuss the methods of closed reduction of shoulder dislocations.							
1.5.9	Discuss the post reduction protocol following closed reduction of anterior dislocation of shoulder.							
1.5.10	Enumerate the complications of shoulder dislocations.							

1.5.11	Describe the mechanism of knee dislocations.							
1.5.12	Classify knee dislocations.							
1.5.13	Discuss associated injuries with knee dislocation.							
1.5.14	Discuss relevant investigation in knee dislocation.							
1.5.15	Discuss the management of knee dislocation.							
1.5.16	Enumerate the complications associated with knee dislocations.							
1.5.17	Classify hip dislocations.							
1.5.18	Explain the mechanism and clinical features of anterior dislocation of hip.							

1.5.1 9	Describe the mechanism and clinical features of posterior dislocation of hip.							
1.5.2 0	List the investigation in hip dislocation.							
1.5.2 1	Discuss the management of anterior and posterior dislocation.							
1.5.2 2	Describe the post reduction protocol of hip dislocation.							
1.5.2 3	Enumerate the complication of hip dislocation.							

OR1.6	Participate as a member in the team for closed reduction of shoulder dislocation /hip dislocation /knee dislocation	K	K/KH / SH	Y	Simulation, DOAP session	OSCE/ Simulation		
Specific learning objectives:								
1.6.1	Discuss the principles of closed reduction of a dislocated joint.							
1.6.2	Describe the common closed reduction techniques of shoulder dislocation.							
1.6.3	Describe the common closed reduction techniques of hip dislocation.							

1.6.4	Observe, assist in closed reduction of shoulder dislocation in skill lab as an assistant using various methods.							
1.6.5	Observe , assist in closed reduction of hip dislocation in skill lab as an assistant using various methods.							

TOPIC : FRACTURES								
OR2.1	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fracture of clavicle.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ voce/ OSCE	Viva	
Specific learning objectives:								
2.1.1	Describe the anatomy of clavicle and acromio- clavicular joint.							
2.1.2	Discuss the mechanism of injury of clavicle fracture.							
2.1.3	Discuss the clinical features of clavicle fracture.							
2.1.4	Classify clavicle fractures.							
2.1.5	Enumerate associated injuries in fracture clavicle patient.							

2.1.6	Discuss the principles of management of clavicle fractures.							
2.1.7	List the surgical indications for clavicle fractures.							
2.1.8	Enumerate complications in clavicle fractures.							

OR2.2	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fractures of proximal humerus	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ Viva voce/ OSCE		
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Specific learning objectives:

2.2.1	Describe the anatomy of proximal humerus.							
2.2.2	Discuss the blood supply and its importance.							
2.2.3	Explain the mechanism of injury.							
2.2.4	Discuss the clinical features and relevant investigations.							

2.2.5	Classify proximal humerus fractures.							
2.2.6	Discuss the principles of management of proximal humeral fractures.							
2.2.7	List the surgical indications of proximal humerus fractures.							
2.2.8	Enumerate the complications of proximal humerus fractures.							

OR2.3	Select, prescribe and communicate appropriate medications for relief of joint pain	K	K/K H/S H	Y	Lecture, Small group discussion, Bed side clinic	Written/ voce/ OSCE	Viva		
Specific learning objectives:									
2.3.1	Discuss the pathophysiology of joint pain.								
2.3.2	Enumerate the causes of joint pain .								
2.3.3	How do you evaluate join pain.								
2.3.4	Discuss WHO analgesics ladder								
2.3.5	Describe the role of opioid analgesics used in joint pains.								

2.3.6	Enumerate NSAIDS group of analgesics used in relief of joint pain.							
2.3.7	Mention parental analgesics used in relief of joint pain.							
2.3.8	Discuss the side effects of chronic use of NASIDS in a osteoarthritic joint pain.							
2.3.9	Name some topical analgesics.							
2.3.1 0	Discuss the role of intra-articular steroid injections in osteoarthritis.							
2.3.1 1	Discuss the role of viscosupplementation.in osteoarthritis.							

OR2.4	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of fracture of shaft of humerus and supracondylar fracture humerus with emphasis on neurovascular deficit	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic	Written/ Viva voce/ OSCE		
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Specific learning objectives:

2.4.1	Discuss the mechanism of injury and pathoanatomy of fracture shaft of humerus.							
2.4.2	Describe the classification and various patterns of fracture shaft of humerus.							
2.4.3	Define Holstein-Lewis fracture.							
2.4.4	Discuss the principles of management of fracture shaft of humerus.							
2.4.5	Enumerate various methods of conservative management of fracture shaft of humerus.							
2.4.6	Discuss various surgical methods of fixation of fracture shaft of humerus							
2.4.7	Discuss the management of humerus fracture with radial nerve Injury.							
2.4.8	Define supracondylar fracture of humerus.							
2.4.9	Differentiate supracondylar and intercondylar humerus fractures.							

2.4.10	Classify supracondylar fracture in children.							
2.4.11	Discuss the radiological findings in paediatric supracondylar fracture humerus.							
2.4.12	Discuss the management of paediatric supracondylar fracture humerus.							19

2.4.1 3	Discuss the management of paediatric supracondylar fracture with absent radial pulse.							
2.4.1 4	Define compartment syndrome.							
2.4.1 5	Discuss the investigations and management of compartment syndrome of forearm.							
2.4.1 6	Enumerate the various complications of paediatric supracondylar fracture humerus							

OR2.5	Describe and discuss the aetiopathogenesis, clinical features, mechanism of injury, investigation & principles of management of fractures of both bones forearm and Galeazzi and Monteggia injury	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
Specific learning objectives:								
2.5.1	Describe the anatomy of radius and ulna.							
2.5.2	Discuss the mechanism of injury of fracture both bones of forearm.							
2.5.3	Discuss clinical features and investigations in fracture both bones of forearm.							
2.5.4	Define greenstick fracture.							
2.5.5	Discuss the principles of management of forearm fracture in children							
2.5.6	Discuss the principles of management of forearm fracture in adults							
2.5.7	Define Galeazzi fracture.							

2.5.8	Describe the mechanism of injury, pathoanatomy and clinical features in Galeazzi fracture.							
2.5.9	Classify Galeazzi fracture.							
2.5.10	Discuss the management of Galeazzi fracture							

2.5.11	Define Monteggia fracture.							
2.5.12	Describe the mechanism of injury, pathoanatomy and clinical features of Monteggia fracture.							
2.5.13	Classify Monteggia fracture.							
2.5.14	Discuss the management of Monteggia fracture.							
2.5.15	Enumerate various complications of forearm fractures.							

OR2.6	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of distal radius	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
Specific learning objectives:								
2.6.1	Define Colle's fracture.							
2.6.2	Discuss the mechanism of injury, pathoanatomy and radiological findings in Colle's fracture.							
2.6.3	Define Smith's fracture.							
2.6.4	Define Barton's fracture.							
2.6.5	Describe the criteria for conservative management of fractures of distal radius.							
2.6.6	Discuss the closed reduction technique of Colle's fracture.							
2.6.7	Discuss the surgical management of fractures of distal radius.							

2.6.8	Describe the complications and its management of fractures of distal radius.							
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OR2.7	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of pelvic injuries with emphasis on hemodynamic instability	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ voce/ OSCE	Viva	
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Specific learning objectives:

2.7.1	Discuss the anatomy of pelvis.							
2.7.2	Describe the mechanism of injury, pathoanatomy and clinical features of pelvic fractures.							
2.7.3	Classify pelvic fractures.							
2.7.4	Discuss the investigations in pelvic fractures.							
2.7.5	Describe the principles of management of pelvic fractures.							

2.7.6	How will you assess and manage a patient with pelvic fracture with haemodynamic instability.							
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OR2. 8	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of spine injuries with emphasis on mobilization of the patient	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
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Specific learning objectives

2.8.1	Describe the anatomy of spine.							
2.8.2	Discuss the mechanism of injury, clinical features and investigations of a patient with spine injury.							
2.8.3	Differentiate stable and unstable spine fractures.							
2.8.4	Classify spine fractures.							
2.8.5	Define Hangman's fracture.							
2.8.6	Define whiplash injury.							

2.8.7	Discuss the principles of management of spine fractures.							
2.8.8	Discuss the surgical management of spine fracture with spinal cord injury.							
2.8.9	Discuss how will you rehabilitate quadriplegic and paraplegic patients following spine fractures.							

OR2.10	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of proximal femur.	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva	
Specific learning objectives:								
2.10.1	Discuss the blood supply of femoral head.							
2.10.2	Define and classify Intracapsular fractures of neck of femur.							
2.10.3	Discuss the clinical features and investigations of intracapsular fracture neck of femur							

2.10.4	Discuss the management of intracapsular fracture neck of femur in all age groups.							
2.10.5	Enumerate complications of fracture neck of femur and discuss its management.							
2.10.6	Define extracapsular fracture neck of femur							
2.10.7	Classify extracapsular fracture neck of femur.							
2.10.8	Describe the clinical features, investigations and management of extracapsular fracture neck of femur.							
2.10.9	Discuss the management of intertrochanteric fracture.							

OR2.11	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of (a)Fracture patella (b) Fracture distal femur (c) Fracture proximal tibia with special focus on neurovascular injury and compartment syndrome	K	K/KH/SH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
Specific learning objectives:									

2.11.1	Discuss the anatomy of extensor mechanism of knee.							
2.11.2	Discuss mechanism of injury and clinical features of patella fracture.							
2.11.3	Interpret radiograph of knee with patella fracture patterns.							
2.11.4	Discuss the general principles of management of fracture patella.							
2.11.5	Discuss the mechanism of injury in supracondylar and intercondylar fracture femur.							
2.11.6	Discuss general principles of management of distal femur fractures.							
2.11.7	Classify proximal tibia fractures							
2.11.8	Discuss the general principles of management of proximal tibia fractures.							
2.11.9	Enumerate the common complications of proximal tibia fracture.							

2.11.10	Discuss the etiopathogenesis, clinical features, investigation and management of compartment syndrome with proximal tibia fracture.							
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OR2.12	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Fracture shaft of femur in all age groups and the recognition and management of fat embolism as a complication	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
Specific learning objectives:								
2.12.1	Discuss the etiology of fracture shaft of femur							
2.12.2	Discuss the clinical features and investigations in fracture shaft of femur							
2.12.3	Discuss the management of fracture shaft of femur in children.							
2.12.4	Discuss the management of fracture shaft of femur in adults							
2.12.5	Enumerate the complications of fracture shaft of femur							
2.12.6	Define fat embolism.							

2.12.7	Discuss the clinical features and management of fat embolism.							
2.12.8	Explain the preventive steps to avoid fat embolism in long bone fractures.							

OR2.13	Describe and discuss the aetiopathogenesis, clinical features, Investigation and principles of management of: a) Fracture both bones leg b) Calcaneus c) Small bones of foot	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
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Specific learning objectives:

2.13.1	Discuss the mechanism and clinical features of fracture both bones of leg							
2.13.2	Discuss the conservative and surgical management of fracture both bones of leg							
2.13.3	Discuss the management of isolated fibula fracture							
2.13.4	Discuss the fractures caused due to fall from height							
2.13.5	Classify calcaneal fractures.							

2.13.6	Discuss the radiological findings and management of calcaneal fractures.							
2.13.7	What is Aviator's fracture.							
2.13.8	Define Jones fracture							

OR2.14	Describe and discuss the aetiopathogenesis, clinical features, Investigation and principles of management of ankle fractures	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/voce/ OSCE	Viva		
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Specific learning objectives:

2.14.1	Discuss the mechanism of injury of ankle fractures.							
2.14.2	Classify ankle fractures							
2.14.3	Discuss the principles of management of ankle fractures							
2.14.4	Define Cotton's fracture.							
2.14.5	Mention the complications of ankle fractures.							

OR2.15	Plan and interpret the investigations to diagnose complications of fractures like malunion, non-union, infection, compartment syndrome	K	K/K H	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce/ OSCE		
Specific learning objectives:								
2.15.1	Enumerate immediate, early and late complications of fractures.							
2.15.2	Define malunion							
2.15.3	Define nonunion.							
2.15.4	Define delayed union.							
2.15.5	Discuss the factors affecting fracture healing							
2.15.6	Classify nonunion of long bones.							
2.15.7	List the radiological investigations in nonunion.							
2.15.8	Discuss the investigation to rule out infections following fractures.							
2.15.9	Discuss the management of nonunion.							
2.15.10	Discuss the management of malunion.							
2.15.11	Define compartment syndrome.							
2.15.12	Discuss the clinical features of compartment syndrome.							

2.15.13	Discuss the investigations to rule out compartment syndrome.							
2.15.14	Discuss the indications for fasciotomy.							
2.15.15	Discuss the sequelae of compartment syndrome.							

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OR2.16	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of open fractures with focus on secondary infection prevention and management	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ voce/ OSCE	Viva		
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Specific learning objectives:

2.16.1	Define open fractures.							
2.16.2	Classify open fractures.							
2.16.3	Discuss the etiology in open fractures.							
2.16.4	Discuss the management of open fractures.							
2.16.5	Describe antibiotic prophylaxis in open fractures.							

2.16.6	Discuss wound debridement and role of irrigation in open fractures.							
2.16.7	Enumerate the complications of open fractures.							
2.16.8	Discuss the prophylaxis against tetanus and gas gangrene.							

TOPIC: Musculoskeletal Infection								
OR3.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of bone and joint infections. a) Acute Osteomyelitis. b) Subacute osteomyelitis. c) Acute Suppurative arthritis. d) Septic arthritis & HIV infection e) Spirochetal infection	K	K/KH	Y	Lecture, small group discussion, video assisted lecture	Written/ Viva voice/OSCE	Pathology, Microbiology	General Surgery
Specific learning objectives:								
3.1.1	Define osteomyelitis.							
3.1.2	Classify osteomyelitis.							
3.1.3	Discuss the epidemiological aspects of osteomyelitis.							

3.1.11	Define saucerization.								33
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3.1.4	Define septic arthritis.								
3.1.5	List the common organisms causing acute osteomyelitis.								
3.1.6	Discuss the routes of infection in osteomyelitis.								
3.1.7	Discuss the risk factors associated with osteomyelitis.								
3.1.8	Describe the clinical features and investigations in acute, subacute and chronic osteomyelitis.								
3.1.9	Enumerate types of sequestrum.								
3.1.10	Describe the principles of management of acute, subacute and chronic osteomyelitis.								

3.1.1 2	Enumerate the complications of chronic osteomyelitis.								
3.1.1 3	Describe the clinical features, investigations and management of septic arthritis.								
3.1.1 4	Discuss the characteristics and management of septic arthritis in HIV patients.								

OR3.2	Participate as a member in team for aspiration of joints under supervision.	K	K/KH/S H	Y	Small group, Discussion. DOAP session	Viva voice/ OSCE/ Skill assessment.		
Specific learning objectives:								
3.2.1	Define arthrocentesis.							
3.2.2	Discuss indications for arthrocentesis.							
3.2.3	Describe the informed consent procedure before aspirations.							
3.2.4	Perform the procedure of arthrocentesis of knee on a mannequin under supervision.							
3.2.5	Enumerate the complications of arthrocentesis.							

OR3.3	Participate as a member in team for procedure like drainage of abscess , sequestrectomy/ saucerization and arthrotomy.	K	K/KH/S H	Y	DOAP session, Video demonstratio n	Viva voice/OSCE/Ski lls assessment.		General Surgery
Specific learning objectives:								
3.3.1	Define abscess.							
3.3.2	Discuss the indications and contra indications of incision and drainage (I&D).							
3.3.3	Describe the procedure of I&D including appropriate anesthesia.							
3.3.4	Discuss the importance of aftercare and patient education about abscess and I&D.							
3.3.5	Define arthrotomy.							
3.3.6	Discuss the indications of arthrotomy.							
3.3.7	Discuss the procedure of arthrotomy of knee joint.							
3.3.8	Define sequestrum.							
3.3.9	Discuss the types of sequestrum.							
3.3.10	Enumerate the operative methods in chronic osteomyelitis							

3.3.11	Differentiate involucrum from sequestrum.							
3.3.12	Discuss the procedure of saucerization.							
3.3.13	Mention the prerequisites before doing sequestrectomy.							

Topic : Skeletal Tuberculosis

OR4.1	Describe and discuss the clinical features , investigation and principles of management of tuberculosis affecting major joints (hip, knee) including cold abscess and caries spine.	K	K/KH	Y	Lecture, Small group discussion, Case discussion.	Written voice/ OSCE /Viva	Pathology	General surgery
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Specific learning objectives:

4.1.1	Discuss the epidemiology of skeletal tuberculosis.							
4.1.2	Describe the pathogenesis, clinical features and radiological findings in tuberculosis of hip.							
4.1.3	Enumerate the stages of TB hip.							
4.1.4	Discuss the medical and surgical management of TB hip.							
4.1.5	Discuss triple deformity of knee.							
4.1.6	Discuss the management of TB knee.							

4.1.13	Discuss psoas abscess and its management.							
4.1.7	Describe the pathogenesis, clinical features and investigations of TB spine.							
4.1.8	Discuss the general principles of management of TB spine.							
4.1.9	Define Pott's paraplegia.							
4.1.10	Enumerate the causes of Pott's paraplegia.							
4.1.11	Define cold abscess. List the locations where cold abscess are seen.							
4.1.12	Discuss the mechanism of action, dose ,regimen and side effects of anti-tubercular drugs.							

Topic: Rheumatoid Arthritis and associated inflammatory disorders.

OR5.1	Describe and discuss the aetiopathogenesis , clinical features, investigations and principles of management of various inflammatory disorders of joints.	K	K/KH	Y	Lecture , Small group discussion, Bedside clinic	Written/Vi va voice/OSCE		General medicine.
Specific learning objectives:								
5.1.1	Define poly arthritis.							
5.1.2	Enumerate the causes of poly arthritic joint pain							
5.1.3	Enumerate various causes of inflammatory joint diseases.							
5.1.4	Describe the etiopathogenesis, clinical features and investigations of rheumatoid arthritis.							
5.1.5	Discuss the articular deformities in rheumatoid arthritis							
5.1.6	Discuss the extra articular manifestations in rheumatoid arthritis							
5.1.7	Describe the medical management of rheumatoid arthritis.							
5.1.8	Describe the mechanism of action, dosage and side effects of DMARDS.							

5.1.9	Enumerate various causes of seronegative arthritis.							
5.1.10	Discuss ankylosing spondylitis							
5.1.11	Describe clinical features, investigations and management of crystalline arthropathies							

Topic: Degenerative disorders

OR6.1	Describe and discuss the clinical features, investigations and principles of management of degenerative condition of spine (cervical Spondylosis, Lumbar Spondylosis, IVDP)	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written/Viva voice/OSCE		
Specific learning objectives:								
6.1.1	Define degenerative disc disease.							
6.1.2	Discuss the etiopathogenesis and clinical features of intervertebral disc prolapse (IVDP).							
6.1.3	Discuss the general principles of management of IVDP.							
6.1.4	Discuss the differential diagnosis of radicular pain of lower limbs.							
6.1.5	Discuss the differential diagnosis of Low back pain.							
6.1.6	Define cervical spondylosis.							

6.1.7	Discuss the clinical features, radiological findings and management of cervical spondylosis.							
6.1.8	Define lumbar spondylosis.							
6.1.9	Discuss the clinical features, radiological findings and management of lumbar spondylosis							
6.1.10	Define spondylolisthesis.							

Topic : Metabolic bone disorders

OR7.1	Describe and discuss the aetiopathogenesis, clinical features , investigations and principles of management of metabolic bone disorders in particular osteoporosis , osteomalacia, rickets , Paget's disease.	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written /Viva voice/ OSCE		
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Specific learning objectives:

7.1.1	Define rickets and osteomalacia.							
7.1.2	Discuss the etiopathogenesis, clinical features and investigations of rickets.							
7.1.3	Discuss the pathophysiology, clinical features and investigations of osteomalacia.							
7.1.4	Discuss the medical management of rickets and osteomalacia.							

7.1.5	Discuss the deformities in rickets and its surgical management.							
7.1.6	Define osteoporosis.							
7.1.7	Discuss the etiology and risk factors for osteoporosis.							
7.1.8	Classify osteoporosis.							
7.1.9	Describe the clinical features and investigations in osteoporosis.							
7.1.10	Discuss the general principles of management of osteoporosis.							
7.1.11	Discuss DEXA scan.							

7.1.12	Enumerate the common osteoporotic fractures.							
7.1.13	Discuss the lifestyle measures to prevent osteoporosis and its complications.							
7.1.14	Define Paget's disease.							
7.1.15	Discuss the clinical features, investigations and management of Paget's disease							

OR7.2	Perform a systematic examination of a patient with deformity of Knee.	K	K/KH/SH	Y	DOAP session, Video demonstration	Viva voice/OSCE/Skills assessment.		General Surgery
Specific learning objectives:								
7.2.1	Take an elaborate history in chronological order							
7.2.2	Perform generalized examination of patient							

7.2.3	Perform localized examination of the affected limb and discuss in terms of inspection, palpation, movements and measurements							
7.2.4	Define Genu Varum and Valgum and discuss etiologies and pathogenesis							
7.2.5	Discuss investigations required to diagnose and plan management of a patient with knee deformity							
7.2.6	Discuss management.							

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Topic : Poliomyelitis								
OR8.1	Describe and discuss the aetipathogenesis, clinical features, assessment and principles of managing a patient with Post Polio Residual Paralysis.	K	K/KH	Y	Lecture , Small group discussion, Case discussion	Written /Viva voice/OSCE		
Specific learning objectives:								
8.1.1	Define poliomyelitis.							
8.1.2	Discuss the etiology, pathogenesis and clinical features of poliomyelitis.							
8.1.3	Discuss the types of poliomyelitis and its complications.							
8.1.4	What is PPRP(Post Polio Residual Paralysis).							

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8.1.5	Discuss the signs and symptoms in post polio syndrome.							
8.1.6	How do you recognize the paralysis caused by poliomyelitis.							
8.1.7	Enumerate the common secondary problems following poliomyelitis.							
8.1.8	Mention the common contractures and deformities in PPRP.							
8.1.9	Discuss how do you evaluate a case of PPRP.							
8.1.10	Discuss the general principles of management of PPRP.							

Topic : Cerebral Palsy								
OR9.1	Describe and discuss the aetiopathogenesis , clinical features, assessment and principles of management of cerebral palsy patient.	K	K/KH	Y	Lecture , Small group discussion	Written/ voice/ OSCE	Viva	
Specific learning objectives:								
9.1.1	Define cerebral palsy.							

9.1.2	Discuss the etiopathogenesis of cerebral palsy.							
9.1.3	Classify cerebral palsy.							
9.1.4	Discuss the clinical features and investigations of cerebral palsy.							
9.1.5	Discuss the general principles of management of cerebral palsy.							
9.1.6	Discuss the common deformities of cerebral palsy.							
9.1.7	Mention common surgical procedures done in cerebral palsy.							

Topic : Bone tumors

OR10.1	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of benign and malignant bone tumors and pathological fractures.	K	K/KH	Y	Lecture , Small group discussion , Video assisted interactive lecture	Written/Viva voice/ OSCE	Pathology	General surgery. Radiotherapy
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Specific learning objectives:

10.1.1	Classify bone tumors.							
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10.1.13	Discuss the general principles of management of pathological fractures.							
10.1.2	Enumerate common benign tumors.							
10.1.3	Discuss aetiopathogenesis, clinical features , investigations and management of Osteochondroma.							
10.1.4	List the complications of Osteochondroma.							
10.1.5	Discuss the etiopathogenesis, clinical features, radiological findings and management of Osteoclastoma.							
10.1.6	Discuss Enneking staging of malignant bone tumors.							
10.1.7	Discuss the technique of open bone biopsy in malignant bone tumors.							
10.1.8	Describe the etiopathogenesis, clinical features, investigations and management of osteosarcoma.							
10.1.9	Discuss the etiopathogenesis, clinical features, investigations and management of Ewing's sarcoma.							
10.1.10	Define pathological fracture.							
10.1.11	Enumerate the causes of pathological fracture.							
10.1.12	Discuss the criteria for impending pathological fracture.							

OR 10.2	Perform a systematic examination of a patient with bony swelling	K	K/KH/S H	Y	DOAP session, Video demonstration	Viva voice/OSCE/Skills assessment.		General Surgery
Specific learning objectives:								
10.2.1	Take an elaborate history in chronological order							
10.2.2	Perform generalized examination of patient							
10.2.3	Perform localized examination of the affected limb and discuss in terms of inspection, palpation, movements and measurements							
10.2.4	Discuss differential diagnosis of bony swellings/tumors.							
10.2.5	Discuss investigations required to establish diagnosis and plan management of benign and malignant tumors							
10.2.6	Discuss medical and surgical management of bony swelling.							

11.1.9	Discuss the etiology, clinical tests and management of sciatic nerve injury.							
11.1.10	Discuss various splints used in peripheral nerve injuries							

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Topic: Congenital lesions								
OR12.1	Describe and discuss the clinical features , investigations and principles of management of Congenital and acquired malformations of deformities of a. limbs and spine - Scoliosis and spinal bifida. b. Developmental Dysplasia of Hip (DDH), Torticollis. c. Congenital Talipes Equino Varus (CTEV).	K	K/K H	Y	Lecture, Small group discussion.	Written / voice/ OSCE	Viva	Human anatomy
Specific learning objectives:								
12.1.1	Define scoliosis and kyphosis.							
12.1.2	Discuss the causes, clinical features, investigations and management of scoliosis.							
12.1.3	Define spina bifida.							
12.1.4	Discuss the etiology, clinical features, investigations and management of spina bifida.							

	CTEV.							
12.1.5	Describe the etiology, pathoanatomy, clinical features and investigations of DDH.							
12.1.6	Discuss the general principles of management of DDH.							
12.1.7	Enumerate the causes of Torticollis.							
12.1.8	Discuss the clinical features, investigations and management of Torticollis.							
12.1.9	Describe the etiology, pathoanatomy , clinical features and investigations of CTEV.							
12.1.10	Discuss the general principles of management of CTEV.							
12.1.11	Discuss the correction techniques of CTEV.							
12.1.12	Enumerate the common surgical procedures performed for							

Topic: Procedural Skills								
OR13.1	Participate in a team for procedures in patients and demonstrating the ability to perform on mannequins/ simulated patients in the following: i. Above elbow plaster. ii. Below knee plaster. iii. Above knee plaster. iv. Thomas splint. v. Splinting for long bone fractures. vi. Strapping for shoulder and clavicle trauma.	K	K/KH/S H	Y	Case discussion, Video assisted Lecture, Small group discussion, Teaching , Skill lab sessions	OSCE with Simulation based assessment.		
Specific learning objectives:								
13.1.1	Differentiate cast and slab.							
13.1.2	Discuss the precautions to be followed during and after plaster application.							
13.1.3	Perform under supervision application of above elbow slab for an undisplaced supracondylar fracture.							
13.1.4	Perform under supervision the application of Colle's cast .							
13.1.5	Perform under supervision the application of above knee plaster slab to immobile proximal tibia fracture.							
13.1.6	Identify Thomas splint and enumerate its uses.							

13.1.7	Perform under supervision the application of strapping for clavicle Fractures.							
13.1.8	Perform under supervision the application of Thomas splint for fracture shaft femur							

OR13.2	Participate as a member in team for Resuscitation of Polytrauma victim by doing all of the following: (a) IV access central- peripheral (b) Bladder catheterization (c) Endotracheal intubation. (d) Splintage	K	K/KH/SH	Y	Case discussion, Video assisted Lecture, Small group discussion, Teaching, Skill lab sessions	OSCE with Simulation based assessment		Anesthesiology
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Specific learning objectives:

13.2.1	Perform under supervision in getting IV access on a mannequin in a skill lab.							
13.2.2	Perform bladder catheterization under supervision in skill lab.							
13.2.3	Perform endotracheal intubation under supervision on a mannequin in a skill lab.							
13.2.4	Perform neck immobilization using cervical collar in a polytrauma patient under supervision.							

13.2.5	Perform under supervision the use of Thomas splint to immobilize fracture both bones leg in a polytrauma patient.							
13.2.6	Perform under supervision the use of pelvic binder in a case of pelvic fracture with haemodynamic instability							

Topic : Counselling Skills

OR14.1	Demonstrate the ability to counsel patients regarding prognosis in patients with various orthopaedic illness like a. fracture with disabilities. b. fracture that requires prolonged bed stay. c. bone tumours d. congenital disabilities.	K/C	K/KH/SH	Y	Case discussion, Video assisted lecture, Small group discussion, Teaching, Skill lab sessions.	OSCE with Simulation based assessment		AETCOM
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Specific learning objectives:

14.1.1	Demonstrate ability to communicate to patients with fractures, that multiple complications can occur leading to loss of skeletal function, restricted range of motion and neurovascular damage that can severely compromise function and performance.							
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14.1.2	Demonstrate ability to communicate to patients with multiple osteoporotic vertebral fractures about the necessity of prolonged bed rest and its complication.							
14.1.3	Demonstrate ability to counsel to patients with bone tumors , the prognosis, or outlook for survival depending on the particular type of bone tumor and extent to which it had spread.							
14.1.4	Demonstrate ability to counsel parents about children with congenital disabilities with respect to function, performance and cosmesis.							

OR14.2	Demonstrate the ability to counsel patients to obtain consent for various orthopaedic procedures like limb amputation, permanent fixations etc.	K/C	K/KH/ SH	Y	Case discussion, Video assisted lecture , Small group discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment		AETCOM
Specific learning objectives:								

14.2.1	Demonstrate the ability to counsel a patient with limb amputation for serious trauma (crush or blast), about the advantages, recovery , rehabilitation and functional recovery.							
14.2.2	Demonstrate the ability to obtain informed consent from patient and family in a simulated environment.							
14.2.3	Communicate diagnostic and therapeutic options to patient and family for fracture fixation to obtain informed consent							

OR14.3	Demonstrate the ability to convince the patient for referral to a higher center in various orthopaedic illness , based on the detection of warning signals and need for sophisticated management.	K/C	K/KHS H	Y	Case discussion, Video assisted lecture , Small group discussion, Teaching, Skills lab sessions	OSCE with Simulation based assessment		AETCOM
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Specific learning objectives:

14.3.1	Enumerate common orthopedic emergencies which needs timely referral to a higher tertiary center .							
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14.3.2	Demonstrate the ability to convince about referring patient with fracture proximal tibia associated with vascular injury to higher center.							
14.3.3	Demonstrate the ability to convince about referring patient with traumatic amputation of leg to higher center for replantation.							
14.3.4	Demonstrate the ability to convince about referring a spinal cord injury patient to higher center.							

Model Time table for Phase II MBBS, Phase III Part 1 and Part 2 MBBS

Phase II (2 weeks Clinical Posting)	
	9.00 AM to 12.00 Noon
Monday	Postings

Tuesday	Postings
Wednesday	Postings
Thursday	Postings
Friday	Postings
Saturday	X

Phase III Part 1 (4 weeks Clinical Posting + 5 SDL + 20hrs SGD/IT+ 15hrs Lectures)			
	9.00 AM to 12.00 Noon	12.01 Pm to 1.00 PM <i>5 SDL+ 19 SGD/IT</i>	2.00PM to 3.00 PM
Monday	Postings	SDL/SGD/IT	
Tuesday	Postings	SDL/SGD/IT	

Wednesday	Postings	SDL/SGD/IT	<i>15 Lectures + 1 SGD/IT</i>
Thursday	Postings	SDL/SGD/IT	
Friday	Postings	SDL/SGD/IT	
Saturday	Postings	SDL/SGD/IT	

Phase III Part 2 (2 weeks Clinical Posting + 5 SDL+ 25 SGL/IT+ 20 Lectures)			
	9.00 AM to 12.00 Noon	12.01 Pm to 1.00 PM <i>(5 SDL+ 7 SGD/IT)</i>	2.00PM to 3.00 PM
Monday	Postings	SDL/SGD/IT	
Tuesday	Postings	SDL/SGD/IT	

Wednesday	Postings	SDL/SGD/IT	<i>20 Lectures+ 18 SGD/IT</i>
Thursday	Postings	SDL/SGD/IT	
Friday	Postings	SDL/SGD/IT	
Saturday	Postings	SDL/SGD/IT	

List of Competencies to cover in each phase of MBBS

**Lectures in Phase III Part 1 and Part 2
MBBS**

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR1.1, 1.2, 1.3, 1.4, 1.5	
2	Fractures	OR 2.1, 2.2, 2.4, 2.5, 2.6, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16	2.7, 2.8
3	Musculoskeletal Infection		3.1
4	Skeletal Tuberculosis		4.1
5	Rheumatoid Arthritis and associated inflammatory disorders		5.1
6	Degenerative disorders		6.1
7	Metabolic bone disorders		7.1
8	Poliomyelitis		8.1

14	Total Hours	15 hours	20 hours
9	Cerebral Palsy		9.1
10	Bone Tumors		10.1
11	Peripheral nerve injuries		11.1
12	Congenital lesions		12.1
13	Physical Medicine and Rehabilitation		PM1.2,1.3, 1.4, 5.1, 5.2, 5.3, 5.4, 7.7, 8.1

Small group discussions (Tutorials / Seminars) in Phase III Part 1 and Part 2 MBBS

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR1.1, 1.2, 1.3, 1.4, 1.5, 1.6	
2	Fractures	OR 2.3, 2.4, 2.5, 2.10, 2.12, 2.14, 2.16	2.7, 2.8
3	Musculoskeletal Infection		3.2, 3.3
4	Skeletal Tuberculosis		4.1
5	Rheumatoid Arthritis and associated inflammatory disorders		5.1
6	Metabolic bone disorders		7.1
7	Bone Tumors		10.1
8	Peripheral nerve injuries		11.1

9	Congenital lesions		12.1
10	Counseling Skills	14.1,14.2,14.3	
	Total Hours	14 Hours	9 Hours

**Integrated learning in Phase III Part 1 and Part 2
MBBS**

Sl.No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Anatomy	AN2.4,2.5,8.4, 8.6, 17.2, 10.12, 17.3, 18.6, 18.7, 11.4, 19.4, 19.6, 19.7	
2	Microbiology		MI 4.2
3	Forensic medicine		FM3.7, 3.8, 3.9, 3.10, 3.11, 3.12
4	Pathology		PA33.1, 33.2, 33.2, 33.4
5	General Medicine		IM7.4, 7.6, 7.7, 7.8, 7.9, 7.10, 24.12, 24.13, 24.14. 24.16
6	Physical Medicine and Rehabilitation		PM 5.1, 5.2, 5.3, 5.4 6.3, 6.4, 2.4, 7.4, 7.5

	Total Hours	6 hours	16 hours
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Self Directed Learning in Phase III Part 1 and Part 2			
MBBS			
Sl. No	Topics	MBBS Phase III, Part 1 Competencies to be covered	MBBS Phase III, Part 2 Competencies to be covered
1	Skeletal trauma, poly trauma	OR 1.5,1.6	
2	Fractures	OR 2.15	OR 2.7, OR 2.8
3	Musculoskeletal Infection		OR 3.1
9	Cerebral Palsy		
10	Bone Tumors		OR 10.1

11	Peripheral nerve injuries		OR 11.1
13	Physical Medicine and Rehabilitation	PM5.3, PM5.4, PM7.2,	
14	Total Hours	5 Hours	5 Hours

Time allotment for Competencies in Phase III Part 1					
MBBS					
Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
1	Skeletal trauma, poly trauma	OR1.1	1	1	1
		OR1.2	1	1	
		OR13, OR1.4	1	1	
		OR1.5	1	1	1
		OR 1.6		1	

2	Fractures	OR 2.1, 2.2	1		
		OR 2.3		1	
		OR 2.4	1	1	
		OR 2.5	1	1	
		OR 2.6	1		
		OR 2.10	1	1	
		OR 2.11	1		
		OR2.12	1	1	
		OR 2.13	1		
		OR 2.14	1		
		OR 2.15	1	1	1
		OR 2.16	1	1	

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**Time allotment for Competencies in Phase III Part 1
MBBS**

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
3	Counseling Skills	OR 14.1,14.2		1	
		OR 14.3		1	
4	Anatomy (Integrated)	AN 2.4,2.5,8.4		1	
		AN 8.6,17.2		1	
		AN10.12, 17.3		1	
		AN 18.6, 18.7		1	
		AN 11.4, 19.4		1	
		AN 19.6, 19.7		1	

5	Physical medicine and Rehabilitation	PM 5.3,5.4			1
		PM 7.2			1
	Total		15	20	5

**Time allotment for Competencies in Phase III Part 2
MBBS**

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
1	Fractures	OR 2.7	1	1	1
		OR 2.8	1	1	1
2	Musculoskeletal Infection	OR 3.1	2		1
		OR 3.2,3.3		1	
3	Skeletal Tuberculosis	OR 4.1	2	1	

4	Rheumatoid Arthritis and associated inflammatory disorders	OR 5.1	1	1	
5	Degenerative disorders	OR 6.1	1		
6	Metabolic bone disorders	OR 7.1	1	1	
7	Poliomyelitis	OR 8.1	1		
8	Cerebral Palsy	OR 9.1	1		
9	Bone Tumors	OR 10.1	2	1	1
10	Peripheral nerve injuries	OR 11.1	2	1	1
11	Congenital lesions	OR 12.1	2	1	

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Time allotment for Competencies in Phase III Part 2 MBBS

Sl.No	Topics	Competency	Type of Learning and Hours		
			Lectures (hours)	Small group discussions (Tutorials / Seminars) /Integrated learning (hours)	Self - Directed Learning (hours)
12	Pathology	PA 33.1		1	
		PA 33.2, 33.4		1	
13	Microbiology	MI 4.2		1	
14	Forensic Medicine and Toxicology	FM3.7, 3.8, 3.9, 3.10		1	
		FM 3.11, 3.12		1	
15	General Medicine	IM 7.5, 7.6, 7.7, 7.8, 7.9, 7.10,		2	
		24.12		1	
		24.13, 24.14, 24.16		2	
16	Physical Medicine and Rehabilitation	PM 1.2, 1.3, 1.4	1		
		PM 5.1, 5.2, 5.3, 5.4	1	1	

		PM 6.3		2	
		PM 6.4		1	
		PM 7.4		1	
		PM 7.5		1	
		PM 7.7, 8.1	1		
	TOTAL HOURS		2 0	25	5

Orthopaedic Competencies in Internship

GOAL

The goal of the internship programme is to train medical students to fulfill their roles as doctors of first contact in the community.

(A) THERAPEUTIC- An intern must know:

- (a) Splinting (plaster slab) for the purpose of emergency splintage, definitive splintage and post operative splintage and application of Thomas splint;
- (b) Manual reduction of common fractures – phalangeal, metacarpal, metatarsal and Colles’s fracture;
- (c) Manual reduction of common dislocations – interphalangeal, metacarpophalangeal, elbow and shoulder dislocations;
- (d) Plaster cast application for undisplaced fractures of arm, fore arm, leg and ankle;
- (e) Emergency care of a multiple injury patient;
- (f) Precautions about transport and bed care of spinal cord injury patients.

(B) Skill that an intern should be able to perform under supervision:

- (1) Advise about prognosis of poliomyelitis, cerebral palsy, CTEV and CDH;
- (2) Advise about rehabilitation of amputees and mutilating traumatic and leprosy deformities of hand;

(C) An intern must have observed or preferably assisted at the following operations:

- (1) drainage for acute osteomyelitis;
- (2) sequestrectomy in chronic osteomyelitis;
- (3) application of external fixation;

(4) internal fixation of fractures of long bones.

Physical Medicine and Rehabilitation Competencies in Internship

GOAL

The aim of teaching the undergraduate student in Physical Medicine & Rehabilitation is to impart such knowledge and skills that may enable him to diagnose and treat common rheumatologic, orthopedic and neurologic illnesses requiring physical treatment. He/she shall acquire competence for clinical diagnosis based on history, physical examination and relevant laboratory investigations and institute appropriate line of management.

(A) THERAPEUTIC- An intern must know:

- a) Diagnosing and managing with competence clinical diagnosis and management based on detailed history and assessment of common disabling conditions like poliomyelitis, cerebral palsy, hemiplegia, paraplegia, amputations etc.
- b) Participation as a team member in total rehabilitation including appropriate follow up of common disabling conditions, c) Procedures of fabrication and repair of artificial limbs and appliances.

(B) An intern must have observed or preferably assisted at the following operations/ procedures: :

- a) Use of self-help devices and splints and mobility aids

- b) Accessibility problems and home making for disabled
- c) Simple exercise therapy in common conditions like prevention of deformity in polio, stump exercise in an amputee etc.
- d) Therapeutic counseling and follow up

List of Competencies to cover in Internship

<i>SL NO</i>	<i>Competency</i>	<i>Performed</i>	<i>Assisted</i>	<i>Observed</i>
1	Splinting	?	?	?
2	Cast Application	?	?	?
3	Manual Reduction of Common dislocations	?	?	?
4	Application of External Fixator		?	?
5	Internal Fixation of Long Bones		?	?
6	Wound repair and dressing	?	?	?

7	Drainage of Acute Osteomyelitis	?	?	?
8	Major Operative Procedures		?	?
9	Minor Operative Procedures		?	?
10	Case Sheet Writing	?		

Period Of

Internship	
Subject	Period of Posting (Weeks)
Orthopaedics including PMR	4 weeks

Training in

Certifiable skills in Internship

A Comprehensive list of skills recommended in Orthopedics desirable for Bachelor of Medicine and Bachelor of Surgery (MBBS) – Indian Medical Graduate

- 1. Application of basic splints and slings (I)**
- 2. Basic fracture and dislocation management (O)**
- 3. Compression bandage (I)**

I- Independently performed on patients,

O- Observed in patients or on simulations,

D- Demonstration on patients or simulations and performance under supervision in patients

Assessment in Orthopaedics

Formative Assessment - An assessment conducted during the instruction with primary purpose of providing feedback for improving learning.

Summative Assessment - An assessment conducted at the end of instruction to check how much the student has learnt.

Internal Assessment (IA)- Range of assessments conducted by the teachers teaching a particular subject with the purpose of knowing what is learnt and how it is learnt. Internal assessment can have both formative and summative functions.

Note - Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually

Scheduling of Internal Assessment -

- A. In Phase II MBBS there will be one Internal assessments in practicals.
- B. In Phase III part 1 MBBS there will be one Internal assessment each in theory and practicals.
- C. In Phase III part 2 MBBS the test should be prelim or pre-university examination with theory and practicals **Theory can include:**

Theory tests, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have essay questions, short notes and creative writing experiences.

Practical can include:

Practical tests, Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), records maintenance and attitudinal assessment.

Log Book Assessment -

- A. Log book should record all activities like seminar, symposia, quizzes and other academic activities.
- B. It should be assessed regularly and submitted to the department.
- C. Up to twenty per cent internal marks can be considered for Log book assessment. 69

Feedback in Internal Assessment

Feedback should be provided to students throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and students must be sensitized to giving and receiving feedback.

The results of IA should be displayed on notice board within two weeks of the test and an opportunity provided to the students to discuss the results and get feedback on making their performance better.

It is also recommended that students should sign with date whenever they are shown IA records in token of having seen and discussed the marks.

Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination. Internal assessment should be based on competencies and skills.

Criteria for appearing in University examination

Students must secure at least 50% marks of the total marks (combined in theory and practical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination

Annexures

A. Teaching Learning Methods

- ✦ **Didactic lectures** should be made more interactive by encouraging the more involvement of the students. In the present digital era, student's involvement is more with usage of technology. For examples, many polling sessions, quizzes etc., can be done using google slides and other apps or websites.
- ✦ **Small group discussion (SGD)** should be planned properly and discussed among the faculty members before taking the class. As far as possible, uniformity should be maintained in the SGD by various facilitators. **Case based learning (CBL) and problem based learning (PBL)** may be used to make the learner understand and learn about the various aspects in order to achieve the particular competency.
- ✦ Encourage the students learn themselves through **self-directed learning (SDL)**. SDL sessions may be planned with objectives in order to cover the particular competency. These sessions may be conducted by providing learning material (research articles, public news, videos, etc.) by a teacher and ask the students to search on a particular topic. Students should learn themselves by going through available resources and come back to classes allotted for SDL sessions where teacher able to connect the learning of students in order to achieve the competency.
- ✦ **Integrated classes** should be planned in order to cover the competency involving the topics from different subjects. These classes can be taken using Nesting, Temporal Coordination or Sharing. Case linkers may be used to link the topic/subject area among different subjects/ departments.
- ✦ Skills should be taught using the clinical cases at hospital wards/casualty/EMD, simulation in skills labs and/or departmental demonstration rooms. **Case scenarios** may be developed while teaching at skills lab and/or demonstration rooms.

B. Blue Print & Assessment methods - Theory

Number of QPs for Orthopaedics: One

Theory marks: 50

This shows the weightage given to each chapter in the summative assessment. This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each chapter.

Number of QPs for the subject: One.

Only CORE competencies shall be considered for framing questions. QP should contain the following distribution of questions (as shown in below table).

Type of Question	Marks Per Question	Number of questions	Total Marks
Long Essay	10	2	20
Short Essays	5	3	15
Short Answers	3	5	15

		Total	50
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Each paper should contain Long essays (10 marks x 2), Short essay (5 marks x 3), Short answer (3 marks x 5).

Distribution of marks in suggested blue print

SL NO	Topics	Type of Question		
		Long Essay	Short Essay	Short Answers
1	Skeletal trauma, poly trauma		?	?
2	Fractures	?	?	?
3	Musculoskeletal Infection	?	?	?
4	Skeletal Tuberculosis	?	?	?
5	Rheumatoid Arthritis and associated inflammatory disorders		?	?
6	Degenerative disorders		?	?
7	Metabolic bone disorders	?	?	?
8	Poliomyelitis		?	?

9	Cerebral Palsy		?	?
10	Bone Tumors	?	?	?
11	Peripheral nerve injuries		?	?
12	Congenital lesions	?	?	?
13	Physical Medicine and Rehabilitation		?	?

NOTE: The questions should be framed only from Core competencies (as shown in above table).

c. Blue Print & Assessment methods - Practicals

1. Total Marks: 50

Case		
Sl No	Assessment parameter	Marks
1	History and case sheet writing	5
2	Clinical examination	5
3	Diagnosis/ analysis of case	5

Suggested Marks distribution for Each

4	Presentation	5
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I. Clinical Cases: 40 Marks

I. Viva Voce: 10 Marks

Clinical Cases:

Two short cases (2 X 20 Marks)

Viva:

Two Radiographs (5 Marks)

Two Instruments/ Implants (5Marks)

D. Integration Topics

Integration: The teaching should be aligned and integrated horizontally and vertically recognizing the importance of orthopaedic conditions as they relate to the practice of medicine as a whole.

HUMAN ANATOMY

HUMAN ANATOMY								
AN2.4	Describe various types of cartilage with its structure & distribution in body	K	KH	Y	Lecture	Written/Vive voice	orthopaedics	
Specific learning objectives:								
2.4.1	Define cartilage.							
2.4.2	Enumerate types of cartilage.							
2.4.3	Discuss the components of cartilage.							
2.4.4	Describe structure of various types of cartilage with examples							
2.4.5	Discuss what happens to articular cartilage in osteoarthritis							
AN2.5	Describe various joints with subtypes and examples	K	KH	Y	Lecture	Written/Viva Voce	orthopaedics	
Specific learning objectives:								
2.5.1	Define a joint.							
2.5.2	Classify joints based on mobility between bones.							
2.5.3	Discuss the components of synovial joints.							

2.5.4	Describe the structure of joint capsule.							
2.5.5	Enumerate the types of synovial joints.							
2.5.6	Describe the supporting structures of synovial joints.							

AN8. 4	Demonstrate important muscle attachments on the given bone	K/S	SH	Y	Practical, DOAP session, Small group teaching	Viva voice/ Practicals	orthoapedics	
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Specific learning objectives:

8.4.1	Demonstrate the origin and insertion of Deltoid muscle.							
8.4.2	Demonstrate the origin and insertion of Biceps Brachii.							
8.4.3	Demonstrate the flexor group of muscles of forearm and its attachments.							
8.4.4	Demonstrate the extensor group of muscles of forearm and its attachments.							
8.4.5	Demonstrate the muscle attachment of humerus.							

8.4.6	Demonstrate the muscle attachment of radius and ulna.							
8.4.7	Discuss the muscle attachment of femur.							
8.4.8	Discuss the origin and insertion of quadriceps.							
8.4.9	Describe the muscle attachment of tibia and fibula.							

AN8.6	Describe scaphoid fracture and explain the anatomical basis of avascular necrosis	K	KH	N	DOAP session	Viva voice	orthopaedics	
Specific learning objectives:								
8.6.1	Discuss the anatomy of scaphoid bone.							
8.6.2	Describe the blood supply of scaphoid bone.							
8.6.3	Discuss the mechanism of injury of scaphoid fracture.							
8.6.4	Classify scaphoid fractures.							
8.6.5	Discuss the clinical features and investigations in scaphoid fractures.							

8.6.6	Discuss the principles of management of scaphoid fracture.							
8.6.7	Enumerate complications of scaphoid fracture							
8.6.8	Discuss the causes of avascular necrosis of scaphoid fracture and its management.							

AN10.1 2	Describe and demonstrate shoulder joint for type, articular surfaces, capsule , synovial membrane, ligaments, relations, movements, muscle involved, blood supply, nerve supply and applied anatomy.	K/ S	SH	Y	Practical, Lecture, Small group discussion, DOAP session.	Written/Vi va voice/Skills assessment	Orthopaedics	
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Specific learning objectives:

10.12.1	Discuss shoulder joint anatomy.							
10.12.2	Describe various supporting structures of shoulder joint.							
10.12.3	Discuss glenoid labrum and its importance.							
10.12.4	Demonstrate the movements of shoulder joint.							
10.12.5	Describe sub acromial bursa and its importance.							

10.12.6	Describe the blood supply of proximal humerus and its applied anatomy.							
10.12.7	Discuss rotator cuff group of muscles							
AN11.4	Describe the anatomical basis of Saturday night paralysis	K	K/KH	Y	Practical ,Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
11.4.1	Discuss the formation of radial nerve.							
11.4.2	Discuss the anatomy of radial nerve in the arm.							
11.4.3	Define Saturday night paralysis.							
11.4.4	Discuss the mechanism of injury in Saturday night paralysis.							
11.4.5	Discuss the clinical features and investigations of radial nerve injury in the arm.							
11.4.6	Discuss the general principles of management of compression neuropathy.							

AN17.2	Describe anatomical basis of complications of fracture neck of femur,	K	K/K H	N	Lecture	Written/Viva voice	orthopaedics	
Specific learning objectives:								
17.2.1	Discuss the blood supply of femoral head.							
17.2.2	Enumerate the complications of fracture neck of femur.							
17.2.3	Discuss the reasons for high incidence of nonunion of fracture neck of femur.							
17.2.4	Discuss the reasons for high incidence of avascular necrosis of femoral head							
AN17.3	Describe dislocation of hip joint and surgical hip replacement.	K	K/K H	N	Lecture	Written/Viva voice	Orthopaedics	
Specific learning objectives:								
17.3.1	Classify hip dislocations.							
17.3.2	Classify posterior hip dislocation.							
17.3.3	Discuss the mechanism of injury, clinical features and investigations of posterior dislocation.							
17.3.4	Discuss the closed reduction methods for posterior dislocation.							
17.3.5	Enumerate the indications for open reduction of posterior dislocation.							

17.3.6	List the complications of dislocation of hip.							
17.3.7	Differentiate hemiarthroplasty and total hip arthroplasty.							
17.3.8	Differentiate unipolar and Bipolar hemiarthroplasty.							
17.3.9	Enumerate the indications of hemiarthroplasty.							
17.3.10	Enumerate the common indications for total hip arthroplasty							

AN18.6	Describe knee joint injuries with its applied anatomy.	K	KH	N	Lecture	Written//Viva voice	orthopaedics	
Specific learning objectives:								
18.6.1	Enumerate the common knee injuries.							
18.6.2	Describe the anatomy of ligaments of the knee.							
18.6.3	Describe the anatomy of the meniscus.							
18.6.4	Descriptive the mechanism of injury, various tests and investigations in ACL injury.							
18.6.5	Discuss the general principles of management of ACL injury.							
18.6.6	Describe the mechanism of injury, various tests and investigations in meniscus injury.							

18.6.7	Discuss the general principles of management of meniscus injury							
AN18.7	Explain anatomical basis of osteoarthritis	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	

Specific learning objectives:

18.7.1	Define osteoarthritis.							
18.7.2	Classify osteoarthritis.							
18.7.3	Discuss the aetiopathogenesis of primary osteoarthritis.							
18.7.4	Discuss the changes in articular cartilage in primary osteoarthritis.							
18.7.5	Discuss the secondary causes of osteoarthritis							

AN19.4	Explain the anatomical basis of rupture of Achilles tendon	K	KH	N	Lecture	Written/Viva voice	orthopaedics	
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Specific learning objectives:

19.4.1	Discuss the anatomy of Achilles tendon.							
19.4.2	Discuss the pathoanatomy of rupture of Achilles tendon.							

19.4.3	Discuss the mechanism of injury in tear of Achilles tendon.							
AN19.6	Explain the anatomical basis of flat foot & club foot	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	

Specific learning objectives:

19.6.1	Define flatfoot.							
19.6.2	Discuss the arches of foot.							
19.6.3	Describe the pathoanatomy of flatfoot.							
19.6.4	Discuss the etiology of flatfoot.							
19.6.5	Define CTEV							
19.6.6	Discuss the pathoanatomy of CTEV							
19.6.7	Discuss the etiology of CTEV							

AN19.7	Explain the anatomical basis of Metatarsalgia & plantar fasciitis	K	KH	N	Lecture	Written/Viva voice	Orthopaedics	
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Specific learning objectives:

19.7.1	Define metatarsalgia.							
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19.7.2	Classify metatarsalgia.							
19.7.3	Enumerate the causes for metatarsalgia.							
19.7.4	Discuss the risk factors responsible for metatarsalgia.							
19.7.5	Define plantar fasciitis.							
19.7.6	Discuss the structure and function of plantar fascia.							
19.7.7	Discuss the risk factors responsible for plantar fasciitis							

**PATHOLOG
Y**

PA33.1	Classify and describe the etiology , pathogenesis , manifestation , radiologic and morphologic features and complications of osteomyelitis	K	K H	Y	Lecture, Small group discussion	Written/ Viva voice		Human anatomy Orthopaedics.
Specific learning objectives:								
33.1.1	Classify osteomyelitis.							
33.1.2	Discuss aetiopathogenesis of acute osteomyelitis.							
33.1.3	Discuss the clinical features and investigations in acute osteomyelitis.							

33.1.4	Discuss the clinical features and radiological findings in chronic osteomyelitis.							
33.1.5	Discuss the pathologic morphology in osteomyelitis.							
33.1.6	Enumerate the complications of osteomyelitis							
PA33.2	Classify and describe the etiology , pathogenesis , manifestations, radiologic and morphologic features and complications and metastases of bone tumors.	K	K H	Y	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
33.2.1	Classify skeletal metastasis.							
33.2.2	Describe the mechanism of bone metastasis.							
33.2.3	Describe the clinical features and investigative work up in bone metastasis.							
33.2.4	Discuss the principles of management of skeletal metastasis.							
33.2.5	Discuss the complication of skeletal metastasis							

PA33.4	Classify and describe the etiology , pathogenesis , manifestations, radiologic and morphogenic features and complications of Paget's disease of the bone.	K	KH	N	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
Specific learning objectives:								

33.4.1	Define Paget's disease.							
33.4.2	Discuss the pathophysiology of Paget's disease.							
33.4.3	Discuss the clinical features, diagnostics and differential diagnosis of Paget's disease.							
33.4.4	Discuss principles of management of Paget's disease.							
33.4.5	Discuss the complications of Paget's disease							

Microbiolog

y

MI4.2	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of bone and joint infections.	K	KH	Y	Lecture	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
4.2.1	Discuss the aetiopathogenesis of acute osteomyelitis.							
4.2.2	Discuss the aetiopathogenesis of acute septic arthritis.							
4.2.3	Discuss the clinic features of acute osteomyelitis.							
4.2.4	Discuss the clinical features of acute septic arthritis.							
4.2.5	Discuss the laboratory diagnosis of acute osteomyelitis, chronic osteomyelitis and acute septic arthritis.							

Forensic medicine

FM3.7	Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death : primary and secondary.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		Forensic medicine. Orthopaedics.
Specific learning objectives:								
3.7.1	Describe the factors influencing the causation of an injury.							
3.7.2	Describe the factors that influence healing of an injury or fracture.							
3.7.3	Discuss the primary and secondary causes of death from a wound.							
FM3.8	Mechanical injuries and wounds: describe and discuss different types of weapons including dangerous weapons and their examination.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		General surgery. Orthopaedics.
Specific learning objectives:								
3.8.1	Identify the weapons that cause blunt force and sharp force injuries.							
3.8.2	Define dangerous weapon (S.324 IPC and 326 IPC)							

FM3.9	Firearm injuries: Describe different types of firearms including structure and components, along with description of ammunition propellant charge and mechanism of fire-arms , different types of cartridges and bullets and various terminology in relation of firearm – caliber range , choking.	K	K/KH	Y	Lecture, Small group discussion	Written /Viva voice		General surgery. Orthopaedics.
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Specific learning objectives:

3.9.1	Define Forensic ballistics, Proximal ballistics, Intermediate ballistics and Terminal ballistics.							
3.9.2	Define firearm							
3.9.3	Classify firearms.							
3.9.4	Enumerate the parts of the basic firearms.							
3.9.5	Explain ‘ rifling’ and ‘caliber’ of a firearm.							
3.9.6	Explain choking in a firearm and its purpose.							
3.9.7	Enumerate the components of rifled firearm and shotgun and its function .							
3.9.8	Describe the types of gunpowder.							
3.9.9	Discuss on types of bullets and pellets.							

FM3.10	Firearm injuries: Describe and discuss wound ballistics- different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidenced in cases of fire arm and blast injuries. Various tests related to confirmation of use of firearms.	K	K/ K H	Y	Lecture , Small group discussion. Bed side clinic DOAP session	Written/Vive voice/OSCE	General orthopaedics.	
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Specific learning objectives:

3.10.1	Define wound ballistics.							
3.10.2	Enumerate the factors affecting gunshot wound production.							
3.10.3	Explain the mechanism of firing and various components of discharge of firing.							
3.10.4	Describe the entry and exit wounds from rifled firearm at various Ranges.							
3.10.5	Describe the entry and exit wounds from a shotgun at various Ranges.							
3.10.6	Discuss on Ricocheting of a bullet and its effect.							
3.10.7	Discuss on tumbling bullet, Yawning bullet, Dumdum bullet, Tandem bullet, Souvenir bullet.							
3.10.8	List the evidentiary materials to be collected and preservation of evidentiary materials in gunshot wounds.							
3.10.9	Describe the method of collection and preservation of evidentiary Materials in gunshot wounds.							
3.10.10	Describe the significance of bullet markings and use of comparison microscope.							

3.10.11	Enumerate the tests done for detection of gunshot residue.							
3.10.12	Describe the injuries caused by bomb blast/explosion .							
3.10.13	Discuss the diagnostic evaluation in blast injury.							

3.10.14 Describe the principles of surgical management of blast

FM3.11	Regional injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial hemorrhages , coup and countercoup injuries) neck, chest , abdomen, limbs ,genital organs, spinal cord and skeleton.	K	K/KH	Y	Lecture, Small group discussion, Bed side clinic or autopsy , DOAP session	Written/Viva voice/OSCE/OS PE		General surgery. Orthopaedics.
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Specific learning objectives:

3.11.1	Define head injury.							
3.11.2	Discuss the forensic anatomy of scalp and scalp injuries.							
3.11.3	Enumerate the types of skull fracture.							
3.11.4	Describe the intracranial hemorrhages and its medicolegal aspects.							
3.11.5	Describe the cerebral injuries and its medicolegal aspects.							

3.11.6	Explain 'concussion of brain' and 'diffuse axonal injury'.							
3.11.7	Discuss on punch drunk syndrome.							
3.11.8	Describe the mechanism , clinical features and medicolegal aspects Of whiplash injury.							
3.11.9	Discuss on 'railway spine'.							
3.11.10	Discuss on injuries to chest , abdomen and genital organs.							

FM3.12	Reginal injuries: Describe and discuss injuries related to fall from height and vehicular injuries - Primary and Secondary impact, Secondary injuries , crush syndrome , railway spine.	K	K/KH	Y	Lecture, Small group discussion, Bedside clinic or autopsy, DOAP session	Written/ voice/ OSCE/OPSE	Viva	General surgery. Orhopaedics.
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Specific learning objectives:

3.12.1	Describe the injuries sustained to person in a fall from height .							
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3.12.2	Describe the injuries to a pedestrian in vehicular accident (primary impact , second impact and secondary injuries)							
3.12.3	Describe the injuries to driver , front seat passenger and back seat passenger of a motor car.							
3.12.4	Discuss on 'Crush syndrome'.							

General medicine								
IM7.5	Develop a systematic clinical approach to joint pain based on the pathophysiology.	K	K/KH	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
7.5.1	Enumerate the common causes of joint pain.							
7.5.2	Discuss the pathophysiology of joint pain.							
7.5.3	List the causes of joint pain structurally arising from within the joint.							
7.5.4	Enumerate the causes of joint pain arising from structures around the joint.							
7.5.5	Enumerate various causes of joint pain because of referred pain.							

7.5.6	Discuss synovitis as a cause for joint pain.							
7.5.7	Discuss enthesitis as a cause for joint pain.							
7.5.8	Discuss crystal deposition as a cause for joint pain							

IM7.6	Describe and discriminate acute, subacute and chronic causes of joint pain.	K	K/K H	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
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Specific learning objectives:

7.6.1	Enumerate the various causes of acute joint pain.							
7.6.2	Enumerate the various causes of chronic joint pain.							
7.6.3	Differentiate acute joint pain from chronic joint pain.							
7.6.4	Discuss the differential diagnosis of acute joint pain.							
7.6.5	Discuss the differential diagnosis of chronic joint pain.							

IM7.7	Discriminate , describe and discuss arthralgia from arthritis and mechanical from inflammatory causes of joint pain	K	K/K H	Y	Lecture, Small group discussion	Written/ Viva voice		Orthopaedics.
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Specific learning objectives:

7.7.1	Define arthritis.							
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7.7.2	Define arthralgia.							
7.7.3	Differentiate between arthritis and arthralgia.							
7.7.4	Enumerate the causes of mechanical joint pain with examples.							
7.7.5	Enumerate the causes of inflammatory joint pain with examples.							
7.7.6	Differentiate mechanical joint pain from inflammatory joint pain							

IM7.8	Discriminate , describe and discuss distinguishing articular from periarticular complaints.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.8.1	Discuss the clinical features of joint pain arising from intra-articular structures.							
7.8.2	Discuss the clinical features of joint pain arising from periarticular structures.							
7.8.3	Differentiate the articular and periarticular joint pain.							
IM7.9	Determine the potential causes of joint pain based on the presenting features of joint involvement.	K	K/KH	Y	Lecture , Small group discussion	Written/ Viva voice		Orthopaedics.

Specific learning objectives:								
7.9.1	Enumerate various presenting symptoms of joint pain conditions.							
7.9.2	Differentiate various conditions of joint pain by presenting symptoms.							
IM7.10	Describe the common signs and symptoms of articular and periarticular diseases.	K	K/KH	Y	Lecture, Small group discussion	Written/Viva voice		Orthopaedics.
Specific learning objectives:								
7.10.1	Discuss the clinical features of various articular conditions.							
7.10.2	Discuss the clinical features of periarticular joint conditions							

IM7.13	Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease.	S	SH	Y	Bedside clinic, DOAP session	Skill assessment		Orthopaedics.
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Specific learning objectives:								
7.13.1	Perform the clinical examination of Hip joint.							
7.13.2	Perform the clinical examination of Knee joint.							

7.13.3	Perform the clinical examination of Shoulder joint.							
7.13.4	Perform the clinical examination of Elbow joint.							
7.13.5	Perform the clinical examination of Wrist and Hand							
7.13.6	Perform the clinical examination of Foot and Ankle.							
IM7.17	Enumerate the indications for arthrocentesis.	K	K	Y	Lecture , Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.17.1	Describe arthrocentesis.							
7.17.2	Describe various indications for arthrocentesis							

IM7.18	Enumerate the indications and interpret plain radiographs of joints.	K	SH	Y	Bedside clinic, Small group discussion.	Skill assessment/Written	Radiodiagnosis	Orthopaedics.
Specific learning objectives:								
7.18.1	Enumerate the investigations for joint pain.							
7.18.2	Enumerate the indications for radiological examination of joint pain.							
7.18.3	Enumerate various radiological findings in arthritis of a joint.							
7.18.4	Discuss the radiological findings of osteoarthritis knee joint.							
7.18.5	Discuss the radiological findings in tuberculosis knee joint.							
7.18.6	Discuss the radiological findings in tuberculosis of hip joint.							
IM7.21	Select, prescribe and communicate appropriate medications for relief of joint pain.	K / C	SH	Y	DOAP session	Skill assessment/Written	Pharmacology.	Orthopaedics.
Specific learning objectives:								
7.21.1	Discuss the pathophysiology of joint pain.							
7.21.2	Enumerate the causes of joint pain .							
7.21.3	How do you evaluate join pain.							
7.21.4	Discuss WHO analgesics ladder.							

7.21.10	Discuss the role of intra-articular steroid injections.							
7.21.11	Discuss the role of viscosupplementation in osteoarthritis.							97
7.21.5	Describe the role of opioid analgesics used in osteoarthritis.							
7.21.6	Enumerate NSAIDs group analgesics used in relief of joint pain.							
7.21.7	Mention parental analgesics used in relief of joint pain.							
7.21.8	Discuss the side effects of chronic use of NSAIDs in an osteoarthritic joint pain.							
7.21.9	Name some topical analgesics.							

IM24.12	Describe and discuss the aetiopathogenesis, clinical presentation, identification, functional changes, acute care, stabilization, management and rehabilitation of degenerative joint disease.	K	K H	Y	Lecture, Small group discussion.	Written/Viva voice		Orthopaedics.
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Specific learning objectives:

24.12.1	Define degenerative joint disease.							
24.12.2	Discuss the aetiopathogenesis of degenerative joint disease.							
24.12.3	Describe the clinical features of degenerative joint disease.							
24.12.4	Discuss the loss of functional activity in degenerative joint disease.							
24.12.5	Discuss the management of early osteoarthritis.							

24.12.6	Discuss the principles of management of degenerative joint disease.							
24.12.7	Discuss the physical therapy and rehabilitation of degenerative Joint pain							

IM24.13	Describe and discuss the aetipathogenesis , clinical presentation, identifications, functional changes , acute care, stabilization, management and rehabilitation of falls in the elderly.	K	K H	Y	Lecture ,Small group discussion.	Written/ Viva voice		Orthopaedics. Physical medicine and rehabilitation.
Specific learning objectives:								
24.13.1	Discuss the causes of falls in elderly.							
24.13.2	Discuss the common factures in elderly because of falls.							
24.13.3	List the common presentation features following falls in elderly patients.							
24.13.4	Discuss the acute care management of fractures in elderly.							
24.13.5	Discuss general principles of management of fractures in elderly.							
24.13.6	Discuss the rehabilitation of elderly fractured patient.							
24.13.7	Describe the preventive steps to avoid falls in elderly							

IM24.16	Describe and discuss the principles of physical and social rehabilitation , functional assessment , role of physiotherapy and occupation therapy in the management of disability in the elderly.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics. Physical medicine and rehabilitation.
Specific learning objectives:								
24.16.1	Discuss the common form of disability in elderly.							
24.16.2	Discuss ageing and disability.							
24.16.3	Discuss disability of elderly population in India.							
24.16.4	Discuss the general principles of physical and social rehabilitation of the disabled elderly.							
24.16.5	Discuss the occupational therapy for a disabled elderly							

Physical Medicine & Rehabilitation

PM1.2	Define and describe disability, its cause and magnitude, identification and prevention of disability.	K	K/KH	Y	Lecture, Small group discussion	Written/ Viva voice		General medicine · Orthopaedics.
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Specific learning objectives:

1.2.1	Define disability.							
1.2.2	Describe the various causes of disabilities.							
1.2.3	Classify disability.							
1.2.4	Define impairment.							
1.2.5	Differentiate temporary and permanent disability.							
1.2.6	Define handicap.							
1.2.7	List various domains of functioning which can be affected by disability.							
1.2.8	Discuss the prevalence of disability in India and worldwide.							

PM1.3	Define and describe the methods to identify and prevent disability	K	K/KH	Y	Lecture, Small group discussion	Written/Viva voice		General medicine Orthopaedics.
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Specific learning objectives:

1.3.1	Discuss the methods of identification of various disabilities.							
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1.3.2	Discuss identification of locomotor disability in a child.							
1.3.3	Discuss the checklist for identification of children with special needs.							
1.3.4	Differentiate primary, secondary and tertiary prevention of disabilities.							
1.3.5	Discuss disability management							

PM1.4	Enumerate the rights and entitlements of differently abled persons	K	K	Y	Lecture, Small group discussion	Written/ Viva voice		General medicine. Orthopaedics.
Specific learning objectives:								
1.4.1	Discuss the rights of differently abled persons.							
1.4.2	Define " persons with benchmark disabilities".							
1.4.3	Discuss the rights and entitlement of differently abled persons.							
1.4.4	Enumerate additional benefits provided for persons with benchmark disabilities and those with high support needs							

PM4.3	Observe in a mannequin or equivalent the administration of an intra-articular injection	S	KH	N	DOAP session	Skill assessment		Orthopaedics
Specific learning objectives:								
4.3.1	List out the indications for intra-articular injections.							
4.3.2	Demonstrate the sterile precautions to be taken while administering intra-articular injection.							
4.3.3	Enumerate the drugs used to be injected as intra-articular formulations.							
4.3.4	Surface marking of joint line and position of the joint for intra-articular injection to be elicited.							
4.3.5	Depiction of post intra-articular injection care and rehabilitation.							
4.3.6	Recent advances in the modality of intraarticular injection.							
4.3.7	Explain the guided intra-articular injections							
PM4.5	Demonstrate correct assessment of muscle strength and range of movements	S	SH	Y	DOAP session, Bedside clinic	Skill assessment		General medicine Orthopaedics.
Specific learning objectives:								

4.5.1	List out the MRC grading of muscle power.							
4.5.2	Explain the types of joints.							
4.5.3	Demonstrate the movements across each major joint of upper limb.							
4.5.4	Demonstrate the various movements across each major joint of lower limb.							

PM5.1	Enumerate the indications and describe the principles of amputation.	K	KH	Y	Lecture , Small group discussion.	Written/ Viva voice		Orthopaedics. General Surgery.
Specific learning objectives:								
5.1.1	Define amputation.							
5.1.2	Define disarticulation.							
5.1.3	Enumerate the indications of amputations.							
5.1.4	Discuss the general principles in techniques of amputation and disarticulations.							
5.1.5	Enumerate the complications of amputation.							
PM5.2	Describe the principles of early mobilizations, evaluation of the residual limb, contralateral limb and the influence of co-morbidities.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
5.2.1	Discuss the principles of early mobilization of an amputee patient.							
5.2.2	Discuss ideal stump in an amputated patient.							
5.2.3	Discuss the evaluation of the amputation stump for prosthesis fitting.							

5.2.4	Discuss the rehabilitation following amputation.							
5.2.5	Discuss the factors affecting the rehabilitation of a amputated patient.							
5.2.6	Discuss the influence of co morbidities in an amputated patient.							

PM5.3	Demonstrate the correct use of crutches in ambulation and postures to correct contractures and deformities	S	SH	Y	DOAP session, Bedside clinic discussion	Skill assessment		Orthopaedics.
Specific learning objectives:								
5.3.1	List the indications for use of crutches.							
5.3.2	Enumerate various types crutches.							
5.3.3	Demonstrate the correct use of crutches while standing, walking, sitting and climbing stairs.							
5.3.4	Define contracture.							
5.3.5	Define deformity.							
5.3.6	Discuss the causes for contractures and deformities.							
5.3.7	Discuss various preventive measures to avoid contractures and deformities.							
5.3.8	Discuss how do you prevent contractures in bedridden patients							
PM5.4	Identify the correct prosthesis for common amputations.	S	SH	Y	DOAP session	Skill assessment/Written		Orthopaedics.
Specific learning objectives:								

5.4.6	Identify upper limb prosthesis with respect to level of amputation.							105
5.4.1	Define prosthesis.							
5.4.2	Enumerate various lower limb prostheses.							
5.4.3	Enumerate various upper limb prostheses.							
5.4.4	Identify correct prosthesis for above knee amputation.							
5.4.5	Identify correct prosthesis for below knee amputation.							

PM6.3	Describe the principles of skin traction, serial casts and surgical treatment including contracture release , tendon transfer , osteotomies and arthrodesis.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
6.3.1	Define traction.							
6.3.2	Enumerate types of traction.							
6.3.3	Discuss the conditions in which traction is used.							
6.3.4	List the indications for skin tractions in upper and lower limbs.							
6.3.5	Discuss the technique of skin traction application and its complications.							
6.3.6	Define serial cast technique.							
6.3.7	Enumerate common indications for serial cast technique.							
6.3.8	Discuss the principles of deformity corrections by surgical release.							
6.3.9	List some conditions where surgical release of contracted structures is performed to correct deformity.							
6.3.10	Define tendon transfer							
6.3.11	List the indications for tendon transfers.							
6.3.12	Discuss the principles of tendon transfers.							

6.3.13	Define osteotomy.							
6.3.14	Enumerate common indications for osteotomies.							
6.3.15	Discuss the general principles of osteotomy.							
6.3.16	Define arthrodesis.							
6.3.17	Enumerate the indications of arthrodesis.							
6.3.18	Discuss the general principles of arthrodesis procedure							106

PM6.4	Describe the principles of orthosis for ambulation in PPRP	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
6.4.1	Define PPRP.							
6.4.2	Define orthosis.							
6.4.3	Discuss the general principles of orthotic management of PPRP.							
6.4.4	Enumerate the common orthosis used for lower limb, spine and upper limb in PRPP							
PM7.1	Describe and discuss the clinical features , diagnostic work up, work up diagnosis and management of spinal cord injury.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.1.1	Define complete spinal cord injury.							
7.1.2	Differentiate complete and incomplete cord injury.							
7.1.3	Discuss spinal shock.							
7.1.4	Discuss the aetiopathogenesis of spinal cord injury.							
7.1.5	Discuss the clinical features of spinal cord injury.							

7.1.6	Discuss the evaluation and diagnosis of spinal cord injuries.							
7.1.7	Discuss the management of spinal cord injury.							
7.1.8	Discuss the prognosis of spinal cord injury.							

PM7.2	Describe and demonstrate process of transfer, applications of collar restraints while maintaining airway and prevention of secondary injury in a mannequin/model.	S	SH	Y	DOAP session, Small group discussion.	Skill assessment.		Orthopaedics.
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Specific learning objectives:

7.2.1	Demonstrate the transfer process of polytrauma patient.							
7.2.2	Differentiate primary and secondary transport.							
7.2.3	Discuss the risks associated during transportation.							
7.2.4	Discuss the safety of patient transport.							

PM7.3	Perform and demonstrate a correct neurological examination in a patient with spinal injury and determine the neurologic level of injury.	S	SH	Y	Bedside clinic.	Skill assessment		Orthopaedics.
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Specific learning objectives:

7.3.1	Perform neurological examination in Quadriplegia patient.							
7.3.2	Perform neurological examination in paraplegia patient.							
7.3.3	Perform neurological examination in paraparesis patient.							

PM7.4	Assess bowel and bladder function and identify common patterns of bladder dysfunction	S	KH	Y	Small group discussion	Written/Viva voice		General medicine. Orthopaedics.
Specific learning objectives:								
7.4.1	Enumerate the causes of bowel and bladder dysfunction.							
7.4.2	Describe the nerve supply of bladder							
7.4.3	Explain the types of bladder in spinal cord injury (SCI).							
PM7.5	Enumerate the indications and identify the common mobility aids and appliances , wheel chairs.	S	S	Y	DOAP session	Skill assessment/ Viva voice		Orthopaedics.
Specific learning objectives:								
7.5.1	Name the common mobility aids.							
7.5.2	Explain walking stick and walking frame							
7.5.3	Role of wheel chairs in orthopedics and neurology							

PM7.7	Enumerate and describe common life threatening complications following SCI like Deep vein thrombosis , Aspiration Pneumonia , Autonomic dysreflexia.	K	KH	Y	Lecture, Small group discussion.	Written/ Viva voice		General medicine. Orthopaedics.
Specific learning objectives:								
7.7.1	Describe the pathophysiology, investigations and management of deep vein thrombosis (DVT) and preventive measures in DVT in follow up case of SCI.							
7.7.2	Discuss the pathophysiology, investigations and management of aspiration pneumonia							
7.7.3	Enumerate the pathophysiology, investigations, management and preventive measures in autonomic dysreflexia in follow up case of SCI.							

PM8.1	Describe the clinical features , evaluation , diagnosis and management of disability following traumatic brain injury.	K	KH	Y	Lecture , Small group discussion.	Written/ Viva voice		General medicine. Orthopaedics. General surgery .
Specific learning objectives:								
7.8.1	Discuss the clinical features of traumatic brain injury (TBI).							
7.8.2	Discuss the neurological status of traumatic brain injury .							
7.8.3	Evaluate the diagnostic modality of traumatic brain injury							
7.8.3	Discuss t the management of disability of traumatic brain injury							

E. SELF DIRECTED LEARNING (10 Hours)

SL NO	MBBS PHASE III Part 1	MBBS PHASE III Part 2
1	OR1.1- Polytrauma, ATLS	OR 2.7- Pelvic Injury and Shock
2	OR 1.6- Dislocations	OR 2.8- Spinal cord injury
3	OR 2.15- Compartment Syndrome	OR 3.1- Osteomyelitis
4	PM 5.3- Crutches, Mobility Aids	OR 10.1- Malignant Bone Tumor
5	PM 5.4- Amputation , Prosthesis	OR 11.1- Peripheral Nerve injury

SDL EXAMPLE 1: Case Scenario:- Polytrauma

A 35-year-old man is brought to the emergency department following a motorcycle accident. He is breathing spontaneously and has a systolic blood pressure of 80 mm Hg, a pulse rate of 120/min, and a temperature of 98.6° F (37° C). Examination suggests an unstable pelvic fracture. Ultrasound evaluation of the abdomen is negative. Despite administration of 4 L of normal saline solution, he still has a systolic pressure of 90 mm Hg and a pulse rate of 110. Urine output has been about 20 mL since arrival 35 minutes ago. Discuss Management of this patient

Learning objectives

- A. Classify a polytrauma patient to one of the four groups (stable, borderline, unstable, extremis) based on the physiology
- B. Learn which injury pattern and physiologic parameters can lead to ARDS and MODS in the polytrauma patient
- C. Outline the latest advances in resuscitation (ATLS)
- D. Define the role of orthopedic surgery in saving life and limb after major trauma
- E. Identify patients that can safely have early total care
- F. Consider the suitability of damage control surgery
- G. Set priorities for management of injuries - Long bone vs Pelvic Ring

SDL EXAMPLE 2: Case Scenario:- Compartment Syndrome

20 year old male patient was treated conservatively with a cast for fracture of right radius and ulna. He comes to ER 24 hours later with severe pain in his forearm.

What is the most likely diagnosis?

Learning objectives

- A. What is compartment syndrome?
- B. What are clinical signs of compartment syndrome?
- C. What is the pathophysiology behind compartment syndrome?
- D. How do you measure compartment pressure?
- E. What would have prevented this complication?
- F. How do you manage this patient?- Investigations, medication, surgery
- G. What are the complications of compartment syndrome?

F. Topics for Electives

1. Trauma and fractures
2. Paediatric Orthopaedics
3. Orthopaedic adult reconstruction/ Joint Replacement
4. Orthopaedic spine 5. Orthopaedic sports medicine
6. Geriatric orthopaedics
7. Musculoskeletal Oncology

G. Clinical Postings

Learner - Doctor programme (Clinical) – As per GMER 2019	
Year of Curriculum	Focus of Learner - Doctor programme

Phase I	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Phase II	History taking, physical examination, assessment of change in clinical status, communication and patient education
Phase III Part 1	All of the above and choice of investigations, basic procedures and continuity of care
Phase III Part 2	All of the above and decision making, management and outcomes

	MBBS Phase II	MBBS Phase III Part I	MBBS Phase III Part 2	Total weeks
Orthopedics - including Trauma and PMR	2 weeks	4 weeks	2 weeks	8 weeks

List of Competencies to be considered in clinical Postings

Bed Side Clinics	Case discussion	Demonstrations
OR1.5: Dislocation of joints	OR 3.4: Osteomyelitis/Septic Arthritis	AN8.4: Demonstrate important muscle attachment on the given bone
OR 2.1 to OR 2.16: Fractures	OR4.1: Tuberculosis of joints/spine	AN 10.12: Describe and demonstrate Shoulder joint for- type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply and applied anatomy
OR5,1: Inflammatory disorders of joints	OR6.1: Degenerative conditions of spine	OR13.1: Casts and Plasters
IM7.13: Perform a systematic examination of all joints, muscle and skin that will establish the diagnosis and severity of disease	OR7.1,7.2: Metabolic Bone Disorders- osteoporosis, osteomalacia, rickets, Paget's disease	OR13.2: Splints and tractions
IM7.18: Enumerate the indications and interpret plain radiographs of joints	OR8.1: PPRP	PM5.3: Demonstrate the correct use of crutches in ambulation and postures to correct contractures and deformities
	OR 11.1- Peripheral Nerve injuries	

PM 4.5: Demonstrate correct assessment of muscle strength and range of movements	OR 12.1: Congenital - CTEV	
PM7.3: Perform and demonstrate a correct neurological examination in a patient with spinal injury and determine the neurologic level of injury	OR 10.1, 10.2: Tumors, swellings	

Model Time table for MBBS Phase II Clinical Postings

Day		Week 1	Week 2
Monday	Clinical case Discussion	History Taking and Basic Orthopaedic Examination (IM 7.5)	History and Examination of Shoulder Joint (IM 7.13.3)
Tuesday	Clinical case Discussion	History and Examination of bone and joint infection (PA33.1)	History and Examination of Elbow Joint (IM 7.13.4)
Wednesday	Clinical case Discussion	History and Examination of Knee Joint (IM 7.13.2)	History and Examination of Wrist Joint and Hand (IM 7.13.5)
Thursday	Clinical case Discussion	History and Examination of Ankle and Foot (IM 7.13.6)	History and Examination of Hip Joint (IM 7.13.1)
Friday	Clinical case Discussion	History taking and examination of deformed limb (OR 7.2)	History and Examination of Bone swelling/tumor (OR 10.2)
Saturday	X	X	X

Model Time table for MBBS Phase III, Part 1 Clinical Postings

Day		Week 1	Week 2	Week 3	Week 4
Monday	Clinical case Discussion	Infections -1 Osteomyelitis of long bones (PA33.1))	Osteoarthritis KNEE (IM 7.13.2, OR 2.3)	Malunion – Upper limb(OR 2.15)	Examination of Bone Tumor (OR 10.2)
Tuesday	Clinical case Discussion	Rickets/deformities (OR 7.1,7.2)	Nerve injuries – Foot drop (OR11.1)	Frozen Shoulder/ Shoulder Impingement (IM 7.13.3)	Malunion – lower limb(OR 2.15)

Wednesday	Clinical case Discussion	Rheumatoid Arthritis/ Ankylosing spondylitis (OR 5.1)	TB Hip/Knee (OR4.1)	Nerve injuries – Wrist drop/Claw Hand (OR11.1)	Septic Arthritis (OR3.4)
Thursday	Clinical case Discussion	Non- union (OR 2.15)	Ligamentous Injuries of Knee (OR1.3, AN18.6)	Hip Deformity- Abnormal Gait (IM 7.13.1)	Examination of Patient with claudication pain (OR 6.1)
Friday	Skill lab	Below and above elbow slab/cast (OR13.1)	Below and above Knee slab/cast(OR 13.1)	Reduction and cast application for Colle’s Fracture. (OR 13.1) Strapping of Clavicle Fracture (OR 2.1)	ATLS – Basics (OR 1.1)
Saturday	Operating procedures / Skill Lab	Hand wash, Donning surgical gown and gloves, preparation of parts	Suturing Methods	Debridement of Osteomyelitis/ Saucerization	Tendon Repair

Model Time table for MBBS Phase III, Part 2 Clinical Postings

Day		Week 1	Week 2
Monday	Clinical case Discussion	Infections -2 Infected Non Union/ Ilizarov/external fixator (PA33.1))	CTEV (AN19,6. OR 12.1)
Tuesday	Clinical case Discussion	Quadriplegia/Paraplegia (PM 7.3)	Examination of Bone Tumor (OR 10.2)
Wednesday	Clinical case Discussion	Recurrent Shoulder Dislocation (IM 7.13.3)	Elbow- Deformity (OR7.2)
Thursday	Instruments/Specimens/X-rays	X-rays and Specimens	Instruments, Implants, orthosis and prosthesis,
Friday	Skill lab	Skin traction and Thomas splint application (OR13.1)	Shoulder dislocation reduction Techniques (OR1.6)
Saturday	Operating procedures/ Video Assisted Teaching	Intramedullary nailing	Plate Osteosynthesis

H. Model Question Papers

Example 1

Time: 1 hour 30 minutes

Total Marks: 50

Long Essays- 10 Marks Each (2X10=20 Marks)

1. A 6 year old kid was brought to emergency department with pain swelling and in left elbow with difficulty on moving the elbow. Parents give a history of fall from height directly on elbow while playing.
 1. What is the most common pediatric elbow/distal humerus fracture?
 2. Mechanism of injury and classification
 3. Management
 4. Complications- acute and chronic **(1+3+3+3= 10Marks)**
2. A 65 year old obese individual has come to the hospital with complaints of pain in both knees. Discuss clinical examination Investigations and various treatment modalities of Osteoarthritis of knee (3+3+4=10)
 1. Osteoclastoma - definition, Histology, management
 2. Colle's fracture- definition, classification, management
 3. Tuberculosis of Spine – Pathogenesis, Classification and Management

Short Answers- 3 marks each Marks)

(5X3=15

6. Thomas Splint
7. Saturday Night Palsy
8. Deformities in CTEV
9. Bennett's Fracture 121
10. Stages of Fracture Healing

Example 2

Total Marks: 50

Time: 1 hour 30 minutes

Long Essay- 10Marks Each (2X10=20Marks)

1. A new born was brought to the hospital with CTEV of both feet. Discuss
 1. Etiology
 2. Deformities
 3. Management
 4. **(3+3+4= 10Marks)**
2. A 11 year old boy was referred from a primary care center with osteosarcoma of femur. Discuss

1. Clinical features
2. Radiological and histological findings
3. Management (3+3+4= 10)

marks) Short Essay- 5 marks each

(3X5=15

Marks)

1. Monteggia Fracture Dislocation
2. Claw hand
3. Nutritional Rickets

Short Answers- 3 marks each

(5X3=15 Marks)

6. Dennis Brown splint 9. Ant
7. Skeletal Traction eri
8. List DMARD's or

- wer's Test
10. Mallet Finger

Dra

J. Recom mended Text Books

1. Natarajan's Textbook of Orthopaedics and Traumatology. 8th Edition
2. Maheshwari, Essential Orthopaedics. 6th Edition
3. Crawford Adams, Outline of Orthopaedics – Fractures and dislocation. 14th Edition
4. Apley & Solomon's System Of Orthopaedics And Trauma. 10th edition
5. Das S, A Manual On Clinical Surgery. 14th Edition
6. McRae, Clinical Orthopaedic Examination. 6th

Edition

Rajiv Gandhi University of Health Sciences Bangalore, Karnataka



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Date of Beginning of the Current Phase:

Reg. No. (College ID):

Reg. No. (University ID):

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BONAFIDE CERTIFICATE

KEMPEOWDA INSTITUTE OF MEDICAL SCIENCES

This is to certify that the candidate

.....

Reg No has satisfactorily completed all requirements

mentioned in this Logbook for Phase III MBBS in ORTHOPAEDICS

including related AETCOM modules as per the Competency -Based

Undergraduate Medical Education Curriculum, Graduate Medical

Regulation 2019 during the period from:to

He/ She is eligible to appear for the Summative (University) Assessment.

Faculty Mentor:

Head of Department:

Name:

Name:

Signature:

Signature:

Date:

Place:

PREFACE

This logbook is designed to follow and record your academic journey through the Orthopaedics course. The knowledge, skills and desirable attitudes you acquire in order to function as a primary care physician of first contact will be documented and certified in this logbook.

Section 1 contains the **CBME competencies in Orthopaedics**. It includes the competencies that would be covered during the course.

Section 2 records your participation in **Attitude, Ethics and Communication (AETCOM)** modules related to Orthopaedics.

Section 3 consists of the **Scheme and Summary of Formative Assessments** in Orthopaedics, including the Internal Assessments.

Section 4 documents the **Clinical Postings – Learner Doctor Method**.

Section 5 documents **Additional-Curricular Activities** (Seminars, Conference, Workshops Attended, Scientific Project Presentations, Outreach Activities, etc.) and **Extracurricular Activities**.

We hope that this logbook serves as a guide and facilitates your progress through the year.

GENERAL INSTRUCTIONS

1. This logbook is a record of the Academic/Co-curricular activities in Orthopaedics of the designated student.
2. The student is responsible for getting the entries in the Logbook verified by the Faculty in-charge regularly.
3. Entries in the Logbook will reflect the activities performed by you in the Department of Orthopaedics during your course.

4. The student has to get this logbook verified by the Mentor and the Head of the
5. All signatures must be done with a date stamp.

Draft

Department before submitting the Application of the University Examination.

SUMMARY OF ATTENDANCE

<i>Block/Phase</i>	<i>Percentage of Classes Attended</i>		<i>Eligible for University Examination (Yes / No)</i>	<i>Signature of Student with Date</i>	<i>Signature of Teacher with Date</i>
	<i>Theory</i>	<i>Practical</i>			
First Block	NA				
Second Block					
Third Block					
Attendance at the end of MBBS Phase III					

SUMMARY OF INTERNAL ASSESSMENT (IA)

<i>Sl. No.</i>	<i>Internal Assessment</i>	<i>Date of Assessment</i>	<i>Total Marks</i>		<i>Marks Scored</i>		<i>Signature of Student with Date</i>	<i>Signature of Teacher with Date</i>
			<i>Theory</i>	<i>Practical</i>	<i>Theory</i>	<i>Practical</i>		
1	First Phase II		NA		NA			
2	Second Phase III Part 1							
3	Third Phase III Part 2							
4	Remedial Phase III Part 2							

Note: A candidate who has not secured requisite aggregate in the Internal Assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The Remedial Assessment shall be completed before submitting the Internal Assessment marks online to the University.

SECTION: 1 Competencies in Orthopaedics

Competency-Based Medical Education (CBME) Curriculum in Orthopaedics

Competencies in Orthopaedics:

There are **39** competencies in Orthopaedics that have been listed in the CBME curriculum by the MCI (*Refer Annexure I*). They can be categorized into knowledge, skills and affect

There are **29** competencies in the **Knowledge Domain**.

1.A Competencies in the Knowledge Domain

Sl. No.	Topic	Competency
1	Skeletal Trauma, Poly Trauma	OR 1.1, 1.2, 1.3,1.4, 1.5
2	Fractures	OR 2.1, 2.2, 2.4 to OR 2.14, 2.16
3	Musculoskeletal Infection	OR 3.1
4	Skeletal Tuberculosis	OR 4.1
5	Rheumatoid Arthritis and Associated Inflammatory Disorders	OR 5.1
6	Degenerative Disorders	OR 6.1
7	Metabolic Bone Disorders	OR 7.1
8	Polio Myelitis	OR 8.1
9	Cerebral Palsy	OR 9.1
10	Bone Tumors	OR 10.1
11	Peripheral Nerve Injuries	OR 11.1
12	Congenital Lesions	OR 12.1

domains as given below.

Competencies in Skills: There are **10** competencies in this domain. These are as given below.

1.B Competencies in Skills

Topics	Competency	Description
Skeletal Trauma, Poly Shoulder Dislocation / Hip Dislocation / Knee Dislocation Trauma	OR 1.6	Participate as a member in the team for Closed Reduction of
Fractures	OR 2.3	Select, Prescribe and Communicate appropriate medication for relief of Joint Pain
	OR 2.15	Plan and Interpret the Investigations to Diagnose Complications of Fractures like Malunion, Non-union, Infection, Compartment Syndrome
Musculo Skeletal Infection	OR 3.2	Participate as a member in the team for Aspiration of Joints under supervision
	OR 3.3	Participate as a member in the team for procedures like Drainage of Abscess, Sequestrectomy / Saucerisation and Arthrotomy
Procedural demonstrating Skills – the ability to perform on mannequins / simulated patients in the following –	OR 13.1	Participate in a team for procedures in patients and
	OR 13.2	Participate as a member in a team for Resuscitation of Poly Trauma Victim by doing all of the following – i. Above Elbow Plaster ii. Below Knee Plaster iii. Above Knee Plaster iv. Thomas Splint v. Splinting for Long Bone Fractures vi. Strapping for Shoulder and Clavicle Trauma
Counselling Skills	OR 14.1	Demonstrate the ability to Counsel the patient regarding prognosis in patients with various Orthopaedic illnesses like – a. Fracture with Disabilities b. Fracture that requires prolong bed stay c. Bone Tumors d. Congenital Disabilities
	OR 14.2	Demonstrate the ability to counsel patients to obtain consent for various Orthopaedic procedures like Limb Amputation, Permanent Fixations etc.
	OR 14.3	Demonstrate the ability to convince the patient for referral to a higher centre in various Orthopaedic illnesses, based on the detection of warning signals and need for sophisticated management

SECTION 2:

FORMAT OF AETCOM Modules Report

AETCOM Module Number:

Date:

Topic:

Competencies:

1.

2

3.

Reflections (100 words):

1. What did you learn from this AETCOM session based on the objectives?
2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Draft

Remarks by Facilitator:

Signature of Facilitator with Date:

Draft

AETCOM Module Number:

Date:

Topic:

Competencies:

- 1.
- 2.
- 3.

Reflections (100 words):

1. What did you learn from this AETCOM session based on the objectives?
2. What change did this session make in your learning?
3. How will you apply this knowledge in future?

Draft

Remarks by Facilitator:

Signature of Facilitator with Date:

Draft

SECTION: 3

Formative Assessment 1

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Practical	10		

Formative Assessment 2

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Theory	25		
Formative Assessment Practical	20		

Formative Assessment 3

	Maximum Marks	Marks Obtained	Feedback and Signature
Formative Assessment Theory	25		
Formative Assessment Practical	20		

Rubric for Assessing Professionalism

<i>Phase</i>	<i>Areas assessed</i>				<i>Total (20 marks)</i>	<i>Signature of Student</i>	<i>Signature of Teacher</i>
	<i>Regular for Classes (5marks)</i>	<i>Regular in Completing Assignments (5marks)</i>	<i>Behaviour in Class and Discipline (5marks)</i>	<i>Dress Code and Presentation (5marks)</i>			
At the end of 1 st IA							
At the end of 2nd IA							
At the end of 3rd IA							
Average score at the end of the year							

Note: Parameters will be assessed at the Departmental level to consider eligibility (Minimum of 50% at the end of the year) of the candidate to appear for the university examination. Not considered for internal assessment marks.

Evaluation and Feedback on Self-Directed Learning (SDL)- 10 hours

Sl. No.	Date	Topic of SDL	Feedback	Signature of Faculty/Mentor
----------------	-------------	---------------------	-----------------	------------------------------------

Posting 1:
Duration 2 weeks
Date of Posting: From:
To:
Unit:

1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Section 4: Clinical Postings – Learner Doctor Method

List of Clinical Cases Presented/Attended in Posting 1.

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			

7			
8			
9			
10			

Draft

Learner Doctor Method: Posting

1:

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient’s progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient’s stay in hospital.

Draft

Lerner Doctor Method:

Draft

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

Posting 2:
Duration 4 weeks
Date of Posting: From: To:
Unit:

List of Clinical Cases Presented/Attended in Posting 2:

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			

9			
10			

Draft

Learner Doctor Method:

Posting 2:

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Draft

Lerner Doctor Method:

Draft

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

Posting 3:
Duration 2 weeks
Date of Posting: From: To:
Unit:

List of Clinical Cases Presented/Attended in Posting 3:

	Diagnosis	Presented/Attended	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Draft

Learner Doctor Method:

Posting 3:

One patient will be allotted to the student at the beginning of the posting. The patient is assessed at admission and followed up. The student will interact with the patient and the treating team to make daily notes of the following aspects of patient's progress in hospital.

History taking, physical examination, assessment of change in clinical status, communication and patient education.

A brief summary is to be written at the end of the patient's stay in hospital.

Draft

Lerner Doctor Method:

Draft

Reflection on the Learner Doctor Method of Learning:

What did you learn from this Learning Method?

What change did this Learning Method make?

How will you apply this knowledge in future?

Signature of the Faculty:

Date:

**Section 5: Additional Curricular and Extracurricular
Activities**

5.1 Additional Curricular Activities

(Seminar, Conferences, Outreach Activities, Workshops etc.)

Sl. No.	Date	Particulars	Signature of the Faculty

5.2 Extracurricular Activities

Sl. No.	Date	Particulars	Signature of the Faculty

5.3 Achievements/Awards

Sl. No.	Date	Particulars	Signature of the Faculty

FINAL SUMMARY

Sl. No.	Description	Dates		Attendance in Percentage	Status*	Signature of the Teacher with Date
		From	To			
1	AETCOM Modules					
2	Internal Assessment Marks					

Signature of Head of Department

Date:

* Status: Complete/Incomplete: For Skills and AETCOM modules
Eligible/Ineligible: For Internal Marks

**Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka**



Obstetrics and Gynecology Curriculum as per Competency Based Curriculum

Acknowledgements: This Obstetrics and Gynaecology Curriculum as per the new Competency based Medical education curriculum has been prepared by the following faculty

Dr Jayshree. V. Kanavi, Associate Professor, St John's Medical College, Bangalore

Dr Girija Prasanna, Professor, Hassan Institute of Medical Sciences, Hassan

Dr Rekha Gurumurthy, Professor, Shridevi Institute of Medical Sciences & Research

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Dr Suneetha Nithyanandam, Professor, Medical Education, St John's Medical College,
Bangalore

RGUHS Obstetrics and Gynaecology Curriculum as per the new Competency Based Medical Education

PREAMBLE

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME), which most of us are now aware about, (a) is an outcomes-based training model that has become the international standard of medical education. This newly implemented curriculum is being rolled out as detailed by incorporating key principles of CBME and developing competencies for each speciality.

One of the key healthcare indicators of a country is maternal health. Reproductive health is also gaining prominence in the modern health context. The advances in obstetrics include a steady governmental push towards institutionalization of maternal care and a growing body of knowledge regarding prediction and prevention of problems, over and above the existing knowledge.

In line with this, the obstetrics and gynaecology undergraduate curriculum provides the IMG the appropriate knowledge, mandatory skills and optimal attitudes to be able to care for pregnant women and for women with reproductive tract issues and be able to identify high risk conditions and refer to specialists as appropriate.

The GMER 2019 states the following to be the competencies to be achieved by the IMG
Obstetrics and Gynaecology

Competencies in Obstetrics: The student must demonstrate ability to:

1. Provide peri-conceptual counselling and antenatal care,
2. Identify high-risk pregnancies and refer appropriately,
3. Conduct normal deliveries, using safe delivery practices in the primary and secondary care settings,
4. Prescribe drugs safely and appropriately in pregnancy and lactation,
5. Diagnose complications of labour, institute primary care and refer in a timely manner,
6. Perform early neonatal resuscitation,

7. Provide postnatal care, including education in breast-feeding,
8. Counsel and support couples in the correct choice of contraception
9. Interpret test results of laboratory and radiological investigations as they apply to the care of the obstetric patient,
10. Apply medico-legal principles as they apply to tubectomy, Medical Termination of Pregnancy (MTP), Pre-conception and Prenatal Diagnostic Techniques (PC PNDT Act) and other related Acts.

Competencies in Gynaecology: The student must demonstrate ability to:

1. Elicit a gynaecologic history, perform appropriate physical and pelvic examinations and PAP smear in the primary care setting,
2. Recognize, diagnose and manage common reproductive tract infections in the primary care setting,
3. Recognize and diagnose common genital cancers and refer them appropriately.

(b) **Integration:** The teaching should be aligned and integrated horizontally and vertically in order to provide comprehensive care for women in their reproductive years and beyond, based on a sound knowledge of structure, functions and disease and their clinical, social, emotional, psychological correlates in the context of national health priorities.

To achieve these, NMC has given a detailed list of OBGYN competencies in the **3rd Volume (Competency based Undergraduate Curriculum in Surgery and Allied subjects)** with competencies Numbered OG1.1 and so forth) required to be gained by the IMG.

Based on the competencies mentioned in the above said document, following items have been developed and spelt out in a tabular format

- Specific learning objectives (SLO's) to achieve each competency
- Suggested Teaching-Learning methods
- Preferred assessment methods (both formative and summative)

This is only a guideline and teachers are encouraged to improvise and develop more detailed SLOs. The T-L methods can be modified based on local resources. Also, a detailed **blueprint** showing the weightage and the assessment for particular topics. (Few topics have been grouped together to give the weightage). This blueprint is an attempt at ensuring concordance between the SLOs', TL methods and the assessment.

A **question paper layout (theory)** has also been added to ensure that there is consistency among different paper setters.

List of all Obstetrics and Gynaecology Competencies with their specific learning objectives, with suggested teaching-learning and assessment methods

	Competencies	Specific learning objectives	Teaching learning methods with hours	When T-L will be done	Form of assessment
Topic: Demographic and Vital Statistics Number of competencies: (03) Number of procedures that req					
OG1.1	Define and discuss birth rate, maternal mortality and morbidity	Definition of birth rate Definition of maternal mortality What is maternal mortality ratio and rate, Incidence, Causes of maternal mortality Factors affecting maternal mortality - 3 delays Interventions to prevent maternal death Definition of maternal morbidity Explain - acute, chronic, direct, indirect, non-obstetric maternal morbidity	Lecture 1hr Integration with community health	5 th term	MCC 's at end lectr

Also, a suggested **assessment format (practical)** has also been given.

OG1.2	"Define and discuss perinatal mortality and morbidity including perinatal and neonatal mortality and mortality audit	Definition of perinatal mortality Incidence Factors affecting perinatal mortality Causes of perinatal mortality Strategies to reduce perinatal mortality Definition of perinatal morbidity How to audit neonatal morbidity	Lectures 1hr Integration with community health	5 th term	MCC 's at end lectr
OG1.3	Define and discuss still birth and abortion	Definition of stillborn Incidence, aetiology, pathology, symptoms, signs, investigations- still born infant Examination of stillborn infant Complications of IUD Management Definition of abortion Types of abortion Aetiology, Pathophysiology, clinical features, investigations, management, differential diagnosis	Lectures 2hr Tutorials /SGD	5 th Term	MCC 's at end lectr
Topic: Anatomy of the female reproductive tract (Basic anatomy and embryology) Number of competences : (NIL)					
Y					
OG2.1	Describe and discuss the development and anatomy of the female reproductive tract, relationship to other pelvic organs, applied anatomy as related to	Development of external genital organs Development of internal genital organs Development of ovary, differentiation, descent Anatomy of external genitalia Anatomy of Internal genital organs- vagina, uterus, cervix, fallopian tubes, ovary Relationship to other pelvic organs Applied anatomy	Lecture 2hr Integration with Anatomy	5th term	MCC / Vi

	Obstetrics and Gynaecology.				
OG2.2	Define, classify classification of Mullerian anomaly, Investigation & management 1hr term / Viv investigations and management of mullerian anomaly		Lecture 5 th MCQ and discuss the		
	Topic: Physiology of conception	Number of competencies: (01)	Number of procedures that require cer		
OG3.1	Describe the physiology of structure of ovum menstruation, fertilization, events, implantation	Gametogenesis – spermatogenesis, oogenesis Formation and maturation of ovarian follicles, Ovulation- mechanism, causes, timing, effects Fertilization- process, post fertilization implantation and gametogenesis.	Lecture 5 th MCQ 2hrs term ovulation,		
	Topic: Development of the fetus and the placenta	Number of competencies: (01)	Number of procedure		
OG4.1	Describe and MCQ discuss the development embryology of fetus, factors structure, influencing fetal	Embryology – formation of 3 germ layers, amnion and chorion, placenta Timing of appearance of different organ systems Placenta- development, gross anatomy, placental circulation, functions of	Lecture 6 th Phases of conceptus		
	placenta growth and anatomy and physiology of placenta, and teratogenesis	Teratogenesis, teratogens development,			
	Topic: Preconception counselling	Number of competencies:(02)	Number of procedures that require ce		
OG5.1	Describe, identify pre-existing medical disorders and discuss their management; group	Pre-existing medical disorders- anaemia, cardiac disease, DM, chronic hypertension, bronchial asthma, seizure disorders, thyroid disorders, chronic kidney disease, Antenatal care and preconception counselling Objectives, history and examination, assessment of period of gestation, investigations and nutrition. Small	Lectures 6 th MCQ discuss and 1hr term Tutorials 1hr Bedside clinics, discuss		
	evidence-based discussion intrapartum care				
OG5.2	Determine risk factors and pregnancy immunization status	screening for high risk factors, elderly primigravida: complications during pregnancy and labour, maternal and foetal mortality, management bad obstetric history obesity: physiological changes, management grand multipara: complications, mortality, management maternal immunization status for - Tetanus - hepatitis B - whooping cough - influenza	Lectures 6 th MCQ maternal high 1hr Bedside verify clinic, small group discussion		

		vaccines contraindicated in pregnancy immunization in special circumstances: rabies, yellow fever, hepatitis A,			
Topic: Diagnosis of pregnancy Number of competencies:(01) Number of procedures that require certification:					
OG6.1	Describe, demonstrate the clinical features of pregnancy, discuss and elaborate the principles underlying and interpret pregnancy tests. Tests to confirm pregnancy - immunological test, Urine Pregnancy test. Discuss the role of ultrasound in diagnosing Pregnancy OPDs discuss its differential diagnosis,	Discuss the clinical features of early pregnancy 1hr term Lectures s Bedside clinic, small group diagnosis,	6 th	MCQ	discuss and
Topic: Maternal Changes in pregnancy Number of competencies: (01) Number of procedures that require certification:					
OG7.1	Describe and discuss the changes in the genital tract, cardiovascular system, Renal Gastrointestinal changes haematology, renal and cervix gastrointestinal system in pregnancy	Haematology-blood volume, plasma volume, RBC & haemoglobin, blood coagulation factors 1hr term CVS-anatomical changes, cardiac output, BP, venous pressure RS-respiratory rate, tidal volume, total lung capacity discussion respiratory, Genital tract-changes in body of uterus, isthmus,	Lectures s Bedside clinic, small group	6 th	
Topic: Antenatal Care Number of competencies: (08) Number of procedures that require certification:					
OG8.1	Enumerate, describe and	Procedure at 1st visit Procedure at subsequent visits	Bedside clinic, small	6 th term	MCQs

	discuss the objectives of antenatal care, assessment of period of gestation; screening for high-risk factors.	Routine Antenatal screening Antenatal hygiene Immunization Pre conceptional counselling & care Period of gestation based on pts statement, previous records, objective signs & investigations	group discussion OPDs			
OG8.2	Elicit document and present an obstetric history including menstrual history, last menstrual period, previous obstetric history, comorbid conditions, past medical history and surgical history	Menstrual history in detail Negele's rule Importance of Past history Importance of Surgical history	Bedside clinic, small group discussion OPDs	6 th term	MCC s	
OG8.3	Describe, demonstrate, document and perform an obstetrical examination including a general and abdominal examination (and clinical monitoring of maternal and fetal well-being;)	<table border="1"> <tr> <td>Antepartum fetal surveillance - clinical - biochemical - biophysical</td> </tr> </table> <p>Evaluation of foetal wellbeing Maternal weight gain Assessment of height of fundus General physical examination Per abdomen -inspection, palpation, auscultation Symphysis fundal height, abdominal girth</p>	Antepartum fetal surveillance - clinical - biochemical - biophysical	Lectures 1hr Bedside clinic, small group discussion OPDs	3 rd 4 th & 6 th term	MCC s
Antepartum fetal surveillance - clinical - biochemical - biophysical						
OG8.4	Describe and demonstrate clinical monitoring of maternal and fetal well-being	Non stress test Biophysical profile DFMC CTG Maternal condition assessment -vital parameters -investigations - Antenatal foetal surveillance	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion	6 th term	MCC s	

OG8.5	Describe and demonstrate pelvic assessment in a model	Bones of pelvis, anatomical measurements of diameters clinic, small assessment at brim At midcavity At outlet Plane of least pelvic diameter	Bedside group discussion, DOAP, Labour term room	3rd 6th, 8th & 9th	S	
OG8.6	Assess and counsel a patient in a clinic, small requirement appropriate Develop checklist	BMI calorie requirement in pregnancy & lactation Protein requirement Bedside simulated Folic acid requirement Iron Vit b12 requirement group regarding discussion, Supplementary nutritional therapy Role play nutrition in OPD pregnancy	Lectures 1hr group regarding nutrition in pregnancy	3rd term	MCQs	
OG8.7	Enumerate the for Safe vaccines in pregnancy Bedside vaccination in pregnancy	Contraindicated vaccines in pregnancy 1hr terms and types of Tetanus toxoid-dose, route Current guideline for antenatal vaccination including T-dap Timing of vaccination	Lectures 3rd term MCQ indications			
OG8.8	Enumerate the 1st trimester USG markers of fetal anomalies including the use of ultrasound in initial assessment and monitoring in	Indication of 1st trimester USG 1hr terms describe the Indication of 3rd trimester USG Bedside investigations USG Gestational age assessment on USG Doppler studies Routine antenatal blood and urine investigation the Screening test for aneuploidy, preeclampsia and GDM Describe trimester wise blood test and ultrasound assessment pregnancy	Lectures 3rd term MCQ indications and Indication of 2nd trimester USG Bedside investigations group discussion			
Topic: Complications in early pregnancy Number of competencies: (05) Number of procedures that req						
OG9.1	Classify, define the aetiology and management of complete and definition threatened, incomplete, Management	Definition Classification Definition, clinical features, investigations and management of threatened, inevitable, missed, and incomplete abortion clinic, small including Clinical Features Management OPD inevitable, Prevention missed and septic	Lectures 6th & 7th MCQ and discusses Etiology 1hr			
			Tutorials 1hr Bedside abortions Septic abortion discussion	term		

OG9.2	Describe the steps and observe/ assist in the performance of an MTP evacuation	Enumerate the steps of suction evacuation Enumerate steps of dilatation and evacuation Enumerate steps of menstrual regulation	Tutorials 1hr Bedside clinic, small group discussion opd / ward/ minor OT	6 th & 7 th term	MCC s
OG9.3	Discuss the aetiology, clinical features, differential diagnosis of acute abdomen in early pregnancy (with a focus on ectopic pregnancy) and enumerate the principles of medical and surgical management	Differential diagnosis of acute abdomen in early pregnancy- obstetric, gynaecological, medical and surgical causes Etiology of ectopic pregnancy Classification of ectopic pregnancy Clinical features of acute and chronic ectopic Diagnosis Management options Medical management Surgical management	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCC s
OG9.4	Discuss the clinical features, laboratory investigations, ultrasonography, differential diagnosis, principles of management and follow up of gestational trophoblastic neoplasms	Definition of Molar pregnancy Classification Etiopathology Clinical features Investigations- blood and ultrasonography Differential diagnosis Complications- immediate and late Management- medical and surgical Follow up- history, examination, investigations, and contraceptive advice.	Lectures 1hr Tutorials 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCC s
OG9.5	Describe the etiopathology, impact on maternal and fetal health and principles of management of hyperemesis gravidarum	Definition of hyperemesis gravidarum Etiopathology Clinical features- symptoms and signs Investigations Complications to mother and foetus Management- hospitalization, fluids, drugs, diet, nutritional supplementation	Lectures 1hr Bedside clinic, small group discussion OPD	6 th & 7 th term	MCC s

OG10.1	Define, classify and describe Placenta previa pathogenesis, features, ultrasonography, differential diagnosis and grades antepartum haemorrhage in pregnancy	Classification and differential diagnosis 2hr 7 th s the aetiology, Etiology and types Clinical features 2hr clinical Complications Management- investigations, expectant vs definitive management Definition of abruption placenta Etiology and types OPD management of Clinical features Management	Lectures 6 th & 7 th term Tutorials Bedside clinic, small group discussion	6 th & 7 th term	MCQs
OG10.2	Enumerate the indications and Indications for transfusion of blood and blood their complications	Enumerate different types of blood components Characteristic features and storage 1hr Bedside appropriate use Complications and their management Discuss importance of consent form and management.	Lectures 8 th term Bedside appropriate use Massive transfusion protocol group discussion	8 th term	MCQs
OG11.1	Describe the etiopathology, clinical abdominal examination diagnosis and investigations, Management- including delivery of 2nd twin, third stage, management of	Etiopathology and types Diagnosis- History, symptoms, general and abdominal examination	Lectures 6 th & 7 th term 1hr Tutorials term features; Investigations 1hr	6 th & 7 th term	MCQs
OG12.1	Define, classify and describe y, early detection, principles of antenatal management- antibiotics, anti-hypertensives, antieclampsia, complications of eclampsia.	Maternal changes Complications to mother and fetus Management- antenatal, 1st and 2nd stage of labour, including delivery of 2nd twin, third stage, puerperium OPD multiple pregnancies	Lectures 8 th term 2hr Bedside clinic, small investigations; Specific investigations group	8 th term	MCQs
OG12.2	Define, classify and describe the etiology, pathophysiology, diagnosis, investigations, pregnancy and foetus	Classification of hypertensive disorders, definition of pre-eclampsia and eclampsia 3hr term s the pathophysiology Etiopathogenesis Clinical features of pre-eclampsia and eclampsia- pregnancy and foetus	Lectures 6 th & 7 th term 1hr Tutorials 1hr Bedside clinic, small adverse effects group on the mother discussion	6 th & 7 th term	MCQs

	and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy	puerperium Prevention of nutritional anaemia Management of nutritional anaemia- diet, oral and parenteral iron, blood transfusion Discuss classification, aetiology, clinical features, investigations, complications and management of non-nutritional anaemia	OPD		
OG12.3	Define, classify and describe the pathophysiology, diagnosis, investigations, criteria, adverse effects on the management of diabetes during pregnancy	definition of gestational diabetes mellitus classification of diabetes mellitus in pregnancy Enumerate etiological factors Discuss pathophysiology of diabetes mellitus in pregnancy investigations for diabetes mellitus in pregnancy Screening test for gestational diabetes mellitus Describe the effects of diabetes on pregnancy complications of diabetes mellitus in pregnancy management of diabetes in antenatal management and labor, and complications of diabetes in pregnancy	1hr Tutorials 1hr Bedside clinic, small group effects on mother and foetus and the postnatal period, in labour, postnatal	Lectures 7th term 1hr Bedside clinic, small group effects on mother and foetus and the postnatal	6 th & 7 th term MCQs
OG12.4	Define, classify and describe the etiology, pathophysiology, diagnosis, criteria, adverse effects on the management of heart disease during pregnancy	classification of heart disease in pregnancy Discuss etiology Describe pathophysiology of heart disease in pregnancy Discuss clinical features of heart disease in pregnancy Describe antenatal investigations diagnosis Discuss the effects of heart disease on pregnancy management during pregnancy, during labour, in postnatal	1hr Tutorials 1hr Bedside investigations, clinic, small group	Lectures 1hr Tutorials 1hr Bedside investigations, clinic, small group	6 th & 7 th term MCQs
	criteria, adverse effects on the management of heart disease during pregnancy	management during pregnancy, during labour, in postnatal	group		

	during pregnancy and labor, and complications of heart diseases in pregnancy	Complications, preconceptional counselling			
OG12.5	Describe the clinical features, detection, effect of pregnancy on the disease and impact of the disease on pregnancy complications and management of urinary tract infections in pregnancy	aetiology of UTI in pregnancy pathophysiology in pregnancy symptoms signs investigations complications management Asymptomatic bacteriuria	Lectures 1hr Bedside clinic, small group discussion OPD	7 th term	MCC s
OG12.6	Describe the clinical features, detection, effect of pregnancy on the disease and impact of the disease on pregnancy complications and management of liver disease in pregnancy	Discuss classification of liver disease in pregnancy aetiology pathophysiology Describe clinical features of liver disease in pregnancy List the investigations of liver disease in pregnancy Discuss the differential diagnosis of liver disease in pregnancy List the maternal complications management of liver disease in pregnancy	Lectures 1hr Bedside clinic, small group discussion OPD	7 th term	MCC s
OG12.7	Describe and discuss screening, risk factors, management of mother and newborn with HIV	introduction of HIV and incidence routes of transmission immunopathogenesis clinical presentation diagnosis management prenatal care, antenatal care, intrapartum care, postnatal care Pre-test and post-test counselling PPTCT program TORCH infection in pregnancy	Lectures 1hr Bedside clinic, small group discussion	7 th term	MCC s
OG12.8	Describe the mechanism, prophylaxis,	Definition of Rh- isoimmunisation Mechanism of antibody formation in the mother Prevention of Rh-isoimmunisation	Lectures 1hr	6 th & 7 th term	MCC s

	fetal complications, diagnosis and management of isoimmunization in pregnancy	Haemolytic disease of the fetus and newborn Antenatal investigations protocol of Rh-negative mother Plan of delivery in unimmunised and immunised mother Prognosis of Rh-isoimmunisation	Bedside clinic, small group discussion OPD		
Topic: Labour- Number of competencies: (05) Number of procedures that require certification : (01)					
OG13.1	Enumerate and discuss the physiology of normal labor, mechanism of labor in occipito-anterior presentation; monitoring of labor including partogram; conduct of labor, pain relief; principles of induction and acceleration of labor; management of third stage of labor.	physiology of normal labour mechanism of normal labour monitoring of labour by partogram steps of delivery labour analgesia induction of labour by natural, medical, surgical, combined acceleration of labour management of 3rd stage of labour	Lectures 3hr Tutorials 1hr Bedside clinic, small group discussion, evening labour room posting	3 rd & 4 th term	MCCS
OG13.2	Define, describe the causes, pathophysiology, diagnosis, investigations and management of preterm labor, PROM and postdated pregnancy	definition for preterm labour, PROM & post-dated pregnancy etiology pathophysiology symptoms signs investigations diagnosis complications management	Lectures 2hr Tutorials 1hr Bedside clinic, small group discussion	6 th & 7 th term	MCCS
OG13.3	Observe/ assist in the performance of an artificial rupture of membranes	indications for ARM Enumerate the technique of procedure limitations contraindications complications	Bedside clinic, small group discussion, evening labour room posting	8 th & 9 th term	

OG13.4	Demonstrate the stages of normal labor in a simulated environment / mannequin (and counsel on safe complications).	physiology and mechanism and events of stage 1,2 and 3 of normal labour term definition of abortion types of abortion indications of induced abortion medical and surgical methods MTP act methods of abortion).	Bedside clinic, small group	8 th	
OG13.5	Observe and assist the labour conduct of a Position for delivery	Monitoring of mother and foetus in second stage of labour clinic, 9 th General management- sterile precautions Evening delivery labour procedures Oxytocics and analgesia in labour Management of third stage of labour Examination of placenta Fourth stage of labour	Bedside room posting DOAP	8 th &	term normal vaginal
Topic: Abnormal Lie and Presentation; Maternal Pelvis Number of competencies: (04) Number of procs (NIL)					
OG14.1	Enumerate and discuss the significance of each maternal pelvis classification of pelvis.	Bones of female pelvis Diameters and planes of obstetric pelvis False and true pelvis pelvis.	Bedside clinic, 8 th & DOAP 9 th s diameters of term and types Caldwell and Moley	6 th Clinical	MCQ
OG14.2	Discuss the mechanism of Explain synclitism/asynclitism describe obstructed labor, its diagnosis Management prevention; and	normal labour- definition Describe cardinal movements involved in labour 1hr Bedside Define and Definition of obstructed labour causes Clinical features Evening clinical Prevention labour features; Management room Complications of obstructed labour posting management	Lectures term s normal labor, group discussion, labour features; posting management Lectures	8 th	MCQ
OG14.3	Describe and discuss rupture diagnosis and management.	incidence of Rupture Uterus causes 1hr term s uterus, causes, pathology Clinical features diagnosis complications Management- general and definitive	Bedside clinic, small group discussion, Evening labour room posting	8 th	MCQ
				52	

				Bedside clinic, small group		
OG14.4	Describe and discuss the pathological retraction ring and diagnosis;	Definition Classification of abnormal uterine action 1hr term s classification; management		Lectures	8th	MCQ Describe
OG14.5	management of abnormal labor Describe and discuss causes, Etiology management of breech presentation, posterior, transverse lie, Definition of presentation	Management of abnormal labour Dystocia dystrophia syndrome Breech – Etiological features 1hr term s dagnosis and Clinical Examination Management of Antenatal intrapartum Complications - Maternal Foetal OP- clinic, small occipito Aetiology Features group Clinical Examination Mechanism of labour in OP, Course of labour labour deep transverse arrest and its management		discussion Lectures 1hr Bedside discussion , evening face room	8th	MCQ
Topic: Operative obstetrics Number of competencies: (02) Number of procedures that require certification						
OG15.1	Enumerate and describe the structures incised, indications, Bedside common low forceps- obstetric caesarean section- complications. What is caesarean hysterectomy breech delivery- coming head, vacuum extraction; low forceps; Caesarean cervical cerclage	Episiotomy- definition, types, timing of episiotomy, Skill steps of contraindications, procedure, description of forceps, indications, Small t contraindications, procedure, complications group procedures, types, indications, procedure, discussion, technique and complications: assisted delivery of after evening complications external cephalic version- prerequisites, indications, contraindications, procedure, complications section, assisted complications breech delivery; external cephalic version;		Tutorials vacuum extraction- design, complications clinic, Assisted delivery of after labour room posting	8th &	MCQ
OG15.2	Observe and assist in the group and demonstrate the correct suturing technique of an	episiotomy- suturing technique breech delivery clinic, s performance of discussion ,		Bedside Small an episiotomy observatio n in OT, DOAP		MCQ
		Skill lab episiotomy in a				
					53	

	simulated environment. Observe/Assist in operative obstetrics cases – including - CS, Forceps, vacuum extraction, and breech delivery				
Topic: Complications of the third stage of labor- Number of competencies: (03) Number of procedures					
OG16. 1	Enumerate and discuss causes, prevention, diagnosis, management, of blood and blood products in appropriate use postpartum haemorrhage	Definition – primary and secondary PPH Aetiology incidence diagnosis Degree of shock in PPH Prevention Management- medical, appropriate use of blood and blood products Uterine compression sutures Step wise devascularisation	Lectures 1hr Tutorials 1hr Bedside clinic, Small group discussion, evening labour room posting	8 th term	MCC s
OG16. 2	Describe and discuss uterine inversion – causes, prevention, diagnosis and management.	uterine inversion- INCIDENCE TYPES degree aetiology Clinical features diagnosis Complications D/D ,prevention, prognosis management	Lectures 1hr Tutorials 1hr Bedside clinic, Small group discussion	8 th term	MCC s
OG16. 3	Describe and discuss causes, clinical features, diagnosis, investigations; monitoring of fetal well-being, including ultrasound and fetal Doppler; principles of management; prevention and counselling in	intrauterine growth restriction – definition Pathophysiology of FGR TYPES OF FGR aetiology diagnosis Management- antepartum, intrapartum and neonatal	Lectures 1hr Tutorials 1hr Bedside clinic	8 th term	MCC s

	intrauterine growth retardation				
OG16.4	Describe and discuss macrosomia, causes, diagnosis, intrapartum complications, maternal & neonatal complications	Definition of Macrosomia Causes clinical & sonological findings to diagnose & management shoulder dystocia - Causes Intrapartum Management posting management Skill lab	Lectures 1hr Bedside clinic, evening labour room		MCQs
Topic: Lactation Number of competencies: (03) Number of procedures that require certification: (NIL)					
OG17.1	Describe and discuss the physiology of lactation	Anatomy of breast Phases of lactation Prolactin reflex Milk let down reflex			MCQ
OG17.2	Counsel in a simulated care of the breast, importance and the technique of breast feeding	Lactation inhibition and suppression Care of breast Initiation of breast feeding environment, Technique of breastfeeding-different position and attachment Frequency of breastfeeding Adequacy of breastfeeding Expression of breast milk	Exclusive breast feeding		
OG17.3	Describe and discuss the clinical presentation of mastitis, prevention of mastitis diagnosis and definition, clinical investigation, treatment mastitis and breast abscess	Clinical presentation in mastitis Diagnosis of mastitis Complication of mastitis features, Treatment and Breast abscess - diagnosis, management of mastitis and breast abscess			MCQ
Topic: Care of the new born Number of competencies: (04) Number of procedures that require certification: (NIL)					
OG18.1	Describe and discuss the maturity of the newborn, resuscitation principles of resuscitation, common labour problems.	Examination of newborn Assessment of gestation age – by sole creases, breast nodule, scalp hair, ear lobe, testes and scrotum Birth asphyxia – definition, etiology, diagnosis, clinical features, management group birth asphyxia, Common problem in resuscitation	Lectures 1hr Bedside term clinic, Equipments for DOAP, Evening posting Skill Lab OG18. Demonstr	3 rd & 4 th s assessment of	MCQ

				ate New born resuscitation algorithm Bedside 6 th		
2	the steps of Initial steps clinic, term neonatal Positive pressure ventilation DOAP, resuscitation in Endotracheal intubation, Evening a simulated chest compression environment medication room			labour		
OG18. 3	Describe and discuss the etiology diagnosis of birth asphyxia	definition birth asphyxia pathogenesis 1hr term s Clinical features and diagnosis management		posting Skill Lab Lectures Bedside	8 th	MCQ
OG18. 4	Describe the principles of resuscitation of newborn despite tactile stimulation and Resuscitation when baby is apnoeic and HR less than 100 common problems encountered	Principles of resuscitation Steps of resuscitation clinic, term s Resuscitation principle in baby who is apnoeic Small the group discussion enumerate the 100 common problems encountered		clinic, small group discussion Bedside	8 th	MCQ
Topic: Normal and abnormal puerperium. Number of competencies: (04) Number of procedures that r						
OG19. 1	Describe and discuss the Physiological changes includes term puerperium, its general physiological changes diagnosis and management; counselling for contraception, puerperal pulmonary sterilization	definition of Purperium Physiological changes includes 2hrs 8 th s physiology of uterine changes Define lochia & types Bedside Puerperal sepsis – definition , causes, pathogenesis , clinical features, diagnosis, management Small Subinvolution , urinary problems Thromboembolic disorders – DVT, thrombophlebitis, puerperal pulmonary embolism Obstetric palsies , puerperal psychiatric disorders		Lectures 1hr complications, clinic, group discussion	6 th &	MCQ
OG19. 2	Counsel in a simulated Puerperal sterilization - 1hr 9 th environment, contraception Role sterilisation	Methods of contraception a. informed consent and pre-requisites clinic, and puerperal b. timing c. methods play d. technique e. steps f. complication		Tutorials Bedside DOAP,	8 th & term	

		Develop a checklist for role paly including above mention SLO			
OG19. 3	Observe/ assist in the Type performance of tubal ligation	Pre -operative preparation of anaesthesia Intra 9 th Types of incision Procedure Advantages Drawbacks	DOAP & operative, skill lab	8 th & term	
OG19. 4	Enumerate the indications for, criteria of insertion - no touch insertion - no environment	Indications for cu-t insertions -WHO eligibility criteria OPD 9 th s describe the Timing of insertion insert and remove an intrauterine device in a simulated	Skill lab & steps in and	8 th & Technique	MCQ
Topic: Medical termination of pregnancy Number of competencies: (03) Number of procedures that re					
OG20. 1	Enumerate the indications and legal First trimester (Upto 12 weeks) -Medical & Surgical Second Trimester (13-24 weeks) Medical & Surgical Complications of MTP- Immediate & Remote Management of Complications and management of complications of Medical Termination of Pregnancy	Induction of Abortion- Definition MEDICAL TERMINATION OF PREGNANCY Act 2hr Bedside discuss the Recommendations (new changes) Small aspects, group indications, discussion methods for first and second trimester MTP; complications of complications of Medical Termination of	Lectures term s describe and	3 rd clinic,	MCQ
OG20. 2	In a simulated environment or legal guardian informed consent to a person wishing to undergo Termination of Pregnancy	Introduces oneself and verifies the patients identity and age. Explains that if minor or lunatic then parents DOAP, Role term Calculates the gestational age Provides information regarding the options available or the need for opinion of two medical practitioners Provides information regarding the failure rates, Medical immediate and remote complications of the chosen procedures Explains that only the patients written consent is required and not the husbands Explains that it is a confidential procedure and has to be reported to the DHS in the prescribed form	Tutorials 1hr play	8 th & 9 th administer	

OG20.3	Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC& PNDT) Act	Develop a checklist for role play including above mentioned SLO Definition of the PC & PNDT act Prenatal diagnostic procedures under the act Prenatal diagnostic Tests covered by the act Qualified Personnel and Registration (of The place where USG is performed) Offences and penalties	Lectures 1hr Bedside clinic, Small group	9 th term	MCQs
1994 & its discussion amendments					
Topic: Contraception Number of competencies: (02) Number of procedures that require certification :					
OG21.1	Describe and discuss the MEC permanent Temporary withdrawal, and female condoms, and foam complications; selection of patients, side effects and rate and non-management male contraception, PPIUCD contraception and	Methods of contraception Criteria 5hrs 9 th s temporary and pearl Index Permanent – Male and Female contraceptive method Natural- Calendar, temperature, lactational (FAM) Small technique and diaphragms ; IUCD- types, mode of action, contraindications, complications, other uses Steroidal Contraception-oral, parenteral, devices COC- types, Mechanism of action, contraindications failure rate and non-contraceptive uses, follow up, Missed pill including Ocs, Implants injectables and Emergency contraception Male contraception emergency What is	Lectures Tutorials 4hrs methods of Bedside contraception, Barrier- Physical-male creams jelly discussion Skill lab 1	8 th & term	MCQ
OG21.2	IUCD Describe & discuss PPIUCD Benefits	Mode of insertion of PPIUCD 1hr 9 th s programme Drawbacks Government Family Planning programs	Lectures clinic, Small group discussion	8 th & term	MCQ
Topic: Vaginal discharge Number of competencies: (02) Number of procedures that require certification :					
OG22.1	Describe the clinical characteristics of physiological vaginal discharge	Characteristics of normal vaginal discharge Leucorrhoea 1hr term s Physiological excess of physiological vaginal discharge Vaginal causes ,Small discharge Enumerate	Lectures Bedside clinic, Small group discussion, OPD	6 th term	MCQ
OG22.2	Describe and discuss the Bedside	Defence of the genital tract 1hr term s etiology (with Candida- Clinical features,	Lectures complications, diagnosis,	6 th term	MCQ

	special emphasis on Candida, T. vaginalis, bacterial vaginosis), Gonorrhoea - Clinical features, complications, diagnosis, treatment clinical investigations, genital hygiene, management of Clinical common causes and the syndromic management	treatment T. vaginalis- Clinical features, complications, diagnosis, treatment Bacterial Vaginosis- Clinical features, complications, diagnosis, treatment Gonorrhoea - Clinical features, complications, characteristics, diagnosis, treatment Syphilis- Clinical features, complications, diagnosis, diagnosis, treatment Chlamydial infections- Clinical features, complications, diagnosis, treatment Chancroid, LGV, Granuloma Inguinale- cause, features, complications, diagnosis, treatment Herpes Genitalis- Clinical features, complications, diagnosis, treatment Syndromic Approach & kits available	clinic ,Small group discussion, OPD		
Topic: Normal and abnormal puberty	Number of competencies: (03)	Number of procedures that require			
OG23. 1	Describe and discuss the physiology of puberty, etiology, diagnosis, treatment, prognosis, common management	Puberty Definition and Morphological Changes Endocrinology of Puberty 1hr 7 th s Precocious Puberty Definition, types, etiology, diagnosis, treatment, prognosis, ,Small abnormal Delayed Puberty- Definition, types, etiology, diagnosis, treatment, prognosis group Puberty Menorrhagia - etiology, diagnosis treatment OPD problems and their	Lectures Bedside clinic features of ,Small abnormal discussion,	6 th & term	MCQ
OG23. 2	Enumerate the causes of delayed and management	Hypergonadotrophic Hypogonadism- Ovarian Failure, gonadal dysgenesis 1hr 7 th s Hypogonadotrophic hypogonadism-primary, kallmann syndrome, tumors Describe the Eugonadism- Anatomical ; AIS investigation of common causes	Lectures term puberty. AIS investigation	6 th & term	MCQ
OG23. 3	Enumerate the causes of independent – Ovarian; adrenal; Liver; associated with irregular cycle, HMB, bleeding, dismenorrhea, PMS, ovulatory pain	GnRH dependent- constitutional, intracranial lesions, 1hr term s juvenile primary hypothyroidism; incomplete puberty iatrogenic	Lectures s precocious	6 th term	MCQ
Topic: Abnormal uterine bleeding	Number of competencies: (01)	Number of procedures that require c			
OG24. 0	Discuss common disorders associated with irregular cycle, HMB, bleeding, dismenorrhea, PMS, ovulatory pain	Definition of dysmenorrhea clinical Features Types of dysmenorrhea & management of associated with clinic menstruation Pre menstrual syndrome ,Small like irregular Etiology group	Lectures 1hr Bedside clinic menstruation Pre menstrual syndrome ,Small like	6 th term	
OG24. 1	Define, classify and discuss DUB	Old terminology- Menorrhagia; Polymenorrhagia; Menorrhagia; Oligomenorrhagia; Hypomenorrhagia; Tutorials	Lectures 1hr term s abnormal	6 th term	MCQ

	uterine management	Oligomenorrhea; Hypomenorrhea; DUB PALM-COEIN classification Bedside Causes and its clinical features Investigations Management	1hr bleeding, its	FIGO clinic	
Topic: Amenorrhea Number of competencies: (01) Number of procedures that require certification : (N					
OG25.1	Describe and discuss the clinical types of amenorrhea primary and secondary causes of primary and secondary amenorrhea clinical examination investigation and the principles of management.	definition of primary and secondary amenorrhea clinical types of amenorrhea Tutorials pathological amenorrhea of primary and secondary amenorrhea Bedside amenorrhea, its history, when to start clinic, investigating investigations panel differential diagnosis of primary and secondary amenorrhea	1hr term s causes of	Lectures physiological 1hr Small group discussion, OPD	6 th MCQ
OG25.2	Describe and discuss sexual and disorders	Sexual Development Classification of intersex Disorder Klinefelter's syndrome of sexual development	1hr term s development	Lectures Turners Syndrome OPD	6 th MCQ
Topic: Genital injuries and fistulae Number of competencies: (02) Number of procedures that require c					
OG26.1	Describe and discuss the etiopathogenesis (theories) features; investigation and Small group health and fertility and management of endometriosis management - expectant	ENDOMETRIOSIS definition - prevalence and sites 1hr - pathology - naked eye and microscopic appearance - ovarian endometrioma implications on - Symptoms and signs - investigations - differential diagnosis - complications and -		Lectures 2hr Bedside clinic, discussion, OPD	8 th MCQ
/medical / surgical /combined					

		<p>ADENOMYOSIS</p> <ul style="list-style-type: none"> - definition - causes - pathogenesis - symptoms and signs - investigations - differential diagnosis - management - complications 			
Topic: Genital infections Number of competencies: (04) Number of procedures that require certification:					
OG27.1	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of sexually transmitted infections	<p>Discuss etiopathogenesis of each STD</p> <p>Describe the clinical features</p> <p>Discuss differential diagnosis of STD</p> <p>Discuss investigations and management of STD</p> <p>Syndromic Approach</p> <p>Discuss long term implications of STD</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6 th term	MCC s
OG27.2	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of genital tuberculosis	<p>Describe aetiopathogenesis of genital TB</p> <p>Describe the clinical features</p> <p>Discuss differential diagnosis of genital TB</p> <p>Discuss investigations and management of genital TB</p> <p>Discuss long term implications of genital TB</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6 th term	MCC s
OG27.3	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations,	<p>Describe etiopathogenesis of HIV</p> <p>Describe the clinical features of HIV in Gynaecology</p> <p>Discuss differential diagnosis of HIV</p> <p>Discuss investigations and management of HIV</p> <p>Discuss long term implications of HIV</p>	Lectures 1hr Bedside clinic, Small group discussion, OPD	6 th term	MCC s

	management and long term implications of HIV				
OG27.4	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management and long term implications of Pelvic Inflammatory Disease	Define PID Describe etiopathogenesis of PID Describe the clinical features of PID Discuss differential diagnosis of acute PID Discuss investigations and management of PID Discuss long term implications of PID	Lectures 1hr Tutorials 1hr Small group discussion, OPD	6 th term	MCC s
OG27.5	Describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations, management of low back ache and chronic pelvic pain	Describe aetiology, clinical features, management of chronic PID Definition of chronic pelvic pain Difference between cyclic and acyclic pelvic pain Non gynaecological causes of pelvic pain Enumerate Different causes of pelvic pain (gynaecological) What is pelvic congestion syndrome and its management What is Cornett sign What is pessary test What is role of laparoscopy in diagnosis of chronic pelvic pain What is LUNA What is residual (trapped) ovarian syndrome	Lectures 1hr Small group discussion, OPD	6 th term	MCC s
OG27.6	Discuss clinical features, differential diagnosis, pathogens and management of Bartholin's abscess	Causative organisms Pathology Fate of infection of Bartholin gland clinical features local examination findings treatment recurrent Bartholinitis	Lectures 1hr Small group discussion, OPD	6 th term	MCC s
Topic: Infertility Number of competencies:(04) Number of procedures that require certification : (NIL)					

OG28.1	Describe and discuss the common causes, pathogenesis, clinical features, differential diagnosis; investigations; principles of management of infertility – methods of tubal patency, ovulation induction, assisted reproductive techniques	Definition of infertility Enumerate the causes and pathogenesis Clinical features Evaluation of infertile couple, Discuss the principles of management of infertility	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCC s
OG28.2	Enumerate the assessment and restoration of tubal patency	Causes for tubal factor in infertility Discuss the investigations to assess tubal patency Enumerate the methods to restore tubal patency	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCC s
OG28.3	Describe the principles of ovulation induction	Discuss ovarian factor leading to infertility Enumerate the investigations for ovarian factor in infertility Discuss the principles and different methods available for ovulation induction	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCC s
OG28.4	Enumerate the various Assisted Reproduction Techniques	Define ART Counselling for ART	Lectures 1hr Tutorials 1hr Small group discussion, OPD	8 th term	MCC s
OG28.5	Describe and discuss the common causes, pathogenesis,	Male Infertility : Discuss Aetiology - Genetic Disorders of Spermatogenesis			MCC s

	clinical features, differential diagnosis; investigations; principles of management of male infertility	<p>Disorders of Sperm Anatomical defect Sexual dysfunction & explain</p> <p>History to be elicited - To find the probable causes</p> <p>Investigation - WHO guidelines for semen analysis - Testicular biopsy - Immunological test - Chromosomal assay</p> <p>Enumerate ART methods</p>			
Topic: Uterine fibroids Number of competencies: (01) Number of procedures that require certification					
OG29.1	Describe and discuss the etiology; pathology; clinical features; differential diagnosis; investigations; principles of management, complications of fibroid uterus	<p>Incidence and pathogenesis Risk factors Figo classification of types of fibroid Histological features of fibroid Clinical features Examination Investigations Differential diagnosis Management Asymptotic fibroids: Medical management : Indications Side effects Surgical management : Principles of myomectomy prerequisites Indications Contraindications Endoscopic procedures: Hysteroscopy Laproscopy Uterine artery embolization New methods: MRgFUS Abdominal hysterectomy</p>	<p>Lectures 1hr Tutorials 1hr Small group discussion, OPD, Intra operative</p>	8 th term	MCCQs
Topic: PCOS and hirsutism Number of competencies: (02) Number of procedures that require certification					
OG30.1	Describe and discuss the etiopathogenesis; clinical features; differential diagnosis; investigations; management,	<p>discuss the etiopathogenesis of PCOS Discuss clinical features of PCOS investigations , Diagnostic criteria , Differential diagnosis Treatment Long term complications</p>	<p>Lectures 1hr Tutorials 1hr Small group discussion</p>	8 th term	MCCQs

	complications of PCOS				
OG30.2	Enumerate the causes and describe the investigations and management of hyperandrogenism	Definition of hirsutism Ovarian causes: Adrenal causes: Others: Clinical features investigations management	Lectures 1hr Small group discussion, OPD	8 th term	MCC s
Topic: Uterine prolapse Number of competencies: (01) Number of procedures that require certification					
OG31.1	Describe and discuss the etiology, classification, clinical features, diagnosis, investigations, principles of management and preventive aspects of prolapse of uterus	Definition of pelvic organ prolapse Supports of uterus Pathophysiology and causes of prolapse Classification of pelvic organ prolapse Symptoms of prolapse Clinical evaluation including history and examination Differential diagnosis of mass per vaginum investigations Factors determining the choice of treatment in pelvic organ prolapse Management of prolapse: pessary treatment in pelvic organ prolapse preventive aspects of prolapse of uterus	Lectures 1hr Tutorials 1hr Small group discussion, OPD, OT, Bed side clinics	8 th term	MCC s
Topic: Menopause Number of competencies: (02) Number of procedures that require certification : (N					
OG32.1	Describe and discuss the physiology of menopause, symptoms, prevention, management and the role of hormone replacement therapy.	Definition of menopause Physiology of menopause Symptoms and investigations Management and HRT	Lectures 1hr Small group discussion, OPD	6 th term	MCC s
OG32.2	Enumerate the causes of postmenopausal bleeding and describe its management	Definition of post-menopausal BLEEDING causes investigations management	Lectures 1hr Tutorials 1hr Small group discussion, OPD, minor OT, Bed side clinics	9 th term	MCC s

Topic: Benign, Pre-malignant (CIN) and Malignant Lesions of the Cervix Number of competencies: (04) require certification : (NIL)

OG33.1	Classify, describe and discuss the etiology, pathology, clinical features, differential diagnosis, investigations and staging of cervical cancer	Risk factors Clinical features Signs and symptoms Modes of spread investigations Histological types of c a Cervix Staging of Ca cervix-FIGO	Lectures 2hr Tutorials 1hr Small group discussion , OPD	9 th term	MCC s
OG33.2	Describe the principles of management including surgery and radiotherapy of Benign, Pre-malignant (CIN) and Malignant Lesions of the Cervix	Benign lesions: Etiopathogenesis Clinical features Symptoms and treatment: preventive and definitive Premalignant lesions of cervix (CIN): Pathogenesis Etiology Symptoms Investigations Treatment of CIN: preventive and definitive Ca cervix: Management of Cervical Cancer according to staging Types of hysterectomy Indications for radiotherapy & Chemotherapy	Lectures 1hr Small group discussion , OPD	9 th term	MCC s
OG33.3	Describe and demonstrate the screening for cervical cancer in a simulated environment	Complications and followup counsel the patient about need for Pap smear Examination take informed consent about the procedure ensure the adequate privacy at examination area keep ready equipment needed for the procedure Perform examination under aseptic precaution Document the findings Proper disposal of gloves	Small group discussion, OPD, Skill Lab, DOAP	9 th term	MCC s
OG33.4	Enumerate the methods to prevent cancer of cervix including visual inspection with acetic acid (VIA), visual inspection of	Need for screening: Methods: VIA VILI PAP Colposcopy Indications Methods inference	Lectures 1hr Small group discussion, OPD	9 th term	MCC s

	cervix with Lugol's iodine (VILI), pap smear and colposcopy				
Topic: Benign and malignant diseases of the uterus and the ovaries Number of competencies: (04) Number of certification : (NIL)					
OG34.1	Describe and discuss aetiology, pathology, staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer	Types of endometrial hyperplasia Incidence, aetiology of endometrial cancer Pathology – gross, microscopic features. Types of endometrial cancer Modes of spread Diagnosis Figo staging Differential diagnosis, investigations Steps of staging laparotomy Chemotherapy and radiotherapy Follow-up	Lectures 1hr Small group discussion, OPD, intra operative	9 th term	MCC s
OG34.2	Describe and discuss the etiology, pathology, classification, staging of ovarian cancer, clinical features, differential diagnosis, investigations, principal of management including staging laparotomy	Incidence, aetiology for ovarian cancer Genetics and ovarian malignancy Pathology Classification of ovarian cancer Modes of spread Clinical features Investigations Diagnosis Figo staging Differential diagnosis Screening Surgical management Chemotherapy Follow-up Germ cell tumours of ovary Discuss the role of Tumour markers	Lectures 2hr Tutorials 1hr Small group discussion, OPD, intra operative, Bed side clinics	9 th term	MCC s
OG34.3	Describe and discuss the etiology, pathology, classification, staging, clinical features, differential diagnosis, investigations	Gestational trophoblastic disease- spectrum WHO based prognostic scoring Incidence Aetiology pathology staging Spread, clinical features Investigations, management Surveillance during and after therapy	Lectures 1hr Tutorials 1hr Small group discussion, OPD, Bed side clinics	9 th term	MCC s

	and management of gestational trophoblastic disease				
OG34.4	Operative Gynaecology : Understand and describe the Cervical biopsy: types, indications, steps, procedures, complications: Dilatation & Curettage (D&C); EA-ECC; cervical biopsy; Staging laparotomy hysterectomy; VH+PFR: steps, complications myomectomy; Fothergill's operation: indications, steps, surgery for complications ovarian Laparoscopy: advantages, disadvantages, tumours; instruments, indications, contraindications, staging techniques, complications laparotomy; Hysteroscopy: instruments, distending media, vaginal anaesthesia, procedures, indications, hysterectomy contraindications, complications including pelvic floor repair; Fothergill's operation, Laparoscopy; hysteroscopy; management of postoperative complications	operative gynaecology: technique and complications Dilatation and curettage: indications, steps, complications Endometrial aspiration – endocervical curettage group technique and discussion, complications TAH: types, indications, steps, complications Myomectomy: measures to control blood loss during myomectomy, steps, complications Surgery for ovarian tumours abdominal Staging laparotomy hysterectomy; VH+PFR: steps, complications myomectomy; Fothergill's operation: indications, steps, surgery for complications ovarian Laparoscopy: advantages, disadvantages, tumours; instruments, indications, contraindications, staging techniques, complications laparotomy; Hysteroscopy: instruments, distending media, vaginal anaesthesia, procedures, indications, hysterectomy contraindications, complications including pelvic floor repair; Fothergill's operation, Laparoscopy; hysteroscopy; management of postoperative complications	Lectures 2hr Small group OPD, OT, Minor OT	9 th term	MCQs
OG34.5	Benign lesions of cervix, ovary - cervical ectropion	Benign disorders of cervix - cervical erosion - cervical polyp Benign disorders of ovary -	Lectures 2hr Small group discussion, OPD, Bed	8 th term	MCQs
		-Enumerate the conditions of non-neoplastic ovarian enlargement - classification of Benign ovarian tumors -complications of Benign ovarian tumors	side clinics		
OG35.1	Obtain a logical sequence of history, and	Obtain a demographic data Chief complaints History of presenting complaints	Small group	3 rd 4 th 6 th &	

	perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal)	Obstetric and menstrual history Past and family history Treatment history Personal history General physical examination including breast and thyroid, BMI SYSTEMIC EXAMINATION- RS/CVS/CNS ABDOMEN EXAMINATION	discussion, OPD, DOAP	8 th term	
OG35.2	Arrive at a logical provisional diagnosis after examination.	With elicited history and detailed examination arrive at a logical provisional diagnosis	Small group discussion, OPD, DOAP	6 th 8 th & 9 th term	
OG35.3	Recognize situations, which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.	Analysis of clinical situation Identify the risk factors and need for urgent treatment Administer emergency medications Transfer to tertiary care centre	Small group discussion, OPD, DOAP	8 th & 9 th term	
OG35.4	Demonstrate interpersonal and communication skills befitting a physician in order to discuss illness and its outcome with patient and family	Counsel the patient and family members Arrive at a provisional diagnosis Explain the medical condition to family members in a language understood by them Discuss the medical and surgical management, complications, requirement of blood and blood products if needed Explain the prognosis of medical condition	Small group discussion, OPD, DOAP	8 th & 9 th term	
OG35.5	Determine gestational age, EDD and obstetric formula	Address their concerns GA; Menstrual History. Clinical methods Ultrasound examination EDD; Menstrual History Negele's Formula Clinical methods Dating scan No dating scan Then interval Scan	Small group discussion, OPD, DOAP	8 th & 9 th term	

OG35.6	Demonstrate ethical behavior medical beneficence	Definition Gravida, Para, Living, Dead and Abortion Autonomy group 4 th in all aspects of Justice OPD, 8 th & practice. DOAP, role 9 th	Small discussion,	3 rd 6 th	
OG35.7	Obtain informed For Examination: Informed oral consent group 4 th consent informed written consent discussion, 6 th examination / Signature is must OPD, DOAP 8 th & procedure diagnosis of condition name and purpose of procedure term benefits, risks, and alternative procedures benefits and risks of each alternative procedures	Non malfeasance For Examination: Informed oral consent group 4 th consent informed written consent discussion, 6 th examination / Signature is must OPD, DOAP 8 th & procedure diagnosis of condition name and purpose of procedure term benefits, risks, and alternative procedures benefits and risks of each alternative procedures	play Small for any For Procedure;	3 rd 9 th	
OG35.8	Write a complete case Menstrual history necessary details	Demography Obstetric score with amenorrhea group 4 th record with all LMP EDD discussion, 6 th Chief complaint HOPI Present obstetric history, Past obstetric history Past medical and surgical history and personal history General Physical examination with Vitals. Breast and Spine examination Specific Systemic Examination Diagnosis	Small DOAP	3 rd 8 th & 9 th term	
OG35.9	Write a proper discharge -name, age, sex, hospital number, address, date of group 9 th summary with admission & discharge discussion, term all relevant Final diagnosis DOAP information	Contents of discharge summary -name, age, sex, hospital number, address, date of group 9 th admission & discharge discussion, term all relevant Final diagnosis DOAP Name of the operative interventions and intraoperative findings & complications Brief history Relevant investigations and Reports Course in the hospital in brief Advice on discharge Warning signs and symptoms relevant to the case to be mentioned Timing of follow up visits	Small DOAP	8 th &	
OG35.10	Write a proper referral note to secondary or tertiary centres physicians with details.	Definition of referral letter Patient demographics Registered general Practitioner details Referral Details OPD, DOAP or to other - Institute - Specialty dept all necessary Referring Practitioner details Presenting complaints Past /Family History	Small group discussion,	8 th & 9 th term	

		<p>Assessment and examination</p> <p>Legal information</p> <p>Management to date</p> <p>Reason and urgency for referral</p>			
OG35.11	Demonstrate the correct use of appropriate universal precautions for self-protection against HIV and hepatitis and counsel patients	<p>Universal Infection Control Precautions</p> <p>Protective Clothing</p> <p>Isolation Facilities</p> <p>Spillage Of Blood and Body Fluids</p> <p>Sterilization And Disinfection</p> <p>Intravenous Procedures</p> <p>Waste Disposal</p> <p>Staff Protection and Immunization</p>	Small group discussion, OPD, DOAP	3 rd 4 th 6 th 8 th & 9 th term	
OG35.12	Obtain a PAP smear in a stimulated environment	<p>counsel the patient about need for Pap smear</p> <p>Examination</p> <p>ensure the adequate privacy at examination area</p> <p>keep ready equipment needed for the procedure</p> <p>perform examination under aseptic precaution</p> <p>document the findings</p> <p>Proper disposal of gloves</p>	DOAP Skill lab	8 th & 9 th term	
OG35.13	Demonstrate the correct technique to perform artificial rupture of membranes in a simulated / supervised environment	<p>Indications</p> <p>Complications</p> <p>Pelvic examination findings</p> <p>Colour of liquor</p> <p>Foetal Heart Assessment</p> <p>Verbal consent</p>	DOAP, Evening labour room posting Skill lab	8 th & 9 th term	
OG35.14	Demonstrate the correct technique to perform and suture episiotomies in a simulated/ supervised environment	<p>Define</p> <p>Types</p> <p>Advantages</p> <p>Disadvantages</p> <p>Correct technique</p> <p>Complications – immediate & late</p>	DOAP, Evening labour room posting Skill lab	8 th & 9 th term	
OG35.15	Demonstrate the correct technique to insert and remove an IUD in a simulated/ supervised environment	<p>Define</p> <p>Types</p> <p>Mechanism of action</p> <p>Advantages</p> <p>Disadvantages</p> <p>Indications and contra indications</p> <p>Criteria for selection of a client</p> <p>Techniques</p> <p>Uses</p>	Skill lab	8 th & 9 th term	

OG35. 16	Diagnose and provide Examination management of antepartum and postpartum balloon hemorrhage in stepwise a simulated Emergency environment	Complications Symptoms and signs 9th asses emergency Resuscitation discussion, - Airway, breathing, circulation Vitals monitoring Conservative management, medical, tamponade, brace suturing, devascularization, guided hysterectomy. environment	Small term t drills, Skill lab	8th &	Skill
OG35. 17	Demonstrate the correct knowledge of anatomy of urethra catheterization foley's catheter and its parts, environment a mannequin	Verbal consent after explaining to the patient 9th asses technique of meatus with urinary Knows importance of aseptic precautions, proper painting and draping of the patient for the procedure in a simulated/ Identifies Can demonstrate the procedure of catheterization on a mannequin	Skill lab	8th &	Skill
Topic: Obstetrics & Gynecological skills - II Number of competencies: (03) Number of procedures that					
OG36. 1	Plan and institute a line of treatment, which is need Appropriate diagnosis appropriate for common conditions taking into institutional protocols for common diseases on (a) Patient conditions (b) Disease and chooses the economic status (d) Institution/ Governmental guidelines.	History taking to help to arrive at the differential diagnosis group 9th Appropriate examination of the patient to elicit signs and narrow the list of differential diagnosis Bed side based, cost clinics effective and Understanding the specificity and sensitivity of an investigation and its value in arriving at a diagnosis Have idea about cost of investigations so that balance decisions can be taken. consideration Have Understand and cost involved in various treatment (c) Socio- on social	Small discussion, term Bed side based, cost options on social	8th &	
OG36. 2	Organize antenatal, medical postnatal, well-baby and family welfare clinics	Understands the role of conservative treatment / medical treatment / surgical treatment for various disease conditions Will understand antenatal care and its importance Know the requirements for providing ANC care clinics Will understand the various warning symptoms during antenatal period Knowledge of puerperium Knowledge of assessing the neonatal wellbeing Importance of breast feeding	Small group 9th discussion, Bed side clinics	8th &	term

		Understand attachment, latching and suckling in breast feeding evaluation Value of organizing postnatal clinics along with paediatrician /neonatologist for comfort and benefit of mother and baby Able to counsel regarding family planning in the postnatal visit			
OG36.3	Demonstrate the correct technique of punch biopsy of Cervix in a Visualize the cervix using appropriate instrument simulated/ Demonstrate the procedure on a mannequin supervised Collect the specimen for histopathological examination environment	Consent for the procedure Identify the punch biopsy forceps Aseptic precautions, painting and draping for the procedure Visualize the cervix using appropriate instrument simulated/ Demonstrate the procedure on a mannequin supervised Collect the specimen for histopathological examination	Small group discussion OPD	8 th & 9 th term	
Topic: Obstetrics & Gynecological skills - III Number of competencies: (07) Number of procedures that					
OG37.1	Observe and assist in the performance of a Caesarean section	Define caesarean section [CS] Mention the indication for CS Describe preoperative care, investigations, informed consent Appreciate the need to cross match and confirm blood Inform anaesthetist, OT staff and neonatologist Observe hand washing, safety check list, instrument counts, type of anaesthesia given Enumerate the steps of LSCS List the complications of CS and its management	Small group discussion, OT	8 th & 9 th term	
OG37.2	Observe and assist in the performance of Laparotomy	Describe the post-operative care Appreciate the importance Documentation of all steps, events including new born details discuss, term Describe the preoperative care and investigations Informed consent, arrange blood and ICU bed Lists the steps of laparotomy, need for frozen section. Patient positioning and anaesthesia Complications of the procedure	Small group performance of OT	8 th & 9 th term	Indication
OG37.3	Observe and assist in the performance of Hysterectomy - Perineal	Post Operative care Documentation of all events Indications Assessment for route of surgery Preoperative preparation OT abdominal/vagi Informed consent Anaesthesia and patient positioning Steps of Hysterectomy- abdominal/vaginal Complications of the procedure	Small group discussion, consent	8 th & 9 th term	
OG37.	Observe and	Post Operative care Documentation of all events	Small	8 th &	

4	assist in the performance of Dilatation & Curettage (D&C)	<p>Indications and contraindications group 9th</p> <p>Patient evaluation and pre op preparation</p> <p>Informed consent and anaesthesia</p> <p>Steps of procedure</p> <p>Post procedure monitoring</p> <p>Complications of the procedure</p> <p>Documentation of all events</p>	discussion, Minor OT OPD	term	
OG37. 5	Observe and assist in the performance of Endometrial aspiration - Know about instruments used (Pipelle) and aseptic precautions curettage (EA-ECC)	<p>Discharge advice</p> <p>Know how to take informed consent group 9th</p> <p>How to perform per speculum and per vaginal examination</p> <p>about instruments used (Pipelle) and aseptic OPD</p> <p>How to take utero cervical length/ cervical length</p> <p>Procedure of EA-ECC</p> <p>Know how to fill the relevant clinical details in HPE /Biopsy form</p> <p>Postop instructions and follow up</p>	Small discussion, Minor OT endocervical	8 th & term	
OG37. 6	Observe and assist in the performance of outlet forceps application of vacuum and breech delivery	<p>Know how to take informed consent</p> <p>Identify whether there is an appropriate indication for application of outlet forceps/ vacuum/ breech delivery</p> <p>Assess whether all criteria for application of outlet forceps/ vacuum/ breech delivery are met</p> <p>Pre requisites – availability of OT, blood products, Neonatologist, Senior Obstetrician</p> <p>Labour analgesia/ anaesthesia</p> <p>Know how to perform phantom application of outlet forceps/ check equipment of vacuum and choose an appropriate cup/ manoeuvres for delivery of legs, arms, shoulders and head in assisted breech delivery</p> <p>Perform application of outlet forceps/ vacuum/ breech delivery</p> <p>Know how to give and suture episiotomy and aseptic precautions</p> <p>Identify maternal and neonatal complications</p> <p>Documentation of the procedure</p>	Small group 9 th discussion, Evening labour room posting	8 th & term	
OG37. 7	Observe and assist in the of taking informed consent MTP in the first OT trimester and Identifying the complications of MTP incomplete pills/Incomplete abortion/ Evacuation of retained abortion	<p>Counselling the patient regarding the various methods available and complications of each and discussion, term</p> <p>Look for any contraindications for the method chosen</p> <p>Prescription of first trimester MTP pills evacuation in</p> <p>Identifying the complications of MTP incomplete pills/Incomplete abortion/ products</p> <p>Know regarding equipment, instruments and drugs used (Karmans cannula, Suction apparatus) Procedure</p>	Small group 9 th Minor	8 th & performance	

		for Evacuation of retained products in incomplete abortion, under aseptic precautions Check the need for USG and Anti D Know how to fill the relevant clinical details in HPE /Biopsy form Post operative/ post pill instructions and follow up Documentation of the procedure and know which register needs to be filled for intimation to Health Department of Government			
Topic: Should observe Number of competencies: (04) Number of procedures that require certification					
OG38.	Laparoscopy group 9 th	Indications for laparoscopy Small 8 th & 1 Informed consent Anaesthesia under which it is performed and its OT complications Complications of laparoscopy Postoperative instructions	Contraindications for laparoscopy discussion, term		
OG38. 2	Hysteroscopy	Definition of Hysteroscopy Steps of Hysteroscopy group 9 th Indications of Hysteroscopy Diagnostic Hysteroscopy Operative Hysteroscopy Fluid distension Media Post Op care and advice Risks and Complications of Hysteroscopy	Small discussion, OT	8 th & term	
OG38. 3	Lap	Sterilization procedure in women sterilization Steps of tubal sterilization done laparoscopically group 9 th Effectiveness of Lap sterilization in prevention of discussion term pregnancy Risks associated with Lap tubal sterilization Benefits of Lap tubal sterilization Ideal timing for Lap tubal sterilization Reversal of Lap tubal sterilization procedure	Small discussion term	8 th & 9 th	
OG38. 4	Assess the need for and issue medical certificates to work patients for the the third party	Definition of Medical certificate Medical Certificate certifying illness Medical Certificate certifying fitness Assessing the patient illness and nature of Responsibility of the issuing doctor various Responsibility of the patient purposes Responsibility of the the third party Certificate Requirements Date of Certificate	Small group 9 th discussion proper term	8 th & 9 th	

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Obstetrics and gynaecology

Course content

The course content been given in detail in the above Table, which includes competencies, specific learning objectives for each competency and the suggested Teaching-Learning methods and assessment methods both formative and summative. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have written by the expert committee constituted by Rajiv Gandhi University of Health Sciences.

Teaching-Learning methods and Time allotted

	Lectures (hours)	Small group discussion (hours)	Self-directed learning (hours)	Total hours	Clinical postings (weeks)
2nd MBBS	25			25	4weeks First posting in 3-4 th terms (15hours/week)
3rd MBBS Part 1	25	35	5	65	4weeks Second posting in 6-7 th terms (18hours/week)
3rd MBBS Part 2	70	125	15	210	8+4weeks 3 rd &4 th posting (18hours/week)
Total	120	160	20	300	20weeks (This includes maternity and family welfare and family planning) Two postings of 4 weeks each. and

Time allotted excludes time reserved for internal / University examinations, and vacation. 25% of allotted time (non-clinical time) of third Professional shall be utilized for integrated learning with pre- and para- clinical subjects. This will be included in the assessment of clinical subjects.

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.

The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner's interest and eliminate redundancy and overlap. The integration allows the student to understand the structural basis of Obstetrics and Gynaecology problems, their management and correlation with function, rehabilitation, and quality of life

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates in listed skills should be done mandatorily.

The clinical postings in the second professional shall be 15 hours per week (3 hrs per day from Monday to Friday)

The clinical postings in the third professional part II shall be 18 hours per week (3 hrs per day from Monday to Saturday)

Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings in Obstetrics and Gynaecology itself.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical posting the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing surgeries if any till patient is discharged.

Curriculum Focus of Learner - Doctor programme	
Posting 1	Introduction to hospital environment, early clinical exposure, understanding perspectives of illness
Posting 2	History taking, physical examination, assessment of change in clinical status, communication and patient education
Posting 3	All of the above and choice of investigations, basic procedures and continuity of care
Posting 4	All of the above and decision making, management and outcome

Attitude, Ethics & Communication Module (AETCOM module)

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, systems-based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship. MBBS Phase 3 Part 2, has to complete 8 modules of 5 hours each. The OBG

faculty will have the responsibility of conducting 2-3 modules as per the decision and logistics of each institution.

Assessment

Eligibility to appear for university examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks **Attendance**

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Obstetrics and Gynaecology.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in 3rd professional year 3 part 2.

Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained.

There shall be no less than four theory internal assessment (One each in 2nd MBBS and 3rd MBBS Part1 and Two in 3rd MBBS Part2) excluding the prelims in Obstetrics and Gynaecology. An end of posting clinical assessment shall be conducted for each of the clinical postings in Obstetrics and Gynaecology. There will be one Theory and Clinical preliminary exams before the student is eligible for university exams.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Obstetrics and Gynaecology to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination.

The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.

Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Obstetrics and Gynaecology logbook entry completed to be eligible for appearing at the final university examination.

AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

University examinations

University examinations in Third Professional Part II shall be held at end of 12months of training in the subjects of Medicine, Surgery including Orthopedics, Obstetrics and Gynecology and Pediatrics.

University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact.

Assessment shall be carried out on an objective basis to the extent possible.

Marks allotted

Obstetrics and Gynecology	Theory	Clinical examination
Total marks	2 papers of 100 marks each for Obstetrics and Gynecology. The pattern of each question paper is given below	200 marks
	Long essay 2X10= 20	One obstetric case for 80 marks
	Short essay 8x5=40 marks	One gynaec case for 80 marks
	Short answer question 10x3=30marks	Viva-voce for 40 marks. Station-1: Dummy, pelvis and fetal skull. Station-2: Instruments Station-3: Specimens Station-4: Drugs and contraception
	MCQs 10x1=10marks	

The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

All the question papers to follow the suggested **blueprint (APPENDIX 1)**. It is desirable **that** the marks allotted to a particular topic are adhered to.

A minimum of **80%** of the marks should be from the **must know** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component. All **main essay questions** to be from the **must know component** of the curriculum. **One main essay question** to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be of common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyse the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical, and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.

At least one question in each paper of the clinical specialties in the University examination should test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce. There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria

Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.

Appointment of Examiners

Person appointed as an examiner in the subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college. For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.

Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation

External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.

BLUEPRINT FOR ASSESSMENT

This section contains the following items

- a. Rationale behind the blueprinting with excerpts from NMC document on assessment.
- b. Suggested Blueprinting for Obstetrics (including contraception)
- c. Sample for a 100-mark theory question paper in Obstetrics
- d. Suggested blueprinting for Gynecology theory 100 marks paper
- e. Sample for a 100-mark theory question paper in Obstetrics
- f. Comments on the theory blueprint and samples
- g. Principles to be followed in practical assessment
- h. Schema for practical examination (200 marks)
- i. Sample examination format

RATIONALE BEHIND THE BLUEPRINTING WITH EXCERPTS FROM NMC DOCUMENT ON ASSESSMENT

As per NMC guidelines, a balance should be drawn between the action verbs which are specified in the Bloom's taxonomy along with a balance of the topics of the curriculum

Levels of Bloom's Taxonomy with Suggested Verbs in the questions are specified below.

Knowledge	Define, Describe, Draw, Find, Enumerate, Cite, Name, Identify, List, label, Match, Sequence, Write, State
Comprehension	Discuss, Conclude, Articulate, Associate, Estimate, Rearrange, Demonstrate understanding, Explain, Generalise, Identify, Illustrate,
Application	Interpret, Review, Summarise Apply, Choose, Compute, Modify, Solve,
Analysis	Prepare, Produce, Select, Show, Transfer, Use Analyse, Characterise, Classify, Compare, Contrast, Debate, Diagram,
Synthesis	Differentiate, Distinguish, Relate, Categorise Compose, Construct, Create, Verify, Determine, Design, Develop, Integrate,
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Organise, Plan, Produce, Propose, rewrite

Evaluation Appraise, Assess, Conclude, Critic, Decide, Evaluate, judge, Justify, Predict,
Prioritise, Prove, Rank

The focus should be on providing clinical oriented questions rather than purely theoretical questions. All faculty and students are directed to the NMC document on Competency Based Assessment for further details.

The blueprinting provided is an estimate only. While exact adherence to the number of questions may not be perfectly possible, the spirit of the blueprint must be honoured while setting the paper. This document will guide teachers/ students and evaluators on what to focus on.

SUGGESTED BLUEPRINTING FOR OBSTETRICS (INCLUDING CONTRACEPTION)

Level of Bloom's taxonomy tested	Demography / Anatomy / Physiology / Fetus / Placenta / Diagnosis of pregnancy	Antenatal care / Complications in early pregnancy / APH / Multiple pregnancy / Medical disorders in pregnancy	Labour/Abnormal lie / presentation / Operative obstetrics / Complications in 3 rd stage of labour	Lactation/Care of newborn / Puerperium	MTP / Contraception	Number of questions
Knowledge	1	1	1	1	2	6
Comprehension	1	2	2	1	1	7
Application	0	1	2	0	0	3
Analysis	1	1	1	1	0	4
Synthesis	0	0	0	0	1	1
Evaluation	0	1	0	0	0	1
Questions in each topic	3	6	6	3	4	Grand total 22

***Operative procedures may be incorporated into questions in the respective topics.**

Incorporating both these above concepts, a sample 100-mark theory is mentioned below.

SAMPLE FOR A 100-MARK THEORY QUESTION PAPER IN OBSTETRICS

LONG ESSAYS (10 marks x 2 = 20 marks)

- 32-year-old G2P1L1 at 33 weeks of gestation presents with first episode of painless spotting per vaginum.
 - What is the clinical condition (1)
 - Enumerate the differential diagnoses. (1)

- Discuss the clinical features of this condition. (2)
 - List the investigations and their interpretation (2)
 - Discuss the temporizing management options of this patient (2)
 - Discuss the definitive management options of this patient (2)
2. Discuss the steps of lower segment cesarean section in terms of preoperative preparation, intraoperative steps and immediate postoperative care (3+4+3)

SHORT ESSAYS (5 marks x 8 =40 marks)

3. Illustrate the physiological fetal circulation in utero. Illustrate the changes that take place in fetal circulation immediately after birth. (2+3)
4. Differentiate between threatened abortion and incomplete abortion on the basis of definition, history, clinical features and management. (1+1+2+1)
5. A 21 year old primigravida comes with 7 weeks amenorrhea and excessive vomiting. Discuss the differential diagnosis, clinical examination and management of such a patient (1+2+2).
6. Illustrate the components of WHO Labour care guide. (5)
7. Primigravida who is in 2nd stage of labour for the past 2.5 hours has the following pervaginal findings. Fully dilated, fully effaced, vertex at +2 station and occiput at 2 o'clock position. Choose the optimal method of delivery with justification and details.
8. Compare and contrast non-severe preeclampsia with severe preeclampsia in terms of history/ clinical examination/investigations/ management (1+1+1+2).
9. A 26-year-old P1L1 with instrumental delivery 2 days back presents with fever, chills and foul-smelling vaginal discharge.
- a. Discuss the other clinical features of this conditions (2).
 - b. Discuss the investigations and management of the condition (1.5 + 1.5)
10. Differentiate monochorionic twins and dichorionic twins in terms of embryology/ USG features and complications (1+2+2)

SHORT ANSWERS (3 marks x 10 = 30 marks)

11. Define maternal mortality. Enumerate four causes for maternal mortality. (1+2)
12. Enumerate six vaccines that are safe in pregnancy (1/2 each).
13. Justify the use of routine screening for GDM in all pregnant women. (3)

14. Enumerate the components of Active Management of Third Stage of Labour (3)
15. Describe the components of the milk ejection reflex (3)
16. Compare term and preterm newborns – three characteristics (1+1+1).
17. Enumerate 3 non-contraceptive benefits of oral contraceptive pills (1+1+1).
18. P3L3 has come seeking contraception but is not willing for permanent method of sterilization.
List six options available for her contraception (1/2 each)
19. You are the district officer for Beti Bachao program. Develop 6 points to be put in a poster which is to be organized for popularizing awareness about PCPNDT act (3)
20. G2P1L1 with 34 weeks of gestation with mother's blood group O negative and husband's blood group A positive comes with ICT positive status. MCA PSV doppler and amniocentesis for bilirubin are available as options. Choose the modality with brief justification. (2+1)

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW. 10X1=10 marks

21.(i) Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;

- a) Metrorrhagia
- b) Metropathia hemorrhagica
- c) Menorrhagia
- d) Polymenorrhoea

21 (ii) A 21 year old P1L1 has delivered 45 days back. She is not breastfeeding her infant. She has tested HIV positive during her antenatal checkup. She wants a temporary method of contraception.

What are her options?

- a) Combined oral contraceptive pills
- b) Copper Intra uterine device
- c) LNG implant
- d) LNG Intrauterine device

21.(iii) The length of fallopian tube is:

- a) 8-12cm
- b) 12-15cm
- c) 15-18cm
- d) 18-20cm

21(iv)The Corpus luteum secretes:

- a) Estrogens
- b) Progesterone
- c) Both
- d) None

21.(v)Test for Tubul patency is

- a) Basal body temperature measurement
- b) Hysterolaparascopy
- c) Fern test
- d) Spimbarkeit test

22(i)Contraceptive method with the highest failure rate is

- a) Combined hormonal pills
- b) Tubectomy
- c) Barrier method
- d) Intra uterine devices

22(ii)Which is the first sign of puberty in a girl?

- a) Thelarche
- b) Menarche
- c) Adrenarche
- d) Pubarche

22.(iii)Screening test for carcinoma cervix is:

- a) Visual inspection of cervix with acetic acid
- b) Conization of cervix
- c) Thermal ablation of cervix
- d) Trachelectomy

22(iv).Birth truma is a risk factor for:

- a) Endometriosis
- b) Prolapse
- c) Abortion
- d) PID

22.(v).Which of the following are effects of increased levels of oestrogen in the follicular phase of the menstrual cycle?

- a) Hair thinning
- b) Thickening of cervical mucous
- c) Thinning of cervical mucous
- d) Thickening of the endometrium

Rajiv Gandhi University of Health Sciences

MBBS / PHASE III / PART II DEGREE EXAMINATION

TIME:THREE HOURS

MAX.MARKS: 100 MARKS

OBSTETRICS & GYNAECOLOGY – PAPER -1

LONG ESSAY

2X10=20 marks

1. A 30 year old Gravida 4, Para 3, living 3 has delivered a live baby of weight 4 kgs 10mins back. Patient complains of extreme fatigue. Her pulse is 110/mm, BP is 80/50mmHg. Uterus is flabby with excessive bleeding per vagina.
 - What is your diagnosis?
(2 marks)
 - Give reasons.
(2 marks)
 - Outline the investigations & treatment of the case.
(3+3marks)
2. A Gravida 3, Para 2, living 2 with 32 weeks of pregnancy comes to Emergency ward with 2 episodes of bleeding per vagina , there is no history of pain abdomen and she had a similar episode which resolved spontaneously two days prior.
 - What is your differential diagnosis?
(3 marks)
 - Outline the investigations and treatment.
(3+4 marks)

SHORT ESSAY

8X5=40 marks

3. A 30 yr old G3P1L1A1 lady has come in with 9 wks of unplanned pregnancy. She wants to terminate the pregnancy, what are the legal issues to consider?
4. Describe the mechanism of labour in breech presentation. Enumerate the foetal complications of vaginal breech delivery.
(3+2 marks)
5. Enumerate the investigations and treatment of a Primigravida with 26 weeks of gestation with Hb of 6.5gms% on routine ANC.
(2+3 marks)

6. Describe the investigations and management of a Primigravida with 37 weeks of gestation who presents to the obstetric OPD with a blood pressure of 150/100mm of Hg. (2+3 marks)
7. A 23 yr old lady comes with 2months amenorrhoea. What signs and symptoms will diagnose pregnancy? What investigations will confirm the pregnancy? (2+2+1 marks)
8. State the objectives of antenatal care. Enumerate the investigations & vaccinations in pregnancy. (2+2+1 marks)
9. Describe the indications and methods of medical management of ectopic pregnancy. (2+3 marks)
10. Define maternal mortality. Enumerate the causes of maternal deaths. Outline the preventive measures for the top 3 cases of maternal mortality in India. (1+2+2 marks)

SHORT ANSWERS

10X3=30 marks

11. Describe the screening tests to diagnose Diabetes in pregnancy.
12. What are the steps of active management of third stage of labour?
13. Mention 6 causes of Shock in obstetrics.
14. Enumerate the radiological signs of fetal death.
15. What are the types & risk factors for morbidity adherent placenta
16. Describe the causes and management of Bandl's ring.
17. Discuss the investigations to diagnose HELLP syndrome 18. Write the components of modified WHO Partogram(2020)
19. Pre- requisites for ventouse delivery.
20. Enumerate the indications & contraindications of Inj.Methyl ergometrine in obstetrics.

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW. 10X1=10 marks

21. (i) A 22 year old woman Gravida4 para3 living3 with 33weeks of gestation presents to the hospital with heavy painless vaginal bleeding. Her pulse rate is 110/min. Blood pressure is 90/50 mmHg. Per abdomen uterus is relaxed, nontender. FHR is 160/min.
What is the most likely diagnosis?
 - a) Concealed abruption
 - b) Placenta previa
 - c) Premature labour

- d) Revealed abruption
- e) Vasa previa

21.(ii) Which of the following is a parameter used in fetal biophysical profiling?

- a) Abdominal circumference
- b) Amniotic fluid index
- c) Biparietal diameter
- d) Head circumference
- e) Femur length

21.(iii) A 32 year old Primigravida with 28 weeks of gestation presents to the emergency ward with headache, reports seeing flashing lights, her Pulse are 80beats/min, and blood pressure is 172/112mmHg. Urine dipstick shows protein 3+, nitrites negative, leucocytes trace and blood trace.

Which is the **appropriate immediate** management of the patient?

- a) Request for an obstetric ultrasound
- b) Administer I V Labetolol to lower her blood pressure
- c) Administer Ramipril
- d) Immediate cesarean delivery.
- e) Avoid antenatal steroids as it would worsen her blood pressure

21.(iv) Which of the following methods is the correct way to calculate the estimated date of delivery (EDD)?

- a) First day of LMP + 9 months and 1 week
- b) First day of LMP + 9 months
- c) First day of last menstrual period (LMP) + 8 months and 1 week
- d) Last day of LMP + 9 months and 1 week

21.(v) Which one of the following is the primary source of progesterone in the later stages of pregnancy?

- a) Fetus
- b) Decidua
- c) Corpus luteum
- d) Placenta

22.(i) Which of the following statements are NOT true regarding HELLP Syndrome;

- a) Diagnosis is by biochemical evaluation.
- b) Blood pressure is elevated in all cases of HELLP.
- c) Termination of pregnancy is recommended irrespective of the period of gestation.
- d) It is associated with high maternal & perinatal morbidity & mortality.

22.(ii) Which of the following statements describe the first stage of labour correctly?

- a) Starts when regular painful contractions begin and ends when the cervix is fully effaced and dilated to 5 cm.
- b) Starts when the effaced cervix is 3cm dilated and ends when the cervix is fully dilated at 10cm.
- c) Onset of painful contractions to full effacement of the cervix. The membranes are still intact.
- d) Onset is at rupture of membranes and ends with expulsion of the fetus.

22.(iii) A 25 year old G3P2L2 comes to the antenatal clinic with history of 6 months amenorrhea. She complains of easy fatigability and her Hb% is 7.5 gms%

- a) Blood transfusion
- b) Parenteral iron injections
- c) 60 mgs of elemental iron per oral thrice daily
- d) 200mgs of ferrous sulphate orally once daily

22.(iv) 23 year old Primigravida comes with history of 3 months amenorrhea and pain abdomen. She has had two episodes of spotting per vagina. On vaginal examination, her vitals are stable, uterus corresponds to 12 weeks size and cervical os is closed.

- The most probable diagnosis is a)
- a) Missed abortion
 - b) Threatened abortion
 - c) Incomplete abortion
 - d) Complete abortion

22.(v) Tertiary chorionic villi consists of;

- a) Trophoblast and mesoderm
- b) Trophoblast, ectoderm and blood vessels
- c) Mesoderm ectoderm and blood vessels
- d) Trophoblast mesoderm and blood vessels

SUGGESTED BLUEPRINTING FOR GYNECOLOGY THEORY 100 MARKS PAPER

A suggested distribution of topics in obstetrics incorporated with the Levels of Bloom's taxonomy is tabulated below.

Level of Bloom's taxonomy tested	Vaginal discharge/Genital infections	AUB/ Fibroid/ Genital Injuries/ Fistula	Puberty/ Amenorrhea/ Menopause/ Prolapse	Infertility/ PCOS/ Hirsutism	CIN/ Malignancy	Number of questions
Knowledge	1	1	2	2	0	6
Comprehension	1	2	2	0	2	7
Application	0	1	0	1	1	3
Analysis	0	0	0	1	1	2
Synthesis	1	0	0	0	1	2
Evaluation	0	1	0	1	0	2
Questions in each topic	3	4	4	5	5	Grand total 22

***Operative procedures may be incorporated into questions in the respective topics.**

SAMPLE FOR A 100-MARK THEORY QUESTION PAPER IN GYNECOLOGY LONG ESSAY (2 x 10 marks = 20 marks)

1. 34-year-old comes with excessive menstrual bleeding with passage of clots. She is not pregnant.
 - a. Discuss the PALM COEIN approach to classifying this condition. (3)
 - b. Describe in detail the conditions – L and M (2+2)
She is investigated and found to have a 8x8 cm leiomyoma.
 - c. Discuss the principles and steps in the operative management of such a condition. (3)

2. 15-year-old girl is brought by parents with complaints that she has not attained menstruation.
 - a. What is the condition (1). Define this condition (1).
 - b. Enumerate the various causes for the condition (3).
 - c. Describe the clinical (2) and management (3) of imperforate hymen.

SHORT ESSAY (10 x 5 marks = 50 marks)

3. Genital tuberculosis. Discuss the clinical features (2 marks). Enumerate the investigations (1 mark). Discuss the management (2 marks).
4. A 24-year-old P1L1 comes with complaints of curdy white discharge per vaginum. Apply the concept of syndromic management of Sexually Transmitted Disease and prepare a treatment plan for such a patient.
5. Discuss the etiological factors (2 marks), clinical features (1 mark) and classification (2 marks) and of uterovaginal prolapse.
6. Define menopause (1). Discuss the clinical features (2) and management options (2) for menopausal transition.
7. A couple married for 4 years comes with complaints of not being able to bear children. Classify the various causes of this condition.
8. 45-year-old woman has undergone pap smear and the report shows H-SIL. Discuss the options for management (3) and follow up (2) for the condition
9. Classify Ovarian tumours (WHO classification).
10. A 30-year-old came with raised Beta HCG and passage of grape like vesicles per vaginum. Uterus was evacuated.
 - a. What is the condition likely to be (1 mark).
 - b. Prepare a management plan(2 marks)
 - c. Follow-up plan (2 marks) for this patient.

SHORT ANSWER QUESTIONS (10 x 3 marks = 30 marks) 11.

- Enumerate the criteria for Bacterial vaginosis. (1+1+1)
12. Illustrate any one theory of endometriosis.
 13. Enumerate three etiological factors for genital fistula (1+1+1)
 14. 38-year-old comes with abnormal uterine bleeding not responding to tranexamic acid. Uterine curettage shows endometrial hyperplasia without atypia. She is willing for regular follow-up

and is not willing for major operative procedure. Choose the best treatment modality (1) and describe the modality. (2)

15. List three options for conservative management of prolapse (1 each)
16. An obese hirsute 33-year-old woman presents with irregular menstrual cycles and ultrasonography suggestive of peripherally arranged follicles. Choose three pharmacological management options for her. (1 each)
17. Enumerate the parameters of semen analysis with their normal range (1 each)
18. A 56-year-old woman with endometrial curettage showing Carcinoma Endometrium has an MRI showing spread to serosa of corpus uteri but no invasion of other pelvic organs or vagina. Paraaortic and pelvic lymph nodes appear negative. What is the presumptive stage of this patient (1.5). What is the next step (1.5)?
19. Justify the usage of tranexamic acid as the first line of management of AUB. (3)
20. You are the district officer in-charge for popularizing routine early cancer screening for genital malignancy. Develop 6 points which can be put in a poster for encouraging patients to undergo early cancer screening.

**SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS
GIVEN BELOW. 10X1=10 marks**

21.(i) Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;

- e) Metrorrhagia
- f) Metropathia hemorrhagica
- g) Menorrhagia
- h) Polymenorrhoea

21.(ii) A 21 year old P1L1 has delivered 45 days back. She is not breastfeeding her infant. She has tested HIV positive during her antenatal checkup. She wants a temporary method of contraception.

What are her options?

- e) Combined oral contraceptive pills
- f) Copper Intra uterine device
- g) LNG implant
- h) LNG Intrauterine device

21.(iii) The Length of fallopian tube is:

- e) 8-12cm

- f) 12-15cm
- g) 15-18cm
- h) 18-20cm

21.(iv)The Corpus luteum secretes:

- e) Estrogens
- f) Progesterone
- g) Both
- h) None

21.(v)Test for Tubul patency is

- e) Basal body temperature measurement
- f) Hysterolaparascopy
- g) Fern test
- h) Spimbarkeit test

22.(i)Contraceptive method with the highest failure rate is

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- e) Visual inspection of cervix with acetic acid
- f) Conization of cervix
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- h) Trachelectomy

22.(iv)Birth trauma is a risk factor for:

- e) Endometriosis
- f) Prolapse
- g) Abortion
- h) PID

22.(v)Which of the following are effects of increased levels of oestrogen in the follicular phase of the menstrual cycle?

- e) Hair thinning
- f) Thickening of cervical mucous
- g) Thinning of cervical mucous
- h) Thickening of the endometrium

Rajiv Gandhi University of Health Sciences – Sample question paper

MBBS / PHASE III / PART II DEGREE EXAMINATION

TIME:THREE HOURS

MAX.MARKS: 100 MARKS

2X10=20 marks

1. A 54 year old woman presents with bleeding per vagina after 2 years of cessation of regular menstruation. She is diabetic and hypertensive on treatment since 4 years with a BMI of 30.

- (2 marks)
- What is the differential diagnosis of postmenopausal bleeding?
(2 marks)
- Outline the investigations & treatment of the case

OBSTETRICS & GYNAECOLOGY – PAPER -2

LONG ESSAY

What is the most likely diagnosis?

(3+3marks)

2. A couple married for 2 yrs, unable to conceive despite staying together.

- What are the probable causes?
(3 marks)
- How will you investigate the couple?
(3 marks)

- Wife has irregular cycles with BMI of 32 and coarse facial hair. Outline the treatment plan for her. (4 marks)

SHORT ESSAYS

8X5=40 MARKS

3. A parous woman of age 42 yrs is having regular cycles is experiencing an increase in the amount and duration of bleeding. She also complains of easy fatigability and weakness. Enumerate the differential diagnosis and how do you work up this case?
(2+3 marks)
4. 48yr old multiparous lady is having irregular menstrual periods since one year. She complains of several bouts of hot flushes and night sweats since 6 months. What is your diagnosis and treatment? (1+4 marks)
5. 65 yr old woman, P6L6, complains of something coming out through the vagina since 4 yrs. Since past 3 months she is complaining of occasional bloody discharge and development of a wound over the exposed part. What is the diagnosis. How do you manage the case? (2+3 marks)
6. Discuss the Clinical features and management of genital tuberculosis.
(2+3 marks)
7. Indications & contra indications of combined oral contraceptive pills.
(3+2 marks)
8. Describe causes, clinical features and enumerate the surgeries for Vesico-vaginal fistula. (2+3 marks)
9. Indications for Endoscopy in gynecology. Enumerate the complications of Hysteroscopy. (2+3 marks)
10. Discuss the diagnosis and treatment of Vaginal Trichomoniasis.
(3+2 marks)

SHORT ANSWERS

10X3=30MARKS

11. Describe the course and branches of internal iliac artery.
(1+2 marks)
12. Indications and dosage of Methotrexate in gynecology
(2+1 marks)
13. Describe the American fertility society classification of uterine anomalies.
14. Indications & complications of cervical biopsy.
(1+2 marks)
15. Bethesda classification of Pap smear.
16. Discuss the complications of Radiotherapy in gynecology.
17. What are the causes of precocious puberty?

18. What are the hormonal methods of treatment of endometriosis
19. PALM – COEIN classification.
20. What is Pearl index?

SELECT THE SINGLE BEST RESPONSE TO THE MULTIPLE CHOICE QUESTIONS GIVEN BELOW. 10X1=10 marks

21. Increase in menstrual bleeding in amount of bleeding or duration with regular cycles is called;
 - i) Metrorrhagia
 - j) Metropathia hemorrhagica
 - k) Menorrhagia
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 - i) Estrogens
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- i) Hair thinning
- j) Thickening of cervical mucous
- k) Thinning of cervical mucous
- l) Thickening of the endometrium

PRACTICAL/CLINICAL EXAMINATION

Principles to be adhered to in practical/clinical examination

- The practical/ clinical examination should include assessment in psychomotor and affective domain.

- **Assessment of clinical and procedural skills should be based on direct observations by the examiners.**
- AETCOM competencies should also be assessed.
- **Practical tests should not become simply tests of knowledge. Avoid making assessment mainly targeted to knowledge domain only.**

Examples

1. **Asking a learner in a room away from actual patient, “how history was taken” is to be avoided. Instead, learner should be observed while he/she is taking history.**
2. **Asking a learner in a room away from the actual patient “Tell us how the obstetric abdominal examination is done” is to be avoided. Instead, learner should be observed when the examination is being performed, and evaluated objectively using checklists/ other suitable scales”**

Tools to be used in practical examination

It is suggested that practical examination should include a combination of the following tools

- Clinical examination using long case – one each in Obstetrics and Gynecology, 80marks each
- Objective Structured Clinical Examination (OSCE) – Observed 4 stations 10marks each

SCHEMA FOR PRACTICAL EXAMINATION (200 MARKS)

	Topic header	Obstetrics	Gynaecology
I	Eliciting history (1 Obs / 1 Gyn)	25	25
II	Performing examination (1 Obs/ 1 Gyn)	25	25
III	Discussion (1 Obs / 1 Gyn) of management	30	30
IV	4 Viva voce stations with examiner presence (10 marks eachx4=40)	Station-1: Dummy, pelvis and fetal skull. Station-2: Instruments Station-3: Specimens Station-4: Drugs and contraception	

SAMPLE PRACTICAL EXAMINATION FORMAT

I. ELICITING HISTORY

Role of examiner: To create a simulated patient (For example, an intern or a PG or an
A. ELICITING HISTORY IN AN OBSTETRIC PATIENT [15 MARKS]

SR may be trained to become a simulated patient – as much details as possible to be provided).

Role of student: To elicit detailed obstetric history from a provided simulated patient with all elements

Role of examiner: To **observe and assess the student while student is eliciting history** from the simulated patient and observe regarding arrival at a suitable clinical interpretation/ conclusion based on the history elicited. Checklist for clear schema of marking may be developed locally.

Time duration is around 5-7 minutes.

B. ELICITING HISTORY IN A GYNECOLOGICAL PATIENT [15 MARKS]

Role of examiner: To create a simulated patient (For example, an intern or a PG or an SR may be trained to become a simulated patient – as much details as possible to be provided).

Role of student: To elicit detailed gynaecological history from a provided simulated patient with all elements

Role of examiner: To **observe and assess the student while student is eliciting history** from the simulated patient and observe regarding arrival at a suitable clinical interpretation/ conclusion based on the history elicited. Checklist for clear schema of marking may be developed locally.

Time duration is around 5-7 minutes.

II. EXAMINATION

A. OBSTETRIC EXAMINATION ASSESSMENT (25 marks)

Role of the examiner: A gravid / puerperal woman (with any suitable diagnosis, preferable late 2nd or 3rd trimester) should be provided for examination by the student. The brief history of the obstetric patient should be provided to the student. Student should be allowed to introduce himself/herself and gain confidence of the patient.

Role of the student:

Demonstration of **general physical examination should be observed by the examiner** using a locally developed checklist. (Annexure) [5 marks]

Demonstration of **abdominal obstetric examination should be observed by the examiner** using a locally developed checklist. (Annexure) [10 marks]

Further **discussion** based on the examination findings should be done with focus on the techniques and **nuances of performance on examination** rather than theoretical perspectives on management. [10 marks]

Time duration is around 5-7 minutes.

B. GYNECOLOGY EXAMINATION ASSESSMENT (25 MARKS)

Role of the examiner: A woman with gynaecological pathology should be provided for examination by the student.

The brief history of the gynaecological patient should be provided to the student.
Student should be allowed to introduce himself/herself and gain confidence of the

Role of the student:

Demonstration of general **physical examination should be observed by the examiner** using a locally developed checklist. [5 marks]

Demonstration of abdominal **examination should be observed by the examiner** using a locally developed checklist. [10 marks]

Local examination (such as perineal / speculum and vaginal examination) findings should be provided by the examiner to the student.

Further **discussion based on the examination findings** should be done with focus on the techniques and nuances of **performance on examination** rather than theoretical perspectives on management. [10 marks]

Time duration is around 5-7 minutes.

Discussion on the management of the cases presented

patient.

Rajiv Gandhi University of Health Sciences



UNDERGRADUATE LOGBOOK

**DEPARTMENT OF OBSTETRICS &
GYNAECOLOGY**

Purpose of this logbook

The log book is a verified record of the progression of the learner documenting the Acquisition of there quisite knowledge, skills, attitude and competencies. It is a record

of the academic/co-curricular activities of the designated student, who would be responsible for maintaining his/her logbook.

Entries in the logbook will reflect the activities undertaken in the department and has to be scrutinized by the head of the concerned department.

The logbook is a record of various activities by the student like:

- Overall participation & performance
- attendance
- participation in sessions
- record of completion of pre-determined activities
- acquisition of selected competencies

The logbook is the record of work done by the candidate in the department and shall be verified by the college before submitting the application of the students for the university examination.

The purposes of this logbook are:

- f. To orient the students to holistic patient management by completing the case record, observing and recording procedures and discussing patient treatment in the therapeutics section.
- g. To facilitate the student's learning process, document the learning process and assist in student assessment
- h. To keep a record of the student's progressing development of the desired skills and attitudes
- i. To ensure that the time spent in the department is well utilized
- j. To form a basis for continual assessment of the student

This log book is a documentation of cases seen, clerked and witnessed by you during your posting in OBG .It is also a record of various seminars, case-based learning, simulation exercises and other academic activities that the learner has been a part of during course. Though efforts are made to cover as much as possible, in no way should this be considered the syllabus.

Please carry this book whenever you attend the non-lecture academic activities of the department and get it duly signed by the concerned staff at the end of the academic activity.

We expect discipline, honesty, sincerity and punctuality.

The responsibility of completing the logbook and getting it verified/assessed by the faculty lies with the student. The logbook must be carried by the student as per the given instructions.

General Instructions

11. It is expected that the students will adhere to the highest ethical standards and Professionalism.
12. Shall maintain punctuality in respect to arrival and completion of the assigned work
13. Maintain a cordial relationship with peers, unit staff and hospital staff
14. Not indulge in any act which would bring disrepute to the institution.
15. You should wear a clean apron and follow the dress regulations as laid down by the college and maintain proper hygiene with wearing respective identification badge while in college and hospital.
16. You should carry the following with you for the clinics
 - a. Clinical textbook
 - b. Stethoscope
 - c. Clinical kit for examination
17. Respect the patient as an individual and recognize that she also has rights.
18. Cases that are discussed only have to be documented and not the dummy cases.
19. **Loss of this logbook at any time may affect the formative assessment results and Impair the student appearing in the summative assessment.**
20. **Student is solely responsible for maintaining the Logbook and the records. If the student loses the logbook, he/she would be withheld from appearing for the University examination unless Suitable back up proof is provided.**

Objectives of learning in OBG Department:

A. KNOWLEDGE

At the end of course, the student should be able to:

1. Outline the anatomy, Physiology and pathophysiology of the reproductive system and the common conditions affecting it.
2. Detect normal pregnancy, labour, puerperium and manage the problems likely to be encounter therein.
3. List the leading causes of maternal and perinatal morbidity and mortality.
4. Understand the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their complications.
5. Identify the use, abuse and side effects of drugs in pregnancy, Pre-menopausal and post menopausal periods.
6. Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
7. Identify the common gynecological diseases and describe principles of their management.
8. State the indications, techniques and complications of surgeries like Caesarian section, laprotomy, abdominal and vaginal hysterectomy , Fothergill's operation and vacuum aspiration for MTP

B. SKILLS:

At the end of course, the student should be able to:

1. Examine a pregnant woman: recognize high risk factors.
2. Conduct a normal delivery, recognize complications and early referral. Provide post-natal care.
3. Resuscitate the newborn and recognize congenital anomalies.
4. Advise a couple on the use of various available contraceptive devices and assist in insertion and removal of intra uterine contraceptive devices
5. Perform pelvic examination, diagnose and manage common gynaecological problems including early detection of genital malignancies
6. Make a vaginal cytological smear.
7. Interpretation of data of investigations like biochemical, histopathological, radiological, ultrasound etc.

Name of the student	
Roll No	

University Registration Number	
Batch	
Contact No	
E mail Id	
Guardian/Parent Name Contact Number	
Signature of the student	
Signature of the HOD	

LOGBOOK CERTIFICATE

This is to certify that the candidate

Reg No..... has satisfactorily completed all requirements mentioned in this Logbook for OBG including related AETCOM modules as per the Competency-Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019 during the period fromto

He/ She is eligible to appear for the summative (University) assessment.

Head of Department:

Faculty Name:

Name:

Signature:

Signature:

Date:

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ATTENDANCE EXTRACT

Theory classes

Professional Year	Number attended	Number conducted	Percentage of Attendance	Signature of HOD
Second Professional				
Third Professional Part I				
Third Professional Part II				

Bedside clinics:

Professional Year	Unit From (date) To (date)	Number attended	Number conducted	Percentage of Attendance	Signature of Unit Head	Signature of HOD
Second Professional year Posting 1						
Third Professional year Part I Posting 2						
Third Professional Part II Posting 3						
Third Professional year Part II Posting 4						

Note:

Every candidate should have **attendance not less than 75% of the total classes conducted in theory which includes didactic lectures and selfdirected learning and not less than 80% of the total classes conducted in practical which includes small group teaching, tutorials, integrated learning and practical sessions** in each calendar year calculated from the date of commencement of the term to the last working day in each of the subjects prescribed to be eligible to appear for the university examination.

SUMMARY OF INTERNAL ASSESSMENT (IA)

<i>Sl. No.</i>	<i>Internal Assessment</i>	<i>Date of Assessment</i>	<i>Total marks</i>		<i>Marks scored</i>		<i>Signature of student with date</i>	<i>Signature of teacher with date</i>
			<i>Theory</i>	<i>Practical</i>	<i>Theory</i>	<i>Practical</i>		
1	First							
2	Second							

3	Third							
4	Remedial							

Total marks obtained on a total of 200 is -----

A student will be permitted to appear for final university exams only if he/she obtains more than 100 marks in the assessments.

Final remarks if any -

Note: A candidate who has not secured requisite aggregate in the internal assessment may be subjected to remedial assessment by the institution. If he/she successfully completes the same, he/she is eligible to appear for University Examinations. The remedial assessment shall be completed before submitting the internal assessment marks online to the University.

Formative Assessment at the end of each posting:

MCQ marks obtained	Second Professional year	Third Professional year Part I	Third Professional year Part II

		1 Posting	2 Posting	3 Posting	4 Posting
		Date	Date	Date	Date
Academic Performance (Case Presentation & Viva Voce) (25+10)					
Marks Obtained					
Feedback Provided	Positive				
	Could be improved				
Professionalism					
Timely submission of record Book (5)					
Behaves respectfully with peers and teachers (5)					
Grooming and adherence to Dress code (5)					
Total (out of 35+15)					

Signature of Student				
Signature of Teacher				

Guidelines for scoring (to be shown to the student and discussed with them)

Attendance – 95 -100% - 5 ; 90-94%-4;85-89%-3 80-84%-2;> 80%-1

Timely submission of record – Always submits the record on time – 5; Often submits the record on time -4; Sometimes submits the record on time -3 ; Rarely submits the record on time – 2 ; Never submits the record on time -1

Behaves respectfully with peers and teachers - Always speaks politely and demonstrates the appropriate body language with peers and teachers -5; Often speaks politely and demonstrates the appropriate body language with peers and teachers -4; Sometimes speaks politely and demonstrates the appropriate body language with peers and teachers – 3 ; Rarely speaks politely and demonstrates the appropriate body language with peers and teachers – 2; Never speaks politely and demonstrates the appropriate body language with peers and teachers -1

Clinical posting 1
Duration 4 weeks
Date of posting From To
Unit

Competency to be achieved

- 1) Obstetric History taking & examination
- 2) Gynaecological History taking & examination
- 3) Assessment of postnatal mother
- 4) Monitoring of labour
- 5) Active management of 3rd stage of labour

SLNO	ACTIVITY
1.	Obstetric history taking(OG.8.2) Determine gestational age, EDD and obstetric formula(OG35.5)
2.	Obstetric examination(OG 8.3)
3.	Gynec history taking(OG 24.1)
4.	Gynec examination (OG 24.1)
5.	Monitoring of labour(OG 13.1)
6.	Active Management of third stage of labour(OG 16.1)
7.	History taking and examination of postnatal mother(OG 19.1)

Clinical Posting 1

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
OG 8.2 OG35.5	Obstetric history taking Determine gestational age, EDD and obstetric formula						Initial of learner
OG 8.3	Obstetrics examination						Initial of learner

Learner Posting 1 A. Competency to General physical 3.	OG 24.1	Gynae history							Initial of learner	method 1 be achieved- 1. History taking 2. Examination - examination - Systemic examination - Obstetrics examination Communication skills-
	OG 13.1	Monitoring of Labour								
	OG 16.1	Active management 3 rd stage of labour								
	OG 19.1	History taking and examination of postnatal mother								

One antenatal patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about the patient care.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Lerner doctor method

Learner doctor method Learner doctor method

Learner doctor method

Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Signature of faculty :Date :

Learner doctor method 2

B. Competency to be achieved

1. History taking

- Examination - General physical examination
- Systemic examination
 - Gynaecological examination

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about the patient care.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method

Learner doctor method Learner doctor method

Learner doctor method Reflection on the learner doctor method of learning;

What happened?

So what ?

What next?

Posting 2
Duration 8 weeks
Date of posting From To
Unit :

Signature of

faculty: Date :

Competency to be achieved

- 1) Diagnosis of early pregnancy
- 2) Antenatal care and advice
- 3) Identify the high risk factors in pregnancy
- 4) Methods of Induction of labour
- 5) Develop a partogram
- 6) Postnatal care & Advice
- 7) Pre & Post operative care

Clinical posting 2

SLNO	ACTIVITY (Case Presentation)
1.	Diagnosis of early pregnancy (OG 6.1)
2.	Antenatal care and advice (OG 8.1,8.6)
3.	Diagnosis of high risk (OG 8.1)

4.	Partogram (OG 13.1)
5.	Postnatal care and advice (OG 19.1)
6.	Pre and postoperative care including consent for surgery (OG 34.4, 35.7)

1
6

Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
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	Diagnosis of early pregnancy						Initial of students
	Antenatal care and advice						Initial of students
	Diagnosis of high risk						Initial of students
	Partogram						Initial of students
	Postnatal care and advice						Initial of students

1
.1

3.1

9.1
5.7

Learner doctor method.

Posting 2

4.4,	Pre and postoperative care including consent for surgery						Initial of students	Competency to be achieved 1. History taking 2. Examination - General physical examination - Systemic examination - Obstetrics examination 3. Identifying High Risk factors
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- 4. Communication & patients education
- 5. Selection of appropriate investigation
- 6. Approach towards the diagnosis

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about the patient health.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Learner doctor method.

Learner doctor method.

Learner doctor method

Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

Competency to be achieved

- 1) Obstetric History taking and complete examination
- 2) Gynaecological History taking and complete examination
- 3) Management of medical and obstetric disorders in pregnancy
- 4) Management of Gynaecological disorder

Posting 3	
Duration 8 weeks	
Date of posting	From To
Unit :	

Clinical Posting 3

SLNO	ACTIVITY (Case Presentation)
1.	Describe clinical features; diagnosis and investigations, complications, principles of management of multiple pregnancies (OG11.1)
2.	Define, classify and describe the aetiology, clinical features, ultrasonography, differential diagnosis and management of antepartum haemorrhage in pregnancy (OG10.1)
3.	Define, classify and describe the early detection, investigations; principles of management of hypertensive disorders of pregnancy and eclampsia , complications of eclampsia.(OG12.1)
4.	Define, classify and describe the diagnosis, investigations, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy . (OG12.2)
5.	Define, classify and describe diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of diabetes in pregnancy (OG12.3)

Competency Addressed	Name of Activity	Date completed	Attended	Rating	Decision of faculty	Initial of faculty and date	Feedback Received
7.	Describe the mechanism, prophylaxis, diagnosis and management of heart diseases in pregnancy (OG12.8)		First or Only (F) Repeat (R)	Meets (M), exceeds (E) expectations	(C) Repeat (R) Remedial (Re)		
8.	Describe and discuss causes, clinical features, investigations; monitoring of fetal well-being, including ultrasound		Remedial (Re)				
9.	Describe the clinical features, diagnosis and counselling in intrauterine growth retardation (OG16.3)						
9.	Define, classify and discuss abnormal uterine bleeding , its aetiology, clinical features, investigations, diagnosis and management (OG24.1)						
10.	Define and discuss the clinical features; differential diagnosis; management, complications of multiple pregnancies ; principles of management, complications of uterus (OG29.1)				fibroid		Initial of students
11.	Define, classify and discuss the etiology, classification, clinical features, investigations, principles of management and aetiology, clinical features, aspects of prolapse of uterus (OG31.1)						
	ultrasonography, differential diagnosis and management of antepartum haemorrhage in pregnancy						

							Initial of students	2.1
	Define, classify and describe the early detection, investigations; principles of management of hypertensive disorders of pregnancy and eclampsia , complications of eclampsia						Initial of students	
Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received	

	Define, classify and describe the diagnosis, investigations, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of anemia in pregnancy						Initial of students
3	Define, classify and describe the diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of diabetes in pregnancy						Initial of students

2.2

4	Define, classify and describe the etiology, diagnosis, investigations, criteria, adverse effects on the mother and foetus and the management during pregnancy and labor, and complications of heart diseases in pregnancy						Initial of students
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Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity	Rating	Decision of faculty	Initial of faculty and date	Feedback Received
			First or Only (F) Repeat (R) Remedial (Re)	Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Completed (C) Repeat(R) Remedial(Re)		

8	Describe the mechanism, prophylaxis, fetal complications, diagnosis and management of isoimmunization in pregnancy						Initial of students
3	Describe and discuss causes, clinical features, diagnosis, investigations; monitoring of fetal well-being, including ultrasound and fetal Doppler; principles of management; prevention and counselling in intrauterine growth retardation						Initial of students
1	Define, classify and discuss abnormal uterine bleeding , its aetiology, clinical features, investigations,						Initial of students

	diagnosis and management						
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Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity	Rating	Decision of faculty	Initial of faculty and date	Feedback Received
			First or Only (F) Repeat (R) Remedial (Re)	Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Completed (C) Repeat(R) Remedial(Re)		

1	Describe and discuss the clinical features; differential diagnosis; investigations; principles of management, complications of fibroid uterus						Initial of students
1	Describe and discuss the etiology, classification, clinical features, diagnosis, investigations, principles of management and preventive aspects of prolapse of uterus						<p>Learner doctor method.</p> <p>Posting 3</p> <p>Competency to be achieved</p> <ol style="list-style-type: none"> 1. History taking 2. Examination - General physical examination <ul style="list-style-type: none"> - Systemic examination - Obstetrics examination 3. Identifying High Risk factors 4. Communication & patients education 5. Selection of appropriate investigation 6. Approach towards the diagnosis 7. Plan of Management. <p>Initial of students</p>

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor, about the patient care & plan of management

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Learner doctor method.

Learner doctor method.

Learner doctor method

Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

Posting 4
Duration 4 weeks
Date of posting From To
Unit :

Competency to be achieved

- 1) Gynaecological history taking and complete examination
- 2) Early detection of genital malignancies
- 3) Document and maintain a case record
- 4) Write a discharge summary for the given case

- 5) Write a Referral note for the given case
- 6) Take an informed consent for the given procedure

Clinical posting 4

SLNO	ACTIVITY (Case Presentation)
1.	Classify, describe and discuss the etiology, clinical features, differential diagnosis, investigations and staging of cervical cancer (OG33.1)
2.	Describe and discuss aetiology, staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer (OG34.1)
3.	Describe and discuss the etiology, classification, staging of ovarian cancer , clinical features, differential diagnosis, investigations, principal of management including staging laparotomy (OG34.2)
4.	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and pervaginal) (OG35.1)
5.	Arrive at a logical provisional diagnosis after examination. (OG35.2)
6.	Write a complete case record with all necessary details (OG35.8)
7.	Write a proper discharge summary with all relevant information (OG35.9)

8.	Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details (OG35.10)
9.	Take an informed consent from the patient and family for Staging laprotomy (OG34.4, OG35.7)

Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received
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	Classify, describe and discuss the etiology, , clinical features, differential diagnosis, investigations and staging of cervical cancer							3.1
.1	Describe and discuss aetiology, staging clinical features, differential diagnosis, investigations, staging laparotomy and principles of management of endometrial cancer							Initial of students
.2	Describe and discuss the etiology, classification, staging of ovarian cancer , clinical features, differential diagnosis,							

	investigations, principal of management including staging laparotomy						Initial of students	5.1
Competency Addressed	Name of Activity	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received	
	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal						Initial of students	

Competency Addressed	Name of a Activity provisional diagnosis after examination.	Date completed dd-mm-yyyy	Attempt at activity First or Only (F) Repeat (R) Remedial (Re)	Rating Below (B) expectations Meets(M) expectations Exceeds(E) expectations	Decision of faculty Completed (C) Repeat(R) Remedial(Re)	Initial of faculty and date	Feedback Received Initial of students
9	Write a						Initial of students
8	Write a discharge case secondary with all necessary details information						Initial of students
10	Write a proper referral note to secondary						Initial of students
	or tertiary centres or to other physicians with all necessary details						Initial of students

4,	Take an informed consent from the patient and family for Staging laprotomy							5.7
							Initial of students	

Learner doctor method.

Posting 4

Competency to be achieved

1. Arriving at diagnosis
2. Planning management
3. Taking consent from the patient for the procedure
4. Assessing post procedure complication
5. Writing discharge summary
6. Advise on discharge

One patient will be allotted to the student. The student is expected to take the history of the patient and examine her. Case record has to be written and daily follow-up till discharge has to be entered. The students will communicate with the patient and doctor about patient care and plan of management.

A brief summary is to be written at the time of patient discharge and discuss the case with the teacher.

Learner doctor method.

Lerner doctor method.

Learner doctor method

Reflection on the learner doctor method of learning :

What happened?

So what ?

What next?

Signature of the faculty:

Date:

LABOUR ROOM PROCEDURES

SLNO	ACTIVITY
1.	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal) (OG35.1)
2.	Arrive at a logical provisional diagnosis after examination. (OG35.2)
3.	mechanism of labor in occipito-anterior presentation (OG13.1)

4.	monitoring of labor including partogram (OG13.1)
5.	Induction of Labour
6.	acceleration of labor(OG13.1)
7.	Amniotomy (OG 13.3)
8.	Enumerate and describe the indications, steps and complications of Caesarean Section (OG15.1)
9.	Observe/Assist in operative obstetrics case – Forceps/ vacuum extraction (OG15.2)
10	Describe and discuss the classification; diagnosis; management of abnormal labor (OG 14.4)

Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Observed	Assisted	Initial of faculty and date	Feedback Received

OG35.1	Obtain a logical sequence of history, and perform a humane and thorough clinical examination, excluding internal examinations (perrectal and per-vaginal					Initial of students
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OG35.2	Arrive at a logical provisional diagnosis after examination.						Initial of students
OG13.1	mechanism of labor in occipito-anterior presentation						Initial of students
Competency # addressed	Name of Activity	Date completed dd-mm-yyyy	Observed	Assisted	Initial of faculty and date	Feedback Received	
OG13.1	monitoring of labor including partogram						Initial of students

Certifiable Skills

Name of Activity: Observe of a normal vaginal

OG13.1	Induction of labour					Initial of students
OG13.1	acceleration of labor					Initial of students
OG 13.3	Amniotomy					Initial of students
OG15.1	Caesarean section,					Initial of students
OG15.2	Instrumental delivery					Initial of students
OG14.4	diagnosis; management of abnormal labor					Initial of students

and assist the conduct delivery

OG13.5				
OG13.5				
OG13.5				

Checklist for assessment of skills in Skill lab

Sl. no	Skills
1	Speculum Examination /Pap Smear
2	Prevaginal examination
3	Normal Delivery
4	Episotomy
5	Female Urinary Catheterization

1. Speculum Examination / Pap Smear

Sl No	Step/Task	Yes 1	No 0
1	Introduce yourself		
2	Verbal consent		
3	Explain procedure to woman		
4	Ask to empty bladder		
5	Provide adequate privacy		
6	Place in dorsal position		
7	Scrub hands		
8	Wear sterile gloves		
9	Encourage the woman to take deep breath and relax during examination		
10	Separate the labia with left hand, introduce cuscos speculum into vagina with right hand.		
11	Points to observe:		
	a) Direction of cervix		
	B)Cervical lips		
	c) External os		
	d) abnormal discharge or bleeding from any side		
	e) abnormal growth from any side		

12	Take Pap Smear using Ayre's spatula from the cervix \, rotate in a 360 ⁰ movement. The longer projection of the spatula is inserted into the endocervix and shorter end to the ecto cervix		
13	Another sample is collected from the posterior fornix with the flat end of the spatula		
14	The material collected is immediately spread over 2 slides and at once put into the fixative ethyl alcohol 95% before drying or fixed with confixative spray.		
15	The slides are labelled and send to the lab with brief patient history and examination findings and proper patient identification number.		
16	Proper disposal of the gloves		
17	Documentation of findings		

Level of expertise expected - advanced / beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session – Yes/ No

Repeat session: level of expected expertise attained- Yes/ No.

2.Pre vaginal examination

Sl No	Step/Task	Yes 1	No 0
1	Introduce yourself		
2	Verbal consent		
3	Ask to empty bladder		
4	Provide adequate privacy		
5	Explain procedure to woman		

6	Place in dorsal position		
7	Scrub hands		
8	Wear sterile gloves		
9	Lubricate fingers with jelly		
10	Separate the labia with left hand, introduce index and middle finger of right hand into vagina,		
11	Encourage the woman to take deep breath and relax during examination		
12	Bimanual examination – to note down a) Direction of the cervix		
	b) consistency of the cervix (firm / hard)		
	c) cervical motion tenderness (tenderness present / absent)		
	d) Whether cervix bleeds on touch		
	e) Uterus - anteverted/ retroverted		
	f) Size of uterus		
	g) Consistency of uterus		
	h) Mobility of uterus		
	i) Surface of Uterus –regular/ irregular		
	j) Palpation of Adnexa – appendages / fornices / describe the mass if palpable		
13	Proper disposal of gloves		

14	Document findings		
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Level of expertise expected- advanced/ beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session - Yes/ No

Repeat session: level of expected expertise attained- Yes/ No.

3. Normal delivery

Sl. No.	Procedure	Yes	No	Comments if any
1.	Put on personal protective barriers. (Wear Goggles, Mask, Cap, Shoe cover, Plastic Apron).			
2.	Perform hand hygiene and put on sterile glove			
3.	Empty the bladder			
4.	Paint & drape the parts			
5.	Talk to the woman and encourage woman for breathing & small pushes with contractions			
6.	Once crowning give liberal episiotomy after infiltrating lignocaine			
7.	Control the birth of the head with the fingers of one hand to maintain flexion, allow natural stretching of the perineal tissue, ask the assistant to support perineum			
8.	Feel around the baby's neck for the cord and respond appropriately if the cord is present.			

9.	Allow the baby's head to turn spontaneously and with the hands on either side of the baby's head, delivers the anterior shoulder			
10.	Pull the head upward as the posterior shoulder is born over the perineum			
11.	Support the rest of the baby's body as it slides out and place the baby on the mother's abdomen over the clean towels			
12.	Note the time of birth and sex of the baby			
13	Active management of third stage of labor (AMTSL) a) Administer uterotonic Drug – Inj.oxytocin10 IU IM or tab. Misoprostol (600ug) orally			
	b) Perform controlled cord Traction during a contraction by placing one hand on the lower abdomen to support the uterus and gently pulling the clamped cord by the other hand close to perineum			
14.	Examine the vagina and perineum			

15.	Examine the placenta, membranes, and umbilical cord <ul style="list-style-type: none"> ● Maternal surface of placenta ● Foetal surface ● Membranes Umbilical cord			
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Level of expertise expected – advanced / beginner

Level of expected expertise attained – Yes / No

Needs to repeat the session – Yes / No

Repeat session: level of expected expertise attained- Yes/ No

4. Episiotomy

Sl No	Step/Task	Yes 1	No 0
1	Informs patient about need for episiotomy and local infiltration		
2	Gives local Inj. Xylocaine in fan shaped manner after checking for inadvertent needle in vessel		
3	Performs the incision with fingers guarding the fetus from injury		
4	Confirms integrity of rectum		
5	Changes gloves		
6	Identifies the apex of the mucosal layer		
7	Ask for appropriate suture material		
8	<i>Sutures vaginal mucosa first by continuous suturing</i>		
9	Sutures muscle layer intermittently after vaginal mucosa		
10	Sutures skin after muscular layer		
11	Confirms haemostasis, looks for any forgotten gauze		

12	Do a per rectal examination to feel for any suture passing through rectal mucosa		
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Level of expertise expected- advanced/ beginner

Level of expected expertise-attained- Yes/no

Needs to repeat the session - Yes/ No

Repeat session : level of expected expertise attained- Yes/ No.

5. Female Urinary Catheterization

Sl No	Step/Task	Yes 1	No 0
1	Self-Introduce, Explain procedure & take consent		
2	Arrange Catheter set		
3	Paint external genitalia upto mid-thigh		

4	Painting- separate labia minora & clean urethral & vaginal region		
5	Draping		
6	Keep kidney tray over drape		
7	Lubricate the tip of the foley 's Catheter with xylocaine gel		
8	Separate labia minora with left hand		
9	Introduce the catheter into the urethra		
10	Drain the urine into the kidney tray		
11	Foley bulb to be inflated with 5 ml distilled water		
12	Connecting the urosac bag		
13	Dispose appropriately (yellow linen – gauze, paper) (red linen – glove)		

Level of expertise expected- advanced/ beginner

Level of expected expertise attained- Yes/no

Needs to repeat the session – Yes/ No

Repeat session : level of expected expertise attained- Yes/ No.

AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of Internal Medicine

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty AETCOM MODULES

Module number:

Date:

Name of the activity:

Department of Internal Medicine

Competencies
The student should be able to :

Reflection

Feedback

Signature of the student:

Assessment:

Signature of the faculty

Integrated sessions :

	Date of session	Topics covered	Competency numbers addressed	Departments involved in the conduct of the session	Signature of the student	Signature of the faculty
1						
2						
3						

4						
5						

Self-directed learning sessions:

Sl. No.	Date	Topic	Competency number	Signature of The Faculty

Research projects and publications

Sl.no	Name of the topic	Date	Signature of the faculty
1			

2			
3			
4			
5			

Co curricular activities -(quiz, poster, debates, essays, skit)

Sl.no	Name of the topic	Date	Signature of the faculty
1			
2			

3			
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4			
5			
6			
7			
8			
9			

10			
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Participation in CME, conference, workshops

Sl..no	Name of the topic	Date	Signature of the faculty
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1			
2			
3			
4			
5			

Awards and recognition

Sl. no	Name of the topic	Date	Signature of the faculty
1			
2			
3			
4			
5			

Rajiv Gandhi University of Health Sciences
Bangalore, Karnataka



Paediatrics Curriculum
as per
Competency-Based Medical Education Curriculum

Abbreviations

NMC	-	National Medical Council
IMG	-	Indian Medical Graduate
CBME	-	Competency Based Medical Education
SLO	-	Specific Learning Objectives
TL	-	Teaching Learning
P	-	performed
Y/N	-	yes / no
SGD	-	Small group discussion
OSCE	-	Objective structured clinical examination
AETCOM	-	Attitude, Ethics and communication
SAQ	-	short answer question
MCQ	-	multiple choice question

RGUHS Paediatrics Curriculum as per the new Competency Based Medical Education

Preamble

The NMC envisages that the Indian Medical Graduate, should function as the Physician of first contact in the community, to provide holistic health care to the evolving needs of the nation and the world. To fulfil this the IMG should be able to perform the following roles: a clinician, a communicator, a lifelong learner, a professional and a team leader.

Competency-based medical education (CBME) is an outcomes-based training model that has become the new standard of medical education internationally. This new curriculum is being implemented across the country and the first batch has been enrolled since the academic year 2019. The regulatory and accrediting body NMC had started the process by training faculty across the country in the key principles of CBME and developing key competencies for each speciality with the input from expert groups under each speciality.

Paediatrics is an interesting branch of medicine dealing with health and medical care of children. It encompasses a broad spectrum of services ranging from preventive health care to the diagnosis and treatment of acute and chronic childhood illnesses. It is an ever-evolving branch requiring compassion, dedication and precision of care. The Paediatrics undergraduate curriculum provides the IMG the requisite knowledge, essential skills and appropriate attitudes to be able to diagnose and treat common paediatric disorders and also to be able to recognise serious conditions and refer appropriately.

The NMC, in the Graduate medical regulations 2019, has provided the list of paediatric competencies required for an IMG and these have been included in this curriculum document. The Specific learning objectives (SLO's) to achieve each competency has been listed along with the suggested Teaching-Learning methods and preferred assessment methods.

Following this is a detailed **blueprint** showing the weightage and the assessment tool for a particular chapter. This blueprint will ensure that there is an alignment between the SLOs', TL methods and the assessment. A **question paper layout** has also been added to ensure that there is consistency among different paper setters. Finally, the list of practical skills along with the most appropriate TL and assessment methods has been laid out.

Goals and Objectives of the RGUHS Paediatrics Curriculum

Goals:

The course includes systematic instructions in management of common diseases of infancy and childhood, evaluation of growth and development, nutritional needs, and immunization schedule in children, social pediatrics and counseling is also dealt in the course. The aim of teaching undergraduate medical students is to impart appropriate knowledge and skills to optimally deal with major health problems and also to ensure optimal growth and development of children.

Objectives:

(A) Knowledge

At the end of the course, the student shall be able to:

- 1. Describe normal growth and development during fetal, neonatal, child and adolescence period.*
- 2. Describe the common pediatric disorders and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation.*

- 3. State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease.*
- 4. Describe preventive strategies for common infectious disorders, poisonings, accidents and child abuse.*
- 5. Outline national programmes relating to child health including immunization programmes.*

(B) Skills

At the end of the course, the student shall be able to:

- 1. Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.*
- 2. Distinguish between normal newborn babies and those requiring special care and institute early care to all newborn babies including care of preterm and low birth weight babies.*
- 3. Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, perform venesection, start an intravenous line and provide nasogastric feeding.*
- 4. Would have observed procedures such as lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascitic tap.*
- 5. Provide appropriate guidance and counseling in breast feeding.*
- 6. Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.*
- 7. Be aware and analyse ethical problems that arise during practice and deal with them in an acceptable manner following the code of ethics.*

(C) Attitude and communication skills

At the end of the course, the student shall be able to:

1. Communicate effectively with patients, their families and the public at large.
2. Communicate effectively with peers and teachers and demonstrate the ability to work effectively with peers in a team.
3. Demonstrate professional attributes of punctuality, accountability and respect for teachers and peers.
4. Appreciate the issues of equity and social accountability while undergoing early clinical exposure

(D) Integration

The training in pediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of a team in an integrated form with other disciplines.

List of all Paediatrics competencies with their specific learning objectives, with suggested teaching-learning and assessment methods:

Number	Competency&LearningObjective(s)			Core	Suggested Teaching Learning Method	Suggested Assessment Method	Number for Certification	Vertical Integration	Horizontal Integration
Topic: Normal Growth and Development		Number of competencies: (7)			Number of procedures that require certification: (02)				
PE1.1	Define the terminologies Growth and Development and Discuss the factors affecting normal growth and development			Y	Lecture/SGD	Written/vivo			

1.1.1	Define Growth and Development			Y	Lecture/SGD	Written/viva voce			
1.1.2	Enumerate the factors affecting normal growth and development			Y	Lecture/SGD	Written/viva voce			
PE1.2	Discuss and Describe the patterns of growth in infants, children and adolescents			Y	Lecture/SGD	Written/viva voce			Psych
1.2.1	Describe the patterns of growth in infants, children and adolescents			Y	Lecture/SGD	Written/viva voce			
PE1.3	Discuss and Describe the methods of assessment of growth including use of WHO and Indian national standards. Enumerate the parameters used for assessment of physical growth in infants children and adolescents			Y	Lecture/SGD	Written/viva voce			ComMed
1.3.1	Describe the methods of assessment of growth including use of WHO and Indian national standards.			Y	Lecture/SGD	Written/viva voce			
1.3.2	Describe WHO and Indian national standards for growth of infants, children and adolescents.			Y	Lecture/SGD	Written/viva voce			
1.3.3	Enumerate the parameters used for assessment of physical growth in infants, children and adolescents.			Y	Lecture/SGD	Written/viva voce			
PE1.4	Perform Anthropometric measurements, document in growth charts and interpret			Y	SGD	Document in Logbook	3		
1.4.1	Perform anthropometric measurements in children of different age groups.			Y	Clinical teaching/skill lab	Document in Logbook	3		
1.4.2	Document the measured parameters in growth charts and interpret the findings on growth charts.			Y	Clinical teaching/skill lab	Document in Logbook	3		

PE1.5	Define development and Discuss the normal developmental milestones with respect to motor, behavior, social, adaptive and language			Y	Lecture/SGD	Written/viva voce			Psych
1.5.1	Definedevelopment.			Y	Lecture/SGD	Written/viva voce			
1.5.2	Describe the normal developmental milestones with respect to motor, behavior, social, adaptive and language domains.			Y	Lecture/SGD	Written/viva voce			Psych
PE1.6	Discuss the methods of assessment of development.			Y	Lecture/SGD	Written/viva voce			
1.6.1	Discuss the methods of assessment of development			Y	Lecture/SGD	Written/viva voce			
PE1.7	Perform Developmental assessment and interpret			N	Bedside/skills lab	Document in Logbook	3		
1.7.1	Perform Developmental assessment in infants and children and interpret the findings.			N	Bedside/skills lab	Document in Logbook/skill lab	3		
Topic: Common problems related to Growth		Number of competencies: (6)			Number of procedures that require certification: (NIL)				
PE2.1	Discuss the etiopathogenesis, clinical features and management of a child who fails to thrive			Y	Lecture/SGD	Written/viva voce			
2.1.1	Discuss the etiopathogenesis of a child who fails to thrive.			Y	Lecture/SGD	Written/viva voce			
2.1.2	Describe the clinical features of a child who fails to thrive.			Y	Lecture/SGD	Written/viva voce			
2.1.3	Discuss the management of a child who fails to thrive.			Y	Lecture/SGD	Written/viva voce			

PE2.2	Assessment of a child with failure to thrive including eliciting an appropriate history and examination			Y	Bedside clinics	Skills station			
2.2.1	Elicit an appropriate history in a child with failure to thrive.			Y	Bedside clinics	OSCE/Clinical case			
2.2.2	Perform a complete physical examination in a child with failure to thrive.			Y	Bedside clinics	OSCE/Clinical case			
PE2.3	Counseling a parent with a failing to thrive child			Y	OSCE	Document in Logbook		AETCOM	
2.3.1	Counsel a parent of a child with failure to thrive.			Y	Skill lab/roleplay	OSCE/Document in Logbook			
PE2.4	Discuss the etiopathogenesis, clinical features and management of a child with short stature			Y	Lecture/SGD	Written/viva voce			
2.4.1	Enumerate causes of short stature in children.			Y	Lecture/SGD	Written/viva voce			
2.4.2	Describe the clinical features of a child with short stature.			Y	Lecture/SGD	Written/viva voce			
2.4.3	Discuss the management of a child with short stature.			Y	Lecture/SGD	Written/viva voce			
PE2.5	Assessment of a child with short stature: Elicit history; perform examination, document and present.			Y	Bedside/skill lab	Skill assessment			
2.5.1	Elicit history in a child with short stature.			Y	Bedside/skill lab	Bedside/OSCE			
2.5.2	Perform a complete physical examination in a child with short stature.			Y	Bedside/skill lab	Bedside/OSCE			

2.5.1	Document and present assessment of a child with short stature.			Y	Bedside/skill lab	Skill assessment/ bedside case			
PE2.6	Enumerate the referral criteria for growth related problems			Y	Lecture/SGD	Written/viva voce			
2.6.1	Enumerate the referral criteria for growth related problems			Y	Lecture/SGD	Written/viva voce			
Topic: Common problems related to Development-1 Number of competencies: (8) Number of procedures that require certification: (NIL) (Developmental delay, Cerebral palsy)									
PE.3.1	Define, Enumerate and Discuss the causes of developmental delay and disability including intellectual disability in children			Y	Lecture,SGD	Written/viva-voce			
3.1.1	Define developmental delay.			Y	Lecture/SGD	Written/viva-voce			
3.1.2	Enumerate causes of developmental delay.			Y	Lecture/SGD	Written/viva-voce			
3.1.3	Define disability as per WHO.			Y	Lecture/SGD	Written/viva-voce			
3.1.4	Define Intellectual disability in children.			Y	Lecture/SGD	Written/viva-voce			
3.1.5	Grade intellectual disability in terms of intelligence quotient (IQ).			Y	Lecture/SGD	Written/viva-voce			
PE3.2	Discuss the approach to a child with developmental delay			Y	Lecture,SGD	Written/viva-voce			
3.2.1	Discuss clinical presentation of common causes of developmental delay.			Y	Lecture,SGD	Written/Viva voce			
3.2.2	Enumerate investigations for developmental delay.			Y	Lecture,SGD	Written/Viva voce			

3.2.3	Based on clinical presentation, make an			Y	Lecture,SGD	Written/			
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	investigation plan for a child with developmental delay.					Vivavoce			
3.2.4	Discuss differential diagnosis of developmental delay.			Y	Lecture,SGD	Written/Vivavoce			
PE3.3	Assessment of a child with developmental delay - elicit document and present history			Y	Bedside, Skillslab	Skill assessment			
3.3.1	Elicit developmental history from a parent/care taker.			Y	Bedside, Skillslab	Case/OSCE			
3.3.2	Elicit the current developmental milestones of the child.			Y	Bedside, Skillslab	OSCE			
3.3.3	Interpret developmental status of a child based on the history and examination.			Y	Bedside, Skillslab	OSCE			
3.3.4	Document and present the developmental assessment.			Y	Bedside, Skillslab	LOGBOOK			
PE3.4	Counsel a parent of a child with developmental delay			Y	DOAP Session	Document in Logbook			
3.4.1	Communicate the developmental status of the child to the parent.			Y	DOAP Session	Document in Logbook			
3.4.2	Counsel the parents of a child with developmental delay.			Y	DOAP Session	Document in Logbook			
PE3.5	Discuss the role of the child developmental unit in management of developmental delay			N	Lecture,SGD	Written/Vivavoce		Com Med	
3.5.1	Enumerate the structure and composition of staff at a child development unit.			N	Lecture/SGD	Written/Vivavoce		Com Med	

3.5.2	Describe roles of a child development unit.			N	Lecture/SGD	Written/ Viva voce		Com Med	
PE3.6	Discuss the referral criteria for children with developmental delay			Y	Lecture,SGD	Written/viva			

						voce			
3.6.1	Enumerate clinical criteria for referral of a child with developmental delay.			Y	Lecture/SGD	Written/v iva voce			
PE3.7	Visit a Child Developmental Unit and observe its functioning			Y	Lecture,SGD	Logbook entry		Com Med	
3.7.1	Observe and list the activities in the child development unit.			Y	Lecture,SGD	Logbook entry		Com Med	
PE3.8	Discuss the etiopathogenesis, clinical presentation and multidisciplinary approach in the management of cerebral palsy			Y	Lecture/SGD	Written/vi va voce			PMR
3.8.1	Define cerebral palsy.			Y	Lecture/SGD	Written/v iva voce			
3.8.2	Enumerate common causes of cerebral palsy.			Y	Lecture/SGD	Written/viva voce			
3.8.3	Describe the etiopathogenesis of cerebral palsy.			Y	Lecture/SGD	Written/v iva voce			
3.8.4	Classify cerebral palsy with respect to function and topography.			Y	Lecture/SGD	Written/viva voce			
3.8.5	Describe common clinical presentations of different types of cerebral palsy.			Y	Lecture/SGD	Written/v iva voce			
3.8.6	List some common co-morbidities in a child with cerebral palsy.			Y	Lecture/SGD	Written/v iva voce			

3.8.7	Describe common interventions for management of a child with cerebral palsy.			Y	Lecture/SGD	Written/viva voce			
Topic: Common problems related to Development-2 (Scholastic backwardness, Learning Disabilities, Autism, ADHD) Number of competencies: (6) Number of procedures that require certification: (NIL)									
PE4.1	Discuss the causes and approach to a child with scholastic backwardness			N	Lecture,SGD	Written/viva voce			
4.1.1	Define scholastic backwardness.			N	Lecture,SGD	Written/viva voce			
4.1.2	List common causes of scholastic backwardness.			N	Lecture,SGD	Written/viva voce			
4.1.3	Discuss clinical assessment of a child with scholastic backwardness.			N	Lecture,SGD	Written/viva voce			
PE4.2	Discuss the etiology, clinical features, diagnosis and management of a child with learning disabilities			N	Lecture,SGD	Written/viva voce			
4.2.1	Define learning disabilities.			N	Lecture,SGD	Written/viva voce			
4.2.2	Enumerate causes of learning disabilities.			N	Lecture,SGD	Written/viva voce			
4.2.3	Describe clinical presentation of a child with learning disabilities.			N	Lecture,SGD	Written/viva voce			
4.2.4	Discuss assessment of a child with learning disabilities.			N	Lecture,SGD	Written/viva voce			
4.2.5	Discuss management options for a child with learning disabilities.			N	Lecture,SGD	Written/viva voce			
PE4.3	Discuss the etiology, clinical features, diagnosis and management of a child with Attention Deficit Hyperactivity Disorder (ADHD)			N	Lecture,SGD	Written/viva voce			

4.3.1	DefineADHD.			N	Lecture,SGD	Written/viva voce			
4.3.2	DescribeclinicalfeaturesofADHD.			N	Lecture,SGD	Written/vivavoce			
4.3.3	Discussdiagnosticassessmentofachildwithsuspected ADHD.			N	Lecture,SGD	Written/viva voce			
4.3.4	EnumeratedrugsfortreatmentofADHD.			N	Lecture,SGD	Written/vivavoce			
PE4.4	Discussetiology,clinicalfeatures,diagnosisandmanagementofa childwithautism			N	Lecture,SGD	Written/vivavoce			

4.4.1	DefineAutismSpectrumDisorders(ASD).			N	Lecture,SGD	Written/viva voce			
4.4.2	DiscusscausesofASD.			N	Lecture,SGD	Written/vivavoce			
4.4.3	DescribeclinicalfeaturesofASD.			N	Lecture,SGD	Written/viva voce			
4.4.4	DiscussclinicalassessmentofASD.			N	Lecture,SGD	Written/vivavoce			
4.4.5	DiscussmanagementoptionsforachildwithASD.			N	Lecture,SGD	Written/vivavoce			
PE4.5	DiscusstheroleofChildGuidanceClinicinchildren withDevelopmentalproblems			N	Lecture,SGD	Written/Viva voce		Psych	
4.5.1	DescribethestructureofaChildGuidanceClinicwith respecttostaffandfacilities.			N	Lecture,SGD	Written/Vivavoce		Psych	
4.5.2	Enumeratethefunctionsofachild guidanceclinic.			N	Lecture,SGD	Written/Vivavoce		Psych	
PE4.6	VisittotheChildGuidanceClinic			N	Lecture,SGD	Documentin Logbook		Psych	

4.6.1	Describe the functioning of child guidance clinic in their institutions.			N	Lecture,SGD	Document in Logbook		Psych	
Topic: Common problems related to behaviour		Number of competencies: (3)			Number of procedures that require certification: (NIL)				
PE 5.1	Describe the clinical features, diagnosis and management of thumb sucking			N	Lecture,SGD	Written			
5.1.1	Describe clinical features of thumb sucking.			N	Lecture,SGD	Written/viva voce			
5.1.2	Describe diagnosis of thumb sucking.			N	Lecture,SGD	Written/viva voce			
5.1.3	Discuss management strategies for a child with thumb sucking.			N	Lecture,SGD	Written/viva voce			

PE 5.2	Describe the clinical features, diagnosis and management of feeding problems			N	Lecture,SGD	Written/viva voce			
5.2.1	Enumerate common feeding problems.			N	Lecture,SGD	Written/viva voce			
5.2.2	Discuss clinical presentations of feeding problems.			N	Lecture,SGD	Written/viva voce			
5.2.3	Discuss management strategies for a child with feeding problems.			N	Lecture,SGD	Written/viva voce			
PE 5.3	Describe the clinical features, diagnosis and management of nail-biting			N	Lecture,SGD	Written/Viva Voce			
5.3.1	Describe features of nail biting.			N	Lecture,SGD	Written/Viva Voce			
5.3.2	Discuss management of nail biting.			N	Lecture,SGD	Written/Viva Voce			
PE 5.4	Describe the clinical features, diagnosis and management of breath holding spells.			N	Lecture,SGD	Written/Viva Voce			

5.4.1	Describeabreathholdingspell.			N	Lecture,SGD	Written/Viva Voce			
5.4.2	Describethetypesofbreathholdingspells.			N	Lecture,SGD	Written/V ivaVoce			
5.4.3	Discusscausesofbreathholdingspells.			N	Lecture,SGD	Written/Viva Voce			
5.4.4	Discussmanagementofbreathholdingspells.			N	Lecture,SGD	Written/V ivaVoce			
PE 5.5	Describethetheclinicalfeatures,diagnosisand managementoftempertantrums			N	Lecture,SGD	Written/Viv a Voce			Psych
5.5.1	Describepresentationofatempertantrum.			N	Lecture,SGD	Written/V ivaVoce			
5.5.2	Discusscausesoftempertantrum.			N	Lecture,SGD	Written/Viva Voce			
5.5.3	Discussmanagementoftempertantrums.			N	Lecture,SGD	Written/Viva Voce			

PE 5.6	Describe the clinical features, diagnosis and management of pica			N	Lecture,SGD	Written/Viva Voce			
5.6.1	Define pica.			N	Lecture,SGD	Written/Viva Voce			
5.6.2	Discuss causes of pica.			N	Lecture,SGD	Written/Viva Voce			
5.6.3	Discuss treatment of pica.			N	Lecture,SGD	Written/Viva Voce			
PE 5.7	Describe the clinical features, diagnosis and management of fussy infant			N	Lecture,SGD	Written/Viva Voce			Psych
5.7.1	Describe a fussy infant.			N	Lecture,SGD	Written/Viva Voce			
5.7.2	Enumerate causes of fussiness in children.			N	Lecture,SGD	Written/Viva Voce			
5.7.3	Discuss management of fussiness in a child.			N	Lecture,SGD	Written/Viva Voce			
PE 5.8	Discuss the etiology, clinical features and management of enuresis.			N	Lecture,SGD	Written/Viva Voce			
5.8.1	Define primary and secondary enuresis for boys and girls.			N	Lecture,SGD	Written/Viva Voce			
5.8.2	Discuss etiology of primary and secondary enuresis.			N	Lecture,SGD	Written/Viva Voce			
5.8.3	Discuss pharmacological and non-pharmacological management strategies for enuresis.			N	Lecture,SGD	Written/Viva Voce			
PE 5.9	Discuss the etiology, clinical features and management of Encopresis.			N	Lecture,SGD	Written/Viva Voce			
5.9.1	Describe Encopresis.			N	Lecture,SGD	Written/Viva Voce			

5.9.2	DiscusscausesofEncopresis.			N	Lecture,SGD	Written/VivaVoce			
5.9.3	DescribemanagementofEncopresis.			N	Lecture,SGD	Written/VivaVoce			
PE 5.10	Discusstheroleofchildguidanceclinicinchildrenwithbehaviouralproblemsandtheferralcriteria			N	Lecture,SGD	Written/VivaVoce			Psych
5.10.1	Describetheroleofachildguidanceclinicinchildrenwithbehaviouralproblems.			N	Lecture,SGD	Written/VivaVoce			
5.10.2	Enumeratereferralcriteriaforbehaviouralproblemsin children.			N	Lecture,SGD	Written/VivaVoce			
PE 5.11	VisittoChildGuidanceClinicandobservefunctioning			N	Lecture,SGD	Documentin Logbooks			
5.11.1	DescribefunctioningofaChildGuidanceClinic.			N	Lecture,SGD	Documentin Logbooks			
Topic:AdolescentHealth&commonproblemsrelatedto Adolescent Health									
Numberofcompetencies:(13) Numberofproceduresthatrequirecertification:(NIL)									
PE6.1	DefineAdolescenceandstagesofadolescence			Y	Lecture,SGD	Written/viva voce			
6.1.1	Defineadolescence.			Y	Lecture,SGD	Written/viva voce			
6.1.2	Enumeratethestagesofadolescence.			Y	Lecture,SGD	Written/viva voce			
PE 6.2.	Describethephysical,physiologicalandpsychological changesduringadolescence(Puberty)			Y	Lecture,SGD	Written/viva voce			Psych
6.2.1	Describethephysicalchangesduringadolescence.			Y	Lecture,SGD	Written/viva voce			Psych
6.2.2	Describethephysiologicalchangesduringadolescence.			Y	Lecture,SGD	Written/viva voce			Psych

6.2.3	Describe the psychological changes during adolescence.			Y	Lecture,SGD	Written/viva voce			Psych
PE6.3	Discuss the general health problems during adolescence			Y	Lecture,SGD	Written/viva voce			
6.3.1	Enumerate the general health problems of adolescence			Y	Lecture,SGD	Written/viva voce			
6.3.2	Describe the general health problems of adolescence			Y	Lecture,SGD	Written/viva voce			
PE6.4	Describe adolescent sexuality and common problems related to it			N	Lecture,SGD	Written/viva voce			Psych
6.4.1	Describe adolescent sexuality.			N	Lecture,SGD	Written/viva voce			Psych
6.4.2	Enumerate common problems related to adolescent sexuality.			N	Lecture,SGD	Written/viva voce			Psych
PE6.5	Explain the Adolescent Nutrition and common nutritional problem			Y	Lecture,SGD	Written/viva voce			Psych
6.5.1	Describe the nutritional requirements of adolescents.			Y	Lecture,SGD	Written/viva voce			
6.5.2	Discuss the nutritional problems in adolescents.			Y	Lecture,SGD	Written/viva voce			Psych
PE6.6	Discuss the common Adolescent eating disorders (Anorexia nervosa, Bulimia)			N	Lecture,SGD	Written/viva voce			Psych
6.6.1	Describe the common adolescent eating problems like Anorexia nervosa and Bulimia nervosa.			N	Lecture,SGD	Written/viva voce			Psych

PE6.7	Describe the common mental health problems during adolescence			Y	Lecture,SGD	Written/viva voce			Psych
6.7.1	Describe the common mental health problems during adolescence.			Y	Lecture,SGD	Written/viva voce			Psych

PE6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence			Y	Bedside	Skillstation			
6.8.1	Interact with an adolescent in privacy and maintaining confidentiality.			Y	Bedside	Skillstation			AETCOM
PE6.9	Perform routine Adolescent Health checkup including eliciting history, performing examination including SMR (Sexual Maturity Rating), growth assessments (using Growth charts) and systemic exam including thyroid and Breast exam and the HEADSS screening			Y	Bedside clinic	Skillstation			
6.9.1	Elicit the history from an adolescent.			Y	Bedside	Skillstation			
6.9.2	Assess sexual maturity rating (SMR) in an adolescent.			Y	Bedside	Skillstation			
6.9.3	Evaluate the growth of an adolescent using growth charts.			Y	Bedside	Skillstation			
6.9.4	Examine the thyroid gland of an adolescent.			Y	Bedside	Skillstation			
6.9.5	Perform a breast examination of an adolescent.			Y	Bedside	Skillstation			
6.9.6	Apply HEADSS screening in adolescent workup.			Y	Bedside	Skillstation			
PE6.10	Discuss the objectives and functions of AFHS (Adolescent Friendly Health Services) and the referral criteria			N	Lecture,SGD	Written/viva voce			
6.10.1	Discuss the objectives of adolescent friendly health services (AFHS).			N	Lecture,SGD	Written/viva voce			

6.10.2	Enumerate the functions of adolescent friendly health services (AFHS).			N	Lecture,SGD	Written/viva voce			
PE6.11	Visit to the Adolescent Clinic			Y	DOAP session	Document in Logbook			
6.11.1	Visit an adolescent clinic at least once.			Y	DOAP session	Document in Logbook			
PE6.12	Enumerate the importance of obesity and other NCD			Y	Lecture,SGD	Written/viva voce			

	in adolescents					voce			
6.12.1	Define obesity in adolescence and Enumerate the complications.			Y	Lecture,SGD	Written/viva voce			
6.12.2	Analyze the importance of noncommunicable diseases in adolescence.			Y	Lecture,SGD	Written/viva voce			
PE6.13	Enumerate the prevalence and the importance of recognition of sexual drug abuse in adolescents and children			N	Lecture,SGD	Written/viva voce			
6.13.1	State the prevalence of sexual and drug abuse among adolescents and children.			N	Lecture,SGD	Written/viva voce			
6.13.2	Discuss the importance of recognition of sexual and drug abuse in adolescents and children.			N	Lecture,SGD	Written/viva voce			Psych

Topic: To promote and support optimal Breastfeeding for Infants **Number of competencies: (11)** **Number of procedures that require certification: (01)**

PE7.1	Awareness on the cultural beliefs and practices of breastfeeding			N	Lecture,SGD	Written/Viva voce			OBG
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7.1.1	Explain the harmless and harmful cultural beliefs and practices of breastfeeding.			N	Lecture,SGD	Written/Viva			
PE7.2	Explain the Physiology of lactation			Y	Lecture,SGD	Written/Viva		Physio	
7.2.1	Describe the Anatomy of breast.			Y	Lecture,SGD	Written/viva			
7.2.2	Explain the Physiology of lactation.			Y	Lecture,SGD	Written/viva		Physio	
PE7.3	Describe the composition and types of breast milk and Discuss the differences between cow's milk and Human milk			Y	Lecture,SGD	Written/viva voce		Physio	
7.3.1	Describe the composition of breast milk.			Y	Lecture,SGD,	Written/viva voce			

7.3.2	Describe the composition of cow's milk.			Y	Lecture,SGD	Written/viva voce			
7.3.3	Enumerate the differences between breast milk and cow's milk.			Y	Lecture,SGD,	Written/viva voce			
7.3.4	Describe the various types of breast milk and their characteristic composition.			Y	Lecture,SGD,	Written/viva voce			
PE7.4	Discuss the advantages of breast milk			Y	Lecture,SGD	Written/viva voce			
7.4.1	Enumerate the advantages of breast milk.			Y	Lecture,SGD	Written/viva voce			
PE7.5	Observe the correct technique of breastfeeding and distinguish right from wrong technique			Y	Bedside, Skillslab	Skill assessment	3		
7.5.1	Observe correct technique of breastfeeding noting signs of good attachment and correct positioning of mother and baby.			Y	Bedside teaching/video/Skilllab	Logbook	3		

7.5.2	Distinguish correct feeding technique from wrong one on the mother baby dyad.			Y	Bedside, skillslab	OSCE (video based)	3		
PE7.6	Enumerate the baby friendly hospital initiatives			Y	Lecture, SGD	Written/ vivavoce			
PE7.6.1	Enumerate components of the baby friendly hospital initiative.			Y	Lecture, SGD	Written short notes/ vivavoce			
PE7.7	Perform breast examination and Identify common problems during lactation such as retracted nipples, cracked nipples, breast engorgement, breast abscess			Y	Bedside, Skillslab	skill assessment			OBG
7.7.1	Enumerate common problems in the mother during lactation.			Y	Lecture, Bedside, skillslab	Written/ viva voce			

7.7.2	Examine breast of a lactating mother in an appropriate manner.			Y	Bedside, skillslab	Skill assessment, OSCE (video based)			
7.7.3	Identify the common problems after examining the breast in lactating mother viz retracted nipples, cracked nipples, breast engorgement, breast abscess.			Y	Bedside, skillslab	Skill assessment, OSCE (video based)			
PE7.8	Educate mothers on antenatal breast care and prepare mothers for lactation			Y	DOAP session	Document in Logbook			AETCOM
7.8.1	Educate and counsel pregnant woman during antenatal period in preparation for breastfeeding.			Y	DOAP session/ Clinical session	OSCE			

7.8.2	Educate the pregnant woman for antenatal breast care.			Y	DOAP session/Clinical Session	OSCE			OBG
PE7.9	Educate and counsel mothers for best practices in Breastfeeding			Y	DOAP session	Logbook, OSCE			
7.9.1	Enumerate the best breastfeeding practices.			Y	Lecture, SGD	Written/viva voce			
7.9.2	Educate mothers for the best breastfeeding practices.			Y	DOAP session	Logbook, OSCE with SP			
PE7.10	Respect patient privacy			Y	DOAP session	Document in Logbook			AETCOM
7.10.1	Demonstrate respect for a mother's privacy.			Y	DOAP session	OSCE			
PE7.11	Participate in Breastfeeding Week Celebration			Y	DOAP session	Document in Logbook			

7.11.1	Participate actively in breastfeeding week celebrations.			Y	Active Participation in the activities	Document in Logbook			
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Topic: Complementary Feeding	Number of competencies: (5)	Number of procedures that require certification: (NIL)
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PE8.1	Define the term Complementary Feeding			Y	Lecture, SGD	Written/Viva voce		ComMed	
PE 8.1.1	Define complementary feeding.			Y	Lecture, SGD	Written/viva voce			
PE8.2	Discuss the principles, the initiation, attributes, frequency, technique and hygiene related to complementary feeding including IYCF			Y	Lecture, SGD	Written/Viva voce		ComMed	

8.2.1	Describe the principles of complementary feeding.			Y	Lecture,SGD	Written/vivavoce			
8.2.2	Narrate the types and attributes of good complementary foods.			Y	Lecture,SGD	Written/vivavoce			
8.2.3	Describe the initiation of complementary feeding in different situations.			Y	Lecture,SGD	Written/vivavoce			
8.2.4	Describe the frequency of complementary feeding in different situations.			Y	Lecture,SGD	Written/vivavoce			
8.2.5	Describe the correct technique of complementary feeding.			Y	Lecture,SGD	Written/vivavoce			
8.2.6	Enumerate the hygienic practices to be followed during complementary feeding.			Y	Lecture,SGD	Written/vivavoce			
PE8.3	Enumerate the common complimentary foods			Y	Lecture,SGD	Written/Viva voce		ComMed	
PE 8.3.1	Enumerate common locally available complementary foods.			Y	Lecture,SGD	SAQ,vivavoce			
PE8.4	Elicit history on the Complementary Feeding habits			Y	BEDSIDE,SKILL AB	skill assessment		ComMed	
PE 8.4.1	Elicit a focused and detailed history for complementary			Y	Bedside	OSCE			

	feeding.								
PE8.5	Counsel and educate mothers on the best practices in complementary feeding			Y	DOAP session	DOCUMENT IN LOGBOOK		ComMed	
8.5.1	Counsel the mother for the best practices in complementary feeding.			Y	DOAP session	OSCE			

Topic: Normal nutrition, assessment and monitoring Number of competencies: (7) Number of procedures that require certification: (NIL)

PE9.1	Describe the age-related nutritional needs of infants, children and adolescents including micronutrients and vitamins			Y	Lecture, SGD	Written/ Vivavoce		ComMed, Biochemistry	
9.1.1	List the macronutrients and micronutrients required for growth.			Y	Lecture, SGD	Written/ Vivavoce			
9.1.2	Describe the nutritional needs (calorie, protein, micronutrients, minerals and vitamins) of an infant.			Y	Lecture, SGD	Written/ Vivavoce			
9.1.3	Describe the nutritional needs (calorie, protein, micronutrients, minerals and vitamins) for children of different ages.			Y	Lecture, SGD	Written/ Vivavoce			
9.1.4	Describe the nutritional needs (calorie, protein, micronutrients, minerals and vitamins) of adolescents of both genders.			Y	Lecture, SGD	Written/ Vivavoce			
PE9.2	Describe the tools and methods for assessment and classification of nutritional status of infants, children and adolescents			Y	Lecture, SGD	Written/ Vivavoce		ComMed	
9.2.1	List the tools required for anthropometric measurements viz. weight, length/height, head circumference, midarm circumference.			Y	Lecture, SGD	Written/ Vivavoce			
9.2.2	Describe the method of assessment in detail for different anthropometric measurements for all age groups			Y	Lecture, SGD	Written/ Viva			
	ps.					voce			
9.2.3	Classify the nutritional status as per WHO classification based on anthropometric measurement data for all age groups.			Y	Lecture, SGD	Written/ Vivavoce			

PE9.3	Explain the calorific value of common Indian foods			Y	Lecture,SGD	Written/Viva voce		Biochemistry	
9.3.1	Explain the calorie and protein content of commonly used uncooked and cooked cereals.			Y	Lecture,SGD	Written/Viva voce			
9.3.2	Explain the calorie and protein content of common uncooked food items like dairy products, eggs, fruits, vegetables etc.			Y	Lecture,SGD	Written/Viva voce			
9.3.3	Explain the calorie and protein content of common Indian cooked food items e.g. dalia, roti, chapati, khichdi, dal, rice, idli.			Y	Lecture,SGD	Written/Viva voce			
PE9.4	Elicit, document and present an appropriate nutritional history and perform a dietary recall			Y	Bedside, skill lab	Skill Assessment		ComMed	
9.4.1	Take a focused dietary history based on recall method from the caregiver.			Y	Bedside, skill lab	OSCE			
9.4.2	Document the dietary history and calculate calorie and protein content.			Y	Bedside, skill lab	OSCE, VIVA VOCE			
9.4.3	Present the dietary history.			Y	Bedside, skill lab	LONG CASE, VIVA VOCE			
PE9.5	Calculate the age appropriate calorie requirement in health and disease and identify gaps			Y	Bedside clinic, SGD	OSCE, CLINICAL CASE		ComMed	

9.5.1	Calculate the recommended calorie and protein requirement for children of all age groups.			Y	Bedside clinic, SGD	LONG CASE, VIVA VOCE, OSCE			
9.5.2	Calculate the calorie and protein content of 24-hour dietary intake by a child.			Y	Bedside clinic, SGD	LONG CASE, VIVA VOCE			

9.5.3	Calculate the gap (deficit) between recommended intake of calorie and protein and actual intake.			Y	Bedside clinic, SGD	LONG CASE, VIV AVOCE			
PE9.6	Assess and classify the nutrition status of infants, children and adolescents and recognize deviations			Y	Bedside clinic, SGD	Skill Assessment		ComMed	
9.6.1	Assess nutritional status from anthropometric parameters for children of all age groups.			Y	Bedside clinic, SGD	OSCE, Bedside			
9.6.2	Interpret the anthropometric measurement data by plotting in appropriate WHO growth charts for children of all age groups and gender.			Y	Bedside clinic, SGD	OSCE			
9.6.3	Classify the type and degree of undernutrition using the WHO charts.			Y	Bedside clinic, SGD	OSCE			
9.6.4	Identify overnutrition (overweight and obesity) by using WHO charts.			Y	Bedside clinic, SGD	OSCE			
PE9.7	Plan an appropriate diet in health and disease			N	Bedside clinic, SGD	Document in Logbook		ComMed	
9.7.1	Plan a diet for a healthy child of all age groups.			N	Bedside clinic, SGD	Document in Logbook			
9.7.2	Plan an age appropriate diet for child of different age groups with undernutrition/overnutrition.			N	Bedside clinic, SGD	Document in Logbook			
9.7.3	Plan an age appropriate diet for child of different age groups with few common diseases viz. Lactose			N	SGD	Document in Logbook			

	intolerance, Celiac disease, Chronic Kidney disease								
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Topic: Provide nutritional support, assessment and monitoring for common nutritional problems		Number of competencies: (6)			Number of procedures that require certification: (NIL)				
P E10.1	Define and Describe the etiopathogenesis, classify including WHO classification, clinical features, complication and management of severe acute malnourishment (SAM) and moderate acute Malnutrition (MAM)			Y	Lecture, SGD	Written/ Viva voce		Physio, Biochemistry,	
10.1.1	Define malnutrition as per WHO.			Y	Lecture, SGD	Written/ Viva voce			
10.1.2	Describe the aetiology of malnutrition.			Y	Lecture, SGD	Written/ Viva voce			
10.1.3	Discuss the pathophysiology of malnutrition.			Y	Lecture, SGD	Written/ Viva voce			
10.1.4	Classify the malnutrition as per WHO.			Y	Lecture, SGD	Written/ Viva voce			
10.1.5	Describe the criteria for severe acute malnutrition (SAM) and moderate acute malnutrition (MAM) as per WHO.			Y	Lecture, SGD	Written/ Viva voce			
10.1.6	Describe the clinical features of MAM and SAM including marasmus and kwashiorkor.			Y	Lecture, SGD	Written/ Viva voce			
10.1.7	Describe the complications of SAM.			Y	Lecture, SGD	Written/ Viva voce			
10.1.8	Describe the steps of management of SAM involving stabilization and rehabilitation phase.			Y	Lecture, SGD	Written/ Viva voce			
10.1.9	Describe the domiciliary management of moderate acute malnutrition (MAM).			Y	Lecture, SGD	Written/ Viva voce			
P E10.2	Outline the clinical approach to a child with SAM and MAM			Y	Lecture, SGD	Written/ Viva voce		Physio, Biochemistry	

10.2.1	Describe the clinical approach (algorithmic approach including clinical history, examination and investigations) to a child with SAM and MAM.			Y	Lecture, SGD	Written/ Viva voce			
PE10.3	Assessment of a patient with SAM and MAM, diagnosis, classification and planning management including hospital and community-based intervention, rehabilitation and prevention			Y	Bedside, Skills Lab	Skill assessment		Physio, Biochemistry	
10.3.1	Take clinical history including focussed dietary history from the caregiver.			Y	Bedside	OSCE, Long case			
10.3.2	Examine the child including anthropometry and signs of vitamin deficiency.			Y	Bedside	OSCE, Long case			
10.3.3	Diagnose and classify the patient as having SAM or MAM based on clinical history, examination and anthropometry.			Y	Bedside	OSCE, Long case			
10.3.4	Plan the individualised home based management in a child with MAM or uncomplicated SAM.			Y	Bedside	OSCE, Long case			
10.3.5	Plan the hospital based management of complicated SAM in a child.			Y	Bedside	OSCE, Long case			
10.3.6	Plan the hospital based rehabilitation phase management of complicated SAM in a child.			Y	Bedside	OSCE, Long case			
10.3.7	Plan prevention of malnutrition at all levels.			Y	Bedside	OSCE, Long case			
PE10.4	Identify children with undernutrition as per IMNCI criteria and plan referral			Y	DOAP session	Document in Logbook		Com Med	
10.4.1	Identify undernutrition as per IMNCI criteria.			Y	DOAP session	Document in Logbook			

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10.4.2	Describe pre-referral treatment as per IMNCI.			Y	DOAP session	Document in Logbook			
10.4.3	Plan referral for children with undernutrition as per IMNCI guidelines.			Y	DOAP session	Document in Logbook			
P E10.5	Counsel parents of children with SAM and MAM			Y	Bedside clinic, Skills Station	Document in Logbook		AETCOM	
10.5.1	Counsel the parents on rehabilitation of children with SAM and MAM.			Y	Bedside clinic, skill station	OSCE			
10.5.2	Address the queries raised by the parents.			Y	Bedside clinic, skill Station	OSCE			
P E10.6	Enumerate the role of locally prepared therapeutic diets and ready to use therapeutic diets			N	Lecture, SGD	Written/Viva voce			
10.6.1	Enumerate the composition of Ready to use therapeutic foods (RUTF).			N	Lecture, SGD	Written/viva voce			
10.6.2	Enumerate the locally available home food prepared with cereals, pulses, sugar, oil, milk and/or egg etc.			N	Lecture, SGD	Written/viva voce			
10.6.3	Discuss the role of RUTF/locally prepared food to achieve catch up growth in malnourished child.			N	Lecture, SGD	Written/viva voce			
Topic: Obesity in children Number of competencies: (6) Number of procedures that require certification: (01) 									
P E11.1	Describe the common etiology, clinical features and management of obesity in children			Y	Lecture/SGD	Written/Viva voce	NIL	Physio/Biochemistry/Path	

11.1.1	Define Obesity and overweight as per WHO guidelines.			Y	Lecture, SGD	Written/viva voce			
11.1.2	Enumerate common causes of Obesity among children.			Y	Lecture, SGD	Written/viva voce			

	n.								
11.1.3	Describe clinical features of obesity including comorbidities.			Y	Lecture, SGD	Written/viva voce			
11.1.3	Outline principles of management of Obesity in children.			Y	Lecture, SGD	Written/viva voce			
PE11.2	Discuss the risk approach for obesity and Discuss the prevention strategies			Y	Lecture, SGD	Written/Viva voce		Physio, Path	
11.2.1	Enumerate risk factors for Obesity among children.			Y	Lecture, SGD	Written/viva voce			
11.2.2	Describe strategies for prevention of Obesity.			Y	Lecture, SGD	Written/viva voce			
PE11.3	Assessment of a child with obesity with regard to eliciting history including physical activity, charting and dietary recall			Y	Bedside, Standardized patients	Document in Logbook			
11.3.1	Elicit detailed history in a child with obesity including activity charting.			Y	Bedsideskilllab	Logbook			
11.3.2	Obtain detailed dietary history by recall method.			Y	Bedsideclinics, skilllab	Logbook			
PE11.4	Examination including calculation of BMI, measurement of waist:hip ratio, Identify external markers like acanthosis, striae, pseudogynecomastia etc			Y	Bedside, Standardized patients, Videos	Skills Station			

11.4.1	Perform anthropometry in an obese child including calculation of BMI and Waist Hip Ratio.			Y	Bedside /Multimedia based tutorial	OSCE			
11.4.2	Identify physical markers of obesity like acanthosis, striae, pseudogynecomastia.			Y	Videos/patients	OSCE			
PE 11.5	Calculate BMI, document in BMI chart and interpret			Y	Bedside,SGD	Document in Logbook	3		

11.5.1	Calculate and Chart BMI accurately.			Y	Clinical postings	Record Logbook	3		
11.5.2	Interpret BMI for a given patient.			Y	Bedside clinic	OSCE	3		
PE 11.6	Discuss criteria for referral			Y	Lecture,SGD	Written/Viva voce			
11.6.2	Enumerate criteria for referral in an obese child.			Y	Lecture/SGD	Written/viva voce			

Topic: Micronutrients in Health and disease- 1 (Vitamins A, D, E, K, B Complex and C)	Number of competencies: (21)	Number of procedures that require certification: (NIL)
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PE 12.1	Discuss the RDA, dietary sources of Vitamin A and their role in health and disease			Y	Lecture,SGD	Written/Viva voce		Biochemistry	
12.1.1	Recall the RDA and dietary sources of vitamin A for children of different ages.			Y	Lecture,SGD	Written/viva voce			
12.1.2	Describe the physiology and role of vitamin A in health and disease.			Y	Lecture,SGD	Written/viva voce			
PE 12.2	Describe the causes, clinical features, diagnosis and management of Deficiency/excess of Vitamin A			Y	Lecture,SGD	Written/Viva voce		Biochemistry	
12.2.1	Enumerate the causes of Vitamin A deficiency/excess in children.			Y	Lecture,SGD	Written/viva voce			

12.2.2	Describe the clinical features of Vitamin A deficiency/excess in children.			Y	Lecture, SGD	Written/viva voce			
12.2.3	Describe the diagnosis and management of Vitamin A deficiency/excess in children.			Y	Lecture, SGD	Written/viva voce			
PE 12.3	Identify the clinical features of dietary deficiency/excess of Vitamin A			Y	Bedside, SGD	Document in Logbook		Biochemistry	
12.3.1	Identify the clinical features of Vitamin A deficiency/excess in children.			Y	SGD/clinical photographs/bedside teaching	OSCE/case presentation		Ophthalmology	

PE 12.4	Diagnose patients with Vitamin A deficiency (VAD), classify and plan management			N	Bedside, Skill Station	Document in Logbook		Biochemistry	
12.4.1	Diagnose patients with VAD.			N	Bedside	Document in Logbook		Ophthalmology	
12.4.2	Classify the patient with VAD as per WHO.			N	Skill Station, Bedside	Skill station, Document in Logbook		Ophthalmology	
12.4.3	Plan management of a child with VAD.			N	Skill Station, Bedside	Skill station, Document in Logbook			
PE 12.5	Discuss the Vitamin A prophylaxis program and their recommendations			Y	Lecture, SGD	Written/Viva voce		Biochemistry	
12.5.1	Enumerate the components of the National Vitamin A prophylaxis program.			Y	Lecture, SGD	Written/viva voce		ComMed	

PE 12.6	Discuss the RDA, dietary sources of Vitamin D and its role in health and disease			Y	Lecture, SGD	Written/Viva voce		Biochemistry	
12.6.1	Describe the RDA and dietary sources of vitamin D for the pediatric age groups.			Y	Lecture, SGD	Written/viva voce			
12.6.2	Describe the role of vitamin D in health and disease.				Lecture, SGD	Written/viva voce			
PE 12.7 Rickets	Describe the causes, clinical features, diagnosis and management of vitamin D deficiency (VDD)/ excess (Rickets & Hypervitaminosis D)			Y	Lecture, SGD	Written / viva voce		Biochemistry, Physio, Path	
12.7.1	List the causes of Rickets/Hypervitaminosis D in children.			Y	Lecture, SGD	Written/viva voce			
12.7.2	Describe the clinical features and describe the underlying pathophysiology of Rickets/Hypervitaminosis			Y	Lecture, SGD	Written/viva voce			

	sD.								
12.7.3	Describe the diagnosis and management of Rickets /Hypervitaminosis D.			Y	Lecture, SGD	Written/viva voce			
PE 12.8	Identify the clinical features of dietary deficiency of Vitamin D			Y	Bedside, Skills lab	Document in Logbook		Biochemistry, Physio, Path	
12.8.1	Identify the clinical features of Rickets (VDD).			Y	Clinical case or photographs/bedside teaching	OSCE/clinical case			
PE 12.9	Assess patients with Vitamin D deficiency, diagnose, classify and plan management			Y	Bedside, skills lab	Document in Logbook		Biochemistry, Radiology	

12.9.1	Diagnose patients with Rickets.			Y	Bedside	Document in Logbook/OSCE			
12.9.2	Classify the patient with Rickets.			Y	Skill Station, Bedside	Skill station, Document in Logbook			
12.9.3	Plan management and follow-up of patient with Rickets.			Y	Skill station	Logbook			
12.9.4	Identify non-responses to VDD management and identify need for referral.			Y	Skill station	Logbook			
PE 12.10	Discuss the role of screening for Vitamin D deficiency			Y	Lecture, SGD	Written/viva voce			
12.10.1	List the sociodemographic factors associated with vitamin D deficiency.			Y	Lecture, SGD	Written/viva voce			

12.10.2	Describe the prevalence and patterns of VD in the region/country.			Y	Lecture, SGD	Written/viva voce			
12.10.3	Discuss the role of screening for VDD in different groups (high-risk/population).			Y	Lecture/SGD	Written/viva voce			
PE 12.11	Discuss the RDA, dietary sources of Vitamin E and its role in health and disease			N	Lecture, SGD	Written/Viva voce		Biochemistry	
12.11.1	Describe the RDA and dietary sources of vitamin E for the pediatric age.			N	Lecture, SGD	Written/viva voce		Biochemistry	-
12.11.2	Describe the role of vitamin E in health and disease.			N	Lecture, SGD	Written/viva voce		Biochemistry	
PE 12.12	Describe the causes, clinical features, diagnosis and management of deficiency of Vitamin E			N	Lecture, SGD	Written/Viva voce		Biochemistry	

12.12.1	List the causes of deficiency of Vitamin E in children.			N	Lecture,SGD	Written/viva voce		Biochemistry	
12.12.2	Describe the clinical features of deficiency of Vitamin E.			N	Lecture,SGD	Written/viva voce		Biochemistry	
12.12.3	Describe the diagnosis and management of deficiency of Vitamin E.			N	Lecture,SGD	Written/viva voce		-	
PE 12.13	Discuss the RDA, dietary sources of Vitamin K and their role in health and disease			N	Lecture,SGD	Written/Viva voce		Biochemistry, Physio, Path	
12.13.1	Describe the RDA and dietary sources of vitamin K for the pediatric age.			N	Lecture,SGD	Written/viva voce		Biochemistry	-
12.13.2	Describe the role of vitamin K in health and disease.			N	Lecture,SGD	Written/viva voce		Biochemistry	
PE 12.14	Describe the causes, clinical features, diagnosis management & prevention of deficiency of Vitamin K			N	Lecture group, Small Discussion	Written/Viva voce		Biochemistry, Physio, Path	
12.14.1	List the causes of deficiency of Vitamin K in children of different ages.			N	Lecture/SGD	Written/viva voce		Biochemistry	

12.14.2	List the clinical features of deficiency of Vitamin K.			N	Lecture/SGD	Written/viva voce		Biochemistry	
12.14.3	Describe the diagnosis and management of deficiency of Vitamin K.			N	Lecture/SGD	Written/viva voce	-	-	
PE 12.15	Discuss the RDA, dietary sources of Vitamin B and its role in health and disease				Lecture,SGD	Written/Viva voce	-	Biochemistry	
12.15.1	Describe the RDA and dietary sources of various vitamins B for the pediatric age group.			Y	Lecture/SGD	Written/viva voce	-	Biochemistry	-
12.15.2	Describe the role of vitamin B in health and disease.			Y	Lecture/SGD	Written/viva voce	-	Biochemistry	

PE 12.16	Describe the causes, clinical features, diagnosis and management of deficiency of B complex vitamins			Y	Lecture,SGD	Viva/SA Q/MCQ	-	Biochemistry, Com Med, Derm, Hematology	
12.16.1	List the causes of deficiency of B complex vitamins in children			Y	Lecture/SGD	Written/viva voce	-	Biochemistry, Com Med	
12.16.2	Describe the clinical features of deficiency of B complex vitamins			Y	Lecture/SGD	Written/viva voce	-	Biochemistry, Derm, Hematology	
12.16.3	Describe the diagnosis and management of deficiency of B complex vitamins			Y	Lecture/SGD	Written/viva voce	-	Hematology	
PE 12.17	Identify the clinical features of Vitamin B complex Deficiency			Y	Bedside, Skillslab	Document in Logbook	-	Derm, Hematology	
12.17.1	Identify the clinical features of deficiency of B complex vitamins			Y	Clinical case /slides/bedside teaching	OSCE	-	Derm, Hematology	
PE 12.18	Diagnose patients with vitamin B complex deficiency and plan management			Y	Bedside, Skillslab	Document in Logbook	-	Derm Hematology	
12.18.1	Diagnose patients with vitamin B complex deficiency			Y	Bedside, Clinical phot	Document in Logbook	-	Derm, Hematology	

					ographs	k			
12.18.2	Plan management for a child with vitamin B complex deficiency			Y	Skill Station, Bedside, Case based learning	Skill station, Document in Logbook	-		
PE 12.19	Discuss the RDA, dietary sources of vitamin C and their role in health and disease			N	Lecture,SGD	Written/Viva voce		Biochemistry	

12.19.1	List the RDA and dietary sources of vitamin C for the pediatric age			N	Lecture, SGD	Written/viva voce	-	Biochemistry	-
12.19.2	Describe the role of vitamin C in health and disease			N	Lecture, SGD	Written/viva voce	-	Biochemistry	
PE 12.20	Describe the causes, clinical features, diagnosis and management of deficiency of vitamin C (scurvy)			N	Lecture, SGD	Written/Viva voce		Biochemistry	
12.20.1	List the causes of deficiency of Vitamin C in children			N	Lecture, SGD	Written/viva voce	-	Biochemistry	
12.20.2	Describe the clinical features of deficiency of vitamin C			N	Lecture, SGD	Written/viva voce	-	Biochemistry	
12.20.3	Describe the diagnosis and management of deficiency of vitamin C			N	Lecture, SGD	Written/viva voce	-	-	
PE 12.21	Identify the clinical features of vitamin C deficiency			N	Bedside, Skill lab	Document in Logbook		-	
12.21.1	Identify the clinical features of deficiency of vitamin C.			N	Clinical case /slides/bedside teaching	Document in Logbook OSCE	-	-	
12.21.2	Differentiate the clinical features of deficiency of vitamin C (scurvy) from those due to VDD (rickets).			N	Clinical case or photograph/ bedside teaching	Document in Logbook, OSCE/ case	-	-	

Topic: Micronutrients in Health and disease-2: Iron, Iodine, Calcium, Magnesium **Number of competencies: (14) Number of procedures that require certification: (NIL)**

PE 13.1	Discuss the RDA, dietary sources of Iron and their role in health and disease			Y	Lecture, SGD	Written/Viva voce		Path, Biochemistry	
13.1.1	Recall the RDA of Iron in children of all age groups.			Y	Lecture, SGD	Written/viva voce			

13.1.2	Enumerate the dietary sources of Iron and Discuss their role in health and disease.			Y	Lecture, SGD	Written/viva voce			
PE 13.2	Describe the causes, diagnosis and management of iron deficiency			Y	Lecture, SGD	Written/viva voce		Path, Biochemistry	
13.2.1	Enumerate the causes of iron deficiency.			Y	Lecture, SGD	Written/viva voce			
13.2.2	Describe the diagnosis of iron deficiency.			Y	Lecture, SGD	Written/viva voce			
13.2.3	Describe management of iron deficiency.			Y	Lecture, SGD	Written/viva voce			
PE 13.3	Identify the clinical features of dietary deficiency of Iron and make a diagnosis			Y	Bedside/skill lab	Document in Logbook		Path, Biochemistry	
13.3.1	Identify the clinical features of dietary iron deficiency.			Y	Bedside/skill lab	Document in Logbook / OSCE / Clinical case			
13.3.2	Make a clinical diagnosis of dietary deficiency of Iron after appropriate history and examination.			Y	Bedside/skill lab	Document in Logbook / OSCE / Clinical case			
PE 13.4	Interpret the hemogram and Iron Panel			Y	Bedside clinic/Small group discussion	Skill Assessment		Path, Biochemistry	
13.4.1	Identify the features of iron deficiency anemia in a blood film.			Y	Bedside clinic/Small group discussion	Skill Assessment / OSCE			
13.4.2	Identify abnormal hematological indices on a hemogram.			Y	Bedside clinic/Small group discussion	Skill Assessment / OSCE			

13.4.3	Interprethemogram.			Y	Bedsideclinic/S mallgroupdiscu ssion	SkillAsses sment/ OSCE			
13.4.4	Interpretabnormalvaluesoftheironpanel.			Y	Bedsideclinic/S mallgroupdiscu ssion	SkillAsses sment/ OSCE			
PE 13.5	ProposeamanagementplanforIRONdeficiency Anemia			Y	Bedside/skilllab	Skill assessment		Path, Pharm	
13.5.1	MakeamanagementplanforIrondeficiencyan emiainchildrenofdifferent ages.			Y	Bedside/skilllab	Skillassess ment/OSCE			
PE 13.6	DiscusstheNationalanemiacontrolprograman dits recommendations			Y	Lecture,SGD	Written/viv a voce		Pharm, ComMed	
13.6.1	Describe the components of National anemia controlprogramand itsrecommendations.			Y	Lecture,SGD	Written/v ivavoce			
PE 13.7	DiscusstheRDA,dietarysourcesofIodineandits role inHealthanddisease			Y	Lecture,SGD	Written/viv a voce		Biochemist ry	
13.7.1	RecalltheRDAofIodinein children.			Y	Lecture,SGD	Written/viva voce			
13.7.2	EnumeratethedietarysourcesofIodineandtheirrol einHealthand disease.			Y	Lecture,SGD	Written/v ivavoce			
PE 13.8	Describethecauses,diagnosisandmanagement of deficiencyofIodine			Y	Lecture,SGD	Written/viv a voce		Biochemist ry	
13.8.1	EnumeratethecausesofIodinedeficiency.			Y	Lecture,SGD	Written/viva voce			
13.8.2	DiscussthedagnosisofIodinedeficiency.			Y	Lecture,SGD	Written/v ivavoce			

13.8.3	Describe the management of iodine deficiency.			Y	Lecture, SGD	Written/voice		
PE 13.9	Identify the clinical features of iodine deficiency disorders			N	Bedside clinic	Clinical assessment		Biochemistry
13.9.1	Identify the clinical features of iodine deficiency disorders.			N	Bedside clinic	Clinical assessment		
PE 13.10	Discuss the National Goiter Control program and its recommendations			Y	Lecture/ Small group discussion	Written/voice		Biochemistry, ComMed
13.10.1	Discuss the National Goiter Control program and the Recommendations.			Y	Lecture/ Small group discussion	Written/voice		
PE 13.11	Discuss the RDA, dietary sources of Calcium and its role in health and disease			Y	Lecture/ Small group discussion	Written/voice		Biochemistry
13.11.1	Recall the RDA of Calcium in children.			Y	Lecture/ Small group discussion	Written/voice		
13.11.2	Enumerate the dietary sources of calcium.			Y	Lecture/ Small group discussion	Written/voice		
13.11.3	Explain the role of calcium in health and disease.			Y	Lecture/ Small group discussion	Written/voice		
PE 13.12	Describe the causes, clinical features, diagnosis and management of Calcium Deficiency			Y	Lecture/ Small group discussion	Written/voice		Biochemistry
13.12.1	Enumerate the causes of Calcium Deficiency.			Y	Lecture/ Small group discussion	Written/voice		
13.12.2	Describe the clinical features of Calcium Deficiency.			Y	Lecture/ Small group discussion	Written/voice		
13.12.3	Discuss the diagnosis of Calcium Deficiency.			Y	Lecture/ Small group discussion	Written/voice		
13.12.4	Discuss the management of Calcium Deficiency.			Y	Lecture/ Small group discussion	Written/voice		

PE 13.13	Discuss the RDA, dietary sources of Magnesium and their role in health and disease			N	Lecture/ Small group discussion	Written/ viva voce		Biochemistry	
13.13.1	Recall the RDA of Magnesium in children.			N	Lecture/ Small group discussion	Written/ viva voce			
13.13.2	List the dietary sources of Magnesium and their role in health and disease.			N	Lecture/ Small group discussion	Written/ viva voce			
PE 13.14	Describe the causes, clinical features, diagnosis and management of Magnesium Deficiency			N	Lecture/ Small group discussion	Written/ viva voce		Biochemistry	
13.14.1	Enumerate the causes of Magnesium Deficiency.			N	Lecture/ Small group discussion	Written/ viva voce			
13.14.2	Describe the clinical features of Magnesium Deficiency.			N	Lecture/ Small group discussion	Written/ viva voce			
13.14.3	Discuss the diagnosis of Magnesium Deficiency.			N	Lecture/ Small group discussion	Written/ viva voce			
13.14.4	Discuss the management of Magnesium Deficiency.			N	Lecture/ Small group discussion	Written/ viva voce			
Topic: Toxic elements and free radicals and oxygen toxicity Number of procedures that require certification: (NI competencies: (5))									
PE 14.1	Discuss the risk factors, clinical features, diagnosis and management of Lead Poisoning				Lecture/ Small Group discussion	Written/ viva voce		Pharm	
14.1.1	Enumerate the risk factors for lead poisoning in children.			N	Lecture/ Small group discussion	Written/ viva voce			
14.1.2	Describe the clinical features of lead poisoning.			N	Lecture/ Small group discussion	Written/ viva voce			

14.1.3	Discuss the diagnosis of lead poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.1.4	Describe the management of a child with lead poisoning including prevention.			N	Lecture/Small group discussion	Written/viva voce			
PE 14.2	Discuss the risk factors, clinical features, diagnosis and management of Kerosene aspiration			N	Lecture/Small group discussion	Written/viva voce		ENT	
14.2.1	Enumerate the risk factors for kerosene aspiration.			N	Lecture/Small group discussion	Written/viva voce			
14.2.2	Describe the clinical features of kerosene aspiration.			N	Lecture/Small group discussion	Written/viva voce			
14.2.3	Discuss the diagnosis of kerosene aspiration.			N	Lecture/Small group discussion	Written/viva voce			
14.2.4	Describe the management of a child with kerosene aspiration.			N	Lecture/Small group discussion	Written/viva voce			
PE 14.3	Discuss the risk factors, clinical features, diagnosis and management of Organophosphorus poisoning			N	Lecture/Small group discussion	Written/viva voce		Pharm	
14.3.1	Enumerate the risk factors for organophosphorus poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.3.2	Describe the clinical features of organophosphorus poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.3.4	Discuss the diagnosis of organophosphorus poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.3.5	Describe the management of a child with organophosphorus poisoning.			N	Lecture/Small group discussion	Written/viva voce			
PE 14.4	Discuss the risk factors, clinical features, diagnosis and management of paracetamol poisoning			N	Lecture/Small group discussion	Written/viva voce		Pharm	

14.4.1	Enumerate the risk factors for paracetamol poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.4.2	Describe the clinical features of paracetamol poisoning.			N	Lecture/Small group discussion	Written/viva voce			

14.4.3	Discuss the diagnosis of paracetamol poisoning.			N	Lecture/Small group discussion	Written/viva voce			
14.4.4	Discuss the management of a child with paracetamol poisoning including prevention.			N	Lecture/Small group discussion	Written/viva voce			
PE 14.5	Discuss the risk factors, clinical features, diagnosis and management of Oxygen toxicity			N	Lecture/Small group discussion	Written/viva voce			
14.5.1	Enumerate the risk factors for oxygen toxicity.			N	Lecture/Small group discussion	Written/viva voce			
14.5.2	Describe the clinical features of oxygen toxicity.			N	Lecture/Small group discussion	Written/viva voce			
14.5.3	Discuss the diagnosis of oxygen toxicity.			N	Lecture/Small group discussion	Written/viva voce			
14.5.4	Discuss the management of a child with oxygen toxicity.			N	Lecture/Small group discussion	Written/viva voce			

Topic: Fluid and electrolyte balance

Number of competencies: (7)

Number of procedures that require certification: (NIL)

PE 15.1	Discuss the fluid and electrolyte requirement in health and disease			Y	Lecture/Small group discussion	Written/viva voce			
15.1.1	State the fluid requirement of a healthy neonate.			Y	Lecture/Small group discussion	Written/viva voce			
15.1.2	Describe the fluid and electrolyte requirements of healthy children of different ages.			Y	Lecture/Small group discussion	Written/viva voce			

15.1.3	Describe the fluid requirements in common diseases of children.			Y	Lecture/Small group discussion				
PE 15.2	Discuss the clinical features and complications of fluid and electrolyte imbalance and outline the management				Lecture/Small group discussion				

15.2.1	Define hyponatremia and hypernatremia.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.2	Define hypokalemia and hyperkalemia.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.3	Describe the clinical features of a child who has dehydration or fluid overload.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.4	Outline the management of a child who has dehydration or fluid overload.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.5	Enumerate the symptoms and signs of hyponatremia and Hypernatremia.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.6	Enumerate the symptoms and signs of hypokalemia and hyperkalemia.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.7	Outline the management of a child with hyponatremia /hypernatremia.			Y	Lecture/Small group discussion	Written/viva voce			
15.2.8	Outline the management of a child with hypokalemia or Hyperkalemia.			Y	Lecture/Small group discussion	Written/viva voce			
PE 15.3	Calculate the fluid and electrolyte requirement in health			Y	Bedside, SGD	Skill assessment			
15.3.1	Calculate fluid requirement in healthy children of different ages.			Y	Bedside, SGD	Skill assessment			

15.3.2	Calculate electrolyte requirement in healthy children of different ages.			Y	Bedside,SGD	Skill assessment			
PE 15.4	Interpret electrolyte report			Y	Bedside/SGD	Skill assessment			
15.4.1	Interpret reports of dyselectrolytemia.			Y	Bedside/SGD	Skill assessment			
PE 15.5	Calculate fluid and electrolyte imbalance			Y	Bedside/SGD	Skill assessment			
15.5.1	Calculate fluid requirement of the child to correct fluid imbalance.			Y	Bedside/SGD	Skill assessment			
15.5.2	Calculate electrolyte correction for a given scenario.			Y	Bedside/SGD	Skill assessment			

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PE 15.6	Demonstrate the steps of inserting an IV cannula in a model			Y	Skill lab	Skill assessment			
15.6.1	Demonstrate inserting an intravenous cannula on a model in a skill laboratory.			Y	Skill lab	Mannequin			
PE 15.7	Demonstrate the steps of inserting an interosseous line in a mannequin			Y	Skill lab	Skill assessment			
15.7.1	Demonstrate inserting an intraosseous cannula in a mannequin.			Y	Skill lab	Mannequin			

Topic: Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Guideline		Number of competencies: (3)			Number of procedures that require certification: (NIL)				
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PE 16.1	Explain the components of Integrated Management of Neonatal and Childhood Illnesses (IMNCI) guidelines and method of Risk stratification			Y	Lecture, SGD	Written/voice			
16.1.1	State the components of IMNCI approach.			Y	Lecture/SGD IMNCI videos	Written/voice			
16.1.2	Explain the risk stratification as per IMNCI.			Y	Lecture/SGD	Written/voice			
PE 16.2	Assess children < 2 months using IMNCI guidelines			Y	DOAP	Document in Logbook			
16.2.1	Demonstrate assessment of the young infant < 2 months age as per IMNCI guidelines.			Y	DOAP, Video	Document in Logbook/ bedside session			
16.2.2	Classify the young infants < 2 months age as per the IMNCI classification.			Y	DOAP, Video	Document in Logbook/ k/			

						bedside			
16.2.3	Identify the treatment in young infants < 2 months as per IMNCI.			Y	DOA P,SG D	Document in Logbook			
16.2.4	Counsel parents as per IMNCI guidelines.			Y	DOAP, SGD, roleplay, Video	Document in Logbook/ k/			
PE16.3	Assess children > 2 months to 5 years using IMNCI guidelines and stratify risk			Y	DOAP	Document in Logbook			
16.3.1	Demonstrate assessment of the child > 2 months to 5 years as per IMNCI format.			Y	DOAP, Video	Document in Logbook, OSCE			
16.3.2	Classify the children > 2 months to 5 years as per the IMNCI classification.			Y	DOAP, Video	Document in Logbook, OSCE			
16.3.3	Identify the treatment in children > 2 months to 5 years as per IMNCI guidelines.			Y	DOA P,SG D	Document in Logbook			
16.3.4	Counsel parents as per IMNCI guidelines.			Y	DOAP, SGD, roleplay, Video	Document in Logbook, OSCE			
Topic: The National Health programs, NHM									
				Number of competencies: (02)			Number of procedures that require certification: (NIL)		
PE17.1	State the vision and outline the goals, strategies and plan of action of NHM and other important national programs pertaining to maternal and child health including RMNCHA+, RBSK, RKSK, JSSK, mission Indradhanush and ICDS			Y	Lecturer/SGD	Written/vivo		ComMed	

17.1.1	List the national health programs pertaining to maternal and child health.			Y	Lecture/SGD	Written/viva voce			
17.1.2	Outline the vision, goals, strategies and plan of action of NHM.			Y	Lecture/SGD	Written/viva voce			
17.1.3	Outline the vision, goals, strategies and plan of action of other important national programs for maternal and child health – RMNCHA+, RBSK, RKSK, JSSK, mission Indradhanush and ICDS.			Y	Lecture/SGD	Written/viva voce			
PE17.2	Analyze the outcomes and appraise the monitoring and evaluation of NHM			Y	Debate	Written/viva voce		ComMed	
17.2.1	Critically analyze the impact of NHM and other national health programs on maternal and child health.			Y	Debate, SGD	Written/viva voce			
17.2.2	Appraise the monitoring and evaluation of NHM and other health programs.			Y	Debate, SGD	Written/viva voce			
Topic: The National Health Programs: RCH Number of competencies: (8) Number of procedures that require certification: (NIL) 									
PE18.1	List and explain the components, plan, outcome of Reproductive Child Health (RCH) program and appraise its monitoring and evaluation			Y	Lecture/SGD	Written/viva voce		ComMed	OBG
18.1.1	State the components, strategy and targeted outcome of RCH program.			Y	Lecture/SGD	Written/viva voce			
18.1.2	List the prerequisites and role of accredited social health activist (ASHA).			Y	Lecture/SGD	Written/viva voce			
18.1.3	Analyze the monitoring and evaluation of RCH program.			Y	Lecture/SGD	Written/viva voce			

PE 18.2	Explain preventive interventions for child survival and safe motherhood			Y	Lecture/ SGD	Written/viva voce		ComMed	OBG
18.2.1	List the preventive interventions for child survival and safe motherhood.			Y	Lecture/SGD	Written/viva voce			
18.2.2	Explain the preventive interventions for child survival and safe motherhood.			Y	Lecture/SGD	Written/viva voce			
PE 18.3	Conduct antenatal examination of women independently and apply a risk approach in antenatal care			Y	Bedside	Skill station		ComMed	OBG
18.3.1	Conduct antenatal examination of women independently.			Y	Bedside, Video	Skill station			
18.3.2	Apply a risk approach in antenatal care.			Y	Bedside, Video	Skill station			
PE 18.4	Provide intra-natal care and conduct a normal delivery in a simulated environment			Y	DOAP session, Skills lab	Document in Logbook		ComMed	OBG
18.4.1	Demonstrate the steps of intra-natal monitoring in a simulated environment.			Y	DOAP session, Skills Lab, Video	Document in Logbook			
18.4.2	Demonstrate the use of a partogram.			Y	DOAP session, Skills Lab, Video	Document in Logbook			
18.4.3	Conduct a normal delivery in a simulated environment.			Y	DOAP session, Skills lab, Video	Document in Logbook			
PE 18.5	Provide intra-natal care and observe the conduct of a normal delivery			Y	DOAP session	Document in Logbook			OBG

18.5.1	Demonstrate the preparation of various components of intranatal care.			Y	DOAP session	Document in Logbook			
18.5.2	Observe and assist in conduct of a normal delivery.			Y	DOAP session	Document in Logbook			
PE 18.6	Perform Postnatal assessment of newborn and mother, provide advice on breastfeeding, weaning and family planning			Y	Bedside, Skill Lab	Skill Assessment		ComMed	OBG

18.6.1	Perform postnatal assessment of newborn.			Y	Bedside, Skill Lab	Skill Assessment			
18.6.2	Perform postnatal assessment of mother.			Y	Bedside, Skill Lab	Skill Assessment			
18.6.3	Give advice to the mother on initiation and maintenance of exclusive breastfeeding, common problems seen during breastfeeding, weaning and family planning.			Y	Bedside, Skill Lab	Skill Assessment			
PE 18.7	Educate and counsel caregivers of children			Y	roleplay	OSCE/Skill Assessment		AETCOM	
18.7.1	Educate and counsel caregivers of children on newborn care including providing warmth, feeding, and prevention of infection, immunization and danger signs.			Y	Role play Video	Skill Assessment OSCE			
PE 18.8	Observe the implementation of the program by visiting the Rural Health Center			Y	Bedside, Skill Lab	Document in Logbook		Com Med	OBG
18.8.1	Make observations on the implementation of the program by visiting the Rural Health Center.			Y	Rural health center visit	Document in Logbook			
Topic: National Programs, RCH-Universal Immunization program									
				Number of competencies: (16)		Number of procedures that require certification: (01)			
PE 19.1	Explain the components of the Universal Immunization Program (UIP) and the National Immunization Program (NIP)			Y	Lecture /SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.1.1	Explain the components of UIP and NIP.			Y	Lecture/ SGD	Written/viva voce			
19.1.2	List the vaccines covered under UIP and NIP.			Y	Lecture/SGD	Written/viva voce			

PE 19.2	Explain the epidemiology of vaccine preventable diseases (VPDs)			Y	Lecture/SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.2.1	Describe the epidemiology of individual VPDs.			Y	Lecture/SGD	Written/viva voce			
PE 19.3	Vaccine description with regard to classification of vaccines, strain used, dose, route, schedule, risks,			Y	Lecture/SGD	Written/viva voce		Com Med, Micro,	

	benefits and side effects, indications and contraindications							Biochemist	
19.3.1	Classify vaccines according to type of vaccine.			Y	Lecture/SGD	Written/viva voce			
19.3.2	Describe the composition of the NIP vaccines including the strain used.			Y	Lecture/SGD	Written/viva voce			
19.3.3	State the dose, route and schedule of all vaccines under NIP.			Y	Lecture/SGD	Written/viva voce			
19.3.4	Recall the risks, benefits, side effects, indications and contraindications of vaccines under NIP.			Y	Lecture/SGD	Written/viva voce			
PE 19.4	Define cold chain and discuss the methods of safe storage and handling of vaccines			Y	Lecture/SGD	Written/viva voce		Com Med, Micro, Biochemistry	
19.4.1	Define cold chain and discuss its importance for vaccines.			Y	Lecture/SGD	Written/viva voce			
19.4.2	List the various cold chain equipment.			Y	Lecture/SGD	Written/viva voce			
19.4.3	Describe the appropriate storage of vaccines in domestic refrigerator, icelined refrigerator (ILR) and vaccine carriers.			Y	Lecture/SGD	Written/viva voce			
19.4.4	Enumerate the precautions for maintaining vaccines at appropriate temperature including the use of vaccine vial monitor (VVM).			Y	Lecture/SGD	Written/viva voce			
19.4.5	Explain the method of cold chain maintenance during a vaccine session.			Y	Lecture/SGD	Written/viva voce			

PE 19.5	Discuss immunization in special situations – HIV positive children, immunodeficiency, pre-term, organ transplants, those who received blood and blood products, splenectomised children, adolescents, and travelers			Y	Lecture/ SGD	Written/ vi vavoce		Com Med, Micro , Biochemistry	
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19.5.1	Explain immunization in special situations – HIV positive children, immunodeficiency, preterm, organ transplants, those who received blood and blood products, splenectomised children, adolescents, travelers.			Y	Lecture/SGD	Written/ v ivavoce			
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PE 19.6	Assess patient for fitness for immunization and prescribe an age appropriate immunization schedule			Y	Out Patient clinics, Skillslab	Skill Assessment	5		
19.6.1	Assess patient fitness for immunization.			Y	Out Patient clinics, Skillslab	Skill Assessment OSCE	5		
19.6.2	Make an age appropriate plan for immunization including catchup doses.			Y	Out Patient clinics, Skillslab	Skill Assessment OSCE	5		
19.6.3	Prescribe the correct vaccine, dose, route of administration for the child.			Y	Out Patient clinics, Skillslab	Skill Assessment	5		
PE 19.7	Educate and counsel a patient for immunization			Y	DOAP session	Document in Logbook			
19.7.1	Educate the parents about the importance of vaccines.			Y	DOAP session, Role play	Document in Logbook			
19.7.2	Counsel parents for age appropriate vaccines, the schedule and timing and the expected side effects.			Y	DOAP session, Role play	Document in Logbook, OSCE			
PE 19.8	Demonstrate willingness to participate in the national and subnational immunization days			Y	Lecture/ small group discussion	Document in Logbook		ComMed	
19.8.1	Participate in the national (NIDs) and subnational immunization days (SNIDs).			Y	Small group, NIDs and SNIDs	Document in Logbook			
PE 19.9	Describe the components of safe vaccine practice - Patient education/ counselling; adverse events following immunization, safe injection practices, documentation and medico-legal implications			Y	Lecture/ small group discussion/ Immunization on clinic	Written/ viva voce		AETCOM	

19.9.1	Describe the components of safe vaccine practices patient education/counseling.			Y	Lecture/SGD	Written/viva voce		AETCOM	
19.9.2	Describe adverse events following immunization and standard precautions to prevent them.			Y	Lecture/SGD	Written/viva voce			
19.9.3	List safe injection practices and documentation during immunization.			Y	Lecture/SGD	Written/viva voce			
19.9.4	Demonstrate necessary documentation and medico-legal implications of immunization.			Y	Lecture/SGD	Written/viva voce			

PE 19.10	Observe the handling and storing of vaccines			Y	DOAP session	Written/viva voce			
19.10.1	Observe and note the correct handling and storing of vaccines.			Y	DOAP session, Videos	Viva voce/OSCE			
PE 19.11	Document Immunization in an immunization record			Y	Out Patient clinics, Skillslab	Skill assessment			
19.11.1	Document Immunization in an immunization record.			Y	Out Patient clinics, Skillslab	Skill assessment OSCE			
PE 19.12	Observe the administration of UIP vaccines			Y	DOAP session	Document in Logbook		ComMed	
19.12.1	Observe and document the administration of vaccines.			Y	DOAP session	Document in Logbook			
PE 19.13	Demonstrate the correct administration of different vaccines in a mannequin			Y	DOAP session	Document in Logbook		ComMed	
19.13.1	Prepare vaccines by maintaining hand hygiene and skin sterilization.			Y	DOAP session, Skill station	Document in Logbook, OSCE			
19.13.2	Administer a vaccine in the mannequin by correct route (IM, SC, ID) for the correct vaccine.			Y	DOAP session, Skill station	Document in Logbook, OSCE			
PE 19.14	Practice Infection control measures and appropriate handling of the sharps			Y	DOAP session	Document in Logbook		ComMed	
19.14.1	Practice Infection control measures.			Y	DOAP session	Document in Logbook			

19.14.2	Practice appropriate handling of the sharps.			Y	DOAP session	Document in Logbook			
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PE 19.15	Explain the term implied consent in Immunization services			Y	Small group discussion	Written/viva voce			
19.15.1	Explain the term implied consent in Immunization services.			Y	Small group discussion	Written/viva voce			
PE 19.16	Enumerate available newer vaccines and their indications including pentavalent pneumococcal, rotavirus, JE, typhoid IPV & HPV			N	Lecture/small group discussion	Written/viva voce			
19.16.1	Enumerate newer vaccines (pneumococcal, rotavirus, JE, typhoid, IPV, influenza & HPV vaccines).			N	Lecture/SGD	Written/viva voce			

19.16.2	List the indications for new vaccines such as pneumococcal, JE, typhoid, influenza & HPV vaccines			N	Lecture/SGD	Written/vivo voce			
Topic: Care of the Normal Newborn and High Risk Newborn Number of competencies: (20) Number of procedures that require certification: (NIL)									
PE 20.1	Define the common neonatal nomenclatures including the classification and describe the characteristics of a Normal Term Neonate and High Risk Neonates			Y	Lecture/SGD	Written/vivo voce			
20.1.1	Define the Neonatal and Perinatal period.			Y	Lecture/SGD	Written/Vivo voce			
20.1.2	Define live birth and stillbirth.			Y	Lecture/SGD	Written/Vivo voce			
20.1.3	Classify the neonate according to birth weight into different categories.			Y	Lecture/SGD	Written/Vivo voce			
20.1.4	Classify the neonate according to period of gestation.			Y	Lecture/SGD	Written/Vivo voce			
20.1.5	Classify the neonate as per intrauterine growth percentiles.			Y	Lecture/SGD	Written/Vivo voce			
20.1.6	Define Neonatal Mortality Rate (NMR) and Perinatal Mortality Rate.			Y	Lecture, SGD.	Written/Vivo voce			
20.1.7	Describe the characteristics of a normal term neonate.			Y	Lecture, SGD.	Written/Vivo voce			
20.1.8	Describe the characteristics of the high-risk neonate.			Y	Lecture, SGD.	Written/Vivo voce			
PE 20.2	Explain the care of a normal neonate			Y	Lecture, SGD	Written/Vivo voce			
20.2.1	Enumerate the components of Essential Newborn Care			Y	Lecture, SGD	Written/Vivo voce			
20.2.2	Enumerate the steps of care of the normal neonate at birth.			Y	Lecture, SGD.	Written/Vivo voce			

20.2.3	Explain the care of the normal neonate during the postnatal period.			Y	Lecture, SGD.	Written /Vivavoce			
20.2.4	List the criteria for discharge of a normal neonate from the Hospital			Y	Lecture, SGD.	Written/Viva voce			
PE 20.3	Perform Neonatal resuscitation in a manikin			Y	DOAP/SKILLLAB	Logbook			
20.3.1	Perform all the steps of routine care on a manikin.			Y	DOAP/skilllab	Logbook/OSCE			

20.3.2	Demonstrate the initial steps of neonatal resuscitation in a manikin in the correct sequence.			Y	DOAP	Logbook entry/OSCE			
20.3.3	Demonstrate the method of counting the heart rate of the neonate during resuscitation.			Y	DOAP	Skilllab/OSCE			
20.3.4	Demonstrate the method of administering free flow oxygen during resuscitation.			Y	DOAP	Skill station/OSCE			
20.3.5	Check the functions of all parts of the self-inflating bag.			Y	DOAP	Logbook entry/OSCE			
20.3.6	Demonstrate the method of positive pressure ventilation (PPV) in a manikin using appropriate size of bag and mask.			Y	DOAP	Logbook entry/OSCE			
20.3.7	Check the signs of effective positive pressure ventilation.			Y	DOAP	Logbook/OSCE			
20.3.8	Initiate corrective steps in correct sequence for ineffective ventilation in simulated settings.			Y	DOAP	Logbook entry/OSCE			
20.3.9	Demonstrate the method of placement of orogastric tube during prolonged PPV in a manikin.			Y	DOAP	Logbook entry			
20.3.10	Demonstrate the 'thumb technique' and 'two finger technique' of providing chest compression in a manikin.			Y	DOAP	Logbook entry/skill station/OSCE			
20.3.11	Prepare correct dilution of adrenaline injection.			Y	DOAP	Logbook			
20.3.12	Identify the correct size of Laryngoscope and endotracheal tube based on given birth weight/gestation correctly.			Y	DOAP	Logbook entry/OSCE			
20.3.13	Demonstrate the technique of endotracheal intubation in a manikin correctly.			Y	DOAP	Logbook entry			
PE 20.4	Assessment of a normal neonate			Y	Bedside/Skilllab	Skill assessment			

20.4.1	Elicit the relevant general, antenatal, natal and postnatal history of the mother.			Y	Bedside/Skilllab	Skill assessment			
20.4.2	Demonstrate the touch method of assessment of temperature in a newborn.			Y	Bedside/Skilllab	Skill assessment			
20.4.3	Demonstrate the method of recording axillary and rectal temperature in a neonatal manikin.			Y	Bedside/Skilllab	Skill assessment			
20.4.4	Demonstrate the counting of respiratory rate in a neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.5	Demonstrate the eliciting of capillary refill time CRT in a newborn.			Y	Bedside/Skilllab	Skill assessment			

20.4.6	Demonstrate counting the heart rate in a neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.7	Measure weight, length, head circumference and chest circumference in a neonate/manikin accurately.			Y	Bedside/Skilllab	Skill assessment			
20.4.8	Perform a gestational assessment by physical and neurological criteria in a neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.9	Perform a head-to-toe examination of the neonate.			Y	Bedside/Skilllab	Skill assessment			
20.4.10	Elicit common neonatal reflexes like rooting, sucking, grasp, and Moro's reflex correctly.			Y	Bedside/Skilllab	Skill assessment			
20.4.11	Perform a relevant systemic examination of a neonate			Y	Bedside/Skilllab	Skill assessment			
PE 20.5	Counsel/educate mothers on the care of neonates			Y	DOAP	Logbook entry			
20.5.1	Counsel mothers using the GALPAC technique (Greet, Ask, Listen, Praise, Advise, Check for understanding) appropriately.			Y	DOAP	Logbook documentation/OSCE			
20.5.2	Educate mothers regarding care of the eyes, skin and cord stump of the neonate.			Y	DOAP	Logbook documentation			
20.5.3	Educate the mother for prevention of infections.			Y	DOAP	Logbook documentation/OSCE			
20.5.4	Educate mothers regarding bathing routine and cleanliness.			Y	DOAP	Logbook documentation/OSCE			
20.5.5	Counsel the mother regarding her own nutrition and health.			Y	DOAP	Logbook documentation			

PE 20.6	Explain the follow-up care for neonates including Breastfeeding, Temperature maintenance, immunization, importance of growth monitoring and red flags.			Y	DOAP	Logbook documentation			
20.6.1	Counsel the mothers about the importance of exclusive			Y	DOAP	Logbook documentation			
	breastfeeding appropriately.					n			
20.6.2	Educate the mother regarding harmful effects of pre-lacteals and non-human milk.			Y	DOAP	Logbook documentation			
20.6.3	Explain to the mother the importance of frequent breastfeeding including night feeds.			Y	DOAP	Logbook documentation			

20.6.4	Educate the mother regarding common lactation problems			Y	DOAP	Logbook documentation			
20.6.5	Explain to the mother the methods of keeping the baby warm at home.			Y	DOAP	Logbook documentation/OSCE			
20.6.6	Demonstrate the technique of Kangaroo Mother Care in a manikin and simulated mother.			Y	DOAP	Logbook documentation/OSCE			
20.6.7	Explain the schedule of immunization as per the national immunization schedule correctly.			Y	DOAP	Logbook documentation/OSCE			
20.6.8	Counsel the parents on importance of regular visits to the well baby clinic for growth monitoring.			Y	DOAP	Logbook documentation/OSCE			
20.6.9	Explain to the parents the red flag signs for urgent visits to hospital.			Y	DOAP	Logbook documentation/OSCE			
PE 20.7	Discuss the etiology, clinical features and management of Birth asphyxia			Y	Lecture/SGD	Written/Viva voce			
20.7.1	Define birth asphyxia as per NNF (National Neonatology Forum) and WHO, AAP guidelines.			Y	Lecture/SGD	Written/Viva voce			
20.7.2	Enumerate the etiology of birth asphyxia based on antenatal, natal and postnatal factors.			Y	Lecture,SGD	Written/Viva voce			
20.7.3	Describe the clinical features of birth asphyxia.			Y	Lecture,SGD	Written/Viva voce			
20.7.4	List the complications of hypoxic ischaemic encephalopathy.			Y	Lecture,SGD	Written/Viva voce			
20.7.5	Describe the post-resuscitation management of the asphyxiated neonate.			Y	Lecture,SGD	Written/Viva voce			

PE 20.8	Discuss the etiology, clinical features and management of respiratory distress in Newborn including meconium aspiration and transient tachypnea of newborn.			Y	Lecture,SGD	Written /Vivavoce			
20.8.1	Define Respiratory Distress in neonate (as per NN			Y	Lecture,SGD	Written			
	Fguidelines).					/Vivavoce			

20.8.2	Enumerate the common etiologies of respiratory distress based on time of onset and gestation.			Y	Lecture,SGD	Written /Vivavoce			
20.8.3	Enumerate the parameters of the Downes score for assessment of severity of respiratory distress.			Y	Lecture,SGD	Written/Viva voce			
20.8.4	Describe the clinical features and complications of Meconium Aspiration Syndrome (MAS).			Y	Lecture,SGD	Written /Vivavoce			
20.8.5	Discuss the management of MAS.			Y	Lecture,SGD	Written/Viva voce			
20.8.6	Discuss the clinical features and management of Transient Tachypnea of Newborn.			Y	Lecture,SGD	Written /Vivavoce			
20.8.7	Describe the etiology and clinical features of Hyaline Membrane Disease.			Y	Lecture,SGD	Written /Vivavoce			
20.8.8	Discuss the management including prevention of HMD.			Y	Lecture,SGD	Written/Viva voce			
PE 20.9	Discuss the etiology, clinical features and management of birth injuries.			Y	Lecture,SGD	Written/Viva voce			
20.9.1	Define birth injury (as per National Vital Statistics Report).			Y	Lecture,SGD	Written /Vivavoce			
20.9.2	Enumerate the common birth injuries in neonates			Y	Lecture,SGD	Written /Vivavoce			
20.9.3	Discuss the etiology and risk factors of birth injuries			Y	Lecture,SGD	Written/Viva voce			
20.9.4	Discuss the clinical features of common birth injuries like, cephalhematoma, subgaleal hemorrhage, brachial plexus and facial nerve injury, bone and soft tissue injuries and intra-abdominal injuries, fractures.			Y	Lecture,SGD	Written /Vivavoce			
20.9.5	Discuss the management including prevention of common birth injuries			Y	Lecture,SGD	Written /Vivavoce			

PE 20.10	Discuss the etiology, clinical features and management of hemorrhagic disease of newborn			Y	Lecture, SGD	Written/Viva voce			
20.10.1	Enumerate the causes of hemorrhagic disease of newborn according to time of onset.			Y	Lecture, SGD	Written/Viva voce			
20.10.2	Discuss the role of vitamin K deficiency in hemorrhagic disease of newborn.			Y	Lecture, SGD	Written/Viva voce			

20.10.3	Describe the clinical features of early, classical and late onset hemorrhagic disease of newborn.			Y	Lecture,SGD	Written /Vivavoce			
20.10.4	Outline the steps of management and prevention of hemorrhagic disease of newborn.			Y	Lecture,SGD	Written/Viva voce			
PE 20.11	Discuss the clinical characteristics, complications and management of low birth weight (preterm and small for gestation).			Y	Lecture,SGD	Written /Vivavoce			
20.11.1	Describe the clinical characteristics of preterm, small for gestation and low birth weight newborns.			Y	Lecture,SGD	Written /Vivavoce			
20.11.2	Enumerate the complications in the preterm, small for gestation and low birth weight newborns			Y	Lecture,SGD	Written/Viva voce			
20.11.3	Describe the management of the preterm, small for date and low birth weight newborns.			Y	Lecture,SGD	Written /Vivavoce			
20.11.4	Enumerate the criteria for discharge of low birth weight babies from hospital-based care.			Y	Lecture,SGD	Written /Vivavoce			
20.11.5	List the follow-up advice for low birth weight newborns.			Y	Lecture,SGD	Written/Viva voce			
PE 20.12	Discuss the temperature regulation in neonates, clinical features and management of Neonatal Hypothermia.			Y	Lecture,SGD	Written /Vivavoce			
20.12.1	Enumerate the modes of heat loss in a newborn.			Y	Lecture,SGD	Written/Viva voce			
20.12.2	Describe the mechanism of thermoregulation in the newborn.			Y	Lecture,SGD	Written/Viva voce			
20.12.3	Classify hypothermia in newborns as per NNF criteria.			Y	Lecture,SGD	Written /Vivavoce			
20.12.4	Describe the clinical features of a newborn with cold stress, moderate hypothermia and severe hypothermia.			Y	Lecture,SGD	Written /Vivavoce			

20.12.5	Discuss the management of cold stress, moderate hypothermia and severe hypothermia.			Y	Lecture, SGD	Written/Viva voce			
20.12.6	Outline the prevention of hypothermia in newborn by 'ten steps of the warm chain'.			Y	Lecture, SGD	Written/Viva voce			
20.12.7	Explain the Kangaroo Mother Care for prevention of hypothermia in newborns.			Y	Lecture, SGD	Written/Viva voce			

PE 20.13	Discuss the etiology, clinical features and management of Neonatal hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.1	Define hypoglycemia in newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.2	Enumerate the etiology of hypoglycemia in the newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.3	Enumerate the “at risk newborns” needing routine blood sugar monitoring for hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.4	Describe the clinical features of hypoglycemia in the newborn.			Y	Lecture,SGD	Written/Viva voce			
20.13.5	Discuss the management of a newborn with asymptomatic and symptomatic hypoglycemia.			Y	Lecture,SGD	Written/Viva voce			
20.13.6	Enumerate the measures for prevention of hypoglycemia in newborn.			Y	Lecture,SGD	Written/Viva voce			
PE 20.14	Discuss the etiology, clinical features and management of Neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.1	Define neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.2	Enumerate the risk factors for early and late onset hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.3	Describe the clinical features of neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
20.14.4	Outline the management of neonatal hypocalcemia.			Y	Lecture,SGD	Written/Viva voce			
PE 20.15	Discuss the etiology, clinical features and management of neonatal seizures.			Y	Lecture,SGD	Written/Viva voce			
20.15.1	Enumerate the clinical types of seizures in the newborn.			Y	Lecture,SGD	Written/Viva voce			

20.15.2	Enumerate the key differentiating features between seizures			Y	Lecture,SGD	Written/Viva voce			
	and jitteriness.								
20.15.3	Describe the common causes of neonatal seizures according to time of onset of seizure.			Y	Lecture,SGD	Written /Viva voce			
20.15.4	Discuss the clinical features of the common causes of neonatal seizures.			Y	Lecture,SGD	Written /Viva voce			

20.15.5	List the primary diagnostic tests indicated in neonatal seizures.			Y	Lecture,SGD	Written /Viva voce			
20.15.6	Elaborate the stepwise algorithmic approach for the management of neonatal seizures.			Y	Lecture,SGD	Written/Viva voce			
PE 20.16	Discuss the etiology, clinical features and management of neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.1	Define neonatal sepsis, probable sepsis, severe sepsis, septic shock			Y	Lecture,SGD	Written /Viva voce			
20.16.2	Classify Early and late neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.3	Enumerate the organisms responsible for causing early and late onset sepsis.			Y					
20.16.4	Enumerate the risk factors of early and late onset neonatal sepsis correctly.			Y	Lecture,SGD	Written /Viva voce			
20.16.5	Describe the clinical features of early onset and late onset neonatal sepsis			Y	Lecture,SGD	Written/Viva voce			
20.16.6	Enumerate the commonly used laboratory tests for diagnosis of neonatal sepsis.			Y	Lecture,SGD	Written /Viva voce			
20.16.7	Recall the interpretation of a positive sepsis screen.			Y	Lecture/SGD	Written /Viva voce			
20.16.8	Describe the approach to a newborn with suspected early onset sepsis.			Y	Lecture,SGD	Written/Viva voce			
20.16.9	Describe the approach to a newborn with suspected late onset sepsis.			Y	Lecture,SGD	Written /Viva voce			
20.16.8	List the commonly used antibiotics (with dosage and duration of therapy) in the management of neonatal sepsis.			Y	Lecture,SGD	Written/Viva voce			

20.16.9	Describe the supportive and adjunctive therapy in management of neonatal sepsis.			N	Lecture/SGD	Written/viva voce			
20.16.9	Discuss the measures for prevention of early onset			Y	Lecture,SGD	Written			

	and late onset sepsis.					/Viva voce			
PE 20.17	Discuss the etiology, clinical features and management of Perinatal infections.			Y	Lecture,SGD	Written/Viva voce			
20.17.1	Define Perinatal infection.			Y	Lecture,SGD	Written/Viva voce			

20.17.2	Discuss the etiology and risk factors for acquisition of common Perinatal infections like Herpes, Cytomegalovirus, Toxoplasmosis, Rubella, HIV, Varicella, Hepatitis B virus and syphilis.			Y	Lecture, SGD	Written /Vivavoce			
20.17.3	Describe the clinical features of the common Perinatal infections.			Y	Lecture, SGD	Written /Vivavoce			
20.17.4	Outline the management of the common Perinatal infections.			Y	Lecture, SGD	Written/Vivavoce			
20.17.5	Enumerate the measures for prevention of common Perinatal infections.			Y	Lecture, SGD	Written /Vivavoce			
PE 20.18	Identify and stratify risk in a sick neonate using IMNCI guidelines			Y	DOAP	Document in Logbook			
20.18.1	Identify possible serious bacterial infection/ jaundice and stratify the sick neonate as per IMNCI.			Y	DOAP	Document in Logbook			
20.18.2	Identify and stratify dehydration in a sick neonate with diarrhea as per IMNCI.			Y	DOAP	Document in Logbook			
20.18.3	Classify diarrhea into severe persistent diarrhea and severe dysentery as per IMNCI guidelines.			Y	DOAP	Document in Logbook			
20.18.4	Check for feeding problem and malnutrition and stratify.			Y	DOAP	Document in Logbook			
20.18.5	Assess breastfeeding and check for signs of good attachment to the breast in a neonate.			Y	DOAP	Document in Logbook			
20.18.6	Interpret and classify the neonate on the basis of weight for age z scores weight categories accurately.			Y	DOAP	Document in Logbook			

PE 20.19	Discuss the etiology, clinical features and management of Neonatal hyperbilirubinemia.			Y	Lecture/SGD	Written/Viva voce			
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20.19.1	Describe the etiology of neonatal hyperbilirubinemia			Y	Lecture/SGD	Written/Viva voce			
20.19.2	Differentiate the causes of neonatal jaundice based on age of onset and duration of jaundice.			Y	Lecture/SGD	Written/Viva voce			
20.19.3	Enumerate the common causes of unconjugated and conjugated hyperbilirubinemia in the newborn.			Y	Lecture/SGD	Written/Viva voce			
20.19.4	Differentiate between physiological and pathological jaundice in the newborn.			Y	Lecture/SGD	Written/Viva voce			

20.19.5	Discuss the clinical features of common causes of neonatal jaundice			Y	Lecture/SGD	Written/Vivavoce			
20.19.6	Describe the important clinical features of acute bilirubin encephalopathy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.7	List the investigations to be performed in the evaluation of neonatal hyperbilirubinemia.			Y	Lecture/SGD	Written/Vivavoce			
20.19.8	Categorize the risk in neonatal hyperbilirubinemia based on the American Academy of Pediatrics Bilirubin Nomogram.			Y	Lecture/SGD	Written/Vivavoce			
20.19.9	Identify a neonate requiring phototherapy as per the American Academy of Pediatrics Bilirubin Nomogram.			Y	Lecture/SGD	Written/Vivavoce			
20.19.10	Identify a neonate requiring exchange transfusion as per the American Academy of Pediatrics Bilirubin Nomogram correctly.			Y	Lecture/SGD	Written/Vivavoce			
20.19.11	Describe the care of the baby receiving phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.12	Explain the mechanism of phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
20.19.13	Detail the method of administering phototherapy.			Y	Lecture/SGD	Written/Vivavoce			
PE 20.20	Identify clinical presentations of common surgical conditions in the newborn including TEF, esophageal atresia, anal atresia, cleft lip and palate, congenital diaphragmatic hernia and causes of acute abdomen.			Y	Lecture/SGD	Written/vivavoce			

Topic:Genito-Urinarysystem		Numberofcompetencies:(17)			Numberofprocedureshatrequirecertification:(NIL)				
PE21.1	Enumeratetheetiopathogenesis,clinicalfeatures,complicationsandmanagementofUrinaryTractinfection(UTI)inchildren			Y	Small group discussion	Written/Vivavoce		Micro	
21.1.1	DefineUTIasperstandardcriteria.			Y	Lecture/SGD	Written/Vivavoce			
21.1.2	EnumeratetheorganismscausingUTIinchildrenofdifferentages.			Y	Lecture/SGD	Written/Vivavoce			
21.1.3	Describethetheclinicalfeaturesofsimple&complicatedUTI.			Y	Lecture/SGD	Written/Vivavoce			
21.1.4	OutlinediagnosticworkupforchildrenwithUTIatdifferentages.			Y	Lecture/SGD	Written/Vivavoce			
21.1.5	Describe the treatment including the choice of antibiotics and duration of antibiotic therapy for treating simple & complicated UTI.			Y	Lecture/SGD	Written/Vivavoce			
21.1.6	EnumeratethecomplicationsofUTIchildren.			Y	Lecture/SGD	Written/Vivavoce			
PE21.2	Enumeratetheetiopathogenesis,clinicalfeatures, complications and management of acute post-streptococcalGlomerularNephritisin children			Y	Lecture/SGD	Written/Vivavoce		Path	
21.2.1	Defineacuteglomerulonephritis.			Y	Lecture/SGD	Written/Vivavoce			
21.2.2	Elaboratepathogenesisofimmunemediatednephriticsyndrome			Y	Lecture/SGD	Written/Vivavoce			

21.2.3	Describe the clinical features of Post-Streptococcal Glomerulonephritis (PSGN)			Y	Lecture/SGD	Written/Viva voce			
21.2.4	Enumerate the complications of PSGN.			Y	Lecture/SGD	Written/Viva voce			
21.2.5	Enumerate the investigations for PSGN.			Y	Lecture/SGD	Written/Viva voce			
21.2.6	Enumerate indications of kidney biopsy in PSGN.			Y	Lecture/SGD	Written/Viva voce			
21.2.7	Outline management of PSGN.			Y	Lecture/SGD	Written/Viva voce			

PE21.3	Discuss the approach and referral criteria to a child with Proteinuria			Y	Lecture/ SGD	Written/ Viva voce		Path	
21.3.1	List causes of glomerular & non-glomerular Proteinuria.			Y	Lecture/SGD	Written /Viva voce			
21.3.2	Define nephrotic syndrome.			Y	Lecture/SGD	Written/Viva voce			
21.3.3	Enumerate causes of nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.4	Outline the approach to a child with first episode of nephrotic syndrome.			Y	Lecture/SGD	Written/Viva voce			
21.3.5	List the complications of nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.6	List indications of kidney biopsy in nephrotic syndrome.			Y	Lecture/SGD	Written /Viva voce			
21.3.7	Outline the management of initial episode nephrotic syndrome and subsequent relapse.			Y	Lecture/SGD	Written/Viva voce			
21.3.8	List the Criteria for referral of a child with proteinuria.			Y	Lecture/SGD	Written /Viva voce			
PE21.4	Discuss the approach and referral criteria to a child with hematuria			Y	Lecture/ SGD	Written/ Viva voce		Anat	
21.4.1	Enumerate causes of hematuria in children of different ages			Y	Lecture/SGD	Written/Viva voce			
21.4.2	Outline differences between glomerular & non-glomerular hematuria			Y	Lecture/SGD	Written /Viva voce			
21.4.3	List investigations for a child with hematuria			Y	Lecture/SGD	Written /Viva voce			
21.4.4	List indications of kidney biopsy in hematuria			Y	Lecture/SGD	Written/Viva voce			

21.4.5	List criteria for referral for a child with hematuria			Y	Lecture/SGD	Written /Vivavoce			
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PE21.5	Enumerate the etiopathogenesis, clinical features, complications and management of Acute Renal Failure in children			Y	Lecture/ SGD	Written /Vivavoce		Path	
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21.5.1	Define acute kidney injury (AKI) as per KDIGO.			Y	Lecture/SGD	Written/Viva voce			
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21.5.2	OutlineclassificationofAKI.			Y	Lecture/SGD	Written /Vivavoce			
21.5.3	EnumeratecausesofAKI.			Y	Lecture/SGD	Written/Viva voce			
21.5.4	ListinvestigationsforAKIinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.5.5	DescribethemanagementofAKI.			Y	Lecture/SGD	Written/Viva voce			
21.5.6	ListindicationsofrenalreplacementtherapyinAKI.			Y	Lecture/SGD	Written /Vivavoce			
21.5.7	EnumeratecomplicationsofAKI.			Y	Lecture/SGD	Written /Vivavoce			
PE21.6	Enumerate the etiopathogenesis, clinical features, complications and management of chronickidney disease in children.			Y	Lecture/ SGD	Written /Vivavoce		Path	
21.6.1	Definechronickidneydisease(CKD)&itsstaginginchildren.			Y	Lecture/SGD	Written/Viva voce			
21.6.2	OutlinetheclinicalfeaturesofCKDinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.6.3	ListcausesofCKDinchildren.			Y	Lecture/SGD	Written/Viva voce			
21.6.4	EnumeratecomplicationsofCKDinchildren.			Y	Lecture/SGD	Written /Vivavoce			
21.6.5	OutlinemanagementofCKD &itscomplications.			Y	Lecture/SGD	Written /Vivavoce			
PE21.7	Enumeratetheetiopathogenesis,clinicalfeatures, complicationsandmanagementofWilmsTumor .			Y	Lecture/ SGD	Written/Viva voce		Path	
21.7.1	DescribeEtiopathogenesisofWilmstumor.			Y	Lecture/SGD	Written/Viva voce			

21.7.2	Describe clinical features of Wilms tumor.			Y	Lecture/SGD	Written /Viva voce			
21.7.3	List investigations for a patient with Wilms tumor.			Y	Lecture/SGD	Written/Viva voce			
21.7.4	Outline the management of Wilms tumor.			Y	Lecture/SGD	Written /Viva voce			

PE21.8	Elicit, document and present a history pertaining to diseases of the Genitourinary tract			Y	Bedside, Skillslab	Skill Assessment			
21.8.1	Elicit clinical history pertaining to genitourinary diseases in children.			Y	Bedside, Skillslab	Skill Assessment			
21.8.2	Perform a complete physical examination for a child with genitourinary diseases.			Y	Bedside, Skillslab	Skill Assessment			
21.8.4	Document the complete history in the Logbook.			Y	Bedside, Skillslab	Skill Assessment			
PE21.9	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca			Y	Bedside, Skillslab	Document in Logbook			
21.9.1	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca.			Y	Bedside, Skillslab	Document in Logbook			
PE21.10	Analyze symptom and interpret the physical findings and arrive at an appropriate provisional differential diagnosis			Y	Bedside, Skillslab	Logbook			
21.10.1	Analyze symptoms and interpret the physical findings and arrive at an appropriate provisional differential diagnosis.			Y	Bedside, Skillslab	Logbook			
PE21.11	Perform and interpret the common analytes in a Urine examination			Y	Bedside, Skillslab	Skill assessment		Biochemist, Path	
21.11.1	Perform at least one test to elicit Proteinuria.			Y	Bedside, Skillslab	Skill assessment			
21.11.2	Interpret the tests for proteinuria and their significance.			Y	Bedside, Skillslab	Skill assessment			

21.11.3	Performtest forevaluatingUrinePH.			Y	Bedside,Skillslab	Skillassessment			
21.11.4	Performurinemicroscopy.			Y	Bedside,Skillslab	Skillassessment			

21.11.5	IdentifytheabnormaldepositsandInterprettheurinemicroscopyfindings.			Y	Bedside,Skillslab	Skillassessment			
21.11.6	Testtheurineforglucosuria.			Y	Bedside,Skillslab	Skillassessment			
21.11.7	Interprettheurinesugarresults.			Y	Bedside,Skillslab	Skillassessment			
PE21.12	InterpretreportofPlainXRayofKUB			Y	Bedside,Skillslab	Logbook			Radio D
21.12.1	Identifyany abnormalitiesonX-Ray KUB.			Y	Bedside,Skillslab	Logbook			
PE21.13	Enumeratetheindicationsfor andInterpretthewrittenreportofUltrasonogramofKUB			Y	Bedside,Skillslab	Logbook			Radio D

21.13.1	Enumerate indications for Ultrasound KUB.			Y	Bedside, Skillslab	Logbook			
21.13.2	Interpret the written report of ultrasound of KUB.			Y	Bedside, Skillslab	Logbook			
PE21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosis, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechiae			Y	Bedside, Skillslab	Bedside, Skillslab			Surg
21.14.1	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosis, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechiae.			Y	Bedside, Skillslab	Bedside, Skillslab			
PE21.15	Discuss and enumerate the referral criteria for children with genitourinary disorder			Y	Lecture/SGD	Written/viva voce			
21.15.1	Enumerate referral criteria in a child with Genitourinary disorder.			Y	Lecture/SGD	Written/viva voce			
PE21.16	Counsel/educate patient for referral appropriately			Y	DOAP	Logbook		AETCOM	
21.16.1	Counsel/educate patient for referral appropriately.			Y	DOAP	Logbook			
PE21.17	Describe the etiology, pathogenesis, grading, clinical features and management of hypertension in children			Y	Lecture/SGD	Written/viva voce			
21.17.1	Define Hypertension (HTN) & its staging as per AAP 2017 guidelines.			Y	Lecture/SGD	Written/viva voce			

21.17.2	Enumerate causes of hypertension in children.			Y	Lecture/SGD	Written/viva voce			
21.17.3	Describe the clinical presentation of a child with HT.			Y	Lecture/SGD	Written/viva voce			
21.17.4	List complications of HT in children.			Y	Lecture/SGD	Written/viva voce			
21.17.5	Enumerate investigations for hypertension in children.			Y	Lecture/SGD	Written/viva voce			

21.17.6	Outline treatment of hypertension (as per guidelines) in children.			Y	Lecture/SGD	Written/vivavoce			
Topic: Approach to and recognition of a child with possible Rheumatological problem Number of competencies: (3) Number of procedures that require certification: (NIL) 									
PE 22.1	Enumerate the common Rheumatological problems in children. Discuss the clinical approach to recognition and referral of a child with Rheumatological problem			Y	Lecture/SGD	Written / vivavoce			
22.1.1	Enumerate the common Rheumatological problems in children.			Y	Lecture/SGD	Written/vivavoce			
22.1.2	Describe the clinical approach to a child with Rheumatological problem.			Y	Lecture/SGD	Written/vivavoce			
22.1.3	Enumerate the indications for referral of a child with Rheumatological problem.			Y	Lecture/SGD	Written/vivavoce			
PE 22.2	Counsel a patient with Chronic illness			N	Bedside clinic/skill lab	Logbook			
22.2.1	Counsel a child /parent of a child with a chronic illness.			N	Bedside clinic/skill lab	Logbook			
PE 22.3	Describe the diagnosis and management of common vasculitic disorders including Henoch Schonlein Purpura, Kawasaki Disease, SLE, JIA			N	Lecture/SGD	Written / vivavoce			
22.3.1	List the common causes of vasculitis in children.			Y	Lecture/SGD	Written/Vivavoce			
22.3.2	Enumerate Clinical features suggestive of vasculitis in a child			N	Lecture/SGD	Written/vivavoce			

22.3.3.	List the clinical features of Henoch Schonlein Purpura (HSP).			N	Lecture/SGD	Written/vi vavoce			
22.3.4	List the diagnostic criteria of HSP.			N	Lecture/SGD	Written/vi vavoce			
22.3.5	Outline the management of a child with HSP.			N	Lecture/SGD	Written/viva voce			
22.3.6	Enumerate the clinical features of Kawasaki disease (KD).			N	Lecture/SGD	Written/vi vavoce			

22.3.7	Defined diagnostic criteria of Kawasaki disease.			N	Lecture/SGD	Written/vi vavoce			
22.3.8	Outline the management of a child with Kawasaki Disease.			N	Lecture/SGD	Written/viva voce			
22.3.9	Defined diagnostic criteria of SLE.			N	Lecture/SGD	Written/vi vavoce			
22.3.10	Outline the management of a child with SLE.			N	Lecture/SGD	Written/viva voce			
22.3.11	Defined diagnostic criteria of JIA.			N	Lecture/SGD	Written/vi vavoce			
22.3.12	Outline the management of a child with JIA.			N	Lecture/SGD	Written/vi vavoce			
Topic: Cardiovascular system-Heart Diseases Number of competencies: (18) Number of procedures that require certification: (NIL)									
PE 23.1	Discuss the Hemodynamic changes, clinical presentation, complications and management of cyanotic Heart Diseases VSD, ASD and PDA			Y	Lecture/SGD	Written/Vivavoce		Physio, Path	
23.1.1	Explain and illustrate diagrammatically the hemodynamic changes seen in cyanotic congenital heart diseases viz VSD, ASD, PDA.			Y	Lecture/SGD	Written/VivaVoce		Physio, Path	
23.1.2	Describe the signs and symptoms, timing of presentation of above cyanotic congenital heart diseases.			Y	Lecture/SGD	Written/VivaVoce			
23.1.3	Enumerate the complications of cyanotic congenital heart diseases.			Y	Lecture/SGD	Written/VivaVoce			
23.1.4	Outline the medical management of congenital cyanotic heart disease as above.			Y	Lecture/SGD	Written/VivaVoce			
23.1.5	Enumerate the surgical treatments for VSA, ASD, PDA.			Y	Lecture/SGD	Written/VivaVoce			

PE 23.2	Discuss the Hemodynamic changes, clinical presentation, complications and management of			Y	Lecture/SGD	Written/Viva Voce		Physio, Path	
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	Cyanotic Heart Diseases – Fallot Physiology								
23.2.1	Enumerate the essential components of Fallot Physiology and List the cardiac conditions with the Fallot Physiology.			Y	Lecture/SGD	Written/Viva Voce			
23.2.2	Describe and illustrate diagrammatically the hemodynamic changes seen in Fallot Physiology cyanotic congenital heart diseases.			Y	Lecture/SGD	Written/Viva Voce			

23.2.3	ExplaintheclinicalpresentationandcomplicationsofFallotPhysiologycyanoticcongenitalheartdiseases.			Y	Lecture/SGD	Written/VivaVoce			
23.2.5	Describeacyanoticspellandthepharmacologicalandnon-pharmacologicalmanagementofcyanoticspells.			Y	Lecture/SGD	Written/VivaVoce			
23.2.6	DescribethetreatmentoptionsforlesionswithFallotPhysiology.			Y	Lecture/SGD	Written/VivaVoce			
PE 23.3	Discuss the etiopathogenesis, clinical presentation and management of cardiac failure in infant and children			Y	Lecture/SGD	Written/Viva Voce			Physio, Path
23.3.1	Enumerate causes of congestive heart failure in children as per the age of presentation.			Y	Lecture/SGD	Written/VivaVoce			
23.3.2	Describe the hemodynamic changes in congestive heart failure.			Y	Lecture/SGD	Written/VivaVoce			
23.3.3	Describe the signs and symptoms of left side, right side and combined congestive heart failure.			Y	Lecture/SGD	Written/VivaVoce			
23.3.4	Enumerate the various management options available for congestive heart failure.			Y	Lecture/SGD	Written/VivaVoce			
23.3.5	Explain the role of diuretics, inotropes, inodilators, and afterload reducing agents in treatment of CCF.			Y	Lecture/SGD	Written/VivaVoce			
PE 23.4	Discuss the etiopathogenesis, clinical presentation and management of Acute Rheumatic Fever in children			Y	Lecture/SGD	Written/Viva Voce			Physio, Path
23.4.1	Explain the etiopathogenesis of Acute rheumatic fever.			Y	Lecture/SGD	Written/VivaVoce			

23.4.2	Describe the modified Jones criteria to diagnose the Acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.4.3	Describe laboratory changes in Acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.5	Discuss the clinical features, complications, diagnosis, management and prevention of Acute Rheumatic Fever			Y	Lecture/SGD	Written/Viva Voce		Physio, Path	
23.5.1	Describe the clinical features of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.5.2	List the long-term complications of Acute Rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			

23.5.3	Outline the medical management of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
23.5.4	Discuss strategies for the primary and secondary prevention of acute rheumatic fever.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.6	Discuss the etiopathogenesis, clinical features and management of Infective endocarditis in children			Y	Lecture/SGD	Written/Viva Voce		Physio, Path, Micro	
23.6.1	Enumerate the common predisposing conditions and etiopathogenesis of Infective endocarditis in children			Y	Lecture/SGD	Written/Viva Voce			
23.6.2	List criteria used to diagnose Infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
23.6.3	Describe the clinical features of infective endocarditis in children.			Y	Lecture/SGD	Written/Viva Voce			
23.6.4	Outline the management of infective endocarditis in children.			Y	Lecture/SGD	Written/Viva Voce			
23.6.5	State the long-term complications of Infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
23.6.6	Enumerate the conditions requiring prophylaxis for infective endocarditis.			Y	Lecture/SGD	Written/Viva Voce			
PE 23.7	Elicit appropriate history for a cardiac disease, analyze the symptoms e.g. breathlessness, chest pain, tachycardia, feeding difficulty, failing to thrive, reduced urinary output, swelling, syncope, cyanotic spells, Suck rest cycle, frontal swelling in infants.			Y	Bedside, Skills lab	Bedside/skills assessment			

23.7.1	Elicit appropriate history relevant to the cardiac disease and analyze the importance of symptoms e.g. breathlessness, chest pain, tachycardia, feeding difficulty, failing to thrive, reduced urinary output, swelling, syncope, cyanotic spells, Suckrest cycle, frontal swelling in infants.			Y	Bedside, skillslab	Bed side/skill assessment			
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23.7.2	Document and present the history taken in appropriate manner.			Y	Bedside, skillslab	Bedside/skill assessment			
PE 23.8	Identify external markers of a cardiac disease e.g. Cyanosis, Clubbing, dependent edema, dental caries arthritis, erythema rash, chorea, subcutaneous nodules, Osler node, Janeway lesions and document			Y	Bedside, Skills Lab	Bed side/skill assessment			

23.8.1	Identify and document the external markers of heart disease in general physical examination e.g. Cyanosis, Clubbing, dependent edema, dental caries, arthritis, erythema rash, chorea, subcutaneous nodules, Osler node, Janeway lesions.			Y	Bedside, skills lab	Bed side/skill assessment			
PE 23.9	Record pulse, blood pressure, temperature and respiratory rate and interpret as per the age			Y	Bedside, Skillslab	Bedside/skill assessment			
23.9.1	Record and demonstrate various parameters of the pulse.			Y	Bedside, Skillslab	OSCE/bedside assessment			
23.9.2	Record correctly the systolic and diastolic blood pressure using appropriate equipment.			Y	Bedside/skilllab	OSCE /bedside assessment			
23.9.3	Use the age specific nomogram to interpret the BP readings.			Y	Bedside, Skillslab	OSCE/bedside assessment			
23.9.4	Measure body temperature using a thermometer.			Y	Bedside, Skillslab	OSCE /bedside assessment			
23.9.5	Count the respiratory rate and interpret as per the age.			Y	Bedside, Skillslab	OSCE /bedside assessment			
PE 23.10	Perform independently examination of the cardiovascular system – look for precordial bulge, pulsations in the precordium, JVP and its significance in children and infants, relevance of percussion in Pediatric examination, Auscultation and other system examination and document			Y	Bedside, Skillslab	Bed side/skill assessment			

23.10.1	Perform independent CV examination looking for precordial bulge and pulsations, auscultation of areas of precordium.			Y	Bedside, Skillslab	Bedside, OSCE			
23.10.2	Look for and measure JVP.			Y	Bedside, Skillslab	bedside assessment			
23.10.3	Describe relevance of percussion in the cardiovascular examination.			Y	SGD	Viva			
23.10.4	Document the findings of the cardiovascular and dot her system exam.			Y	Bedside, Skillslab	Logbook			
PE 23.11	Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti-failure drugs, and inotropic agents			Y	Bedside, Skillslab	written/Viva voce			
23.11.1	Make an appropriate treatment plan for a child with cardiac disease including anti-failure drugs, inotropes and fluids.			Y	Bedside class/paper cases	OSCE/Logbook			
PE 23.12	Interpret chest X-ray and recognize Cardiomegaly			Y	Bedside, Skillslab	Logbook entry		RadioD	
23.12.1	Calculate cardiothoracic ratio and interpret accordingly.			Y	Bedside, Skillslab	viva voce, OSCE		RadioD	
23.12.2	State features of cardiomegaly on the chest X-ray.			Y	Bedside, Skillslab	OSCE, viva voce		RadioD	
23.12.3	Identify the pathognomonic radiological features of various congenital heart diseases on chest x-ray.			Y	Bedside, Skillslab	OSCE, viva voce			
23.12.4	Identify pleural effusion and the pulmonary edema on chest X-ray.			Y	Bedside, Skillslab	OSCE, viva voce			
PE 23.13	Choose and Interpret blood reports in Cardiac illness			Y	Bedside, SGD	Logbook entry			
23.13.1	List blood tests relevant for the cardiac diseases.			Y	Bedside, Skillslab	viva voce			
23.13.2	Interpret the blood test reports for the cardiac disease.			Y	Bedside, Skillslab	viva voce, OSCE			

PE 23.14	Interpret Pediatric ECG			Y	Bedside, Skillslab	Logbook entry			
23.14.2	Interpret few common ECG abnormalities in children.			Y	SGD, skilllab	OSCE, viva voce			
PE 23.15	Use the ECHO reports in management of cases			Y	Bedside	Logbook entry		Cardio	

23.15.1	Use the ECHO reports in management of cases.			Y	Bedside, Skillslab	Logbook entry			
PE 23.16	Discuss the indications and limitations of Cardiac catheterization			Y	Lecture/ SGD	Written/ Viva Voce			
23.16.1	Enumerate the indications of Cardiac catheterization.			Y	Lecture/SGD	Written/ Viva Voce			
23.16.2	List the limitations of Cardiac catheterization.			Y	Lecture/SGD	Written/ Viva Voce			
PE 23.17	Enumerate some common cardiac surgeries like BT shunt, Potts and Waterston's and corrective surgeries			Y	Lecture/ SGD	Written/ Viva Voce			
23.17.1	Enumerate common cardiac surgeries and their indications in children.			Y	Lecture/SGD	Written/ Viva Voce			
PE 23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter			Y	SGD, Bedside, Skillslab	Document in Logbook, Direct observation, OSCE		AETCOM	
23.18.1	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter.			Y	Bedside, Skillslab	Direct observation, OSCE		AETCOM	
23.18.2	Demonstrate empathy while dealing with parents of children with cardiac diseases in every contact.			Y	Bedside, Skillslab	Direct observation, OSCE		AETCOM	

Topic:DiarrhoealdiseasesandDehydration		Numberofcompetencies:(17)			Numberofproceduresthatrequirecertification:(03)				
PE 24.1	Discuss the etiopathogenesis, classification, clinical presentation and management of diarrheal diseases in children.			Y	Lecture/ SGD	Written / vivavoce		Path Micro	
24.1.1	Explain etiopathogenesis of Diarrheal diseases in children.			Y	Lecture/SGD	Written/ VivaVoce		Path Micro	
24.1.2	Classify Diarrheal disease based on duration and etiology.			Y	Lecture/SGD	Written/Viva Voce		Path Micro	
24.1.3	Describe symptoms and signs of Diarrheal disease in children.			Y	Lecture/SGD	Written/ VivaVoce			
24.1.4	Enumerate investigations required for Diarrheal disease in children.			Y	Lecture/SGD	Written/ VivaVoce		Path Micro	
24.1.5	Outline the treatment plan of Diarrheal disease in children.			Y	Lecture/SGD	Written/Viva Voce			
PE 24.2	Discuss the classification and clinical presentation of various types of diarrheal dehydration			Y	Lecture/SGD	Written/viva voce		Path, Micro	
24.2.1	Enumerate all the signs and symptoms of dehydration in children.			Y	Lecture/Small group activity	Written/ VivaVoce			
24.2.2	Classify dehydration as per WHO guidelines.			Y	Lecture/SGD	Written/Viva Voce			
24.2.3	Enumerate the clinical features of dehydration of different severity.			Y	Lecture/SGD	Written/VivaVoce			
PE 24.3	Discuss the physiological basis of ORT, types of ORS and the composition of various types of ORS in children			Y	Lecture/ SGD	Written/ vivavoce			

24.3.1	Explain pathophysiology of fluid and electrolyte loss in Diarrheal diseases.			Y	Lecture/SGD	Written/Viva voce			
24.3.2	State the basis of fluid and electrolyte replacement in Diarrheal diseases.			Y	Lecture/SGD	Written/Viva voce			
24.3.3	Recall composition of WHO standard ORS.			Y	Lecture/SGD	Written/Viva voce			
24.3.4	Recall composition of other types of ORS viz Reso Mal, Low osmolarity ORS.			Y	Lecture/SGD	Written/Viva voce			
PE 24.4	Discuss the types of fluid used in Pediatric diarrheal			Y	Lecture/SGD	Written/viva voce			

	diseases and their composition								
24.4.1	Enumerate the types of fluids used in management of dehydration in children.			Y	Lecture SGD	Written/Viva voce			
24.4.2	Describe the composition of Ringer lactate and Normal saline and rationale of their use in correction of dehydration.			Y	Lecture SGD	Written/Viva voce			
PE 24.5	Discuss the role of antibiotics, antispasmodics, antisecretory drugs, probiotics, antiemetics in acute diarrheal diseases			Y	Lecture/SGD	Written / viva voce		Pharm, Micro	
24.5.1	Describe harmful practices in treatment of diarrheal diseases in children			Y	Lecture SGD	Written/Viva voce			
24.5.2	Enumerate the indications of antibiotic therapy in diarrheal diseases in children			Y	Lecture SGD	Written/Viva voce			
24.5.3	Describe role, dosage and duration of Zinc therapy in Diarrheal diseases in children			Y	Lecture SGD	Written/Viva voce			

24.5.4	Interpret selective role of probiotics, antisecretory drugs, antispasmodics and antiemetics in acute diarrheal diseases.			Y	Lecture/SGD	Written/Viva voce			
PE 24.6	Discuss the causes, clinical presentation and management of persistent diarrhoea in children			Y	Lecture/SGD	Written/viva voce	Nil	Micro	
24.6.1	Define Persistent diarrhoea in children.			Y	Lecture/SGD	Written and viva voce			
24.6.2	Enumerate causes of persistent diarrhoea in children.			Y	SGD	Written and viva voce			
24.6.3	Describe clinical presentation in child with persistent diarrhoea.			Y	Lecture/SGD	Written and viva voce			

24.6.4	List investigations in persistent diarrhoea.			Y	Lecture/SGD	Written and viva voce			
24.6.5	Outline the treatment plan in persistent diarrhoea.			Y	Lecture/SGD	Written and viva voce			
PE 24.7	Discuss the causes, clinical presentation and management of chronic diarrhoea in children.			Y	Lecture/SGD	Written/ viva voce			
24.7.1.	Define chronic diarrhoea in children.			Y	Lecture/SGD	Written/viva			
24.7.2	Enumerate the common causes of chronic diarrhoea in children.			Y	Lecture/SGD	Written and viva voce			
24.7.3	Describe symptoms and signs of chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			
24.7.4	Enumerate investigations for chronic diarrhoea.			Y	Lecture/SGD	Written and viva voce			

24.7.5	Outline treatment of chronic diarrhea.			Y	Lecture/SGD	Written and viva voce			
24.7.6	Identify need of referral in a case of chronic diarrhea.			Y	Lecture/SGD	Written and viva voce			
PE 24.8	Discuss the causes, clinical presentation and management of dysentery in children			Y	Lecture/SGD	Written/viva voce	Nil	Pharm, Micro	
24.8.1	Define dysentery in children.			Y	Lecture/SGD	Written, Viva voce			
24.8.2	Enumerate the etiological agents causing dysentery in children.			Y	Lecture/SGD	Written/viva		Micro	
24.8.3	Describe symptoms and signs of dysentery in children.			Y	Lecture/SGD	Written, Viva voce			
24.8.4	Outline the antibiotic therapy in children with dysentery.			Y	Lecture/SGD	Written/viva		Pharm	

PE 24.9	Elicit, document and present history pertaining to diarrheal diseases			Y	Bedside, Skilllab	Clinical case/OSCE/skill assessment			
24.9.1	Elicit history for diarrheal diseases in children.			Y	Bedside, Skilllab	Clinical case/OSCE/skill assessment			
24.9.2	Document gathered information in history sheet.			Y	Bedside, Skilllab	clinical case/skill assessment			
24.9.3	Present the history pertaining to diarrheal diseases.			Y	Bedside, Skilllab	Clinical case, skill assessment,			
PE 24.10	Assess for signs of dehydration, document and present			Y	Bedside, skilllab	Skill Assessment			

24.10.1	Assess clinical signs of dehydration.			Y	Bedside, skill lab	Skill Assessment			
24.10.2	Correlate clinical signs to severity of dehydration.			Y	Bedside, skill lab	Skill Assessment			
24.10.3	Document and present the signs of dehydration pertaining to diarrheal diseases.			Y	Bedside, skill lab	Skill Assessment			
PE 24.11	Apply the IMNCI guidelines in risk stratification of children with diarrheal dehydration and refer			Y	Bedside/skill lab	Document in Logbook			
24.11.1	Apply risk stratification of children with diarrheal dehydration as per IMNCI guidelines.			Y	Bedside/skill lab	Document in Logbook			
24.11.2	Identify need for referral in a case of diarrheal dehydration based on risk stratification as per IMNCI.			Y	Bedside, Skill lab	Document in Logbook			
PE 24.12.1	Perform and interpret stool examination including Hanging Drop			N	Bedside, Skill lab	Document in Logbook		Micro	

24.12.1	Prepare slide for stool examination under microscope.			N	Bedside, Skill lab	Document in Logbook			
24.12.2	Correctly identify pathogen after microscopic examination of stool.			N	Bedside, Skill lab	Document in Logbook			
24.12.3	Correctly perform hanging drop preparation from stool sample given.			N	Bedside, Skill lab	Document in Logbook			
PE 24.13	Interpret RFT and electrolyte report			Y	Bedside/skill lab / SGD	Document in Logbook			
24.13.1	Interpret the given reports for values of urea, creatinine, sodium and potassium.			Y	Bedside/skill lab/SGD	Document in Logbook			

PE 24.14	Plan fluid management as per the WHO criteria			Y	Bedside, Small group activity	Skilllab			
24.14.1	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan A, for a given age and weight of a child.			Y	Bedside, Small group activity	Skilllab			
24.14.2	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan B, for a given age and weight of a child.			Y	Bedside, Small group activity	Skilllab			
24.14.3	Select appropriate type of fluid and Calculate amount, route and duration of therapy of fluid to be given as per Plan C for age and weight of a child.			Y	Bedside, Small group activity	Skilllab			
PE 24.15	Perform NG tube insertion in a manikin			Y	DOAP session	Document in Logbook	2		
24.15.1	Identify size of nasogastric tube as per age of child.			Y	DOAP session	Document in Logbook	2		
24.15.2	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin.			Y	DOAP session	Document in Logbook	2		

24.15.3	Correctly measure the length of NG tube to be inserted.			Y	DOAP session	Document in Logbook	2		
24.15.4	Insert the tube and check its position.			Y	DOAP session	Document in Logbook	2		
24.15.5	Demonstrate all the steps to check correct position of NG tube and fix NG tube.			Y	DOAP session	Document in Logbook	2		
PE 24.16	Perform IV cannulation in a model			Y	DOAP session	Document in Logbook	2		
24.16.1	Identify size of IV cannula as per age of child.			Y	DOAP session	Document in Logbook	2		

24.16.2	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe.			Y	DOAP session	Document in Logbook	2		
24.16.3	Demonstrate common sites for IV cannulation in children and preparation of site.			Y	DOAP session	Document in Logbook	2		
24.16.4	Correctly insert IV cannula in a model and look for free flow of blood.			Y	DOAP session	Document in Logbook	2		
24.16.5	Properly fix IV cannula and correctly demonstrate disposal of biomedical waste.			Y	DOAP session	Document in Logbook	2		
PE 24.17	Perform Interosseous insertion model			Y	DOAP session	Document in Logbook	2		
24.17.1	Identify site for intraosseous insertion in children based on landmarks.			Y	DOAP session	Document in Logbook	2		
24.17.2	Demonstrate all steps of infection control.			Y	DOAP session	Document in Logbook	2		
24.17.3	Insert the Intraosseous cannula and demonstrate how to check its proper insertion in model.			Y	DOAP session	Document in Logbook	2		

24.17.4	Fix Intraosseous cannula and correctly demonstrate disposal of biomedical waste.			Y	DOAP session	Document in Logbook	2		
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Topic: Malabsorption **Number of competencies: (1)** **Number of procedures that require certification: (NIL)**

PE 25.1	Discuss the etiopathogenesis, clinical presentation and management of Malabsorption in Children and its causes including celiac disease.			N	Lecture/SGD	Written/ vivavoce		Path	
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25.1.1	Definemalabsorptioninchildren.			N	Lecture/SGD	Written/Viva Voce			
25.1.2	Enumeratecausesofmalabsorptionin children.			N	Lecture/SGD	Written/VivaVoce			
25.1.3	Describeetiopathogenesisofmalabsorptioninchild ren.			N	Lecture/SGD	Written/VivaVoce			
25.1.4	Describecommonsymptomsandsignsofmalabsorp tionin children.			N	Lecture/SGD	Written/Viva Voce			
25.1.5	Describepresentationsofceliacdiseaseinchildren.			N	Lecture/SGD	Written/VivaVoce			
25.1.6	Enumerateinvestigationsincaseofceliacdisease.			N	Lecture/SGD	Written/VivaVoce			
25.1.7	Enumeratestepsoftreatmentplanin caseofceliacdisease.			N	Lecture/SGD	Written/Viva Voce			

Topic:Acuteandchronicliverdisorders		Numberofcompetencies:(13)			Numberofprocedureshatrequirecertification:(NIL)				
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PE26.1	Discuss the etiopathogenesis, clinical features andmanagementofacutehepatitis inchildren			Y	Lecture/ SGD	Written/ VivaVoce		Path Micro	
26.1.1	DefineAcuteHepatitisinchildren.			Y	Lecture/SGD	Written/Viva Voce			

26.1.2	EnumeratecommoncausesofAcuteHepatitisinchild ren.			Y	Lecture/SGD	Written/VivaVoce			
26.1.3	DescribepathogenesisofAcuteHepatitisinchildren.			Y	Lecture/SGD	Written/Viva Voce			
26.1.4	Describetheclinicalfeaturesandcomplication sofAcuteHepatitis.			Y	Lecture/SGD	Written/VivaVoce			
26.1.5	ListtheinvestigationsrequiredfordiagnosisofAcute Hepatitis.			Y	Lecture/SGD	Written/Viva Voce			

26.1.6	Describe the management and prevention of Acute Hepatitis.			Y	Lecture/SGD	Written/ Viva Voce			
PE 26.2	Discuss the etiopathogenesis, clinical features and management of Fulminant Hepatic Failure in children			Y	Lecture/ SGD	Written/Viva Voce		Path Micro	
26.2.1	Define Fulminant Hepatic Failure in Children.			Y	Lecture/SGD	Written/Viva Voce			
26.2.2	Enumerate the factors which precipitate Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.3	Describe the pathogenesis of Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.4	Describe the clinical features of Fulminant Hepatic Failure.			Y	Lecture/SGD	Written/Viva Voce			
26.2.5	Enumerate the investigations for a child with Fulminant Hepatic Failure.			Y	Lecture/Small group activity	Written/Viva Voce			
26.2.6	Describe the management of Fulminant Hepatic Failure.			Y	Lecture/Small group activity	Written/Viva Voce			
PE 26.3	Discuss the etiopathogenesis, clinical features and management of chronic liver diseases in children			Y	Lecture/ SGD	Written/Viva voce		Path Micro	
26.3.1	Define Chronic Liver Disease in children.			Y	Lecture/SGD	Written/Viva voce			
26.3.2	Enumerate the causes of chronic liver diseases in children.			Y	Lecture/SGD	Written/Viva voce			
26.3.3	Discuss the pathogenesis of common chronic Liver Diseases.			Y	Lecture/SGD	Written/Viva voce			
26.3.4	Describe the clinical features of chronic liver disease.			Y	Lecture/SGD	Written/Viva voce			

26.3.5	Enumerate the investigations for diagnosis of Chronic Liver Disease.			Y	Lecture/SGD	Written/Viva voce			
26.3.6	Describe the management of Chronic liver disease.			Y	Lecture/SGD	Written/Viva voce			
PE 26.4	Discuss the etiopathogenesis, clinical features and management of Portal Hypertension in children			Y	Lecture/SGD	Written/Viva voce		Path	
26.4.1	Define Portal Hypertension in children.			Y	Lecture/SGD	Written/Viva voce			
26.4.2	Classify different types of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.3	Enumerate the causes of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.4	Explain the pathogenesis of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.5	Describe the clinical features of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
26.4.6	Outline the management of portal hypertension.			Y	Lecture/SGD	Written/Viva voce			
PE 26.5	Elicit document and present the history related to diseases of Gastrointestinal system			Y	Bedside, Skills Lab	Skills station/bedside/OSCE			
26.5.1	Elicit the history for diseases of Gastrointestinal system.			Y	Bedside, Skills Lab	Skills station/bedside/OSCE			
26.5.2	Document the history.			Y	Bedside, Skills Lab	Skills station			
26.5.3	Present the history related to Gastrointestinal system.			Y	Bedside, Skills Lab	Skills station/bedside			

PE 26.6	Identify external markers for Gland Liver disorders e.g. Jaundice, Pallor, Gynecomastia, Spider angioma, Palmar erythema, Ichthyosis, Caput medusa, Clubbing, Failing to thrive,			Y	Bedside, Skills Lab	Skill Assessment/OSCE			
	Vitamin A and D deficiency								
26.6.1	Detect Jaundice, pallor, Gynecomastia, Spider angioma, clubbing, Caput medusa, Ichthyosis and failure to thrive, signs of vitamin deficiency.			Y	Bedside, Skills Lab	Skill Assessment/OSCE			

PE26.7	Perform examination of the abdomen, demonstrate organomegaly, ascites etc.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.1	Perform an examination of the abdomen in children of different ages.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.2	Detect organomegaly on abdominal examination giving details of the affected organ/s.			Y	Bedside clinic, Skills Lab	Bedside/skill lab/OSCE			
26.7.3	Examine for ascites in children.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.7.4	Examine for other palpable masses in abdomen.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE 26.8	Analyze symptoms and interpret physical signs to make a provisional/differential diagnosis			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.1	Analyze the symptoms in a child with gastrointestinal disorder.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.2	Interpret the physical signs in a child with gastrointestinal disorder.			Y	Bedside clinic, Skills Lab	Skill Assessment			
26.8.3	Formulate a provisional and differential diagnosis related to clinical presentation.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE26.9	Interpret Liver Function Tests, viral markers, Ultrasound sonogram report			Y	Bedside/skill lab	Bedside/OSCE		Path Biochemistry	
26.9.1	Interpret the given reports of liver function tests.			Y	Bedside/skill lab	Bedside/OSCE			
26.9.2	Interpret the viral markers related to viral hepatitis.			Y	Bedside/skill lab	Bedside/OSCE			

26.9.3	Interpret the given report of abdominal/liver Ultrasonography.			Y	Bedside clinic, Skills Lab	Skill Assessment			
PE 26.10	Demonstrate the technique of liver biopsy in a simulated environment			Y	DOAP	Document in Logbook			
26.10.1	Demonstrate the technique of liver biopsy in a simulated environment.			Y	DOAP	Document in Logbook			
PE 26.11	Enumerate the indications for Upper GI endoscopy			Y	Lecture/SGD	Written, Viva voce			
26.11.1	Enumerate the indications of upper GI endoscopy in children.			Y	Lecture/SGD	Written, Viva voce			

PE26.12	Discuss the prevention of HepB infection- Universal precautions and Immunization			Y	Lecture/SGD	Written, Viva voce		Micro	
26.12.1	Enumerate different preventive measures against the hepatitis B virus infection.			Y	Lecture/SGD	Written, Viva voce			
26.12.2	List universal precautions.			Y	Lecture/SGD	Written, Viva voce			
26.12.3	Describe the immunization schedule of Hepatitis B.			Y	Lecture/SGD	Written/ Viva voce			
PE 26.13	Counsel and educate patients and their family appropriately on liver diseases			Y	Bedside clinic, Skills Lab	Document in Logbook			
26.13.1	Counsel the family on liver disease in the child.			Y	Bedside clinic Skills Lab	Document in Logbook			
26.13.2	Educate the family about prevention of liver disease.			Y	Bedside clinic, Skills Lab	Document in Logbook			
Topic: Pediatric Emergencies – Common Pediatric Emergencies		Number of competencies: (35)			Number of procedures that require certification: (10)				
PE 27.1	List the common causes of morbidity and mortality in the under five children			Y	Lecture/SGD	Written/ viva-voce			
27.1.1	Enumerate the common causes of morbidity and mortality in under five children.			Y	Lecture/SGD	Written/ viva			
PE 27.2	Describe the etiopathogenesis, clinical approach and management of cardiorespiratory arrest in children			Y	Lecture/SGD	Written/ Viva voce			
27.2.1	Enumerate the causes of cardiorespiratory arrest in children.			Y	Lecture/SGD	Written/ Viva voce			
27.2.2	Discuss the pathogenesis of respiratory and cardiac failure leading to cardiorespiratory arrest.			Y	Lecture/SGD	Written/ Viva voce			

27.2.3	Describe the clinical approach to a child in cardiorespiratory arrest.			Y	Lecture/SGD	Written/Viva voce			
27.2.4	Describe the management of a child in cardiorespiratory arrest.			Y	Lecture/SGD	Written/Viva voce			
PE 27.3	Describe the aetiology of respiratory distress in children			Y	Lecture/SGD	Written/Viva voce			
27.3.1	Enumerate the causes of respiratory distress in children of different age groups.			Y	Lecture/SGD	Written/Viva voce			

27.3.2	Explain the pathogenesis of respiratory distress in children.			Y	Lecture/SGD	Written/ Viva voce			
PE 27.4	Describe the clinical approach and management of respiratory distress in children			Y	Lecture/SGD	Written/ Viva voce			
27.4.1	Discuss the clinical approach based on history, examination and investigational algorithm of children of different ages presenting with respiratory distress.			Y	Lecture/SGD	Written/ Viva voce			
27.4.2	Outline the treatment in children with respiratory distress.			Y	Lecture/SGD	Written/ Viva voce			
PE 27.5	Describe the etiology, pathogenesis, clinical approach and management of Shock in children			Y	Lecture/SGD	Written/ Viva voce			
27.5.1	Define shock including different types of shock.			Y	Lecture/SGD	Written/ Viva voce			
27.5.2	Enumerate the causes leading to different types of shock viz hypovolemic, septic and cardiogenic shock.			Y	Lecture/SGD	Written/ Viva voce			
27.5.3	Explain pathogenesis of different types of shock in children.			Y	Lecture/SGD	Written/ Viva voce			
27.5.4	Describe clinical approach to identify different types of shock.			Y	Lecture/SGD	Written/ Viva voce			
27.5.4	Outline an algorithm approach to the management of different types of shock in children.			Y	Lecture/SGD	Written/ Viva voce			
PE 27.6	Describe the etiology, pathogenesis, clinical approach and management of Status epilepticus			Y	Lecture/SGD	Written/ Viva voce			
27.6.1	Define Status epilepticus.			Y	Lecture/SGD	Written/ Viva voce			
27.6.2	Discuss the pathogenesis of status epilepticus in children.			Y	Lecture/SGD	Written/ Viva voce			

27.6.3	Discuss the underlying diagnosis based on clinical history,examinationandinvestigationalgorithm in			Y	Lecture/SGD	Written/ Vivavoce			
	achildwithstatus epilepticus.								
27.6.4	Outlinethetreatmentalgorithmasperrecentguide linesinachild with statusepilepticus.			Y	Lecture/SGD	Written/ Vivavoce			
PE 27.7	Describetheetiopathogenesis,clinicalapproach and managementofanunconsciouschild			Y	Lecture,SGD	Written/Viv a voce			

PE27.7.1	Define different levels of consciousness in children.			Y	Lecture/SGD	Written/Viva voce			
27.7.2	Enumerate the causes of altered sensorium/coma in children.			Y	Lecture/SGD	Written/Viva voce			
27.7.3	Explain pathogenesis of altered sensorium/coma.			Y	Lecture/SGD	Written/Viva voce			
27.7.4	Describe the clinical approach based on clinical history, examination in a child with altered sensorium/coma.			Y	Lecture/SGD	Written/Viva voce			
27.7.5	List the investigations as guided by the clinical assessment of the patient.			Y	Lecture/SGD	Written/Viva voce			
27.7.4	Outline the treatment plan for a comatose child.			Y	Lecture/SGD	Written/Viva voce			
PE 27.8	Discuss the common types, clinical presentation and management of poisoning in children			Y	Lecture, Small group discussion	Written/Viva voce			
27.8.1	Enumerate the common poisoning in children.			Y	Lecture/SGD	Written/Viva voce			
27.8.1	Elaborate on the clinical signs and symptoms of common poisoning in children (kerosene, organophosphorus, paracetamol and corrosive).			Y	Lecture/SGD	Written/Viva voce			
27.8.1	Discuss the management of common poisoning in children (kerosene, organophosphorus, paracetamol and corrosive).			Y	Lecture/SGD	Written/Viva voce			
PE 27.9	Discuss oxygen therapy, in Pediatric emergencies and modes of administration			Y	Lecture/SGD	Written/Viva voce			
27.9.1	Enumerate the indications of oxygen therapy in pediatric emergencies.			Y	Lecture/SGD	Written/Viva voce			

27.9.2	Describedifferentmodalitiesforoxygendelivery.			Y	Lecture/SGD	Written/ Vivavoce			
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PE 27.10	Observe the various methods of administering Oxygen			Y	Demonstration	Document in Logbook			
27.10.1	Observed and noted various methods of oxygen delivery.			Y	Demonstration Bedside	Document in Logbook			
27.10.2	Monitor oxygen delivery in a patient.			Y	Demonstration Bedside	Document in Logbook			

PE 27.11	Explain the need and process of triage of sick children brought to health facility			Y	Lecture,SGD	Written/Viva voce			
27.11.1	Discuss the need of triage of sick child especially in resource limited setting.			Y	Lecture,SGD	Written/Viva voce			
27.11.2	Explain the process of triage of sick children.			Y	Lecture,SGD	Written/Viva voce			
PE 27.12	Enumerate emergency signs and priority signs			Y	Lecture,SGD	Written/Viva voce			
27.12.1	Enumerate various emergency and priority signs in a sick child.			Y	Lecture,SGD,	Written/Viva voce			
PE 27.13	List the sequential approach of assessment of emergency and priority signs			Y	Lecture,SGD	Written/Viva voce			
27.13.1	Discuss the systematic approach for assessing a sick child based on emergency and priority signs as per WHO-ETAT guidelines.			Y	Lecture,SGD	Written/Viva voce			
PE 27.14	Assess emergency signs and prioritize			Y	DOAP session, Skills lab	Skills Assessment			
27.14.1	Assess and recognize emergency signs in a sick child and prioritize treatment.			Y	Bedside, skill lab	Skill assessment			
PE 27.15	Assess airway and breathing: recognizes signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting			Y	DOAP session, Skills lab	Skills Assessment			
27.15.1	Recognizes signs of severe respiratory distress by assessing cyanosis, severe chest indrawing and grunting.			Y	Bedside, DOAP session	skill assessment, OSCE with video	3		

PE 27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open			Y	DOAP session, Skills Lab	Skills Assessment	3		
	airway in a simulated environment								
27.16.1	Demonstrate the methods of opening the airway in infants and children by head tilt-chin lift and jaw thrust methods on mannequin.			Y	BL Straining session using mannequin	OSCE using mannequin	3		
PE 27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate			Y	DOAP session, Skills Lab	Skills Assessment	3		

27.17.1	Demonstrate the appropriate use of various oxygen delivery systems in different clinical scenarios along with recommended flow rate of oxygen			Y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
PE 27.18	Assess airway and breathing: perform assisted ventilation by Bag and mask in a simulated environment			y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
27.18.1	Demonstrate assisted ventilation using bag and mask in a simulated environment			y	DOAP session, Skills Lab	Skill assessment, OSCE using mannequin	3		
PE 27.19	Check for signs of shock i.e. pulse, Blood pressure, CRT			y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.1	Check pulse as a sign of shock.			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.2	Measure blood pressure to check for shock.			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.19.3	Assess CRT for checking for shock.			Y	DOAP session, Skills Lab	Skill assessment	3		
PE 27.20	Secure an IV access in a simulated environment			Y	DOAP session, Skills Lab	Skill assessment,	3		
27.20.1	Collect all the necessary items for IV access.			Y	DOAP session, Skills Lab	Skill assessment	3		
27.20.2	Identify an appropriate site and vein.			Y	DOAP session, Skills Lab	Skill assessment	3		

27.20.3	ObtainIVaccessinthemanikin.			Y	DOAPsession,S killsLab	Skillassesment	3		
27.20.4	SecuretheIVlineappropriately.			Y	DOAPsession,S killsLab	Skillassesment	3		
27.20.5	Maintainasepsisthroughouttheprocedure.			Y	DOAPsession,Skill s Lab	Skillassesment	3		

PE 27.21	Choosethetypeoffluidandcalculatethefluid requirementinshock			Y	DOAPsession, SkillsLab	Skill assessment	3		
27.21.1	Chooseappropriatefluidaccordingtodifferenttypesofshock.			Y	DOAPsession,SkillsLab	Skillassessment	3		
27.21.2	Calculatethefluidfor managingdifferenttypesofshockat differentage/sizeofthechild.			Y	DOAPsession,SkillsLab	Skillassessment	3		
PE 27.22	Assess level of consciousness & provide emergencytreatment to a child with convulsions/ coma - Positionanunconsciouschild - Positionachildwithsuspectedtrauma - AdministerIV/perrectalDiazepamforaconvulsingchildinasimulatedenvironment			Y	DOAP session,SkillsLab	Skillassessment	3		
27.22.1	Assesslevelofconsciousness			Y	DOAPsession,SkillsLab	Skillassessment	3		
27.22.2	Provideemergencytreatmenttoachildwithconvulsions/comaincludingABCDE			Y	DOAPsession,SkillsLab	Skillassessment	3		
27.22.3	AdministerIV/perrectalDiazepamforaconvulsingchildinasimulatedenvironment			Y	DOAPsession,SkillsLab	Skillassessment	3		
27.22.4	Positionanunconsciouschildappropriately.			Y	DOAPsession,SkillsLab	Skillassessment	3		
27.22.5	Positionachildwithsuspectedtraumakeepingtheneccessaryprecautions.			Y	DOAPsession,SkillsLab	Skillassessment	3		
PE 27.23	Assesssignsofseveredehydration			Y	DOAPsession, SkillsLab	Skill assessment	3		
27.23.1	Identifysignsofseveredehydration			Y	DOAPsession,SkillsLab	Skillassessment	3		

PE 27.24	Monitoring and maintaining temperature: define hypothermia. Describe the clinical features, complications and management of H			Y	Lecture/SGD	Written/ Vivavoce			
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	ypothermia								
27.24.1	Define Hypothermia.			Y	Lecture/SGD	Written/Viva voce			
27.24.2	Describe clinical features of Hypothermia.			Y	Lecture/SGD	Written/ Vivavoce			

27.24.3	Enumerate complications of hypothermia.			Y	Lecture/SGD	Written/ Viva voce			
27.24.4	Describe management of Hypothermia.			Y	Lecture/SGD	Written/Viva voce			
PE 27.25	Describe the advantages and correct method of keeping an infant warm by skin to skin contact			Y	Lecture/SGD	Written/Viva voce			
27.25.1	Describe the correct method of keeping infant warm by skin to skin contact			Y	Lecture/SGD	Written/ Viva voce			
27.25.2	Enumerate the advantages of providing warmth by skin to skin contact			Y	Lecture/SGD	Written/Viva voce			
PE 27.26	Describe the environmental measures to maintain temperature			Y	Lecture/SGD	Written/Viva voce			
27.26.1	Describe the environmental measures to maintain temperature in sick children.			Y	Lecture/SGD	Written/ Viva voce			
PE 27.27	Assess for hypothermia and maintain temperature			Y	Skills Lab	Skill assessment			
27.27.1	Assess a sick child for hypothermia.			Y	Skills Lab	Skill assessment			
27.27.2	Apply measures to maintain temperature in sick children.			Y	Skills Lab	Skill assessment			
PE 27.28	Provide BLS for children in manikin			Y	Skills Lab	Skill assessment	3		
27.28.1	Perform all the steps of BLS in children.			Y	Skills Lab	Skill assessment	3		
PE 27.29	Discuss the common causes, clinical presentation, medico-legal implications of abuse			Y	Lecture/SGD	Written/Viva voce			
27.29.1	Enumerate common causes of child abuse.			Y	Lecture/SGD	Written/Viva voce			

27.29.2	Describe clinical presentations of child abuse.			Y	Lecture/SGD	Written/ Vivavoce			
27.29.3	Discuss medicolegal implications of child abuse.			Y	Lecture/SGD	Written/Viva voce			
PE 27.30	Demonstrate confidentiality with regard to abuse			Y	Skill lab, simulated patients	Skill assessment			
27.30.1	Maintains confidentiality with regard to child abuse in a simulated setting			Y	Skill lab, simulated patients	Skill assessment			

PE 27.31	Assess child for signs of abuse			Y	DOAP, Skills Lab	Logbook,			
27.31.1	Elicit appropriate history for suspected child abuse.			Y	DOAP, Skills Lab	Logbook			
27.31.2	Examine the child for evidence of child abuse.			Y	DOAP, Skills Lab	Logbook			
27.31.3	Based on history and examination make a provisional diagnosis of specific type of child abuse			Y	DOAP, Skills Lab	Logbook			
PE 27.32	Counsel parents of dangerously ill/terminally ill child to break a bad news			Y	DOAP, Skills Lab	Logbook,			
27.32.1	Communicate with empathy and counsel parents of dangerously ill/terminally ill child to break a bad news using an appropriate technique			Y	DOAP, Skills Lab	Logbook			
27.32.2	Answer the queries/questions of parents appropriately			Y	DOAP, Skills Lab	Logbook			
27.32.3	Provide emotional support to parents			Y	DOAP, Skills Lab	Logbook			
PE 27.33	Obtain Informed Consent			Y	DOAP, Skills Lab	Logbook,			
27.33.1	Provide adequate information as per the need in a language understood by the consent giver			Y	DOAP, Skills Lab	Logbook			
27.33.2	Answer queries/questions appropriately			Y	DOAP, Skills Lab	Logbook			
27.33.3	Obtain the consent on an appropriated document.			Y	DOAP, Skills Lab	Logbook			
PE 27.34	Willing to be a part of the ER team			Y	DOAP, Skills Lab	Logbook,			
27.34.1	Takes an active part in the ER team performing the assigned role and responsibilities			Y	DOAP, Skills Lab	Logbook			
PE 27.35	Attend to emergency calls promptly			Y	DOAP, Skills Lab	Logbook,			
27.35.1	Respond promptly to emergency calls			Y	DOAP, Skills Lab	Logbook,			

Topic:Respiratorysystem	Numberofcompetencies:(20)	Numberofprocedureshatrequirecertification:(NI
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PE28.1	Discuss the etiopathogenesis, clinical features and management of Nasopharyngitis			Y	Lecture,SGD	Written/ Vivavoce		ENT	

28.1.1	EnumeratetheetiologalfactorsforNasopharyngiti s.			Y	lectur e,SGD	Written/ Vivavoce			
28.1.2	DescribethetheclinicalfeaturesofNasopharyngitis			Y	lecture, SGD	Written/Viva voce			
28.1.3	OutlinethemanagementofNasopharyngitis			Y	lectur e,SGD	Written/ Vivavoce			
PE28.2	DiscusstheetiopathogenesisofPharyngotonsillitis			Y	Lecture,SGD	Written/Viva voce		ENT	
28.2.1	EnumeratetheetiologalfactorscausingPharyngotonsillitis.			Y	lecture,SGD	Written/ Vivavoce			
PE28.3	Discusstheclinicalfeaturesandmanagementof Pharyngotonsillitis			Y	Lecture,SGD	Written/Viva voce		ENT	
28.3.1	DescribethetheclinicalfeaturesofPharyngotonsillitis.			Y	lectur e,SGD	Written/V ivavoce			
28.3.2	OutlinethemanagementofacutePharyngotonsillitis.			Y	lectur e,SGD	Writte n/Viva voce			
PE28.4	Discusstheetiopathogenesis,clinicalfeaturesan d managementofAcuteOtitisMedia(AOM)			Y	Lecture,SGD	Written/Viva voce		ENT	
28.4.1	ListthecommonetiologalagentcausingAcuteOtitisMedia (AOM)			Y	lecture, SGD	Written/Viva voce			
28.4.2	DiscussthepathogenesisofAcuteOtitisMedia(AOM)			Y	lecture,SGD	Written/ Vivavoce			
28.4.3	EnumeratetheclinicalfeaturesofAcuteOtitisMedia(AOM),recurrentAOM and OMwitheffusion			Y	lectur e,SGD	Written/ Vivavoce			
28.4.4	OutlinethemanagementofAcuteOtitisMedia(AO M),recurrentAOM andOM witheffusion			Y	lectur e,SGD	Written/ Vivavoce			

PE28.5	Discuss the etiopathogenesis, clinical features and			Y	Lecture, SGD	Written/Viva		ENT	
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	management of Epiglottitis					voce			
28.5.1	Describe the etiopathogenesis of Epiglottitis			Y	Lecture, SGD	Written/ Viva voce			
28.5.2	Enumerate the clinical features of Epiglottitis			Y	Lecture, SGD	Written/ Viva voce			

28.5.3	OutlinethemanagementofEpiglottitisincludingacutecare			Y	Lecture,SGD	Written/ Vivavoce			
PE28.6	Discuss the etiopathogenesis, clinical features and management of Acute laryngo-tracheo-bronchitis			Y	Lecture, Small group Discussion	Written/ Vivavoce		ENT	
28.6.1	Describe the etiopathogenesis of Acute laryngo-tracheo-bronchitis (croup)			Y	Lecture,SGD	Written/ Vivavoce			
28.6.2	Describe the clinical features of Acute laryngo-tracheo-bronchitis			Y	Lecture,SGD	Written/ Vivavoce			
28.6.3	OutlinethemanagementofAcute laryngo-tracheo-bronchitis.			Y	Lecture,SGD	Written/Viva voce			
PE28.7	Discuss the etiology, clinical features and management of Stridor in children			Y	Lecture,SGD	Written/Viva a voce		ENT	
28.7.1	Enumerate the etiology of stridor in children			Y	lectur e,SGD	Written/ Vivavoce			
28.7.2	Describe the clinical features of stridor in children			Y	Lecture,SGD	Written/ Vivavoce			
28.7.3	Discuss the differential diagnosis of stridor			Y	Lecture,SGD	Written/Viva voce			
28.7.4	Outlinethemanagementofstridor.			Y	Lecture,SGD	Written/ Vivavoce			
PE28.8	Discuss the types, clinical presentation, and management of foreign body aspiration in infants and children			Y	Lecture,SGD	Written/ Vivavoce		ENT	
28.8.1	List the objects commonly aspirated by children			Y	Lecture,SGD	Written/Viva voce			
28.8.2	Enumerate the clinical features of FB aspiration			Y	Lecture,SGD	Written/ Vivavoce			

28.8.3	Describe 'Heimlich maneuver' for a child and '5 backslaps and 5 chest thrust' for an infant			Y	Lecture, SGD	Written/Viva voce			
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28.8.5	Outline the management of FB aspiration			Y	Lecture, SGD	Written/Viva voce			
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PE28.9	Elicit, document and present age appropriate history of a child with upper respiratory problem including Stridor			Y	Bedside, skilllab	Skill Assessment		ENT	
28.9.1	Elicit detailed history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.9.2	Document the history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	Logbook			
28.9.3	Present the history of a child with upper respiratory problem including stridor			Y	Bedside, skilllab	Logbook			
PE28.10	Perform otoscopic examination of the ear			Y	DOAP session	Skills Assessment		ENT	
28.10.1	Counsel the parent and child to prepare for otoscopic examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.10.2	Position the child and perform otoscopic examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
PE28.11	Perform throat examination using tongue depressor			Y	DOAP session	Skills Assessment		ENT	
28.11.1	Counsel the parent and child to prepare for throat examination			Y	Bedside, skilllab	OSCE/Skills Assessment			
28.11.2	Position the child and perform throat examination using a tongue depressor			Y	Bedside, skilllab	OSCE/Skills Assessment			
PE28.12	Perform examination of the nose			Y	DOAP session	Skills Assessment		ENT	
28.12.1	Position the child and perform nose examination			Y	Bedside, skilllab	OSCE/Skills Assessment			

PE 28.13	Analyze the clinical symptoms and interpret physical findings and make a provisional/differential diagnosis in a child with ENT symptoms			Y	Bedside	Skills Assessment			
28.13.1	Discuss the provisional/differential diagnosis in a child with ENT symptoms after analysis of history and physical examination.			Y	Bedside	Skills Assessment/OSCE/Clinical Case			
PE 28.14	Develop a treatment plan and document appropriately in a child with upper respiratory symptoms			Y	Bedside	Skills Assessment			

28.14.1	Plantreatmentinachildwithupperrespiratorysymptoms			Y	Bedside	OSCE/SkillsAssessment			
28.14.2	Prescribesupportiveandsymptomatictreatmentforupperrespiratorysymptoms			Y	Bedside	OSCE/SkillsAssessment			
PE 28.15	StratifyriskinchildrenwithstridorusingIMNCIguidelines			Y	Bedside	Logbookdocumentation			
28.15.1	ClassifythechildwithstridorasperIMNCIguidelines			Y	Bedside	Logbookdocumentation/clinicalcase			
PE 28.16	Interpretbloodtestsrelevanttoupperrespiratory problems			N	Bedside,SGD	Logbook			
28.16.1	Planandinterprettherelevantbloodtestinapatientwithupperrespiratory problems			N	Bedside,SGD	Logbook			
PE 28.17	Interpret X-ray of the paranasal sinuses and mastoid;and /or use, written report in case of management.Interpret CXR in foreign body aspiration and lowerrespiratorytractinfection,understandthesignificance ofthymicshadow inpediatricchestX-rays			Y	Bedside,SGD	SkillsAssessment		ENT,Radio D	
28.17.1	InterprettheX-rayofparanasalsinusesandmastoidforvariouscommon diseases			Y	Bedside,SGD	OSCE/SkillsAssessment			
28.17.2	InterpretthechestX-rayforidentifysuspectedFBaspirationandlowerrespiratorytractinfection			Y	Bedside,SGD	SkillsAssessment/OSCE			

28.17.3	Identify thymic shadow in chest X-ray.			Y	Bedside,SGD	Skills Assessment/OSCE			
28.17.4	Plan the treatment after interpreting X-ray and/or its written report.			Y	Bedside,SGD	Skills Assessment/OSCE			
PE 28.18	Describe the etiology, pathogenesis, diagnosis, clinical features, management and prevention of lower respiratory infections including bronchiolitis, wheeze associated LRTI pneumonia and empyema			Y	SGD, Lecture	Written, Viva voce			
28.18.1	Enumerate the common organisms causing LRTI			Y	Lecture,SGD,	Written/Viva voce			
28.18.2	Discuss the pathogenesis of LRTI including bronchiolitis, WALRI, pneumonia and empyema.			Y	Lecture,SGD,	Written/Viva voce			
28.18.3	Describe the clinical features of LRTI including bronchiolitis, WALRI, pneumonia and empyema			Y	Lecture,SGD,	Written/Viva voce			
28.18.4	Discuss the diagnosis of LRTI including bronchiolitis, WALRI, pneumonia and empyema after taking relevant clinical history and examination.			Y	Lecture,SGD,	Written/Viva voce			
28.18.5	Describe relevant investigations in a child with LRTI			Y	Lecture,SGD,	Written, Viva voce			
28.18.6	Discuss the treatment of LRTI including bronchiolitis, WALRI, pneumonia and empyema			Y	Lecture,SGD,	Written, Viva voce			
28.18.7	Discuss the preventive strategies for LRTI			Y	Lecture,SGD,	Viva voce, SAQ/MCQ			

PE 28.19	Describe the etiology, pathogenesis, diagnosis, clinical features, management and prevention of asthma in children			Y	Lecture, SGD	Written/ Vivavoce		Resp Med	
28.19.1	Define Asthma in children as per ATM guidelines.			Y	Lecture, SGD,	Written, Viva voce			
28.19.2	Discuss the pathophysiology of asthma in children.			Y	Lecture, SGD,	Written			

						test, Vivavoce			
28.19.3	Describe the clinical features of asthma			Y	Lecture, SGD,	Written test, Vivavoce			
28.19.4	Discuss the diagnosis of asthma based on relevant clinical history, family history and physical examination.			Y	Lecture, SGD,	Vivavoce			
28.19.5	Enumerate the investigations in a child with Asthma			Y	Lecture, SGD,	Vivavoce			
28.19.6	List the drugs used for treating asthma in children			Y	Lecture, SGD,	Written test, Vivavoce			
28.19.7	Describe the treatment of acute attack of asthma			Y	Lecture, SGD,	Written test, Vivavoce			
28.19.8	Describe the stepwise approach of preventive therapy for asthma as per ATM/GINA guidelines			Y	Lecture, SGD,	Written test, Vivavoce			
28.19.9	Describe various drug delivery devices for asthma			Y	Lecture, SGD	Written, Vivavoce			
28.19.10	Enumerate asthma triggers			Y	Lecture, SGD,	Written, Viva voce			

PE 28.20	Counsel the child with asthma on the correct use of inhalers in a simulated environment			Y	Bedside, SGD, Lecture	Skills Assessment Written Viva voce		Resp Med	
28.20.1	Counsel the child and the caretaker for correct use of MDI and spacer at initiation of therapy and on follow up			Y	Skill lab, clinics, lecture	OSCE			

Topic: Anemia and other Hemato-oncologic disorders in Children		Number of competencies: (20)			Number of procedures that require certification: (NIL)				
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PE 29.1	Discuss the etiopathogenesis, clinical features, classification and approach to a child with anemia			Y	Lecture, SGD	Written, viva-voce		Path, Physio	
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29.1.1	Define anemia as per WHO GUIDELINES			Y	Lecture, SGD	Written, viva-voce			
29.1.2	Enumerate the causes of anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.3	Describe the pathogenesis of anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.4	Enumerate clinical features of anemia			Y	Lecture, SGD	Written, viva-voce			
29.1.5	Classify Anemia according to red cell morphology			Y	Lecture, SGD	Written, viva-voce			
29.1.6	Describe the approach to a child with Anemia.			Y	Lecture, SGD	Written, viva-voce			
29.1.7	List the investigations in child with anemia.			Y	Lecture, SGD	Written, viva-voce			
PE 29.2	Discuss the etiopathogenesis, clinical features and management of iron deficiency anemia.			Y	Lecture, SGD	Written/Viva-voce		Path, Physio	
29.2.1	Enumerate the causes of iron deficiency anemia in children			Y	Lecture, SGD	Written, viva-voce			

29.2.2	Describe the pathogenesis of iron deficiency anemia.			Y	Lecture,SGD	Written, viva-voce			
29.2.3	Describe clinical features of iron deficiency anemia in children.			Y	Lecture,SGD	Written, viva-voce			
29.2.4	List the investigations in a child with iron deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.2.5	Describe the treatment of iron deficiency anemia in children.			Y	Lecture,SGD	Written, viva-voce			
PE 29.3	Discuss the etiopathogenesis, clinical features and management of Vitamin B-12, Folate deficiency anemia.			Y	Lecture,SGD	Written/Viva-voce		Path,Physio	
29.3.1	Enumerate the causes of vitamin B-12 and folic acid deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.2	Describe the pathogenesis of Vitamin B-			Y	Lecture,SGD	Written,			

	12 deficiency.					viva-voce			
29.3.3	Describe the pathogenesis of folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.4	Describe the clinical features of vitamin B-12 and Folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.5	Enumerate the investigations for a child of Vitamin B-12 and Folate deficiency.			Y	Lecture,SGD	Written, viva-voce			
29.3.6	Describe the treatment for a child suffering from Vitamin B-12 and Folic acid deficiency.			Y	Lecture,SGD	Written, viva-voce			
PE 29.4	Discuss the etiopathogenesis, clinical features and management of Hemolytic anemia, Thalassemia Major, Sickle cell anemia, Hereditary spherocytosis, Autoimmune hemolytic anemia and hemolytic uremic syndrome.			Y	Lecture,SGD	Written, viva-voce		Path,Physio	

29.4.1	Define Hemolytic Anemia.			Y	Lecture,SGD	Written, viva-voce			
29.4.2	Enumerate the causes of hemolytic anemia in children.			Y	Lecture,SGD	Written, viva-voce			
29.4.3	Describe the pathogenesis of different types of hemolytic anemia.			Y	Lecture,SGD	Written, viva-voce			
29.4.4	Describe the clinical features of hemolytic anemia, Thalassemia Major, Sickle cell anemia, Hereditary spherocytosis, Auto-immune hemolytic anemia and hemolytic uremic syndrome			Y	Lecture,SGD	Written, viva-voce			
29.4.5	List the investigations for diagnosis of hemolytic anemia.			Y	Lecture,SGD	Written, viva-voce			

29.4.6	Differentiate various types of hemolytic anemia based on clinical features and investigations.			Y	Lecture,SGD	Written, viva-voce			
29.4.7	Describe treatment of hemolytic anemia Thalassemia Major, Sickle cell anemia, Hereditary spherocytosis, Auto-immune hemolytic anemia and hemolytic uremic syndrome.			Y	Lecture,SGD	Written, viva-voce			
29.4.8	Describe the role of chelation therapy and recall the drugs, dosages and side-effects of the drugs.			Y	Lecture,SGD	Written, viva-voce			
PE29.5	Discuss the National Anemia Control Program.			Y	Lecture,SGD	Written, viva-voce		ComMed	
29.5.1	Describe National Anemia Control Program.			Y	Lecture,SGD	Written, viva-voce			
PE29.6	Discuss the cause of thrombocytopenia in children: describe the clinical features and management of idiopathic Thrombocytopenic Purpura.			Y	Lecture,SGD	Written, viva-voce		Path	

29.6.1	Define thrombocytopenia			Y	Lecture,SGD	Written, viva-voce			
29.6.2	Enumerate the causes of thrombocytopenia in children.			Y	Lecture,SGD	Written, viva-voce			
29.6.3	Describe the pathogenesis of ITP.			Y	Lecture,SGD	Written, viva-voce			
29.6.4	Describe the clinical features of ITP.			Y	Lecture,SGD	Written, viva-voce			
29.6.5	Outline the investigations of ITP			Y	Lecture,SGD	Written, viva-voce			
29.6.6	Outline the management of ITP.			Y	Lecture,SGD	Written, viva-voce			
PE29.7	Discuss the etiology, classification, pathogenesis and clinical features of Hemophilia in children.			Y	Lecture,SGD	Written, viva-voce		Path	
29.7.1	Describe the etiology of hemophilia.			Y	Lecture,SGD	Written, viva-voce			

29.7.2	Classify hemophilia.			Y	Lecture,SGD	Written, viva-voce			
29.7.3	Describe the pathogenesis of hemophilia.			Y	Lecture,SGD	Written, viva-voce			
29.7.4	Enumerate the clinical features of hemophilia.			Y	Lecture,SGD	Written, viva-voce			
PE29.8	Discuss the etiology, clinical presentation and management of Acute Lymphoblastic Leukemia in Children.			N	Lecture,SGD	Written, Viva-voce		Path	
29.8.1	State the etiologies of Acute Lymphoblastic Leukemia (ALL).			N	Lecture,SGD	Written, viva-voce			
29.8.2	Enumerate risk factors for childhood leukemia.			N	Lecture,SGD	Written, viva-voce			

29.8.3	Describe the clinical presentation of ALL.			N	Lecture,SGD	Written, viva-voce			
29.8.4	Outline the investigations for diagnosis of ALL.			N	Lecture,SGD	Written, viva-voce			
29.8.5	Outline the treatment for ALL.			N	Lecture,SGD	Written, viva-voce			
PE29.9	Discuss the etiology, clinical presentation and management of Lymphoma in children.			N	Lecture,SGD	Written, Viva - Voce		Path	
29.9.1	Define lymphoma.			N	Lecture,SGD	Written, viva-voce			
29.9.2	State the etiology of Lymphoma and its types.			N	Lecture,SGD	Written, viva-voce			
29.9.3	Describe the pathology of lymphomas.			N	Lecture,SGD	Written, viva-voce			
29.9.4	Recall the clinical features of Lymphomas.			N	Lecture,SGD	Written, viva-voce			
29.9.5	Outline the investigations (diagnostic workup) for Lymphomas.			N	Lecture,SGD	Written, viva-voce			
29.9.6	Enumerate the treatment modalities for Lymphoma			N	Lecture,SGD	Written, viva-voce			

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PE29.10	Elicit, document and present the history related to Hematology.			Y	Bedside, Skillslab	Skill Station			
29.10.1	Elicit the history related to a hematological disorder.			Y	Bedside, Skillslab	Skill Station			
29.10.2	Document the history.			Y	Bedside, Skillslab	Skill Station			
29.10.3	Present the history			Y	Bedside, Skillslab	Skill Station			

PE29.11	Identify external markers for hematological disorders e.g. Jaundice, Pallor, Petechiae, Purpura, Ecchymosis, Lymphadenopathy, bone tenderness, loss of weight, Mucosal and large joint bleed.			Y	Bedside, Skills Lab	Skill assessment			
29.11.1	Identify jaundice, pallor, petechial spots, purpura, ecchymosis, lymphadenopathy, bone tenderness, Mucosal and large joint bleed in a patient of hematological disorder.			Y	Bedside, Skills Lab	Skill assessment			
PE29.12	Perform examination of the abdomen, demonstrate Organomegaly.			Y	Bedside, Skills Lab	Skill assessment			
29.12.1	Perform per abdomen examination.			Y	Bedside, Skills Lab	Skill assessment			
29.12.2	Demonstrate organomegaly in a child after abdominal examination.			Y	Bedside, Skills Lab	Skill assessment			
PE29.13	Analyze symptoms and interpret physical signs to make a provisional/differential diagnosis.			Y	Bedside, Skills Lab	Skill assessment			
29.13.1	Analyze symptoms related to hematological conditions.			Y	Bedside, Skills Lab	Skill assessment			
29.13.2	interpret physical signs to make a provisional diagnosis			Y	Bedside, Skills Lab	Skill assessment			
29.13.3	Produce differential diagnosis keeping in mind the symptoms and signs related to haematological conditions.			Y	Bedside, Skills Lab	Skill assessment			

PE29.14	Interpret CBC, LFT			Y	Bedside, Skills Lab	Skill assessment			
29.14.1	interpret Complete Blood Count Report			Y	Bedside, Skills Lab	Skill assessment			

29.14.2	InterpretLiverFunctionTestsReport.			Y	Bedside,SkillsLab	Skillassessment			
PE29.15	PerformandInterpretperipheralsmear.			Y	DOAPsession	DocumentinLogbook			
29.15.1	Prepareaperipheralbloodfilm.			Y	DOAPsession	DocumentinLogbook			
29.15.2	Interprettheperipheralbloodfilm.			Y	DOAPsession	DocumentinLogbook			
29.15.3	Makediagnosisofperipheral bloodfilm.			Y	DOAPsession	DocumentinLogbook			
PE29.16	DiscusstheindicationsforHemoglobinelectrophoresis andinterpret thereport.			N	Lecture,SGD	Written/Viva-voce		Biochemistry	
29.16.1	EnumeratetheindicationsforHemoglobinelectrophoresis			N	Lecture,SGD	Written/Viva-voce			
29.16.2	interpretthereportofHemoglobinelectrophoresis			N	Lecture,SGD	Written/Viva-voce			
PE29.17	Demonstrateperformanceofbonemarrowaspiration inmannequin.			Y	Skillslab	DocumentinLogbook			
29.17.1	identifythesitesofbonemarrowaspiration			Y	SkillsLab	DocumentinLogbook			
29.17.2	Demonstratethecorrectstepsofbonemarrowaspiration underasepticconditionsonamannequin.			Y	SkillsLab	DocumentinLogbook			
PE29.18	EnumeratethereferralcriteriaforHematologic al conditions.			Y	Bedside,Small groupactivity	Written/Viva-voce			

29.18.1	Enumerate the criteria for referring a patient with Hematological conditions			Y	Small group activity	Written/ Viva-voce			
PE29.19	Counsel and educate patients about prevention and treatment of anemia.			Y	Bedside, Skills Lab	Document in Logbook			
29.19.1	Counsel the parents empathetically about the diet and preventivemeasuresfor anemia.			Y	Bedside, Skills Lab	Document in Logbook			
29.19.2	Educate the patients/parents about the correct usage of drugs.			Y	Bedside, Skills Lab	Document in Logbook			
PE29.20	Enumerate the indications for splenectomy and precautions			N	Small group activity	Written/Viva-voce			
29.20.1	Enumerate the indications for splenectomy			N	Small group activity	Written/ Viva-voce			
29.20.2	Explain about the immunization and antibiotic prophylaxis			N	Small group activity	Written/ Viva-voce			
Topic: Systemic Pediatrics-Central Nervous System Number of competencies: (23) Number of procedures that require certification: (NIL)									
PE 30.1	Discuss the etiopathogenesis, clinical features, complications, management and prevention of meningitis in children			Y	Lecture, SGD	Written/ Viva voce		Micro	
30.1.1	Enumerate all common causes of meningitis in children.			Y	Lecture, SGD	Written/Viva voce			
30.1.2	Describe pathogenesis of meningitis in children.			Y	Lecture, SGD	Written/ Viva voce			
30.1.3	Describe all the clinical features of meningitis in children.			Y	Lecture, SGD	Written/ Viva voce			
30.1.4	Enumerate all the complications of meningitis in children.			Y	Lecture, SGD	Written/ Viva voce			

30.1.6	Enumerate all the investigations to diagnose meningitis in children.			Y	Lecture,SGD	Written/ Vivavoce			
30.1.7	Describe the CSF picture diagnostic of pyogenic meningitis.			Y	Lecture,SGD	Written/ Vivavoce			
30.1.8	Describe the standard treatment of meningitis based on age of patient and organism if identified.			Y	Lecture,SGD	Written/ Vivavoce			
30.1.9	Enumerate various preventive measures for meningitis.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.2	Distinguish bacterial, viral and tuberculous meningitis			Y	Lecture,SGD	Written/ Vivavoce		Micro	
30.2.1	Differentiate the clinical features of bacterial, viral and tubercular meningitis in a child			Y	Lecture,SGD	Written/ Vivavoce			
30.2.2	Differentiate the cerebrospinal fluid (CSF) picture of bacterial, viral and tubercular meningitis in a child			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.3	Discuss the etiopathogenesis, classification, clinical features, complication and management of Hydrocephalus in children			Y	Lecture,SGD	Written/ Vivavoce			
30.3.1	Define hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			
30.3.2	Enumerate all causes of hydrocephalus.			Y	Lecture,SGD	Written/Viva voce			
30.3.3	Describe normal CSF circulation and pathogenesis of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.4	Classify types of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.5	Describe all the clinical features of hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			

30.3.6	Enumerate all the complications of hydrocephalus.			Y	Lecture,SGD	Written/ Vivavoce			
30.3.7	Describe the radiological picture (USG, CT scan or MRI)			Y	Lecture,SGD	Written/ Vivavoce			

	diagnostic of hydrocephalus								
30.3.8	Enumerate the investigations required to make an etiological diagnosis of hydrocephalus			Y	Lecture,SGD	Written/ Vivavoce			
30.3.9	Describe the standard treatment for hydrocephalus including medical and surgical modalities.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.4	Discuss the etiopathogenesis, classification, clinical features, and management of Microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.1	Define microcephaly.			Y	Lecture,SGD	Written/ Vivavoce			
30.4.2	Enumerate all causes of microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.3	Describe pathogenesis of microcephaly in children			Y	Lecture,SGD	Written/Viva voce			
30.4.4	Classify types of microcephaly in children			Y	Lecture,SGD	Written/ Vivavoce			
30.4.5	Describe all the clinical features of microcephaly			Y	Lecture,SGD	Written/ Vivavoce			
30.4.6	Describe treatment for microcephaly.			Y	Lecture,SGD	Written/ Vivavoce			

PE 30.5	Enumerate the Neural tube defects. Discuss the causes, clinical features, types, and management of Neural Tube defect			Y	Lecture,SGD	Written/ Vivavoce			
30.5.1	Define Neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.2	Enumerate all causes of Neural tube defects.			Y	Lecture,SGD	Written/Viva voce			
30.5.3	Describe pathogenesis of Neural tube defects.			Y	Lecture,SGD	Written/Viva voce			
30.5.4	Classify types of Neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.5	Describe all the clinical features of the common types of Neural tube defects			Y	Lecture,SGD	Written/ Vivavoce			
30.5.6	Describe radiological investigations (USG local and USG Head, CT scan and MRI) and the relevant findings to diagnose Neural tube defects and associated conditions			Y	Lecture,SGD	Written/ Vivavoce			
30.5.7	Outline medical and surgical management including immediate treatment of neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.8	Enumerate indications and contraindications of conservative and surgical modalities to treat neural tube defects.			Y	Lecture,SGD	Written/ Vivavoce			
30.5.9	Enumerate steps for prevention of neural tube defects.			Y	Lecture,SGD	Written/Viva voce			
PE 30.6	Discuss the etiopathogenesis, clinical features, and management of Infantile hemiplegia			Y	Lecture,SGD	Written/ Vivavoce			
30.6.1	Define infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			

30.6.2	Enumerate all causes of infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.3	Describe pathogenesis of infantile hemiplegia.			Y	Lecture,SGD	Written/Viva voce			
30.6.4	Describe all the clinical features of infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.5	Enumerate investigations to diagnose infantile hemiplegia.			Y	Lecture,SGD	Written/ Vivavoce			
30.6.6	Describe all the treatment modalities for infantile hemiplegia including medical management, occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.7	Discuss the etiopathogenesis, clinical features, complications and management of Febrile seizures in children			Y	Lecture,SGD	Written/ Vivavoce			

30.7.1	Define Febrile seizures.			Y	Lecture,SGD	Written/Viva voce			
30.7.2	Enumerate causes of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.3	Describe the pathogenesis of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.4	Classify types of Febrile seizures.			Y	Lecture,SGD	Written/Viva			

						voce			
30.7.5	Describe the clinical features of different types of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.6	Enumerate complications of Febrile seizures.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.7	Enumerate the investigations for diagnosis of Febrile seizures and the cause of the underlying fever.			Y	Lecture,SGD	Written/ Vivavoce			
30.7.8	Describe the standard treatment for Febrile seizures in children including intermittent prophylaxis and treatment of cause of fever.			KH	Lecture,SGD	Written/ Vivavoce			
PE 30.8	Define epilepsy. Discuss the pathogenesis, clinical types, presentation and management of Epilepsy in children			K	Lecture,SGD	Written/ Vivavoce			
30.8.1	Define Epilepsy.			KH	Lecture,SGD	Written/ Vivavoce			
30.8.2	Describe the pathogenesis of Epilepsy.			Y	Lecture,SGD	Written/Viva voce			
30.8.3	Classify clinical types of Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.4	Describe the various presentations of Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.5	Enumerate and Describe the investigations required to diagnose Epilepsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.8.6	Outline the medical and surgical management of Epilepsy			Y	Lecture,SGD	Written/ Vivavoce			
30.8.7	Enumerate common Antiepileptic drugs and the type of Epilepsy in which they are indicated.			Y	Lecture,SGD	Written/ Vivavoce			

30.8.8	Enumerate the side effects of commonly used Antiepileptic drugs.			Y	Lecture,SGD	Written/ Vivavoce			
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PE 30.9	Define Status Epilepticus. Discuss the clinical presentation and management			Y	Lecture,SGD	Written/ Vivavoce			
30.9.1	Define Status epilepticus.			Y	Lecture,SGD	Written/ Vivavoce			
30.9.2	Describe the clinical presentation of status epilepticus			Y	Lecture,SGD	Written/ Vivavoce			
30.9.4	Enumerate investigations required for diagnosis of status			Y	Lecture,SGD	Written/Viva			

	epilepticus					voce			
30.9.5	Describe management of status epilepticus in a step wise manner based on the standard algorithm of management of status epilepticus of the PICU			Y	Lecture,SGD	Written/ Vivavoce			
PE 30.10	Discuss the etiopathogenesis, clinical features and management of Mental retardation in children			Y	Lecture,SGD	Written/ Vivavoce			
30.10.1	Define Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/Viva voce			
30.10.2	Enumerate the causes of Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/ Vivavoce			
30.10.3	Describe the pathogenesis of Mental Retardation (Intellectual disability)			Y	Lecture,SGD	Written/ Vivavoce			
30.10.4	Classify Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.5	Enumerate and Describe clinical features of Mental Retardation (Intellectual disability) including dysmorphic features.			Y	Lecture,SGD	Written/ Vivavoce			
30.10.6	Describe the investigations for diagnosis of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.7	Describe the investigations (including genetic tests) required for identifying the etiology of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.8	Describe the multidisciplinary approach to management of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			
30.10.9	Describe the treatment of preventable and treatable causes of Mental Retardation (Intellectual disability).			Y	Lecture,SGD	Written/ Vivavoce			

PE 30.11	Discuss the etiopathogenesis, clinical features and management of children with cerebral palsy			Y	Lecture,SGD	Written/ Vivavoce			
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30.11.1	Define Cerebral Palsy			Y	Lecture,SGD	Written/ Vivavoce			
30.11.2	Enumerate the causes of Cerebral Palsy			Y	Lecture,SGD	Written/Viva voce			
30.11.3	Describe the pathogenesis of Cerebral Palsy			Y	Lecture,SGD	Written/Viva voce			
30.11.4	Classify Cerebral Palsy.			Y	Lecture,SGD	Written/Viva			

						voce			
30.11.5	EnumerateandDescribeclinicalfeaturesofdifferent types ofCerebralPalsy			Y	Lecture,SGD	Written/ Vivavoce			
30.11.6	Describetheinvestigationsrequiredforidentifyingthe etiologyofCerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.11.7	Describethe multidisciplinary approach to management of CerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
30.11.8	Describethe treatment of preventable and treatable causes of CerebralPalsy.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.12	Enumerate the causes of floppiness in an infant and discuss the clinical features, differential diagnosis and management			Y	Lecture,SGD	Written/ Vivavoce			
30.12.1	Define floppiness in an infant.			Y	Lecture,SGD	Written/Viva voce			
30.12.2	Enumerate the causes of floppiness in an infant.			Y	Lecture,SGD	Written/ Vivavoce			
30.12.3	Describe the pathogenesis of floppiness in an infant			Y	Lecture,SGD	Written/ Vivavoce			
30.12.4	Describe the clinical features of floppiness in an infant			Y	Lecture,SGD	Written/Viva voce			
30.12.5	Describe the differential diagnosis of floppiness in an infant			Y	Lecture,SGD	Written/ Vivavoce			
30.12.6	Enumerate the investigations for floppiness in an infant			Y	Lecture,SGD	Written/ Vivavoce			
30.12.7	Describe treatment approach to a floppy infant, including occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			

PE30.13	Discuss the etiopathogenesis, clinical features, management and prevention of Polio myelitis in children			Y	Lecture,SGD	Written/ Vivavoce		Micro	
30.13.1	Define acute flaccid paralysis (AFP).			Y	Lecture,SGD	Written/ Vivavoce			
30.13.2	List causes of Acute Flaccid Paralysis.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.3	Enumerate the viruses causing Poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce		Micro	
30.13.4	Describe the pathogenesis of Poliomyelitis			Y	Lecture,SGD	Written/Viva			

						voce			
30.13.5	Describe all the clinical features of Poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.6	Discuss the differential diagnosis of AFP.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.7	Describe all the treatment modalities for Poliomyelitis/AFP including medical management, occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
30.13.8	Describe the various available Polio vaccines and their role in prevention of poliomyelitis.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.14	Discuss the etiopathogenesis, clinical features and management of Duchenne muscular dystrophy			Y	Lecture,SGD	Written/ Vivavoce			
30.14.1	Define Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.2	Describe the etiopathogenesis of Duchenne muscular dystrophy			Y	Lecture,SGD	Written/ Vivavoce			
30.14.3	Describe the clinical features of Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.4	Enumerate investigations required including genetic testing to diagnose Duchenne muscular dystrophy.			Y	Lecture,SGD	Written/ Vivavoce			
30.14.5	Describe the treatment modalities for Duchenne muscular dystrophy including occupational therapy and physiotherapy.			Y	Lecture,SGD	Written/ Vivavoce			
PE30.15	Discuss the etiopathogenesis, clinical features and management of Ataxia in children			Y	Lecture,SGD	Written/ Vivavoce			
30.15.1	Define Ataxia in children.			Y	Lecture,SGD	Written/ Vivavoce			

30.15.2	Enumerate all causes of Ataxia in children.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.3	Describe the pathogenesis of Ataxia in children.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.4	Describe all the clinical features of Ataxia in children.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.5	Enumerate the investigations in evaluation of Ataxia in children.			Y	Lecture,SGD	Written/ Vivavoce			
30.15.7	Describe the treatment available for the various causes of			Y	Lecture,SGD	Written/Viva voce			

	Ataxia in children.								
PE30.16	Discuss the approach to and management of a child with headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.1	Enumerate causes of headache in children			Y	Lecture,SGD	Written/Viva voce			
30.16.2	Enumerate the types of headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.3	Describe the clinical features of various types of headaches in children			Y	Lecture,SGD	Written/ Vivavoce			
30.16.4	Enumerate all investigations to diagnose cause and type of headache.			Y	Lecture,SGD	Written/ Vivavoce			
30.16.5	Analyse the history and interpret the examination findings and investigations using an algorithm to come to a differential diagnosis/diagnosis of headache			Y	Lecture,SGD	Written/ Vivavoce			
30.16.6	Discuss approach to management of headache based on history, examination and investigations			Y	Lecture,SGD	Written/ Vivavoce			
30.16.7	Describe treatment of a child with headache.			Y	Lecture,SGD	Written/Viva voce			
PE30.17	Elicit, document and present an age appropriate history pertaining to the CNS			Y	Bedside, Skills lab	Skill Asses sment			
30.17.1	Elicit age appropriate detailed history pertaining to CNS			Y	Bedside, Skills lab	Clinical case/OSC E			
30.17.2	Write down age appropriate history including history pertaining to CNS under appropriate headings			Y	Bedside, Skills lab	Logbook			
30.17.3	Present the documented age appropriate history pertaining to CNS			Y	Bedside, Skills lab	Logbook			

PE30.18	Demonstrate the correct method for physical examination of CNS including identification of external markers. Document and present clinical findings			Y	Bedside, Skills lab	Skill Assessment			
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30.18.1	Measure head circumference accurately.			Y	Bedside, Skills lab	OSCE			
30.18.2	Recognize neurocutaneous markers.				Bedside/skill lab/ pictures/video	OSCE			
30.18.3	Do a complete CNS examination in children of different				Bedside/skill lab	Skill lab			

	ages.								
30.18.4	Recognizeinvoluntarymovements.				Bedside/skilllab/ pictures/video	OSCE			
30.18.5	Examineforsignsofmeningealirritation.				Bedside/skilllab	Skilllab			
30.18.6	Documentandpresentclinicalfindings.				Bedside/skilllab	Clinicalcase			
PE30.19	Analyse symptoms and interpret physical findings and propose a provisional/differential diagnosis			Y	Bedside, Skilllab	Skill Assessment			
30.19.1	Analyse symptoms and propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinicalcase			
30.19.2	Interpret physical findings and propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinicalcase			
30.19.3	Combine analysis of symptoms and interpretation of physical findings to propose a provisional/differential diagnosis			Y	Bedside/skilllab	Clinicalcase			
PE30.20	Interpret and explain the findings in a CSF analysis			Y	SGD	Logbook		Micro	
30.20.1	Interpret the findings (cells, proteins and sugar levels) in a CSF analysis.			Y	Skilllab	OSCE			
30.20.2	Explain the significance of findings (cells, proteins and sugar levels) in a CSF analysis			Y	SGD	SAQ/viva			
PE30.21	Enumerate the indication and discuss the limitations of EEG, CT, MRI			N	Bedside	Logbook			
30.21.1	Enumerate the indications of EEG.			N	Bedside	Logbook			
30.21.2	Discuss the limitations of EEG.			N	Bedside	Logbook			
30.21.3	Enumerate the indications of CT scan			N	Bedside	Logbook			
30.21.4	Discuss the limitations of CT scan.			N	Bedside	Logbook			
30.21.5	Enumerate the indications of MRI.			N	Bedside	Logbook			
30.21.6	Discuss the limitations of MRI.			N	Bedside	Logbook			

PE30.22	Interpret the reports of EEG, CT, MRI			Y	Bedside, Skills lab	Logbook		RadioD	
30.22.1	Interpret EEG reports			Y	Bedside, Skills lab	Logbook			
30.22.2	Interpret CT scan (Brain and Spine) reports			Y	Bedside, Skills lab	Logbook		RadioD	
30.22.3	Interpret MRI (Brain & Spine) reports			Y	Bedside, Skills lab	Logbook		RadioD	

PE30.23	Perform in a mannequin lumbar puncture. Discuss the indications, contraindication of the procedure			Y	Bedside, Skills lab	Skill Assessment			
30.23.1	Perform lumbar puncture on a mannequin.			Y	Skill lab	SKILL assessment			
30.23.2	Enumerate all indications of lumbar puncture.			Y	SGD	OSCE/VIVA			
30.23.3	Enumerate contraindications of lumbar puncture			Y	SGD	OSCE/VIVA			
Topic: Allergic Rhinitis, Atopic Dermatitis, Bronchial Asthma, Urticaria Angioedema Number of competencies: (12) Number of procedures that require certification: (NIL)									
PE 31.1	Describe the etiology, pathogenesis, management and prevention of Allergic Rhinitis in Children			Y	Lecture, SGD	Written/ Viva voce		ENT	
31.1.1	Define allergic rhinitis in children			Y	Lecture, SGD	Written/ Viva voce		ENT	
31.1.2	Enumerate risk factors and describe pathogenesis of allergic rhinitis in children			Y	Lecture, SGD	Written and viva voce		ENT	
31.1.3	Describe treatment and prevention for allergic rhinitis in children			Y	Lecture, SGD	Written and viva voce		ENT	
PE 31.2	Recognize the clinical signs of Allergic Rhinitis			Y	Bedside, Skill Lab	Skill assessment		ENT	
31.2.1	Identify clinical signs of allergic rhinitis in children			Y	Bedside, Skill Lab	Skill assessment		ENT	
PE 31.3	Describe the etiology, pathogenesis, clinical features and management of Atopic dermatitis in Children			Y	Lecture, SGD	Written/ Viva voce		Derm	
31.3.1	Describe etiology, pathogenesis of atopic dermatitis in children.			Y	Lecture, SGD	Written/ Viva voce		Derm	

31.3.2	Describe clinical features of atopic dermatitis in children.			Y	Lecture, SGD	Written and viva voce			
31.3.3	Describe treatment for prevention and control of atopic dermatitis in children			Y	Lecture, SGD	Written and viva voce			
PE 31.4	Identify clinical features of atopic dermatitis and manage			Y	Bedside, skill lab	Skill assessment		Derm	
31.4.1	Identify clinical features of atopic dermatitis			Y	Bedside, skill lab	Skill assessment		Derm	

31.4.2	Make a plan for local and supportive therapy for children with atopic dermatitis			Y	Bedside, skill lab	Skill assessment			
31.4.3	Plan appropriate systemic therapy for children with atopic dermatitis			Y	Bedside, skill lab	Skill assessment			
PE 31.5	Discuss the etiopathogenesis, clinical types, presentations, management and prevention of childhood Asthma			Y	Lecture/SGD	Written / vivavoce			
31.5.1	Describe etiopathogenesis of childhood asthma			Y	Lecture/SGD	Written/Vivavoce			
31.5.2	Describe types/patterns of childhood asthma as per ATM module.			Y	Lecture/SGD	Written and vivavoce			
31.5.3	Enumerate common triggers in childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.4	Describe clinical presentations of childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.5	Enumerate investigations in childhood asthma			Y	Lecture/SGD	Written and vivavoce			
31.5.6	Discuss treatment options for childhood asthma.			Y	Lecture/SGD	Written and vivavoce			
31.5.7	Discuss prevention for childhood asthma.			Y	Lecture/SGD	Written and vivavoce			
PE 31.6	Recognizes symptoms and signs of asthma in a child			Y	Bedside, skill lab	Skill assessment			
31.6.1	Recognize symptoms and signs of asthma in a child			Y	Bedside, skill lab	Skill assessment			

PE 31.7	Develop treatment plan for a child with appropriate to the severity and clinical presentation			Y	Bedside, skill lab	Skill assessment			
31.7.1	Develop treatment plan appropriate for the severity and clinical presentation of a child with asthma			Y	Bedside, skill lab	Skill assessment			
31.7.2	Make a treatment plan for a child with acute severe asthma (status asthmaticus)			Y	Bedside, skill lab	Skill assessment			
31.7.3	Observe and document steps of use of metered dose inhaler with spacer in a child with asthma.			Y	Bedside, skill lab	Skill assessment			
PE 31.8	Enumerate the criteria for referral in a child with asthma			Y	Lecture, SGD	Written/Viva voce			
31.8.1	Enumerate the criteria for referral in a child with Asthma.			Y	Lecture, SGD	Written/Viva voce			
PE 31.9	Interpret CBC and CX Ray in Asthma			Y	Bedside clinic, SGD	Skill assessment/OSCE			
31.9.1	Interpret CBC findings in relation to asthma from given case report.			Y	Bedside clinic, SGD	Skill assessment/OSCE			
31.9.2	Interpret findings on a given X Ray of a child with asthma			Y	Bedside clinic,	Skill assessment			
PE 31.10	Enumerate the indications for PFT.			N	Lecture, SGD	Written/Viva voce		Pulmonary medicine	
31.10.1	Enumerate the indications of pulmonary function Test (PFT) in childhood asthma			N	Lecture, SGD	Written/Viva voce		Pulmonary medicine	
PE 31.11	Observe administration of Nebulization			Y	DOAP	Document in Logbook			

31.11.1	Observe and document steps of administration of Nebulization to a child with asthma			Y	DOAP	Document in Logbook			
PE 31.12	Discuss the etiopathogenesis, clinical features, complications and management of Urticaria Angioedema.			Y	Lecture, SGD	Written/ Vivavoce			

31.12.1	Describe etiopathogenesis of urticaria/angioedema in children			Y	Lecture/SGD	Written/Viva voce			
31.12.2	Describe clinical features of urticaria/angioedema			Y	Lecture/SGD	Written and vivavoce			
31.12.3	Enumerate common complications of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			
31.12.4	Enumerate investigations in case of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			
31.12.5	Describe treatment plan of urticaria/angioedema in children			Y	Lecture/SGD	Written and vivavoce			

Topic: Chromosomal Abnormalities **Number of competencies: (13) Number of procedures that require certification: (NIL)**

PE32.1	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counselling in Down Syndrome			Y	Lecture, Small group discussion	Written		Human Anat	
32.1.1	Describe the genetic basis of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce		Anat, Biochemistry	OBG
32.1.2	Enumerate the risk factors for Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			
32.1.3	Enumerate the complications of Down syndrome			Y	Lecture/SGD	MCQ/SAQ, Vivavoce			

32.1.4	Describe the prenatal diagnosis of Down syndrome			Y	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.1.5	Describe the management of Down syndrome			Y	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.1.6	Describe the genetic counseling for Down syndrome			Y	Lecture/SGD	MCQ/SAQ/ Vivavoce			
PE 32.2	Identify the clinical features of Down Syndrome			Y	Bedside, Skillslab	Logbook		Med	

32.2.1	Identify common clinical features in a child with Down syndrome			Y	Bedside clinic	Bedside/OSCE			
PE 32.3	Interpret normal Karyotype and recognize Trisomy 21			Y	Bedside, Skillslab	Logbook			Med
32.3.1	Read a normal Karyotype and recognize true Trisomy 21			Y	Skilllab	OSCE/Logbook			
32.3.2	Recognize different types of Karyotype abnormalities in Down Syndrome			N	Skilllab	OSCE		Anat/Path	Med
PE 32.4	Discuss the referral criteria and Multidisciplinary approach to management			Y	Lecture, SGD	Written/Viva voce			
32.4.1	Enumerate the referral criteria for Down syndrome.			Y	SGD	SAQ/Viva		Anat Biochemistry	Med
32.4.2	Describe a multidisciplinary approach to management of a child with Down syndrome			Y	Lecture/SGD	MCQ/SAQ			
PE 32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy			N	Bedside, Skillslab	Logbook			
32.5.1	Counsel the parents of a child with Down syndrome in a comprehensive manner including care, possible complications, future outcomes			Y	DOAP/bedside/skilllab/roleplay	Logbook/roleplay			
32.5.2	Counsel parents for risk in future pregnancies			Y	Simulation, Roleplay	OSCE/Logbook			

PE 32.6	Discuss the genetic basis, risk factors, clinical features, complications, prenatal diagnosis, management and genetic counseling in Turner Syndrome			N	Lecture,SGD	Written/ Vivavoce		Med,OBG	
32.6.1	Describe the genetic basis of Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce		Anat, Biochemistry	OBG
32.6.2	Enumerate the risk factors for Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.6.3	Describe the clinical features of Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.6.4	Enumerate the complications of Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.6.5	Describe the prenatal diagnosis of Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.6.6	Describe the management of Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
32.6.7	Describe the genetic counseling for Turners syndrome			N	Lecture/SGD	MCQ/SAQ/ Vivavoce			
PE 32.7	Identify the clinical features of Turner Syndrome			N	Bedside, Skillslab	Logbook		Med	
32.7.1	Identify clinical features of Turners syndrome			N	Bedside, Photo	Bedside /Logbook			
PE 32.8	Interpret normal Karyotype and recognize Turner Karyotype			N	Bedside, Skillslab	Logbook			Med
32.8.1	Read a normal Karyotype and recognize Turner karyotype			N	Skilllab	Logbook			
PE 32.9	Discuss the referral criteria and Multidisciplinary approach to management			N	Lecture,SGD	Written/Viva voce			
32.9.1	Enumerate the referral criteria for Turners syndrome.			N	SGD	SAQ/Viva		Anat Biochemistry	Med

								y	
32.9.2	Describe a multidisciplinary approach to management of a child with Turner syndrome			N	Lecture/SGD	MCQ/SAQ			
PE 32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy			N	Bedside, Skills lab	Logbook			Med, ObsGynaec
32.10.1	Counsel the parents of a child with Turner syndrome in a comprehensive manner including care, possible complications, future outcomes			N	DOAP/bedside/skill lab/roleplay	Logbook/roleplay			
32.10.2	Counsel parents for risk in future pregnancies			N	Simulation, Roleplay	Logbook			
PE 32.11	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counselling in Klinefelter Syndrome			Y	Lecture/SGD	Written/viva			Med

32.1.1	Discuss the genetic basis, risk factors, complications, prenatal diagnosis, management and genetic counselling in Klinefelter Syndrome			Y	Lecture/SGD	Written/viva			
PE 32.12	Identify the clinical features of Klinefelter Syndrome			N	Bedside/photo	LOGBOOK			Med
	Identify the clinical features of Klinefelter Syndrome			N	Bedside/photo/	LOGBOOK			
PE 32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype			N	Bedside/photo	LOGBOOK			Med

Topic: Endocrinology **Number of competencies: (11)** **Number of procedures that require certification: (02)**

PE33.1	Describe the etiopathogenesis clinical features, management of Hypothyroidism in children			Y	Lecture,SGD	written/vivo			
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33.1.1	Describe the pathogenesis of hypothyroidism in children			Y	Lecture/ SGD	Written/viva			
33.1.2	Enumerate the causes of congenital and acquired hypothyroidism in children.			Y	Lecture,SGD	Written/viva			
33.1.4	Describe the clinical features of congenital and acquired hypothyroidism			Y	Lecture,SGD	Written/viva			
33.1.5	Discuss the approach to a case of congenital/acquired hypothyroidism in children			Y	Lecture,SGD	Written/viva			
33.1.6	Outline the treatment of hypothyroidism in children.			Y	Lecture,SGD	Written/viva			
PE33.2	Recognize the clinical signs of Hypothyroidism and refer			Y	Bedside, Skill Lab	Skill Assessment			
33.2.1	Recognize hypothyroidism by taking appropriate history and focused physical examination			Y	Bedside	Skill assessment			
33.2.2	Identify the need to refer the child to higher center			Y	Bedside, skill lab	OSCE with SP			
PE33.3	Interpret and explain neonatal thyroid screening report			Y	Bedside, SGD	Skill Assessment			
33.3.1	Interpret the given neonatal thyroid screening report			Y	SGD, Bedside	OSCE/viva voce			
33.3.2	Explain the given thyroid screening report			Y	Bedside, SGD	OSCE			

PE33.4	Discuss the etiopathogenesis, clinical types, presentations, complication and management of Diabetes mellitus in children			Y	Lecture, SGD	Written/ Vivavoce			
33.4.1	Explain the etiopathogenesis of Diabetes mellitus in children.			Y	Lecture/SGD	Written/viva		Biochemistry, Physio	
33.4.2	Discuss clinical types of DM in children.			Y	Lecture/SGD	Written/viva			
33.4.4	Describe the clinical features of DM in children.			Y	Lecture/SGD	Written/viva			
33.4.5	Enumerate the complications of DM.			Y	Lecture/SGD	Written/viva			

33.4.6	Describe the comprehensive management for children with DM.			Y	Lecture/SGD	Written/viva			
PE33.5	Interpret Blood sugar reports and explain the diagnostic criteria for Type 1 Diabetes			Y	Bedside clinic, small group activity	Skill Assessment			
33.5.1	Identify Type 1 Diabetes from a given blood report as per latest diagnostic criteria of DM (American Diabetes Association, 2016)			Y	Bedside, SGD	OSCE			
PE33.6	Perform and interpret Urine Dipstick for Sugar			Y	DOAP session	Skill Assessment	3	Biochemistry	
33.6.1	Perform urine dipstick test for sugar and interpret it correctly			Y	DOAP session	OSPE			
PE33.7	Perform genital examination and recognize Ambiguous Genitalia and refer appropriately			Y	Bedside, skill lab	Skill Assessment			
33.7.1	Identify the deviation from normal while performing genital examination maintaining full dignity of the patient			Y	Bedside, skill lab	OSCE			
33.7.2	Counsel the parents for referral to specialist after recognizing ambiguous genitalia			Y	Bedside, skill lab	OSCE station with SP			
PE33.8	Define precocious and delayed Puberty			Y	Lecture, SGD	Written/Viva voce			
33.8.1	Discuss normal Physiology of puberty and define precocious and delayed puberty			Y	Lecture, SGD	Written/viva			

	precocious and delayed puberty								
PE33.9	Perform Sexual Maturity Rating (SMR) and interpret			Y	Bedside, skill lab	Skill Assessment			
33.9.1	Perform SMR staging maintaining full dignity of the adolescent patient and interpret it correctly			Y	Bedside, skill lab	OSCE			

PE33.10	Recognize precocious and delayed Puberty and refer			Y	Bedside, skill lab	Logbook			
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33.10.1	Recognize features of precocious and delayed puberty in a child			Y	Bedside/skilllab	Logbook			
33.10.2	Counsel the parents for need to refer the child to higher center after diagnosing precocious or delayed Puberty			Y	Bedside, skilllab	OSCE with SP			
PE33.11	Identify deviations in growth and plan appropriate referral			Y	Bedside, skilllab	Logbook	2		
33.11.1	Identify the abnormal growth pattern in a child			Y	Bedside, skilllab	OSCE	2		
33.11.2	Plan the referral of a child with abnormal growth to a specialist and counsel the parents accordingly			Y	Bedside, skilllab	OSCE with SP	2		
Topic: Vaccine preventable Diseases- Tuberculosis Number of competencies: (20) Number of procedures that require certification: (03)									
PE 34.1	Discuss the epidemiology, clinical features, clinical types, complications of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce		Micro	Res p Med
34.1.1	Discuss the epidemiology of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.2	Describe the clinical features of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.3	Enumerate the clinical types of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
34.1.4	List the complications of Tuberculosis in Children and Adolescents			Y	Lecture/SGD	Written/ viva voce			
PE 34.2	Discuss the various diagnostic tools for childhood tuberculosis			Y	Lecture/SGD	Written/ viva voce		Micro	Res p Med

34.2.1	Describe the various diagnostic tools for childhood tuberculosis			Y	Lecture/SGD	Written/viva voce			
PE 34.3	Discuss the various regimens for management of Tuberculosis as per National Guidelines			Y	Lecture/SGD	Written/viva voce		Micro, Com Med, Pharm	Res p Med
34.3.1	Describe the various regimens for management of Tuberculosis as per National Guidelines			Y	Lecture/SGD	Written/viva voce			
PE 34.4	Discuss the preventive strategies adopted and the objectives and outcome of the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce		Micro, Com Med, Pharm	Res p Med

34.4.1	Describe the preventive strategies adopted under the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
34.4.2	List the objectives of the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
34.4.3	Discuss the outcome of the National Tuberculosis Program			Y	Lecture/SGD	Written/viva voce			
PE 34.5	Able to elicit, document and present history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			Resp Med
34.5.1	Elicit history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
34.5.2	Document history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
34.5.3	Present history of contact with tuberculosis in every patient encounter			Y	Bedside, Skillslab	Skill Assessment			
PE 34.6	Identify a BCG scar			Y	Bedside, Skillslab	Skill Assessment	3	Micro	Resp Med
34.6.1	Identify a BCG scar in a child			Y	Bedside, Skillslab	Skill Assessment	3		
PE 34.7	Interpret a Mantoux Test			Y	Bedside	Skill Assessment	3	Micro	Resp Med
34.7.1	Read a Mantoux Test			Y	Bedside	Skill Assessment	3		
34.7.2	Interpret a Mantoux Test			Y	Bedside	Skill Assessment	3		
PE 34.8	Interpret a chest radiograph			Y	Bedside	Skill Assessment		Radiod	Resp Med
34.8.1	Identify abnormalities caused by tuberculosis in a chest radiograph			Y	Bedside	Skill Assessment			
PE 34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis			N	Bedside, SGD	Logbook		Micro	Resp Med

34.9.1	interpret blood tests in the context of laboratory evidence for tuberculosis			N	Bedside,SGD	Logbook			
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PE 34.10	Discuss the various samples for demonstrating the organism e.g. Gastric Aspirate, Sputum, CSF, FNAC			Y	Bedside,SGD	Written/viva voce		Micro	Resp Med
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34.10.1	Describe the various samples for demonstrating the mycobacteria e.g. Gastric Aspirate, Sputum, CSF, FNAC			Y	Bedside,SGD	Written/viva voce			
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PE 34.11	PerformAFBstaining			Y	DOAPsession	Logbook/Journal	3	Micro	Resp Med
34.11.1	PerformAFB staining			Y	DOAPsession	Logbook/Journal	3		
PE 34.12	Enumeratetheindicationsanddiscussthelimitations ofmethodsofculturingM.Tuberculosis			Y	SGD	Written/viva voce		Micro	Resp Med
34.12.1	EnumeratetheindicationsofculturingM.tuberculosis			Y	SGD	Written/viva voce			
34.12.2	EnumeratethemethodsofculturingM. tuberculosis			Y	SGD	Written/viva voce			
34.12.3	DescribethelimitationsofdifferentmethodsofculturingM.tuberculosis			Y	SGD	Written/viva voce			
PE 34.13	EnumeratethenewerdiagnostictoolsforTuberculosis includingBACTECBNAATandtheirindications			N	Lecture/ SGD	Written/viva voce			
34.13.1	EnumeratethenewerdiagnostictoolsforTuberculosis includingBACTECandCBNAAT			N	Lecture/SGD	Written/viva voce			
34.13.2	recalltheindicationsforusingthenewerdiagnostictoolsforTuberculosisincludingBACTECand CBNAAT			N	Lecture/SGD	Written/viva voce			
PE 34.14	Enumerate the common causes of fever and discusstheetiopathogenesis,clinicalfeatures, complications andmanagementoffeverinchildren			Y	Lecture/ SGD	Written/viva voce		Micro	
34.14.1	Enumeratethecommoncausesoffeverinchildren.			Y	Lecture/SGD	Written/viva voce			
34.14.2	Describethepathophysiologyoffeverinchildren.			Y	Lecture/SGD	Written/viva voce			
34.14.3	List the clinical features associated with fever in childrenwhich aidindiagnosis.			Y	Lecture/SGD	Written/viva voce			

34.14.4	Recall the complications of fever in children.			Y	Lecture/SGD	Written/viva voce			
34.14.5	Elaborate the management of fever in children.			Y	Lecture/SGD	Written/viva voce			
PE 34.15	Enumerate the common causes of fever and discuss the etiology, pathogenesis, clinical features, complications and management of child with exanthematous illness like Measles, Mumps, Rubella & Chickenpox			Y	Lecture/SGD	Written/viva voce		Micro	

34.15.1	Enumerate the common causes of exanthematous illness (fever with rash) in children			Y	Lecture/SGD	Written/viva voce			
34.15.2	Discuss the pathogenesis of Measles, Mumps, Rubella & Chickenpox			Y	Lecture/SGD	Written/viva voce			
34.15.3	Describe the clinical features of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.15.4	Enumerate the complications of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.15.5	Outline the management of Measles, Mumps, Rubella & Chickenpox in children and adolescents			Y	Lecture/SGD	Written/viva voce			
PE 34.16	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Diphtheria, Pertussis, Tetanus			Y	Lecture/SGD	Written/viva voce		Micro	
34.16.1	Discuss the pathogenesis of Diphtheria, Pertussis and Tetanus			Y	Lecture/SGD	Written/viva voce			
34.16.2	Describe the clinical features of Diphtheria, Pertussis and Tetanus in children and adolescents.			Y	Lecture/SGD	Written/viva voce			
34.16.3	Enumerate the complications of Diphtheria, Pertussis and Tetanus in children and adolescents			Y	Lecture/SGD	Written/viva voce			
34.16.4	Outline the management of Diphtheria, Pertussis and Tetanus in children and adolescents			Y	Lecture/SGD	Written/viva voce			
PE 34.17	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Typhoid			Y	Lecture/SGD	Written/viva voce		Micro	-
34.17.1	Discuss the pathophysiology of Typhoid fever			Y	Lecture/SGD	Written/viva voce			

34.17.2	Describe the clinical features of Typhoid fever in children			Y	Lecture/SGD	Written/viva voce			
34.17.3	Enumerate the complications of Typhoid fever in children			Y	Lecture/SGD	Written/viva voce			
34.17.4	Outline the management of Typhoid fever in children			Y	Lecture/SGD	Written/viva voce			

PE 34.18	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Dengue, Chikungunya and other vectorborne diseases			Y	Lecture/SGD	Written/vivo		Micro	-
34.18.1	Enumerate common causes of fever resulting from vectorborne diseases in children (Eg Dengue, Chikungunya and others)			Y	Lecture/SGD	Written/vivo			
34.18.2	discuss the pathophysiology of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/vivo			
34.18.3	list the clinical features of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/vivo			
34.18.4	recall the complications of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/vivo			
34.18.5	elaborate the management of vectorborne diseases in children (Eg Dengue, Chikungunya, and others)			Y	Lecture/SGD	Written/vivo			
PE 34.19	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of children with Common Parasitic Infections, malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis, giardiasis			Y	Lecture/SGD	Written/vivo		Micro	-
34.19.1	Enumerate the common causes of fever resulting from parasitic infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/vivo			

34.19.2	Discuss the pathophysiology of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.3	List the clinical features of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.4	Recall the complications of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
34.19.5	Elaborate the management of Common Parasitic Infections like malaria, leishmaniasis, filariasis, helminthic infestations, amebiasis and giardiasis			Y	Lecture/SGD	Written/viva voce			
PE 34.20	Enumerate the common causes of fever and discuss the etiopathogenesis, clinical features, complications and management of child with Rickettsial diseases			Y	Lecture/SGD	Written/viva voce		Micro	-
34.20.1	Enumerate the common causes of fever resulting from Rickettsial diseases			Y	Lecture/SGD	Written/viva voce			
34.20.2	Discuss the pathophysiology of Rickettsial diseases			Y	Lecture/SGD	Written/viva voce			
34.20.3	List the clinical features of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			
34.20.4	Recall the complications of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			
34.20.5	Elaborate the management of Rickettsial diseases in children			Y	Lecture/SGD	Written/viva voce			

Topic: The role of the physician in the community

Number of competencies: (1) Number of procedures that require certification: (NIL)

PE 35.1	Identify, discuss and defend medicolegal, socio-cultural and ethical issues as they pertain to healthcare in children (including parental rights and right to refuse treatment)			Y	Small group discussion	Written /Viva voce			
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35.1.1	List common medicolegal issues related to healthcare in children			Y	Interactive lecture	Written/viva	-	Forensic	
35.1.2	List common socio-cultural issues related to healthcare in children			Y	Interactive lecture/ community visit	Written/viva	-	ComMed	
35.1.3	Identify the important socio-cultural and ethical issues related to healthcare in children in a clinical case during bedside teaching			Y	Bedside teaching	Long case OSCE Reflective writing			
35.1.4	Discuss the common medico-legal, sociocultural and ethical issues related to healthcare in children			Y	Case-based learning/SGD	OSCE Reflective writing			

Summary of course content, teaching and learning methods and student assessment for the undergraduate (MBBS) Curriculum in Paediatrics


Course content

The course content has been given in detail in the above Table, which includes competencies, specific learning objectives for each competencies and the suggested Teaching-Learning methods and assessment methods. The competencies have been developed by an expert group nominated by NMC, while the SLOs, T-L methods and assessments methods have been written by the expert committee constituted by Rajiv Gandhi University of Health Sciences, with inputs taken from IAP Taskforce.

Teaching-Learning methods and Time allotted							
				Clinics directed hour	Lectures No. o discussion	Small group learning	Self-
Professional year II	2 weeks (3 day, 6 days a			36 ho	hours per		
Professional year III Part I	4 weeks (3 hours per	20	30	5 day, 6 days a week)			127
Professional year III Part II	4 weeks (3 hours per day, 6 days a week)		20	35		10	137

Teaching-learning methods shall be learner centric and shall predominantly include small group learning, interactive teaching methods and case-based learning. Didactic lectures not to exceed one-third of the total teaching time. The teaching learning activity focus should be on application of knowledge rather than acquisition of knowledge.


The curricular contents shall be vertically and horizontally aligned and integrated to the maximum extent possible to enhance learner’s interest and eliminate redundancy and overlap. Integration allows the student to understand the structural basis of paediatric




problems, their management and correlation with function, rehabilitation and quality of life.

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories. Use of skill lab to train undergraduates is desirable. Newer T-L method like Learner-doctor method (Clinical clerkship) should be mandatorily implemented, from 1st clinical postings itself.

The goal of this type of T-L activity is to provide learners with experience in longitudinal patient care, being part of the health care team, and participate in hands-on care of patients in outpatient and inpatient setting. During the 1st clinical postings, the students are oriented to the working of the department. During the subsequent clinical postings the students are allotted patients, whom they follow-up through their stay in the hospital, participating in that patient's care including case work-up, following-up on investigations, presenting patient findings on rounds, observing procedures, if any, till patient is discharged.



The development of ethical values and overall professional growth as integral part of curriculum



shall be emphasized through a structured longitudinal and dedicated programme on professional development including attitude, ethics, and communication which is called the AETCOM module. The purpose is to help the students apply principles of bioethics, system based care, apply empathy and other human values in patient care, communicate effectively with patients and relatives and to become a professional who exhibits all these values. This will be a longitudinal programme spread across the continuum of the MBBS programme including internship.


Assessment

Eligibility to appear for University examinations is dependent on fulfilling criteria in two main areas – attendance and internal assessment marks

Attendance

Attendance requirements are 75% in theory and 80% in clinical postings for eligibility to appear for the examinations in Paediatrics.

75% attendance in AETCOM Module is required for eligibility to appear for final examination in Professional year III part II.





Internal Assessment

Progress of the medical learner shall be documented through structured periodic assessment that includes formative and summative assessments. Logs of skill-based training shall be also maintained. There shall be no less than three internal assessment examinations in Paediatrics. An end of posting clinical assessment shall be conducted for each of the Paediatric clinical postings.

Day to day records and logbook (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills.

Learners must secure at least 50% marks of the total marks (combined in theory and clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in Paediatrics in order to be eligible for appearing at the final University examination.

Internal assessment marks will reflect as separate head of passing at the summative examination. The results of internal assessment should be displayed on the notice board within 1-2 weeks of the test.


Remedial measures should be offered to students who are either not able to score qualifying marks or have missed on some assessments due to any reason.

Learners must have completed the required certifiable competencies for that phase of training and Paediatric logbook entry completed to be eligible for appearing at the final university examination.


AETCOM assessment will include: (a) Written tests comprising of short notes and creative writing experiences, (b) OSCE based clinical scenarios / viva voce.

University examinations


Paediatrics	Theory	Clinical examination
Total marks	100 marks	100 marks
	Long essay 2X10= 20	Two cases x40marks=80marks



	Short essay 8x5=40 marks	Viva voce 4 x 5=20marks
	Short answer question 10x3=30marks	
	MCQs 10x1=10marks	




University exam shall be held at the end of Professional year III part II of training (Final year MBBS)



in the subjects of Paediatrics, General Medicine, Obstetrics and gynaecology and General Surgery. University examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimal level of skills, ethical and professional values with clear concepts of the fundamentals which are necessary for him/her to function effectively and appropriately as a physician of first contact. Assessment shall be carried out on an objective basis to the extent possible.

Marks allotted:





The theory paper should include different types such as structured essays, short essays, Short Answers Questions (SAQ) and MCQs (Multiple Choice Questions). Marks for each part should be indicated separately.

All the question papers to follow the suggested **blueprint(APPENDIX 1)**. It is desirable that the marks allotted to a particular topic are adhered to.


A minimum of **80%** of the marks should be from the **must know (core)** component of the curriculum. A maximum of **20%** can be from the **desirable to know** component.

All **main essay questions** to be from the **must know component** of the curriculum.


Main essay questions to be of the **modified variety** containing a clinical case scenario. At least 30% of questions should be clinical case scenario based. Questions to be constructed to test higher cognitive levels.

Clinical examinations will be conducted in the hospital wards. Clinical cases kept in the examination must be common conditions that the learner may encounter as a physician of first contact in the community. Selection of rare syndromes and disorders as examination cases is to be discouraged. Emphasis should be on candidate's capability to elicit history, demonstrate physical signs, write a case record, analyze the case and develop a management plan.

Viva/oral examination should assess approach to patient management, emergencies, attitudinal, ethical and professional values. Candidate's skill in interpretation of common investigative data, X-rays, identification of specimens, ECG, etc. is to be also assessed.



At least one question in each paper of the clinical specialties in the University examination should



test knowledge competencies acquired during the professional development programme. Skill competencies acquired during the Professional Development Programme must be tested during the clinical, practical and viva voce.


There shall be one main examination in an academic year and a supplementary to be held not later than 90 days after the declaration of the results of the main examination.

Pass criteria


Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations

University Examination: Mandatory 50% marks separately in theory and clinicals (clinicals = clinical + viva)

The grace marks up to a maximum of five marks may be awarded at the discretion of the University to a learner for clearing the examination as a whole but not for clearing a subject resulting in exemption.



Appointment of Examiners



Person appointed as an examiner in the particular subject must have at least four years of total teaching experience as assistant professor after obtaining postgraduate degree in the subject in a college affiliated to a recognized/approved/permitted medical college.

For the Practical/ Clinical examinations, there shall be at least four examiners for 100 learners, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner will act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.


Where candidates appearing are more than 100, two additional examiners (one external & one internal) for every additional 50 or part there of candidates appearing, be appointed.

All eligible examiners with requisite qualifications and experience can be appointed as internal examiners by rotation.

External examiners may not be from the same University.

There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall moderate the questions.

All theory paper assessment should be done as central assessment program (CAP) of concerned university.



APPENDIX 1: Blueprint for Paediatric theory Examinations

Topics	Marks allotted
<ul style="list-style-type: none"> • Growth, development & Adolescent health • Nutrition and micronutrients 	15
Neonatology	10
Fluid & Electrolytes	3
<ul style="list-style-type: none"> • Immunity & Immunization • Infections & Infestation 	15
Gastrointestinal system	5
Hematology including malignancies	10
<ul style="list-style-type: none"> • Respiratory system • Cardiovascular system 	15
Endocrine, metabolic & genetic disorders	3
Central Nervous system, neuromuscular disorders	10
Disorders of kidney & urinary tract	5
Pediatric emergencies	3
Miscellaneous – Eye, ENT, skin, Rheumatology, Psychiatry & social paediatrics	6
Total	100



Sample Paediatrics Question Paper

Paediatrics Paper –MBBS , Phase III Part 2

Time: 3 hours

Marks: 100

Your answers should be specific to the questions asked.

Draw neat, labelled diagrams wherever necessary.

Long essays (2 X 10 = 20 marks)

1. 3 year old female child from low socio economic background presented with 3 days

history of watery diarrhea and vomiting. There was no fever or other complaints. There was history

of similar illness in many children in neighbourhood. On Examination, child was irritable and thirsty. Weight was 10 kg. Vitals were normal and systemic examination was non contributory. i) Assess and classify dehydration in this child.

ii) Plan fluid & nutritional therapy for this child.

2. A 6 month old boy was brought to the emergency room with complaints of fever for the last 2 days and excessive crying and vomiting for the last 12 hours. He also had an episode of stiffening of body. Discuss the differential diagnosis and justify the most likely diagnosis. Add a note on management.

Short essays (8x5=40marks)

3. A 34 week male baby delivered by caesarean section developed fast breathing soon after birth

and was taken to the NICU. There was history of PROM 24 hours before delivery. Birth weight of the baby was 1.5 kg. On examination, respiratory rate was 80/min. with retractions and grunting. Discuss the causes for distress in this newborn.

4. 4 year old girl presented with epistaxis of one day duration. On examination she was afebrile, echymotic patches were seen over lower limbs and trunk, otherwise clinical examination was unremarkable. How do you approach and manage this child ?
5. Complicated malaria
6. Clinical features and management of hypothyroidism
7. Management of cyanotic spell
8. Define failure to thrive and outline management
9. WHO classification of vitamin A deficiency
10. Nocturnal enuresis

Short answer questions (10x3=30)

11. APGAR score components
12. Urine examination in Nephrotic syndrome
13. Classify Hydrocephalus
14. Age independent anthropometric indices
15. Genetic patterns in Down Syndrome
16. HPV vaccine – Age and schedule
17. Advantages of breast feeding
18. Management of hyperkalemia
19. Normal Moro's reflex
20. Mantoux test

Multiple choice questions (10x1=10marks, with no negative marking)

21. While examining 2 days old infant, small vesicles on erythematous base are noted on face and

chest. Wright stain of the lesions revealed sheets of Eosinophils. Diagnosis of this rash is

- A) miliaria rubra
- B) milia
- C) neonatal acne
- D) erythema toxicum

22. A 2 year old, active, asymptomatic boy is examined by a physician for the first time. His blood pressure is 130/86 in the right arm with a barely palpable right femoral pulse. The most likely diagnosis is

- A) Coarctation of aorta
- B) Tetralogy of Fallot
- C) Aortic stenosis

D) Pulmonary stenosis

23. Which of the following hemolytic anemias is associated with an extracorporeal defect?

- A) Hereditary spherocytosis
- B) Sickle cell anemia
- C) Autoimmune hemolytic anemia
- D) Glucose-6-phosphate dehydrogenase (G6PD) deficiency

24. Calorie requirement in a 3 year old is (kcal/day)

- A) 1000 B) 1100 C) 1200
- D) 1300

25. A 6 week old infant presents with a history of noisy breathing. The noise was first noted shortly after birth, is inspiratory in nature, is worse now that the infant has a viral respiratory illness, and remits almost completely when the child is asleep. The most likely etiology of this child's noisy breathing is

- A) asthma
- B) bronchopulmonary dysplasia
- C) cystic fibrosis
- D) laryngomalacia


26. A 10 year old develops nephrotic syndrome. Several urinalyses reveal the presence of red blood

cell casts. The creatinine is 2.8 mg/dl and the blood pressure is 146/96 mm Hg. The next best course of action is

- A) begin a course of oral prednisone
- B) follow the child and see if the nephrotic syndrome resolves
- C) perform a diagnostic renal biopsy
- D) collect a 24 hour urine for creatinine clearance and protein excretion

27. All the following conditions are characterized by hypochromic, microcytic red cells EXCEPT

- A) iron deficiency anemia
- B) thalassemia major



C) glucose-6-phosphate dehydrogenase

D) anemia of chronic disease

28. Drug used for treatment of autonomic storm due to scorpion sting is

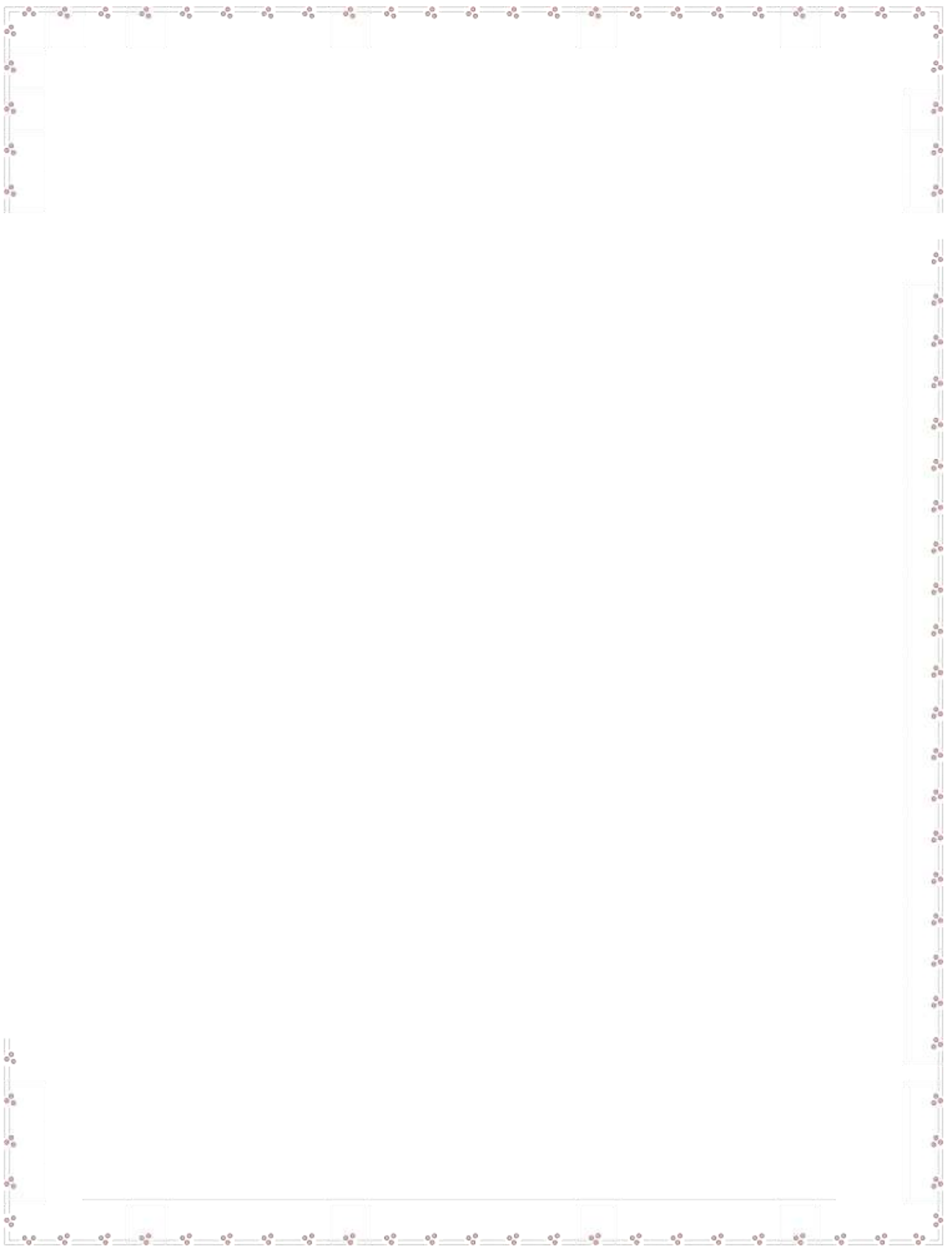
- A) Adrenaline
- B) Propranolol
- C) Prazosin
- D) Noradrenaline

29. An 8 month old girl is noted to have asymmetric use of her arms. The right arm is held in a flexed position with the hand in a fist. The neurologic examination also reveals increased tone in the right ankle and hyper reflexia on the right side. The past history is significant for premature delivery at 28 weeks gestation. The most likely diagnosis for this child is

- a) Duchenne muscular dystrophy
- b) Spinomuscular atrophy
- c) Brachial palsy
- d) Cerebral palsy

30. 2 year old child was brought with history of fever, cough and cold for 1 day and 1 episode of generalized tonic clonic seizure. Temperature was 102°F. What information would like to elicit?

- a) Duration of seizure
- b) Any features suggestive of meningitis
- c) Is she developmentally normal?
- d) All of the above






Acknowledgement of contributors

IAP task force CBME curriculum for Paediatrics

Ophthalmology curriculum prepared by faculty from St Johns RGUHS CBME curriculum for RS 4
Batch

NMC Document - Regulations on Graduate Medical Education

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College
Logo

Student's
Stamp size
photo





UNDER GRADUATE PAEDIATRIC LOG



BOOK







As per Competency-Based Medical Education Curriculum

Sample template

(Name of the medical college)

DEPARTMENT OF PAEDIATRICS
UNDERGRADUATE PAEDIATRIC

LOG BOOK



Name of the student:

Contact Number:

Email id:

Date of admission to MBBS course:

Date of beginning of the current phase:

Reg. No. (College ID):

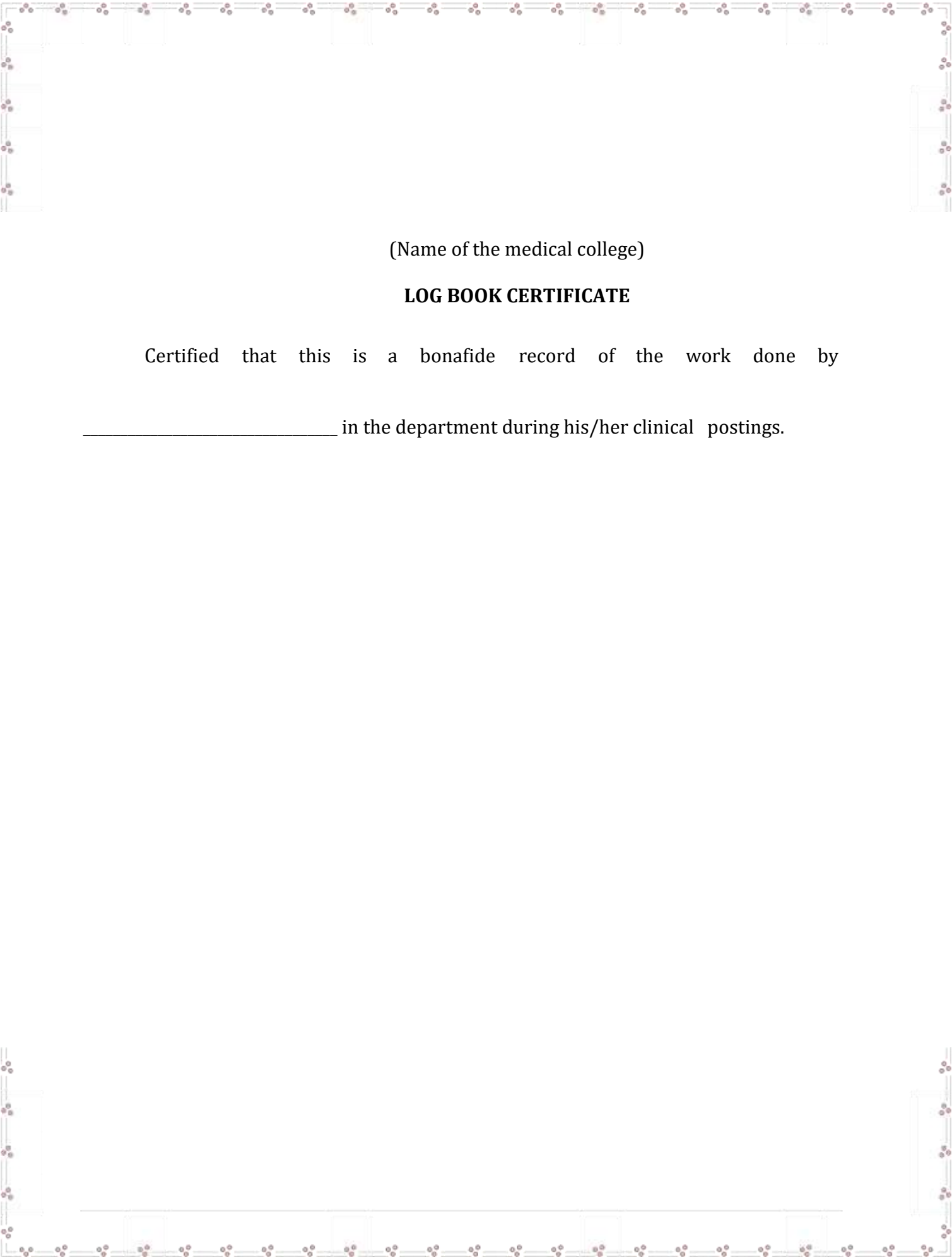
Reg. No. (University ID):



Sample template



DEPARTMENT OF PAEDIATRICS



(Name of the medical college)

LOG BOOK CERTIFICATE

Certified that this is a bonafide record of the work done by

_____ in the department during his/her clinical postings.

He/she will be appearing for the Final M.B.B.S.(Phase 3, part 2) examination of Rajiv Gandhi

University of Health Sciences, Karnataka, in February/August 20

Signature of faculty

Signature of Head of the department

Name :

Reg No. : Batch :

Posting in the Dept :

From

To

I

II

III ATTENDANCE

		Classes held	Classes attended	Percentage	Faculty sign
Clinical Posting	I				
	II				
	III				
Theory Attendance	PY3P1				
	PY3P2				
Small group discussions	PY3P1				
	PY3P2				

INTERNAL ASSESSMENT MARKS		
	Theory	Clinicals
	1st test:	1st :
	2nd test:	2nd:
		3rd:
Final Internal Assessment Marks		



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ABBREVIATIONS

F / R / RE – First or Only / Repeat / Remedial

- First or only – Student completed the task in the first attempt



- Repeat – Student completed the task in multiple attempts

- Remedial – Student completed the task after remedial measures


B / M / E – Below expectation / Meets expectation / Exceeds expectation

- Below expectation – Student did not complete the task
- Meets Expectation – Student completed the task with minimal prompts
- Exceeds expectation – Student completed the task without any prompts

C / R / RE – Completed / Repeat / Remedial

- Completed – Student has successfully completed the task
- Repeat – Student had to repeat the task in the same briefing

- Remedial – Student needs to undergo briefing again and repeat the task



AETCOM – Attitude, Ethics and Communication Module

SUMMARY OF CERTIFIABLE COMPETENCIES



Competency no.	Competency details	No required to certify	Date completed	Reference page no
PE1.4	Perform anthropometric measurements, document in growth charts and interpret	3		8
PE1.7	Perform developmental assessment and interpret	3		14
PE 7.5	Observe the correct technique of breast feeding and distinguish right from wrong techniques	3		23
PE11.5	Calculate BMI, document in BMI chart and interpret	3		15
PE19.6	Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule	5		18
PE24.15	Perform NG tube insertion in a manikin	2		25
PE24.16	Perform IV cannulation in a mode	2		43
PE24.17	Perform intraosseous insertion model	2		44
PE27.15	Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting	3		45

PE27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment	3		46
PE27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate	3		47
PE27.18	Assess airway and breathing: perform assisted ventilation by bag and mask in a simulated environment	3		48







PE27.19	Check for signs of shock i.e. pulse, blood pressure, CRT	3		49
PE27.20	Secure an IV access in a simulated Environment	2		43
PE27.21	Choose the type of fluid and calculate the fluid requirement in shock	3		50
PE27.22	Assess level of consciousness & provide emergency treatment to a child with convulsions/coma 3 Position an unconscious child Position a child with suspected trauma Administer IV/per rectal Diazepam for a convulsing child in a simulated environment	3		51
PE27.23	Assess for signs of severe dehydration	3		52
PE27.28	Provide BLS for children in manikin	3		53
PE33.6	Perform and interpret urine dip stick for sugar	3		26
PE33.11	Identify deviations in growth and plan appropriate referral	2		13
PE34.6	Identify a BCG scar	3		27
PE34.7	Interpret a Mantoux test	3		28
PE34.11	Perform AFB staining	3		29

Student's Signature

Signature of Faculty



(Name and Designation) **DOCUMENTATION OF CASE**

PRESENTATIONS















PROFESSIONAL YEAR II






LEARNING OBJECTIVES 1st CLINICAL POSTING (2 WEEKS)


At the end of the first posting, students are expected to:

1. Perform, interpret and document anthropometric measurements in children
- 



- 
2. Use the appropriate growth chart for a child and interpret them correctly
 3. Perform, interpret and document nutritional history taking and development of a dietary plan for all children
 4. Perform, interpret and document developmental history taking in all children



- 
5. Conduct a developmental assessment in children and interpret them correctly
 6. Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

PE 1.4 Perform anthropometric measurements, document in growth charts and Interpret

Minimum number required to certify-3*



Using growth charts

Anthropometric values to be given here for each batch. They have to mark the values on the chart and interpret the growth pattern (No. Required - 3)



0 to 5 Years : WHO Boys Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____
DOB : _____



Interpretation:

1. 2.

3.



0 to 5 Years : WHO Girls Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____



5 to 18 Years : IAP Boys Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____

IAP Boys Height & Weight Chart 5-18 years



5 to 18 Years : IAP Girls Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE33.11 Identify deviations in growth (Using the above growth charts) and plan appropriate

referral.

2

Minimum number required to certify-

If requiring referral, mention the reasons for referral

(Case 1)

1. 2. 3. 4.

PE1.7 Perform developmental assessment and interpret

Minimum number required to certify-



3

Take a detailed developmental history and perform developmental assessment. Indicate the present milestone attained in each category. Calculate the developmental age for each domain



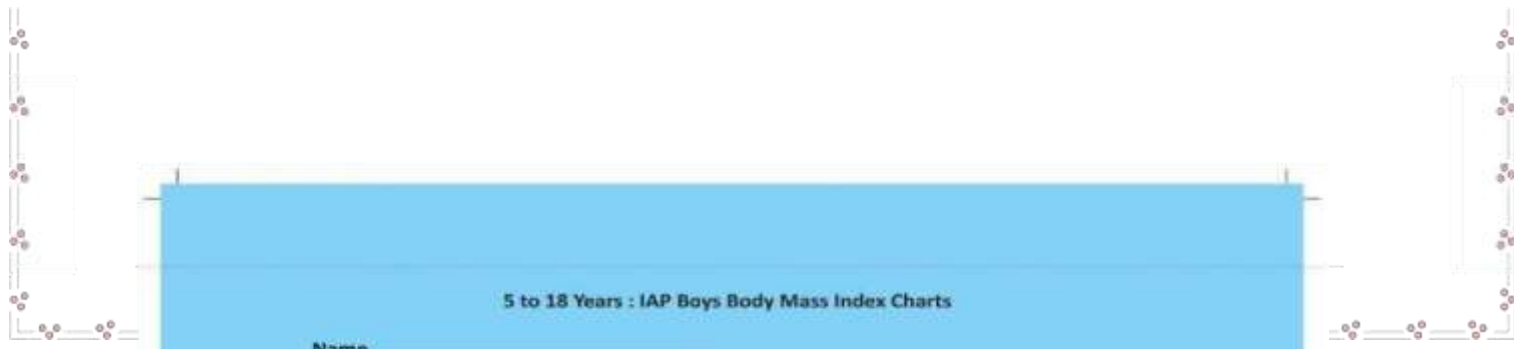
PE11.5 Calculate BMI, document in BMI chart and interpret

Minimum number required to certify-

3

Calculate the BMI for 3 children (above 5 years) and enter in this table and also mark in the appropriate graph





5 to 18 Years : IAP Boys Body Mass Index Charts

Name _____

DOB _____

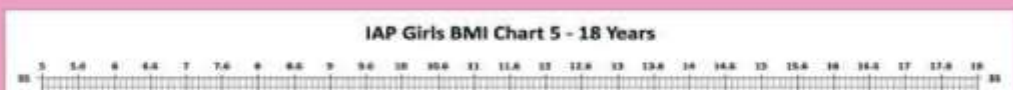


3.



5 to 18 Years : IAP Girls Body Mass Index Charts

Name _____
DOB _____





Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE19.6 Assess patient for fitness for immunization and prescribe an ageappropriate immunization schedule

required to certify-5

Minimum number

Assessment of immunization status:

S. No	Name	Age	Sex	Vaccines received till date	Plan for further immunisation
1					
2					
3					
4					
5					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Fee Rec Init Lea wit



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PROFESSIONAL YEAR III PHASE I



LEARNING OBJECTIVES

1. Observe the correct technique of breast feeding and distinguish right from wrong techniques
 2. Perform NG tube insertion in a manikin correctly
 3. Perform and interpret urine dip stick for sugar correctly
 4. Identify a BCG scar accurately
 5. Interpret a Mantoux test correctly
 6. Perform AFB staining correctly
 7. Write 4 Paediatric and 1 neonatal case sheets
- 



PE7.5 Observe the correct technique of breast feeding and distinguish right from wrong techniques


Minimum number required to certify-3

Observe the process of breast feeding (under supervision and a chaperone being present) and note the following points

Position of mother and baby.

Cradle. The baby is held in the crook or elbow area of the arm on same side as breast to be used for feeding; mother supports breast with opposite hand; baby's body is rolled in toward mother's body so they are belly-to-belly.

Cross-cradle. The baby's head is supported by the hand opposite the breast to be used for feeding; mother supports breast with hand; baby is rolled in toward mother's body belly-to-belly.



Football or clutch. Baby's head is supported by the hand on the same side as breast to be used for feeding; baby's body is supported on a pillow and tucked under the arm on the same side as breast to be used for feeding.

Side-lying using modified cradle. In this position, the baby lies next to the mother

with their bodies facing each other. If a pillow under the arm is uncomfortable, try placing the baby in the crook of the arm. This way, it is unlikely for the mother to roll over on the baby should the mother doze off. This position also keeps the baby's head at a good angle to bring baby and breast together, with the baby's head higher than his or her tummy, which can be helpful for babies who are more likely to spit up.

Laid-back breastfeeding. In this position, the mother is leaning back in a recliner or reclining in bed. The baby is lying on his or her stomach and is pressed against the mother's body. She can support the side of her baby's head if baby cannot hold it by him- or herself. In this position, both mother and baby can relax. She can allow her baby to explore her breast and latch on at his or her leisure. This is a great position if mother has had a cesarean delivery.

Latching.

The latch should be comfortable and pain free.

The baby's chest and stomach rest against the mother's body, so that baby's head is straight, not turned to the side.

Baby's chin touches her breast.

Baby's mouth opens wide around her breast, not just the nipple.

Baby's lips turn out.

Baby's tongue cups under her breast.

Mother hears or sees swallowing.

S. No	Position of mother	Position of child	Attachment (latching)	Comments
1				



2				
3				
4				
5				





Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.15 Perform NG tube insertion in a manikin

Minimum Number required to certify-2

Demonstrate the following steps in inserting a NG tube in a manikin

S. No	Identify size of nasogastric tube as per age of child.	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin	Correctly measure the length of NG tube to be inserted	Insert the tube and check its position
-------	--	--	--	--



1				
2				
3				



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial Learner with D

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE34.7 Interpret a Mantoux test



Minimum number

required to certify- 3

Demonstrate the following steps to interpret a Mantoux test

S. No	Age	Measure induration (horizontal/transverse)	Interpretation
1			
2			
3			
4			
5			



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE34.11 Perform AFB staining

****Shared with Microbiology**

Minimum number required to certify- 3



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

**SUMMARY OF COMPETENCIES REQUIRING DOCUMENTATION
(to be observed in ward/PICU/NICU/LT)**

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty sign
1	18.5	Provide intra-natal care and observe the conduct of a normal delivery	3		

3

12.3

Identify the clinical features of dietary deficiency

3

/excess of Vitamin A

Vitamin C
deficiency

10

13.3

Identify the
clinical

17

20.6

Explain the follow-up care for neonates including Breastfeeding, Temperature

3

2	29.15	Perform and Interpret peripheral smear.	3			
3	32.3	Interpret normal Karyotype and recognize Trisomy 21	2			
4	32.8	Interpret normal Karyotype and recognize Turner Karyotype	2			
5	32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype	2			
6	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	2			

AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION

(To be done as part of AETCOM)

S. No	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	2.3	Counseling a parent with failing to thrive child	3		
2	3.4	Counsel a parent of a child with developmental delay	3		

3	6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence	3		
4	7.8	Educate mothers on antenatal breast care and prepare mothers for lactation	3		
5	7.9	Educate and counsel mothers for best practices in Breastfeeding	3		
6	7.10	Respect patient privacy	3		
7	8.5	Counsel and educate mothers on the best practices in complementary feeding	3		
8	10.5	Counsel parents of children with SAM and MAM	3		
9	19.7	Educate and counsel a patient for immunization	3		

10	19.8	Demonstrate willingness to participate in the national and subnational immunization days	3		
11	20.5	Counsel/educate mothers on the care of neonates	3		
12	21.16	Counsel / educate a patient for referral appropriately	3		



13	22.2	Counsel a patient with Chronic illness	3		
14	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
15	29.19	Counsel and educate patients about prevention and treatment of anemia.	3		
16	32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Down syndrome)	2		
17	32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Turner syndrome)	2		

SELF- DIRECTED LEARNING



List of Self-Directed Learning Topics

1.

2.



3.

4.

5.

6.

7.

8.

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10.

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15.





SELF- DIRECTED LEARNING:

1) T
o
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Objectives:

Task:

Impressions:



2) Topic:

Objectives:

Task:

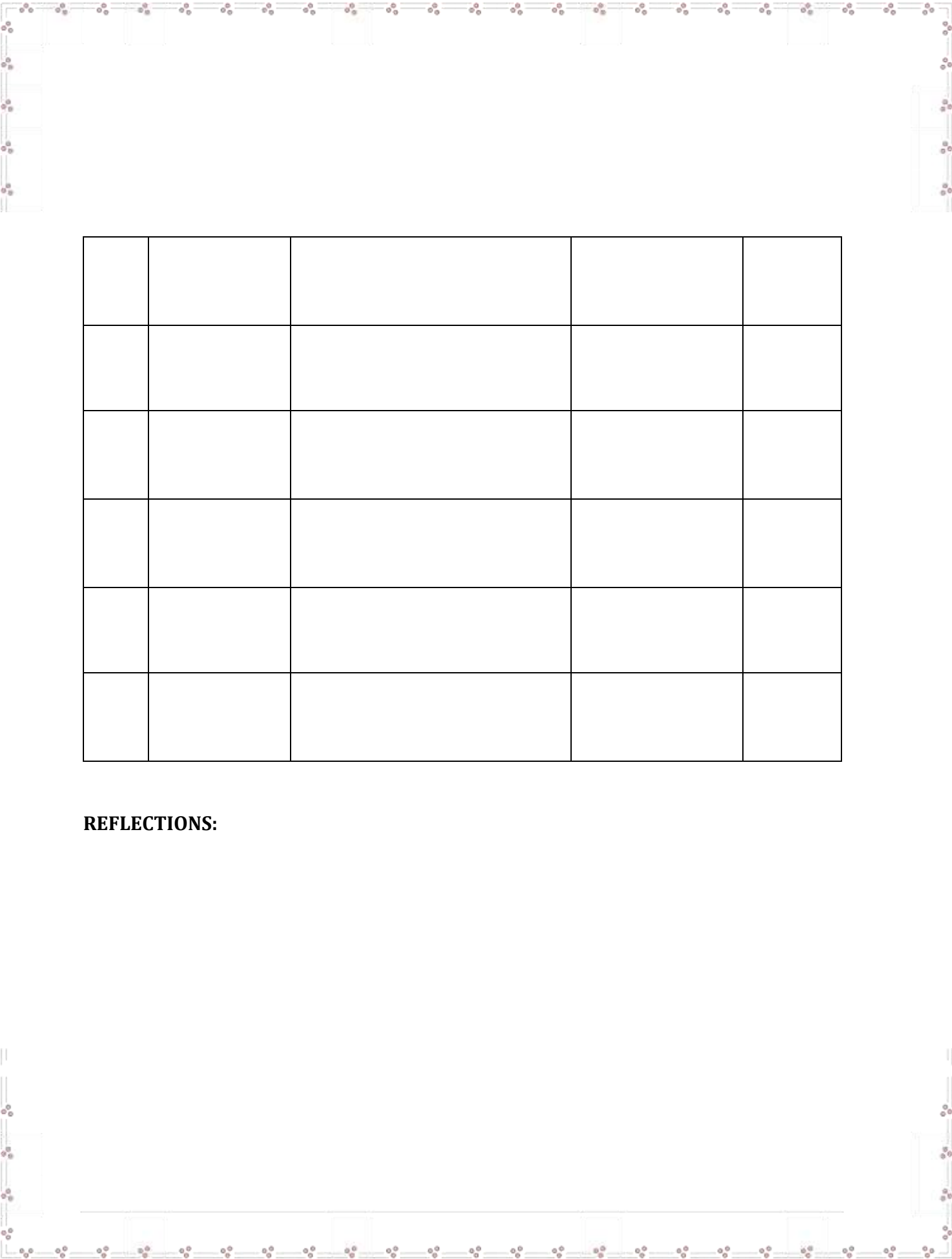


Impressions:

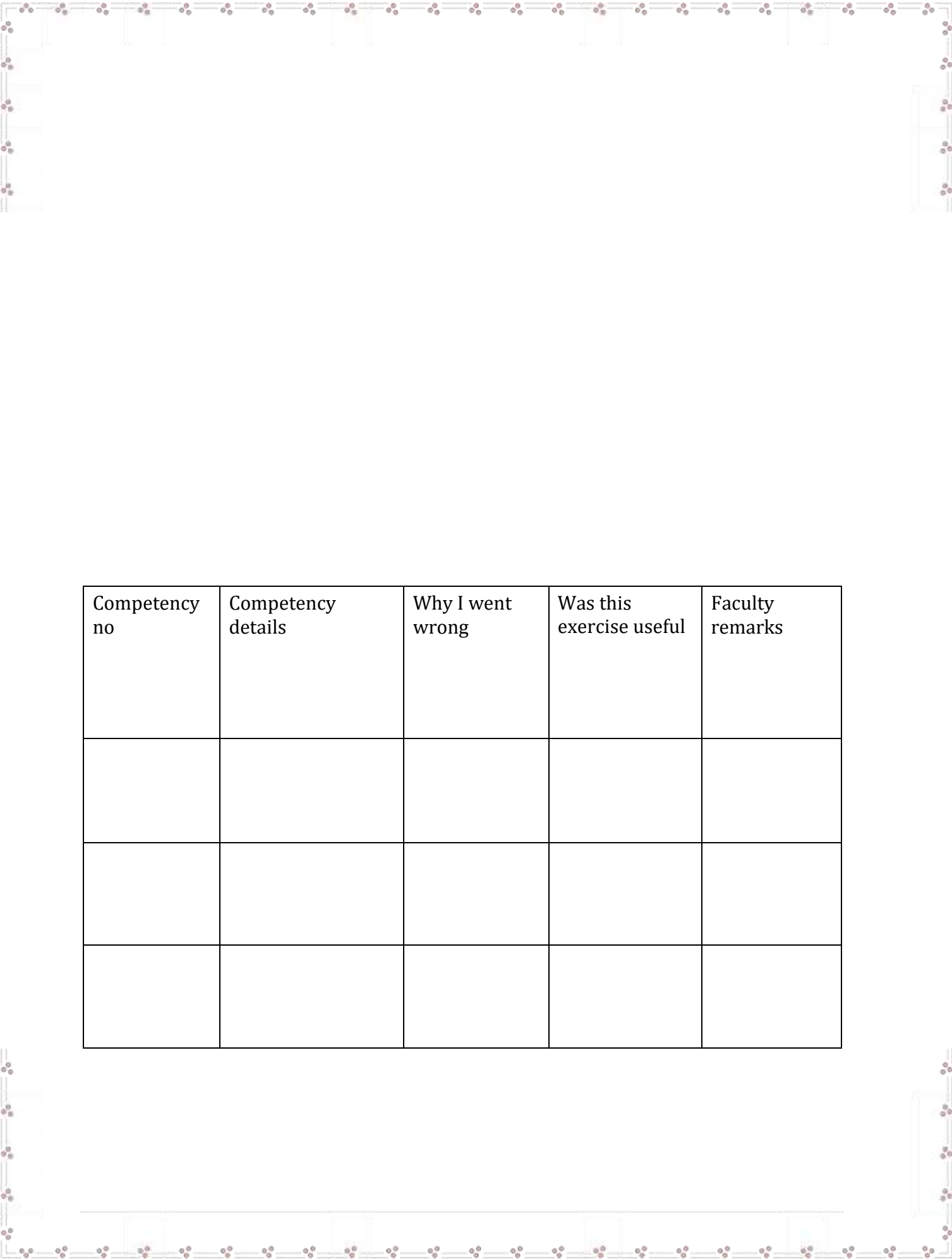
INTEGRATED LEARNING

Summary of integrated learning sessions:

S.No	Competency No.	Topic	Departments involved	Date



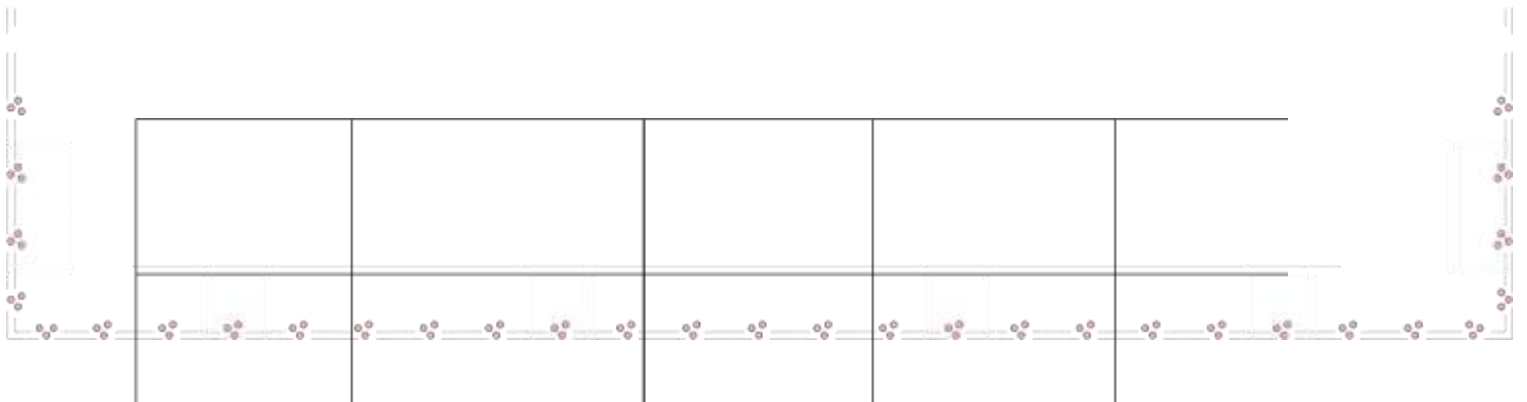
REFLECTIONS:

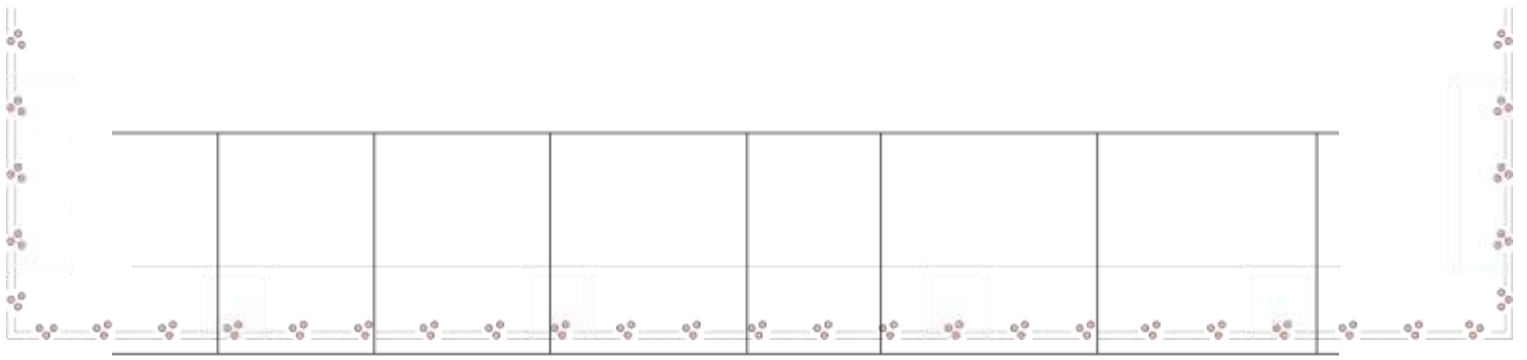


Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks



Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)





LEARNING OBJECTIVES

1. Perform IV cannulation in a simulated environment
2. Perform intraosseous insertion in a simulated environment
3. Assess airway, breathing and circulation in a sick child, give appropriate and accurate treatment
4. Choose the type of fluid and calculate the fluid requirement in shock in children
5. Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma
6. Assess for signs of severe dehydration
7. Provide BLS for children in a manikin
8. Write 4 Paediatric and 1 neonatal case sheet

S.no

PE24.16 / PE 27.20 Perform IV cannulation in a model

Minimum number required to certify-2

Perform IV cannulation in a manikin by observing the following steps

	Identify size of IV cannula as per age of child.	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe	Choose and prepare the site	Correctly insert the cannula and look for free flow of blood	Fix the cannula and properly dispose the biomedical waste
1					

S.no

2					
3					



S.no

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.17 Perform intraosseous insertion in a model

Minimum number

required to certify-2

Perform intraosseous insertion in a model in these following steps

S.no

	Identify site for intraosseous insertion in children based on landmarks.	Demonstrate all steps of infection control	Insert the Intraosseous cannula and demonstrate how to check its proper insertion in model	Fix Intraosseous cannula and correctly demonstrate disposal of biomedical waste
1				
2				
3				

S.no

S.no

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.15 Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting

Minimum number

required to certify- 3

Check for the following signs in a child with respiratory distress

Respiratory rate	Intercostal retractions	Alae nasi flaring	Drowsiness	Grunt or stridor	Cyanosis

S.no

1						
2						
3						

S.no

S.no

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.16 Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment

Minimum number required to certify- 3

Assess whether the student performs the steps in a correct manner

S.no

	Head tilt manoeuvre performed	Chin lift manoeuvre performed	Jaw thrust manoeuvre performed	Remarks of the facilitator
1				
2				
3				

S.no

S.no

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.17 Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate

Minimum number

required to certify- 3

Demonstrate the various methods of administering oxygen and at specific rates

S.no

S. no	Head box	Nasal cannula	High flow nasal cannula	Face mask	Non rebreathing mask	Rate of delivery of oxygen
-------	----------	---------------	-------------------------	-----------	----------------------	----------------------------

1

2						
3						

S. no	Chosen the correct size mask	Chosen the correct bag	Head and neck in proper position	Used the correct pressure to inflate	Looked for chest rise	Used the correct rate of ventilation
1						



1

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.18 Assess airway and breathing: perform assisted ventilation by Bag and mask in a simulated environment

Minimum number required to certify- 3

Demonstrate assisted ventilation using bag and mask in a simulated environment

3						

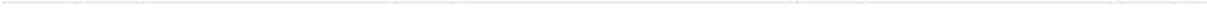


1





1



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.19 Check for signs of shock i.e., Pulse, Blood Pressure, Capillary Refill time

Minimum number required to certify- 3

Check for the signs of shock

S. no	Check for volume of pulse	Check BP	Check for saturation	Check for CRT	Check for skin colour and temperature	Check for sensorium

1

1						
2						



1

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.21 Choose the type of fluid and calculate the fluid requirement in shock

Minimum number required to certify- 3

Choose appropriate fluid according to different types of shock. Calculate the fluid for managing different types of shock at different age/size of the child.

1

S.no	Type of shock	Assess weight of child	Choose the appropriate fluid for bolus administration	Calculate the amount of fluid to be administered for bolus and continuation	Remarks
1	Hypovolemic				
2	Septic				
3	Cardiogenic				

4	Obstructive				
5	Burns				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date



Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.28 Provide BLS for children in manikin

Minimum number required to certify- 3

Either a certificate that they have attended a formal BLS course or a modified BLS session has to be attached



S.No	Check for response	Call for help	Check pulse and breathing simultaneously	Start chest compression	Make airway patent and give 2 rescue breaths	Repeat above CPR
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

3	21.14	provisional differential diagnosis			
		Recognize common			

diseases, anti -
failure drugs,
and inotropic
agents

**Competencies requiring documentation
(to be done in a simulated environment)**



S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.4	Provide intra-natal care and conduct a normal delivery in a simulated environment	3		
2	19.13	Demonstrate the correct administration of different vaccines in a mannequin	3		
3	20.3	Perform Neonatal resuscitation in a manikin	3		
4	26.10	Demonstrate the technique of liver biopsy in a manikin Perform Liver Biopsy in a simulated environment	2		

5	29.17	Demonstrate performance of bone marrow aspiration in mannequin.	2		
---	-------	---	---	--	--

Competencies requiring documentation
(to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI/EEG/ECG reports)

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	21.12	Interpret report of Plain X Ray of KUB	3			
2	21.13	Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB	3			
3	23.12	Interpret a chest X ray and recognize Cardiomegaly	3			
4	23.13	Choose and Interpret blood reports in Cardiac illness	3			
5	23.14	Interpret Pediatric ECG	3			
6	23.15	Use the ECHO reports in management of cases	3			

7	24.13	Interpret RFT and electrolyte report	3			
8	30.20	Interpret and explain the findings in a CSF analysis	3			
9	30.21	Enumerate the indication and discuss the	3			



		limitations of EEG, CT, MRI				
10	30.22	Interpret the reports of EEG, CT, MRI	3			
11	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	3			

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
2	26.13	Counsel and educate patients and their family appropriately on liver diseases	3		



AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION
(To be done as part of AETCOM)

3	27.32	Counsel parents of dangerously ill/ terminally ill child to break a bad news	2		
4	27.33	Obtain Informed Consent	2		
5	27.34	Willing to be a part of the ER team	3		
6	27.35	Attends to emergency calls promptly	3		








SELF-DIRECTED LEARNING

List of Self-Directed Learning Topics

- 1.**
 - 2.**
 - 3.**
 - 4.**
 - 5.**
 - 6.**
 - 7.**
 - 8.**
 - 9.**
- 

10.

11.

12.

13.

14.

15.

SELF-DIRECTED LEARNING:

**1) T
opic:**

Objectives:

Task:

Impressions:

2) T
opic:



Objectives:

Task:

Impressions:

INTEGRATED LEARNING

Summary of integrated learning sessions

S.No	Competency No	Topic	Departments involved	Date



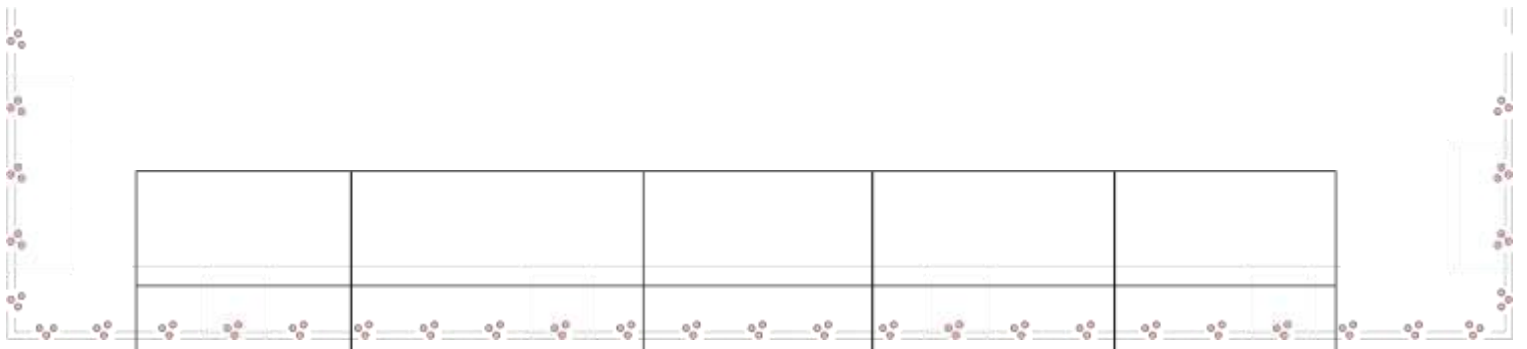




REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks



Child
guidance
clinic

4.6

Visit to the
Child guidance
clinic

Topic:
Scholastic

control
measures and
appropriate
handling of the
sharps



NOTES













Rajiv Gandhi University of Health
Sciences
Bangalore, Karnataka









UNDER GRADUATE PAEDIATRIC LOG BOOK

As per Competency-Based Medical Education Curriculum

Sample template

College
Logo

Student's
Stamp size
photo

(Name of the medical college)

DEPARTMENT OF PAEDIATRICS



UNDERGRADUATE PAEDIATRIC



LOG BOOK

Name of the student:

Contact Number:

Email id:

Date of admission to MBBS course:

Date of beginning of the current phase:

Reg. No. (College ID):

Reg. No. (University ID):

Sample template

DEPARTMENT OF PAEDIATRICS

(Name of the medical college)

LOG BOOK CERTIFICATE

Certified that this is a bonafide record of the work done by

_____ in the department during his/her clinical postings.

He/she will be appearing for the Final M.B.B.S.(Phase 3, part 2) examination of Rajiv

Gandhi University of Health Sciences, Karnataka, in February/August 20

Signature of faculty

Signature of Head of the department

Name :

Reg No. : Batch :

Posting in the Dept :

From

To

II
III ATTENDANCE

		Classes held	Classes attended	Percentage	Faculty sign
Clinical Posting	I				
	II				
	III				
Theory Attendance	PY3P1				
	PY3P2				
Small group discussions	PY3P1				
	PY3P2				

INTERNAL ASSESSMENT MARKS		
	Theory	Clinicals
	1st test:	1st :
	2nd test:	2nd:
		3rd:

**Final Internal
Assessment
Marks**

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5.	Certifiable competencies	8-19
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ABBREVIATIONS

F / R / RE – First or Only / Repeat / Remedial

- First or only – Student completed the task in the first attempt
- Repeat – Student completed the task in multiple attempts
- Remedial – Student completed the task after remedial measures

B / M / E – Below expectation / Meets expectation / Exceeds expectation

- Below expectation – Student did not complete the task
- Meets Expectation – Student completed the task with minimal prompts
- Exceeds expectation – Student completed the task without any prompts

C / R / RE – Completed / Repeat / Remedial

- Completed – Student has successfully completed the task
- Repeat – Student had to repeat the task in the same briefing
- Remedial – Student needs to undergo briefing again and repeat the task

AETCOM – Attitude, Ethics and Communication Module

OMPETENCIES

SUMMARY OF CERTIFIABLE

Competency no.	Competency details	No required to certify	Date completed	Reference page no
PE1.4	Perform anthropometric measurements, document in growth charts and interpret	3		8
PE1.7	Perform developmental assessment and interpret	3		14
PE 7.5	Observe the correct technique of breast feeding and distinguish right from wrong techniques	3		23
PE11.5	Calculate BMI, document in BMI chart and interpret	3		15

PE19.6	Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule	5		18
PE24.15	Perform NG tube insertion in a manikin	2		25
PE24.16	Perform IV cannulation in a model	2		43
PE24.17	Perform intraosseous insertion model	2		44

PE27.15	Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting	3		45
PE27.16	Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment	3		46
PE27.17	Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate	3		47
PE27.18	Assess airway and breathing: perform assisted ventilation by bag and mask in a simulated environment	3		48
PE27.19	Check for signs of shock i.e. pulse, blood pressure, CRT	3		49
PE27.20	Secure an IV access in a simulated Environment	2		43
PE27.21	Choose the type of fluid and calculate the fluid requirement in shock	3		50

PE27.22	Assess level of consciousness & provide emergency treatment to a child with convulsions/coma Position an unconscious child Position a child with suspected trauma Administer IV/per rectal Diazepam for a convulsing child in a simulated environment	3		51
PE27.23	Assess for signs of severe dehydration	3		52
PE27.28	Provide BLS for children in manikin	3		53
PE33.6	Perform and interpret urine dip stick for sugar	3		26
PE33.11	Identify deviations in growth and plan appropriate referral	2		13
PE34.6	Identify a BCG scar	3		27
PE34.7	Interpret a Mantoux test	3		28
PE34.11	Perform AFB staining	3		29

Student's Signature

Signature of Faculty
(Name and Designation) **DOCUMENTATION OF CASE PRESENTATIONS**

S. No	Date	Patient Name and ID	Diagnosis	Case Presented/ Attended (P/A)	Year/ Phase	Grade (B/M/E)	Teacher's Signature

PROFESSIONAL YEAR II LEARNING OBJECTIVES 1st CLINICAL POSTING (2 WEEKS)

At the end of the first posting, students are expected to:

7. Perform, interpret and document anthropometric measurements in children

8. Use the appropriate growth chart for a child and interpret them correctly
9. Perform, interpret and document nutritional history taking and development of a dietary plan for all children
10. Perform, interpret and document developmental history taking in all children
11. Conduct a developmental assessment in children and interpret them correctly
12. Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

PE 1.4 Perform anthropometric measurements, document in growth charts and Interpret

Minimum number required to certify-3*

Growth assessment

No	Name	Age	Sex	Weight			Height/Length			MAC			HC			Wt for Ht		
				A	E	I	A	E	I	A	E	I	A	E	I	A	E	I
1																		
2																		
3																		
4																		
5																		

A – Actual

E – Expected

I – Inference

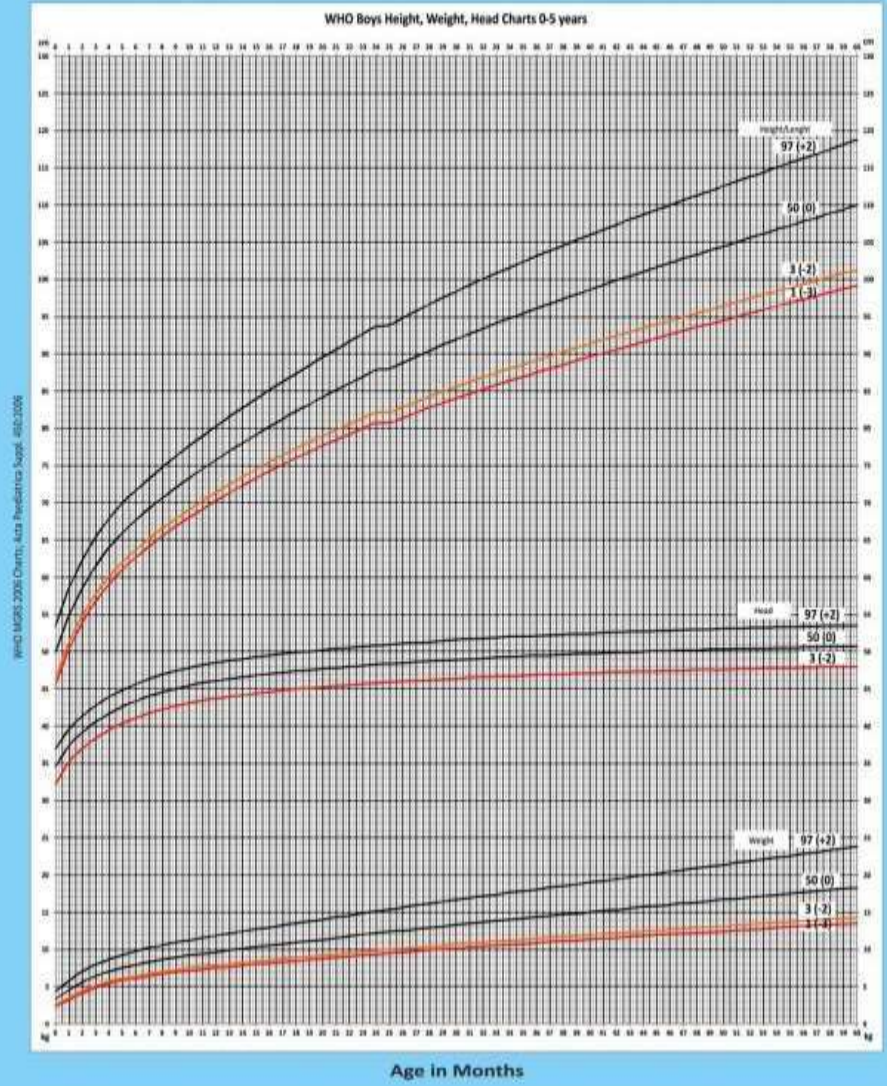
Using growth charts

Anthropometric values to be given here for each batch. They have to mark the values on the chart and interpret the growth pattern (No. Required - 3)

0 to 5 Years : WHO Boys Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____



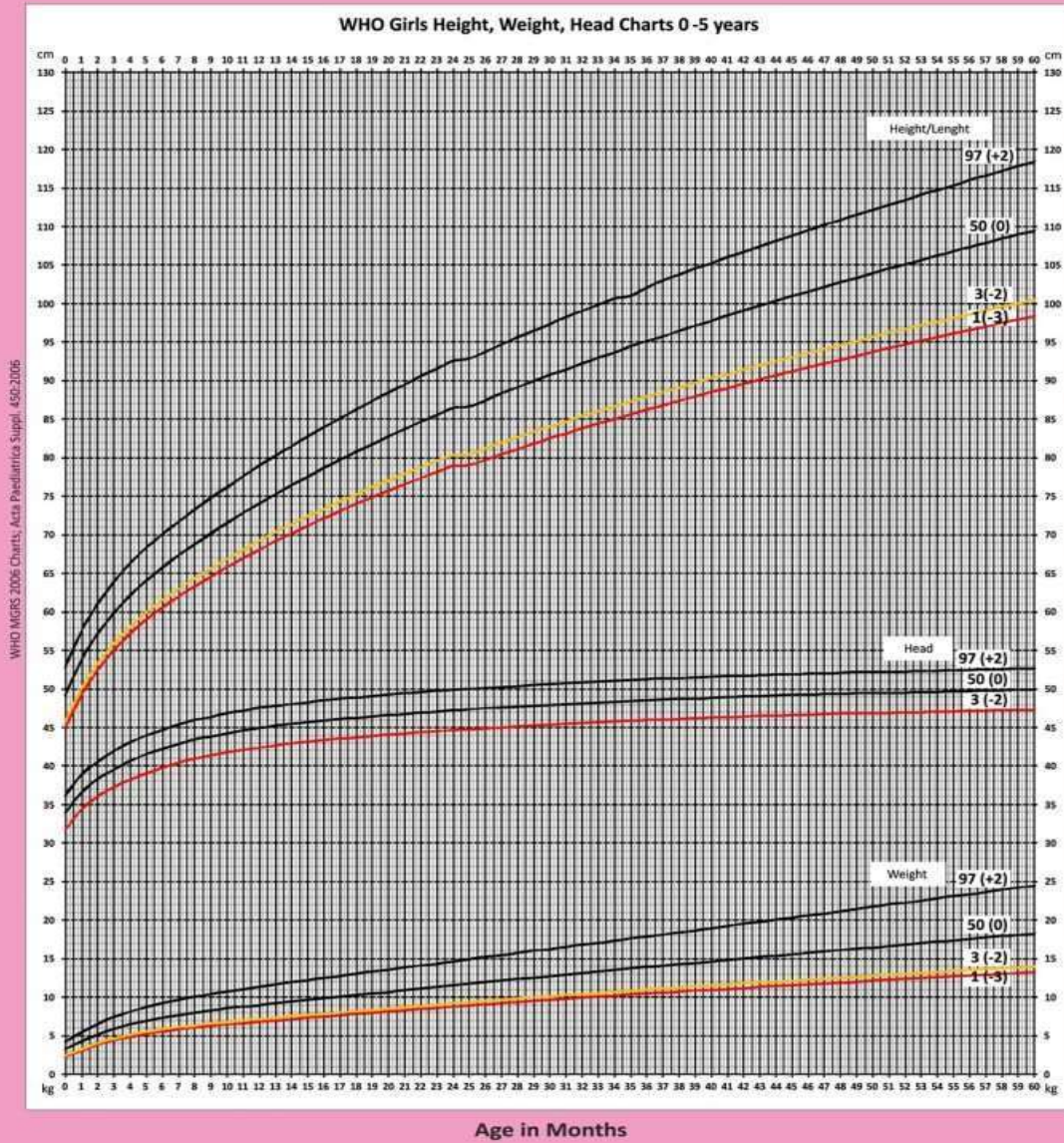
Interpretation:

- 1.
- 2.
- 3.

0 to 5 Years : WHO Girls Length/Height, Weight and Head Circumference Charts
(Z Scores are in Parenthesis)

Name : _____

DOB : _____

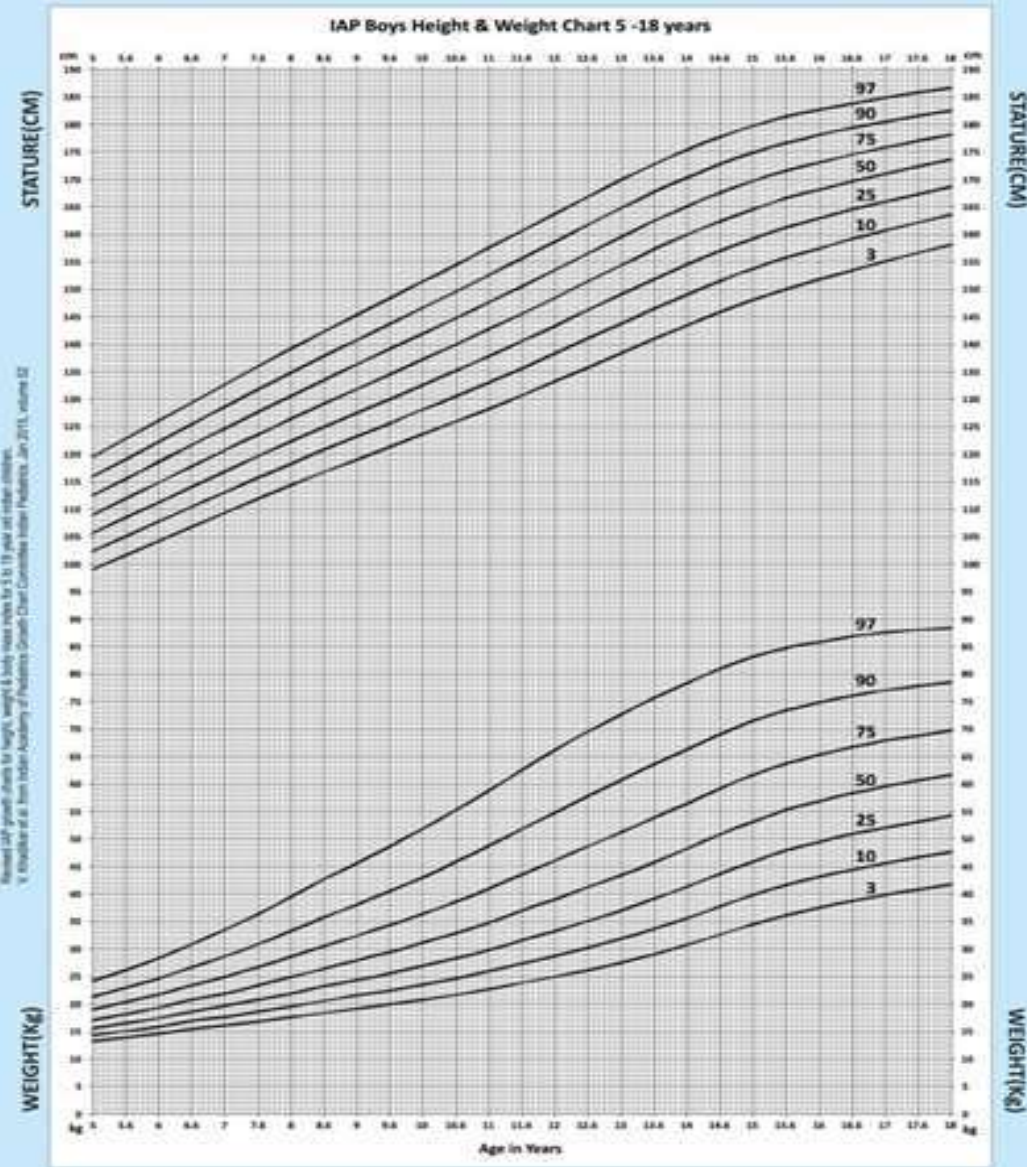


Interpretation:

- 1.
- 2.
- 3.

5 to 18 Years : IAP Boys Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____

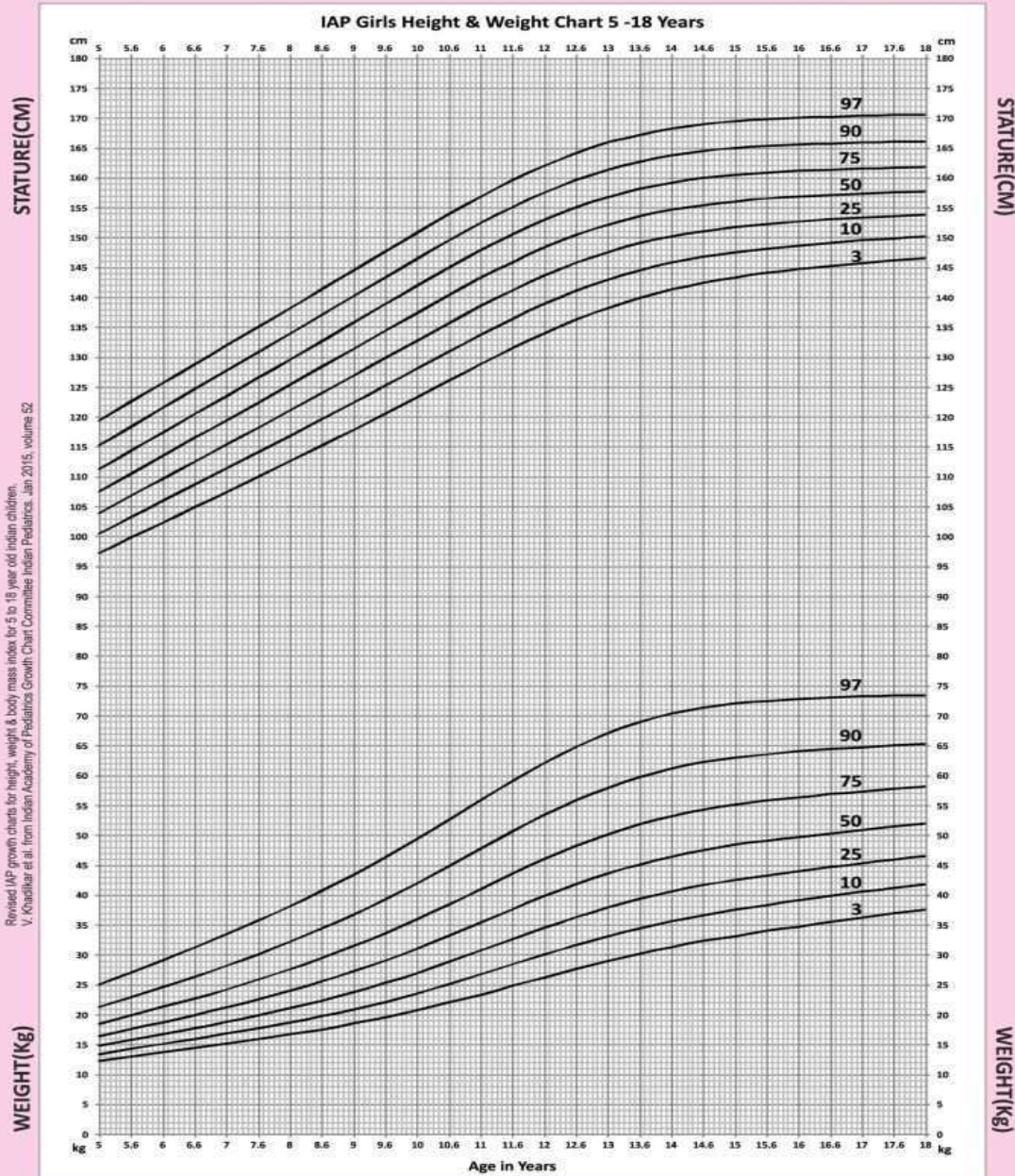


Interpretation:

- 1.
- 2.
- 3.

5 to 18 Years : IAP Girls Height and Weight Charts

Father's Height _____, Mother's Height _____, Target Height _____



Interpretation:

- 1.
- 2.
- 3.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE33.11 Identify deviations in growth (Using the above growth charts) and plan appropriate referral.

Minimum

number required to certify-2

If requiring referral, mention the reasons for referral

(Case 1)

1. 2. 3.

4.

5.

(Case 2)

1. 2.
3. 4.
5.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE1.7 Perform developmental assessment and interpret

Minimum

number required to certify-3

Take a detailed developmental history and perform developmental assessment. Indicate the present milestone attained in each category. Calculate the developmental age for each domain

S. No	Name	Age	Sex	Gross Motor	Fine Motor	Language	Social	Developmental age				Inference
								GM	FM	L	S	
1												
2												
3												
4												
5												

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE11.5 Calculate BMI, document in BMI chart and interpret

Minimum number required to certify-3

Calculate the BMI for 3 children (above 5 years) and enter in this table and also mark in the appropriate graph

S. No	Name	Age	Sex	Weight	Height	BMI	Normal	Inference
1								
2								
3								
4								

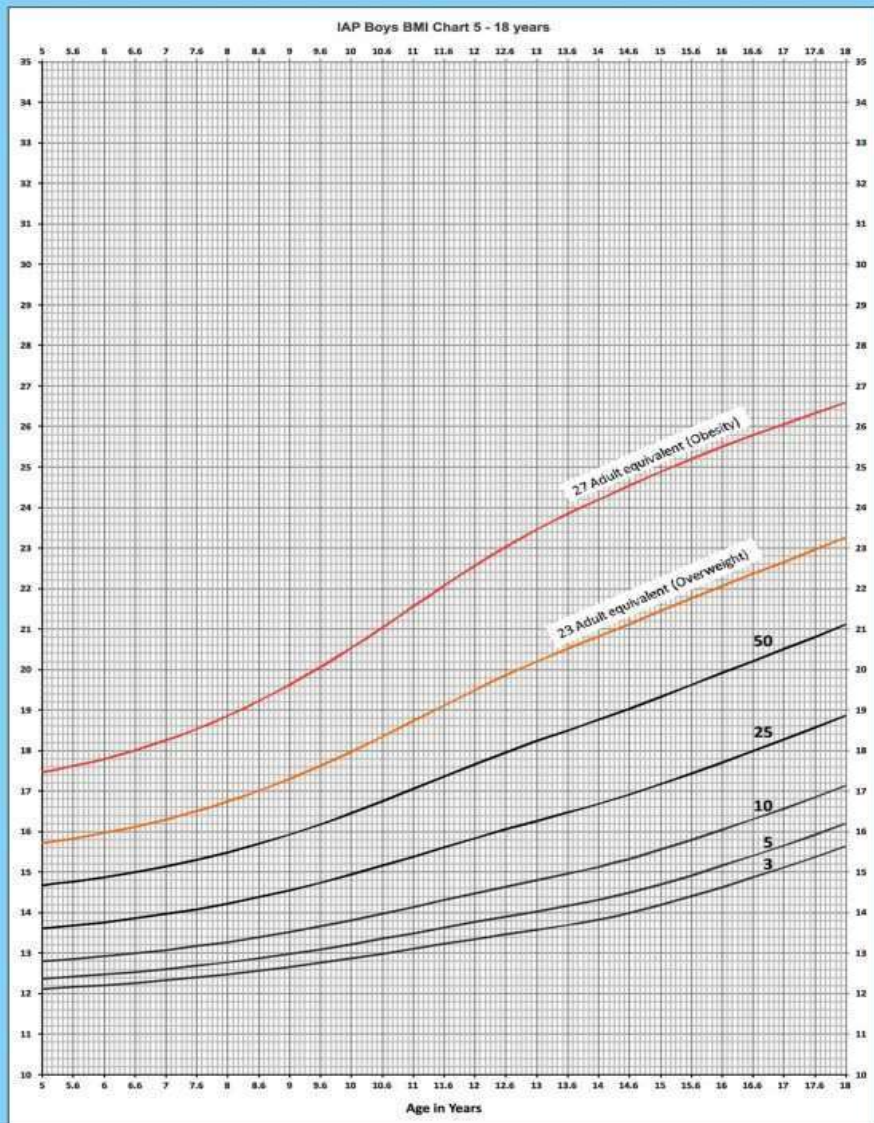
5								
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5 to 18 Years : IAP Boys Body Mass Index Charts

Name _____

DOB _____

Revised IAP growth charts for height, weight & body mass index for 5 to 18 year old Indian children.
V. Khandelwal et al. from Indian Academy of Pediatrics Growth Chart Committee Indian Pediatrics, Jan 2015, volume 52

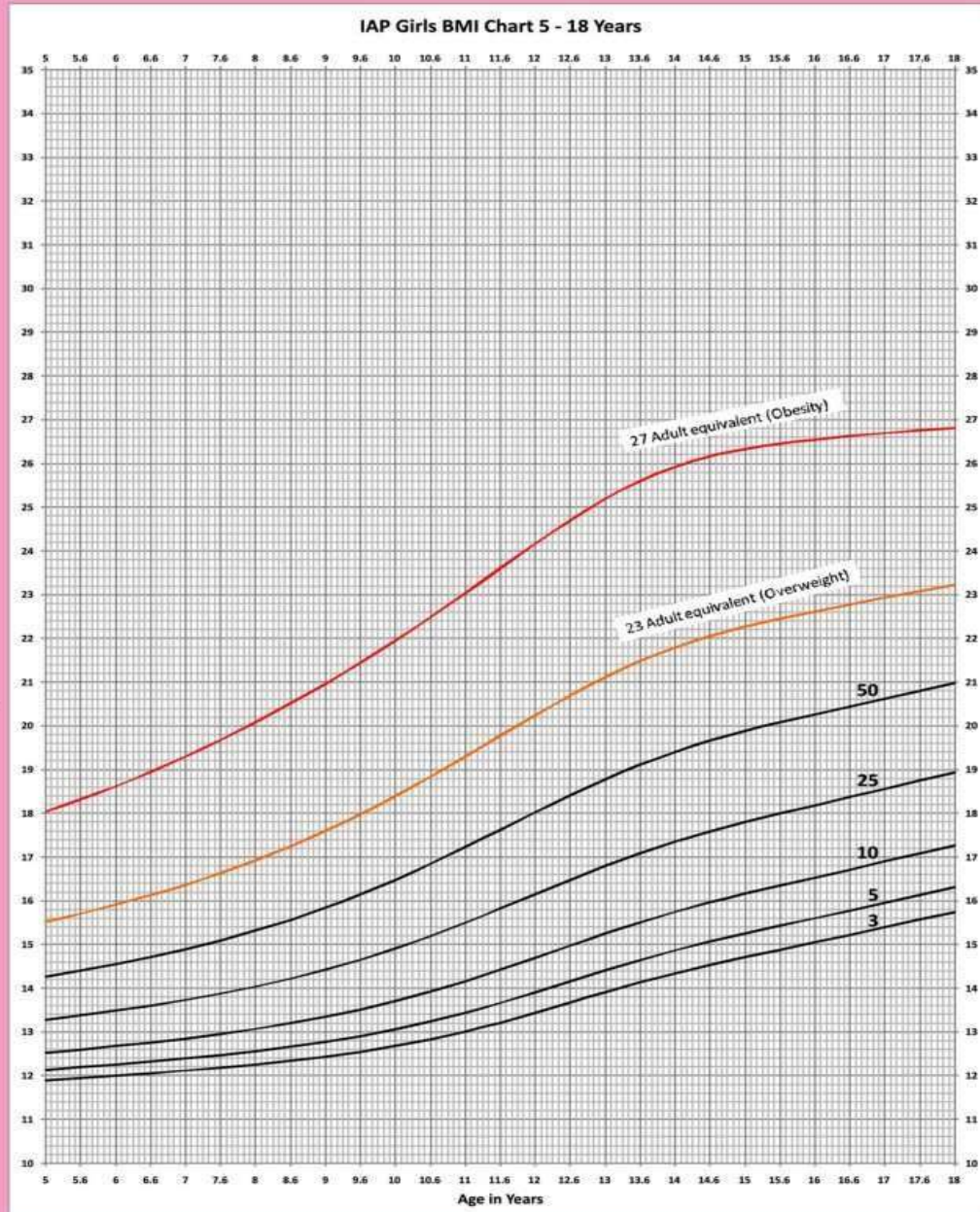


Interpretation:

- 1.
- 2.
- 3.

5 to 18 Years : IAP Girls Body Mass Index Charts

Name _____
 DOB _____



Revised IAP growth charts for height, weight & body mass index for 5 to 18 year old Indian children.
 V. Khadikar et al. from Indian Academy of Pediatrics Growth Chart Committee Indian Pediatrics, Jan 2015, volume 52.

Interpretation:

- 1.
- 2.
- 3.

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE19.6 Assess patient for fitness for immunization and prescribe an age-appropriate immunization schedule

Minimum number required to certify-5

Assessment of immunization status:

S. No	Name	Age	Sex	Vaccines received till date	Plan for further immunisation
1					
2					
3					
4					
5					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

tted mistakes)

REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you commi

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks

PROFESSIONAL YEAR III PHASE I

LEARNING OBJECTIVES

1. Observe the correct technique of breast feeding and distinguish right from wrong techniques
2. Perform NG tube insertion in a manikin correctly
3. Perform and interpret urine dip stick for sugar correctly
4. Identify a BCG scar accurately
5. Interpret a Mantoux test correctly
6. Perform AFB staining correctly
7. Write 4 Paediatric and 1 neonatal case sheets



PE7.5 Observe the correct technique of breast feeding and distinguish right from wrong techniques

Minimum number required to certify-3

Observe the process of breast feeding (under supervision and a chaperone being present) and note the following points

Position of mother and baby.

Cradle. The baby is held in the crook or elbow area of the arm on same side as breast to be used for feeding; mother supports breast with opposite hand; baby's body is rolled in toward mother's body so they are belly-to-belly.

Cross-cradle. The baby's head is supported by the hand opposite the breast to be used for feeding; mother supports breast with hand; baby is rolled in toward mother's body belly-to-belly.

Football or clutch. Baby's head is supported by the hand on the same side as breast to be used for feeding; baby's body is supported on a pillow and tucked under the arm on the same side as breast to be used for feeding.

Side-lying using modified cradle. In this position, the baby lies next to the mother with their bodies facing each other. If a pillow under the arm is uncomfortable, try placing the baby in the crook of the arm. This way, it is unlikely for the mother to roll over on the baby should the mother doze off. This position also keeps the baby's head at a good angle to bring baby and breast together, with the baby's head higher than his or her tummy, which can be helpful for babies who are more likely to spit up.

Laid-back breastfeeding. In this position, the mother is leaning back in a recliner or reclining in bed. The baby is lying on his or her stomach and is pressed against the mother's body. She can support the side of her baby's head if baby cannot hold it by him- or herself. In this position, both mother and baby can relax. She can allow her baby to explore her breast and latch on at his or her leisure. This is a great position if mother has had a cesarean delivery. **Latching.**

The latch should be comfortable and pain free.

The baby's chest and stomach rest against the mother's body, so that baby's head is straight, not turned to the side.

Baby's chin touches her breast.

Baby's mouth opens wide around her breast, not just the nipple.

Baby's lips turn out.

Baby's tongue cups under her breast.

Mother hears or sees swallowing.

S. No	Position of mother	Position of child	Attachment (latching)	Comments
1				

2				
3				
4				
5				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.15 Perform NG tube insertion in a manikin

Minimum Number required to certify-2 Demonstrate the following steps in inserting a NG tube in a manikin

S. No	Identify size of nasogastric tube as per age of child.	Demonstrate landmarks for measurement of length of NG tube to be inserted on a manikin	Correctly measure the length of NG tube to be inserted	Insert the tube and check its position
1				
2				
3				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE33.6 Perform and interpret urine dip stick for sugar

Minimum number required to certify- 3

Demonstrate the steps to perform and interpret the urine dip stick for sugar

S. no	Urine sugar by dipstick	Interpretation
1		
2		
3		

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE34.6 Identify a BCG scar

Minimum number required to certify- 3

Demonstrate the following steps to identify a BCG scar

S.No	Age of the child	Size of BCG scar	Quality of the scar
1			
2			
3			
4			

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date
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PE34.7 Interpret a Mantoux test

Minimum number required to certify- 3

Demonstrate the following steps to interpret a Mantoux test

S. No	Age	Measure induration (horizontal/transverse)	Interpretation
1			
2			

3			
4			
5			

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date
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PE34.11 Perform AFB staining

****Shared with Microbiology**

Minimum number required to certify- 3



103

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

SUMMARY OF COMPETENCIES REQUIRING DOCUMENTATION
(to be observed in ward/PICU/NICU/LT)

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.5	Provide intra-natal care and observe the conduct of a normal delivery	3		
2	27.10	Observe the various methods of administering Oxygen	3		
3	31.11	Observe administration of Nebulization	3		

Competencies requiring documentation
(to be done as part of seminar, demonstration, case presentation)

S.no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature

1	9.7	Plan an appropriate diet in health and disease	3			
----------	-----	--	----------	--	--	--

2	11.3	Assessment of a child with obesity with regard to eliciting history including physical activity, charting and dietary recall	3			
3	12.3	Identify the clinical features of dietary deficiency /excess of Vitamin A	3			

4	12.4	Diagnose patients with Vitamin A deficiency (VAD), classify and plan management	3			
5	12.8	Identify the clinical features of dietary deficiency of Vitamin D	3			
6	12.9	Assess patients with Vitamin D deficiency, diagnose, classify and	3			

		plan management				
7	12.17	Identify the clinical features of Vitamin B complex deficiency	3			

8	12.18	Diagnose patients with vitamin B complex deficiency and plan management	3			
9	12.21	Identify the clinical features of Vitamin C deficiency	3			
10	13.3	Identify the clinical features of dietary deficiency of Iron and make a diagnosis	3			
11	24.12	Perform and interpret stool examination including Hanging Drop	2			

12	27.31	Assess child for signs of abuse	2			
13	32.2	Identify the clinical features of Down Syndrome	3			
14	32.7	Identify the clinical features of Turner Syndrome	2			
15	32.12	Identify the clinical features of Klinefelter Syndrome	2			
16	33.10	Recognize precocious and delayed Puberty and refer	2			

17	20.6	Explain the follow-up care for neonates including Breastfeeding, Temperature maintenance, immunization, importance of growth monitoring and red flags.	3			
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**Competencies requiring documentation
(to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI /EEG/ECG reports)**

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	28.16	Interpret blood tests relevant to upper respiratory problems	3			
2	29.15	Perform and Interpret peripheral smear.	3			
3	32.3	Interpret normal Karyotype and	2			
		recognize Trisomy 21				

4	32.8	Interpret normal Karyotype and recognize Turner Karyotype	2			
5	32.13	Interpret normal Karyotype and recognize the Klinefelter Karyotype	2			
6	34.9	Interpret blood tests in the context of laboratory evidence for tuberculosis	2			

AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION
(To be done as part of AETCOM)

S. No	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
-------	---------------	-------------------	------------------------	----------------	-------------------

1	2.3	Counseling a parent with failing to thrive child	3		
2	3.4	Counsel a parent of a child with developmental delay	3		
3	6.8	Respecting patient privacy and maintaining confidentiality while dealing with adolescence	3		
4	7.8	Educate mothers on antenatal breast care and prepare mothers for lactation	3		
5	7.9	Educate and counsel mothers for best practices in Breastfeeding	3		
6	7.10	Respect patient privacy	3		

7	8.5	Counsel and educate mothers on the best practices in complementary feeding	3		
8	10.5	Counsel parents of children with SAM and MAM	3		
9	19.7	Educate and counsel a patient for immunization	3		

10	19.8	Demonstrate willingness to participate in the national and subnational immunization days	3		
11	20.5	Counsel/educate mothers on the care of neonates	3		
12	21.16	Counsel / educate a patient for referral appropriately	3		
13	22.2	Counsel a patient with Chronic illness	3		
14	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		
15	29.19	Counsel and educate patients about prevention and treatment of anemia.	3		

16	32.5	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Down syndrome)	2		
17	32.10	Counsel parents regarding 1. Present child 2. Risk in the next pregnancy (Turner syndrome)	2		

List of Self-Directed Learning Topics

SELF- DIRECTED LEARNING

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.

14.

15.

SELF- DIRECTED LEARNING:

1) Topic:

Objectives:

Task:

Impressions:

2) Topic:

Objectives:

Task:

Impressions:

INTEGRATED LEARNING

Summary of integrated learning sessions:

S.No	Competency No.	Topic	Departments involved	Date

REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks

Name of clerk	Name of elective	Location of elective	Name of internal preceptor	Attendance	Daily rounds	Assignments	Case presentation	Remarks of the preceptor
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1										
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ELECTIVE POSTINGS (If done in Paediatrics)

2											
3											

PROFESSIONAL YEAR III PHASE II

LEARNING OBJECTIVES

9. Perform IV cannulation in a simulated environment
10. Perform intraosseous insertion in a simulated environment
11. Assess airway, breathing and circulation in a sick child, give appropriate and accurate treatment
12. Choose the type of fluid and calculate the fluid requirement in shock in children
13. Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma
14. Assess for signs of severe dehydration
15. Provide BLS for children in a manikin
16. Write 4 Paediatric and 1 neonatal case sheet

Perform IV cannulation in a manikin by observing the following steps

S.no	Identify size of IV cannula as per age of child.	Demonstrate all steps of infection control policy like handwashing, wearing gloves, proper filling of fluid in syringe	Choose and prepare the site	Correctly insert the cannula and look for free flow of blood	Fix the cannula and properly dispose the biomedical waste
1					
2					
3					

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE24.17 Perform intraosseous insertion in a model

Minimum number required to certify-2

Perform intraosseous insertion in a model in these following steps

S.no	Identify site for intraosseous insertion in children based on landmarks.	Demonstrate all steps of infection control	Insert the Intraosseous cannula and demonstrate how to check its proper insertion in model	Fix Intraosseous cannula and correctly demonstrate disposal of biomedical waste
1				
2				
3				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.15 Assess airway and breathing: recognize signs of severe respiratory distress. Check for cyanosis, severe chest indrawing, grunting

Minimum number required to certify- 3

Check for the following signs in a child with respiratory distress

S.no	Respiratory rate	Intercostal retractions	Alae nasi flaring	Drowsiness	Grunt or stridor	Cyanosis
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty (C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date
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PE27.16 Assess airway and breathing. Demonstrate the method of positioning of an infant & child to open airway in a simulated environment

Minimum number required to certify- 3

Assess whether the student performs the steps in a correct manner

S.no	Head tilt manoeuvre performed	Chin lift manoeuvre performed	Jaw thrust manoeuvre performed	Remarks of the facilitator
1				
2				
3				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.17 Assess airway and breathing: administer oxygen using correct technique and appropriate flow rate

Minimum number required to certify- 3

Demonstrate the various methods of administering oxygen and at specific rates

S. no	Head box	Nasal cannula	High flow nasal cannula	Face mask	Non rebreathing mask	Rate of delivery of oxygen
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date
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PE27.18 Assess airway and breathing: perform assisted ventilation by Bag and mask in a simulated environment

Minimum number required to certify- 3

Demonstrate assisted ventilation using bag and mask in a simulated environment

S. no	Chosen the correct size mask	Chosen the correct bag	Head and neck in proper position	Used the correct pressure to inflate	Looked for chest rise	Used the correct rate of ventilation
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.19 Check for signs of shock i.e., Pulse, Blood Pressure, Capillary Refill time

Minimum number required to certify- 3

Check for the signs of shock

S. no	Check for volume of pulse	Check BP	Check for saturation	Check for CRT	Check for skin colour and temperature	Check for sensorium

1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.21 Choose the type of fluid and calculate the fluid requirement in shock

Minimum number required to certify- 3

Choose appropriate fluid according to different types of shock. Calculate the fluid for managing different types of shock at different age/size of the child.

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S.no	Type of shock	Assess weight of child	Choose the appropriate fluid for bolus administration	Calculate the amount of fluid to be administered for bolus and continuation	Remarks

1	Hypovolemic				
2	Septic				
3	Cardiogenic				
4	Obstructive				
5	Burns				

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.22 Assess level of consciousness & provide emergency treatment to a child with convulsions/ coma

Minimum number required to certify- 3

S. no	Assess level of consciousness (Glasgow or AVPU)	Position a child in coma correctly	Position a child with head/spine trauma correctly	Assess ABCD	Demonstrate how to give rectal diazepam	Calculate how much IV diazepam and give it correctly in a manikin	Administer nasal midazolam spray
1							
2							
3							

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

PE27.28 Provide BLS for children in manikin

Minimum number required to certify- 3

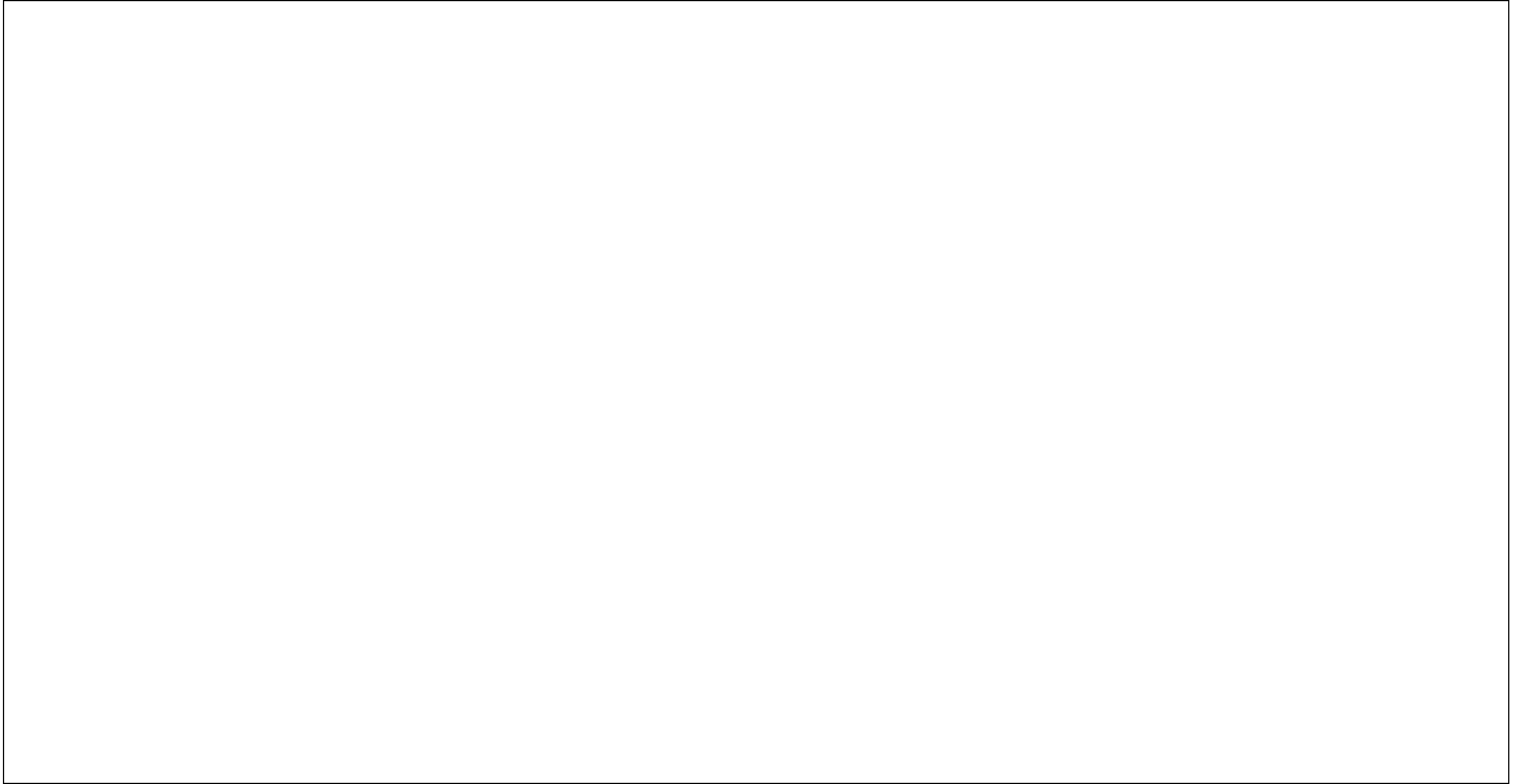
Either a certificate that they have attended a formal BLS course or a modified BLS session has to be attached

S.No	Check for response	Call for help	Check pulse and breathing simultaneously	Start chest compression	Make airway patent and give 2 rescue breaths	Repeat above CPR
1						
2						
3						

Date Completed	Attempt at Competency (F/R/Re)	Rating (B/M/E)	Decision of Faculty(C/R/Re)	Initial of Faculty & Date	Feedback Received Initial of Learner with Date

SUMMARY OF COMPETENCIES REQUIRING DOCUMENTATION

(to be done as part of seminar, demonstration, case presentation)



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S.no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
1	21.9	Identify external markers for Kidney disease, like Failing to thrive, hypertension, pallor, Icthyosis, anasarca	3			
2	21.10	Analyze symptom and interpret the physical findings and arrive at an appropriate	3			

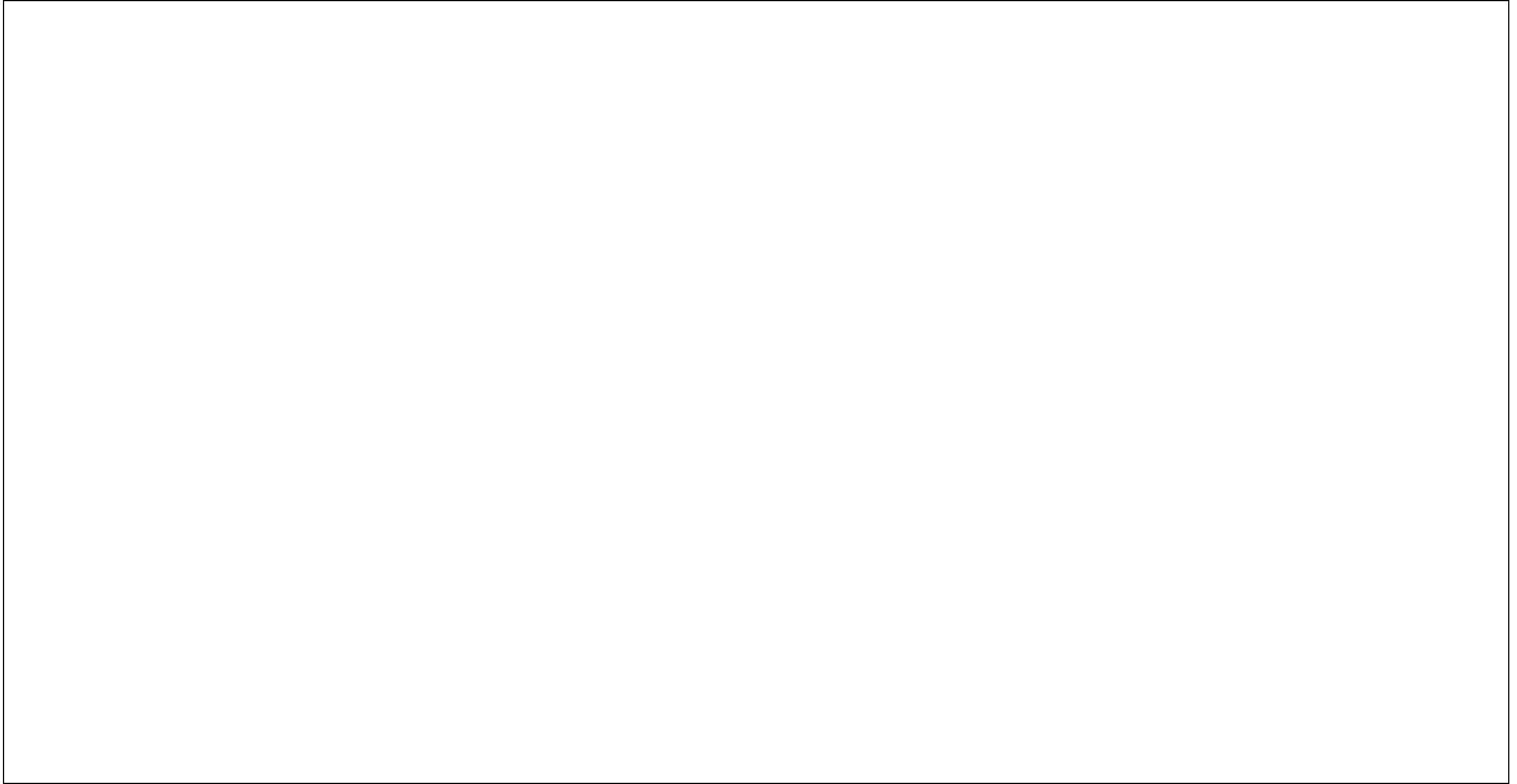
		provisional differential diagnosis				
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3	21.14	Recognize common surgical conditions of the abdomen and genitourinary system and enumerate the indications for referral including acute and subacute intestinal obstruction, appendicitis, pancreatitis, perforation intussusception, Phimosi, undescended testis, Chordee, hypospadias, Torsion testis, hernia Hydrocele, Vulval Synechia	3				
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4	21.16	Counsel / educate a patient for referral appropriately	3			
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5	23.11	Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti failure drugs, and inotropic agents	3			
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(To be done as part of IMNCI assessment) **Competencies requiring documentation**



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S. no	Competency no	Competency detail	Minimum No.to be done	Date completed	Faculty signature
1	10.4	Identify children with under nutrition as per IMNCI criteria and plan referral	3		
2	16.2	Assess children <2 months using IMNCI guidelines	3		
3	16.3	Assess children >2 months to 5 years using IMNCI guidelines and stratify risk	3		

4	20.18	Identify and stratify risk in a sick neonate using IMNCI guidelines	3		
5	24.11	Apply the IMNCI guidelines in risk stratification of children with diarrhoeal dehydration and refer	3		
6	28.15	Stratify risk in children with stridor using IMNCI guidelines	3		

Competencies requiring documentation

(to be done in a simulated environment)

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	18.4	Provide intra-natal care and conduct a normal delivery in a simulated environment	3		
2	19.13	Demonstrate the correct administration of different vaccines in	3		

3	20.3	Perform Neonatal resuscitation in a manikin	3		
4	26.10	Demonstrate the technique of liver biopsy in a manikin Perform Liver Biopsy in a simulated environment	2		
5	29.17	Demonstrate performance of bone marrow aspiration in mannequin.	2		

Competencies requiring documentation (to be done by giving actual blood reports/case scenarios/x-rays/CT/MRI/ EEG/ECG reports)

S. no	Competency no	Competency detail	Minimum No. to be done	T/L method	Date completed	Faculty signature
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1	21.12	Interpret report of Plain X Ray of KUB	3			
2	21.13	Enumerate the indications for and Interpret the written report of Ultra	3			

		sonogram of KUB				
3	23.12	Interpret a chest X ray and recognize Cardiomegaly	3			
4	23.13	Choose and Interpret blood reports in Cardiac illness	3			
5	23.14	Interpret Pediatric ECG	3			
6	23.15	Use the ECHO reports in management of cases	3			
7	24.13	Interpret RFT and electrolyte report	3			

8	30.20	Interpret and explain the findings in a CSF analysis	3			
9	30.21	Enumerate the indication and discuss the limitations of EEG, CT, MRI	3			
10	30.22	Interpret the reports of EEG, CT, MRI	3			
11	34.9	Interpret blood tests in the context of laboratory	3			

		evidence for tuberculosis				
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AFFECTIVE COMPETENCIES REQUIRING DOCUMENTATION

(To be done as part of AETCOM)

S. no	Competency no	Competency detail	Minimum No. to be done	Date completed	Faculty signature
1	23.18	Demonstrate empathy while dealing with children with cardiac diseases in every patient encounter	3		

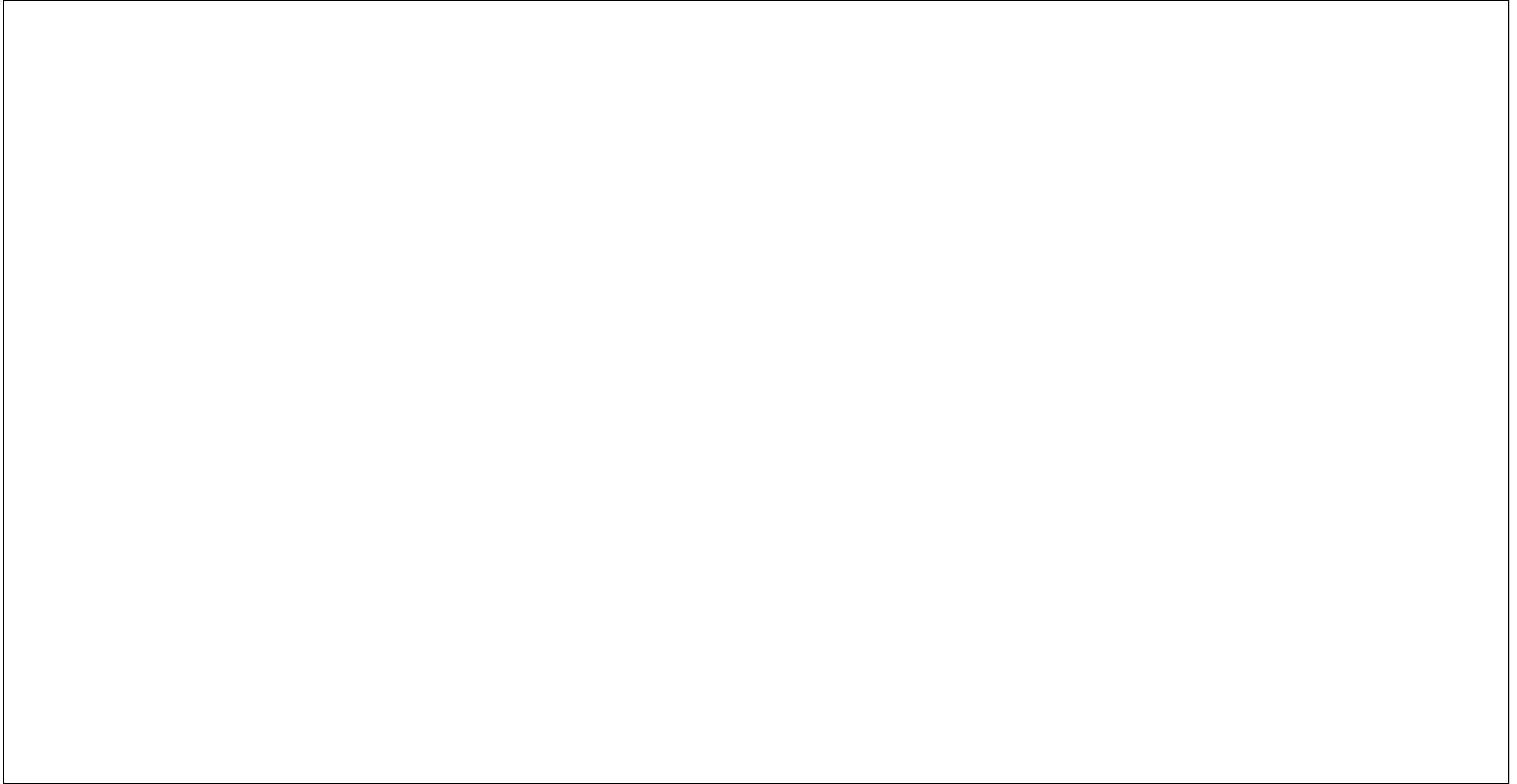
2	26.13	Counsel and educate patients and their family appropriately on liver diseases	3		
3	27.32	Counsel parents of dangerously ill/ terminally ill child to break a bad news	2		

4	27.33	Obtain Informed Consent	2		
5	27.34	Willing to be a part of the ER team	3		
6	27.35	Attends to emergency calls promptly	3		

SELF-DIRECTED LEARNING

List of Self-Directed Learning Topics

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- 14.
- 15.



SELF-DIRECTED LEARNING:

1) Topic:

Objectives:

Task:

Impressions:

2) Topic:

Objectives:

Task:

Impressions:

Summary of integrated learning sessions

S.No	Competency No	Topic	INTEGRATED LEA	
			Departments involved	Date

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REFLECTIONS:

Your thoughts about the procedures requiring certification (any 7 where you committed mistakes)

Competency no	Competency details	Why I went wrong	Was this exercise useful	Faculty remarks

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Other activities :

- 5. Participation in departmental activities- children's day, breast feeding week, ORS week, disease specific days (if being celebrated) 6. STS/ college grant project submitted
- 7. Participation in IAP quiz competition
- 8. Participation in any research projects/student conference

CLINIC/FIELD VISITS

S. no	Visit to	Competency no	Competency	Year/Phase	Date completed	Report submitted	Faculty signature
1	Child development unit	3.7	Visit a Child Developmental Unit and Observe its functioning Topic: Developmental delay and cerebral palsy				

2	Child guidance clinic	4.6	Visit to the Child guidance clinic Topic: Scholastic backwardness, learning disabilities, Autism, ADHD				
		5.11	Visit to Child guidance clinic				

			and observe functioning Topic: Common problems related to behaviour				
3	Adolescent clinic	6.11	Visit to the Adolescent clinic				
4	Rural health centre	18.8	Observe the implementation of the program by visiting the Rural Health Center				
5	Immunization clinic	19.10	Observe the handling and storing of vaccines				
		19.11	Document Immunization in an immunization record				
		19.12	Observe the administration of UIP vaccines				

		19.14	Practice Infection control measures and appropriate				
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			handling of the sharps				
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NOTES

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Acknowledging the Contributors to the development of Curriculum of 3rd MBBS Part 2

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