

**REVISED ORDINANCE GOVERNING AYURVEDA VACHASPATHI MD(Ay)/AYURVEDA  
DHANVANTRI MS(Ay) POST GRADUATE DEGREE COURSE IN AYURVEDA**

**2017**



**Rajiv Gandhi University of Health Sciences, Karnataka**

**4<sup>th</sup> 'T' Block, Jayanagar, Bangalore 560041**

**Revised Ordinance Governing Post Graduate Courses in Ayurveda Vachaspathi MD(Ay)/  
Ayurveda Dhanwantri MS(Ay) -2017**

	<b>Contents</b>
<b>1.</b>	<b>Title of the Course &amp; Post-graduate specialities</b>
<b>2.</b>	<b>Eligibility for Admission</b>
<b>3.</b>	<b>Mode of Admission</b>
<b>4.</b>	<b>Obtaining Eligibility Certificate</b>
<b>5.</b>	<b>Intake of students</b>
<b>6.</b>	<b>Period of study &amp; attendance</b>
<b>7.</b>	<b>Method of training</b>
<b>8.</b>	<b>Medium of Instruction</b>
<b>9.</b>	<b>Monitoring progress of studies</b>
<b>10.</b>	<b>Vacation</b>
<b>11.</b>	<b>Study tour</b>
<b>12.</b>	<b>Dissertation</b>
<b>13.</b>	<b>Scheme of Examination</b>
<b>14.</b>	<b>Schedule of Examination</b>
<b>15.</b>	<b>Appointment of Examiners</b>
<b>16.</b>	<b>Criteria for declaring results</b>
<b>17.</b>	<b>Goals and Objectives of the Courses</b>
<b>18.</b>	<b>Syllabus</b>
<b>19.</b>	<b>Teaching &amp; monitoring Learning progress</b>
<b>20.</b>	<b>Ayurveda ethics-Sensitization and Practice</b>

## **Rajiv Gandhi University of Health Sciences, Karnataka Bangalore.**

### **The Emblem**



The emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both eastern and western health sciences. A central wand with entwined Snakes symbolizes Greek and Roman gods of health called Hermes and Mercury is adopted as symbol of modern Medical sciences. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all health sciences. The wing above it depicts human soul called Hamsa (Swan) in Indian philosophy. The rising sun at the top symbolizes olive branches, which is an expression of peace, love and harmony. In Hindu philosophy it depicts the vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which is an expression of peace, love and Harmony. In Hindu Philosophy it depicts the Vanaspati (also called as Oushadi) held in the hands of Dhanvantri which are the source of all medicine. The lamp depicts human energy (Kundali). Does script "Devahitham Yadayahu" Inside the lamp taken from Upanishath Shanti Manthram (Bhadram Karnebhi Shrunuyanadev...) which says "May we live the full span of our lives allotted by god in perfect health" which is the motto of the Rajiv Gandhi University of Health Sciences.

## **VISION STATEMENT**

The Rajiv Gandhi University of health Sciences, Karnataka aims at brining about a confluence of both Eastern and Western health Sciences to enable the humankind “Live the full span of our lives allotted by God Prefect Health”.

**It would strive for achievement of academic excellence by educating and training health professionals who**

- ❖ **Shall recognize health needs of community.**
- ❖ **Carry out professional obligations ethically and equitably and in keeping with National HealthPolicy.**

**It would promote development of scientific temper and Health Sciences Research.**

**It would encourage inculcation of Social Accountability amongst students, teachers and institutions.**

**It would support quality assurance of all its educational programmes**

## **MOTTO**

*“Right for Rightful Health Sciences Education”*



ರಾಜೀವ್ ಗಾಂಧಿ ಆರೋಗ್ಯ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ, ಬೆಂಗಳೂರು

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, KARNATAKA, BENGALURU

4<sup>th</sup> T Block, Jayanagar, Bengaluru - 560 041

Ref: ACA/DCD/PG-Ayur/400/2020-2021

Date: 14/10/2020

**NOTIFICATION**

Sub: Revised Ordinance pertaining to Ayurveda Vachaspathi MD (Ay)  
Ayurveda Dhanvanthri MS (Ay) Post Graduate Degree course in  
Ayurveda as per CCIM guidelines.

Ref: 1) Recommendations of the Faculty of Ayurveda in its meeting  
held on 22/10/2019  
2) Recommendations of the AC in its meeting held on  
20/11/2019  
3) Minutes of the 146th Syndicate meeting held on 30/11/2019

In pursuance to the decision of the Syndicate in its 146th meeting held on 30/11/2019 and in exercise of the powers conferred under section 35(2) of RGUHS Act, 1994, approval is accorded for implementation of Revised Ordinance pertaining to Ayurveda Vachaspathi MD (Ay) Ayurveda Dhanvanthri MS (Ay) Post Graduate Degree course in Ayurveda as per CCIM guidelines which is annexed herewith.

This ordinance is applicable for 2017-2018 batch onwards.

By Order,

  
**REGISTRAR**

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 - 01
3. The Principals of all affiliated PG Ayurveda medical colleges of RGUHS, Bangalore
4. PA to Vice - Chancellor/PA to Registrar/Registrar (Eva.)/Finance Officer, Rajiv Gandhi University Health Sciences, Bangalore
5. All Officers of the University Examination Branch/ Academic Section.
6. Guard File / Office copy.

## **AYURVEDA VACHASPATHI M.D./AYURVEDA DHANVANTRI M.S.**

### **POST GRADUATE DEGREE COURSE IN AYURVEDA – 2017**

(In conformity with “Indian Medicine Central Council (Post-Graduate Education Regulation, 2016 vide The Gazette of India Notification dated Nov 09, 2016)

#### **INTRODUCTION**

Revised Ordinance Governing Post Graduate Courses in Ayurveda Vachaspati (M.D. Ayurveda) & Ayurveda Dhanvantri (M.S. Ayurveda) in conformity with “Indian Medicine Central Council (Post-Graduate Regulation, 2016” vide The Gazette of India Notification dated Nov 09, 2016.

Central Council of Indian Medicine, by the Notification published in The Gazette of India on Nov 09 2016, in supersession of the earlier (Post Graduate Education) Amendment Regulations, 2005 and 19th March 2012. In view of this, “ Revised Ordinance Governing Post Graduate Courses in Ayurveda Vachaspati (M.D. Ayurveda) & Ayurveda Dhanvantri (M.S. Ayurveda)- 2017” in conformity with “Indian Medicine Central Council (Post-Graduate Regulation, 2016 vide The Gazette of India Notification dated Nov 09, 2016 is notified in this volume. It contains section I, describing regulation pertaining to the PG course. This volume should be read with the earlier regulations i.e., Revised Ordinance Governing Ayurveda Vachaspati MD(Ay)/MS(Ay) PG degree courses in Ayurveda - 2002, and 2006 and 2012 because Goals and Objectives of the course are given in section II, course Description for various subject given in section III, Monitoring Learning Progress given in section 4, Ayurveda Ethics given in section IV, of Revised Ordinance Governing Ayurveda Vachaspati MD(Ay)/MS(Ay) PG degree course in Ayurveda – 2002, 2006 and 2012 continue to be in force.

## SECTION I

### REGULATIONS

#### 1) Title of Course & Post-graduate Specialties

The post-graduate degrees shall be allowed in the following specialties as under:-

Sl.No.	Name of speciality	Nearest terminology of modern subject	Department in which post-graduate degree can be conducted
(1)	(2)	(3)	(4)
<b>Pre-clinical speciality</b>			
1	AyurvedaSamhita evam Siddhant	Ayurveda Samhita and basic principles of Ayurveda	Samhita and basic principles of Ayurveda
2	Rachana Sharira	Anatomy	Rachana Sharira
3	Kriya Sharira	Physiology	Kriya Sharira
<b>Para-clinical speciality</b>			
4	Dravyaguna Vigyana	Materia Medica and Pharmacology	Dravyaguna
5	Rasa Shastra evam Bhaishajya Kalpana	Ayurveda Pharmaceuticals	Rasa Shastra evam Bhaishajya Kalpana
6	Roga Nidanevam Vikrit Vigyana	Diagnostic Procedure and Pathology	RogNidana evam Vikriti Vigyana
<b>Clinical specialty</b>			
7	Prasuti evam Stri Roga	Obstetrics and Gynecology	Prasuti evam Stri Roga
8	Kaumarabhritya –Bala Roga	Pediatrics	Kaumarabhritya– Bala Roga
9	Swasthavritta	Preventive Social Medicine	Swasthavritta and Yoga
10	Kayachikitsa	Medicine	Kayachikitsa
11	Rasayana evam Vajikarana	Rejuvenation and Aphrodisiacs	Kayachikitsa
12	Mano Vigyana evam Manasa Roga	Psychiatry	Kayachikitsa
13	Shalya	Surgery	Shalya Tantra
14	Shalakya	Diseases of Eye, Ear, Nose, Throat Head, Neck, Oral andDentistry	Shalakya Tantra
15	Panchakarma	Panchakarma	Panchakarma
16	Agada Tantra	Toxicology and Forensic Medicine	Agada Tantra.
17	Yoga *	Yoga	Swasthavritta and Yoga

\*MD Yoga in the Department of Swasthavritta and Yoga does not have prescribed syllabus and hence the course is withheld until the syllabus is notified by CCIM.

2) **Nomenclature of post-graduate degree.**- The nomenclature of post-graduate degree in respective specialties shall be asunder:-

Sl.No.	Nomenclature of specialty or degree	Abbreviation
(1)	(2)	(3)
<b>Pre-clinical specialty</b>		
1	Ayurveda Vachaspati – Ayurveda Samhita evum Siddhant	M.D. (Ayurveda)- Compendium and Basic Principles
2	Ayurveda Vachaspati – Rachana Sharira	M.D. (Ayurveda) - Anatomy
3	Ayurveda Vachaspati – Kriya Sharira	M.D. (Ayurveda) - Physiology
<b>Para-clinical specialty</b>		
4	Ayurveda Vachaspati – Dravyaguna Vigyana	M.D. (Ayurveda) - Materia Medica and Pharmacology
5	Ayurveda Vachaspati – Rasa Shastraevam BhaishajyaKalpana	M.D. (Ayurveda) - Pharmaceuticals
6	Ayurveda Vachaspati – Roga Nidana evam Vikriti Vigyana	M.D. (Ayurveda)-Diagnostic procedure and Pathology
<b>Clinical specialty</b>		
7	Ayurveda Dhanvantari – Prasuti evam Stri Roga	M.S. (Ayurveda)- Obstetrics and Gynecology
8	Ayurveda Vachaspati – Kaumarabhritya –Bala Roga	M.D. (Ayurveda)- Paediatrics
9	Ayurveda Vachaspati – Swasthavritta	M.D. (Ayurveda)- Social and Preventive Medicine
10	Ayurveda Vachaspati – Kayachikitsa	M.D. (Ayurveda)- Medicine
11	Ayurveda Vachaspati – Rasayana evam Vajikarana	M.D. (Ayurveda)- Rejuvenation and aphrodisiacs
12	Ayurveda Vachaspati – Mano vigyana evam Manasa Roga	M.D. (Ayurveda)- Psychiatry
13	Ayurveda Dhanvantari – Shalya	M.S. (Ayurveda)- Surgery
14	Ayurveda Dhanvantari – Shalaky	M.S. (Ayurveda)- Diseases of Eye, Ear, Nose, Throat Head, Neck, Oral and Dentistry
15	Ayurveda Vachaspati – Panchakarma	M.D. (Ayurveda)- Panchakarma
16	Ayurveda Vachaspati – Agada Tantra	M.D. (Ayurveda)-Toxicology and Forensic Medicine
17	Ayurveda Vachaspati – Yoga	M.D. (Ayurveda)- Yoga

**Note 1:** The post-graduate degree holder in the old nomenclature, namely, Ayurveda Vachaspati- Ayurveda Sidhant, Ayurveda Vachaspati- Ayurved Samhita, Ayurveda Vachaspati- Kriya Sharir (Dosha-Dhatu-Mala Vigyana) and Ayurveda Vachaspati-Bhaishajya Kalpana as mentioned in Post-graduate Education Regulations, 2005, may be appointed in the concerned department like, holder of Dosha Dhatu Malavigyana in the department of Kriya Sharira, holder of Samhita or Siddhant in the department of Samhita and Basic Principles of Ayurveda, holder of Bhaishajya Kalpana in the



department of Rasa Shastra evam Bhaishajya Kalpana. Similarly, The post-graduate degree holder in the old nomenclature, namely, Ayurveda Dhanvantri - Shalya - Samanya, Ayurveda Dhanvantri – Kshar Karma evam Anushastra Karma, Ayurveda Dhanvantri – Shalakyā – Netra Roga, Ayurveda Dhanvantri – Shalakyā – Shiro- Nasa Karna evam Kantha Roga, Ayurveda Dhanvantri – Shalakyā – Danta evam Mukha Roga, Ayurveda Vachaspati- Sangyahan, Ayurveda Vachaspati-Chhaya evam Vikiran Vigyan, Ayurveda Dhanvantri – Asthi Sandhi and Marmagat Roga and Ayurveda Vachaspati-Swastha Vritta and Yoga as mentioned in Post-graduate Education Regulations, 2012, may be appointed in the concerned department like, holder of Shalya - Samanya in the department of Shalya, holder of Kshar Karma evam Anushastra Karma in the department of Shalya, holder of Shalakyā – Netra Roga in the department of Shalakyā, holder of Shalakyā – Shiro- Nasa Karna evam Kantha Roga in the department of Shalakyā, holder of Shalakyā – Danta evam Mukha Roga in the department of Shalakyā, holder of Sangyahan in the department of Shalya, holder of Chhaya evam Vikiran Vigyan in the department of Rog Nidan, holder of Asthi Sandhi and Marmagat Roga in the department of Shalya and holder of Swasthavritta and Yoga in the department of Swasthavritta.

**Note 2:** The post-graduate degree holder of newly developed speciality, namely, Ayurveda Vachaspati- Yoga as mentioned in these regulations, may be considered for appointment in their corresponding department mentioned under regulations 4 like holder of Yoga in department of Swasthavritta and Yoga.

### **3. Eligibility for Admission**

A person possessing the degree of Ayurvedacharya (Bachelor of Ayurveda Medicine and Surgery) from a recognised University or Board or medical institution specified in the Second Schedule to the Act and enrolled in Central or State register of Indian System of Medicine shall be eligible for admission in the post-graduate courses

Further, sponsored/deputed candidate (Ayurveda Teachers or Physicians) will be required to possess qualification essential for admission.

### **4 Mode of admission**

(1) A person possessing the degree of Ayurvedacharya (Bachelor of Ayurveda Medicine and Surgery) from a recognised University or Board or medical institution specified in the Second Schedule to the Act and enrolled in Central or State register of Indian Systems of Medicine shall be eligible for admission in the post-graduate degree course.

(2) The State Government or University concerned shall conduct the admission process.

(3) The Selection of candidates shall be made on the basis of final merit index calculated out of total of hundred marks based on eighty per cent. weightage to the Post-graduate entrance test (PGET) and twenty per cent. weightage to the marks obtained in under-graduate course.

(4) The Post-graduate entrance test (PGET) of hundred marks shall consist of one common written test of multiple choice questions covering all the subjects of Ayurvedacharya (Bachelor of Ayurveda Medicine and Surgery) course.

(5) The minimum eligibility marks of the entrance test for admission in the case of general candidates shall be fifty per cent of the total marks, in the case of candidates belonging to the Schedule Castes, the Scheduled Tribes and regular Central or State Government service candidate shall be forty per cent. and in the case of candidates belonging to the Other Backward classes shall be forty-five per cent.

(6) The sponsored candidates shall also be required to possess the percentage of marks specified in sub-regulations(5).

(7) The sponsored foreign national's candidates shall not be required to possess the percentage of marks specified in sub-regulations (5).

(8) Reservation for all categories shall be applicable as per the policy of the Central Government or the concerned State Government.

(9) Change of subject shall be permissible within a period of two months from the date of admission, subject to availability of vacancy and guide in the concerned department

**5 Obtaining Eligibility Certificate:** No candidate shall be admitted to any Post-graduate degree course in Ayurveda, unless the candidate has obtained and produced eligibility certificate issued by the University. The candidate has to make an application to the University with following documents along with prescribed fee:-

- 1) B.A.M.S. pass or degree certificate issued by the University.
- 2) Marks card of all University examinations passed (First to Final year of B.A.M.S. Course)
- 3) Attempt certificate issued the Principal.
- 4) Certificate regarding the recognition of College by CCIM.
- 5) Completion of internship certificate from a recognized institution.
- 6) Registration by State of Ayurveda practitioners registration Board/Ayurveda Council.
- 7) Proof of SC/ST or Category I, as the case maybe.

Candidates should obtain the eligibility certificate before the last date for the admission as notified by the University. A candidate who has been admitted to the Post-graduate degree course shall register his/her name in the University within a month after paying the registration fee.

#### **6 Teacher- student ratio.-**

- (1) The teacher-student ratio shall be such that the number of post-graduate teachers to the number of post-graduate students admitted per year is maintained as 1:3 in case of Professor and 1:2 in case of Reader or Associate Professor.

(2) The teacher student ratio shall be 1:1 in case of Lecturer or Assistant Professor having minimum of five years teaching experience in the concerned Department.

### **7 Duration of course and attendance-**

1. The student shall have to undergo study for a period of three years after the admission.
2. The student shall have to attend minimum seventy-five per cent. of total lectures, practicals and clinical tutorials or classes to become eligible for appearing in the examination.
3. The student shall have to attend the hospital and other duties as may be assigned to him during the course of study.
4. The student of clinical subject shall have to do resident duties in their respective departments and student of non-clinical subject shall have duties in their respective departments like Pharmacy or Herbal Garden or Laboratory during the course of study.
5. The student shall attend special lectures, demonstrations, seminars, study tours and such other activities as may be arranged by the teaching departments.
6. The maximum duration for completion of the course shall not exceed beyond the period of six years from the date of admission to the course.
7. Web based centralized biometric attendance system shall be required for the attendance of post-graduate students and manual attendance at department level in which student is pursuing the post-graduate course.

### **8 Method of training:-**

- 1 In the first year of the course, the students shall have to acquire knowledge in the applied aspects of the fundamentals of Ayurveda
- 2 Intensive training shall be provided in classical knowledge along with comparative and critical study in the respective specialty.
- 3 The emphasis shall be given on intensive applied and hands on training.
- 4 The student shall have to acquire the knowledge about the methods and techniques of research in the respective fields making use of information technology.
- 5 In clinical subjects, students shall undertake responsibility in management and treatment of patients independently and deal with emergencies.
- 6 The student shall undertake training in teaching technology and research methods and shall participate

in the teaching and training programs of under-graduate students or interns in the respective subjects during the course of studies.

7 In the clinical training, the student shall have to acquire knowledge of independent work as a specialist.

8 In the specialties of Shalya, Shalakyā and Prasuti - Stri Roga, the student shall undergo training of investigative procedures, techniques and surgical performance of procedures and management in the respective specialty.

### **9 Medium of Instruction:-**

The medium of instruction shall be Sanskrit or Hindi or any recognised regional language

### **10 Monitoring Progress of Studies:-**

Every candidate shall maintain a work diary and record of his/her participation in training programmes conducted by the department such as journals reviews, seminars, etc. (please see section IV for model checklist and log book specimen copy). The work diary shall be scrutinized and certified by the Head of the Department and head of the institution, and presented in the university practical examination, if called for. Special mention may be made of the presentations by the candidate as well as details of experiments or laboratory procedures conducted by the candidate. The presentation will be assessed by the faculty members and peers using relevant checklist given on section IV.

### **11 Vacation:**

There will a vacation of 15 days with stipend at the end preliminary examination only. In addition to the vacation, each student is eligible for 12 days casual leave with stipend. Any leave enjoyed without prior approval or in excess limit mentioned above shall be treated, as willful absence and no stipend will be granted for such period.

### **12 Dissertation.-**

1 Central Scientific Advisory Post Graduate Committee appointed by Central Council of Indian Medicine shall suggest the areas of Research and topics to be focused every academic year to make campaigning of evidence based Ayurveda to the need of global standards and achieve publications and the same shall be followed by University Committee while approving the Dissertation title.

2 The title of the dissertation along with the synopsis, with approval of the Ethics Committee constituted by the institute as per regulations of concerned recognised University, shall be submitted to the University within a period of six months from the date of admission to the post-graduate course.

3 If the student fails to submit the title of dissertation and synopsis within the period specified under sub-regulation (2), his terms for final post-graduate course shall be extended for six months or more in accordance with the time of submission of the synopsis to the University.

4 The synopsis of the proposed scheme of work shall indicate the expertise and action plan of work of the student relating to the proposed theme of work, the name of the department and the name and designation of the guide or supervisor and co-guide (if any).

The University shall approve the synopsis not later than three months after submission of the synopsis.

5 A Board of Research Studies shall be constituted by the University for approving the title.

6 The University shall display the approved synopsis of dissertation on their website.

7 The subject of every dissertation shall be research oriented, practical oriented, innovative and helpful in the development of Ayurveda system and the subject of the dissertation shall have relation with the subject matter of the specialty.

8 Once the title for dissertation is approved by the Board of Research Studies of the University, the student shall not be allowed to change the title of the proposed theme of work without permission of the University.

9 No student shall be allowed to submit the dissertation before six months of completion of course and the student shall continue his regular study in the institution after submission of dissertation to complete three years.

10 The dissertation shall contain the methods and data of the research carried out by the student on the problem selected by him and completed under the guidance of the guide or supervisor approved by the University.

11 The dissertation shall consist of critical review of literature, methodology, results of the research, discussion on the basis of research findings of the study, summary, conclusion, and references cited in the dissertation shall be suitable for publication.

12 The dissertation shall consist of not less than forty thousand words.

13 The dissertation shall contain, at the end, a summary of not more than one thousand and five hundred words and the conclusion not exceeding one thousand words.

14 The guide or supervisor shall be a person of status of a Professor or Reader or Associate Professor.

15 Lecturer or Assistant Professor having five years University approved teaching experience in the subject concerned shall eligible for guide or supervisor.

- 16 Five copies of the bound dissertation along with a certificate from the supervisor or guide shall reach the office of the Registrar of the University four months before the final examination.
- 17 The dissertation shall be assessed by two external examiners and two internal examiners appointed by the University.
- 18 The dissertation shall be accepted only after the approval of examiners appointed under sub-regulation (17) and in case of disapproval by one external examiner, the dissertation shall be referred to third external examiner approved by the University concerned.
- 19 If the dissertation is not accepted by two external examiners, the same shall be returned to the student with the remarks of the examiners and the student shall resubmit the dissertation after making necessary improvement in the light of examiners' report to the University within a further period of six months.
- 20 The student shall be permitted to appear in the final examination of post-graduate degree course only after approval of the dissertation by the examiners.
- 21 Inter-disciplinary research may be done by co-opting the guide or supervisor from the concerned specialty.
- 22 If a para-clinical or pre-clinical subject student takes a thesis topic involving clinical trials then he/she shall work under co-guide of a clinical teacher of the specialty concerned for preparing the thesis\

**14 The dissertation should be written under the following headings:**

Introduction

Aims and Objectives of study

Review of literature

Methodology (Materials & Methods)

Results

Discussion

Summary

Conclusion

Bibliography/References Annexures

**Change of Guide:** In the event of a registered guide leaving the college for any reason including

transfer or in the event of death of guide, guide may be changed with prior permission from the university within 3 months.

## **16 Scheme of Examination**

### **1. Examination and assessment.-**

- (1) The post-graduate degree course shall have two examinations in the following manner, namely:-
  - (a) The preliminary examination shall be conducted at The end of One academic year After admission;
  - (b) the final examination shall be conducted on completion of three academic years after the admission to post- graduate course;
  - (c) examination shall ordinarily be held in the month of June or July and November or December every year;
  - (d) for being declared successful in the examination, student shall have to pass all the subjects separately in preliminary examination;
  - (e) the student shall be required to obtain minimum fifty per cent. marks in practical and theory subjects separately to be announced as pass;
  - (f) if a student fails in preliminary examination, he shall have to pass before appearing in the final examination;
  - (g) if the student fails in theory or practical in the final examination, he can appear in the subsequent examination without requiring to submit a fresh dissertation;
  - (h) the subsequent examination for failed candidates shall be conducted at every six months interval; and
  - (i) the post-graduate degree shall be conferred after the dissertation is accepted and the student passes the final examination.
- (2) The examination shall be aimed to test the clinical acumen, ability and working knowledge of the student in the practical aspect of the specialty and his fitness to work independently as a specialist.
- (3) The clinical examination shall be judge the competence of the student in Ayurveda and scientific literature of the specialty.
- (4) The *viva-voce* part of the practical examination shall involve extensive discussion on any

aspect of subject or specialty.

## **18 Eligibility for attending the examination**

The following requirements shall be fulfilled by every candidate to be eligible to appear for preliminary or final examinations:

- I. Every candidate shall fulfill the attendance prescribed by the university during each academic year of the post graduate course.
- II. Progress and conduct: every candidate shall have participated in the seminars, journal review meeting, symposia, conference, case presentation, clinics/ practicals and lectures during each year as designed by the concerned department.
- III. Work diary/ log book: every candidate shall maintain a work diary and log book for recording his/her participation in the training program conducted by the department.
- IV. The work diary and log book shall be verified and certified by the head of the department and head of the institution (please see section IV for model checklist and log book specimen copy). The certification of satisfactory progress shall be issued by the head of the department.

17 **Schedule for Examination** – for First year (Preliminary) & Final year PG Course:-

### **Subjects of examination.-**

**1 The preliminary examination at the end of one academic year after admission shall be conducted in the following subjects, namely:-**

**Paper I- Research Methodology and Bio or Medical Statistics;**

**Paper II-Applied aspects regarding concerned subjects.**

ii) **Final examination** shall be conducted at the end of the Three years after commencement of the course as notified in the calendar of events issued by the University.

The university shall conduct two examinations. Not more than two examinations shall be conducted in an academic year.

2 The student shall have to undergo training in the department concerned and shall maintain month-wise record of the work done during the last two years of study in the specialty opted by him asunder:-

- a) study of literature related to specialty;
- b) regular clinical training in the hospital for student of clinical subject;



- c) practical training of research work carried out in the department, for student of pre-clinical and para-clinical subject;
- d) participation in various seminars, symposia and discussions; and
- e) progress of the work done on the topic of dissertation.

3 The assessment of the work done by the students of first year post-graduate course during the first year as specified in sub-regulation (2) shall be done before the preliminary examination.

4 The final examination shall include dissertation, written papers and clinical or practical and oral examination.

5 There shall be four theory papers in each specialty and one practical or clinical and viva-voce examination in the concerned specialty or group of sub-specialties selected by the student for special study.

6 The student shall publish or get accepted minimum one research paper on his research work in one journal and one paper presentation in regional level seminar.

**Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.**

## **20 Appointment of Examiners:-**

- (1) The preliminary examination and final examination shall be held in written, practical or clinical and oral examination.
- (2) The preliminary examination shall be conducted by a team of two examiners, out of which one examiner shall be external from any other institution and the final examination shall be conducted by a team of four examiners, out of which two examiners shall be external from any other institution.
- (3) A teacher with five years teaching or research experience in concerned subject or speciality shall be considered eligible for being appointed as an examiner
- (4) For Ist year PG Examination a Research Methodology teacher can opt either research methodology ore concerned subject. However he /she can continue to be the examiner for concerned subject for the final year.

## **21 Criteria for declaring results**

- The candidate has to score 50% of marks in Theory and Practical separately to pass in First and Final

Year.

- Above 75% will be declared as Distinction.
- Above 65% and below 75% will be declared as First Class.
- Above 50% and below 65% will be declared as Pass Class.
- 
- **Number of chances for appearing final year examination**
- 
- Failed students in the preliminary examination should pass in all subjects six months before taking up the final year examination. Otherwise the student shall not be allowed to take up the final year examination.
- The maximum duration for completion of the course shall not exceed beyond the period of six years from the date of admission to the course.

## SECTION III

### Syllabus

#### SYLLABUS FOR POST – GRADUATE COURSE IN AYURVEDA

##### Preliminary Examination

##### I. RESEARCH METHODOLOGY AND BIOSTATISTICS 2-10

##### II. CONCERNED SUBJECT :-

1. AYURVEDA SAMHITA & SIDDHANTA 11-12
2. RACHANA SHARIR 13-14
3. KRIYA SHARIR 15-17
4. DRAVYAGUNA VIGYAN 18-20
5. RASA SHAstra & BHAISHAJYA KALPANA 21-24
6. AGADA TANTRA EVUM VIDHI VAIDYAKA 25-27
7. SWASTHAVRITTA 28-30
8. ROGANIDAN EVUM VIKRITI VIGYAN 31-32
9. CHHAYA EVUM VIKIRAN VIGYAN 33-35
10. KAYACHIKITSA 36-37
11. MANOVIGYAN EVUM MANASROGA 38-40
12. RASAYAN & VAJIKARAN 41-42
13. PANCHKARMA 43-44
14. PRASUTI EVUM STRI ROGA 45-46
15. KAUMARBHRITYA-BALA ROGA 47-48
16. SHALYA -SAMANYA 49-51
17. SHALYA - KSHAR EVUM ANUSHAstra KARMA 52-54
18. ASTHI SANDHI AND MARMAGAT ROGA 55-57
19. SANGYAHARAN 58-59
20. SHALAKYA - NETRA ROGA 60-61
21. SHALAKYA – DANTA EVUM MUKHA ROGA 62-63
22. SHALAKYA- SHIRO-NASA-KARNA EVUM KANTHA ROGA 64-65

## **PG 1st Year Syallabus-1**

### **M.D./M.S.-AYURVEDA PRELIMINARY**

#### **PAPER-I**

#### **RESEARCH METHODOLOGY AND MEDICAL STATISTICS**

##### **PART-A**

##### **RESEARCH METHODOLOGY 1**

###### **Introduction to Research**

###### **Definition of the term research**

###### **Definition of the term anusandhan**

###### **Need of research in the field of Ayurveda 2**

###### **General guidelines and steps in the research process**

Selection of the research problem

Literature review: different methods (including computer database) with their advantages and limitations

Defining research problem and formulation of hypothesis

Defining general and specific objectives

Research design: observational and interventional, descriptive and analytical, preclinical and clinical, qualitative and quantitative

Sample design

Collection of the data

Analysis of data.

Generalization and interpretation, evaluation and assessment of hypothesis.

Ethical aspects related to human and animal experimentation.

Information about Institutional Ethics Committee (IEC) and Animal Ethics Committee (AEC) and their functions. Procedure to obtain clearance from respective committees, including filling up of the consent forms and information sheets and publication ethics.

3. Preparation of research proposals in different disciplines for submission to funding agencies taking EMR-AYUSH scheme as a model.

4. Scientific writing and publication skills.

Familiarization with publication guidelines- Journal specific and CONSORT guidelines.

Different types of referencing and bibliography.

Thesis/Dissertation: contents and structure

Research articles structuring: Introduction, Methods, Results and Discussions (IMRAD)

5 Classical Methods of Research.

Concept of Pratyakshadi Pramana Pariksha, their types and application for Research in Ayurveda.

Dravya-, Guna-, Karma-Parikshana Paddhati

Aushadhi-yog Parikshana Paddhati

Swastha, Atura Pariksha Paddhati

Dashvidha Parikshya Bhava

Tadvidya sambhasha, vadmarga and tantrayukti

6 Comparison between methods of research in Ayurveda (Pratigya, Hetu, Udaharana, Upanaya, Nigaman) and contemporary methods in health sciences.

PG 1st Year Syallabus-2

7. Different fields of Research in Ayurveda

Fundamental research on concepts of Ayurveda

Panchamahabhuta and tridosha.

Concepts of rasa, guna, virya, vipak, prabhav and karma

Concept of prakriti-saradi bhava, ojas, srotas, agni, aam and koshta.

8. Literary Research-

Introduction to manuscriptology: Definition and scope. Collection, conservation, cataloguing.

Data mining techniques, searching methods for new literature; search of new concepts in the available literature. Methods for searching internal and external evidences about authors, concepts and development of particular body of knowledge.

9. Drug Research (Laboratory-based)- Basic knowledge of the following:

Drug sources: plant, animal and mineral. Methods of drug identification.

Quality control and standardization aspects: Basic knowledge of Pharmacopoeial standards and parameters as set by Ayurvedic Pharmacopoeia of India.

Information on WHO guidelines for standardization of herbal preparations. Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP).

10. Safety aspects: Protocols for assessing acute, sub-acute and chronic toxicity studies. Familiarization with AYUSH guidelines (Rule 170), CDCSO and OECD guidelines.

11. Introduction to latest Trends in Drug Discovery and Drug Development

-Brief information on the traditional drug discovery process

-Brief information on the latest trends in the Drug Discovery process through employment of rational approach techniques; anti-sense approach, use of micro and macro-arrays, cell culture based assays, use of concepts of systems biology and network physiology

-Brief introduction to the process of Drug development

12. Clinical research:

Introduction to Clinical Research Methodology identifying the priority areas of Ayurveda

Basic knowledge of the following:-

Observational and Interventional studies

Descriptive & Analytical studies

Longitudinal & Cross sectional studies

Prospective & Retrospectives studies

Cohort studies

Randomized Controlled Trials (RCT) & their types

Single-case design, case control studies, ethnographic studies, black box design, cross-over design, factorial design.

Errors and bias in research.

New concepts in clinical trial- Adaptive clinical trials/ Good clinical practices (GCP)

Phases of Clinical studies: 0,1,2,3, and 4.

Survey studies -

Methodology, types, utility and analysis of Qualitative Research methods. Concepts of in-depth

interview and Focus Group Discussion.

13. Pharmacovigilance for ASU drugs. Need, scope and aims & objectives. National Pharmacovigilance Programme for ASU drugs.

14. Introduction to bioinformatics, scope of bioinformatics, role of computers in biology. Introduction to Data base- Pub med, Medlar and Scopus. Accession of databases.

15. Intellectual Property Rights- Different aspect and steps in patenting. Information on Traditional **Knowledge Digital Library (TKDL)**.

### **PG 1st Year Syallabus-3**

#### **PART-B**

**40 marks**

#### **MEDICAL STATISTICS**

Teaching hours: 80

1 Definition of Statistics : Concepts, relevance and general applications of Biostatistics in Ayurveda

2 Collection, classification, presentation, analysis and interpretation of data (Definition, utility and methods)

3 Scales of Measurements - nominal, ordinal, interval and ratio scales.

Types of variables – Continuous, discrete, dependent and independent variables.

Type of series – Simple, Continuous and Discrete

4 Measures of Central tendency – Mean, Median and Mode.

5 Variability: Types and measures of variability – Range, Quartile deviation, Percentile, Mean deviation and Standard deviation

6 Probability: Definitions, types and laws of probability,

7 Normal distribution: Concept and Properties, Sampling distribution, Standard Error, Confidence Interval and its application in interpretation of results and normal probability curve.

## 8 Fundamentals of testing of hypotheses:

Null and alternate hypotheses, type I and type 2 errors.

Tests of significance: Parametric and Non-Parametric tests, level of significance and power of the test, 'P' value and its interpretation, statistical significance and clinical significance

## 9 Univariate analysis of categorical data:

Confidence interval of incidence and prevalence, Odds ratio, relative risk and Risk difference, and their confidence intervals

## 10 Parametric tests: 'Z' test, Student's 't' test: paired and unpaired, 'F' test, Analysis of variance (ANOVA) test, repeated measures analysis of variance

## 11 Non parametric methods: Chi-square test, Fisher's exact test, McNemar's test, Wilcoxon test, Mann-Whitney U test, Kruskal – Wallis with relevant post hoc tests (Dunn)

## 12 Correlation and regression analysis:

Concept, properties, computation and applications of correlation, Simple linear correlation, Karl Pearson's correlation co-efficient, Spearman's rank correlation.

Regression- simple and multiple.

## 13 Sampling and Sample size computation for Ayurvedic research:

Population and sample. Advantages of sampling, Random (Probability) and non random (Non-probability) sampling. Merits of random sampling. Random sampling methods- simple random, stratified, systematic, cluster and multiphase sampling. Concept, logic and requirement of sample size computation, computation of sample size for comparing two means, two proportions, estimating mean and proportions.

## 14 Vital statistics and Demography: computation and applications - Rate, Ratio, Proportion, Mortality and fertility rates, Attack rate and hospital-related statistics

## 15 Familiarization with the use of Statistical software like SPSS/Graph Pad



## **PG 1st Year Syallabus-4**

### **PRACTICAL 100 marks**

#### **I. RESEARCH METHODOLOGY -Teaching hours 120**

##### **PRACTICAL NAME**

###### 1 Pharmaceutical Chemistry

Familiarization and demonstration of common lab instruments for carrying out analysis as per API

###### 2 Awareness of Chromatographic Techniques

Demonstration or Video clips of following:

Thin-layer chromatography (TLC).

Column chromatography (CC).

Flash chromatography (FC)

High-performance thin-layer chromatography (HPTLC)

High Performance (Pressure) Liquid Chromatography (HPLC)

Gas Chromatography (GC, GLC)

###### 4 Pharmacognosy

Familiarization and Demonstration of different techniques related to:-

Drug administration techniques- oral and parenteral.

Blood collection by orbital plexuses puncturing.

Techniques of anesthesia and euthanasia.

Information about different types of laboratory animals used in experimental research

Drug identification as per API including organoleptic evaluation

###### 5 Pharmacology and toxicology

Familiarization and demonstration of techniques related to pharmacology and toxicology

###### 6 Biochemistry (Clinical)

Familiarization and demonstration of techniques related to basic instruments used in a clinical biochemistry laboratory – semi and fully automated clinical analyzers, electrolyte analyzer, ELISA-techniques, nephelometry.

Demonstration of blood sugar estimation, lipid profiles, kidney function test, liver function test.

HbA1, cystatin and microalbumin estimation by nephelometry or other suitable techniques.

Interpretation of the results obtained in the light of the data on normal values.

## 7 Clinical Pathology

Familiarization and demonstration of techniques related to basic and advanced instruments used in a basic clinical

pathology lab. Auto cell counter, urine analyzer, ESR, microscopic examination of urine.

## 8 Imaging Sciences

Familiarization and demonstration of techniques related to the imaging techniques.

Video film demonstration of CT-Scan, MRI-scan and PET-scan.

## 9 Clinical protocol development

### **PG 1st Year Syallabus-5**

#### **II. MEDICAL STATISTICS**

Practical hours:20

Statistical exercise of examples from Topic number 4, 5, 8-12, 14, 15.

Records to be prepared.

Distribution of marks (practical):

Instrumental spotting test	– 20 marks
Clinical protocol writing exercise on a given problem	– 20 marks
Records: Research methodology	-10 Mark
Medical statistics	-10 marks
Viva- Voce	-40 Marks

#### **REFERENCE BOOKS:-**

##### **Pharmacognosy:**

Aushotosh Kar “Pharmacognosy & Pharmacobiotechnology” New Age International Publisher. Latest Edition. New Delhi.

Drug Survey by Mayaram Uniyal

Fahn A (1981). Plant Anatomy 3rd Edition Pergamon Press, Oxford

Kokate, CK., Purohit, AP, Gokhale, SB (2010). Pharmacognosy. Nirali Prakashan. Pune.

Kokate, CK., Khandelwal and Gokhale, SB (1996). Practical Pharmacognosy. Nirali Prakashan. Pune.

Trease G E and Evans W C, Pharmacognosy, Bailliere Tindall, Eastbourne, U K.  
Tyler V C., Brady, L R., and Robers J E., Pharmacognosy, Lea and Febiger, Philadelphia.  
Tyler VE Jr and Schwarting AE., Experimental Pharmacognosy, Burgess Pub. Co, Minneapolis, Minnesota.  
Wallis- TE (2011)- reprint. Practical Pharmacognosy (Fourth Edition) Pharma Med Press, Hyderabad.  
Wallis T E, Analytical Microscopy, J & A Churchill limited, London.  
Wallis T E., Text Book of Pharmacognosy, J & A Churchill Limited, London.  
WHO guidelines on good agricultural and collection practices- (GACP) for medicinal plants (2003). World Health Organization- Geneva.  
WHO monographs on selected medicinal plants (1999)—Vol. 1. 1.Plants, Medicinal 2.Herbs 3.Traditional medicine. ISBN 92 4 154517 8. WHO Geneva.

### **PG 1st Year Syallabus-6**

Pharmaceutical chemistry, quality control and drug standardization:

Ayurvedic Pharmacopoeia of India. Part I- volume 1 to 8 and Part II- volume 1 to 3. Ministry of Health and Family Welfare. Controller of Publication. Govt of India. New Delhi.

Brain, KR and Turner, TD. (1975). The Practical Evaluation Phytopharmaceuticals. Wright Scientechnica, Bristol.

Galen Wood Ewing (1985). Instrumental Methods of Chemical Analysis. McGraw-Hill College ; Fifth edition

Harborne, JB (1973). Phytochemistry Methods. Chapman and Hall, International Edition, London.

HPTLC- Fingerprint atlas of Ayurvedic Single Plant Drugs mentioned in Ayurvedic Pharmacopoeia Vol- III and IV. CENTRAL COUNCIL FOR RESEARCH IN AYURVEDA AND SIDDHA. New Delhi.

Kapoor, RC (2010). Some observations on the metal based preparations in Indian System of Medicine. Indian Journal of Traditional Knowledge. 9(3): 562-575

Khopkar, S. M. Analytical Chemistry, New Age International Publishers , 3 rd edition

Laboratory Guide for- The Analysis of Ayurved and Siddha Formulations – CCRAS, New Delhi.

Mahadik KR, Bothara K G. Principles of Chromatography by, 1st edition, Nirali Prakashan.

Qadry JS and Qadry S Z., Text book of Inorganic Pharmaceutical and Medicinal Chemistry, B. S. Shah Prakashan, Ahmedabad.

Quality Control Methods for Medicinal Plant Material. Reprint (2002). WHO- Geneva.

Rangari V.D., Pharmacognosy & Phytochemistry, Vol I, II, Career Publication,

Sharma BK. Instrumental Methods of Chemical Analysis by, Goel Publishing House.

Srivastav VK and Shrivastav KK. Introduction to Chromatography (Theory and Practice)

Stahl E., Thin Layer Chromatography - A Laboratory Handbook, Springer Verlag, Berlin.

Sukhdev Swami Handa, Suman Preet Singh Khanuja, Gennaro Longo and Dev Dutt Rakesh (2008).  
Extraction Technologies for Medicinal and Aromatic Plants -INTERNATIONAL CENTRE FOR  
SCIENCE AND HIGH TECHNOLOGY- Trieste,  
Biochemistry and Laboratory techniques:

Asokan P. (2003) Analytical Biochemistry, China publications,

Campbell, P.N and A.D .Smith, Biochemistry Illustrated, 4th ed, Churchill Livingstone.

David Frifelder. W. H. Freeman. (1982). Physical Biochemistry by; 2 edition

David Sultan (2003).Text book of Radiology and Imaging, Vol-1, 7th Edition.

Deb, A.C., Fundamentals of Biochemistry, Books and Allied (P) Ltd, 2002.

Harold Varley. Practical Clinical Bio-chemistry

Kanai L.Mukherjee. Clinical Pathology:,Medical Laboratory Technology Vol. I.Tata McGrawHill  
1996, New Delhi.

Gradwohl, Clinical Laboratory-methods and diagnosis, Vol-I

Clinical Biochemistry -Sabitri Sanyal, Clinical Pathology, B.I.Churchill Livingstone (P) Ltd, New  
Delhi.2000.

Satyanarayanan,U. Essentials of Biochemistry, Books and allied(P) Ltd.2002

Zubay, G.L. Biochemistry, W.M.C. Brown Publishers, New York 1998.

Text book of Radiology and Imaging, Vol-1, David Sultan, 7th Edition. 2003.

## **PG 1st Year Syllabus-7**

### **Research methodology:**

Alley, Michael. The craft of scientific writing. Englewood Cliffs. N.N. Prentice 1987.

Ayurvediya Anusandhan Paddhati – P.V. Sharma

Altick and Fenstermaker. ( 2007).The Art of Literary Research. 4th ed. W. W. Norton. Castle,  
Gregory. Blackwell Guide to Literary Theory. Blackwells,

Bowling, A. (2002). Research Methods in Health (2nd ed). Buckingham: Open University Press.

Day R.A. How to write a scientific paper. Cambridge University Press.

Cooray P.G. Guide to scientific and technical writing.

Deepika Chawla and Neena Sondhi. (2011). Research Methods- Concepts and cases. New Delhi:

Vikas Publishing House.

Greenhalgh, T. (2006) How to Read a Paper: The Basics of Evidence-Based Medicine. (3rd ed) Blackwell

Kothari- CR (2004). Research Methodology- Methods and Techniques (Second Revised Edition). New Age International Publishers- New Delhi.

Kumar, R. 2005. Research Methodology: a Step-by-Step Guide for Beginners, 2nd ed. Thousand Oaks, CA, London: Sage Publications.

Petter Laake, Haakon Breien Benestad and Bjørn Reino Olsen. (2007). Research Methodology in the Medical and Biological sciences. Academic Press is an imprint of Elsevier, 84 Theobald's Road, London WC1X 8RR, UK. ISBN: 978-0-12-373874-5

Relevant portions of Ayurvedic Samhitas and other texts

Drug research and development:

RICK NG, (2009). DRUGS- from discovery to approval. John Wiley & Sons, Inc., Hoboken, New Jersey

Research guidelines for evaluating the safety and efficacy of herbal medicines. (1993). . WHO- (Regional Office for the Western Pacific – Manila) ISBN 92 9061 110 3 (NLM Classification: WB 925).

Jagdeesh, Sreekant Murthy, Gupta, YK and Amitabh Prakash Eds. Biomedical Research (From Ideation to Publication) (2010). Wolters Kluwer/ Lippincott Williams and Wilkins.

WHO Guidelines on Safety Monitoring of herbal medicines in pharmacovigilance systems. (2004). WHO- Geneva. ISBN 92 4 1592214.

Natural products isolation. (2006) 2nd ed. / edited by Satyajit D. Sarker, Zahid Latif, Alexander I. Gray. (Methods in biotechnology; 20). Includes bibliographical references and index. Humana **Press Inc. ISBN 1-58829-447-1 (acid-free paper) – ISBN 1-59259-955-9 (eISBN)**

Gazette Extraordinary Part- II-Section 3 - Sub section (i) December 2008. Govt of India. AYUSH Guidelines on safety studies- Rule 170 of Drugs and Cosmetics Act.

OECD (2000) Guidance Document on Acute Oral Toxicity. Environmental Health and Safety Monograph Series on Testing and Assessment No 24.

OECD Guideline for the Testing of Chemicals – Repeated Dose 90-day Oral Toxicity Study in Rodents, 408, 1998.

<http://browse.oecdbookshop.org/oecd/pdfs/free/9740801e.pdf>

(latest version)

OECD Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring, 1998.

[http://www.oecd.org/document/63/0,2340,en\\_2649\\_34381\\_2346175\\_1\\_1\\_1\\_1,00.php](http://www.oecd.org/document/63/0,2340,en_2649_34381_2346175_1_1_1_1,00.php)

ICH Harmonised Tripartite Guideline (2000). Maintenance of the ICH Guideline on Non-clinical Safety Studies for the conduct of Human Clinical Trials for Pharmaceuticals M3 (R1).

Ghosh M.N.: Fundamentals of Experimental Pharmacology, Scientific Book Agency.

Bombay.\

12- Jaju B.P.: Pharmacological Practical Exercise Book, Jaypee Brothers, New Delhi.

13- Kulkarni S.K.: Hand Book of Experimental Pharmacology, Vallabh Prakashan, New Delhi

14- Ravindran R.: X-Pharm (Software), Indian Journal of Pharmacology, JIPMER, Pondicherry.

## **PG 1st Year Syallabus-8**

### **Biotechnology and Bio-informatics:**

Angela M. Meireles A (2009). Extracting Bioactive compounds for food products. Theory and applications. CRC- Press Taylor and Francis Group.

Bergeron BP 2002 Bioinformatics Computing 1st Edition, Prentice Hall

Chikhale, N.J. and Virendra Gomase, Bioinformatics- Theory and Practice, Publisher: Himalaya Publication House, India; 1 edition (July, 2007) ISBN-13: 978-81-8318-831-9

Lesk, A.M. Introduction to Bioinformatics Oxford 2002.

Satyanarayana, U.: Biotechnology, Books and Allied (P) Ltd, Kolkata, 2005

Setubal J. C and J. Meidanis, Introduction to Computational Molecular Biology, PWS Publishing Company, 1997.

<http://www.iitb.ac.in/~crnts>

<http://www.>

[zygogen.com](http://www.zygogen.com).

<http://www.dsir.nic.in/reports/tifp/database/metallo.pdf>

[www.consort-statement.org](http://www.consort-statement.org)

[www.strobe-statement.org](http://www.strobe-statement.org)

[www.icmr.nic.in](http://www.icmr.nic.in)

Clinical Evaluation:

CDSCO, Good Clinical Practices For Clinical Research in India, Schedule Y (Amended Version – 2005),

<http://cdsco.nic.in/html/GCP1.php>

Ethical Guidelines for Biomedical Research on Human subjects. (2000). Indian Council of Medical

Research- New Delhi.

Gallo P., Chuang-Stein C., Dragalin V., Gaydos B., Krams M., Pinheiro J. Adaptive Designs in Clinical Drug Development—An Executive Summary of the PhRMA Working Group. *Journal of Biopharmaceutical Statistics*. 16: 275–283; 2006

Good Clinical Practices- (2001). Guidelines for Clinical Trial on Pharmaceutical Products in India. Central Drugs Standard Control Organization. Directorate General of Health Services. New Delhi. (<http://WWW.cdsc.nic.in.ich.org>)

Gupta, SK Ed. *Basic Principles of Clinical Research and Methodology* (2007). Jaypee Brothers- new Delhi

ICH Harmonised Tripartite Guidelines for Good Clinical Practices.(1997)- Quintiles- Published by Brookwood Medical Publications. Richmond, Surrey. United Kingdom.

NCI. Clinical Trials Education Series.

<http://www.cancer.gov/clinicaltrials/learning/clinical-trials-education-series>, 2001.

Petter Laake, Haakon Breien Benestad and Bjørn Reino Olsen. (2007). *Research Methodology in the Medical and Biological sciences*. Academic Press is an imprint of Elsevier, 84 Theobald's Road, London WC1X 8RR, UK. ISBN: 978-0-12-373874-5

William C. Scheffer *Introduction to Clinical Research*

## **PG 1st Year Syallabus-9**

### **Medical Statistics:**

Armitage, P. and Berry, G. (1994) *Statistical Methods in Medical Research* (3rd ed). Blackwell Science.

Armitage P, Berry G, Matthews JNS: *Statistical Methods in Medical Research*. Fourth edition. Oxford, Blackwell Science Ltd; 2002

Bland, M. (2000) *An Introduction to Medical Statistics* (3rd ed). Oxford: Oxford University Press.

Bradford Hill – *Basic Medical Statistics*

Cambell, M.J. and Machin, D. (1993) *Medical Statistics: A Common Sense Approach* (2nd ed). Chester: Wiley.

Dwivedi S. N., Sundaram K. R and V. Sreenivas (2009). *Medical Statistics - Principles & Methods*-BI Publications Pvt. Ltd., New Delhi –1.

Gupta S.P. - *Fundamentals of statistics*, Sultan Chand. Delhi.

Indrayan. (2008). *Basic Methods of Medical Research*. AITBS Publishers- India

Mahajan B K, Methods in Bio statistics for medical students, 5th Ed. New Delhi, Jaypee Brothers Medical Publishers

Mehdi, B and Prakash A. (2010). Biostatistics in Pharmacology. Practical Manual in experimental and clinical pharmacology. 1st Edition. New-Delhi: Jaypee brothers Medical Publishers

Rao, NSN and Murthy, NS. (2008) 2nd Edition. Applied statistics in health sciences. Jaypee Brothers Medical Publishers (P) Ltd. Bengaluru, New Delhi.

Rick J Turner and Todd A Durham (2008). Introduction to Statistics in Pharmaceutical Clinical trails. Published by the Pharmaceutical Press- An imprint of RPS Publishing, 1 Lambeth High Street, London SE1 7JN, UK

Symalan, K. (2006). Statistics in Medicine (First Edition) Trivandrum: Global Education Bureau.

Sundar Rao, Jesudian Richard - An Introduction to Biostatistics.

Suhas Kumar Shetty- Medical statistics made easy

## **PG 1st Year Syallabus-10**

### **M.D.-AYURVEDA PRELIMINARY**

#### **1. AYURVED SAMHITA & SIDDHANTA (Ayurvedic Compendia & Basic Principles)**

##### **PAPER-II**

##### **THEORY- 100 marks**

##### **PART-A**

##### **Practical- Viva-Voce-100**

##### **50 marks**

Learning and Teaching methodology available in Samhita- Tantrayukti, Tantraguna, Tantradosha, Tachchilya, Vadamarga, Kalpana, Arthashraya, Trividha Gyanopaya, teaching of Pada, Paada, Shloka, Vakya, Vakyartha, meaning and scope of different Sthana and Chatushka of Brihatrayee.

Manuscriptology - Collection, conservation, cataloguing, Critical editing through collation, receion (A critical revision of a text incorporating the most plausible elements found in varying sources), emendation (changes for improvement) and textual criticism (critical analysis) of manuscripts. Publication of edited manuscripts.

Concept of Bija chatustaya (Purush, Vyadhi, Kriyakaal, Aushadha according to Sushrut Samhita).

Introduction and Application of Nyaya (Maxims) - Like Shilaputrak Nyaya, Kapinjaladhikaran Nyaya, Ghunakshara Nyaya, Gobalivarda Nyaya, Naprishtah Guravo Vadanti Nyaya, Shringagrahika Nyaya, Chhatrino Gacchhanti Nyaya, Shatapatrabhedana Nyaya, Suchikatah Nyaya.



Importance and utility of Samhita in present era.

Importance of ethics and principles of ideal living as mentioned in Samhita in the present era in relation to life style disorders.

Interpretation and co-relation of basic principles with contemporary sciences.

## **PART-B**

**50 marks**

Definition of Siddhanta, types and applied examples in Ayurveda.

Ayu and its components as described in Samhita.

Principles of Karana-Karyavada, its utility in advancement of research in Ayurveda.

Theory of Evolution of Universe (Srishti Utpatti), its process according to Ayurveda and Darshana.

Importance and utility of Triskandha (Hetu, Linga, Aushadh) and their need in teaching, research and clinical practice.

Applied aspects of various fundamental principles: Tridosha, Triguna, Purusha and Atmanirupana, Shatpadartha, Ahara-Vihara. Scope and importance of Pariksha (Pramana).

Importance of knowledge of Sharir Prakriti and Manas Prakriti.

Comparative study of Principles of Ayurveda and Shad Darshanas.

## **PG 1st Year Syllabus-11**

### **REFERENCE BOOKS:-**

- 1 Charak Samhita Chakrapani commentary
- 2 Sushrut Samhita Dalhana Commentary
- 3 Ashtanga Samgraha Indu commentary
- 4 Ashtanga Hriday Arundutta and Hemadri commentary
- 5 Vaisheshika Darshan Prashastapada Bhasya
- 6 Nyaya Darshan Vatsyayan Bhasya Patanjala
- 7 Yoga Darshan Vyas Bhasya
- 8 Vedantsara
- 9 Sarvadarshan Samgraha
- 10 Bhartiya Darshan Baldev Upadhyaya
- 11 Ayurved Darshanam Acharya Rajkumar Jain

## **PG 1st Year Syallabus-12**

### **M.D.-AYURVEDA PRELIMINARY**

#### **RACHANA SHARIR (Anatomy)**

##### **PAPER-II**

##### **Theory 100 marks**

###### **PART-A 50 marks**

Basic principles of Sharira, Purushavichaya, Rashi Purusha, Karma Purusha (Shad Dhatuj Purusha), Chaturvimshati Purusha, Ek Dhatu Purusha. Relevant principles described in the Sharirasthan of Sushrut Samhita, Charak Samhita, Ashtang Sangrah and Ashtang Hridaya.

Basic principles of Garbha Sharira in Ayurveda: Definitions of Garbha, Shukra Shonita Siddhanta, Dauhrida, Matrijadi Garbhotpattikar bhava.

Types of tissues, histological study of liver, spleen, uterus, kidney, endocrine glands, mammary gland, skin, tongue, lungs, bronchi, bones, muscles, cartilages and nervous tissue.

###### **PART-B 50 marks**

Paribhasha Sharira (Anatomical terminology)

Pramana Sharira – Anguli and Anjali Pramana, Sama pramana Sharira, Ayama – Vistara and their prognostic values.

Fundamental aspects of Asthi, Sandhi, Peshi Sharir.

Fundamental aspects of Sira, Dhamani, Srotas – Definitions, Siravedha, Avedhya Sira. Fundamental aspect of Srotomoola Sthana.

Fundamental aspects of Kosktha and Koskthang: Hridaya, Yakrit, Vrikka, phuphphusa, Aantra, Pleeha, Adhivrikkagranthi, Basti, Paurushagranthi, Amashaya, Agnyashaya and Vrishana.

Fundamental aspects of Uttamangiya Sharir – Introduction to Nervous system - development, divisions, neuron–structure, types, functional anatomy.

Mrita shodhan (as per Sushruta) and Mrita Samrakshana (preservation method of human cadaver).

##### **PRACTICAL 100 marks**

###### **Contents:**

Practical study of bones

Practical study of organs

Practical study of surface and radiological anatomy.

Shava Vichhedana – detailed dissection of the whole body.

Practical study of location of Marma

Demonstration of histology slides (10 slides)

### **PG 1st Year Syllabus-13**

Distribution of marks (Practical)

Spotting	- 20 Marks
Surface Anatomy	- 20 Marks
Dissection	- 30 Marks
Imaging Anatomy – Basic Principles and Application	- 10 Marks
Viva-Voce	- 20 Marks

### **REFERENCE BOOKS:**

Relevant matters of Brihatrayee and Laghutrayee

PratyakshaShariram

- GananathSen

AbhinavaShariram

- Damodar Sharma Gaur

Parishadyam Sabdartha Shariram

- Damodara Sharma Gaur

Brihat Shariram

- P S Varier

Shiva Samhita

Gray's Anatomy

- Latest Edition

Human Anatomy

- B D Chaurasia

Cunnigham's Companion to Manual of Practical Anatomy. Vol I, II & III

Developing Human

- Keith L Moore & Persaud

Clinically oriented Anatomy

- Keith L Moore

Clinically oriented Neuro Anatomy

- Richard Snell

Surface and Radiological Anatomy

- Halim

Grant's Methods of Anatomy

- Grant

Grant's dissector

- Grant

Human Embryology

- I. B. Singh

Ayuurvediya Human Anatomy

- G. M. Kanthi

## **PG 1st Year Syallabus-14**

### **M.D.-AYURVEDA PRELIMINARY**

#### **3.KRIYA SHARIR (Physiology)**

PAPER-II Theory 100 Marks

PART-A 50 marks

Theory of Loka-Purusha Samya

Theory of Panchamahabhuta

Physiological aspects of Samanya – Vishesha siddhanta

Concepts of Tridosha and Triguna

Concept of Dhatu

Concept of Mala

Description of Ojas

Process of Ahara Parinama including Aharaparinamakara Bhava and Asta Ahara Vidhi Visesayatana

Physiological importance of Agni, its classification and functions

Dhatuposana theories

Concepts of Atma, Manas and Indriya.

Concepts of Prakriti and Ashtavidha Sara.

Concept of Srotas

#### **PART-B 50 marks**

Description of essential and relevant understandings related to contemporary physiology, both general physiology and systemic physiology.

Essentials of cell physiology – organization of cell.

Membrane physiology- transport across cell membrane, action potentials and resting membrane potentials.

Homeostasis- negative and positive feedback mechanisms.

Genetic code, its expression and regulation of gene expression.

Essentials of cardiovascular physiology- cardiac cycle, regulation of heart rate and blood pressure.

Essentials of respiratory physiology- regulation of respiration-chemical and neural, gaseous exchange, transportation of gases.

Gastrointestinal physiology- various digestive juices and their actions, gastrointestinal hormones, enteric nervous system.

Nervous system physiology- ANS, somatic nervous system, reflexes, general and special sensations, higher mental functions, functions of brain, brainstem and spinal cord.

Blood: Blood cells-RBCs, WBCs, platelets, plasma proteins and immunity.

Muscle physiology: properties and mechanisms of contraction of skeletal, cardiac and smooth muscles.

Physiology of excretion- mechanism of urine formation, micturition.

Endocrine physiology: Classification of hormones, hormones secreted by pituitary, thyroid, parathyroid, adrenal glands, pineal, pancreas and their functions.

Study of male and female reproductive system: functions of reproductive hormones.

## **PG 1st Year Syallabus-15**

### **PRACTICAL 100 marks**

#### **Contents:**

Ayurvedic practicals

Assessment of Prakriti

Assessment of Sara

Pramana Pariksha

Hematology

Hemoglobin estimation

Total RBC count

Total WBC count

Differential leukocyte count

Packed cell volume (PCV)

ESR

Bleeding time

Clotting time

Blood grouping and Rh typing

Urine examination -

Physical examination- Specific gravity and reaction of urine

Chemical examination

Albumin test

Sugar test

Ketone bodies

Bile salts and pigments

### **Distribution of marks (Practical)**

Laboratory Practical	- 20
Human Experiment	- 15
Spotting	- 15
Prakriti Saradi pariksha	- 20
Practical Record	- 10
Viva-voce	- 20

### **REFERENCE BOOKS:**

Ayurvediya Kriyasharir	- Ranjit Rai Desai
Kayachikitsa Parichaya	- C. Dwarkanath
Prakrit Agni Vigyan	- C. Dwarkanath
Sharir Kriya Vigyan	- Shiv Charan Dhyani
Abhinava Sharir Kriya Vigyana	- Acharya Priyavrata Sharma
Dosha Dhatu Mala Vigyana	- Shankar Gangadhar Vaidya
Prakrita Dosha Vigyana	- Acharya Niranjana Dev
Tridosha Vigyana	- Shri Upendranath Das
Sharira Tatva Darshana	- Hirlekar Shastri
Prakrita Agni Vigyana	- Niranjana Dev
Deha Dhatvagni Vigyana	- Vd. Pt. Haridatt Shastri
Sharir Kriya Vigyana (Part 1-2)	- Acharya Purnchandra Jain
Sharir Kriya Vigyana	- Shri Moreshwar Dutta Vd.
Sharira Kriya Vijnana (Part 1-2)	- Nandini Dhargalkar
Dosha Dhatu Mala Vigyana	- Basant Kumar Shrimal

### **PG 1st Year Syllabus-16**

Abhinava Sharir Kriya Vigyana	- Dr. Shiv Kumar Gaur
Pragyogik Kriya Sharir	- Acharya P.C. Jain
Kaya Chikitsa Parichaya	- Dr. C. Dwarkanath
Concept of Agni	- Vd. Bhagwan Das
Purush Vichaya	- Acharya V.J. Thakar
Kriya Sharir	- Prof. Yogesh Chandra Mishra
Sharir Kriya Vigyana	- Prof. Jayaram Yadav & Dr. Sunil
Verma	
Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) by	-Dr. Srikant Kumar Panda

Sharir Kriya – Part I & II	- Dr. Ranade, Dr. Deshpande &
Dr. Chobhe	
Human Physiology in Ayurveda	- Dr Kishor Patwardhan
Sharirkriya Vignyan Practical Hand Book	- Dr.Ranade, Dr.Chobhe, Dr.
Deshpande	
Sharir Kriya Part 1&2	- Dr.R.R.Deshapande, Dr.Wavhal
Textbook of Physiology	- Gyton & Hall
Review of medical physiology	- William Ganong
Essentials Of Medical Physiology	- Sembulingam, K.
Concise Medical Physiology	- Chaudhari, Sujit. K.
Fundamental of Anatomy & Physiology	- Martini
Principals of Anatomy & Physiology	- Tortora & Grabowski
Human Physiology	- Richards, Pocock
Samson Wrights Applied Physiology, Keele, Neil, joels	
Brainstem Control of Wakefulness And Sleep	- Steriade, Mirce
An Introduction to Human Physiology	- Green, J.h.
Ancient Indian Medicine	- Kutumbiah P.
Biographical History of Indian Medicine	- Srikanthamurthy KR
Ayurveda Kriya Sharira	- Yogesh Chandra Mishra
Textbook of Medical Physiology	- Indu Khurana
Tridosha Theory	- Subrahmanya Shastri
Statistics in Medicine	- K. Syamalan

## **PG 1st Year Syallabus-17**

### **M.D.-AYURVEDA PRELIMINARY**

#### **4. DRAVYAGUNA VIGYAN**

(Materia Medica & Pharmacology)

##### **PAPER-II**

Theory 100 Marks

##### **PART-A 50 marks**

Panchamahabhuta siddhanta, Samanya Vishesha siddhanta, Tridosha siddhanta. Extensive study on classifications of Dravya as described in Brihatrayi.

Applied aspects of Rasa, Guna, Virya, Vipaka and Prabhava

Applied aspects of Aushdha karma with reference to Sharngadhara and Bhavaprakasha

Importance of Namarupa vigyan and concept of basonyms and synonyms of Dravyas

Applied knowledge of Bhaishajya Prayoga (marga, kalpana, matra, anupana, sevan, kala etc.)

## **PART-B      50 marks**

Basic principles of Desha pravichara, Dravya sangrahana (collection), Samrakshana (preservation)

Evolution of Dravyaguna vigyan with special emphasis on Nighantus

Prashasta bshhaj lakshana

Profound knowledge on applied aspects of Agrya aushadha

Methodology of studying controversial, pratinidhi (substitute), apamishrana (adulterant) and unidentified dravya

Pharmacognosy and its relevance in Dravyaguna vigyan

An integrated study of Charakokta Bshhaj pariksha and scientific method of drug evaluation with special reference to quality, safety and efficacy

Brief knowledge and importance of clinical pharmacology

General principles of various good cultivation practices, collection practices, storage practices and manufacturing practices

Pharmacovigilance and ADR issues

Knowledge on the Ayurvedic Pharmacopoeia of India, The Formulary of India and international pharmacopoeias

## **PRACTICAL      100 marks**

Contents:

Field visits for the Identification of important classical medicinal plants (Minimum two visits to neighboring forest areas)

Macroscopic and microscopic identification of minimum two plants of each of prayojyanga (useful parts of plants)

Preliminary study of pharmacoepial standards (API) of minimum 5 plants

Minimum two experiments on Animals

Distribution of marks (Practical)

Herbarium sheets

-10 Marks



Practical of macroscopic and microscopic identification of prayojyanga (one part of the plant)	-30 Marks
Practical record book of pharamcopoeial standards and animal experimentations	-10 Marks
Spotting	-30 Marks
Viva-voce	-20 Marks

### **PG 1st Year Syallabus-18**

#### **REFERENCE BOOKS:**

- 1 Abhinav Buti Darpan (Vol.1-2) - Vd. Roop Lal Vaishya**
- 2 Aushadna Vigyna Shastra - Acharya Pt. Vishvanatha Dwidevi**
- 3 Ayurvediya Aushadnkarma vigyana -Acharya V.J. Thakur**
- 4 Bedi Vanaspati Kosha-Prof. Ramesh Bedi**
- 5 Bhaishajyaguna Vigyana-Dr. Alakhnarayan Singh**
- 6 Bhav Prakash Nigantu (English)-Shreekanthamurti**
- 7 Bhav Prakash Nighantu-With Vd. Krishna Chandra Chunekar commentary**
- 8Bhrinad dravyagunadarsha-Mahendra Kumar Shastri**
- 9Classical Uses of Medicinal Plants-Acharya Priyavrata Sharma**
- 10 Controversial Medicinal Plants-Vd. G. Bapa Lal**
- 11 Dalhana Ka Dravyaguna Shastra Ke Kshetra Me Yogadana-Vd. Shiv Kumar Vyas**
- 12 Dravyaguna Kosha-Acharya Priyavrata Sharma**

- 13 Dravyaguna Sutram-Acharya Priyavrata Sharma**
- 14 Dravyaguna Vigyana-Dr. Gyanendra Pandey**
- 15 Dravyaguna Vigyana(Vol. 1-2)-Acharya Yadavji Tikram Ji**
- 16 Dravyaguna Vijyana-Dr. V.M. Gogate**
- 17 Dravyaguna Vigyana (Vol. 1-5)-Acharya Priyavrata Sharma**
- 18 Dravyaguna Shastrum-Vaidya G.A. Phadake**
- 19 Dravyaguna Vijyana-Dr. A.P. Deshpande**
- 20 Dravyagunavijnana basic Principles-Prof.D.S.Lucas**
- 21 Forgotten Healers (Indian Medicinal Plants)-Dr. Prakash Pranjape**
- 22 Glossry of Vegetable Drugs in Bhritrtrayis-Thakur Balwant Singh & Vd. Krishna Chandra Chuneekar**
- 23 Introduction to Dravyaguna-Acharya Priyavrata Sharma**
- 24 Kriyatamka Aushadi Parichaya-Acharya Pt. Vishvanath Dwidevi**
- 25 Materia Medica-Acharya Ghosh**
- 26 Nighantu Adarsh (Vol. 1-2)-Vd. Bapa Lal**
- 27 Pharmacological basis of Medical Practice-Goodman & Gillman**
- 28 Pharmacology and Pharmacotherapeutics-Satoskar Bhandarkar & Ainapure**
- 29 Prayogatamaka Dravyaguna Vigyana-Dr. Maya Ram Uniyal**

- 30 Priya nighantu-Acharya Priyavrata Sharma**
- 31 Raspanchaka/Dravyaguna Siddhanta-Prof. Shivcharan Dhyani**
- 32 System of Plant Nomenclature in Ayurveda-Dr. Gyanendra Panday**
- 33 Text Book of Pharmacology-Trees & Valis**
- 34 Textbook of Dravyaguna-Dr.K.Nishteswar**
- 35 Unani Dravyaguna Vigyana-Hakim Daljeet Singh**

**PG 1st Year Syllabus-19**

- 36 Useful parts of Charaka, Sushrut, and Vagbhata.**
- 37 Uttarakand Ki Vanaspathiya - Dr. Gyanendra Pandey**
- 38 Vanoashadi Darshika - Thakur Balwant Singh**
- 39 Vanoashadi Nidarshika - Dr. Ram Sushil Singh**
- 40 Vedic Vanaspathiyan - Dr. Dinesh Chandra Sharma**
- 41 Pharmacopia of India –all the volumes**
- 42 Database on medicinal plants all the volumes of CCRAS**
- 43 Aurveda formulary of india – all the volumes**
- 44 All the nighantoo**
- 45 Laghutrayi**

## **PG 1st Year Syllabus-20**

### **M.D.-AYURVEDA PRELIMINARY**

#### **5. RASA SHASTRA AND BHAISHAJYA KALPANA**

**(Iatrochemistry & Pharmaceuticals Science)**

##### **PAPER-II Theory 100 marks**

###### **PART-A 50 marks**

Fundamental principles of Rasa Shastra and Bhaishajya Kalpana, introduction to Rasachikitsa, Ashuddha and Apakwa Bhasma- sevan Dosha and its management, introduction to Aushadha Sevan Kaal and Prayoga Marga (routes of administration).

Introduction to basic principles of Aushadha Yoga (formulations).

Classification of Rasa Dravya - concept and relevance.

Introduction to principles of Aushadha Nirmana, concept of Shodhan, Marana, Jarana, Murcchhana, Sattvapatan and Amritikarana.

Concept of Kashaya, Panchavidha Kashaya and other Kalpana.

Concept of Rasashala, Rasa Mandapa with introduction to pharmacy in accordance with the Good Manufacturing Practices (GMP).

Critical study of Rasa Ratnasamuchchaya, Rasendra Chintamani, Rasa Tarangini, Sharngadhara Samhita, Chakradutta and Bharat Bhaishajya Ratnakara with special reference to Aushadha-Nirmana.

###### **PART-B 50 marks**

Introduction to methods of analytical, toxicity, experimental and clinical validation of classical and proprietary Ayurvedic formulations.

Introduction to new dosage forms.

Introduction to advance instruments of analysis like XRD, XRF, SEM-E-Dax, ICP analysis,

Chromatography: TLC, gas chromatography, HPTLC, concept of Nanotechnology and its relevance to Aushadha-Nirman.

Concept of Pharmacopoeia and Formulary with introduction of 'The Ayurvedic Pharmacopoeia of India' (API) and 'The Ayurvedic Formulary of India' (AFI).

Introduction to databases of medicinal plants published by CCRAS, ICMR and others.

**PRACTICAL            100 marks**

**Contents:**

Shodhan, Marana, Amritikarana of Rasa Dravya    (10 practicals)

2. Preparation of different dosage forms (10 forms)

3. Pharmacopoeial standards of raw and prepared drugs    (20 practicals)

**Raw Materials**

1. Minerals and Metals

Mineralogical Identification Mineralogical Identification

Physical form - Crystal and Amorphous

Hardness on Moh's scale

Brittleness test

Fracture and Cleavage

Streak test

Luster

**PG 1st Year Syallabus-21**

**2. Plant Material**

Macroscopic and Microscopic examination

Orgnaoleptic testing

Estimation of Foreign materials

Microbial load

Moisture content

Determination of ash value - total, water soluble and acid Insoluble ash

Specific gravity

Solubility- water and alcohol

Extract values- water and alcohol

TLC

Determination of optical density

Refractive index

Aflatoxins

Limit tests for heavy metals

pH estimation

Prepared dosage forms:

### **1. Solid dosage forms**

Rasaushadhi

a) Bhasma and Pishti Pariksha

b) Determination of Particle size

c) Limit tests for heavy metals

d) Determination of moisture content, specific gravity, pH and acid value.

### **Kasthaushadhi**

a. Powders (Churna)

Particle size

Bulk density

Solubility

Estimation of Foreign material

Microbial load

Moisture content

Determination of ash value - total, water soluble and acid insoluble ash

Solubility - water and alcohol

Extract values - water and alcohol

TLC

Determination of Optical density

Refractive Index

Aflatoxins

Limit tests for Heavy metals

pH Value estimation

### **b. Tablets**

Uniformity in weight and size

Tablet hardness

Tablet friability  
Tablet disintegration  
Tablet dissolution

**c. Semisolid dosage forms**

Moisture content  
Sugar content  
Microbial load

**PG 1st Year Syallabus-22**

d. Liquids

pH value  
Specific gravity  
Determination of refractive index  
Acid value  
Viscosity  
Saponification value  
Iodine value

Note:

All practicals should be performed in accordance with Authoritative Text Books of Schedule-I of D.C.Act-1940.

All practicals related to Pharmacopoeial Standards should be performed in accordance with Methods Published in Protocol for testing of ASU Medicines and Laboratory Guidelines for the Analysis of Ayurveda & Siddha Formulations published by Deptt. of AYUSH, Government of India.

Distribution of marks (Practical)

Practical Record Book	- 10 Marks
Practicals related to Preparation of Drugs	
Major practical- one	- 20 Marks
Minor practical- one	- 10 Marks
Drug analysis	
Major practical- one	- 20 Marks
Minor practical- one	- 10 Marks

Spotting	- 10 Marks
Viva-voce	- 20 Marks

### **REFERENCE BOOKS:**

Rasahridaya Tantra  
Rasarnava  
Rasaratna Samuccahaya  
Ayurved Prakasha  
Rasendrachudamani  
Rasendra Chintamani  
Rasatarangini  
Rasapraksha Sudhakar  
Rasamrita  
Rasa Chandanshu : CCRAS Publication  
Sharangadhara Samhita  
Sharangadhara Darpan (BP Pandey)  
Bhavaprakasha  
Yoga Ratnakara  
Bhaishajya Ratnavali  
Siddha Bhaishajya Manimala  
Bharat Bhaishajya Ratnakara  
Rasayoga Sagara  
Siddha Bhaishajya Manimala  
Sahasrayoga  
Siddha Yoga Sangraha – Yadavaji Trikamji Acharya  
Vaidyaka Paribhasha Pradeepa

### **PG 1st Year Syallabus-23**

Ayurvediya Aushadhikarana – Puranik and Dhamanakar  
Dravyaguna Vijnan Part - 1 and 2 - Yadavji Trikamji  
Chakradatta - Ratnaprabha, Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya,



Remington: Science and Practice of Pharmacy  
Theory and Practice of Industrial Pharmacy – Leon Lachman et al  
Clinical Pharmacology, KD Tripathi  
Clinical Pharmacology, Lawrence Benette  
Drug Discovery and Evaluation (Pharmacological assays) HG Vogel  
Pharmacological Basis of therapeutics – Goodman and Gilman  
Data Base of Medicinal Plants of CCRAS  
Quality and Standards of Medicinal Plants – ICMR publication  
Quality Control of Ayurvedic Drugs – PLIM, Gaziabad  
Ayurvedic Pharmacopeia of India  
Ayurvedic Formulary of India  
Indian Pharmacopeia  
British Pharmacopeia  
United States Pharmacopeia  
Pharmacopeia Codex  
Current Good Manufacturing Practices  
Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments  
Drugs and Magic remedies (Objectionable advertisement) Act-1954  
Prevention of Food Adulteration (PFA) act  
Laws pertaining to Narcotics  
Factory and Pharmacy Acts  
Consumer Protection Act -1986  
Brief information on the peer reviewed journals, official websites and other official search engines  
along with their links (related with the subject)  
Rutleys Elements of Mineralogy  
Bhasma Vigyaniam  
Kupipakva Vigyaniam  
Anupana Manjari

## **PG 1st Year Syallabus-24**

### **M.D.-AYURVEDA PRELIMINARY**

#### **6. AGADTANTRA AVUM VIDHI VAIDYAKA**

**(Toxicology & Forensic Medicine)**

**PAPER-II Theory 100 marks**

**PART-A 50 marks**

Introduction to Agadatantra, its sequential development, traditional and contemporary toxicology.

Examination of poisons as per contemporary and Ayurvedic methods.

Ancient and contemporary classification of Visha.

Knowledge about Sthavara visha, Jangama visha and Kritrima visha, their clinical and pathological manifestations and management.

Garavisha and Dushi visha, signs, symptoms and management with contemporary relevance.

Vishajanya Janapadodhvamsaniya Roga (community health problems due to poisons) - environmental pollution, water pollution, soil pollution, air pollution etc, their features and management according to ancient and contemporary concepts.

Concept of Viruddhahara with contemporary views.

Definition of Vyavahara Ayurveda.

Fundamentals of Vyavahara Ayurveda. Courts of law in India and legal procedures.

Chaturvinshati upakrama (24 management procedures).

**PART-B 50 marks**

Introduction to Forensic medicine.

Techniques of pathology, pharmacology, pharmacognosy and microbiology used in toxicology.

Death and its medico-legal aspects (Medical Thanatology), Medico-legal autopsy, Legal procedures in clinical forensic medicine.

Forensic Science Laboratory:- Structure and functions

Introduction to Medical Jurisprudence.

Laws related to medical profession. Ancient practice of medical jurisprudence in india.

Ancient and contemporary fundamentals of medical ethics.

Madya visha (Alcoholism).

Diagnosis and Management of food poisoning.

General and Emergency medical management of poisoning including preparation, administration and complications of antidotes, antivenoms, antisera.

Management of the toxic manifestations caused by the contact poisons (paduka, vastra, abhushana, mukhalepa- vishabadha etc).

Diagnosis and management of dermatological manifestations of Visha.

Death due to poisoning, duty of physician in poisoning and cases of suspected poisoning.

Post mortem findings in poisoning.

### **PRACTICAL 100 marks**

Contents:

Clinical Postings

Case records – 20 cases (Postmortem/ poisoning/dermatological/medico legal cases)

PG 1st Year Syallabus-25

Distribution of marks (Practical)

Case records (20 Cases) - 20 Marks

Bedside clinical case taking

Long Case - 20 Marks

Short Case - 10 Marks

Identification of specimens, models and equipments of jurisprudence importance. - 15 Marks

Spotting related to Visha, Upavisha and other poisonous drugs - 15 Marks

Viva-voce -20 marks

### **REFERENCE BOOKS:**

Useful Portion of Charak-Sushrut-Vagbhata

Dravyaguna Vigyan - Acharya Yadavji

Aushadhigunadharm Shastra - Pt Visvanath Dvivedi

Kriyatmat Aushada parichaya Vigyan - Pt Visvanath Dvivedi

Ayurvedic Vyadhi Vigyan - Acharya Yadavji Trikamji

Madhavanidan with Madhukosha commentary

Sharangadhara Samhita

Yogaratnakara

Aushadigunadharm Shastra - PtGangadhara Shastri Gune

Rasendracintamani  
Rasaratna samuchhaya  
Vishavigyan - Dr. Krishna Kumar  
Related matter of Kautilya Artha Shastra  
Harmekhlatantra  
Anupana manjari  
Ayurvedprakash  
System of clinical Medicine - Savil  
Forensic Pharmacy -B.M. Mhithai  
Hand book of Forensic Medicine and toxicology - Dr. P.V. Chadha  
Viva Forensic Medicine and toxicology - L.C. Gupta  
Forensic Medicine and Ethics - J.P. Narena  
Modi's Medical Jurispudence and Toxicology  
The essentials of forensic medicine and toxicology -Dr.K.S. Narayan Reddy  
Medical Laws and Ethics - Dr. H.S. Mehta  
M.R.K. Krishnan's Handbook of Forensic Medicine  
Text book of Medical Jurisprudence and Toxicology - Dr. C.K. Parikh  
Atlas of Forensic Medicine - Dr. Tomio Watenbe  
Medico legal Post Mortems (Atlas) - Dr. Parikh and Others  
Textbook of Forensic Medicine and Toxicology - Dr.V.V. Pillay  
Textbook of Forensic Medicine and Toxicology - Dr. Karmakar  
Textbook of Forensic Medicine and Toxicology - Dr. Singhal  
Textbook of Forensic Medicine and Toxicology - Dr. Krishnan Vij  
Forensic Pathology - Dr. Bernard Knight  
Textbook of Forensic Medicine and Toxicology - Lyon's  
Pocket picture guide to Forensic Medicine - Gower's Medical  
Publication  
Forensic Medicine - Simpson Knight  
Taylor's Principles and Practical of Medical Jurisprudence - J and A Churchis  
Doctor and Law - Singhal  
Textbook of Toxicology - Singhal  
Medicine Harrison's Principal of Internal Medicine  
Agad Tantra - Dr.Shekhar Namboodri

## **PG 1st Year Syallabus-26**

- Modern Medical Toxicology - Dr. V.V.Pillay  
Critical care toxicology - Bruent Wallace  
Diagnosis and Management of common poisoning- Agarwal wali  
Colour Atlas of Forensic Medicine - Govindaiah  
Guidelines of poisons - W.H.O.  
Doctors patients relationships - Dr.Lavekar  
Bhavaprakasha.  
Vishavaidya Jyotsnika -- English translation By VPSV Ayurveda college, Kottakkal.  
Lakshnamritham.  
Toxicology, Ayurvedic perspective - VPSV Ayurveda college, Kottakal  
Text book of Agadatantra - Edited By Dr Huparikar, Dr. Joglekar  
Agadatantra ki Pathyapustaka - Edited By Dr Huparikar, Dr. Joglekar  
Vyavahar Ayurveda Vigyanam - Dr.Indramohan Jha (Sachchan)  
Forensic Medicine - Dr. B. Umadathan  
Visha Chikitsa - Dr. M. Balakrishnan Nair  
Park Text book of Preventive and Social Medicine. - K. Park  
Environmental Science and Biotechnology - Theory and Practice  
- A.G. Murukesan &C. Rajakumari  
Veterinary Toxicology - Dr. Satish K. Gargi  
Guide to Drinking Water Quality (3 Volumes) - WHO Publication  
A short Text Book of Medical Entomology - H.S. Bhatti, R. Sehgal,  
R.C. Mahajan.

## **PG 1st Year Syallabus-27**

### **M.D.-AYURVEDA PRELIMINARY**

#### **7. SWASTHAVRITTA & YOGA**

**(Preventive, Social Medicine & Yoga)**

**PAPER-II Theory 100 marks**

**PART A 50 marks**

Importance and relevance of Swasthavritta and Community Medicine. History of community medicine. Concept of health and disease as per Ayurveda and Modern Medicine. Various definitions and dimensions of health as per Ayurveda and World Health Organization.

Relevance of Dinacharya, Ratricharya and Ritucharya in Health Promotion. Basic concept of Vega. Concept of Adharaniya and Dharaniya Vega in health promotion and prevention of diseases with examples. Concept of Trayopastambha in health promotion and prevention of diseases.

Concept of nutrition as per Ayurveda and modern science.

Concept of Vyadhikshamatva. Concept of Bala and Ojas in relation to health.

Role of Panchakarma in preventive medicine.

Role of Rasayana in promotion of health and prevention of diseases. Scope of Rasayana in Geriatrics and Reproductive & Child Health.

The concept of Ashtanga Yoga and its relation to health. Concept of Moksha.

Basic concepts of Nisargopachara including Panchabhautika Chikitsa.

### **PART B 50 marks**

Concept of Janapadodhwamsa and tools of its prevention. Principles of Epidemiology. Definitions in infectious disease epidemiology.

Concept of disease control and intervention strategies.

Levels of disease prevention

Basic principles of Samkramak Vikara- causes, modes of disease transmission, epidemiological triad

Principles of Health Education

Environmental Health- concept of water, soil and air purification as per Ayurveda and modern science.

### **Introduction to Meteorology**

Role of Swasthavritta in maternal and child health care.

National Population Policy, National Health Policy as per Alma Ata Declaration and Role of Ayurveda therein. Role of Swasthavritta in communicable and non-communicable diseases and life style disorders.

Biomedical waste management.

National health programmes.

### **PG 1st Year Syllabus-28**

### **PRACTICAL 100 marks**

Contents:

Duty in OPD and IPD with regard to Pathyapathya, Yoga and Nisargopachar

Preparation of different Kritanna Kalpana

Practice of the following Pratimarsha Nasya

Anjana

Kavala and Gandusha

Abhyanga Udvardana

Prayogika Dhoomapana

Matra basti

Health awareness lectures to the community (minimum 5)

Participation in observance of National & International days related to health.

Proficiency in performing the following Asanas

Standing Postures- Ardhakatichakrasana, Padahasthasana, Ardhashakrasana, Trikonasana.

Sitting postures- Swasthika, Gomukha, Padmasana, Vajrasana, Bhadrasana, shashankasana, Ushtrasana, Pashchimottanasana, Suptavajrasana, Ardhamatsyendrasana, Siddhasana. Supine

Postures- Pavanamuktasana, Sarvangasana, Matsyasana, Halasana, Chakrasana, Shavasana. Prone postures- Bhujangasana, Shalabhasana, Dhanurasana, Makarasana.

Distribution of marks (Practical)

Records - 20 Marks

Long Procedures - 20 Marks

Short Procedures - 10 Marks

Spotting - Aahar dravyas, Family Planning

Devices, Vaccine/Serum and Models/Specimens,

Naturopathic and Yogic specimens etc. - 10 Marks

Yogasana - 20 Marks

Viva-voce - 20 Marks

## REFERENCE BOOKS:

Relevant portions of Charak, Sushruta, Vagbhata (AshtangHrudaya), Ashtang Samgraha, Sarangadhara, Bhavaprakasha, Madhavanidan&Yogaratnakara, Bhela Samhita with the respective commentaries

Swasthavritta Samuchaya -VaidyaPtRajesvarDuttaShastri

Swasthya Vignyana -Dr.B.G.Ghanekarshastri

Prakritika Chikitsa -Kedarnath Gupta

Reddy's Comprehensive Guide to

Swasthavritta -Dr.P.Sudhakar Reddy

Swastha Vigyan	- Dr.MukundswaroopVerma
Ayurvediya Hitopadesh	- Vd.RanjitRai Desai
Yoga and Ayurveda	- Dr.Rajkumar Jain
Swasthvritta Vigyan	- Dr.Ramharsha Singh.

### **PG 1st Year Syallabus-29**

Swasthvrittam	- Dr.BramhanandTripathi
Ayurvediya Swasthvrittam	- Vd.Jalukar
Hathayog Pradipika	– SwatmaramYogendra (Kaivalyadhama)
YogikYog Paddhati	– BharatiyaprakrutikChikitsaPadhat
Yogik Chikitsa	-ShriKedarnath Gupta
Prakrutik Chikitsa Vigyan	– Verma
Janasankhyashikshasidhanta evam	
Upadesa	- S.C.Seel
Swasthvritta	- Dr.Shivkumar Gaud
Health and Family Welfare	- T.L.Devra
SachitraYogasan Darshika	- Dr.IndramohanJha
Preventive and Social medicine	- J.K.Park
Yogadeepika	- Shri. B.K.S. Iyengar
Swasthavritta	- Vd.Sakad
Positive Health	- Dr.L.P.Gupta
Biogenic Secretes of Food In Ayurveda	- Dr.L.P.Gupta
Yoga and Yogikchikitsa	- Ramharsha Singh
The Foundation of Contempary Yoga	- R.H.Singh
Yogasidhanta evum Sadhna	- H.S.Datar
Patanjal Yoga Sutra	– Maharshi Patanjali, Karambelkar
Prakrutik Chikitsa Vidhi	- Sharan Prasad
Text book of Swasthavritta	- Dr.Ranade, Dr.Bobade, Dr.Deshpande
Gherand Samhita	
Bio-Statistics	- B.K. Mahajan
Swasthavritta Vidnyan	- Dr.Mangala Gauri
Community Medicine	- Baride and Kulkarni.



Light on Yoga	- Shri. B.K.S. Iyengar
Light on Pranayama	- Shri. B.K.S. Iyengar
Light on Patanjala Yogasutra	- Shri. B.K.S. Iyengar
Shiva Samhita	– Kaivalyadhama
Gheranda Samhita	– Kaivlyadhama
Swasthavritta Vigyan	– Vd. Patrikar Vijay
Swasthavritta	– Vd Yashwant Patil and Vd. Vhawal
Food and Nutrition	– Swaminathan
Preventive and Social Medicine	– Mahajan
Preventive and Social Medicine	– B.N.Ghosh
Preventive and Social Medicine	– Gupta
Yoga and Nisargopachar	- Vd. Prama Joshi

## **PG 1st Year Syallabus-30**

### **M.D.-AYURVEDA PRELIMINARY**

#### **8. ROGA NIDANA AVUM VIKRITI VIGYAN**

**(Pathology and Diagnostic Procedure)**

**PAPER-II Theory 100 marks**

**PART-A 50 marks**

Understanding of Samprapti of diseases in Charaka Nidana Sthana in contemporary context

Clinical aspects of Dosha, Dhatu, Upadhatu, Mala, Agni, Ama, Srotas and Indriya

Understanding of the role of Trividha Avasthapaka in the vitiation of Dosha

Concept of Nanatmaja and Samanyaja Vikara

Clinical application of Avarana in diagnosis of various diseases

Clinical application of Shatkriyakala in diagnosis of diseases.

Clinical and applied aspects of concept of Upadrava and Arista

**PART-B 50 marks**

Ayurvedic interpretation of various laboratory investigations to derive treatment principles.

Interpretation of various Rogi Bala and Roga Bala technique to plan Chikitsa Sutra  
Clinical examination of Deha Bala, Roga Bala, Agnibala And Chetas Bala  
Knowledge of current diagnostic tools like ECG, X-Ray, CT scan, MRI and USG

### **PRACTICAL 100 marks**

#### **Contents:**

Duty in hospital OPD and IPD.

Duty in pathology laboratory.

Case taking – 25 cases

Performance of pathology and biochemistry practicals – 10 cases

Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG

#### **Distribution of marks (Practical)**

Case record (25 Cases)	- 10 marks
Bed side clinical case taking	
Long case	- 20 Marks
Short case	- 10 Marks
Laboratory Practical	- 20 Marks
Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG	- 10 Marks
laboratory experiment record	- 10 marks
Viva-voce	- 20 Marks

#### **REFERENCE BOOKS:**

Madhav Nidan (Madhukosha Commentary)

Relevant portions of Charak Samhita, Sushrut Samhita and Vagbhata

Doshakaranatwa Mimamsa - Acharya P.V. Sharma

Nadi pariksha - Vb Athavale

Nadi Pariksha – - GP Upadhyay

Rogi Pariksha vidhi - Acharya Priyavrata Sharma

Nidan Panchak - Shivcharan Dhyani

#### **PG 1st Year Syallabus-31**

Vyadhivigyan I and II - Yadav Thrikamji

Ayurvediya Roga Vargikaran - Vd. Ramanat Vd. Gurdip Singh  
Ayurvediya Nidan Evum Chikitsa Ke Siddhanta - Prof. Ram Harsh Singh  
Clinical methods in Ayurveda - K. R . S. Murthy  
Parameswarappa's Ayurvediya Vikriti Vigyan & Roga Vikriti Vigyan - Dr. P.S. Byadgi.  
Oxford Handbook of Clinical Examination and Practical Skills  
Symptoms & Signs in Clinical Medicine - Chamberlains  
Hutchison's Clinical Methods  
Bedside Clinics in Medicine Part- I & II - Kundu  
Practical Pathology - Dr. K. Uma Chaturvedi  
Medical Laboratory Technology - R. Sood  
Clinical Diagnosis and Management by Laboratory methods - Todd, Sanford and Davidson

### **PG 1st Year Syallabus-32**

### **M.D.-AYURVEDA PRELIMINARY**

### **9.CHHAYA AVUM VIKIRAN VIGYAN**

**(Imaging and Radio diagnosis)**

#### **PAPER-II Theory- 100 marks**

#### **PART A 50 marks**

Objectives of Chhaya avum Vikiran Vigyan.

History,development and concept of Chhaya avum Vikiran vigyan

Poorva karma (preparatory measures) related to Chhaya avum Vikiran Vigyan in relation to consultant, technical staff and patients (with their attendants) including counseling and consent.

Review of fundamental principles of Ayurveda.

Shishyopanayan regarding the Chhaya avum Vikiran Vigyan – introduction of Chhaya avum Vikiran department and hospital unit, guidelines for their use, do's and don'ts, discipline, duties and responsibilities.

Ethical and legal issues related to Chhaya avum Vikiran Vigyan.

Precautions and preventions in Chhaya avum Vikiran Vigyan unit.

Environmental issues related to Chhaya avum Vikiran Vigyan. Impact of used radiological energies on environment.

Disposing and recycling of radiological materials. Biomedical waste disposal management in Chhaya

avum Vikiran Vigyan.

Management of Chhaya avum Vikiran Vigyan department. Relation between consultant, student, technical staff, patients (with their attendants).

Basic concept of research methodology related to Chhaya avum Vikiran Vigyan.

**PART B      50 marks**

Preliminary knowledge of various modalities of Chhaya avum Vikiran Vigyan.

Efficiency and limitations of various radiological modalities.

Introduction of surface and applied anatomy, patho-physiology related to Chhaya avum Vikiran Vigyan.

Preliminary knowledge of equipments related to radiology.

Selection of appropriate radiological modalities- basis of selection, correct radiological investigation advice, further assessments and diagnostic advice.

Management of emergencies in radiology section, electrical and mechanical violent emergencies, radiation hazards and its preventive measures.

Pharmacology and application of emergency drugs, analgesics, muscle relaxants, fluids, plasma expanders, oxygen and various contrast media used in Radio-diagnosis and imaging.

Drug and contrast media reactions and shock - its management, cardio-cerebro-pulmonary resuscitation (CCPR), endo-tracheal intubation, tracheostomy.

Anesthesiology related to radiology.

Short review of common diseases, frequently investigated in the Chhaya avum Vikiran Vigyan department especially their clinical findings, anatomical and patho-physiological changes.

Skills of transfer of knowledge- Teaching methodology, audio-visuals preparation and presentations.

Knowledge of Information Technology – relevant to radiology.

Record keeping.

Documentation, books and journals, research paper writing.

**PG 1st Year Syallabus-33**

**PRACTI CAL      100 marks**

Contents:

- Evaluation of knowledge of functioning of equipments
- Evaluation of knowledge of Chhaya avum Vikiran Vigyan procedures
- Management of Chhaya avum Vikiran vigyan department

- Management of emergencies in Chhaya avum Vikiran Vigyan unit
- Personality development assessment.
- Basic knowledge of concepts of radiological interpretations

Distribution of Marks (practical):

Case Records of 25 patients	20
Chhaya avum Vikiran Vigyan procedures -	
Long procedure	20
Short procedure	10
Identification and functioning of instruments and equipments	15
Interpretation of Radiograph and images	15
Viva Voce	20

#### REFERENCE BOOKS:-

Shusruta Samhita	Relevant part
Charak Samhita	- do-
Astang Hridaya/Sangrah	- do-
Text Book of Radiographic Positioning and Related Anatomy	- By Kenneth L Bontrager,
John P Lampignano	
Radiographic interpretation to general practitioner	-W.H.O.
Procedures in diagnostic Radiology	- By T. Doyle, W. have, K.
Thomson.	
Radiographic positioning	- By Clark
Radiobiology for the Radiologist	- By Hall.Christensen's Physics of
Diagnostic Radiology	- By Curry T S , Dowdey J E
, Murry R C	
Farr's Physics for Medical Imaging	- By Penelope Allisy-
Roberts , jerry Williams	
Fundamental of Diagnostic Radiology	- By Brant.
Diagnostic Imaging	- By Federle
Diagnostic Imaging	- By Peter Armstrong ,
Martin Wastie , Ansrea	
Rockall	
Gastrointestinal radiology	- R.L. Eisenberg

Uro-radiology	- T.Sherwood, A.J.Davidson,
.B.Talner	
Grainger and Allison's Diagnostic Radiology imaging	-Text book of medical
Text Book in Radiology and Imaging	- By D. Sutton.
Introduction to Vascular Ultrasonography	- By Zwiebel , Pellerito
Text book in Ultrasonography	- By Roumack
Manual of Medical Diagnostic Ultrasonography group.	- By W.H.O. Scientific

### **PG 1st Year Syallabus-34**

Computed Tomography & MRI of the whole body	- By Hagg.
Surface and Radiological Anatomy	- By A. Halim
X-Ray equipment for student Radiographers	- By DN and MO Chesney
Clinical Sonography , A Practical Guige	- By Roger C. Sanders , Tom Winter
Ultrasonography in obstretics and gynaecology	-Callen
Standard Journals like Indian Journal of Radiology, Radiology,Radiological clinics of north America,British Journal of Radiology etc.	
Audio-visual aids	-CDs & DVDs

### **PG 1st Year Syallabus-35**

#### **M.D.-AYURVEDA PRELIMINARY**

#### **10.KAYACHIKITSA**

**(Genral Medicine)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Understanding of fundamental concepts of Kayachikitsa like Vriddhi and Kshaya of Dosha, Dushya, Mala with Amshaamsha Kalpana. Srotodushti, Khavaigunya, Agni, Ama (Saama and Nirama Dosha, Dhatu & Mala). Aavarana, Rogamarga, Ashayapakarsha, Dosha Gati, Kriyakala. Aushadha Sevana

Kala, Anupana, Pathya-Apathya and their scientific relevance during health and disease.

Detailed knowledge of Rogi Roga Pariksha including detailed history taking and systemic examination of patient. Clinical implementation of Dwividha Pariksha, Trividha Pariksha, Chaturvidha Pariksha, Panchavidha Pariksha, Shadvidha Pariksha, Ashtavidha Pariksha, Dashvidha Pariksha Bhavas and Prakriyadi Dashvidha Pariksha.

Principles of Kayachikitsa in disease management including Shodhana, Shamana and Naimittika Rasayana.

Introduction of the basic principles of Modern medicine, Homeopathy, Unani, Siddha, Tibetan Medicine, Yoga and Naturopathy and their relevance in light of the basic principles of Ayurvedic medicine.

### **PART B 50 marks**

1. Chikitsa Siddhanta of Pranavaha, Annavaha, Udakavaha, Rasadi Dhatuvaha, Malavaha & Manovaha Srotovikara.

2. Emergency medicine: Acute Severe Asthma, pulmonary oedema, myocardial infarction, cerebrovascular accidents, water and electrolyte imbalance, haemorrhage, syncope, seizure, coma, hyperpyrexia, hypertensive encephalopathy.

3. Knowledge of conducting various medical procedures like infusions, tapping, lumbar puncture, Ryle's tube insertion, catheterization, tractions, water seal drainage, Cardio Pulmonary Resuscitation.

4. Basic knowledge of underlying principles of ECG, TMT, echo cardiography, vascular doppler studies, EEG, EMG, X-Ray, USG, CT scan, MRI, PET and their interpretation.

5. Knowledge of common Ayurvedic formulations and preparations used in treatment:

Churna- Triphala, Sitopaladi, Lavanbhaskara, Hingvashtaka, Avipattikara, Gangadhara, Shaddharana, Sudarshana, Panchasakara, Ajmodadi.

Kashaya- Dashamula, Rasnasaptaka, Asanadi, Pathyadi, Phalatrikadi, Punarnavashtaka, Gojivhadi, Mahamanjishthadi, Drakshadi Kashaya.

Asavas-Arista- Amritarishta, Kanakasava, Chitrakasava, Saraswatarishta, Ashwagandharishta, Chandanasava.

### **PG 1st Year Syllabus-36**

Vati- Sanjivani, Chandraprabha, Agnitundi, Chitrakadi, Khadiradi, Vyoshadi, Shankha Vati, Shiva Gutika.

Guggula-Kalpana-Triphalaguggula, Kaishoraguggula, Trayodashangaguggula, Simhanadaguggula,

Yogarajaguggula, Gokshuradi guggula, Kanchanaraguggula.

Rasaushadhi- Tribhuvanakirti Rasa, Arogyavardhini Rasa, Shwasakuthara Rasa, Rasamanikya Rasa, Smritisagara Rasa, Lakshmivilasa Rasa, Sutshekhara Rasa, Pravala Panchamrita Parpati, Hemagarbhapottali Rasa.

Taila- Mahanarayana Taila, Pindataila, Prasarinyadi Taila, Ksheerabala Taila, Brihat Saindhavadi Taila, Panchaguna Taila, Amritadi Taila, Marichyadi Taila, Mahamasha Taila.

Ghrita- Mahatriphaladi Ghrita, Brahmi Ghrita, Panchtikta Guggulu Ghrita, Sukumara Ghrita, Dadimadya Ghrita, Kantakari Ghrita, Kalyanaka Ghrita.

Lehya- Chyavanaprasha Avaleha, Kushmanda Avaleha, Ashwagandha Avaleha, Agastya Hareetaki Rasayana, Drakshavaleha, Vasavaleha, Amrita-Bhallataka Rasayana.

## **PRACTICAL 100 marks**

Content:-

Daily hospital duties in OPD, IPD and casualty

Bed-side case taking – 25 patients

Distribution of marks (practical):

- |  |          |
|--|----------|
| 1. Case records of 25 Patients in detail | 20 marks |
| 2. Bedside clinical case taking-         |          |
| Long case                                | 20 marks |
| Short case                               | 10 marks |
| 3. Medical procedures/laboratory work    | 15 marks |
| 4. Instruments and spotting              | 15 marks |
| 5. Viva voce                             | 20 marks |

## **REFERENCE BOOKS-**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| Charak Samhita                   | -Cakrapanidutta commentry         |
| Sushrut Samhita                  | -with all available commentaries. |
| Ashtang Samgraha                 | –Indu commentary                  |
| Ashtang Hridaya                  | –Arundutta and Hemadri commentry  |
| Cikitsadarsha                    | - Pandit Rajesvardutta Shastri    |
| Kayachikitsa                     | - Ramaraksha Pathak               |
| Rog Pariksha Vidhi               | - Priyavrat Sharma                |
| Panchakarma Vigyan               | - Haridas Sridhar Kasture         |
| Ayurved Nidan Chikitsa Siddhanta | - Prof. R.H.Singh.                |



Kayachikitsa Vol. I-IV. - Prof. Ajay Kumar

Davidson's Principles and Practice of Medicine.

API Text Book of Medicine.

Harrison's Text Book of Medicine.

Cecil Text Book of Medicine.

Relevant texts of concerned subjects.

## **PG 1st Year Syallabus-37**

### **M.D.-AYURVEDA PRELIMINARY**

#### **11. MANO VIGYAN AVAM MANAS ROGA**

**(Psychiatry)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Concept of Manas in Sankhya, Yoga, Nyaya, Vaisheshika, Purva Meemamsa, Vedanta, Bouddha, Tantra and Purana. Philosophical concepts in Ayurveda and its applications.

Basic principles of Ayurveda psychology - Srishti utpatti, Triguna, Loka purusha samya Siddhanta, determination of Purusha according to Dhatubheda, Chikitsadhikrita purusha in a psycho somatic axis, Perception and cognition in Ayurveda. Dosha, Dhatu, Agni, Mala Vigyanam and its psychosomatic importance, 'Shariramapi Sattvamanuvidhiyate Sattvam Cha Shariram'. Concept of Dharma, Artha, Kama and Moksha, concept of Apunarbhava in Ayurveda, Trividha Eshana.

Introduction to psychoanalytical concept – Id, Ego, Super ego. Concept of mind in Western psychology

Concept of Mana in Ayurveda, Mano Nirupana, Manaswarupa, Sthana, Vishaya, Karma, Guna and Dosha. Manovyapara, Gyanotpatti, Gyanotpattau Manaso Dayittwam. Manas as 'Cheshta Pratyayabhutam Indriyanam Indriyo-Pakramaniyam'. Atma nirupana, Atmaguna.

Psychological Processes – Attention and perception, intelligence, creativity, motivation, emotion, sex and other drives, states of consciousness, learning, memory, cognition and dream, knowledge of developmental psychology.

Understanding of Manasika bhava / Manovikara and their importance in Manasroga Nidana and Chikitsa – Iccha, Dwesha, Sukha, Dukha, Lobha, Moha, Krodha, Shoka, Vilapa, Preeti etc. Emotional aspects of human behaviour.

Manovaha Sroto Nirupana, basics of neurophysiology, neurotransmitters, psychoneuroimmunology, physiological basis in human behaviour, influence of nervous system on human behaviour, sensory systems, autonomic nervous system, study of Ojas, Gyanendriya and Buddhi.

Satvikadi Kayanam samanya gyanam, basic concepts of personality, Sattvabala and mental disorders.

Manasroga samanya nidana, Pragyaparadha- samkshipta vivarana. Vibhramsha of Dhee, Dhriti and Smruti, Mano Dosha and Sharir Dosha in psychopathogenesis, Sadvritta and its importance.

Relation of psychology with parapsychology.

### **PART B 50 marks**

Basic understanding of Sattva Pariksha , utility of Trividha, Shadvidha, Ashta Sthana, Dashavidha and Srotopariksha in psychiatric practice, Vikriti pariksha- Vibhrama of Mano -Buddhi- Samgya Gyan-Smruti-Bhakti-Sheela-Cheshta and Achara.

Psychiatric examination- Mental status examination, mini mental status examination, cognitive assessment with higher mental functions, personality and self in psycho analysis, basic psychiatric assessment inventories- Hamiltons scale, Bech's inventory, GRISS questionnaire, Weschlers' scale for intelligence.

Clinical psychology – General psychology with schools of psychology, theories of personality development, social dimensions of behavior and current issues, doctor patient relationship, patient interviewing and study of therapeutic relationship. Basic knowledge about anxiety disorders, delusional disorders, phobic disorders, lying, stealing, juvenile delinquency. Mental hygiene and behaviorism.

Technical terms used in psychiatric practice, general symptoms of psychiatric disorders, classification of psychiatric disorders as per DSM and ICD classifications.

### **PG 1st Year Syallabus-38**

Basic knowledge about organic psychosis, psychoneurosis, Schizophrenia, mood disorders, personality disorders, sexual perversions, sleep disorders and mental retardation.

Basic understanding of Bhuta, Graha and Bhutavidya. Hetu, Lakshana and Samprapti of Unmada, Apsmara, Atattwabhinivesha, Grahavesha, Bhutonmada, Gadodvega, Yoshapasmara, Madatyaya.

Nidra and Swapna, its types and role in psychopathogenesis.

Basic understanding of Chikitsa bheda, descriptions of general and specific principles of Kayachikitsa, its practical application in Manasroga, Daivavyapashraya, Yuktivyapashraya, Satvavajaya chikitsa and Dravya-adravya chikitsa, Manodosha Samanya chikitsa, basic treatment principles in Manasika vyadhi, Panchkarma and its application in Manasika roga, Importance of Rasayana and Vajikarana therapies in Psychiatric practice, Medhya rasayana.

General knowledge in the basic management principles of psychiatric disorders in modern medicine. Basic knowledge on psychopharmacology, forensic psychiatry, community psychiatry, liaison psychiatry, child psychiatry and geriatric psychiatry.

Application of psychiatric knowledge in other specialities viz. Kayachikitsa, Agadatantra, Shalya, Shalakyas, Prasuti- Stri Roga and Kaumarabhritya.

Psychosomatic disorders, psychological understanding on essential hypertension, asthma and other allergic disorders, psoriasis, IBS, ulcerative colitis, CAD, tension /vascular headaches, pseudopsychosis, hyperemesis gravidarum, enuresis, diabetes mellitus, obesity, autoimmune disorders, neoplasm and psychosexual disorders.

Basic understanding of diagnostic applications- Haematological, biochemical, serological, histopathological, imaging - ECG, EEG, USG, MRI scan, CT scan, PET scan in psychosomatic, psychiatric and neuro- psychiatric practices.

### **PRACTICAL 100 marks**

Contents:

Daily hospital duties in OPD, IPD and casualty

Practical Record Book

Psychiatric – 5 cases

Psychosomatic – 5 cases

Paediatric / Geriatric Psychiatry – 5 cases

Psychosexual / Substance abuse – 5 cases

Psychiatric Inventories- MMSE, Hamilton Anxiety Depression Rating Scale, Brief Psychiatric Rating Scale, Bech's Depressive Inventory, Weschlers' scale, GRISS questionnaire -2 Cases each

Manasa Bhava assessment scales- Sattvabala, Manasa Kaya, Smriti, Buddhi, Raja and Tama rating,

Manas Bhava Pariksha –2 cases each

### **Distribution of marks (Practical)**

Case records of Patients in Detail (25 Cases)	- 20 Marks
Bedside clinical case taking	
Long case	- 20 Marks
Short case	- 10 Marks
Procedure	- 15 Marks
Instruments & Spotting	- 15 Marks
Viva - voce	- 20 Marks

### **PG 1st Year Syallabus-39**

#### **REFERENCE BOOKS:**

Related matter of Charak, Sushrut and Vagbhata and other ancient texts with commentaries

Prachin Manovikara Vigyanm	- Ayodhya Prasad Achal
Ayurvediya Padarth Vigyan	- Ranjit Rai Deshai
Ayurved Darshan	- Acharya Rajkumar Jain
Purusha Vichaya	- Prof. V.J. Thakkar
Ayurvediya Manas Vigyan	- Prof. Ram Harsh Singh
Yoga evum Ayurved	- Acharya Rajkumar Jain
Basic principles of Ayurvediya Padartha Vigyan	- Dr Yogesh Chandra Mishra
Synopsis of Psychiatry	- Harold kaplon and Benjamin saddock
Oxford textbook of Psychiatry	- Michael Gerlder, Paul Harrison
General psychology and Abnormal psychology	- S.K. Mangal
A text book of Post Graduate Psychiatry	- Neeraj Ahuja
Mind in Ayurveda and other Indian Traditions	- A.R.V.Murthy
Psychopathology in Indian medicine	- Satyapal Gupta
Body- Mind-Spirit Integrative Medicine	- Prof. Ram Harsh Singh
Rationale of Ayurveda Psychiatry	- Dr. A.R.V. Murthy
Foundations of contemporary Yoga and Yoga Therapy	- Prof. Ram Harsh Singh
Stress and its Management	- Dr. K.N. Udupa
Concept of Mind	- Edited by Prof. C.R. Agnivesh, Kottakkal
Kayachikitsa - Part 3	- R. R. Pathak and Vidhyadhar Shukla
Panchakarma Illustrated	- Prof. Shrinivasa Acharya

Unified Dimensions of Ayurvedic Medicine	- Dr. J.S. Tripathi
Essential Psychiatry	- Bhatia MS
Sahassrayoga	- Nishteswar and Vaidyanath
Ayurveda and the Mind	- David Frawley
Manasa Roga Vijnana	- Balakrishna
Comprehensive Textbook of Psychiatry	- Kaplan and Sadock's
Psychiatry for medical students	- Robert J Waldinger
Introductions to Psychology	- Morgan / King.

**PG 1st Year Syallabus-40**

**D.-AYURVEDA PRELIMINARY**

**12.RASAYAN & VAJIKARAN**

**(Rejuvenation & aphrodisia)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Concept of Bhesaja, classification and understanding of Swasthasya Urjaskara and Artasya Roganut.

Etymology, derivation, definition, synonyms and scope of Rasayana, Vajikarana & Vrishya.

Historical aspects of Rasayana & Vajikarana

Rasayana-Vajikarana Arha & Anarha

Classification of Rasayana & Vajikarana.

Knowledge of Dosha, Dhatu & Mala.

Knowledge of Dhatu Parinamana & Poshana Nyaya.

Detailed knowledge of Shukradhatu, Shukra, Retas, Veerya, Rupadravya, Prashastha Sukra Lakshana, Sukrasaara Purusha.

Knowledge of Sukravahasrotas, Sukradhara Kalaa.

Concept of Ojas.

Knowledge of Prakriti, Sara & Satwa.

Knowledge of concept of Agni: all components of Agni, levels of Agnimandya, Agnimandyajanya Vikara.

Principles of Panchakarma and application in Rasayana & Vajikarana.

**PART B 50 marks**

Applied anatomical & physiological aspects of male reproductive system.

Applied aspects of physiology of puberty.

Spermatogenesis.

Basics of genetics. Bija and its components.

Applied aspects of reproductive endocrinology.

Semen formation, knowledge of various components of semen.

Basics of applied pharmacology related to Rasayana & Vajikarana.

Knowledge of metabolism and metabolic disorders.

Basics of Geriatrics.

**PRACTICAL 100 marks**

**Contents:-**

Daily hospital duties in OPD, IPD and casualty.

Assessment of Saara – Shukrasaara and Shukra-Asaara –10 patients.

Rasayan and Vajikarana in geriatric patients – 10 patients.

Semen analysis- Retopariksha – 10 cases.

Uttarbasti – 5 cases.

Technique of psychosexual counseling.

Applied knowledge of assessment scales pertaining to Vajikarana /sexual functions.

Practical aspects of Panchakarma pertaining to Rasayana & Vajikarana.

Distribution of Marks (practical):

**PG 1st Year Syllabus-41**

Case records of patients-

(15 case of Rasayana; 10 cases of Vajikarana) 20 marks

2. Bedside clinical case taking-

Long case 20 marks

Short case 10 marks

3. Semen analysis and lab investigations 20 marks

4. Instruments and spotting 10 marks

4. Viva voce 20 marks

## REFERENCE BOOKS:-

Relevant chapters from Brihatrayee and Laghutrayee and their commentaries

Panchakarma by Prof.H.S. Kasture

Kayachikitsa Vol I & II (Including Panchakarma, Rasayana & Vajikarana) by Prof. RH Singh

Illustrative Panchakarma by Dr Sreenivasa Acharya

Campbell-Walsh Urology by

Alan J. Wein MD PhD (Hon)

Louis R. Kavoussi MD

Andrew C. Novick MD

Alan W. Partin MD PhD

Clinical Endocrinology 2013 The (Clinical Medicine Series) by MD., CG Weber

Sex and Human Loving -Masters and Johnson

Diagnosis and treatment of functional Infertility by Lunenfeild B, Insler V, Glezerman M (eds) Black well scientific publications, Berlin.

Human reproduction conception and contraception, He fez ESE (ed) Harpar and Row publications, New York

Infertility- Practical guide for the physician, Hommond GM, Talbert LM (eds) Black well scientific publications, Oxford

Rasayana vajeekarana- Darpan by Om prakash Upadhyaya, Soi Balachandra yantralaya, Manavashram, Jaipur

Vatsayana kamasutra

Ananga ranga

Kelikutuhala

Infertility manual by kamini Rao

Advanced infertility management- Mehroo Hansotia

Endocrine and Reproductive systems – Sanders

Proceedings of WHO Symposium on advances in fertility regulation, Moscow: USSR

WHO Laboratory Manual for the examination of semen and sperm. Cambridge Uni. Press

WHO (1973) Reproductive function in the human male. World Health Organization, Geneva(Mannual)

WHO (1975): Scientific group on the epidemiology of infertility. The epidemiology of infertility, Geneva (Technical Report Series No. 5820 37 P)

Decision making in infertility; DeCherney AH, Polan ML, Lee RD, Boyers SP (Eds), JP Brothers, New Delhi

Handbook of sexual Dysfunction by Richard Balon, R. Taylor Seagraves pub. By Taylor and Francis Group Florida

The Sperm Cell (Production, Maturation, Fertilization, Regeneration) by Christopher J. De Jonge, Christopher L.R. Barratt, Cambridge University Press

Kaplan and Saddocks Synopsis of Psychiatry, Lippincott Williams and Wilkins

## **PG 1st Year Syallabus-42**

### **M.D.-AYURVEDA PRELIMINARY**

#### **13.PANCHKARMA**

**(Five Therapeitic proedure)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Chikitsa and its classifications; Antah-Parimarjana and Bahir-Parimarjana Chikitsa

Principles of Chikitsa, Kriyakal, Shadvidha and Dvididha Upakrama and role of Panchakarma therein.

Applied aspects of Trividha, Shadvidha, Ashta Vidha and Dasha Vidha Pariksha.

Applied anatomy and physiology of cortex, cranial and peripheral nerves. Methods of physical examinations of central nervous system: sensory system, motor examination-muscle power and tone, superficial and deep reflexes, difference of upper and lower motor neuron lesions. Tremors and coordination.

Functions of various single muscles and groups of muscles, applied anatomy and physiology of joints. Methods of examination of locomotor system. Differential diagnosis of Amavata (rheumatoid arthritis), Vatarakta (gout) and Sandhivata (osteoarthritis). Examination of lumbar and cervical disorders including Gridhrasi (sciatica) and Vishvachi (Brachial neuralgia).

Applied anatomy and physiology of cardiovascular and respiratory systems, functions of capillaries and its permeability. Methods of examination of respiratory and cardiovascular system. Interpretation of spirometry and ECG findings.

Knowledge and method of examination of various skin lesions.

Applied anatomy of stomach, small intestine and large intestine. Detailed examination of gastro-



**intestinal** system.

**PART B 50 marks**

Definition of Karma. Trividha Karma for Shodhana.

Importance of Panchakarma in health and disease.

Indications and contraindications for Shodhana. Applied aspects of Koshtha and Agni.

Importance of Purva and Pashchata Karma in Shodhana. Parihara Vishaya for Panchakarma.

Samsarjana Karma. General knowledge of various Aushadha and Ahara Kalpana used for Panchakarma.

Areas of research in Panchkarma.

Knowledge of equipments and instruments used in Panchkarma in ancient times and the possible modifications therein now.

Knowledge of quality standards of NABH (National Accreditation Board of Hospitals) for Ayurveda, guidelines for establishment and management of eco-friendly Panchkarma theatre including management of biomedical waste.

**PG 1st Year Syallabus-43**

**PRACTI CAL 100 marks**

Duty in Panchakarma ward and theatre.

Performance of 5 Cases each of Snehana, Svedana, Vamana, Virechana, Basti and Nasya with maintaining of detailed record.

Record of detailed examination of 25 patients treated with Panchakarma and effects observed thereon.

**Distribution of marks (practical):**

Case records of 25 patients in detail	20 marks
Performance of long Karma	20 marks
Performance of short Karma	10 marks
Panchakarmal procedures	15 marks
Instruments and spotting	15 marks
Viva voce	20 marks

**REFERENCE BOOKS:**

**1 Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpa taruby Gangadhara**

**2 Sushruta Samhita with the Nibhandha Samgraha commentary of Dalhana and Nyayachandrika panjika of Gayadasa on nidansthana**

**3 Ashtang Hridaya with Sarvanga sundara and Ayurved rasayana commentaries**

**4 Ashtanga Sangraha with Shashilekha commentery**

**5 Bhela Samhita**

**6 Kashyapa Samhita**

**7 Bhavaprakasha of Bhavamishra**

**8 Sharangadhara Samhita**

**9 Vangasen**

**10 Gadanigraha**

**11 Ayurvediya Panchkarma chikitsa**

**Dr Mukundilal Dwivedi**

**12 Panchkarma Vigyan**

**Dr Haridas Shreedhar Kasture**

**13 Illustrated Panchkarma**

**Dr.G Srinivasa Acharya**

**14 Ayurveda-Principles and Practice of Panchakarma**

**Dr. Mandip and Dr Gurdip Singh**

**15 The Panchkarma Treatment of Ayurved with Kerala Specialities**

**16 Dr. T.L. Devaraj**

**17 Panchkarma Therapy**

**18 Dr. R.H. Singh**

**19 Principles and practice of vasti**

**20 Dr. Vasudevan Nampoothiri and Dr. L. Mahadevan**

**21 Claiton's Physiotherapy**

**22 Teddy's Physiotherapy**

**23 Harrison's Principles of Internal Medicines**

**24 Guyton's Physiology**

**PG 1st Year Syallabus-44**

**M.S.-AYURVEDA PRELIMINARY**

**14. PRASUTI AVUM STRI ROGA**

**(Gynecology & obstetrics)**

**PAPER-II Theory- 100 marks**

**PART A      50 marks**

Concept of Tridosha, Dhatu, Upadhatu, Agni, Pancha Mahabhuta in relation to Prasuti and Stri Roga.  
Concept of Artava and Shukra.  
Concept of Rasa, Guna, Veerya, Vipak and Karma of Dravya used in Prasuti and Stri Roga.  
Action and adverse drug reaction related to commonly used plants and Rasa Aushadhi in Prasuti and Stri Roga.  
Concept of Pathya- Apathya in relation to Prasuti and Stri Roga.  
Concept of Garbhadhan and Garbha.  
Concept of Vrana and Vrana dushti.  
Concept of special therapies of Ayurved used in Prasuti and Stri Roga.  
Concept of Ashtavidha Shastra Karma, Yantra & shastra used in Prasuti and Stri Roga

**PRACTI CAL 100 marks**

Applied anatomy and physiology of genito-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, inguinal ligament, inguinal canal, vulva, rectum and anal canal.  
Abnormal development, structure and function of female and male urogenital systems  
Development, structure and function of placenta, umbilical cord and amniotic fluid.  
Physiological and neuro-endocrinal changes during puberty, adolescence and menstruation.  
Introduction of hormones related with gynaecology and obstetrics. Ovulation, fertilization, climacteric and menopause. Biophysical and biochemical changes in uterus and cervix during pregnancy and labour.  
Pre-natal, Natal and Post natal counseling and examination.  
Pharmacological study of drugs used in gynaecology and obstetrics.  
Knowledge of diagnostic techniques used in gynaecology and obstetrics.  
Basic Knowledge of pathological and biochemical investigation used in gynaecology and obstetrics.  
Ethics, law and Acts Related to gynaecology and obstetrics – laws of abortion and adoption.  
Knowledge of contraception and sterilization procedures.  
**Pre-operative and post operative care in gynaecology and obstetrics.**

**PRACTI CAL      100 marks**

**Contents:**

Hospital duties in OPD, IPD, labor room, OT and casualty

History taking and counseling - 25 cases.  
Labor cases - observation/performing - 10 cases  
Knowledge of instruments required in gynaecology and obstetric practices.  
Ayurvedic diagnostic and therapeutic procedures.  
Fluid therapy and blood transfusion.  
Contraception and sterilizations.

### **PG 1st Year Syallabus-45**

Pre-operative, operative and post operative procedures.

Distribution of marks (Practical)

Case records of Patients in Detail (25 Cases)	- 20 Marks
Bedside clinical case taking	
Long case	- 20 Marks
Short case	- 10 Marks
Procedures	- 15 Marks
Identification of instruments, X-ray etc & Spotting	- 15 Marks
Viva - voce	- 20 Marks

### **REFERENCE BOOKS:**

Related matter from all the samhitas and their commentaries.

Prasuti tantra evum stree roga by prof Tewari P V

Concepts of gynecology Dr Nirmala G Joshi.

Prasuti Tantra Prof. M. Dwivedi

Stree roga vigyan - Dr VNK Usha

Navya prasuti Vigyan Dr Pooja Bharadwaja

Text book of gynaecology-Berek and Novak.

Text book of obstetrics- Williams

Text book of obstetrics- D C Dutta

Text book of gynaecology - D C Dutta

Gabbe's normal and problem pregnancies.

Human embryology by Sandler.

Jeffcoat's principles of gynaecology

Te linde's gynaecological surgery.

## **PG 1st Year Syallabus-46**

### **M.D.-AYURVEDA PRELIMINARY**

#### **15. KAUMARBHRITYA - BALA ROGA**

**(Pediatrics)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Development of Kaumarbhritya tantra including ancient and modern literature. Strength of Ayurveda specific to child health care.

Vayobheda (Classification of age) according to different classics

Anatomical and physiological differences in child compared to adult.

Ayurvedic consideration of physiology and pathology of Dosha, Dhatu, Mala, Oja, Agni, Prakriti (sharirika-manasika), Kaya and Dhatuposhana in children.

Basic Concepts of growth and development, and its assessment.

Ayurvedic and modern clinical methods of examination of healthy and diseased newborn and children.

Knowledge of modern diagnostic tools like clinical and laboratory investigations, X-ray, USG, MRI etc.

Fundamentals of Ayurvedic treatment for childhood disorders.

Applied pharmacological considerations: Ayurvedic and modern concepts of drug doses, administration, distribution, metabolism, excretion, and other important factors of consideration.

National programs related to pediatrics.

Childhood Samskara

Principles of Child Psychology (Ayurvedic & modern concepts)

**PART B 50 marks**

Concept of Bala Rasayana and its application in physical and mental health of children.

Concept of Vyadhi-Kshamatva avam Vardhanopaya. Concept of immunity and immune enhancing measures including immunization.

Concept of Dhupana and Raksha karma and their clinical application in pediatric practice

Basic concepts of single drugs commonly used in pediatric practice with special reference to their karma like- Guduchi, Yastimadhu, Mandukaparni, Shankhapushpi, Ativisha, Pippali, Maricha, Shunti, Haritaki, Amalaki, Tulasi, Bhumyamalaki, Daruharidra, Haridra, Vidanga, Katuki, Dadima, Brahmi, Ashvagandha, Shatavari, Bala, Kampillaka, Trivrita, Jyotishmati, Vacha, Jeevanti, Rasna, Shatavari, Anantamula (Krishna Sariva), Durva, Khadir, Tankana, Tambula, Jatamansi, Sphatika.

Knowledge of their ingredients, indications, precautions and specific considerations including adverse drug reactions (ADR) of commonly used Ayurvedic formulations in pediatric practice e.g. Aravindasava, Baalachaturbhadra Churna, Kumarakalyana Rasa, Saraswatarista, Swarnaprashana (Kashyapa Samhita), Kumaryasava, Kushmanda Rasayana (Sharangdhar), Ashvagandha Rasayana (Ashtanga Hridaya), Brahmi Ghrita, Kalyanaka Ghrita, Talishadi Churna, Sitopaladi Churna, Haridra Khanda, Krimikuthara Rasa, Mugdha Rasa, Dantodbheda-Gadantaka Rasa, Rajanyadi Churna (Ashtanga Hridaya), Samvardhana Ghrita, Ashta Mangal Ghrita.

Methods of preparation of various specific Kalpana (e.g. Lehya, Syrup, drops etc.) according to needs of children.

Common instruments and their application in new born care and general pediatric practice.

Specific considerations in research methods related to Pediatrics.

Regulatory laws related to child health management.

## **PG 1st Year Syallabus-47**

### **PRACTICAL 100 marks**

#### **Contents:**

a) In-patient case history record -(25 Patient)

b) Child Health record - (50 Case)

Involvement in Outreach and National programs:

School Child health checkup

Adolescent education

Adolescent counseling etc

Pediatric ward/nursery management.

Distribution of marks (Practical)

a) Case History Record - (25 Patient) - 10 Marks

b) Child Health record - (50 Case) - 10 Marks

### **Bed side clinical case taking**

1. Long Case - 20 Marks
2. Short Case - 10 Marks
3. Procedures/ Kriya Kalpa - 15 Marks
4. Identification of instruments & Spotting - 15 Marks
5. Viva-voce - 20 Marks

### **REFERENCE BOOKS:**

Kashyapa Samhita Complete Hindi translation by Satyapal Vidhyalankara English translation by Prof. Premvati Tiwari

Principles & practice of Pediatrics in Ayurveda: CHS Shastri

Child Health Care in Ayurveda: Abhimanyu Kumar

Ayurvedic Concepts of human Embryology: Abhimanyu Kumar

Kaumarbhritya by Prof. D.N. Mishra

Kaumarbhritya Ke Antargata Balgraho Ka Kramika Evam Vaigyanika Adhyana by Prof. Chanchal Sharma

Notes on Kaumarbhritya-by Dr. Dinesh K S

Pran - Pratyagamanam-by Dr. B.M. Singh

Ayurveda Dwara Matra Evam Shishu Paricharya by Dr. KS Patel, V.K. Kori & Rajgopal S.

Kaumarbhritya related references from Charaka Samhita, Sushruta Samhita Vagbhata etc.

Clinical Methods in Paediatrics by Meharban Singh

Pediatrics Emergencies by Meharban Singh

Essential Pediatrics O.P. Ghai

Text Book of Pediatrics Nelson

Care of New Born by Meharban Singh



## **PG 1st Year Syallabus-48**

### **M.S.-AYURVEDA PRELIMINARY**

#### **16.SHALYA TANTRA – SAMANYA**

**(General Surgery)**

**PAPER-II Theory- 100 marks**

**PART A 50 marks**

Etymology and definition of Shalya Tantra.

Scope and importance of Shalya Tantra.

Study of Sushruta Samhita Sutra Sthana.

Study of modern surgical clinical methodology.

Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.

Applicability of Shat Kriyakala in the pathogenesis of surgical diseases.

Applicability of Prakriti in understanding the causes and role of treatment in surgical diseases.

Applicability of basic principles of Ayurveda in Rogi Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and latest investigations.

Concept of Rakta according to Sushruta.

Introduction of clinical and diagnostic methods in Shalya Tantra - X-rays, U.S.G., Endoscopies (for diagnostic and treatment purposes), MRI, CAT scanning and other recent diagnostic tools.

Concept and applicability of Sadhya-Asadhya (Prognosis) - Arishtha lakshana.

Knowledge of life saving drugs.

Emergency conditions and its management.

Diagnosis and management of Pranashtha Shalya.

**PART B 50 marks**

Yantra and Shastra – Surgical Instruments - Ancient and recent advances.

Sterilization – methods and types.

Basic knowledge of Sangyahan – Anaesthesia - Types, methods, indications, contraindications, complications and its management.

Concept of Trividha Karma – Purva, Pradhana and Pashchat.

Ashtavidha Shastra Karmas.

Bandhana Karma – Ancient and recent advances.

Kshara Karma – Introduction, types, method of various preparations like Kshara, Kshara Varti, Kshara Pichu and applications.

Kshara Sutra – Method of preparation, standardization and applications.

Agnikarma – Introduction, types and applications.

Raktamokshana – Introduction, types and applications.

Application of Panchakarma therapy in surgical practice.

Scope of Pathya-Apathya in the management of surgical diseases.

## **PG 1st Year Syallabus-49**

### **PRACTI CAL          100 marks**

#### **Content:-**

Hospital duties in OPD, IPD, OT and casualty

Case record – 25 cases

Surgical cases - observation/performing- 10 cases

Knowledge of instruments required in surgical practices.

Ayurvedic diagnostic and therapeutic procedures.

Fluid therapy and blood transfusion.

Contraception and sterilizations.

Pre-operative, operative and post operative procedures.

Distribution of marks (practical):

1. Case records of 25 Patients in detail	20 marks
2. Bedside clinical case taking-	
Long case	20 marks
Short case	10 marks
3. Identification of instruments, X-ray etc	15 marks
4. Medical procedures	15 marks
5. Viva voce	20 marks

## REFERENCE BOOKS:-

- Sushruta Samhita  
Ashtanga Sangraha  
Ashtanga Hridaya  
Charaka Samhita  
The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya  
Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma  
Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma  
Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma  
Shalya Pradeepika - Dr. Mukund Swaroop Verma  
Soushruti - Dr. Ram Nath Dwivedi  
Clinical Shalya Vigyan - Dr. Akhilanand Sharma  
Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande  
Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma  
and Dr. Kulwant Singh.  
Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar Chowdary.  
Adhunka Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa  
Agnikarma Technology Innovation - Dr. P.D. Gupta  
Shalya Tantra Ke Siddhant - Dr. K.K.Takral  
Recent advances in the management of  
Arshas /Haemorrhoids - Dr. P. Hemantha Kumar  
Arsha Evum Bhagander Mein sutra Avacharan- Vd. Kanak Prasad Vyas  
Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao  
Leech application in Ayurveda - Dr. M. Bhaskar Rao  
Kshara Sutra - Dr. S.N.Pathak  
Shalya Shalakyta Tantra - Vd. S.G. Joshi  
Surgical ethics of Ayurveda - Dr. D.N. Pande  
Text book of Surgery - Sabistan  
Operative Surgery - Rob and smith

## PG 1st Year Syallabus-50

Bailey and Love's Short Practice of Surgery	- Norman.S. Williams, Charles.V.
Mann and R.C.G. Russell	
Fractures and Joint Injuries	- Watson-Jones
Text books of Operative Surgery	- Farquharsons'
Principles of Surgery	- Schwartz
Emergency Surgery	-Hamilton Bailey's
Surgical pathology	- Willing Worth
Clinical methods in surgery	- S. Das
Textbook of Operative Surgery	- S. Das
Shalya Vigyan (Sachitra)	- Anantram Sharma
Anushastra Karma	- Dr. D.N. Pande
Concept of Vrana is Ayurveda	- Dr. Lakshman Singh
Significance for Poorva Karma in Surgical Patient	- Dr. Lakshman Singh
Sangyahan Prakash	- Dr. D.N. Pande
A concise Text Book of Surgery	- S. Das
A manual on Clinical Surgery	- S. Das
A System of Surgical Diagnosis	- T.N. Patel
A Practical Guide to Operative Surgery	- S. Das
Drugs and Equipment for Anaesthesia	- Arun kumar
Manual of Surgical Instruments	- M.M. Kapur
Ward Procedures	- Patel Mansukh. B
Recent trends in the management of Arshas / Haemorrhoids	- Dr. P. Hemantha Kumar
Primary Anaesthesia	- Maurice King
Synopsis of Anaesthesia	- Lee
Clinical Anatomy/ Surgical Anatomy	- John E.Skandalakis
Surgical Instruments of the Hindus	- Girindharnath Mukopadyay
Outline of Orthopedics	- John Crawford Adams and David Hamblen. L
Outline of Fracture	- John Crawford Adams
Recent trends in the management of Bhagandara / Fistula-in-ano	- Dr. P. Hemantha Kumar
Principles and Practice of Agnikarma	- Dr. Anand Kumar and Dr. Kanchan Shekokar.
Manipal Manual of Surgery	- Dr. Rajgopal Shenoy

## **PG 1st Year Syallabus-51**

### **M.S.-AYURVEDA PRELIMINARY**

#### **17. SHALYA - KSHARA KARMA AVUM ANUSHAstra KARMA**

**(Para Surgical Procedure including Minimal invasive Surgery)**

**PAPER-II Theory- 100 marks**

#### **PART A 50 marks**

1. Etymology and definition of Shalya Tantra.
2. Scope and Importance of Shalya Tantra.
3. Study of Sushrut Samhita Sutra Sthana 1- 46 chapters.
4. Study of modern surgical clinical methodology.
5. Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.
6. Applicability of Shat Kriyakala in the pathogenesis of surgical diseases.
7. Applicability of Prakriti in understanding the causes and role of treatment in surgical diseases.
8. Applicability of basic principles of Ayurveda in Rogi Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and latest investigations.
9. Concept of Rakta according to Sushruta.
10. Introduction of clinical and diagnostic methods in Shalya Tantra - X-rays, U.S.G., Endoscopies (for diagnostic and treatment purposes), MRI, CAT scanning and other recent diagnostic tools.
11. Concept and applicability of Sadhya-Asadhya- Prognosis – Arishtha Lakshana.
12. Knowledge of life saving drugs.
13. Emergency conditions and its management.
14. Diagnosis and management of Pranastha Shalya.

**PART B 50 marks**

1. Yantra and Shastra – Surgical Instruments - Ancient and recent advances.
2. Sterilization – methods and types.
3. Basic knowledge of Sangyaharn – Anaesthesia - Types, methods, indications, contraindications, complications and its management.
4. Concept of Trividha Karma – Purva, Pradhana and Pashchat.
5. Ashtavidha Shastra Karmas.
6. Bandhana Karma – Ancient and recent advances.
7. Kshara Karma – Introduction, types, method of various preparations like Kshara, Kshara Varti, Kshara Pichu and applications.
8. Kshara Sutra – Method of preparation, standardization and applications.
9. Agnikarma – Introduction, types and applications.
10. Raktamokshana – Introduction, types and applications.
11. Application of Panchakarma therapy in surgical practice.
12. Scope of Pathya-Apathya in the management of surgical diseases.

**PG 1st Year Syllabus-52**

**PRACTICAL 100 marks**

**Content :-**

Hospital duties in OPD, IPD, OT and casualty

Case record – 25 cases

Parasurgical cases - observation/performing- 10 cases

Knowledge of instruments required in parasurgical practices.

Ayurvedic diagnostic and therapeutic procedures.

Fluid therapy and blood transfusion.

Pre-operative, operative and post operative procedures.

Distribution of marks (practical):

- |  |          |
|--|----------|
| 1. Case records of 25 Patients in detail     | 20 marks |
| 2. Bedside clinical case taking-             |          |
| Long case                                    | 20 marks |
| Short case                                   | 10 marks |
| 3. Identification of instruments, X-ray etc. | 15 marks |
| 4. Medical procedures                        | 15 marks |
| 5. Viva voce                                 | 20 marks |

## REFERENCE BOOKS :-

- Sushruta Samhita  
Ashtanga Sangraha  
Ashtanga Hridaya  
Charaka Samhita  
The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya  
Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma  
Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma  
Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma  
Shalya Pradeepika - Dr. Mukund Swaroop Verma  
Soushruti - Dr. Ram Nath Dwivedi  
Clinical Shalya Vigyan - Dr. Akhilanand Sharma  
Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande  
Kshara sutra management in anorectal ailments and Dr. Kulwant Singh. - Dr. S.K. Sharma, Dr. K.R.Sharma  
Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar Chowdary.  
Adhunika Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa  
Agnikarma Technology Innovation - Dr. P.D. Gupta  
Shalya Tantra Ke Siddhant - Dr. K.K.Takral  
Recent advances in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar  
Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas  
Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao  
Leech application in Ayurveda - Dr. M. Bhaskar Rao  
Kshara Sutra - Dr. S.N.Pathak  
Shalya Shalakyia Tantra - Vd. S.G. Joshi  
Surgical ethics of Ayurveda - Dr. D.N. Pande  
Text book of Surgery - Sabistan  
Operative Surgery - Rob and smith

### PG 1st Year Syallabus-53

Bailey and Love's Short Practice of Surgery Russell	- Norman.S. Williams, Charles.V. Mann and R.C.G.
Fractures and Joint Injuries	- Watson-Jones
Text books of Operative Surgery	- Farquharsons'
Principles of Surgery	- Schwartz
Emergency Surgery	-Hamilton Bailey's
Surgical pathology	- Willing Worth
Clinical methods in surgery	- S. Das
Textbook of Operative Surgery	- S. Das
Shalya Vigyan (Sachitra)	- Anantram Sharma
Anushastra Karma	- Dr. D.N. Pande
Concept of Vrana is Ayurveda	- Dr. Lakshman Singh
Significance for Poorva Karma in Surgical Patient	- Dr. Lakshman Singh
Sangyahan Prakash	-Dr. D.N. Pande
A concise Text Book of Surgery	- S. Das
A manual on Clinical Surgery	- S. Das
A System of Surgical Diagnosis	- T.N. Patel
A Practical Guide to Operative Surgery	- S. Das
Drugs and Equipment for Anaesthesia	- Arun kumar
Manual of Surgical Instruments	- M.M. Kapur
Ward Procedures	- Patel Mansukh. B
Recent trends in the management of Arshas / Haemorrhoids	- Dr. P. Hemantha Kumar
Primary Anaesthesia	- Maurice King
Synopsis of Anaesthesia	- Lee
Clinical Anatomy/ Surgical Anatomy	- John E.Skandalakis
Surgical Instruments of the Hindus	- Girindharnath Mukopadyay
Outline of Orthopedics Hamblen. L	- John Crawford Adams and David
Outline of Fracture	- John Crawford Adams
Recent trends in the management of Bhagandara / Fistula-in-ano	- Dr. P. Hemantha Kumar
Principles and Practice of Agnikarma	- Dr. Anand Kumar and



Dr. Kanchan Shekokar.

Manipal Manual of Surgery

- Dr. Rajgopal Shenoy

## **PG 1st Year Syallabus-54**

### **M.S.-AYURVEDA PRELIMINARY**

#### **18.ASTHI SANDHI AND MARMAGAT ROGA**

**(Orthopedics and management of vital points)**

**PAPER II Theory- 100 marks**

**PART A 50 marks**

Etymology and definition of Shalya and Shalya Tantra. Scope and importance of Shalya Tantra.

Dosha, Dhatu, Mala and Sarotas vigyan.

Knowledge of ancient and recent Yantra and Shastra – Surgical instruments. Ashtavidha Shastra Karma and their application in surgical practice.

Trividha Karma – Purva, Pradhan and Pashchat Karma. Modern principles of pre-operative and post-operative care. Clinical application of Purva and Pashchat Karma in modern surgery.

Asepsis and Antisepsis. Sterilisation (Nirjantukikarana)-methods and types. O.T. Fumigation.

Surgical infections – Sepsis, Cellulitis, Erysepelas, Tetanus, Gas gangrene, Hepatitis, HIV- AIDS etc.

Handling and care of HIV and Hepatitis positive patients. Knowledge of conditions like Bacteraemia, Septicaemia, Toxaemia and Pyaemia

Concept of Shock - Its varieties etiopathogenesis and management – Cardio-pulmonary resuscitation (CPR), Endo-tracheal intubation and Tracheostomy.

Drug reactions and Anaphylaxis – Management.

Sushruta's concept of Rakta and Raktasrava – Haemorrhage – Types, Patho-physiology, clinical features and management. Concept of Raktastambhana – Haemostasis. Blood transfusion – Indications, blood groups, components, compatibility and complications with management.

Shatkriyakaala and its applicability in the pathogenesis of surgical diseases.

Knowledge of Prakriti and its impact on pathogenesis, clinical features and treatment of orthopedic diseases.

Rogi and Rog Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and its application in the diagnosis of diseases.

Vranashopha and Inflammation, Nadivrana and Sinuses / Fistulae, Vidradhi and abscesses.

Swellings – Arbuda and Tumours, Granthi and Cysts.

Anu Shastra Karma like Ksharakarma, Agnikarma, Raktavasechana etc. and their application in orthopedic practice.

Pranashta Shalya Vigyan.

Fluid, Electrolyte, Acid Base Balance and Nutrition

Introduction to physiology of fluids and electrolytes.

Dehydration and over hydration.

Specific electrolyte losses, symptomatology and management of Acidosis, Alkalosis and Acid-Base balance.

Various replacement fluids in surgery, mode of administration and complications.

Nutrition – pre-operative, peri-operative and post-operative.

Intravenous fluid therapy.

Knowledge of imaging and diagnostic techniques – X-ray, Ultra Sonography, CT scan, MRI and recent advances.

## **PG 1st Year Syallabus-55**

### **PART B 50 marks**

Scope of Asthi Sandhi evam Marmaghata Roga specialty and its importance. Historical aspect of Ayurvedic and modern orthopedics and Marma.

Marma Sharira – Etymological derivation, definition, basic concept of Marma, origin, classification, Pramana. Consequences of Marmaghata and their management.

Vrana Vigyan – Etiology, classification, symptomatology, prognosis and management principles of Nija and Sadyo Vrana. Concept of Shashti Upakrama. Seevana and Suturing, Vrana Bandhana and Bandaging. Modern concept of Wounds and Ulcers, their classification and management principles. Recent wound closure techniques, suture materials, dressing, bandaging materials and techniques. Mechanism of wound healing.

Bhagna - Etiology, classification, general management principles, complications and prognosis of the skeletal injuries according to Ayurved and Modern aspect. Mechanism of bone healing.

Itrathadagdha and Burns - Etiology, classification, symptomatology, prognosis and management principles. Knowledge of Burns Shock, its prevention and management principles.

Principles of initial care of injured person. Handling of poly trauma patient. ARDS (Acute Respiratory

Distress Syndrome), Crush Syndrome, Thromboembolism, Fat Embolism syndrome and their management.

Systemic response to injury.

Pharmacology of emergency drugs, antibiotics, NSAIDs, Opiates, central muscle relaxants.

Anesthesiology related to Orthopedics. Pharmacology of local anesthetics and vasoconstrictors. Knowledge of local anesthesia techniques like local anesthetic infiltration, various blocks (e.g. ring block, nerve block, plexus block, field block, hematoma block, costal block etc.) Spinal and epidural blocks.

Medico-legal aspects in orthopedics. Knowledge of documentation and record keeping.

### **PRACTICAL 100 marks**

#### **Contents:**

Clinical history taking and examination of orthopedic patient.

Knowledge of diagnostic and therapeutic principles of Shalya Tantra.

Identification and functioning of surgical and orthopedic instruments.

Practical knowledge of documentation and record keeping.

Practical knowledge of Anu-Shastra Karma.

Practical Knowledge of Seevan Karma and suturing and Vrana Bandhana and bandaging.

Knowledge about the management of orthopedic emergencies.

Knowledge of Purva Karma and Pashchat Karma.

Practical knowledge of sterilization and OT fumigation.

Knowledge of handling of medico legal cases and issuing MLCs and other certificates.

### **PG 1st Year Syllabus-56**

#### **Distribution of Marks (practical):**

Case Records (25 cases)	20marks
Bed Side examination-	
Patient History (Long case)	20 marks
Patient History (Short case)	10 marks
Instruments / equipments / models identification	15 marks
Medical procedures	15 marks
Viva Voce	20 marks

## **REFERENCE BOOKS-:**

- 1 Sushruta Samhita-Relevant parts**
- 2 Sushruta Samhita (Dalhana commentary) Relevant parts**
- 3 Charak samhita Relevant parts**
- 4 Ashtang Hridaya Relevant parts**
- 5 Ashtang Sangraha Relevant parts**
- 6 Saushruti Ramanath Dwivedi**
- 7 Watson and Jones – Fracture and Joint Injuries J.N. Wilson**
- 8 Practical Fracture Treatment R. McRae**
- 9 Clinical Orthopedic Examination R. McRae**
- 10 Apley’s System of Orthopedics Apley Louis Solomon**
- 11 A Concise Text Book of Surgery S. Das**
- 12 Pye’s Surgical Handicraft**
- 13 Clinical Methods in Surgery Sriram Bhatt**
- 14 Clinical Methods in Surgery S. Das**
- 15 Operative Surgery S. Das**
- 16 Schwartz Principles of Surgery**
- 17 Bailey and Love’s short practice of Surgery**

## **PG 1st Year Syallabus-57**

### **M.D.-AYURVEDA PRELIMINARY**

#### **19. SANGYAHARAN**

**(Anesthesiology)**

**PAPER-II Theory 100 marks**

**PART-A 50 marks**

Shisyopanayana, Vishikhanupravesha, Agropaharaniay and Shatkriyakala.

Etymology and definition of Sangyaharan and its scope, application and importance in surgical practice.

Fundamentals of Ayurveda in relation to Sangyaharan- Panchmahabhuta, Prakriti, Dosha, Dhatu and Mala.

Concept of Vedana (pain), pathophysiology and modalities of pain management in Ayurveda.

Agni Karma in pain management.

Introduction, fundamentals, importance, types, methods of application, duration, instruments, equipments and various materials used for Agni Karma. The indications, contraindications, complications of Agni karma and their management.

Raktamokshana (blood letting) in pain management.

Introduction, fundamentals, importance, types, methods of application, duration, instruments, equipments and various materials used for Raktamokshana. Indications, contraindications, complications of Raktamokshana and their management.

Causes of vitiation of Rakta Dosha and Rakta Dushtijanya Vikaras.

Types of Raktamokshana and determination of appropriate amount of blood loss during Raktamokhana according to diseases and patients.

Methods of Raktastambhana.

Leech Therapy in pain management. Varieties, importance, methods of applications, indications, contraindications, complications and their management and method of maintenance of leeches.

Trividha Karma – Purva karma (preanaesthetic management), Pradhana karma(induction and maintenance) and Pashchat Karma (post anesthetic care ).

Concept of Marma, their importance and application in Sangyaharan.

Concept of palliative care and its role in terminally ill patient care in Ayurveda.

**PART-B 50 marks**

**History of anesthesia.**

Molecular basis of anesthesia, cell physiology and body fluids.

Respiratory system: Anatomy of the upper airway – nose, pharynx, larynx, tracheobronchial segment, mechanics of respiration, physiology of respiration, ventilation, perfusion matching, lung volumes and capacities, pulmonary gas exchange and transport of gases, lung function tests – including laboratory tests for obstructive and restrictive lung diseases.

Cardiovascular system: Anatomy and physiology of heart and autonomic nervous system, maintenance of blood pressure, systemic circulation, pulmonary circulation, microcirculation and lymphatics.

Nervous system: Anatomy and physiology of central nervous system, cranial nerves, nerve plexuses, spinal column. Physiology of sleep, sleep disorders, physiology of pain, physiology of neuromuscular junction, autonomic nervous system – sympathetic and parasympathetic.

Endocrinology as related to anesthesia: Function of anterior and posterior pituitary and their dysfunction, hyper and hypothyroidism, hyper and hypoparathyroidism, diabetes mellitus – hypo and hyperglycemia, ketoacidosis. Adrenal cortex and medulla functions and disorders.

Pathophysiology of renal failure, renal function tests.

**PG 1st Year Syllabus-58**

Pathophysiology of hepatic failure, liver function tests.

Shock and its management.

Fluid and electrolyte, acid base balance, ABG interpretation and water intoxication

Thermoregulation.

Pre anesthetic assessment and premedication.

Physics applied to anesthesia: Gas laws, ventilators & monitors, flow meters, vaporizers, breathing systems, carbon-dioxide absorbers, medical gas supply, suction machines, electrical fire & explosion hazards, pollution in O.T.

Sepsis, asepsis and sterilization- methods, types of sterilization of machine and equipments with special reference to tetanus, hepatitis, HIV-AIDS etc. O.T. fumigation.

Intravenous fluids, crystalloid & colloids, their indications, contra indications, complications and their management.

Blood transfusion-indication, contra indications, complications and their management, component therapy.

Medicolegal and ethical aspects in research and patient care. Medico legal issues, understanding the implications of acts of omission and profession, National Health policy - implications in a medico legal case like accidents, negligence, assaults etc.

Anaesthesia documentation and record keeping.

## **PRACTICAL 100 marks**

### **Contents:**

Anesthetic Drugs.

Demonstration of induction of Anesthesia.

Preanaesthetic assessment of patients.

Post anesthesia management.

Complications of anesthesia and their management.

Identification of instruments and knowledge of their use.

Distribution of marks (Practical)

Anesthesia documentation & record keeping - 20 Marks

Bedside clinical case taking

Long Case - 20 Marks

Short Case - 10 Marks

Procedure - 15 Marks

Identification of instruments & Spotting - 15 Marks

Viva-voce - 20 Marks

## **REFERENCE BOOKS**

Sushruta Samhita

Charaka samhita

Ashtang Hridaya

Practice of Anesthesia - Churchill Davidson

Miller's Anesthesia - Ronald D Miller

Synopsis of Anesthesia - Alfred Lee

Sangyahan Prakash - Dr. D. N. Pande

Agni karma-Technological Innovation	- Dr. P.D. Gupta
Practice of Anesthesia and Resuscitation	- Dr. P.K. Gupta et al
Essentials of Anesthesiology	- Prof. A.K. Paul
Clinical Anesthesia	- Prof. A.K. Paul
Anu Shastra karma	- Dr. D.N. Pande
Textbook of Anesthesia	- Aitkenhead
Anesthesia and co-existing disease	- Stoelting's

## **PG 1st Year Syallabus-59**

### **M.S.-AYURVEDA PRELIMINARY**

#### **20. SHALAKYA - NETRA ROGA**

**(Ophthalmology)**

#### **PAPER-II Theory- 100 marks**

#### **PART-A 50 marks**

Shalaky Tantra Parichaya, Itihas and Pradhanyam.

Netra Sharir and related Marmas

Study of Dosha, Dhatu, Mala and Srotas in context to Netra chikitsa.

Updated knowledge of Agropaharaniya in Netra chikitsa- incorporating sterilization, Sangyahaarana (Anaesthesia).

Basic pharmacology of common drugs required in ocular diagnostic and therapeutic procedures.

Vrana Siddhanta-Trividha Shopha, Shuddha-Ashuddha Vrana, Vrana Srava, Vrana Bandha, Vranitopasana in context to Netra chikitsa.

Swasthavritta related to Netra.

Chaturvidha Chikitsa Siddhanta and Raktamokshana in Netra chikitsa.

Applied knowledge of various Kriyakalpas and other therapeutic procedures related to Netra chikitsa.

Role of Panchkarma in Netra chikitsa.

Netra Chikitsa Upayogi Vishishta Yoganam, Guna, Karma prayog gyanam of most common classical Yogas.



**PART-B****50 marks**

Applied anatomy and physiology of eye, its adnexa and visual pathway.

Clinical methods of eye examination.

Application of various aids and techniques in the examination of eye viz Tonometry, direct Ophthalmoscopy, Perimetry, Refraction and Slit Lamp examination with their interpretation.

Fundamentals of optics and refraction.

Applied aspects of Aetio-Pathogenesis, clinical features, prognostic and therapeutic principles in Netra Roga Chikitsa along with Pathya-Apathya and their contemporary knowledge.

Common ocular emergencies and their management.

Applied aspects of Yantra and Shastra in Netra Chikitsa along with modern ophthalmic surgical instruments and equipments.

Knowledge of rules, regulations and medico legal aspects of ophthalmic practice including eye donation, eye banking and corneal grafting.

Knowledge of handling of biomedical waste.

**PG 1st Year Syallabus-60****PRACTICAL****100 marks****Contents:**

Clinical posting in OPD/IPD/Kriyakalpa Kaksha & OT

Clinical case presentation (10 cases)

Case record (20 cases)

Hands on training in Kriyakalpa

Distribution of marks (practical):

Case Record - 20 Marks

Bed side examination

Long case - 20 Marks

Short case - 10 Marks

Kriyakalpa procedure - 15 Marks

Identification of specimens and Instruments - 15 Marks

Viva-voce - 20 Marks

**REFERENCE BOOKS:-**

1 Charka Samhita with commentaries

2 Sushrut Samhita and vaghbhata with commentaries

3 Astanga hridaya and Astanga sangraha with commentaries

4 Madhava nidan with commentaries

5 Bhavaprakasha with commentaries

6 Sarangadhara Samhita with commentaries

7 Sahstrayoga Sangraha

8 Relevent part of Chakradhatta, Bhel Samhita, Harita Samhita

9 Shalaky Tantra - Ramanath Dwivedi

10 Shalaky Tantra - R.C. Chaudhary

11 The Actions and uses of Indigenous Ophthalmic Drugs - N.Srikanth

12 Clinical Examination of Ophthalmic Cases - Agarwal and Gupta

13 Alder's Physiology of the Eye and Clinical Applications - Cotlier, St. Louis

14 Disease of the Lens and Vitrous, Glaucoma and Hypotony  
Louis - Duke Elder, St.

15 A Text Book of Ophthalmology - Ahmed E.

- 16 A Text book of clinical ophthalmology - Dhanda
- 17 Modern Ophthalmology - Dutta, L.C. Jaypee  
Brothers
- 18 Manual of the Diseases of the Eye - May,C.and Worth,C.  
Bailliere Tindal and Castell
- 19 Ophthalmology – Principles and Concepts - Newell, F.W., C.V.  
Mosby Co., St. Louis.
- 20 Ocular Differential Diagnosis - Roy Fedrick Hamptn  
Lea and Febiger
- 21 Clinical Ophthalmology - Smith, R.Vergheese  
Company
- 22 Abrahm Manual of Refraction - Duke and Elder
- 23 Hand Book of ophthalmology - B.M. Chaterjee
- 24 Hand Book of ophthalmology - Khurana
- 25 Clinical ophthalmology - Kanski
- 26 Parsons Diseases of Eye
- 27 Stallard’s Eye Surgery

## **PG 1st Year Syallabus-61**

### **M.S.-AYURVEDA PRELIMINARY**

#### **21. SHALAKYA- DANTA AVUM MUKHA ROGA**

**(Dentistry and Oral Disease)**

**PAPER-II Theory- 100 marks**

**PART-A marks 50**

Shalaky Tantra Parichaya, Itihas avum Pradhanyam.

Mukhasharir.

Study of Dosha, Dhatu, Mala and Srotas in context to Danta and Mukha Roga.

Agropaharaniya in Danta and Mukha Roga incorporating sterilization, Sangyahaarana and diagnostic and therapeutic pharmacological agents.

Vrana Siddhanta-Trividha Shophya, Shuddha-Dushta Vrana, Vrana Bandha and Vranitopasana in relation to Danta and Mukha Roga.

Swasthavritta related to Danta and Mukha Roga.

Chaturvidha Chikitsopaya (Bheshaja-Shastra-Kshara-Agni) Siddhanta and Raktamokshana related to Danta and Mukha Roga.

Applied knowledge of various Kriyakalpa and other therapeutic procedures related to Danta and Mukha Roga.

Role of Panchkarma in Danta and Mukha Roga.

Mukha and Danta Chikitsopayogi Aushadha Kalpana Parijnanam e.g. Dashana Samskara Manjana, Shwetamanjana, Vajradanta Manjana, Khadiradi Vati, Irimedadi Taila, Peetaka Churna, Kalaka Churna, Nimbadi Churna and Bhadramustadi Vati.

**PART-B 50 marks**

Applied orodental anatomy and physiology.

Clinical methods adopted in orodental practices.

Knowledge of advanced diagnostic techniques, equipments and tests of importance in orodental practices with their interpretations.

Classification, aetiopathogenesis, clinical features and therapeutics of Oshtha, Danta, Dantamula, Jihva, Talu and Sarvasar Mukharogas in the light of modern knowledge.

Basics of Sandhana Vidhi in Mukha and Danta Roga.

Applied aspect of Dysphagia, Manyastambha, Hanumoksha, Apachi (Cervical Lymphadenopathy) and Herpes.

Handling of biomedical waste.

## **PG 1st Year Syallabus-62**

### **PRACTICAL 100 marks**

#### **Contents:**

Clinical posting in OPD, IPD, Kriyakalpa Kaksha and OT.

Clinical case presentation (10 cases).

Case record (20 cases).

Hands on training in Kriyakalpa.

Distribution of marks (practical):

Case Record - 20 Marks

Bed side examination

Long case - 20 Marks

Short case - 10 Marks

Kriyakalpa procedure - 15 Marks

Identification of specimens, radiograph and instruments - 15 Marks

Viva-voce - 20 Marks

#### Reference Books

1. Sushrut Samhita - -Dalhana
2. Useful Portion of Charak Samhita-Ashtang Samgraha -Ashtang Hridaya
3. Useful portion of Laghutrayi related to Danta and Mukha Roga
4. Shalaky Vijnanam - Ravindra Chandra Chaudhary
5. Nimi Tantra - Ramanath Dwivedi
4. Dental Anatomy Histology - Dr. S.I. Bhalajhi
5. Essentials of Preventive and Community Dentistry -Dr. Soben Peter
6. Complete Denture Prosthodontics - Dr. J.J. Manappallil
7. Orthodontics the Art and Science - Dr. S.I. Bhalajhi
8. Text book of Pediatric Dentistry - Dr. S.G. Damle
9. Text book of Oral and Maxillofacial surgery -Dr. Vinod Kapoor

10. Clinical Periodontology	- Dr. B.R.R. Varma
11. Anatomy for Dental Students	- Inderveer Singh
12. Clinical Periodontology	- Carranza , Newman
13. Operative Dentistry	- M A Marzouk
14. Oral and maxillofacial surgery secrets	- A.Omar Abubaker
15. Killey and Kay's Outline of Oral Surgery	- Girdon R Seward
16. Clinical Dentistry	- Ivor G. Chestnut , John Gibson
17. Synopsis of Oral Pathology	- S N Bhaskar
18. Oral Pathology	- Stone

### **PG 1st Year Syallabus-63**

#### **M.S.-AYURVEDA PRELIMINARY**

#### **22. SHALAKYA- SHIRO-NASA- KARNA- AVUM KANTHA ROGA**

**(ENT & HEAD & Neck Disease)**

**PRACTICAL Theory- 100 marks**

**PART A 50 marks**

Shalaky Tantra Parichaya, Itihas and 'Pradhanya'. Establishment of 'superiority of Shiras' among all the organs. Determination and importance of the verse 'Nasa hi Shirso Dvaram'.

Shiro-Nasa- Karna- Avum Kantha Shariram and knowledge of related Marmas.

Study of Dosha- Dhatu-Mala and Srotas in context of Shiro-Nasa- Karna- Avum Kantha Chikitsa.

Agropaharaniya in Shiro-Nasa- Karna- Avum Kantha Chikitsa including sterilization and anesthesia.

Basic pharmacology of common modern drugs used in diagnostic and therapeutic procedures related to Shiro-Nasa- Karna- Evum Kantha Chikitsa.

Vrana Siddhanta- Trividha Shopha, Shuddha- Dushta Vrana, Vrana Bandha and Vranitopasan in context of Shiro-Nasa- Karna- Avum Kantha Chikitsa.

Swasthavritta related to Shiro-Nasa- Karna- Avum Kantha.

Chaturvidha Chikitsopaya ( Bhesaja- Shastra-Kshar -Agni ) and Raktamokshan related to Shiro-Nasa- Karna- Evum Kantha Chikitsa.

Applied knowledge of various therapeutic modalities like Shirobasti, Shirodhara, Shirovirechana, Nasya, Karna Pooran, Karna Dhoopan, Kaval, Gandusha etc.

Role of Panchkarma in Shiro-Nasa- Karna- Avum Kantha Chikitsa.



## **REFERENCE BOOKS:-**

Sushrut Samhita

Charak Samhita

Ashtang Hridaya

Ashtang Samgraha

Laghutrayi

Modern books related to ENT disorder

Diseases of Nose Throat and Ear - Bhargav Shah

Diseases of Nose Throat and Ear, Head and Neck EB Edr.

A Textbook of otorhinolaryngology - Scott Browns editions.

Text book of Ear Nose Throat diseases – Dhingra

Textbook on ENT – Mohd. Maqbool

Logan Turner's book on ENT

Ballengers text book of ENT

Kumin's text book of ENT

Rob Smith's book of ENT surgery

Paprella's book of ENT

Hazarika's text book on ENT

Books on examination of ENT

Audiology Anirwan Biswas

Kurt's Audiology

Books on Speech therapy



## **SYLLABUS FOR II & III YEAR PG COURSE**

### **SYLLABUS FOR FINAL YEAR**

#### **Subject 1. AYURVEDA SAMHITA & SIDDHANT**

**Theory- 400 marks(4 Papers of 100 marks each)**

**Practical and Viva-Voce - 100 marks**

#### **PAPER –I Charak Samhita**

1. Charak Samhita complete with Ayurved Dipika commentary by Chakrapani.
2. Introductory information regarding all available commentaries on Charak Samhita

#### **PAPER –II Sushrut Samhita & Ashtang-Hridayam**

1. Sushrut Samhita Sutra sthana and Sharir- sthana. with Nibandha Samgraha commentary by Acharya Dalhana.
2. Ashtang-Hridayam Sutra Sthanamatram with Sarvanga Sundara commentary by Arun Dutt.
3. Introductory information regarding all available commentaries on Sushrut Samhita and Ashtang Hridaya.

#### **PAPER – III Ayurvediya and Darshanika Siddhanta**

Introduction and description of philosophical principles incorporated in Charak Samhita, Sushrut Samhita, Ashtanga Hridya, shtang Samgraha.

1. Analysis of principles specially loka-purusha samya, Shadpadartha, Praman, Srishti Utpatti, Panchmahabhuta, Pilupaka, Pitharpaka Karana- Karyavada, Tantrayukti, Nyayas (Maxims), Atmatatva siddhant.
2. Importance of Satkaryavad, Arambhavada, Parmanuvada Swabhavoparamvada, Swabhava Vada, Yadricha Vada, Karmvada.
3. Practical applicability principles of Samkhya- Yoga, Nyaya-Vaisheshika, Vedanta and Mimansa.

#### **PAPER – IV Ayurved Itihas and Prayogika Siddhant.**

1. Post independent Development of Ayurveda: Education, Research.
2. Globalisation of Ayurved.
3. Introduction of department of AYUSH, CCIM, CCRAS, RAV.

4. Tridosh Siddhant.
5. Panchabhautik Siddhant
6. Manastatva and its Chikitsa Siddhant.
7. Naishtiki Chikitsa.
8. Practical applicability principles of Charvak, Jain & Bauddha Darshana.
9. Journals, types of Journals review of Articles.

**Practical- Viva-voce - 100 Marks** (50 case sheets are to be filled from samhita siddhant IPD / OPD)

### Reference Books

1. Charak Samhita with Chakrapani commentary.
2. Sushruta Samhita with Dalhana Commentary.
3. Ashtanga Samgraha with Sarvangsundara.
4. Ashtanga Hridaya with Sarvangasundara.
5. Vaisheshika Darshan – Prashastapada Bhasya
6. Nyaya Darshan - Vatsyayan Bhasya Patanjala
7. Yoga Darshan- Vyas Bhasya
8. Vedantsara
9. Sarvadarshan Samgraha
10. Bhartiya Darshan - Baldev Upadhyaya.
11. Ayurved Darshanam - Acharya Rajkumar Jain.
12. Ayurved Darshan Vimarsha- Dr O.P. Upadhyay. PG Final Year Syllabus-2
13. Ayurvediy Jeevak Su -Dr O.P. Upadhyay.
14. Padartha Vidnyan - Dr O.P. Upadhyay.
15. Scientific Exploration of Ayurved – Dr. Sudhir Kumar.
2. **AYURVEDA SAMHITA & SIDHANTA** (Basic Principles) Astanga Hridaya, Charaka (P,U), Padartha Vignana & Ayurveda Ithihasa, Sanskrit
  - 1 Dr. B. P. Pandey Group leader
  - 2 Dr. Mahesh Vyas Coordinator - Coordinator –
  - 3 Dr. B. L. Gaur Samhitha & Siddantha U.G. & P.G.
  - 4 Dr. O. P. Upadhyaya Samhitha & Siddantha U.G. & P.G.
  - 5 Dr. H. P. Sharma Samhitha & Siddantha U.G. & P.G.
  - 6 Dr. S. L. Sharma Samhitha & Siddantha U.G. & P.G.
  - 7 Dr. R. D. Thakur Samhitha & Siddantha U.G. & P.G.
  - 8 Dr. Naresh Sharma Samhitha & Siddantha U.G. & P.G.

- 9 Dr. Yogita Jamadade Samhitha & Siddantha U.G. & P.G.
- 10 Dr. Abichal C. Samhitha & Siddantha U.G. & P.G.
- 11 Dr. Mohan Joshi Samhitha & Siddantha U.G. & P.G.
- 12 Dr. G. P. Rama Reddy Padartha Vigyana & Ayurveda Ithihasa Coordinator –
- 13 Dr. Brij Kumar Dwivedi Padartha Vigyana & Ayurveda Ithihasa
- 14 Dr. Milind Mokashi Padartha Vigyana & Ayurveda Ithihasa
- 15 Dr. Santhosh Nair Padartha Vigyana & Ayurveda Ithihasa
- 16 Dr. Ahalya Sharma Padartha Vigyana & Ayurveda Ithihasa
- 17 Dr. Suhag Rawal Padartha Vigyana & Ayurveda Ithihasa
- 18 Dr. G.R.R Chakravarthy Padartha Vigyana & Ayurveda Ithihasa
- 19 Dr. Nandani Padartha Vigyana & Ayurveda Ithihasa
- 20 Dr. Manoj Sharma Padartha Vigyana & Ayurveda Ithihasa
- 21 Dr. Mallika K. J. Padartha Vigyana & Ayurveda Ithihasa
- 22 Dr. Shubhangi K Padartha Vigyana & Ayurveda Ithihasa
- 23 Dr. Premchand Shastri Sanskrit Coordinator
- 24 Dr. Mohan Chand Bhat Sanskrit
- 25 P. V. Thothadrinathan Sanskrit
- 26 Dr. Nigam Sharma Sanskrit
- 27 Dr. Savitri G.S Sanskrit
- 28 Dr. B.K. Shyam Raw Sanskrit

**RACHANA SHAARIRA Total Marks – 400**

**PAPER-I (GARBHA SHAARIRA) 100 Marks**

1. Etymology of Garbhavakranti Shaarira, features of Shukra and Shonita, description of Beeja, Beejbhaga, Beejbhagavyava and Garbhotpadakabhava, Garbha Poshana Krama, Garbhavridhikar Bhav, Masanumashiki Garbhavridhhi, Foetal circulation. Explanation of lakshana occurring in Ritumati, Sadhyah Grihita Garbha. Yamal garbha, Anasthi garbha.
2. Explanation of Basic Embryology, and Systemic embryology. 3. Knowledge of basic facts in advancement in Anuvanshiki (Genetics) and Garbhajavikara (Teratology).

**PAPER –II (KOSHTHANGA SIRA DHAMANI SROTAS SHAARIR) 100 Marks**

- 1) Koshthanga Shaarira: - Detail etymological derivation of 'Koshtha' and Koshthanga, including detail study of structure of each Koshthanga. Male and Female genital organs.
- 2) Ashaya: - Definition, detail description.

- 3) Kala Shaarira:-Etymology, Definition, description of Seven Kala with their Modern component and applied aspects.
- 4) Paribhashika Shaarira: - Snayu, Kandara, Rajju, Sanghata, Jalaetc. and their general description.
- 5) Sira, Dhamani and Srotas Shaarira: - Etymological derivation, definitions, synonyms, number and types of Sira, Dhamani and Srotas, anatomical differences among Sira, Dhamani and Srotas, description of Vedhya and AvedhyaSira (Puncturable and Non puncturable Veins) and clinical importance of Sira, Dhamani and Srotas including Modern Anatomical counterparts.

**PAPER –III (Marma Shaarira Evum Asthi Sandhi Peshee Shaarira) 100 Marks**

- 1) Marma Shaarira:- Derivation and definitions of the term Marma and their features, characteristics and number of Marma according to Sushruta Divisions of Marma on morphological basis (Rachana Bheda), Shadangatvam (Regional), Abhighataja (Prognostic) classification, Trimarma according to Charaka. Knowledge of 'Marmaabhighata', MarmaViddha, Detailed study of individual marma with their clinical and Surgical importance. Importance of Marma in Shalyatantra.
- 2) Asthi Shaarira :- General introduction and description of Asthi, differences among number of Asthi.Types of Asthi. Detail study of each bone with its ossification &Applied anatomy.
- 3) Sandhi Shaarira :- Etymological derivation,description, features, number, types and Applied anatomy of all Sandhi (joints).
- 4) Peshee Shaarira :- Etymological derivation,description, features, number, types and Applied anatomy of all Peshee (Muscles).

**PAPER – IV (Tantra Shaarira Evum Antah and BahihGranthi Vigyaniya) 100 Marks**

1. Description of Panchgyanendriya – Ayurved and Modern aspects. (Sensory organs (Eye, Ear, Nose, Tongue and Skin with their Applied anatomy). PG Final Year Syllabus-4
2. Shat Chakra - Location and significance in Yoga. Description of Ida, Pingala, Sushumnanadi.
3. Anatomy of brain and spinal cord, Peripheral nervous system (explanation of Nerve Plexuses and peripheral nerves, Cranial nerves and Autonomic nervous system, Cerebro-spinal fluid, Venous sinuses of Brain, Ventricular system of Brain, Blood supply of Brain, Meninges with Applied Anatomy.
4. AntahSraviGranthi and BahihSraviGranthi:-Detail study of Exocrine &Endocrine glands.

**PRACTICAL:-**

- 1) Dissection of atleast one cadaver during the Final part of the course.
- 2) Training of preservation techniques in the Embalming room.
- 3) Preparation of Soft tissue specimen and Models using current technology like Plastination, Lumen

casting etc. under the guidance of Teaching staff and Experts of the relevant fields.

- 4) Preparation of Charts and Models of Rachana Shaarira subject to the individual capacity.
- 5) Observation of MRI, CT Scan, USG procedures, Colour Doppler etc.
- 6) Visits to various Museums of other colleges in the Medical field.
- 7) Observation of Ward procedures like Lumbar puncture, Tracheostomy, Abdominal parentesis, Liver biopsy, Venesection, etc. (subject to the availability and opportunities)

### **Pattern of Practical Examination**

1. Practical record book& log book - 20 Marks
2. Spotting (Dissected organs and Bones-Joints-Muscles) - 20 Marks
3. Dissection - 40 Marks
4. Surface & Radiological Anatomy - 40 Marks
5. Dissertation Presentation - 10 Marks
6. Teaching Skills - 20 Marks

### **Viva-voce - 50 Marks**

### **Reference Books**

1. Relevant matters of Brihatrayee and Laghutrayee
2. PratyakshaShariram - GananathSen
3. AbhinavaShariram - Damodar Sharma Gaur
4. Parishadyam Sabdartha Shariram - Damodara Sharma Gaur
5. BrihatShariram - P S Varier
6. Shiva Samhita
7. Gray's Anatomy - Latest Edition
8. Human Anatomy - B D Chaurasia
9. Cunnigham's Companion to Manual of Practical Anatomy. Vol I, II & III
10. Developing Human - Keith L Moore & Persaud
11. Clinically oriented Anatomy - Keith L Moore
12. Clinically oriented Neuro Anatomy - Richard Snell
13. Surface and Radiological Anatomy – Halim
14. Grant's Methods of Anatomy -Grant
15. Grant's dissector -Grant
16. Human Embryology -I. B. Singh

### **KRIYA SHARIR Paper- I (Dosa-Dhātu-Mala Vijñāna)**

Contribution of different Ayurveda Samhita in Kriya Sharir

- Theory of Pancamahābhūta • Principle of Loka-Purusa Sāmya
- Importance of Sāmānya - Viśesa principle.
- Different views on the composition of Purusa and the importance of Cikitsya Purusa.
- Importance of Gurvādi Guna in Ayurveda.
- General description of Tridosa theory
- Mutual relationship between Triguna-Tridosa-Pancamahābhūta-Indriya.
- Mutual relationship between Rtu-Dosa-Rasa-Guna.
- Biological rhythms of Tridosa on the basis of Day-Night-Age-Season and Food intake.
- Role of Dosa in the formation of Prakrti of an individual.
- Role of Dosa in maintaining health.
- Vāta Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Sāmānya Karma). Five subdivisions of Vāta with their specific locations, specific properties, and specific functions (Prāna, Udāna, Samāna, Vyāna, Apāna)
  - Pitta Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Sāmānya Karma). Five subdivisions of Pitta with their specific locations, specific properties, and specific functions (Pācaka, Ranjaka, Ālocaka, Bhrājaka, Sādhaka). Similarities and differences between Agni and Pitta.
  - Kapha Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Karma) of Kapha. Five subdivisions of Kapha with their specific locations, specific properties, and specific functions (Bodhaka, Avalambaka, Kledaka, Tarpaka, Ślesaka).
    - Applied physiology of Tridosa principle: Kriyākāla, Dosa Vrddhi-Dosa Ksaya.
    - Dhātu Posana: Process of nourishment of Dhātu. Description of various theories of Dhātu Posana (Ksīra-Dadhi, Kedārī-Kulya, Khale Kapota etc).
    - Dhātu: General introduction and definition of Dhātu. Formation, Definition (Nirukti), Distribution, Attributes, quantity, classification, Pāñcabhautika composition and Functions of all seven Dhātus in detail: Rasa, Rakta, Māmsa, Meda, Asthi, Majjā, Śukra.
    - Applied physiology of Dhātu: Manifestations of Ksaya and Vriddhi of each Dhātu. Description of Dhātu Pradosaja Vikāra.
    - Description of Āśraya and Āśrayī kind of relationship between Dosa and Dhātu.
      - Description of the characteristic features of Astavidha Sāra. Description of Rasavaha, Raktavaha, Māmsavaha, Medovaha, Asthivaha, Majjāvaha and Śukravaha Srotāmsi.
      - Ojas: Definition, locations, synonyms, Formation, Distribution, Properties, Quantity, Classification and Functions of Ojas. Description of Vyādhiksamitva. Bala Vrddhikara Bhāva. Classification of Bala. Relation between Ślesmā, Bala and Ojas.

- Applied physiology of Ojas: Etiological factors and manifestations of Ojaksaya, Visramsa and Vyāpat. Physiological and clinical significance of Ojas.
- Upadhātu: General introduction and Definition of the term ‘Upadhātu’. Formation, Nourishment, Quantity, Properties, Distribution and functions of each Upadhātu.
- Stanya: Characteristic features and methods of assessing Śuddha and Dūsita Stanya, Manifestations of Vrddhi and Ksaya of Stanya.

**PG Final Year Syllabus-6** • Ārtava: Characteristic features of Śuddha and Dūsita Ārtava. Differences between Raja and Ārtava, physiology of Ārtavavaha Srotāmsi. • Study of Tvak • Physiology of Mala - Definition of the term ‘Mala’. Definition, Formation, Properties, Quantity and Functions of Purīsa, Mutra. Manifestations of Vrddhi and Kshaya of Purīsa and Mūtra. • Sveda – Definition, Formation, Properties, Quantity and Functions of Svedavaha Srotāmsi. Formation of Sveda. Manifestations of Vrddhi and Ksaya of Sveda. • Dhātumala – Definition, Formation, properties, Quantity, Classification and Functions of each Dhātumala .

### **Paper-II - Prakrti- Sattva Vijñāna**

- Deha-Prakrti: Various definitions and synonyms for the term ‘Prakrti’. Factors influencing the Prakrti. Classification of Deha-Prakrti. Characteristic features of the individuals belonging to each kind of Deha-Prakrti. Recent advances in understanding the Prakrti.
- Pancajnandriya: Physiological description of Pancajnandriya and physiology of perception of Śabda, Sparśa, Rūpa, Rasa, Gandha. Indriya-panca-pancaka; Physiological description of Karmendriya.
- Manas – Definition, location (sthana), Properties, Functions and Objects of Manas.
- Ātmā – Definition, Properties of Ātmā. Difference between Paramātmā and Jīvātmā; Characteristic features of Ātmā.
- Buddhi – Location, Types, Functions of Buddhi; Physiology of Dhī, Dhrti and Smrti.
- Nidrā – Definition of Nidrā, Classification of Nidrā. Tandra, physiological and clinical significance of Nidra; Svapnotpatti and Svapnabheda.
- Physiology of special senses. Intelligence, Memory, Learning and Motivation.
- Physiology of sleep.
- Physiology of speech and articulation;
- Physiology of Pain and temperature.

### **Paper-III - Kosthanga Kriya Vijñāna**

- Āhāra: Definition and significance of Āhāra. Classification of Āhāra. Āhāra-vidhividhāna. Asta āhāra-vidhi viśeṣāyatana, Āhāraparināmakara bhāva.
- Āhārpāchana: Āhāra Pāka Prakriyā, Description of Annavaḥa Srotās. Description of Avasthāpāka and Nishthapāka. Role of doṣha in Āhārapāka. Sāra and Kitta Vibhajana. Absorption of Sāra. Utpatti and Udieeran of Vāta-Pitta-Kapha.
- Definition of the term Kostha. Physiological classification of Kostha and the characteristics of each kind of Kostha.
- Agni: Description of the importance of Agni. Classification of Agni. Locations, properties and functions of Jātharāgni, Bhūtāgni, and Dhātvaḥni.
- Applied physiology of Agni in Kriyā Śārīra and Cikitsā.
- Description of the aetiology and features of Annavaḥa Srotodusti. Applied physiology of Annavaḥa Srotās: Arocaka, Ajīrna, Atīsāra, Grahanī, Chardi, Parināma Śūla Agnimāndya.
- Description of the process of digestion of fats, carbohydrates and proteins in human gastrointestinal tract. Different digestive juices, their enzymes and their mechanisms of action. Functions of Salivary glands, Stomach, Pancreas, Small intestine, Liver and large intestine in the process of digestion and absorption.

### **PG Final Year Syllabus-7**

- Movements of the gut (deglutition, peristalsis, defecation etc.) and their control. Role of neuro-endocrine mechanisms in the process of digestion and absorption. Enteric nervous system.
- Applied physiology of gastrointestinal tract: Vomiting, Diarrhoea, Malabsorption etc.
- Recent understandings related to the gut microbiota and their role in health and disease.
- Introduction to biochemical structure, properties and classification of proteins, fats and carbohydrates.
- Description of the processes involved in the metabolism of proteins, fats and carbohydrates.
- Vitamins: sources, daily requirement and functions. Physiological basis of signs and symptoms of hypo and hyper-vitaminosis.

### **Paper-IV - Modern Physiology and its applied aspect Physiology of Neuro-Immune-Endocrine Mechanisms:**

- Physiology of Nervous System. General introduction to nervous system: neurons, mechanism of propagation of nerve impulse.
- Study of CNS, PNS and ANS. Sensory and motor functions of nervous system. Functions of different parts of brain and spinal cord, Hypothalamus and limbic system
- Physiology of Endocrine system. Classification and characteristics of different hormones.



Description of hormones secreted by Hypothalamus, Pituitary gland, Thyroid gland, Parathyroid glands, Pancreas, Adrenal glands and their physiological effects. Effects of hypo and hyper-secretion of various hormones.

- Male and female reproductive physiology. Spermatogenesis and oogenesis. Hormonal regulation of uterine and ovarian cycles. Physiology of pregnancy and lactation. Parturition
- Adipose tissue and its Function. Circulating lipids. Description of lipoproteins like VLDL, LDL and HDL and their composition.
- Physiology of immune system. Definition and classification of immunity: Innate, acquired and artificial. Mechanisms involved in humoral and cell mediated immunity. Cardiovascular physiology, Respiratory physiology and Blood:
- Physiology of Cardio-Vascular system: Functional anatomy of cardiovascular system. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control. Regional circulations. Physiology of lymphatic circulation.
- Physiology of Respiratory system: Functional anatomy of respiratory system. Ventilation. Mechanism of respiration. Exchange and transportation of gases. Neural and chemical control of respiration. Spirometry and lung function tests. Artificial respiration.
- Functions of Haemopoetic system: Composition and functions of blood and blood cells. Haemopoiesis- (stages and development of RBCs, WBCs and platelets); Introduction to bone marrow: composition and functions of bone marrow. Structure and functions of haemoglobin, mechanism of blood clotting, study of platelets. physiological basis of blood groups. Principles of blood transfusion, plasma protein synthesis and functions. Applied physiology: Anaemia, Jaundice.

### **PG Final Year Syllabus-8**

Musculoskeletal Physiology: • Physiology of muscles. Classification of muscles. Electrical and mechanical properties of Cardiac, skeletal and smooth muscles. Physiology of Excretion: • Physiology of excretion. Functional anatomy of urinary tract. Functions of kidneys. Mechanism of formation of urine. Control of micturition. Renal function tests. • Structure and functions of skin, sweat glands and sebaceous glands. Learners should be well versed with the following instruments- • Physiograph, Computerised spirometry, Biochemical Analyzer, Pulse oxymeter, Elisa Reader, Hematology Analyzer, Tread mill Bridge areas including recent advances: • Recent studies in biorhythms. • Recent advances in Neuro-Immune-Endocrine physiology. • Recent advances in stem cell research

## **PRACTICAL**

Ayurvedic practicals • Assessment of Prakrti • Assessment of Sāra • Assessment of Dosa Vrddhi Ksaya Laksana • Assessment of Dhātu Vrddhi – Ksaya Laksana • Assessment of Agni • Assessment of Kostha • Assessment of Śārīra Bala through Vyāyāma Śakti • Mūtra Parīksa • Nādī Parīksā • Anguli Pramāna • Assessment of Sātmya Hematology • Use and care of Compound microscope • Histological study of different organs • Hemoglobin estimation • Total RBC count • Total WBC count • Differential leukocyte count • Packed cell volume (PCV) • ESR • Bleeding time • Clotting time • Blood grouping and Rh typing Urine examination Physical examination • Specific gravity and reaction of urine • Detecting the presence of Albumin in urine .

## **PG Final Year Syllabus-9**

• Detecting the presence of Sugar in urine • Detecting the presence of Ketone bodies in urine • Detecting the presence of Bile salts and bile pigments in urine Cardio-Vascular system • Clinical methods of examining cardiovascular system • Examination of Arterial Pulse • Arterial blood pressure measurement: Effect of posture, exercise and cold pressor test on Blood Pressure • ECG recording and its interpretation • Heart Sounds Respiratory system • Clinical examination of Respiratory System • Lung Function Tests including Spirometry Nervous System • Clinical examination of nervous system • Examination of higher mental functions • Examination of cranial nerves • Examination of reflexes • Examination of sensory functions • Examination of motor functions • Examination of Autonomic Nervous System • EEG recording (Demonstration) Reference Books • Ayurvediya Kriyasharir - Ranjit rai Desai • Kayachikitsa Parichaya - C. Dwarikanath • Prakrit Agni Vigyan - C. Dwarikanath • Sharir Kriya Vigyan - Shiv Charan Dhyani • Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma • Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya • Prakrita Dosha Vigyana - Acharya Niranjana Dev • Tridosha Vigyana - Shri Upendranath Das • Sharira Tatva Darshana - Hirlekar Shastri • Prakrita Agni Vigyana - Niranjana Dev • Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri • Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain • Sharir Kriya Vigyana - Shri Moreshwar Dutt. Vd. • Sharira Kriya Vijnana (Part 1 and 2) – Nandini Dhargalkar • Dosha Dhatu Mala Vigyana - Basant Kumar Shrimal • Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur • Pragyogik Kriya Sharir - Acharya P.C. Jain • Kaya Chikitsa Parichaya - Dr. C. Dwarkanath • Concept of Agni - Vd. Bhagwan Das • Purush Vichaya - Acharya V.J. Thakar • Kriya Sharir - Prof. Yogesh Chandra Mishra PG Final Year Syllabus-10 • Sharir Kriya Vigyana - Prof. Jayaram Yadav &Dr. Sunil Verma. • Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) - Dr. Srikant Kumar Panda • Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe • Human Physiology in Ayurveda - Dr Kishor Patwardhan • Sharirkriya Vignyan Practical Hand Book – Dr.Ranade, Dr.Chobhe, Dr.

Deshpande • Sharir Kriya Part 1 – Dr.R.R.Deshapande, Dr.Wavhal • Sharir Kriya Part 2 – Dr.R.R.Deshapande, Dr.Wavhal • Textbook of Physiology - Gyton & Hall • Review of medical physiology – William Ganong • Essentials Of Medical Physiology - Sembulingam, K. • Concise Medical Physiology - Chaudhari, Sujit. K. • Fundamental of Anatomy & Physiology - Martini • Principals of Anatomy & Physiology - Tortora & Grabowski • Human Physiology - Richards, Pocock • Samson Wrights Applied Physiology, Keele, Neil, joels • Brainstem Control of Wakefulness And Sleep- Steriade, Mirce • An Introduction to Human Physiology - Green, J.h. • Ancient Indian Medicine - Kutumbiah P. • Biographical History of Indian Medicine - Srikanthamurthy KR • Ayurveda Kriya Sharira - Yogesh Chandra Mishra • Textbook of Medical Physiology - Indu Khurana • Tridosha Theory - Subrahmanya Shastri • Statistics in Medicine - K. Syamalan Important journals to refer: 1. Advances in Physiology Education 2. Academic Medicine 3. Indian journal of Physiology and Pharmacology 4. Journal of Ayurveda and Integrative Medicine 5. Evidence-based Complementary and Alternative Medicine 6. AYU 7. All journals of American Physiological Society 8. Journal of Physiology Important research papers to refer: 1. Hong KW, Oh B. Overview of personalized medicine in the disease genomic era. *BMB Rep.* 2010 Oct;43(10):643-8. 2. Prasher B, Negi S, Aggarwal S, Mandal AK, Sethi TP, Deshmukh SR, Purohit SG, Sengupta S, Khanna S, Mohammad F, Garg G, Brahmachari SK; Indian Genome Variation Consortium, Mukerji M. Whole genome expression and biochemical correlates of extreme constitutional types defined in Ayurveda. *J Transl Med.* 2008 Sep 9;6:48. 3. Patwardhan B, Bodeker G. Ayurvedic genomics: establishing a genetic basis for mind-body typologies. *J Altern Complement Med.* 2008 Jun;14(5):571-6. Review. PubMed PMID: 18564959.

#### **PG Final Year Syllabus-11 4.**

Bhushan P, Kalpana J, Arvind C. Classification of human population based on HLA gene polymorphism and the concept of Prakriti in Ayurveda. *J Altern Complement Med.* 2005 Apr;11(2):349-53. 5. Ghodke Y, Joshi K, Patwardhan B. Traditional Medicine to Modern Pharmacogenomics: Ayurveda Prakriti Type and CYP2C19 Gene Polymorphism Associated with the Metabolic Variability. *Evid Based Complement Alternat Med.* 2009 Dec 16. [Epub ahead of print] 6. Aggarwal S, Negi S, Jha P, Singh PK, Stobdan T, Pasha MA, Ghosh S, Agrawal A; Indian Genome Variation Consortium, Prasher B, Mukerji M. EGLN1 involvement in high-altitude adaptation revealed through genetic analysis of extreme constitution types defined in Ayurveda. *Proc Natl Acad Sci U S A.* 2010 Nov 2;107(44):18961-6. Epub 2010 Oct 18. 7. Tav Pritesh Sethi, Bhavana Prasher and Mitali Mukerji. Ayurgenomics: A New Way of Threading Molecular Variability for Stratified Medicine. *ACS Chemical Biology.* 2011(6):875-880 8. Marchetti B, Morale MC, Gallo F, Batticane N,

Farinella Z, Cioni M. Neuroendocrineimmunology (NEI) at the turn of the century: towards a molecular understanding of basic mechanisms and implications for reproductive physiopathology. *Endocrine*. 1995 Dec;3(12):845-61. 9. Licinio J, Frost P. The neuroimmune-endocrine axis: pathophysiological implications for the central nervous system cytokines and hypothalamus-pituitary-adrenal hormone dynamics. *Braz J Med Biol Res*. 2000 Oct;33(10):1141-8. 10. Turrin NP, Rivest S. Unraveling the molecular details involved in the intimate link between the immune and neuroendocrine systems. *Exp Biol Med (Maywood)*. 2004 Nov;229(10):996-1006 11. Sewlall S, Pillay V, Danckwerts MP, Choonara YE, Ndesendo VM, du Toit LC. A timely review of state-of-the-art chronopharmaceuticals synchronized with biological rhythms. *Curr Drug Deliv*. 2010 Dec;7(5):370-88. 12. Ohdo S. Chronopharmaceutics: pharmaceuticals focused on biological rhythm. *Biol Pharm Bull*. 2010 Feb;33(2):159-67 13. Humes HD. Stem cells: the next therapeutic frontier. *Trans Am Clin Climatol Assoc*. 2005;116:167-83; discussion 183-4. 14. Bianco P, Robey PG. Stem cells in tissue engineering. *Nature*. 2001 Nov 1;414(6859):118-21 15. Bhattacharya J. The Knowledge of Anatomy and Health in Ayurveda and Modern Medicine: Colonial Confrontation and Its Outcome 16. Wujastyk D. Interpreting the image of the human body in premodern India. *Int J Hindu Studies* 13: 189–228, 2009. 17. Kristina Harris, Amira Kassis, Geneviève Major, Chieh J. Chou. Is the Gut Microbiota a New Factor Contributing to Obesity and Its Metabolic Disorders? *J Obes*. 2012; 2012: 87915

#### **PG Final Year Syllabus-12 4.**

#### **DRAVYAGUNA VIGYAN PAPER-I**

Namarupa Vigyana 100 marks

1. Importance of Namagyana of Dravya, origin of Namarupagyana of Aushadhi in Veda, etymological derivation of various names and synonyms of Aushadhi.
2. Rupagyana in relation to Aushadhi. Sthula and Sukshma description (Macroscopic and Microscopic study) of different parts of the plant.
3. Synonyms of dravyas( aushadha and Ahara) mentioned in Vedic compendia, Brihatrayee, Bhavaprakasha and Rajanighantu.
4. Basonyms, synonyms and distinguish morphological characteristic features of medicinal plants listed in Ayurvedic Pharmacopoeia of India(API).
5. Knowledge of Anukta dravya (Extrapharmacopial drugs)with regards to namarupa.
6. Sandigdha dravya(Controversial drugs) vinischaya.
7. Knowledge of biodiversity, endangered medicinal species.

8. Knowledge of TKDL, Introduction to relevant portions of Drugs and cosmetic act, Magic remedies Act, Intellectual Property Right (IPR) and Regulations pertaining to Import and Export of Ayurvedic drugs.

09. Knowledge of tissue culture techniques

10. Knowledge of Genetically Modified Plants

### **PAPER –II Guna Karma Vigyan 100 marks**

1. Fundamental principles of drug action in Ayurveda and conventional medicine.

2. Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their applied aspects and commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) views on them.

3. Comprehensive study of karma as defined in Brihatrayee & Laghutrayee

4. Detailed study of Guna and Karma of dravyas listed in API and Bhavaprakasha Nighantu along with current research review.

5. Detailed study of aharadravya/ ahara varga ascribed in Brihatrayee and various nighantus along with Kritanna varga.

6. Pharmacological principles and knowledge on drugs acting on various systems.

7. Basic knowledge on experimental pharmacology for the evaluation of - analgesic, anti pyretic, anti inflammatory, anti diabetic, anti hypertensive, hypo lipidemic, anti ulcer, cardio protective, hepatoprotective, diuretics, adaptogens, CNS activities.

8. Knowledge on Heavy metal analysis, pesticidal residue and aflatoxins

9. Knowledge on evaluation of anti microbial and antimycotic activities.

### **PAPER – III Prayogavigyana Marks 100**

1. Bhaishjya Prayog Siddhant [Principles of drug administration] - Bhaishajya Marga (routes of drug administration), Vividha Kalpana (Dosage forms), Principles of Yoga Vijnan( compounding), Matra (Dosage), Anupana (Vehicle), Aushadha grahankal (Time of drug administration ), Sevankal avadhi (duration of drug administration), Pathyapathya (Dos' /Donts' /Contraindications), complete Prescription writing (Samagra Vyavastha patraaka).

2. Samyoga- Viruddh Sidhanta and its importance

3. Amayika prayoga (therapeutic uses) of important plants ascribed in as well as Brihatrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.

4. Knowledge of Pharmaco-vigilance in Ayurveda and conventional system of medicine. PG Final Year Syllabus-13

5. Knowledge of clinical pharmacology and clinical drug research as per GCP guide lines.

### **Knowledge of Pharmacogenomics PAPER- IV 100 marks**

1. Etymology of nighantu, their relevance, utility and salient features.
2. Chronological history of the following Nighantus with their authors name, period and content- Paryaya ratnamala, Dhanvantari nighantu, Hridayadipika nighantu, Ashtanga nighantu, Rajanighantu, Siddhamantra nighantu, Bhavaprakasha nighantu, Madanpala nighantu, Rajavallabha nighantu, Madhava Dravyaguna, Kaiyadeva nighantu, Shodhala nighantu, Saligram nighantu, Nighantu ratnakara, Nighantu adharsha and Priya nighantu
3. Detailed study Aushadha kalpana mentioned in Sharangadhara samhita and Ayurvedic Formulary of India (AFI).
4. General awareness on poshaka ahara(Nutraceuticals),Varnya(cosmoceuticals), food additives, Excipients etc.
5. Knowledge of plant extracts, colors, flavors and preservatives.
6. Review of important modern works on classical medicinal plants published by Govt of India, department of AYUSH and ICMR. Syllabus of the Practical training of part two

### **M.D. (Ayu) - Dravyaguna Practical:- Study tours:**

Field identification of medicinal plants through at least three local Dravyaguna study tours within the state and one study tour out of state. Preparation of minimum 50 herbarium sheets, along with raw drug either from field, of plants be collected during study tours.

1. Evaluation of Crude drugs: Macro and microscopic methods of examining five drugs of each of different useful parts of plants, including their powders.
2. Phytochemical evaluation of raw material: Quantitative standards like foreign matter, extractive ( water and alcohol), ash value, acid insoluble ash and TLC separation of various parts of minimum two plants of Ayurvedic Pharmacopoeia of India.
3. Yoga vijñana : Preparation of two yoga of each kalpana of Ayurvedic Formulary of India:
4. Pharmacology: Rasa nirdharana by Taste Threshold method of minimum one drug for each of rasas. Observation of animal experimentation models (both in vitro and in vivo)- 05] models for possible rasadi gunas.
5. Clinical Regular clinical training in the hospital for submission of Single Aushadhi] Prayoga (Single drug trial/ Clinico-pharmacological studies.) Survey for Amayika prayoga of

aushadhi(Pharmaco epidemiology) for studying their role in clinical practice in contemporary period - observational study-minimum.

6. Dissertation A Dissertation, as per the approval of Departmental Research Committee/Competent Committee for the purpose, be prepared under the guidance of approved supervisor PG Final Year Syllabus-14 in Dravyaguna and submitted 6 months before the final examination. The approval of Dissertation shall be essential before appearing the final examinations.

7. Method of practical training – Posting for minimum one month in each of the following units - Quality control laboratory of nearest pharmacy/institution for crude drug identification, adulterants and substitutes & understanding standardization techniques. Experimental pharmacology laboratory for developing skills in animal experimentation Regular clinical training in the Teaching hospital for studying Ekala Aushadhi Prayoga & Adverse drug reactions(ADR).

8. Post Graduate Scholar is expected to present minimum two scientific papers in National / international seminars during the course of study

9. Post Graduate Scholar is expected to publish / get accepted at least one paper in indexed/ peer reviewed journal under the supervision of guide. Pattern of Practical Examination- Total =200 marks

1. Herbarium - 10 Marks 2. Pharmacognosy practical record - 10 Marks 3. Pharmacology practical record - 10Marks 4. Clinical records record - 10 Marks 5. Practical examination(Identification of green and raw drugs, microscopic examination, Ekala aushadha pariksha - 60 Marks 6. Thesis Presentation - 20Marks 7. Viva voce - 80 Marks Reference books

## **PG Final Year Syllabus-15 5.**

### **RASA SHASTRA AND BHAISHAJYA KALPANA**

#### **Paper I Rasa Shastra Part A**

1. History and Chronological evolution of Rasashastra, concept of Raseshwara darshan. Fundamental Principles of Rasashastra Technical terminologies (Paribhasha) used in Rasa shastra.

2. Detailed knowledge of ancient and contemporary Yantropakarana and their accessories used in aushadhikaran and their contemporary modification such as yantras, mushas, putas, Koshtis, bhrashtis, muffle furnaces and other heating appliances, ovens, driers etc. used in manufacturing of Rasaushadhis in small scale and large scale along with their applications.

3. Study of Samskara, Role of agni (Heat), jala and other dravas (water and other processing liquids), kala (Time span), paatra (container) etc. and their significance in aushadhikarana.

4. Concept of Bhavana, study of Mardana and its significance and knowledge of ancient and contemporary grinding techniques.

5. Detailed Knowledge of different procedures of Shodhana, Jarana Murchana and Marana, concept of

Putas, definition, types and specifications of different Putas. Significance of different Putas in relation to Bhasmikanana and therapeutic efficacy of dravya under process. Bhasma pariksha vidhi and its significance in relation to contemporary testing procedures. Amritikaran and Lohitikarana.

6. Detailed knowledge of Satva and Druti, Satva shodhan, mrudukaran and Maran of Satva, its significance, in relation to therapeutic efficacy of dravya under process.

7. Concept of Pratinidhi dravya and discussion on controversial drugs.

## **PART – B**

1. Detailed ancient and contemporary knowledge of Parada and its compounds with reference to source, occurrence, physico-chemical characterization, graahya agrahyatva, Parada dosha, Parada gati, Parada shodhan, Study of Ashta sanskara, ashtadasha sanskara etc., Hingulottha Parada. Concept of Parada jaran, moorcchana, bandhan, pakshaccheda and marana etc. Therapeutic properties and uses of Parada.

2. Detailed ancient & contemporary knowledge with Geochemical / mineralogical / biological identification, source, occurrence, physico-chemical characterization, graahya-agraahyatva, Shodhan Maranadi vidhi and therapeutic properties and uses of dravyas etc. included in Maharasa, Uparasa, Sadharana rasa, Dhatu, Upadhatu, Ratna, Uparatna, Visha, Upavisha, Sudha varga, Lavana varga, Kshara varga, Sikata varga and other miscellaneous drugs used in Rasashastra.

3. Detailed knowledge of manufacturing, pharmacopeial standards, storage, shelf life, therapeutic efficacy, dose, anupana, vikarashanti upaya and development of technology with Standard Operating Procedures of processing, standardization, quality control of Bhasmas and Pishtis Bhasma - Abhraka Bhasma, Svarnamakshika Bhasma, Kasis Bhasma, Svarna Bhasma, Rajata Bhasma, Tamra Bhasma, Loha Bhasma, Mandur Bhasma, Naga Bhasma, Vanga Bhasma, Yashad Bhasma, Trivanga Bhasma, Pittala, Kamsya and Varthaloha Bhasma, Shankha Bhasma, Shukti Bhasma, Kapardika Bhasma, Godanti Bhasma, Praval Bhasma, Mrigashringa Bhasma, Mayurpiccha Bhasma, Kukkutand twak Bhasma, Hiraka Bhasma, Manikya Bhasma. PG Final Year Syllabus-16 Dravaka - Shankha Dravaka Pishti - Praval pishti, Manikya Pishti, Mukta pishti, Jahara mohara pishti, Trinakanta mani pishti etc. 4. Detailed knowledge of manufacturing, storage, shelf life, pharmacopeial standards, therapeutic efficacy, dose, anupana and development of technology with Standard Operating Procedures of processing, standardization and quality control of Kharaliya rasa, Parpati, Kupipakva rasa and Pottali rasa.

5. Study of classical texts with respective commentaries and special emphasis on Rasarnava, Rasahridaya tantra, Rasa Ratna Samucchaya, Rasendra Chintamani, Rasendra Chudamani, Rasa Ratnakara, Rasadhyaya, Rasa Kamdhenu, Anandkanda, Siddha Bhesaja Manimala, Ayurveda



Prakash, Rasatarangini, Bhaishajya Ratnavali, Rasamritam etc. and the books mentioned in the Schedule I of D & C Act – 1940. Relevant portions of Brihatrayi.

## **Paper II**

### **Bhaishajya Kalpana Part A**

1. History and Chronological evolution of Bhaishajya Kalpana, Concept of Bhaishajya and Aushadh, fundamental principles of Bhaishajya Kalpana. Technical terminologies (Paribhasha) used in Bhaishajya Kalpana.

2. Classical and Contemporary concepts of Collection, storage, Saviryata Avadhi and preservation methods of different fresh and dry Aushadhi dravyas and their graahya agraahyatva

3. Detailed knowledge of routes of drug administration, Aushadha matra, Anupana, Sahapana, Aushadha Sevana Kala, Kala Avadhi, Pathya, Apathya (Posology).

4. Detailed knowledge of manufacturing, standardization, quality control, pharmacopeial standards, storage, shelf life and development of innovative technology with Standard manufacturing Operating Procedures of following dosage forms

i) Panchavidha Kashaya, Churna, Rasakriya, Ghana, Avaleha, Pramathya, Mantha, Panaka, Sarkara, Kshirapaka, Ushnodaka, Aushadha Siddha Udaka, Sadangodaka, Tandulodaka, Laksharasa, Arka, Satva, Kshara, Lavana, Masi, Gutika, Vatika, Modaka, Guggulu and Varti etc.

ii) Sneha Kalpana: Concept of accha sneha and sneha pravicharana and Murchhana. Sneha paka, types of sneha paka and sneha siddhi lakshana, Avartana. Sneha kalpa karmukata (Pharmacokinetics and dynamics of sneha kalpa). Role of Sneha in relation to absorption of drug.

iii) Kritanna and Bhaishajya Siddha Anna Kalpana, Aharopayogi varga, concept of medicinal and functional food, dietary supplements and nutraceuticals etc.

iv) Sandhana kalpana: Madya varga and Shukta varga. Asava yoni. Alcoholic and acidic fermentation. Sandhana kalpa karmukata (Pharmacokinetics and dynamics). Advancements in fermentation technology. Knowledge of regulations in relation to alcoholic drug preparations.

v) Bahya Prayogarthi Kalpana : Lepa, Upanaha, Udvarthan, Avachurnana / Avadhulana, Abhyanga, Dhupana, Malahara. vi) Mukha, Karna, Nasa, Netropachararthi Kalpana: PG Final Year Syllabus-17

vii) Basti Kalpana: Basti Yantra Nirmana, Types of basti. Anuvasana and Asthapana basti. Karma, kala and yoga basti etc. Basti Kalpa (Madhutailika, Piccha basti etc.), Comparison of Asthapana and Anuvasana basti with evacuation and retention enema.

## **Part B**

**All the following procedures are to be studied in relevance to Ayurvedic Bhaishajya Kalpas.**

1. Methods of Expression and Extraction: Maceration, percolation, distillation, infusion and decoction.
2. Liquids: Clarified liquid, syrup, elixir, filtration techniques
3. Solid dosage Forms: Powders: Size reduction, separation techniques, particle size determination, principles of mixing. Tablets: Methods of tableting, suppositories, pessaries and capsules, sustained release dosage forms.
4. Semisolid dosage forms, emulsions, suspensions, creams and ointments, sterilization of ophthalmic preparations.
5. An introduction to various cosmetic preparations.
6. Drying, open and closed air drying, freeze drying, vacuum drying and other drying methods pharmaceutical excipients.
7. Study of classical texts with special emphasis on Chakradatta, Sharangadhara Samhita, Bhaishajya Ratnavali, Bhava Prakasha, Yogaratnakara, relevant portions of Brihatrayi, Ayurvedic Pharmacopeia of India, Ayurvedic Formulary of India.

## **Paper III**

### **Rasa Chikitsa & Aushadha Yoga Vigyana PART- A**

1. Rasachikitsa, Kshetrikaran, Rasajirna, Lohajirna, Aushadhi Sevana Vikarashanti Upaya. Ashuddha, Apakva, Avidhi Rasadravya Sevanajanya Vikara evam Vikara shanti upaya.
2. Detailed knowledge of Aushadhi patha Nischiti and sanyojan (formulation composition), dose, anupana and method of administration, therapeutic efficacy and uses (indications and contra-indications), probable mode of action etc. of the following Aushadhi yogas i. Kharaliya Rasa : Shwasa kuthara Rasa, Tribhuvana kirti Rasa, Higuleshwara Rasa, Ananda bhairava Rasa, Maha Lakshmivilasa Rasa, Vasnata kusumakara Rasa, Vasanta malti Rasa, Brihat vata chintamani Rasa, Laghu suta shekhar Rasa, Suta shekhara Rasa, Ram ban Rasa, Chandra kala Rasa, Yogendra Rasa, Hridyarnava rasa, Grahani kapata Rasa, Garbha pala Rasa, Jalodarari Rasa, Mrityunjaya Rasa, Madhumalini vasanta Rasa, Arsha kuthara Rasa, Krimi mudgara Rasa, Suchika bharana Rasa, Tri netra Rasa, Smruti sagara Rasa, Vata gajankusha Rasa, Agni kumar Rasa, Ekanagavir Rasa, Kama dugha Rasa, Purna chandrodaya Rasa, Pratap lankeshwara Rasa, Maha vata vidhwansaka Rasa, Kasturi bhairava Rasa, Ashwa kanchuki Rasa, Gulma kuthara Rasa, Maha jwarankusha Rasa, Chandra mrita Rasa, Kapha ketu Rasa, Prabhakara Vati, Pravala Panchamrita, Gandhaka Rasayana, Chaturbhuj rasa, Navajivan

rasa, Shonitargal rasa, Raktapitta kulakandan rasa, Amavatari Rasa, Kravyada Rasa, Garbha chintamani Rasa, Chintamani Rasa, Trilokya chintamani Rasa, Pradarantaka Rasa, Vangeshwara Rasa, Brihat vangeshwara Rasa, Shwasakasa Chintamani Rasa, Arogya vardhini Vati, Chandra prabha Vati, Agni tundi vati, Shankha Vati. PG Final Year Syllabus-18 ii. Kupipakva Rasa: Rasa Sindura, Makaradhwaja, Sidha makaradhwaja, Samira pannaga Swarnavanga, Malla sindura, Rasa karpura, Rasa pushpa, Manikya Rasa. iii. Parpati Rasa : Rasa Parpati, Loha Parpati, Tamra Parpati, Suwarna Parpati, Gagana Parpati, Vijay Parpati, Panchamrit Parpati, Shwet Parpati, Bola Parpati iv. Pottali Rasa: Rasagarbha pottali, Hemagarbha pottali, Mallagarbha pottali, Hiranyagarbha pottali, Shankargarbha pottali, Lokanatha rasa, Mriganka Pottali v. Loha evam Mandura Kalpa: Ayaskriti, Loha Rasayana, Amla pittantaka loha, Chandanadi loha, Dhatri loha, Navayasa loha, Putapakva vishama jwarantaka loha, Shilajatwadi loha, Tapyadi loha, Saptamrita loha, Dhatri loha Amritasara Loha, Shankaramat loha, Pradarantaka loha, Rohitaka loha. Punarnava Mandura, Shatavari Mandura, Tara Mandura, Triphala Mandura, Mandura Vataka etc.

## **Part B**

Detailed knowledge of Aushadhi patha Nischiti and sanyojan (formulation composition), dose, anupana and method of administration, therapeutic efficacy and uses (indications and contra-indications), probable mode of action etc. of the following Aushadhi yogas i. Panchavidha Kashayas and their Upakalpa: Ardraka swarasa, Tulasi swarasa, Vasa putapaka swarasa, Nimba kalka, Rasona kalka, Kulattha Kwath, Punarnavasthaka kwatha, Rasna saptaka kwatha, Dhanyak hima, Sarivadi hima, Panchakola phanta, Tandulodaka, Mustadi pramathya, Kharjuradi mantha, Shadanga paniya, Laksha rasa, Arjuna kshirapaka, Rasona kshirapaka, Chinchana panaka, Candana panaka, Banapsha sharkara, Nimbu sharkara, Amrita satva, Ardraka satva, Ajamoda arka, Yavanyadi arka ii. Kritanna and Bhesaja Siddha Ahara Kalpana: Yavagu, (Krita and Akrita), Ashtaguna manda, Laja manda, Peya, Vilepi, Krishara, Yusha, Mudga yusha, Kulattha yusha, Saptamushtika yusha, Khada, Kambalika, Raga, Shadava, Mamsarasa, Veshavara, Dadhi, Katvar Dadhi, Dadhi Mastu, Takra, Ghola, Udasvita, Mathita, Chhacchika etc. iii. Churna: Sitopaladi Churna, Talisadi Churna, Triphala Churna, Hingvashtaka Churna, Avipattikara Churna, Swadishta Virechana Churna, Bhaskar Lavana Churna, Sudarshana Churna, Maha Sudarshana Churna, Gandharva Haritaki Churna, Pushyanuga Churna, Ajamodadi Churna, Hingvadi Churna, Eladi Churna, Dadimashtaka Churna, Trikatu Churna, Vaishwanara Churna, Gangadhara Churna, Jati phaladi Churna, Narayana Churna etc. iv. Gutika: Arogya vardhani vati, Chandra prabha vati, Chitrakadi Gutika, Sanjivani Vati, Lasunadi vati, Lavangadi Vati, Vyoshadi vati, Khadiradi Vati, Kankayana Vati, Abhayadi modaka, Marichyadi gutika, Amalakyadi gutika, Samshamini Vati, Kutaja Ghana vati, Amarasundari Vati, Shiva Gutika,

Eladi Vati, Kasturyadi Gutika, Arshoghni Vati. v. Guggulu: Yogaraja Guggulu, Maha yogaraja Guggulu, Trayodashanga Guggulu, Kanchanara Guggulu, Rasnadi Guggulu, Triphala Guggulu, Simhanada Guggulu, Gokshuradi Guggulu, Kaishora Guggulu, Panchatikta Guggulu, Amritadi Guggulu, Vatari Guggulu, Lakshadi Guggulu, Abha Guggulu, Navaka Guggulu, Nava Karshika Guggulu. vi. Sneha Kalpa Sneha Moorchhana - Ghrita Murchhana, Taila Murchhana Siddha Ghrita - Shatavari Ghrita, Jatyadi Ghrita, Phala Ghrita, Dadimadi Ghrita, Kshirashatpala Ghrita, Mahatriphala Ghrita, Dhanvantari Ghrita, Amritaprasha Ghrita, Kalyanaka Ghrita, Brahmi Ghrita, Changeri Ghrita, Panchatikta Ghrita, Sukumara Ghrita, Panchagavya Ghrita Siddha Taila - Maha Narayana Taila, Maha Masha Taila, Bala Taila, Nirgundi Taila, Shadbindu Taila, Vishagarbha Taila, Sahacharadi Taila, Jatyadi Taila, Apamarga Kshara Taila, Tuvaraka Taila, Kshirabala Taila (Avartita), Lakshadi Taila, Anu Taila, Kumkumadi Taila, Hingutriguna Taila, Kottumchukadi Taila, Prasarinyadi Taila, PG Final Year Syllabus-19 Dhanwantari Taila, Balashwagandhadi Taila, Balaguduchyadi Taila, Nilibhringyadi Taila, Brihadavadi Taila, Irimedadi Taila, Chandanadi Taila, Panchaguna taila, Arka taila, Pinda Taila, Kasisadya Taila vii. Rasakriya, Avaleha, Khanda etc.: Darvi Rasakriya, Vasa Avaleha, Brahma rasayana, Chyavanprasha Avaleha, Kushmanda Avaleha, Dadima Avaleha, Bilvadi Avaleha, Kantakaryavaleha, Haridra Khanda, Narikela khanda, Saubhagya shunthi paka, Amrita Bhallataka, Kamsa Haritaki, Chitraka Haritaki, Vyaghri Haritaki, Bahushala Guda, Kalyana Guda viii. Sandhana Kalpa: Lodhrasava, Kumaryasava, Ushirasava, Chandanasava, Kanakasava, Sarivadyasava, Pippalyasava, Lohasava, Vasakasava, Kutajarishta, Draksharishta, Raktamitrarka, Dashamularishta, Abhayarishta, Amritarishta, Ashokarishta, Sarasvatarishta, Arjunarishta, Khadirarishta, Ashwagandha Arishta, Vidangarishta, Takrarishta, Mahadrakshasava, Mritasanjivani sura, Maireya, Varuni, Sidhu, Kanji, Dhanyamla, Madhu Shukta, Pindasava. ix. Anya Kalpa : Phala varti, Chandrodaya varti, Arka lavana, Narikela lavana, Triphala masi, Apamarga kshara, Snuhi kshara, Ksharasutra, Atasi upanaha, Sarjarasa malahara, Gandhaka malahara, Sindhuradi Malahara, Shatadhouta Ghrita, Sahasra Dhouta Ghrita, Siktha taila, Dashanga lepa, Doshaghna lepa, Bhallataka taila patana, Jyotishmati Taila, Bakuchi Taila, Dashanga dhupa, Arshoghna dhupa, Nishadi Netra bindu, Madhutailika Basti, Piccha Basti, Yapana Basti.

## **PAPER – IV**

### **Pharmacology and Pharmacy Management**

#### **PART - A**

1. General Pharmacology: a) Principles of Pharmacology, Pharmacodynamics & Pharmacokinetics: Absorption, distribution, Metabolism & excretion, mechanism of action, dose determination and dose response, structure activity relationship. b) Routes of drug administration c) Factors modifying drug

effect, Bioavailability and Bioequivalence, drug interactions, adverse drug reaction and drug toxicity  
d) Preclinical evaluation: experimental pharmacology [bioassay, in vitro, in vivo, cell line studies]  
animal ethics.

2. Clinical pharmacology: Evaluation of New Chemical Entity – phases and methods of clinical research. Ethics involved in human research.

3. Elemental constituents of human body and its physiological importance. Deficiencies and excess of various elements (micro-nutrients).

4. Toxicity of heavy metals and chelation therapy.

5. Knowledge of toxicity and pharmacological activities of herbo-mineral compounds.

6. Detailed Knowledge of Pharmacovigilance – National and International Scenario.  
Pharmacovigilance of Ayurvedic Drugs

## **Part B**

1. Scope and evolution of pharmacy. Information resources in pharmacy and pharmaceutical Science.

2. Pharmaceutical dosage form design (Pre-formulation)

3. Packaging materials and Labeling

4. Management of pharmacy, store and inventory management, personnel management, Good Manufacturing Practices related to Ayurvedic drug industry.

5. Pharmaceutical Marketing, product release and withdrawals.

6. Hospital, Dispensing and Community pharmacy.

7. Patenting and Intellectual Property Rights.

8. Laws Governing Ayurvedic drugs PG Final Year Syllabus-20 i. Relevant regulatory provisions of Ayurvedic drugs in Drug and Cosmetics Act - 1940 and Rules - 1945 ii. Laws pertaining to Drugs and Magic remedies (Objectionable Advertisement) Act - 1954. iii. Prevention of Food Adulteration (PFA) act. iv. Food Standards and Safety Act - 2006 v. Laws pertaining to Narcotics vi. Factory and Pharmacy Acts vii. Consumer Protection Act -1986

9. Regulatory Affairs related to International Trade and Practices of Ayurvedic Drugs

10. Introduction to Ayurvedic Pharmacopoeia of India, Ayurvedic Formulary of India.

11. Introduction to Indian Pharmacopoeia, British and United States Pharmacopoeia, Pharmacopoeial Codex  
12. Introduction to Traditional Knowledge Digital Library

**Practicals:-** Minimum 150 Practicals are to be performed covering all the dosage forms. Educational Visits to minimum Five (5) GMP approved Ayurvedic Pharmacies. Ten days posting in R & D / Production unit in GMP certified Ayurvedic Pharmacy. Minimum attendance in three National Conferences within three academic years. Minimum 10 clinical cases using different dosage forms are

to be studied and recorded for efficacy and ADRs (if any). Minimum one research paper on the core contributory work of dissertation published or accepted in peer reviewed, indexed journal. Examinee has to submit supporting documents in relation to above mentioned academic activities at the time of Practical examination. Pattern of Practical Examination Total Marks : 100 Duration of the practical: 2 days

1. Identification of the specimen: 10 Marks  
 2. Drug Processing 30 Marks (10+10+5+5) i) Major **Practicals: 2** (1 Rasashastra and 1 Bhaishajya Kalpana) ii) Minor Practical: 2 (1 Rasashastra and 1 Bhaishajya Kalpana)  
 3. Drug testing and Analysis 10 Marks (5+5) i) Rasaushadhi – 1 ii) Kashthaushadhi – 1  
 4. Power Point Presentation on dissertation work: 15 Minutes 10 Marks  
 6. A Demo Lecture on any subject topic: 10 Minutes. 10 Marks  
 7. Documentation 15 Marks  
 i. Journals (Practical Records) of minimum 75 practicals (25 each from Rasa Shastra, Bhaishajya Kalpana and Analytical part).  
 ii. Reports of the Visits  
 iii. Case Records  
 8. Viva Voce examination 15 Marks

Reference Books:-

1. Rasahridaya Tantra
2. Rasarnava PG Final Year Syllabus-21
3. Rasaratna Samuccahaya
4. Ayurved Prakasha
5. Rasendrachudamani
6. Rasendra Chintamani
7. Rasatarangini
8. Rasapraksha Sudhakar
9. Rasamrita
10. Rasa Chandanshu : CCRAS Publication
11. Sharangadhara Samhita
12. Sharangadhara Darpan (BP Pandey)
13. Bhavaprakasha
14. Yoga Ratnakara
15. Bhaishajya Ratnavali
16. Siddha Bhaishajya Manimala
17. Ayurvediya Aushadhikarana – Puranik and Dhamanakar
18. Bharat Bhaishajya Ratnakara
19. Rasayoga Sagara
20. Siddha Bhaishajya Manimala
21. Siddha Yoga Sangraha – Yadavaji Trikamji Acharya
22. Sahasrayoga
23. Vaidyaka Paribhasha Pradeepa
24. Dravyaguna Vijnan Part - 1 and 2 - Yadavji Trikamji
25. Chakradatta - Ratnaprabha,
26. Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya,
27. Remington: Science and Practice of Pharmacy
28. Theory and Practice of Industrial Pharmacy – Leon Lachman et al
29. Clinical Pharmacology, KD Tripathi
30. Clinical Pharmacology, Lawrence Benette
31. Drug Discovery and Evaluation (Pharmacological assays) HG Vogel
32. Pharmacological Basis of therapeutics – Goodman and Gilman
33. Data Base of Medicinal Plants of CCRAS
34. Quality and Standards of Medicinal Plants – ICMR publication
35. Quality Control of Ayurvedic Drugs – PLIM, Gaziabad
36. Ayurvedic Pharmacopeia of India
37. Ayurvedic Formulary of India
38. Indian Pharmacopeia
39. British Pharmacopeia
40. United States Pharmacopeia
41. Pharmacopeia Codex
42. Current Good Manufacturing Practices
43. Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments
44. Drugs and Magic remedies (Objectionable advertisement) Act-1954
45. Prevention of Food Adulteration (PFA) act
46. Laws pertaining to Narcotics
47. Factory and Pharmacy Acts
48. Consumer Protection Act -1986
49. Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)
50. Rutleys Elements of Mineralogy
51. Bhasma Vigyaniam
52. Kupipakva Vigyaniam
53. Anupana Manjari

## **PG Final Year Syllabus-22 6.**

### **AGADA TANTRA EVUM VIDHIVAIDYAKA**

#### **PAPER-I** Agada Tantra (Ayurvedic and Contemporary Toxicology) 100 marks

1. Agada Tantra, its sequential development during Veda kala, Samhitha kala, Samgraha kala and Adhunika kala.
2. Definition of Visha, properties of visha and its comparison with madya and oja, visha samprapti, visha prabhava, visha-vega, vegantara and visha karmukata (toxicodynamic and toxicokinetic study).
3. Descriptive and comparative study of Upavisha in unison with Contemporary Toxicology.
4. Examination of poisons as per Contemporary and Ayurvedic Methods.
5. Descriptive study of sthavara visha, definition, classifications, classical signs and symptoms of poisoning including vanaspatic (phyto poison), khanija (mineral) and compound sthavara visha.
6. Study of Jangama visha and their sources (Animal poisoning and Zoonotic Diseases). Descriptive study of snakes according to ancient and contemporary knowledge. Causes of snake bite and its types. Composition of snake venom and its pharmacological actions. Signs and symptoms of envenomation and its prognostic signs. Clinical features of Vrischika (scorpion), Luta (spider), Grihagodhika (Lizard), Mushaka (rats), Alarka (dogs), Makshika and Mashaka (mosquitoes) and their pathologic manifestations including their role in the manifestation of communicable diseases. Shanka visha and its management. Visha sankat and Visha Kanya.
7. Garavisha and Dushi visha, their varieties, signs, symptoms and management with contemporary relevance. Detailed study of Allergies including allergic manifestations in the eyes, nose, lungs and skin.
8. Detailed study of Madya visha and substances acting on the nervous system; substance abuse.( Diagnosis, Management and De-addiction)
9. Detailed study of the contemporary knowledge about vishajanya Janpadodhvansaniya roga (community health problems due to poisons - Environmental pollution, water pollution, soil pollution, air pollution, Industrial pollutions etc. their features and management according to ancient and recent concepts.
10. Concept of Virudha aahara, Aahara visha and Satmyasatmyata in contemporary and Ayurvedic views.
11. Conceptual study:- Drug interactions and incompatibility, Pharmacovigilance

#### **PAPER- II**

#### **Visha Chikitsa Vigyan (Management Of Poisoning) 100 marks**

1. Fundamental Principles for treatment of poisoning
2. General and specific treatment of different types of Sthavara visha.
3. General and specific treatment of different types of Jangama visha (animal poisons, insect poisons, snake bites and other zoonotic diseases).
4. Emergency medical management of poisoning including preparation, administration and complications of antivenoms/antisera.
5. Chaturvimsati upakrama (24 management procedures).
6. Management of Garavisha and Dushivisha. Treatment of Allergies including allergic manifestations in the eyes, nose, lungs and skin.
7. Diagnosis and Management of Drug Induced Toxicity
8. Management of the toxic manifestations caused by the contact poisons (paduka, vasthra, abharana, mukhalepa- vishabadha etc).
9. Management of food poisoning.
10. Death due to poisoning, Duty of physician in poisoning, in cases of suspected poisoning. Post mortem findings in poisoning.
11. Extra -corporeal techniques (dialysis etc) for removal of poisons. PG Final Year Syllabus-23

### **PAPER –III**

#### **Vyavahara Ayurveda Evam Vidhi Vaidyaka 100 marks**

1. Definition of Vyavahara Ayurveda, its evolution in ancient and contemporary periods.
2. Personal identity and its medico-legal aspects
3. Death and its medico-legal aspects (Medical Thanatology)
4. Asphyxial deaths and its medico-legal importance.
5. Death due to starvation, heat and cold, lightning and electricity. Suspended Animation.
6. Medico-legal autopsy.
7. Injuries due to explosions, chemical and nuclear warfare.
8. Medico-legal aspects of injuries and wounds.
9. Impotence and sterility-Its medico-legal aspects. Regulations of Artificial Insemination. Medico – legal aspects of surrogate motherhood.
10. Sexual offences and perversions.
11. Medico-legal aspects of virginity, pregnancy, delivery, abortion, infanticide and legitimacy with related acts.
12. Indian Penal Code, Criminal procedure code and study of related acts like Indian Evidence Act, Pre Natal Diagnostic Test Act, Nursing Home Act, Human Organ Transplantation Act, Drugs and



Cosmetic Act 1940, Narcotic drugs and Psychotropic substances Act 1985, Pharmacy Act 1948, Drugs and Magical Remedies (Objectionable Advertisements) Act 1954, Medicinal and Toilet Preparations Act 1955 and Anatomy Act etc. Any related act enacted by the government from time to time.

13. Courts and Legal procedures.

14. Forensic Science Laboratory

15. Medico legal aspects of mental illness

16. Duties and privileges of physician.

17. Structure of Central Council of Indian Medicine, its jurisdiction and functions. Code and Conducts as per the CCIM, Rules and Regulations there under.

18. Respective State Council of Indian Medicine, its structure, power, voluntary duties.

19. Doctor - patient relationship.

20. Rights and privileges of patients; Euthanasia.

21. Professional secrecy and privileged communication.

22. Professional negligence and malpractice

23. Indemnity Insurance scheme.

24. Consumer Protection Act related to medical practice.

25. Ethics as in classics. Types of physicians and methods of identification, Pranabhisara and Rogabhisara Physicians, qualities of physician, responsibilities of Physicians, Chaturvidha vaidya vriti, duties of physicians towards patients, Vaidya sadvritam, Apujya Vaidya who is accepting fees, relationship with females.

## **PAPER – IV**

### **Aushadha Yoga Vigyan 100 marks**

1. Study of process for sodhana, marana and samskarana of poisonous drugs.

2. Pharmaco-dynamics of different formulations used in Agadatantra

3. Study of pharmacology and usage of antidotes as per the Ayurvedic and contemporary science.

4. Fundamentals of pharmaceuticals according to Ayurvedic and contemporary point of view.

5. Chemical, analytical, laboratory examination of poisons and suspicious substance.

6. Introduction of different instruments /equipments used in the examination of poisons.

7. Introduction to Clinical toxicology

8. Introduction to Experimental toxicology PG Final Year Syllabus-24

9. Introduction to Toxicology - genomics

10. Survey and study of the traditional and folklore vishachikista sampradaya. Content of Practical/Demonstration 1. Identification of specimens models and equipments of toxicological and

jurisprudence importance. 2. Practical training in postmortem examination (10 cases) 3. Regular clinical postings in the Agadatantra OPD / IPD 4. Medico-legal cases (20 cases) 5. Chemical Identification of various acids, alkalies, alcohols – Hydrochloric acid, Nitric acid, Sulphuric acid, Ascorbic acid, Sodium Hydroxide and Potassium Hydroxide 6. Detection of minerals Copper, Mercury, Lead, Arsenic and their compounds. 7. Physical and Chemical analysis of Datura, Karaveera, Vatsanabha, Jayapala, Arka and Bhallataka with Microscopy, powder microscopy, TLC, solvent extraction, detection of Phenol, tannins etc. (10 studies) 8. Detection of human blood, hair, semen and other biological secretions of Forensic importance. 9. Herbarium of 15 sthavara vishas and 10 agadas. 10. Preparation of two Agada yogas Clinical Postings 1. Modern medical hospitals – 2 weeks (For emergency management of poisoning) 2. Postmortem postings - 2 weeks 3. Court postings - 1 week Visit to 1. Forensic Laboratory 2. Anti snake venom serum manufacturing Unit. Pattern of practical examination 1. Post mortem / Medico-legal case record and clinical record - 10 Marks 2. Identification of specimens models and equipments of jurisprudence importance. - 20 Marks 3. Spotting related to Visha, Upavisha and others poisonous drugs - 20 Marks 4. Thesis presentation - 25 Marks 5. Viva-voce - 25 Marks Total 100 Marks

**Reference Books:-**

1. Useful Portion of Charak-Sushrut-Vagbhata
2. Dravyaguna Vigyan - Acharya Yadavji
3. Aushadhigunadharm Shastra - Pt Visvanath Dvivedi
4. Kriyatmat Aushada parichaya Vigyan - Pt Visvanath Dvivedi
5. Ayurvedic Vyadhi Vigyan - Acharya Yadavji Trikamji
6. Madhavanidan with Madhukosha commentary
7. Sharangadhara Samhita
8. Yogaratnakara
9. Aushadigunadharm Shastra -PtGangadharaShastri Gune
10. Rasendracintamani
11. Rasaratna samuchhaya
12. Vishavigyan - Dr. Krishna Kumar
13. Related matter of Kautilya Artha Shastra
14. Harmekhlatantra
15. Anupana manjari PG Final Year Syllabus-25
16. Ayurvedprakash
17. System of clinical Medicine - Savil

18. Forensic Pharmacy - B.M. Mhithai
19. Hand book of Forensic Medicine and toxicology - Dr. P.V. Chadha
20. Viva Forensic Medicine and toxicology - L.C. Gupta
21. Forensic Medicine and Ethics - J.P. Narena
22. Modi's Medical Jurisprudence and Toxicology
23. The essentials of forensic medicine and toxicology - Dr.K.S. Narayan Reddy
24. Medical Laws and Ethics - Dr. H.S. Mehta
25. M.R.K. Krishnan's Handbook of Forensic Medicine
26. Text book of Medical Jurisprudence and Toxicology - Dr. C.K. Parikh
27. Atlas of Forensic Medicine - Dr. Tomio Watenbe
28. Medico legal Post Mortems (Atlas) - Dr. Parikh and Others
29. Textbook of Forensic Medicine and Toxicology - Dr.V.V. Pillay
30. Textbook of Forensic Medicine and Toxicology - Dr. Karmakar
31. Textbook of Forensic Medicine and Toxicology - Dr. Singhal
32. Textbook of Forensic Medicine and Toxicology - Dr. Krishnan Vij
33. Forensic Pathology - Dr. Bernard Knight
34. Textbook of Forensic Medicine and Toxicology - Lyon's
35. Pocket picture guide to Forensic Medicine - Gower's Medical Publication
36. Forensic Medicine - Simpson Knight
37. Taylor's Principles and Practical of Medical Jurisprudence - J and A Churchis
38. Doctor and law - Singhal
39. Textbook of Toxicology -Singhal
40. Medicine Harrison's Principal of Internal Medicine
41. Agad Tantra - Dr. Shekhar Namboodri
42. Modern Medical Toxicology - Dr. V.V.Pillay
43. Critical care toxicology - Bruent Wallace
44. Diagnosis and Management of common poisoning - Agarwal wali
45. Colour Atlas of Forensic Medicine - Govindaiah
46. Guidelines of poisons - W.H.O.
47. Doctors patients relationships - Dr.Lavekar
48. Bhavaprakasha.
49. Vishavaidya Jyotsnika -- English translation By VPSV Ayurveda college, Kottakkal.
50. Lakshnamritham.
51. Toxicology, Ayurvedic perspective - VPSV Ayurveda college, Kottakkal

52. Text book of Agadatantra - Edited By Dr Huparikar, Dr. Joglekar
53. Agadatantra ki Pathyapustaka - Edited By Dr Huparikar, Dr. Joglekar
54. Vyavahar Ayurveda Vigyanam - Dr. Indramohan Jha (Sachchan)
55. Forensic Medicine - Dr. B. Umadathan
56. Visha Chikitsa - Dr. M. Balakrishnan Nair
57. Park Text book of Preventive and Social Medicine. - K. Park
58. Environmental Science and Biotechnology - Theory and Practice - A.G. Murukesan & C. Rajakumari
59. Veterinary Toxicology - Dr. Satish K. Gargi
60. Guide to Drinking Water Quality (3 Volumes) - WHO Publication
61. A short Text Book of Medical Entomology - H.S. Bhatti, R. Sehgal, R.C. Mahajan.

### **PG Final Year Syllabus-26 7.**

#### **SWASTHAVRITTA PAPER I**

#### **VAIYAKTIKA SWASTHAVRITTAM SADVRITTAM CHA Marks 100**

1. Concept of holistic health according to Ayurveda.
2. Spectrum of health, Iceberg phenomenon of diseases, dimensions of health.
3. Dinacharya – Detailed accounts by Charaka, Sushruta, Vagbhata and Bhavamishra.
4. Probable Physiologic effect of Dinacharya procedures.
5. Ratricharya – Bhavamishra and other classics.
6. Day and night pattern in various countries.
7. Ritucharya – Classical description by Charaka, Sushruta, Vagbhata, BhelaSamhita and Bhavamishra.
8. Ritus prevalent in various Indian states.
9. Ritu pattern in various countries of the world.
10. Shodhana Schedule for Ritusandhis.
11. Concept of Vegas, types and the physiology behind each vega and vegadharana.
12. Ahara – Classical food items in Charaka, Sushruta, Vagbhata and Sharangadhara.
13. Aharavargas and comparison with today's food items.
14. Staple diet of various States of India.
15. Staple diet of various countries in correlation with their climate.
16. Principles of dietetics. Balanced diet for healthy adult, adolescent, elderly people, pregnant ladies and lactating mothers.
17. Food intervention in malnutrition, under nutrition and over nutrition.
18. Rules of food intake according to Charaka, Sushruta and Vagbhata.

19. Pros and Cons of vegetarian and Non vegetarian foods.
20. Viruddhahara – Classical and modern day examples.
21. Sadvritta – Compare Charaka, Sushruta and Vagbhata .
22. Prajnaparadha – Causes, Effects and solution.
23. AcharaRasayana, Nityarasayana.
24. Rasayana procedures for Swastha
25. Vajeekarana for Swastha.
26. Mental Health and the role of Ayurveda in it.
27. Vyadhikshamatva – Modern and Ayurvedic concepts.
28. Principles of Health Education.
29. Genetics in Ayurveda and Modern Science

## **PAPER II**

### **SAMAJIKA SWASTHAVRITTAM (COMMUNITY HEALTH) Marks 100**

1. Concept of community health.
2. Concept of Prevention according to Ayurveda.
3. Concept of prevention according to Modern medicine. Levels of prevention. Stages of intervention.
4. Web of causation of diseases, Multifactorial causation.
5. Natural History of diseases.
6. Ecology and community health.
7. Disinfection practices for the community – Modern and Ayurvedic.
8. Immunization programmes. Possible contribution of Ayurveda.
9. Environment and community health (Bhumi, Jala, Vayu, Shuddhikarana ,Prakasha,Shabda, Vikirana) 10.Housing –W.H.O Standards. Design of Aaturalaya(hospital), Sutikagara, Kumaragara, Panchakarmagara and Mahanasa (Kitchen)
11. Disposal of Wastes- Refuse, Sewage. Methods of Sewage disposal in sewered and unsewered areas. 12.Occupational Health. Ergonomics. Role of Ayurveda in ESI.
13. Medical Entomology– Arthropods of Medical Importance and their control measures. PG Final Year Syllabus-27
14. Knowledge of parasites in relation to communicable diseases.
15. School Health Services and possible contribution of Ayurveda.
16. Demography and Family Planning.
17. Family Welfare Programme and the role of Ayurveda in it.
18. Old age problems in community. Role of Ayurveda in Geriatrics.

19. Care of the disabled.
20. Life Style disorders (Non Communicable diseases) in community and the role of Ayurveda in them.
21. Health tourism. Ayurvedic Resort Management- Panchakarma and allied procedures.
22. Medical Sociology.

### **PAPER III**

#### **SAMKRAMAKA ROGA PRATISHEDHAM EVAM SWASTHYAPRASHASANAM Marks 100**

1. Modern Concept of Epidemiology
2. Critical evaluation of Janapadodhwamsa.
3. Epidemiology of different Communicable diseases in detail.
4. General investigations for Communicable diseases
5. Sexually Transmitted Diseases and their control
6. Ayurvedic view of Samkramaka Rogas.
7. Investigation of an Epidemic
8. Control of Epidemics.
9. Host Defenses.
10. Ayurvedic methods of Vyadhikshamatva.
11. Health advice to travelers.
12. Hospital, Isolation ward and bio medical waste management
13. National Health Programmes. Contribution of Ayurveda in National Health Programmes.
14. Health administration under Ministry of H & FWD
15. AYUSH , NRHM, NUHM administration, functions and programmes.
16. National and International Health Agencies and their current activities.
17. Disaster management
18. Statistics related with Infectious diseases at International, National and State levels
19. Vital Statistics

### **PAPER IV**

#### **YOGA AND NISARGOPACHARA Marks 100**

1. History and evolution of Yoga
2. Different Schools of Yoga
3. Rajayoga –(Ashtanga yoga) philosophy of Patanjali according to Yogasutras.
4. Hathayoga - according to Hathayogapradeepika, GherandaSamhita and Shivsamhita.
5. Karmayoga – Philosophy according to Bhagavad Gita

6. Mantrayoga, Layayoga, Jnanayoga and Bhaktiyoga.
7. Physiological effect of Yoga on Body and mind – Ancient and modern concepts.
8. Concept of Sthula, Sukshma and Karana Shariras
9. Concept of Panchakoshas
10. Concept of Shad chakras and Kundalini
11. Shad Kriyas and their therapeutic effects.
12. Therapeutic effect of yogic practice in the following diseases - Diabetes, Hypertension, Cardiovascular disorders, Obesity, Asthma, Piles, Irritable Bowel Syndrome, Eczema, Psoriasis, Stress Disorders, Eye disorders, Head Ache, Juvenile Delinquency, Mental retardation, Depression, Neurosis, Sexual Dysfunction, Uterine Disorders, Cancer. PG Final Year Syllabus-28
13. Yoga in Ayurveda – Concept of moksha, Tools for Moksha, Naishtikichikitsa, Tatva Smriti, Satyabudhi, yoginam Balam Aishwaram (Charaka Samhita Sharirasthana chapter 1 & 5)
14. History of Nisargopachara.
15. Basic Principles of Western School of Nature Cure
16. Basic Principles of Indian School of Nature Cure – Panchabhuta Upasana and its therapeutic utility.
17. Different types of Massage and their therapeutic effects
18. Concepts of Acupuncture and Acupressure.
19. Principles of Chromotherapy and Magnetotherapy Scheme of Practicals 1. Health promotive and protective practices of Dinacharya procedures viz. Dantadhavana, Anjana, Nasya, Kavala, Gandusha, Dhumapana, Abhyanga, Udvartana 2) Practical Demonstration of Yoga a) Aasanas (24) 1) Swastikasan 2) Gomukhasan, 3) Sarpasan, 4) Kukuttasan, 5) Uttankurmasan, 6) Dhanurasan, 7) Matsyendrasan, 8) Mayurasan, 9) Bhadrasan, 10) Sinhasan, 11) Sarvangasan, 12) Shirshasan, 13) Pavanmuktasan, 14) Bhujangasan, 15) Supta Vajrasan, 16) Chakrasan, 17) Siddhasan, 18) Padmasan, 19) Veerasan, 20) Paschimatanasan, 21) Vajrasan, 22) Shavasan, 23) Makarasan, Suryanamaskara b) Pranayama 1) Nadishudhi- Anulom Vilom Pranayam, 2) Suryabhedani, 3) Ujjayi, 4) Bhasrika, 5) Bhramari, 6) Sheetali, 7) Sitkari c) Mudra 1) Viparita karani 2) Yoga Mudra 3) Maha Mudra 4) Brahma Mudra 5) Ashwini mudra PG Final Year Syllabus-29 d) Bandha 1) Jalandhara, uddiyana, mula bandha e) Shuddhikriya – Jala Neti, Sutra Neti, Jala Dhauti, Kapalabhati, Tratak Basti, Nauli, vastra dhauti (if possible) 3) Practical Demonstration of Naturopathy procedures a. Mruttika Snana b. Mruttika Patti c. Pada and Hasta Snana d. Bashpasnana (Steam bath) e. Awagahana (Immersion bath) f. pristasnana (Spinal bath) g. Katisnana (Hip bath) h. Alternate hot and cold bath i. Observe Jacuzzi and whirlpool bath at available places. 4) Long case sheets for Pathya, Apathya, Aushadhi (if needed), Yoga and Nisargopachara advice to a) Non communicable diseases 20 b) Communicable diseases 10 c) Garbhini Paricharya 10 d) Mal Nutrition treatment cases 10 e) Case studies of Immunization cases

10 iv) Departmental Practicals 1) Dantadhawana - 2 2) Anjana - 2 3) Nasya - 2 4) Gandusha- 2 5) Kavala- 2 6) Dhoompana – DhumavartiNirmana - 2 5) Educational Visits The brief report of each visit (Minimum 10 compulsory) should be written by student in a journal (Duly signed by Guide and HOD)

1) Water Purification Centre, 2) Milk Dairy, 3) Industry, 4) Leprosy Centre, 5) T.B. Centre, 6) Yoga Centre, 7) Naturopathy Centre, 8) Primary Health Center 9) Disposal of Waste Unit, 10) Sewage Disposal Unit , 11) Hospital Disinfections, 12) Govt. Psychiatric Hospital 13) Isolation Hospital 14) A.R.T. Centre 15) Food and Drug Administration Centre 16) District /Civil Hospital 7) Field Work

a) Active Participation in Various National Health Programmes b) Community Health Survey c) School Health Check-up (minimum 100 students) 8. Departmental duties : Regular Attendance as- PG Final Year Syllabus-30 Duty in OPD and IPD with regard to Pathyapathya, Yoga and Nisargopachar.

1. Museum Development 2. Yoga training for self Swastha and patients. 3. Departmental Seminars 4. Research Journal /Article Reviewes 5. Submit minimum 2 papers in any publications. 6. Practical knowledge of AharaDravya&Adulteration of Food 7. Proper planning, beginning ,completion of Thesis work under the guides 8. Micro Teaching (Training to take Lectures and Practicals of UG). Minimum 10. 9. Daily diary- Log book Format of Practical / Oral Examination Sr.No.Heading of Practicals Marks 1 Daily work book-Log book 10 2 Case Record Sheets 20 3 One Long Case ( Pathya-Apathya advice) 20 4 Two Short Cases(10X2) (Yoga and naturopathy advice each) 20 5 Spotting on Instrument/Equipment/ Medicine/Solve a Problem-(10 Spots x2 20 6 Thesis Presentation 50 7 Viva Voce 60 Total 200 Reference Books:- 1) Relevant portions of Charak, Sushruta, Vagbhata (AshtangHrudaya), Ashtang Samgraha, Sarangadhara, Bhavaprakasha, Madhavanidan&Yogaratnakara, Bhela Samhita with the respective commentaries 1) SwasthavrittaSamuchaya –VaidyaPtRajesvarDuttaShastri 2) SwasthyaVignyana - Dr.B.G.Ghanekarshastri 3) PrakritikaChikitsa -Kedarnath Gupta 4) Reddy's Comprehensive Guide to Swasthavritta –Dr.P.Sudhakar Reddy 5) SwasthaVigyan - Dr.MukundswaroopVerma 6) Ayurvediya Hitopdesh - Vd.RanjitRai Desai 7) Yoga and Ayurveda - Dr.Rajkumar Jain 8) SwasthvrittaVigyan - Dr.Ramharsha Singh. 9) Swasthvrittam - Dr.BramhanandTripathi 10) AyurvediyaSwasthvrittam - Vd.Jalukar 11) HathayogPradipika – SwatmaramYogendra (Kaivalyadhama) 12)YogikYogPadhati - BharatiyaprakrutikChikitsaPadhat 13)YogikChikitsa - ShriKedarnath Gupta 14)PrakrutikChikitsaVigyan - Verma 15)Janasankhyashikshasidhanta evamUpadeysa - S.C.Seel 16)Swasthvritta - Dr.Shivkumar Gaud 17) Health and Familywelfare - T.L.Devraj 18)SachitraYogasanDarshika - Dr.IndramohanJha 19)Preventive and Social medicine - J.K.Park 20)Yogadeepika - Shri. B.K.S. Iyengar 21) Swasthavritta - Vd.Sakad 22)Positive Health - Dr.L.P.Gupta 23)Biogenic Secretes of Food In Ayurveda - Dr.L.P.Gupta 24)Yoga and Yogikchikitsa - Ramharsha Singh 25)The Foundation of Contempary Yoga - R.H.Singh 26)YogasidhantaevumSadhna



- H.S.Datar PG Final Year Syllabus-31 27)Patanjal Yoga Sutra – Maharshi Patanjali, Karambelkar 28)PrakrutikChikitsaVidhi - Sharan Prasad 29)Text book of Swasthavritta - Dr.Ranade, Dr.Bobade, Dr.Deshpande 30)GherandSamhita 31)Bio-Statistics - B.K. Mahajan 32)Swasthavrittavidnyan - Dr.MangalaGauri 33) Community Medicine - Baride and Kulkarni. 34) Light on Yoga - Shri. B.K.S. Iyengar 35) Light on Pranayama - Shri. B.K.S. Iyengar 36) Light on Patanjala yogasutra - Shri. B.K.S. Iyengar 37) Shiva samhita – Kaivalyadhama 38) Gheranda samhita – Kaivlyadhama 39) Swasthavritta vigyan – Vd. Patrikar Vijay 40) Swasthavritta – Vd Yashwant Patil and Vd. Vhawal 41) Food and nutrition – Swaminathan 42) Preventive and Social Medicine – Mahajan 42) Preventive and Social Medicine – B.N.Ghosh 43) Preventive and Social Medicine – Gupta 44) Yoga and Nisargopachar- Vd. Prama Joshi Syllabus prepared by 1. Dr. Mihir Hajarnavis (Group leader) 2. Dr. Arpan Bhatt (Coordinator) 3. Dr. S. Venugopal Rao 4. Dr. Sajitha.K 5. Dr.Yeshwant.R.Patil 6. Dr. Poornima Krishnamurthy 7. Dr. Yashawant Chauhan. 8. Dr. Rajkumar Bobade 9. Dr. Jayan Damodaran 10.Dr. Yogeshwar Dayal Bansal 11.Dr. Sudhanshu Dutt Sharma

### **PG Final Year Syllabus-32 8.**

#### **ROGA NIDANA PAPER- I**

**FUNDAMENTAL PRINCIPLES OF ROGANIDANA** Concept of Tridosha and its Pathological implications. 63 permutations and combination of Tridosha. Lina and Stambhita Dosha, their cause and importance in manifestation of Samprapti Concept of Rakta as a Chaturtha Dosha. Importance of Rakta in the manifestation of diseases. Concept of Ashrayashrayi bhava and its applied utility. Different types of Dosha Gati. Causative factors and practical utility of movement of Doshas from Kostha to Shakha and Shakha to Koshtha. Concept of Ashayapakarsha. Trayo roga marga, their diseases and clinical importance of Roga Marga. Concept and classification of Avarana, its role in pathogenesis, mode of diagnosis of Avarana and its importance in chikitsa sutra. Applied aspect of Dhatu Poshana Krama and Dhatu Samvahana. Concept of Margaga and Sthanastha Dhatus. Conept and applied aspects of Doshapaka and Dhatupaka Fundamental and applied aspect of Dhatu, Upadhatu and Mala. Diseases developed due to their vitiation (pradoshaja vikara). Concept and applied aspects of Srotas, their importance in health and diseased conditions. Concept and applied aspects of Sroto Dushti and Khavaigunya. Understanding the various srotas which are not included in classical list of srotas but enumerated while describing the samprapti of diseases. Description of Dosha-Dushya-Sammurchhana, Concept of Prakriti Sama Samaveta and Vikriti Vishama Samaveta Sammurchhana. Importance of Dosha-Dushya-Sammurchhana in Diagnosis and treatment. Concept of Vikara vighata bhavabhava prativisesha. Concept of Agni and its role in manifestation of health and disease. Concept and pathogenesis of Ama. Contemporary interpretation of Ama and its role in pathogenesis. Sama,

Nirama stages of Dosha, Dhatu and Mala. Understanding Samprapti of Santarpanottha and Apatarpanottha Vyadhi Detailed classification of diseases as described in Ayurveda. Knowledge of ICD and DSM classification. Detailed understanding of Nidan Panchaka with their classification and clinical importance. Relation between 'Hetu & Lakshana' and 'Samprapti & Lakshna'. Explanation and applied aspects of Kriyakala and its utility in diagnosis and treatment. Importance of Upadrava, Arishta and Sadhyasadyata and Udarka. Natural History of the Diseases, concept of vyadhisankara in Ayurveda.

## **PAPER – II**

### **ROGA VIGYANA**

Knowledge of classical Samprapti of following diseases with interpretation of Nidana Panchaka including Upadrava, Arishta and Sadhyasadyata and Chikitsa Sutra. Knowledge of commonly occurring diseases of the respective systems mentioned in contemporary medicine and their Ayurvedic interpretation.

1. Diseases of Pranavaha srotas- Kasa - Shwasa - Hikka – Urahkshata – Shosha – Rajayakshma and Ayurvedic understanding of common clinical entities like Pneumonia, Pleural effusion, Bronchitis, Bronchiectasis, Pulmonary Tuberculosis, Bronchial Asthma.
2. Diseases of Annavaha- Pureeshavaha Srotas- Agnimandya - Ajirna - Aruchi- Chhardi, Amlapitta- Shoola, Grahani –Gulma- Udara Roga –Vibandha, Atisara – Pravahika along PG Final Year Syllabus-33 with various clinical presentations. Ayurvedic understanding of common clinical entities like Peptic Ulcer, Irritable Bowel Syndrome, Diarrhoea, Dysentery, Constipation, ulcerative colitis.
3. Diseases of Udakavaha Srotas- Trishna, Daha and knowledge of water and electrolyte imbalance disorders
4. Diseases of Rasavaha Srotas - jwara and Ayurvedic understanding of common clinical entities like various types of Fever- Malaria, Typhoid, viral fevers. Pandu, Amavata, Hridroga, Shotha and Ayurvedic understanding of common clinical entities like Anaemia & its Classification, Rheumatic fever, Rheumatoid Arthritis, Angina, Ischaemic Heart Disease, Hypertension, Myocardial Infarction ,Congestive cardiac failure.
5. Diseases of Raktavaha Srotas- Kamala - Raktapitta - Vatarakta – Kroshtukaseersha - Shitapitta – Maha Kushta – Visarpa – Shwitra and Kshudra Kushta and Ayurvedic understanding of common clinical entities like jaundice, hepatitis, bleeding disorders, Gout, Thrombo Angitis Obliterans (TAO), Deep Vein Thrombosis (DVT), Leukaemia,
6. Diseases of Mamsavaha srotas- Introduction to Granthi, Arbuda, Galaganda and Arsha. Ayurvedic

understanding of all types neoplasia and Thyroid diseases.

7. Diseases of Medovaha srotas- Sthoulya - Karshya – Prameha and Ayurvedic understanding of common clinical entities like Obesity and Diabetes Mellitus.

8. Diseases of Asthi - Majjavaha srotas- Sandhigatavata, Introduction to Asthimajjaparipaka, Asthigata Vidradhi and Ayurvedic understanding of common clinical entities like Osteo- Arthritis, Osteomyelitis, Osteoporosis.

9. Vatavyadhi-Akshepaka - Apatanaka - Ardita - Pakshaghata – Gridhrasi – Viswachi, Avabahuka, Manyasthambha – Katigraha-Pangutwa- Khanja-Khalwee and Ayurvedic understanding of common clinical entities like Hemiplegia, Parkinson's disease, Lumbago- Sciatica syndrome, Bell's Palsy, Ankylosing Spondylitis, MND and other commonly occurring neurological diseases.

10. Diseases of Sukravaha srotas- Klaibya and Vandhyatva and understanding of male and female Infertility, Impotence.

11. Diseases of Mutravaha srotas -Mutrakrichha – Mutraghata, Ashmari and Ayurvedic understanding of common clinical entities like Urinary Tract Infection, Urolithiasis, Nephropathies and Renal failure.

12. Diseases of Swedavaha srotas-knowledge of khalitya, Palitya and Cosmetology.

13. Diseases of Manovaha Srotas - Vishada, Udvega, Bhaya, Bhrama, Anidra, Mada, Murchha, Sanyasa, Apasmara, Unmada, Atatwabhinivesha and Ayurvedic understanding of common clinical entities like Depression, Anxiety neurosis, Phobia, Personality disorders.

14. Indriya Pradoshaja Vikara.

15. Jara janya Vyadhi: Alzheimer's Disease

16. Concept and tools for the study of Anukta Vyadhi (Unexplained and newly emerging diseases). 17. Understanding the concept of karmaja vyadhi

### **PAPER – III**

#### **PARIKSHA VIGYANA**

1. Introduction to Clinical methods and technique for the study of clinical examination
2. Importance of medical history taking and its importance in clinical medicine.
3. Aims, Objectives and Methods, applied aspects and importance of various Rogi and Roga Pariksha as per classics.
4. Srotas Pariksha, Shadanga Pariksha vis-à-vis general & systemic examination of patient.
5. Interpretation of Charakokta trividha pramana pariksha and Sushrutokta shadvidha pariksha with clinical methods mentioned in modern medicine.
6. Interpretation and use of ashtasthana nirikshana along with use of current tools as per Ayurveda. PG

Final Year Syllabus-34

7. Charakokta dashavidha and Sushrutokta Dwadashavidha pariksha along with the use of modern supportive tools for understanding of rogebala and roga bala concept to derive chikitsa sutra
8. Ayurvedic interpretation of all relevant findings of modern clinical examinations, various Laboratory and other Diagnostic tools.
9. Understanding of diagnostic procedures in medical emergencies.
10. Concept of Good clinical practice in Ayurveda and modern medicine.
11. Knowledge of standard clinical laboratory set up useful for Ayurvedic practice.
12. Knowledge of Ancillary common laboratory investigations for diagnosis of diseases, their methods, normal and abnormal values, factors influencing values and their Ayurvedic interpretations & clinical significance as mentioned in practical syllabus.
13. Importance of Bio markers and their utility in clinical researches
- 14.. Update knowledge of emerging diagnostic tools and technologies.
- 15.. Knowledge of various Ayurvedic diagnostic softwares/programmes available.
16. Avayava Pariksha – Radio- Imaging Techniques, Sonological Techniques, ECG, EEG etc and their clinical interpretation.

#### **PAPER – IV**

#### **VIKRITI VIGYANA AND JIVANU VIGYANA**

1. Introduction to pathology and technique for the study of pathology
2. Cell injury and cellular adaptations
3. Immunopathology including amyloidosis and its interpretation with the concept of Ojas vis-à-vis Bala
4. Concept of Shotha versus Inflammation, oedema and healing
5. Derangement of Homeostasis and Hemodynamic disorders
6. |General character and classification of Neoplasia
7. Upasargjanya Vyadhi (Communicable diseases)- Romantika – Masurika – Upadamsha – Phirang and introduction to Syphilis, AIDS, Leprosy, Tuberculosis
8. Detail study of Krimi Vigyanam versus infectious and parasitic diseases along with their mode of infection and life cycle
- . Concept of Snayuka, Shleepada and introduction to Filariasis and classification of common parasites.
10. Concept and applied aspects of Janapadodhvamsa and Environmental diseases
11. Nutritional disorders
12. Concept of genetic diseases and its interpretation in terms of Bija dosha

13. Knowledge of common Bacteria, Virus, Parasites, Fungi and their classification with their disease processes, Nutrition requirements, media and methods for culture and sensitivity

### **PRACTICAL DEMONSTRATION AND HANDS ON EXPERIENCE**

1. Regular posting in Roga Nidana O.P.D. 2. Regular posting in Roga nidana I.P.D. 3. Regular posting in Laboratories 4. Regular posting in other departmental units and Educational Tour to update current medical knowledge 5. Laboratory record – maintenance of observation diary and laboratory record book. 6. Experience in conducting following laboratory investigations for diagnosis of diseases and their methods a) Hematological, Biochemical and Serological measures, Peripheral blood film examination b) Rapid diagnostic techniques. c) Screening test for bleeding disorders- Platelet Count, bleeding time (BT), Clotting time (CT), Prothrombin time (PT). d) Blood grouping - ABO system, Rh typing (Rhesus system) 7. Urine Examination a. Ayurveda anusara mutra pariksha. PG Final Year Syllabus-35 b. Physical Examination, Chemical Examination, and Microscopic Examination c. Dipstix examination 8. Stool Examination i. Ayurveda anusara purisha pariksha-Physical examination - Sama-Nirama Pariksha ii. Microscopic and macroscopic examination of stool 9. Sputum Examination i. Ayurveda pariksha anusara sthivana. ii. Physical, Chemical and Microscopic Examination of the sputum. 10. Semen examination 1) Ayurvediya anusara Retas pariksha. 2) Semen examination & clinical interpretation 11. Biochemical tests related to various organ panels- Liver, Kidney, Heart, Thyroid, Pituitary and Bones. 12. Knowledge of different staining techniques in microbiology. 13. Knowledge of Sero-immunological Investigations: RA, Widal test, ASLO titer, ANA, Etc 14. Physical, chemical, microscopic, biochemical and bacteriological tests for various kinds of body aspirates 15. Knowledge of histopathological techniques.

### **BEDSIDE PRACTICAL /CLINICAL METHODS**

1. Expertise in clinical methods (General and Systemic Examination). 2. Practical knowledge of examination of Roga based on Pancha Nidan. 3. Practical knowledge of instruments used for clinical examination. 4. Practical records of clinical examination of at least 30 long cases in I.P.D. 5. Practical records of clinical examination of at least 50 short cases. 6. Practical knowledge of ECG, USG and Imaging techniques and their clinical interpretation 7. Understanding of various Ayurvedic diagnostic softwares/programmes available like Ayu soft, Rudra, Ayut Nidana etc. PATTERN OF EXAMINATION Name of Paper Hours of training Marks Paper I 100 100 Paper II 100 100 Paper III

100 100 Paper IV 100 100 Practicals: Hospital/Laboratory duties at least 4 Hours per day Total 200 :  
 Observation Diary 10 Laboratory record 10 Short Case (including Case Record) 20 Long Case  
 (including Case Record) 30 Laboratory Work 40 Thesis Presentation 40 Viva Voce 50 REFERENCE  
 BOOKS 1. Charaka Samhita with Various Commentaries 2. Madhava Nidana with various  
 commentaries 3. Abhinava Vikriti Vigyana - Acharya Raghuvir Prasad Dwivedi PG Final Year  
 Syllabus-36 4. Doshakaranatwa Mimamsa - Acharya P.V. Sharma 5. Nadi Darshan - Vd. Tara Shankar  
 Mishra 6. Nadi Vigyanam - Vidyotini Hindi Tika 7. Nadi Vigyan - Shri Satya Dev Vashisht 8. Nadi  
 Vigyan - Gangadhar Tika 9. Nadi pariksha - Vaidya VB Athavale 10. Nadi Pariksha - GP Upadhyay  
 11. Rogi Pariksha vidhi - Acharya Priyavrata Sharma 12. Roga Vigyan - Dr. Vinay Kumar 13. Siddanta  
 Nidan - Gananatha Sen 14. Ayurvediya Roga Vargikaran - Vd. Ramanath and Vd. Gurdip Singh  
 15. Ayurvediya Nidan Evum Chikitsa Ke Siddhanta - Prof. Ram Harsh Singh 16. Relevant portions of  
 Charak Samhita, Sushrut Samhita and Vagbhata 17. Clinical methods in Ayurveda - K. R. S. Murthy  
 18. Parameswarappa's Ayurvediya Vikriti Vigyan - Dr. P.S. Byadgi. and Roga Vikriti Vigyan 19. Nidan  
 Panchaka - Prof SC Dhyani 20. Samprapti lakshana yoh sambhandah - K. Sadashiva Sharma 21. Clinical  
 Diagnosis in Ayurveda in - Vaidya Vasant Patil Roga Nidana and Vikriti Vigyana 22. Oxford  
 Handbook of Clinical Examination - Oxford Handbooks and Practical Skills 23. Symptoms & Signs in  
 Clinical Medicine - Chamberlains 24. Clinical Methods - Hutchinson's 25. Bedside Clinics in Medicine  
 Part- I & II - Kundu 26. Practical Pathology - Dr. K. Uma Chaturvedi 27. Medical Laboratory  
 Technology - R. Sood 28. Clinical Diagnosis and Management by - Todd, Sanford and Davidson  
 Laboratory methods 29. Robbins Basic Pathology - Kumar, Abbas, Fausto at 30. Text Book of  
 Pathology - William Boyds. 31. Text Book of Pathology - Harsh Mohan 32. Text Book of Pathology -  
 Dey and Dey 33. Text Book of Parasitology - Ramnik Sood 34. Clinical Pathology and Bacteriology -  
 S.P. Gupta 35. A Text Book of Microbiology - Ananthanarayana, Panikar

### **PG Final Year Syllabus-37 9.**

#### **PRASUTI TANTRA- STREE ROGA**

#### **PAPER – I**

##### **Garbhagarbhini Vigyan**

1. Applied anatomy of female Genito urinary system, pelvis and Pelvic floor. Pelvic assesment and foetal skull.
2. Physiology, neuro endocrinology and pathology of puberty and Neuroendocrine control of menstrual cycle.. Artava, Rituchakra, Streebija, Pumbija.

3. Garbha sambhava samaagri, Garbhadhanam, Pre-conceptional counseling and care, Pumsavana, Garbhasya shad dhatvatmakata, Garbhavakranti, Matrijadi bhava, Garbha vriddhi, role of panchamahabhutas in the formation and development of foetus. Garbhasya avayavotpatti, Fundamentals of reproduction – gamatogenesis, Fertilization, Implantation and early development of human embryo.
4. Aparā, Garbhodaka Jarayu, Nabhinadi. Placenta, amniotic fluid, membranes and umbilical cord - their formation, structure, Functions and abnormalities. Garbha-poshana, Garbha shareerkriya vaishishtyam, Garbha lingotpatti, Garbha varnotpatti, Garbhasya masanumasika vriddhi. Foetal physiology, circulation, Foetal growth and development
5. Bija – Bijabhaga – Bijabhagavayava janya garbhanga vikruthi. Genetics, Birth defects and other teratologic abnormalities
6. Garbhini nidana, sapekshanidana, Garbhakalina matrigata parivartana, lakshana, Dauhrida. Diagnosis and differential diagnosis of pregnancy, anatomical and physiological changes during pregnancy, Endocrinology related to pregnancy, Immunology of pregnancy.
7. Garbhiniparicharya, Masanumasika Pathya Apathya evum Garbha upaghatakara bhava. Ante Natal care, examination investigations and management,.
8. Garbhasankhya nirnay, Bahu apatyata, Multiple pregnancy.
9. Garbhavyapad - causes, clinical features, complications, management and treatment of Garbhasrava and Garbhapata , Upavishtaka, Nagodara / Upashushka, Lina garbha, Goodagarbha, Jarayu Dosha, Antarmrita garbha , Garbha shosha, Garbha kshaya, Bhutahrta garbha, Raktagulma. Abortions, I.U.G.R, Intrauterine Foetal death Ectopic pregnancy and gestational trophoblastic neoplasia,
10. Garbhini vyapad – nidana panchaka and chikitsa of garbhini vyapad. Early recognition, differential diagnosis and prompt management of pregnancy complications, Emesis and Hyperemesis gravidarium, Anaemia, Pregnancy Induced Hypertension, Pre-eclampsia, Eclampsia, Antepartum hemorrhage, Rhincompatibility. Management of pregnancies complicated by medical, surgical or Gynecological disorders in consultation with the concerned specialties by team approach a. Pyrexia, Heart disease, Diabetes mellitus, Liver disorders, Respiratory diseases, Renal diseases, Epilepsy, Hypertensive disorders. b. Fibroids, Ovarian tumors, Genital prolapse, Carcinoma Cervix. Infections in pregnancy: Toxoplasmosis, Viral infections ,Rubella, CMV, Hepatitis-B, Herpes, Syphilis and other Sexually Transmitted Infections including HIV, Prevention of mother to child transmission of HIV infection (PMTCT).
11. Jataharini related to garbhini avastha
12. Evaluation of Foetal and maternal health in complicated pregnancies by making use of diagnostic modalities.

13. Prenatal diagnosis of fetal abnormalities and appropriate care. PNDT Act and its Implications. 14. Vishesh adhyayan of – Ashtanghriday sharira - Adhyay -1st – Garbhavkranti Sushrutasamhita sharira - Adhyay -3rd – Garbhavkranti Charak Samhita sharira - Adhyaya - 8th Jatisutriya PG Final Year Syllabus-38

## **PAPER – II**

### **Prasava – Vigyan Prakrit prasav**

1. Prasav paribhasha, Prasav kaal, Prasava parambha karana, Prasava kalina garbha sthiti, Avi, Sutikagara. a) Initiation and onset of parturition. b) Examination and evaluation of patient in labour. c) Physiology of labour. d) Mechanism of labour. e) Selection of place of delivery and labour room. 2. Prasava avastha evum paricharya a) Stages of normal labour b) Intrapartum maternal and foetal monitoring c) Management of normal labour Prasava vyapad 1. Etiopathogenesis, clinical features, prevention and management of Garbhasanga, vilambita prasav, Mudhagarbha and Aparasanga. a. Prolonged labour b. Cephalo pelvic disproportions c. Malpresentation d. Obstructed labour e. Methods of Induction and Augmentation of labour 2. Complications of different stages of labour 3. Obstetric management of high risk Pregnancies- Pre eclamptic toxemia, Eclampsia, Diabetes, cardiac disease, asthma, Epilepsy, ante partum haemorrhage, preterm premature rupture of membranes, , Preterm, Post term, Multiple pregnancy, IUGR & HIV -AIDS 4. Still birth- diagnosis, complications and management. Jatamatra/ Navajata shishu paricharya 1. Examination and management of neonate. 2. Management of birth asphyxia. 3. Detection of congenital malformation in newborn and timely referral for correction. Sutika vigyana 1. Sutika Paribhasha, kala maryada, paricharya. 2. Sutika vyadhi and their chikitsa. 3. Stana sampat, Stanya utpatti, Stanya sampat, Stanya pariksha, Stanya vriddhi, kshaya and dusti karana, lakshan and its Chikitsa, stana shotha, stana vidhradhi. 4. Suppression of lactation 5. Normal and abnormal puerperium. Obstetric shock and management 1. Raktadhana: blood transfusion and replacement of blood constituents. 2. Management of fluid and electrolyte imbalance in obstetrics. Drugs used in obstetric practice, indications/contra indications, doses and side effects. Vishesa Adhyayana of – Ashtanga Hridaya Sharira Sthana 2nd Adhyaya – Garbha vyapad Sushruta Samhita Nidana Sthana 8th Adhyaya – Mudhagarbha nidana Sushruta Samhita Chikitsa Sthana 15th Adhyaya – Mudhagarbha Chikitsa PG Final Year Syllabus-39

## **PAPER – III**

### **Stree Rog vigyan**

1. Disorders of menstruation and Female reproductive system. A) Congenital malformations of female genital tract B) Artav dushti, artava vriddhi, artava kshaya, asrigdara, anartava, and kashtartav. C)



Genital infections including sexually transmitted infections. D) Abnormal vaginal discharges. E) Arsha, Yonikanda, Gulma, Granthi, Arbuda. F) Abnormal uterine bleeding, Endometriosis, fibroid uterus, Adenomyosis, Polycystic ovarian syndrome and neoplasia of female genital organs. G) Endocrinological disorders affecting female reproductive system. H) Somarog.

2. Detailed study of yoni vyapad mentioned by different Acharyas with their commentaries and all possible correlations with modern gynecological diseases.

3. Vandhyatva A) Hetu, Bheda, Pariksha, and Chikitsa. B) Detailed study of causative factors, Investigations with recent advances in management of infertility, Adoption law.

4. Stanaroga Detailed study of Stanashotha, Stanakilaka and stanavidradhi, stana granthi, stanarbuda. Examination of breast, diagnosis and differential diagnosis of breast lump.

5. Measures of contraception A) Ayurvedic view of Garbha nirodha and Garbhapatkara yogas. B) Temporary Contraception C) Recent studies in the field of contraception. D) National Health programme to improve maternal and Child health, social obstetrics and vital statistics (maternal and perinatal mortality).

6. Sthanik chikitsa Detailed study of Pichu, Varti, Dhupan, Dhavana, Parisheka, lepa, Kalkadharana, Uttarabasti, agnikarma and kshara karma.

7. Rajo Nirvritti - Climacteric and menopause. - Geriatric health care

8. Study of modern diagnostic techniques and Investigations.

9. Important drugs used in Streerog.

10. Panchakarma in streerog

11. Vishesha Adhyayana of – Charaka Samhita Chikitsa Sthana – 30th Adhyaya - Yonivyapad Chikitsa Sushruta Samhita Uttara Tantra - 38th Adhyaya – Yonivyapad Pratishedha Kashyapa Samhita Kalpa Sthana - Shatapushpa Shatavari, Lashuna kalpa Adhyaya

#### **PAPER – IV**

Prasuti–Streerog–Shalya Karma General principles of Gynecological and Obstetric Surgeries. Analgesia and Anaesthesia in Obstetrics and Gynaec operative procedures. Operative Obstetrics Decision making, techniques, diagnosis and management of surgical complications. PG Final Year Syllabus-40 Dilatation and evacuation, Hysterotomy, Provision of safe abortion services –selection of cases, technique and management of complications, septic abortion, criminal abortion, MTP Act. Cervical encirclage. Instrumental delivery (Forceps, vacuum extraction), Caesarean Section, Manual removal of Placenta, Caesarean Hysterectomy. Operative gynecology Selection of cases, technique and management of complications of minor and major gynecological procedures. Dilatation and Curretage, Cervical cauterization. Polypectomy, Myomectomy, Cystectomy, Oophorectomy. Surgical sterilization

procedures. Hysterectomy. Surgical procedures for genital prolapse. Surgical management of benign genital neoplasm. Recent advances in Gynaecology and obstetrics – Diagnostic and therapeutics Shock and its management, Blood Transfusion, Fluid and electrolyte imbalance, Fluid therapy. Record keeping, ethical and legal issues involved in obstetrics and gynaecology. Medico-legal aspects – ethics, communication and counselling in obstetrics and Gynecology Intensive care in Obstetrics and Gynecology. Content of Practical 1. Practical training to conduct • Normal and Complicated deliveries • Assisted/ Instrumental deliveries • Caesarean Section • Neonatal resuscitation 2. Practical knowledge of grabhini pricharya, sutika pricharya and masaanumasik garbha vriddhi. 3. Practical training to perform obstetrical and Gynaecological Surgery 4. Practical training to provide family welfare/ Planning services, safe abortion methods along with surgical sterilization. 5. Practical knowledge and practice of all relevant equipment, Procedures, complications, Emergencies with their management. 6. Practical knowledge of Yogasanas and pranayam useful in Stree rog and Prasuti tantra. 7. Practical knowledge of Panchakarma and Sthanik Chikitsa used in Stree Rog and Prasuti Tantra. 8. Practical Knowledge of recent advances in Gynaecology and obstetrics. Pattern of Practical Examination 1. Practical Record Book - 20 Marks 2. Bed side examination Short Case - 20 Marks Long Case - 40 Marks 3. Identification of the Instruments/x-ray/USG plate - 20 Marks 4. Thesis Presentation - 50 Marks 5. Viva Voce - 50 Marks PG Final Year Syllabus-41 Reference Books1. Related matter from all the samhitas and their commentaries. 2. Prasuti tantra evum stree roga by prof Tewari P V 3. Concepts of gynecology Dr Nirmala G Joshi. 4. Prasuti Tantra Prof. M. Dwivedi 5. Stree roga vigyan - Dr VNK Usha 6. Navya prasuti Vigyan Dr Pooja Bharadwaja 7. Text book of gynaecology-Berek and Novak. 8. Text book of obstetrics- Williums 9. Text book of obstetrics- D C Dutta 10. Text book of gynaecology - D C Dutta 11. Gabbe's normal and problem pregnancies. 12. Human embryology by Saddler. 13. Jeffcoat's principles of gynaecology 14. Te linde's gynaecological surgery.

### **PG Final Year Syllabus-42 10.**

### **KAUMARBHRITYA-BALA ROGA**

#### **PAPER – I**

Bija, Garbha Vigyaniya (Human Genetics, Embryology) Marks: 100 A. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders)

1. Ayurvedic genetics with modern interpretations: Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya; Measures for obtaining good progeny.

2. Modern genetics Basic concepts: 1. Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening. 2. Human Chromosomes - Structure, number and classification, methods of chromosome preparation, banding

patterns.

3. Single gene pattern inheritance: Autosomal & Sex chromosomal pattern of inheritance, Intermediate pattern and multiple alleles, Mutations, Non Mendelian inheritance, mitochondrial inheritance, Genomic imprinting, parental disomy.

4. Criteria for multi-factorial inheritance. Pathogenesis 1. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism 2. Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities, syndromes 3. Multifactorial pattern of inheritance: Teratology, Cancer Genetics – Haematological malignancies, Pharmacogenetics. 4. Chromosomal disorders 5. Chromosomal aberration (Klinefelter, Turner and Down's syndrome 6. Genetic Counseling, Ethics and Genetics. B. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders) 1. Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum 2. Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm. 3. Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development) First week of development♣ Second week of development♣ Third week of development♣ Fourth to eighth week of development (Embryonic period)♣ Development from third month till birth (Fetal period)♣ 4. Formation of Prakriti, their assessment in children viz. Bala, Kumara, Yauvana; Pathya-Apathya according to Prakriti. 5. Apra (Placenta) Apra Nirmana (Formation of placenta), Apra Karya (Functions of placenta); Apra Vikara (Placental abnormalities) 6. Nabhinadi (Umbilical Cord) Formation and features of umbilical cord 7. Garbha Poshana ( Nutrition- from conception to birth) 8. Yamala Garbha( twins) PG Final Year Syllabus-43 9. Garbha Vriddhikara Bhavas, Garbhopaghatkara Bhavas. 10. Effect of maternal medication, diet and illness over fetus. 11. Teratology including defects of bija, atma karma, kal, ashaya etc.: causative factors for teratogenicity, mode of actions of teratogenes, critical periods 12. Perinatal Care and Perinatal complications 13. Scientific study of Jataharini specific to children. 14. Prenatal diagnosis 15. Samanya Janmajata Vikara (Common congenital anomalies of different systems): Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Khandaoushtha (cleft lip), Khanda-Talu (cleft palate), Sanniruddha Guda (Anal stricture / imperforated anus), Pada-Vikriti (Talipes equinovarus and valgus), Tracheoesophageal Fistula (TOF), Spina bifida, Meningocele, Meningomyelocele, Pyloric Stenosis.

## **PAPER-II**

### **Navajata Shishu Vigyan evam Poshana Marks: 100 PART-A**

1. Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates.)

2. Navajata Shishu Paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation)
3. Samanya Navajata Shishu Paricharya (General Neonatal Care –Labour room onwards)
4. Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn)
5. Prasava Kalina Abhighataja Vyadhi (Birth injuries): Upashirshaka (Caput , cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdural hemorrhage)
6. Navajata Shishu Parikshana (Examination of new born): Ayu Parikshana (including Lakshanadhyaya) Modern approach of Neonatal Examination including gestational age assessment 7. Kumaragara: Navajata Shishu Kaksha Prabandhana (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramnikarana (sterlization), Knowledge of equipments used in nursery.

## **PART-B**

8. Navajata Shishu Vyadhi (Early neonatal disorders): Hypothermia, Shvasavarodha (Asphyxia Neonatorum/Respiratory distress), Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal septicemia), Kamala (Neonatal Jaundice), Akshepaka (Neonatal convulsion), Pandu (Anemia), Atisara (Diarrhea), Asamyaka Nabhinal kartanjanya vyadhi.
9. Navjata Kshudra Vikara (Minor neonatal ailments): Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).
- 10.Sadyojatasya Atyayayika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.
- 11.Procedures: Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Vamana (Stomach wash), Ashchyotana Neonatal resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, Phototherapy, Naso-Gastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture
- 12.Nutrition: A. Navjat Shishu Ahara (Neonatal feeding): PG Final Year Syllabus-44 1. Specific Feeding methodology as per Ayurveda and recent advances; Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby. 2. Stanyotpatti and Prasruti (Lactation physiology), Stanya Samghatana (Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampata evam Mahatva (Properties & importance of pure milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate production and absence of breast milk), Stanya parikshana

(Examination of breast milk), Stanyabhava Pathya Vyavastha (Alternative feeding methods in absence of breast milk), Various feeding methods, TPN( Total Parenteral Nutrition) 3. Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation) 4. Dhatri (Wet nurse): Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking. 5. Lehana (Elucturies) B Bala-Poshana (Child Nutrition): 6. Daily requirements of nutrients for infant and children 7. Common food sources 8. Satmya and Asatmya Ahara (Compatible and incompatible diet) 9. Pathya evam Apathya Ahara (Congenial and non-congenial diet) 10. Stanyapanayana (Weaning)

### **PAPER-III**

#### **Balrog (Pediatric Disorders) Marks: 100**

##### **PART-A**

1. Pranvaha Srotasjanya Vyadhi (Respiratory disorders)- Kasa (Cough), Shvasa (Respiratory distress Syndrome), Tamaka Shwasa (Childhood Asthma), Bronchiolitis, Shvasanaka Jwara (Pneumonia-bacterial, viral etc) Rajyakshma (tuberculosis), Vaksha-Puyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax)
2. Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders): Jwar (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Pravahika, Vibandha (Constipation, Udarshula (Pain in abdomen), Guda bhramsh (Rectal prolapse)
3. Rasa evam Raktavaha Srotasjanya Vyadhi (Hematological and circulatory disorders): Pandu (Anemia and its various types like Nutritional, haemolytic etc.) and , Raktapitta (Bleeding disorders), Vishishta Hridrog (Specific cardiac diseases- RHD etc), Hypertension, Leukemia.
4. Mamsavaha Srotasjanya Vyadhi: Myopathies
5. Mutravaha srotasjanya Vyadhi (Urinary System disorders): Vrikkashotha (Glomerulonephritis and nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria),
6. Vatavaha Sansthanjanya Vyadhi (Nervous system disorders): Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis),
7. Pediatric disabilities and Rehabilitation: Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia), Adharanga Vayu (diplegia),. Amavata (Juvenile Rheumatoid arthritis)
8. Manovaha Srotasa Vyadhi: Breath holding spell, Shayya mutra (Bed wetting), Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation, Temper tantrum, Pica.

## **PART-B**

9. Antahsravi evam Chayapachayajanya Rog (Endocrine and Metabolic disorders) PG Final Year Syllabus-45

10. Kuposhanjanya Vyadhi (Nutritional disorders): Karshya-Phakka-Balshosha Parigarbhika (PEM and allied disorders), Vitamin-mineral and trace elements deficiency disorders, Hypervitaminosis,

11. Krimi evam Aupsargika Rog (Infestations and Infections): Krimi (Giardiasis and intestinal helminthiasis, Amoebiasis) Common bacterial, viral infections with special reference to vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptanaka (Tetanus including neonatal tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella and Masurika (Chickenpox), Antrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis,; Vishama Jwar (Malaria) and Kala-azar, Dengu fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis), Chickengunia

12. Tvaka Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta.

13. Anya Vyadhyi (Miscellaneous disorders): Jalodar (Ascites), Gandamala, Apachi (Cervical lymphadenitis), Kukunakadi Akshi Rog, Hodgkin & non-Hodgkin Lymphoma, Abnormal growth patterns, Short stature, Niruddha prakash (Phimosis), Paridagdha Chhavi, Utpullika

14. Samghata- Bala Pravrita Rog (damstra): Dog bite. Snake bite, Scorpion bite etc

15. Atyayika Balarog Prabandhana (Pediatric emergency management): Shock and Anaphylaxis, Fluid and electrolyte management, Drowning, Foreign body aspiration, Status epilepticus, Acute hemorrhage, Acute renal failure, Febrile convulsion, Status asthmaticus, Burn, Acute Poisoning

16. Balagraha: Scientific study of Graha Rogs 17. Life Style disorders

## **PAPER-IV**

### **Kaumarabhritya in Ancient Classics and recent Advances Marks: 100**

1. Significant contributions of Kashyapa samhita, Arogya raksha Kalpadrum and other texts /treatises of Ayurveda such as Harita Samhitain the field of Kaumarabhritya including relevant parts from Brihatrai

2. Panchakarma: Principles of Panchakarma [Swedan–Hasta–Pata sweda etc], and their application in pediatric practice in detail.

3. Update knowledge of clinical pediatrics including recent researches in Kaumarabhritya.

4. Fundamentals of Hospital management with special emphases on Pediatric Ward. Practical/ Clinical Exposure for (Record of exposures to be produced at the practical examination) 1. Full term, preterm, post term new born baby care 2. Practical procedures like – phototherapy, premature baby care, KMC,

venepuncture, cord blood sampling, stomach wash, suction, resuscitation, etc. 3. Practical skill of Pediatric Panchakarma procedures 4. Child Health Check up 5. IQ Assessment of Children 6. Exposure to National Health Programs related to Children, including Immunization Program. 7. Patient case Records (50 Records) 8. Practical knowledge of modern diagnostic (invasive & non invasive) tools and techniques used in pediatrics. 9. Management of common pediatrics emergencies. 10. Participation in UG teaching/training from UG syllabus via A-V aids (minimum-3) 11. Minimum 15 days compulsory reciprocal exposures in Kaumarbhritya department of other institution during the study period. 12. Participation in National/international seminars 13. Publication/acceptance of two research papers in indexed/peer reviewed/ISSN journals from the dissertation. Pattern of practical examination: PG Final Year Syllabus-46 1. Case record -15 Marks 2. Bed side examination a) Short Case -15 Marks b) Long Case -25 Marks 3. Identification of instruments/ spotting -10 Marks 4. Lecture/Dissertation Presentation -10 Marks 5. Viva-voce -25 Marks Reference Books 1. Kashyapa Samhita Complete Hindi translation by Satyapal Vidhyalankara English translation by Prof. Premvati Tiwari 2. Principles & practice of Pediatrics in Ayurveda: CHS Shastri 3. Child Health Care in Ayurveda: Abhimanyu Kumar 4. Ayurvedic Concepts of human Embryology: Abhimanyu Kumar 5. Kaumarbhritya by Prof. D.N. Mishra 6. Kaumarbhritya Ke Antargata Balgraho Ka Kramika Evam Vaigyanika Adhyana by Prof. Chanchal Sharma 7. Notes on Kaumarbhritya-by Dr. Dinesh K S 8. Pran - Pratyagamanam-by Dr. B.M. Singh 9. Ayurveda Dwara Matra Evam Shishu Paricharya by Dr. KS Patel, V.K. Kori & Rajgopal S 10. Kaumarbhritya related references from Charaka Samhita, Sushruta Samhita Vagbhata etc. 11. Clinical Methods in Paediatrics by Meharban Singh 12. Pediatrics Emergencies by Meharban Singh 13. Essential Pediatrics O.P. Ghai 14. Text Book of Pediatrics Nelson 15. Care of New Born by Meharban Singh

## **PG Final Year Syllabus-47 11.**

### **KAYACHIKITSA**

#### **PAPER- I**

#### **Fundamentals of Kayachikitsa 100 marks**

1. Rogi-Roga Pariksha: Nidan Panchak, Trividha pariksha, Ashtavidhpariksha, Dashvidhpariksha in the light of recent advances. Clinical methods-Detailed history taking and patient examination, Systemic examination as per ayurveda and recent advances.
2. Interpretation of common investigations: ECG, Echo cardiography, TMT, Spirometry, Xray, USG, CT-Scan, MRI, EEG, EMG, in different pathological conditions.
3. Detailed Knowledge of Principles of Chikitsa in Ayurveda. Types of Chikitsa. Principles and practices of Rasayana and Vajikarna.

4. National Health Programmes and prospective role of Ayurveda services and therapeutics in them. 5. Medical ethics, Common laws and regulations applicable to clinical practice.
6. Elaborate knowledge of undertaking common medical procedures like Ryle's tube feeding, tapping, transfusions, catheterization, tractions.
7. Ayurveda Dietetics: importance of Pathya, Apathya and Anupana. 8. Drug-drug interactions and adverse drug reactions, Iatrogenic disorders.

## **PAPER – II**

### **Samanya Roga Chikitsa 100 marks**

Nidana/ Chikitsa including Nidana Parivarjana, Pathya, Apathaya, Chikitsa siddhanta, Shamana, Shodhana, Panchakarma, Rasayana and Atyayika Chikitsa (Anupana, Drug/Nondrug) as per Ayurvedic and conventional therapeutics of following Srotogata vyadhi:

1. Pranavahasrotas: Shwasa, Hikka, Kasa, Rajayakshma, Hridroga, Parshwashoola, Urakshata, Svarabheda Cardio-respiratory system: Bronchitis, Bronchiactasis, Bronchial asthma, COPD, Corpulmonale, Pneumonias, Occupational lung diseases, Pulmonary tuberculosis, Congenital Heart disorders, IHD, RHD- Valvular diseases, Cardiac failures, Cardiomyopathy, Pericarditis, Endocarditis, Hypertension,.
2. Annavahasrotas: Agnimandya, Ajirna, Aruchi, Amadosha, Amlapitta, Chhardhi, Shoola, Grahani. Gastrointestinal disorders: GERD, APD, Malabsorption Syndrome,
3. Udakavahasrotas: Trishna, Shotha, Udararoga, water and electrolyte imbalance
4. Rasavaha srotas: Jwara, Amavata, Pandu, Madatyaya, Anaemias, Rheumatoid arthritis, Substance abuse disorders.
5. Raktavaha Srotas: Raktapitta, Kamala, Vatarakta, Kushtha, Kshudraroga, Sheetpitta, Udarda, Kotha, Visarpa, Shvitra. Haemopoietic disorders, Bleeding and Coagulation disorders, Leukaemias, Thrombocytopenia, Disorders of Bone Marrow, Hepatobiliary disorders, Hepatitis, Cirrhosis, Cholecystitis, Liver abscess, Jaundice, Dermatological disorders, Parasitic, Infective, Allergic, Autoimmune skin disorders, Eczemas,
6. Mamsa-Medovahasrotas: Medoroga, Sthaulya, Prameha, Galaganda, Gandamala, Urustambha, Diabetes mellitus, over weight .
7. Asthi-Majjha vahasrotas: Asthikshaya, Sandhigatavata, Osteoarthritis, Osteopenia
8. Shukravahasrotas: Such as Kalibya, Dwajabhanga. Impotence
9. Mutravahasrotas: Mutrakricchra, Mutraghata, Ashmari, Urinary disorders: UTI, Lithiasis, ARF, CRF, Uraemia, BPH.
10. Purishvaha srotas: Atisara, Pravahika, Anaha, Adhamana, Krimi, Udavarta, Enteritis, Dysenteries,



Ulcerative colitis, IBS, Worm infestation.

### **PAPER – III**

#### **Vishishta Roga Chikitsa 100 marks.**

Comprehensive knowledge of etiology, demography, pathogenesis, symptomatology, complications, investigations, diagnosis and drug/non-drug management of following diseases as per Ayurveda/Conventional therapeutics: PG Final Year Syllabus-48

1. Vata-Vyadhi- Pakshavadha, Adharanga Vata, Sarvanga Vata, Ananta Vata, Gata Vata, Gridhrasi, Ardita, Akshepaka, Apatantraka, Ekangvata, Vishvachi, Avabahuka, Avarana. Musculoskeletal disorders: Myopathies, G B Syndrome, Muscular dystrophies, Lumbago Neurological disorders: Neurodegenerative disorders like Alzheimer's, Parkinsonism, CVA, Neuropathies, Facial palsy, Motor Neuron Diseases, Epilepsy, Sciatica.
2. Sankramakroga: Sheetala, Masoorika, Updansha, Phiranga, Gonorrhoea, Chancroids, Syphilis, 3. Manasa vyadhi; Unmada, Apasmara, Atatvavinivesha, Mada, Moorcha, Sanyasa. Common psychiatric disorders: Classification of psychiatric ailments. Disorders of thought like Schizophrenia. Disorders of Mood like Mania, Depression. Neurosis, personality disorders, psychosexual disorders.
4. Metabolic disorders: Gout, Dyslipidaemia, Atherosclerosis, Obesity.
5. Endocrinal disorders; Disorders of Pituitary, Thyroid, Adrenal Medulla, Reproductive hormones.
6. Parasitic/Infective/Communicable disorders: Shlipada, Filariasis, Vishama Jvara, Malaria, Manthara Jwara, Enteric Fever, Dengue, Chickenpox, Measles, Influenza, Kalaazar, Mumps, Rabies, Poliomyelitis, Plague, Meningitis, Encephalitis, Chickungunya, HIV/AIDs, Common worm infestations.
7. Common neoplastic disorders and their management strategies. Role of Ayurveda medicines in cancer care including palliative care.
8. Autoimmune diseases: Myopathies, Rheumatic fever, SLE.
9. Common poisonings and their management like Insecticide/Pesticide poisoning, Snake poisoning, Vegetable and chemical poisoning.
10. Janapadodhvamsa Vikara. Environmental diseases and their management.

### **PAPER – IV**

#### **Advances in Kayachikitsa 100 Marks.**

Critical care medicine, Management of medical emergencies, ICU services, Field medical services

1. Hospital management strategies, Infrastructure, use of IT technology, essential manpower, equipment, Patient care, management and coordination with contemporary health institutions and field institutions.
2. National Health Campaigns of AYUSH and components under NRHM.
3. Clinical Research in Kayachikitsa and its application in clinical medicine as per new evidence base in different systemic disorders.

4. New emerging health challenges and ayurvedic medicines: Chickangunya, HIV/AIDs, Swineflu, Chickenflu, Dengue, Restless leg syndrome, Sick building syndrome, Fibromyalgia.
5. Role of Ayurveda in immune-protection, immuno-modulation and in management of other allergies and immunological disorders.
6. Indications and importance of Organ transplantation, Ethical and legal issues involved.
7. Knowledge of Geriatric care and terminal care medicine.
8. Basic knowledge of Gene therapy, Stem cell therapy, Genetic modeling and chromosomal disorders in different disease conditions.
9. Radio-isotopes, disease and tumor markers in diagnosis and assessment of therapy.
10. Scope and methods of independent and collaborative research in Kayachikitsa.
11. Disaster management strategies.
12. Application of advances in Rasayana and Vajikarana therapies
13. Application of emerging trends in Panchakarma in medical management.
14. Physical medication and rehabilitation. PG Final Year Syllabus-49 PRACTICALS Practicals shall be held to evaluate the patient care, diagnostic and treatment expertise of the student. It should also be taken as a chance to evaluate the clinical skills. Clinical Ability Evaluation-60 marks based on 1. Case records of 40 IPD Patients in Detail 10 marks 2. Long case History-1: 20 Marks 3. Short Case history-1 : 10 Marks 4. Medical procedures demonstration/ Panchakarma procedure 20 Marks. Academic Competence evaluation- 40 marks based on: 1. Viva 30 Marks. 2. Teaching and communication skills: 10 Marks. Reference Books 1. Relevant portions of Brihatrayi and Laghutrayi with commentaries 2. Cikitsadarsha- Pandit Rajeshvar Dutta Shastri 3. Kayachikitsa - Ramaraksha Pathak 4. Rog Pariksha Vidhi - Priyavrat Sharma 5. Panchakarma Vigyan - Haridas Sridhar Kasture 6. Ayurvediya Nidana-Chikitsa Siddhanta - Prof. R.H.Singh. 7. Kayachikitsa Vol. 1 and 2 - Prof. R.H.Singh. 8. The Holistic Principles of Ayurvedic Medicine - Prof. R.H.Singh. 9. Essentials of Kayachikitsa -II, Vol. 1 - Dr. Aruna 10. Kayachikitsa Vol. I-IV. - Prof. Ajay Kumar 11. Panchakarma Therapy - Prof. R.H.Singh 12. Panchakarma Illustrated - Prof. G. Shrinivasa Acharya 13. Practice of Ayurvedic Medicine (Kayachikitsa) - Prof. A.K. Tripathi 14. Nidanachikitsa Hastamalaka - Prof. R.R. Desai 15. Clinical Methods in Ayurveda - Prof. K.R. Srikantamurthy 16. Aushadhi Gunadharma Shastra - Gangadhar shastri Gune 17. Introduction to Kayachikitsa - Prof. C. Dwarakanath 18. Samprapti lakshnanayoh Sambandhah - Prof. Sadashiv Sharma 19. Nidana Panchak - Prof. S.C. Dhyani 20. Kayachikitsa - Prof. S.C. Dhyani 21. Davidson's Principles and Practice of Medicine. 22. API Text Book of Medicine. 23. Harrison's Text Book of Medicine. 24. Cecil Text Book of Medicine. 25. Relevant texts of concerned subjects.

## **PG Final Year Syllabus-50 12.**

### **MANOVIGYAN AVUM MANASAROGA**

#### **PAPER-I**

#### **Manovyapara Evam Manovigyanam Marks 100**

1. Prachya - arvachya matanusara Mano vityanasya Bhutavidyayah, Amanusha tatha Grahadinam parichaya, setihasa.
2. Prachya arvachya matanusara Manasah Nirupanam-Concept of Manas from Ayurved and modern perspective.
3. Vividha darshananusara Manasah varnanam.-concept of mind in various philosophies.
4. Manasah Svarupam – Structure of mind, Manasah Sthanam- Location of mind, Manovishayah- Objects of mind, Manogunah (Anutva and Ekatva) –Attributes of mind- Minuteness and oneness, Manasah Ubhayatmakatvam-Duality of Manas, Manasah Dravyatvam Karanatvam cha- mind as a substance and tool,Manasah Karanadravyatvam-mind as causative substance,Manodoshah- (Rajas and Tamas),Manasah Bhoutikatvam- Elemental nature of Manas Introduction to concept of Buddhi and Ahamkara - intellect and ego, Manasah Ahamkarikatvam –origin of mind from ego (samkhya),Manasah Annamayatvam- Relationship between food and mind,Manasah trigunatmakatvam(Sattva,Rajas, Tamas)- mind and the three major attributes,Manasah jadatvam-inertia of mind, Manasah dhatutvam-mind as a component of living being, Manasah Karma- Actions of Manas.
5. Manovyapara Nirupanam.
6. Manovyapare Pranodana sadhaka Bodhakadi Doshanam Sambandhah-Relation of humoral fractions such as Prana, Udana, Sadhaka- Bodhaka in the activity of Manas, Concept of Ojas and Manas
7. Katham prakopayanti ManoDoshah SharirDoshah?- How does manasika Doshas aggravate sharirika Doshas?
8. Indriya panchanchakam- five factors in relation to the mental faculties.
9. Gyanendriyanam vishayah- the objects of sense faculties.
10. Gyanotpatti prakriyayam Manaso pradhanyam- Importance of Manas in cognitive process.
11. Indriyarthagrahananantaram Manasah vyapara avum gyanotpattou manaso dayitvam - Action of Manas in cognition after reception by respective Indriya.
12. Knowledge of Dirgha Shashkuli nyaya, Alata-chakra nyaya, Vichi-taranga nyaya, Kadamba-mukula nyaya.
13. Shabda – sparsha – rupa – rasa – gandhanam grahakam manah, tasya mahatvam cha - Manas as conductor of sense objects and its importance.
14. Vayuh indriyanam udyojakah tatha Manasah preranam -Vayu as stimulator of indriya and initiator

of manas.

15. Vakpravrittou Manasah yogadanam - Role of Manas in production of speech.
16. Pratisharire Manasah bhinnatvam - Concept of individuality of mind.
17. Chikitsya purushah- treatable person (living being).
18. Atma nirupanam- description of Atma, Sukshma sharirsya varnanam- description of subtle body, Atma manasoh sambhandhah- relation between Manas and Atma.
19. Antah karana chatushtaya (the four internal faculties).
20. Importance of Dhi, Dhriti and Smriti- importance of intellect, retention power and memory.
21. Role of manas in achieving Tri eshana and Chaturvidha Purushartha/chatur vargarole of manas in attaining the pursuits and four goals of life
- . 22. Concept of Satyabuddhi, Ritambhara Pragya and Upadha- concept of true and false knowledge.
23. Concept of Punarjanma, Purvajanmakrita karma, Karmaphala.
24. Manovaha Srotasam Parichaya– Introduction of Manovaha srotas(channels of mind)
25. Manovaha, Sangyavaha, Buddhivaha, Chetanavaha, Chetovaha, Vataavaha, Raktavaha adi upayukta Srotasam Manasroge varnanam- Description of Manovaha, PG Final Year Syllabus-51 Sangyavaha, Buddhivaha, Chetanavaha, Vataavaha, Raktavaha srotas etc in relation to Manasroga
26. Shatchakra nirupanam.
27. Sattvasara purusha- person with mental excellence.
28. Nidravichara- Concept of sleep, Swapna vichara- Concept of dream, Tandravichara – Concept of drowsiness.
29. Concept of manasprakriti- mental temperament, Concept of Manasa bhava in Shareerika prakriti.
30. Manasaroge Manovigyane cha upayukta Paribhashika shabdanam vishleshanamtechnical terms used in psychology and psychiatry
31. Manas roge upayukta Samhitanam satika adhyayanam- study of portions of treatises useful in psychiatry along with their commentary.
32. Arvachina mano viganasya adhishtana siddhantah, mastishka karmanam sthapanam cha- Fundamentals of modern psychology and functions of brain.
33. Applied Neuro-anatomy and physiology, Neurotransmitters, Psychoneuro immuno endocrinology
34. Manasah swabhavika pratirodhah - Defence mechanism of mind.
35. Shishu manas-shastra, vikasatmaka Manas-shastra – Shishu, Bala, Kumarah, Proudah, Vriddhah cha- Essential elements of psychology, developmental psychology: child, adolescence, adult and aged.
36. Bhava, Sheela, Buddhi, Smriti, Prerakatva adinam gyanam -Concept of Mood, behaviour, attitude, emotions, intelligence, memory, motivation, perception etc.
37. Manas Swasthya Evam Manoroganam Paribhasha – Definition of Mental Health and psychiatric

disorders.

38. Manasrogyansya mahatvam, phalam, prayojanam, prabhavashcha

## **PAPER –II**

### **Manovaikariki Evam Bhutavidya Marks 100**

1. Manovega, Mano vikarah, ManoDosha, ManaSharirayoh paraspara anuvidhayitvam mutual symbiosis of sharir and manas, Manasah chanchalatvam, Manaso vyadhinam ashrayatvam, Manasrogeshu Doshanam paraspara anubandhah, Manasvyadhi utpattou sharirDoshanam vikarakaritam, Indriyadinam hinamithyatiyogah. Prajnaparadha, Purva janma krita karma tatha Papa karmasya rogkarakatvam, Adharmasya Achararasayana upekshanasya cha rogkarakatvam. Bhutavidya – Definition and scope with applied aspects: Divergent views 1. Types and Characteristic features of Bhuta and Graha, Amanushopasarga Vikara caused by Bhuta and Graha, Aetio-pathogenesis of Bhuta and Graha 2. Relationship of Bhuta with Jwara, Ojakshaya, Manovikara, Arishta Lakshana and Daivabala Pravritta diseases. 3. Grahavesha, affecting time of Graha, their specific features, prodromal features and prognosis. 4. Differential understanding of Balagraha and Grahabadha. 5. Sushrut's concept of invasion of Bhuta/Graha. 6. Manas Rognam Nidan, Sampraptischa 7. Manobuddhyadi Vibhramsha 8. Manas dharaniya vega. 9. Kayika-Vachika-Manasika karma hinamithyati yoga in Manasa roga samprapti. Manovikriti –Psychopathology 1. Bijapradosha and Kulaja bhava in manas roga -Genetics and hereditary factors in Psychiatry. 2. Manas roganam prachya arvachina matanusarena vargikaranam 3. Classification of manas rogas yatha kevalamanas, manas sharir, shariramanasika, agantuja adayah 4. Understanding of Parapsychology and its role in overt psychiatric disorders. 5. Recent ICD and DSM classification PG Final Year Syllabus-52 Manas Rogi pariksha vidhi- Psychiatric examination 1. Prachya arvachina matanusarena rogi pariksha visheshena sattva pariksha – Examination of patient according to Ayurvedic and modern methods 2. Trividha Sattva Pariksha 3. Charakokta Anumana Pariksha 4. Manasika avastha Pariksha - Mental Status Examination 5. Vividha pariksha manakah -Different psychiatric assessment inventories like Hamilton's scale, Bech's Depression inventory etc. 6. Manorog chikitsiya manomapaka upakaranani cha - Psychiatric and psychometric tools for diagnosis, Evidence based diagnostic methods. 7. Prayogashaliya pariksha - Investigations– Haematological, biochemical, neurophysiological, endocrinal, EEG, radio imaging- MRI etc. 8. Manasrognam sadhyasadyata – Prognosis of psychiatric diseases. 9. Manas Rog Sandharbhe Vidhi Vaidyakasya vistrita gyanam. 10. Forensic psychiatry- Knowledge about legal and ethical issues in psychiatry, Indian lunacy act, mental health act, Norms to setup a well equipped Mental Hospital (OPD, IPD)

## **PAPER – III**

### **Manas Roga Chikitsa Marks 100**

Comprehensive knowledge of etiology, demography, underlying psycho pathogenesis, symptomatology, complications, investigations, diagnosis, prognosis and drug-non drug management of following psychiatric disorders as per Ayurvedic-Modern therapeutics with their pharmacodynamics:

1. Unmada (Psychoses)- Nija, Agantuja Unmada, Bhutonmada, Vishaja Unmada, Sutikonmada, Smaronmada, Tattvonmada- Paranoia, Mano dukhaja Unmada -Stress related disorders.
2. Apasmara - -seizure disorders
3. Apatantraka – hysterical convulsions
4. Tandavaroga -Chorea
5. Yoshapasmara - conversion disorders
6. Atatvabhinivesha- Obsessive compulsive disorders
7. Vishada- Depressive illness
8. Gadodvega -Hypochondriasis
9. Mada, Murchha, Sanyasa- sensorial disorders
10. Madatyaya, Panatyaya (Panavibhrama, Paramada, Panajirna) - Substance abuse disorders.
11. Nidra vikara (Sleep disorders) , Klama, Tandra, Glani.
12. Bhrama, Vibhrama - Delusional disorders.
13. Chittodvega - Generalized Anxiety disorders.
14. Smriti vikara (memory disorders)
15. Manasika klaibya, Sushrutokta Napumsakata
16. Manasa Dosha Vikara- Kama, Krodha, Lobha, Moha, Irshya, Bhaya, Mana, Mada, Dambha, Ahamkara, Harsha, Matsarya, Iccha, Dvesha.
17. Mood and affective disorders – major depressive disorders, mania and their possible Ayurveda co-relates.
18. Schizophrenia
19. Personality disorders
20. Behavioural disorders
21. Organic mental disorders
22. Post traumatic stress disorders
23. Psycho sexual disorders
24. Eating disorders

25. Somatoform and dissociative disorders PG Final Year Syllabus-53
26. Senile psychiatric disorders - Dementia, Alzhiemer's disease, Parkinsonism, Menopause, Andropause and their possible Ayurveda co-relates.
27. Adhi- Vyadhi Roganam Manasika Prabhava Chikitsa Cha - Psychosomatic disorder-- Bhayaja and Shokaja Atisara, Kamaja and Shokaja Jwara, Tamakashwasa, Prameha, Amlapitta, Parinamashula, Grahani, Ucca Raktachapa(Hypertension), Shula (pain disorders), Twak Vikara.
28. Jirna- Asadhya Sopadrava Vyadhinam Vivechanam – Mental problems in chronic incurable diseases like AIDS, Cancer etc.
29. Mano prakriti vikara – psychopathic personality.
30. Jivana Shaili Tatha mano sammarda janya rogah - Life style and stress related disorders.
31. Shishu tatha Kumara Manoroga - Child and adolescent psychiatry.
32. Jadata, Buddhimandya , Adhyayana Akshamata – Mental deficiency, mentally challenged and learning disabilities.
33. Achara vaikalya - Conduct disorders
34. Manobhava vikara - Emotional disorders
35. Cerebral palsy, infantile autism, Attention Deficit Hyperactive disorders, Tourette's disorder with their possible Ayurveda co-relates.
36. Preventive aspects in Manas Roga – Achara Rasayana, Sadvritta, Shodhana, Rasayana and Vajikarana
37. Manas Roganam Samanya Vishesha Chikitsa Siddhantanam Varnanam,- Daiva Vyapashraya, Yukti Vyapashraya, Sattvavajaya, Adravyabhuta Chikitsa Upayah.
38. Sattvavajaya Chikitsa: Its application and techniques viz. Dhi, Dhairya, Atma Jnana, Kula Jnana, Kala Jnana, Desha Jnana, Bala Jnana, Samadhi, Santwana, Ashwasana, Ayurveda Psycho shock therapy viz. Trasana, Bhayadarshana, Adbhuta Darshana, Vismarana, Vismapana and Pratidvandwi Bhava with their scientific basis.
39. Role of Rasayana, Medhya Rasayana, Achara Rasayana and Vajikarana in Manasa Roga
40. Pathyapathya in Manasa Roga.
41. Manas Rogopayogi Vividha Aushadheenam Vivechanam: Ekamulika (Single drug), Panchavidha Kashaya Kalpana, Rasa Rasayana etc.
42. Brihatrayee, Yogaratnakara, Sharngadhara, Gadanigraha, Bhavaprakasha, Sahasrayoga ukta vividha yoganam vivechanam:Brahmi, Mandukaparni, Vacha, Jatamansi, Yashtimadhu, Shankhapushpi, Kushmanda, Ashwagandha, Kushtha, Tagara, Guduchi, Jyotishmati, Srikhandadichurna,Saraswatachurna etc. Swarna, Swarnamakshika Bhasma, Rajata, Pravala, Mukta, Manahshila, Krishna Chaturmukha Rasa, Krishnachaturbhuj Rasa, Brihatvatachintamani Rasa,Vata

kulantaka Rasa, Manasmitra vataka, Smritisagar Rasa, Unmada gajakesari Rasa, Apatantrakari vati, Kumarakalyana Rasa etc. Kalyanaka ghrita, Brahmi ghrita, Mahapanchagavya ghrita, Mahapaishachika ghrita, Mahabhutarava ghrita, Kushmanda ghrita, Purana ghrita, Panchagavya ghrita etc.

43. Saraswatarishta, Ashwagandharishta, Chittachandirasava etc.

44. Himasagara taila, Tungadrumadi taila, Gandharaja taila, Brahmi taila, Sidharthaka agada etc.

45. Dhupa, Nasya, Lepa, Anjana yogas useful in Manas Roga.

46. Folk Medicine in Manasa Roga.

47. Mano Bhashaja vigyanam - Essentials of Psycho pharmacology, Knowledge of Biological and Pharmacological Therapies in the Management of Various Psychiatric diseases such as hypnotics, sedatives, anxiolytics, mood stabiliser/elevators, antidepressants, antipsychotics, anticonvulsants, Electro-convulsive therapy(ECT) and its applied aspects. PG Final Year Syllabus-54

#### **PAPER – IV**

#### **Manasa Roga Anya Chikitsa Evam Yoga Marks 100**

Panchakarma 1. Importance of Panchakarma and other allied procedures in the management of Manasa Roga. 2. Theoretical knowledge and application of the following karmas in Manasa Roga – Snehana, Svedana, Vamana, Virechana, Basti, Nasya, Raktamokshana, MastishkyaShiro-Basti, Shiro-Dhara, Shiro-Pichu, Shiro-Abhyanga, Murdhni taila, Anjana, Dhupa, Dhupana etc. Yoga 1. Manovigyana sandharbhe yogasya vaishishtyam, Yogashastrasya upayogita mahatvam cha. 2. Yogasya darshanika svarupagyanasahitam tasya astanganam samichinam Gyanam. 3. Ayurveda drishtya yoga adhyayanasya upayogita, Ayurveda shastre pratipaditah yogasya siddhantah. 4. Satvavajaye gyana-bhakti-karma yoganam manasa roge vivechanam-Hatha yogascha. 5. Role of Shatkarma - Kapalabhati, Trataka etc. in Manasa Roga. 6. Naishthiki chikitsa in Manasa Roga. 7. Therapeutic potential of Yoga, Psycho biological effects of Yoga, Spiritual therapy and Yoga. 8. Sudarshana kriya , Transcendental meditation, Yoga nidra, Vipashyana and other allied yogic techniques in Manasa Roga chikitsa. 9. Manas and prana (bio-energy), pranic healing, means of bio-energy modulation in Manasa Roga. Other allied therapeutic procedures: 1. Various methods of psychotherapy and counselling techniques, transactional analysis, behavioural therapy, psycho analysis. 2. Swapna Samvahana chikitsa - Hypnotherapy-Past life Regression and Age Regression Therapy in Manasa Roga. 3. Knowledge of psychiatric emergency and their management. 4. Knowledge of surgical intervention in Manasa Roga 5. Recent advances and updates in concepts, drugs and therapeutic procedures in Manasa Roga. Content of the Practicals S.No. Topic No. of Cases 1. Hypnotherapy techniques 10 2. Case Study Unmada 20 Apasmara 20 Atatvabhinivesh 10 Chittodvega 25 Vishada 25 Madatyaya 10 Psycho



Sexual disorders 25 Psychogenic headache 20 Nidra vikara 20 Stress related disorders 25 3. Examination of Manasika Bhava in psychosomatic illness 25 4. Yogasana, Pranayama and Meditation Techniques 25 5. Panchakarma Procedures in Manasa Roga 25 6. Anjana, Dhoopanadi Karma 25 PG Final Year Syllabus-55 7. Instruments (GSR biofeedback, EST, EEG, etc.) 25 8. Counselling on the pattern of Sattvavajaya 25 9. Psychometric scales (Ayurveda and conventional) 30 Visit to Mental Hospitals Pattern of Practical Examination - 100 Marks 1. Practical Record Book - 10 Marks 2. Bed side examination a. Short Case - 10 Marks b. Long Case - 25 Marks 3. Assessment of Scales and inventories (Ayurveda and Conventional) - 10 Marks 4. Thesis Presentation(PPT) - 25 Marks 5. Viva-voce - 20 Marks Reference Books 1. Related matter of Charak, Sushrut and Vagbhata and other ancient texts with commentaries 2. Prachin Manovikara Vigyanm - Ayodhya Prasad Achal 3. Ayurvediya Padarth Vigyan - Ranjit Rai Deshai 4. Ayurved Darshan - Acharya Rajkumar Jain 5. Purusha Vichaya - Prof. V.J. Thakkar 6. Ayurvediya Manas Vigyan - Prof. Ram Harsh Singh 7. Yoga evum Ayurved - Acharya Rajkumar Jain 8. Basic principles of Ayurvediya Padartha Vigyan - Dr Yogesh Chandra Mishra 9. Synopsis of Psychiatry - Harold kaplon and Benjamin saddock 10. Oxford textbook of Psychiatry - Michael Gerlder, Paul Harrison 11. General psychology and Abnormal psychology - S.K. Mangal 12. A text book of Post Graduate Psychiatry - Neeraj Ahuja 13. Mind in Ayurveda and other Indian Traditions - A.R.V.Murthy 14. Psychopathology in Indian medicine - Satyapal Gupta 15. Body- Mind-Spirit Integrative Medicine - Prof. Ram Harsh Singh 16. Rationale of Ayurveda Psychiatry - Dr. A.R.V. Murthy 17. Foundations of contemporary Yoga and Yoga Therapy- Prof. Ram Harsh Singh 18. Stress and its Management - Dr. K.N. Udupa 19. Concept of Mind - Edited by Prof. C.R. Agnivesh, Kottakkal 20. Kayachikitsa - Part 3 by R. R. Pathak and Vidhyadhar Shukla 21. Panchakarma Illustrated - Prof. Shrinivasa Acharya 22. Unified Dimensions of Ayurvedic Medicine - Dr. J.S. Tripathi 23. Essential Psychiatry - Bhatia MS 24. Sahassrayoga - Nishteswar and Vaidyanath 25. Ayurveda and the Mind - David Frawley 26. Manasa Roga Vijnana - Balakrishna 27. Comprehensive Textbook of Psychiatry - Kaplan and Sadock's 28. Psychiatry for medical students - Robert J Waldinger 29. Introductions to Psychology - Morgan / King

### **PG Final Year Syllabus-56 13.**

#### **RASAYANA&VAJIKARANA PAPER – 1**

#### **CONCEPT & PRACTICE OF RASAYANA Marks: 100**

1. Basic fundamentals and concepts of Rasayana • Derivation, definition and synonyms of Rasayana • Classification of Rasayana • Understanding rasayana in perspective of: Neutriceutical action♣ Immunomodulation♣ Oxygen free radicals♣ &Antioxidant activity Adaptogenesis♣ Cell proliferative activity♣ Cell regenerative activity♣ Genoprotectiveactivity♣ Micronutrients♣

Anabolic activity♣ • Interpretation of different types of Rasayana • Prakruti-Guna/character wise Rasayana • Sara wise rasayana • Dhatu specific rasayana • Indriyanusararasayana like netryya, hridya, tvacchya etc. • Srotas wise rasayana • Occupation wise rasayana • Season wise rasayana • Molecular biology concerned to rasayana Human genome project♣ Genetics and Gene therapy♣ Stem cell theories♣ • Introduction to Bioinformatics • Concept of Bala, types of bala, vriddhikshayahetu. • Knowledge of measures to improve bala • Concept of ojas. Types of ojas. Ojo-vriddhi-kshaya-karabhava. • Ojodustiprakara, hetu, samprapti and their management • Immunology Immune system♣ & components Knowledge of immune mechanisms♣ Immune disorders♣ Rasayana as immunomodulator♣ Rasayana – immune specific/immunoglobulin specific♣ Rasayana in Immune compromised disease like, HIV/AIDS, tuberculosis,♣ Cancer, liver cirrhosis etc.

2. Concept of jara (geriatrics) and ageing (gerontology)

3. Concept of svabhavabalapravrittavyadhi with special reference to Jara its classification (kalaja&akalaja), etiopathogenesis and management

4. Organ wise, system wise Common geriatric disorders and their management

5. Yogya, ayogya, vidhi and prayojana of: • Kutipraveshikarasayana • Dronipraveshikarasayana • Karapratichiyarasayana PG Final Year Syllabus-57 • Indraproktarasayana • Vaatatapikarasayana

6. Concept & practice of Achararasayana

7. Knowledge & application of svasthavritta measures

8. Swasthyanuvartakarasayana

9. Rasayana as nutrient supplement

10. Panchakarma and its role in rasayana

11. Application of Kamyarasayanato achieve - Smriti, Medha, Bala, Prabha, Varna, Svaya

12. Knowledge of Vayasthaapana/Ayushyarasayana 13. Naimittikarasayana –

Vyadhiharaandvyadhiapunarbharasayana.

## **PAPER – 2**

### **CONCEPTS OF APATYA&SUSANTAANA Marks: 100**

1. Etymology, derivation, definition, synonyms of vandhya, vandhyaa, apatya, santaankara, susantaana

2. Importance of fertility

3. Essentials of fertility

4. Knowledge of Garbhasambhavasamagri

5. Knowledge of Garbhaadanaparicharya

6. Knowledge of Garbhotpatti

7. Knowledge of Shukravridhi, kshayahetu, lakshana and chikitsa
8. Knowledge of Shukrapradoshajavyadhi and its management
9. Knowledge of Shukradustihetu, prakara, lakshana, diagnosis and management
10. Knowledge of Retodustiprakara, hetu, lakshana and chikitsa
11. Knowledge of Sukravahasrotodustikarana, lakshana, diagnosis and management
12. Knowledge of Disorders of spermatogenesis (etio-pathogenesis, diagnosis and management) a. Oligozoospermia, asthenozoospermia, teratozoospermia, azoospermia, aspermia, pyospermia, necrozoospermia, OAT syndrome, sertoli cell only syndrome, klinefelters syndrome, kallaman's syndrome. Dal-castele's syndrome etc.
13. Obstructive azoospermia-diagnosis, medical management and knowledge of surgical procedures
14. Retrograde ejaculation and other ejaculatory disturbances in respect to fertility – knowledge, diagnosis and management.
15. Reproductive endocrinal disorders and management
16. Immunological infertility – knowledge of various components involved in immunological infertility, mechanism, diagnosis and management
17. Sperm function tests, semen and cervical mucus interaction, post coital test
18. Knowledge of karyotyping and interpretation
19. Knowledge of chromosomal, genetic disorders pertaining to fertility and management
20. Knowledge and practice of Genetic counseling
21. Knowledge of Normal and abnormal sexual differentiation
22. Applied aspects of panchakarmain rasayana and vajikarana
23. Applied aspects of uttarbasti
24. Knowledge of Susantaana (epigenetics): preconceptional measures
25. Knowledge and technique of Pumsavanakarma for healthy progeny
26. Introduction to MART (Medically Assisted Reproductive Technologies): IUI, IVF-ET, ICSI, cloning etc.
27. Testicular biopsy – indications, surgical procedure, interpretation of HPE results
28. Knowledge of cystoscopy – diagnostic, interventional
29. Scrotal scan & Doppler
30. Knowledge of Varicocele: diagnosis, medical and surgical management
31. Knowledge of disorders of accessory sex glands and their management PG Final Year Syllabus-58

### **PAPER – 3**

#### **CONCEPTS AND PRACTICE OF VAJIKARANA Marks: 100**

1. Etymology, derivation, definition, scope and understanding of word vajikarana and its application in present scenario
2. Physiology of sexual act including mechanism of erection, ejaculation and orgasm
3. Knowledge of hypothalamo-pituitary-testicular axis
4. Knowledge of Psycho-neuro-endocrino-vasculogenic mechanism of sexual activity
5. Knowledge of Haemodynamics and different stages of erection
6. Psychological aspects of sexual function
7. Sukrottejakabhava. Factors influencing sexual function
8. Knowledge of Sukrasrutikarabhava
9. Knowledge of erogenous zones and lunar relationship
10. Maithunavidhi –asthangamaithuan, rules and regulations to have intercourse as per ritu, kala, gotra, kula etc.
11. Concept of Brahmacharya & its application in the present context
12. Sexual ethics
13. Myths & misconcepts regarding sex & sexuality
14. Sex education & counseling including pre- marital counseling
15. Knowledge of contraception and contraceptives
16. Knowledge of sukragatavata/sukrasthavatasukravritavata,
17. Klaibya – definition, nidana, prakara, samprapti, and chikitsa
18. Male Sexual dysfunctions (etio-pathogenesis, diagnosis & management) a. Disorders of sexual desire (increased libido, decreased libido, no desire etc.) b. Erectile dysfunction (psychological, endocrinological, neurological & vasculogenic) c. Ejaculatory disturbances (early, delayed, anejaculation, retrograde ejaculation) d. Orgasmic disorders (anorgasmia)
19. Female sexual disorders, causes, diagnosis and management
20. Knowledge of various sexual postures and advantages
21. Napumsaka, shanda, trinaputrika, vaarta, hermaphroditism – definition, classification, samprapti, clinical manifestation, diagnosis and management
22. Knowledge of paraphilia, abnormal sexual behavior, perversions and management
23. Knowledge of diagnostic aids pertaining to sexual disorders a. ICIVAD (Intra Cavernal Injection of Vaso Active Drugs) b. Vacuum erection devices c. Penile vibrators d. Rigi scan NPT (Nocturnal Penile Tumescence)/snap gauge test e. Penile biothesiometer f. Penile Doppler

24. Knowledge of Dhat syndrome, night emissions
25. Mutrasukra, shukrashmari, sukrameha
26. Aharsha&apraharshabhava
27. Knowledge of Sexual performance assessment scales: MSP, GRISS, GRIMS, HARDS, Libido score, IIEF-5 scoring system for ED, Androgen deficiency score
28. Knowledge of Priapism and its management 29. Knowledge of theories of andropause and management.

#### **PAPER – IV**

#### **PHARMACO-THERAPEUTICS OF RASAYANA&VAJIKARANA Marks: 100**

1. Definition, derivation, etymology, synonyms of vajikara, vrishya
2. Pharmacology and pharmacodynamics of rasayana and vajikarana drugs
3. Definition, scope and understanding of a. Rasayana i. Vyadhibalavirodhi PG Final Year Syllabus-59 ii. Vyadyutpadakapratibandhak iii. Vayasthapan b. Sukrajanaka/sukrala c. Sukrapravarthaka/rechaka d. Shukrashodhana e. Shukrastambhaka f. Sukrashoshaka, vyavayi/vikashi g. Kamoddeepana/kamottejaka etc.
4. Pharmacology of drugs belonging to: a. Sukrajanaka/sukrala b. Sukrapravarthaka/rechaka c. Shukrashodhana d. Shukrastabhaka e. Sukrashoshaka, vyavayi/vikashi f. Kamoddeepana/kamottejaka etc.
5. Pathya and apathya in relation to shukradhatu
6. Formulation, indications & uses of: Vrishyabasti, Vajikaranaabasti, Yapanabasti
7. Pharmacology of: a. Akarakarabha, b. Amalaki, c. Aswagandha, d. Bhallataka, e. Bhanga, f. Bhrihati, g. Gokshura, h. Guduchi, i. Haritaki, j. Ikshu, k. Jatiphala, l. Jivanti, m. Kapikacchu, n. Kokilaksha, o. Ksheeravidari, p. Mandukaparni, q. Masha, r. Punarnava, s. Shatavari, t. SvetaMusali, u. Yastimadhu etc. v. Indraproktharasayanaa
8. Pharmacology of following Rasaushadhis: a. Abhraka, b. KukkutandaTvakBhasma, c. Naga, d. Rajata, e. Shilajit, f. Svarna, g. Svarnamakshika, h. Vanga, i. Yashada etc.
9. Ingredients, properties, indications and phalasruti of: • Agasthyarasayanaa, • Ajamamsarasayanaa • Akarakarabhaktivati, • Amrita PrashaGritha, • AswagandhaGritha, PG Final Year Syllabus-60 • AvalgujaRasayanaa • BalaswagandhaTaila, • Bhallathakarasyana, • Brahmarasyana, • Brihatcchagalladyagritha • Chandraprabhavati, • Chyavanaprasha, • GokshuradiGuggulu, • HaritakyadiRasayana, • JatiphalaVati, • Kaminividravana Rasa, • KhadiraRasayana, • KushmandaRasayanaa • Lasunarasayana, • MahamashaTaila, • Makaradhwaja, • NagabalaRasayana, • NarasimhaRasayanaa, • PippaliVardhamanaRasayanaa, • Pippalirasayana, •

PurnachadrodayaMakaradhwaja, • ShatavariGrita, • Shilajathurasayana, • Siddha Makaradhwaja, • SrigopalaTaila, • VanariGutika • Vasantakusumakara, • VeeryastambhaVati, • VidangaRasayana, • VidaryadiGritha, • VrishyaGritha

10. Pharmacology & Pharmacodynamics of various vajikara, vrishya and rasayanabasties

11. Neuro-psycho pharmacology of rasayana, vajikarn drugs

12. Endocrinological aspects of rasayana, vajikarana drugs 13. Recent advances in rasayana and vajikarana drugs, formulations and therapeutic techniques

**PRACTICALS** 1. Assessment of Prakriti 2. Assessment of saara 3. Assessment of manasaprakriti 4. History taking & clinical examination of geriatric patients 5. Examination of male genito-urinary system 6. Semen analysis- Retopariksha 7. Post coital test, semen & cervical mucus interaction test 8. Technique of ICIVAD 9. Uttarbasti 10. Technique of psychosexual counseling 11. Applicatory knowledge of assessment scales pertaining to vajikarana/sexual functions 12. Technique of genetic counseling 13. Practical aspects of Panchakarma pertaining to rasayana&vajikarana 14. Technique of measuring penile BP

#### **PG Final Year Syllabus-61 14.**

#### **SHALYA TANTRA - SAMANYA PAPER - I**

#### **Shalya Siddhanta – Fundamentals of Surgery 100 Marks**

1. Sushruta's contributions in surgical concepts and practices.
2. Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.
3. Significance and importance of Rakta as the Chaturth Dosha.
4. Yantras and Shastras – Surgical Instruments - Ancient and recent advances.
5. Trividha Karma – Purva, Pradhana and Pashchat Karma and its Importance.
6. Asepsis and Antisepsis.
7. Nirjantukarana – Sterilization – Various methods for surgical equipments, laparoscopes, linen and Operation theatre.
8. Surgical infections – Sepsis, Tetanus and Gas gangrene.
9. Care of patients suffering from Hepatitis, HIV-AIDS, STD and other associated infectious diseases.
10. Ashtavidha Shastra Karma – Critical knowledge and their application in surgical practice.
11. Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants.
12. Concept of Marma and their clinical application.
13. Shock - Its varieties and management.
14. Raktasrava / Haemorrhage – Types, Clinical features and Management.

15. Concept of Raktastambhana –Haemostasis.
16. Vranasopha – Inflammation and Vidradhi - Abscess
17. Granthi – Cyst and Arbuda – Benign and malignant Neoplasm – Concept of Oncogenesis and genetics of cancer.
18. Gulma and Udara Roga.
19. Kshudra Roga.
20. Fluid, electrolyte, Acid Base Balance and Nutrition i. Introduction of physiology of fluids and electrolytes. ii. Dehydration and over hydration. iii. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management. iv. Electrolyte changes in specific surgical conditions and their management. v. Plasma volume expanders and their use in surgical condition. vi. Various replacement fluids in surgery, mode of administration and complications. vii. Nutrition – Indications, types, mode of administration and complications.
21. Blood Transfusion – Blood groups, compatibility, Indications, Contraindications and complications with management.
22. Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

## **PAPER – II**

### **Vishishta Shalya Vigyana - Shalya Tantra Speciality 100 Marks**

1. Yogya Vidhi - Practical and Experimental training i. Practice of surgical procedures on different models. ii. Training of Laproscopic and Endoscopic procedures.
2. Vrana – Wound management i. Management of Nija Vrana, Agantuja Vrana, Dushta Vrana and Nadi Vrana. ii. Vrana Chikitsa – Shasti upakramas, Pathya-apathya . iii. Types and Management of Dagdha Vrana - Burns and scalds. iv. Infection of hands and foot, Diabetic wound, Prameha Pidaka – Diabetic carbuncle and its management. v. Management of Pressure ulcers, Venous ulcers and other chronic non-healing ulcers. vi. Gangrene and its management. PG Final Year Syllabus-62
3. Mutra Roga – Urological diseases. i. Anatomical and physiological knowledge of kidney, ureter, urinary bladder, prostate, seminal vesicles, urethra and penis. ii. Investigations of Mutravaha Srotas – Urinary tract. iii. Aetiopathogenesis and surgical procedures of Ashmari – Urinary stone diseases. iv. Kidney and ureter – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Hydronephrosis, Hydroureter and Haematuria. v. Urinary bladder - Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Diverticulum, Vesicovaginal fistula, Atony, Schistosomiasis, Urinary diversions, Retention of urine – Mutraghata and Mutrakruccha. vi. Urethra - Clinical presentation, Investigations and Management of Congenital anomalies – Hypospadias, Epispadias, Posterior urethral valve, Trauma,

Infection, and Neoplasm. vii. Prostate and seminal vesicles – Benign and malignant enlargement of prostate, Prostatitis, Prostatic abscess and Calculi. viii. Penis – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Phimosis, Paraphimosis, Peyronie's disease and Neoplasm. ix. Testis and scrotum - Clinical presentation, Investigations and Management of Congenital anomalies, Ectopic testis, Trauma, Infection, Neoplasm, Testicular torsion, Hydrocele, Varicocele, Spermatocele, Chylocele, Pyocele, Haematocele, Epididymal cyst and Fournier's gangrene. x. Renal failure – Causes, Diagnosis, Investigations and Management.

4. Asthi roga and Marma Chikitsa - Orthopaedics i. Anatomy and physiology of bone. ii. Diseases of Asthi / Bone and Sandhi / Joints – Congenital, Degenerative, Infective, Metabolic and Neoplastic Disorders of Bones and Joints. iii. Aetiopathogenesis, treatment along with surgical procedures of Bhagna - Fracture, Sandimoksha - Dislocation and bone grafting. iv. Diseases of Spine, vertebral column and spinal cord.

### **PAPER – III**

#### **Adhunik Shalya Karma - Modern surgery 100 Marks**

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and Surgical treatment of head and spine injury, thoracic trauma and abdominal trauma. Blast injuries and Management
3. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid, Thyroglossal cyst and Fistula, Branchial cyst and fistula, Cystic hygroma and Lymphadenopathies.
4. Diagnosis and Surgical management of breast diseases, Benign and Malignant breast tumours.
5. Diagnosis and Surgical measures of diseases of Gastrointestinal system - i. Oral cavity - Oral ulcers, Oral cancer, Precancerous conditions, Submucosal fibrosis, Leukoplakia, Cleft lip and palate, Lip tumours, Mucosal cyst, Nasopharyngeal cancer, Tongue ulcer and cancer. ii. Oesophagus - Oesophageal varices, Dysphagia, Neoplasm, Strictures and Gastro oesophageal reflux. iii. Stomach and duodenum –Congenital anomalies, Injuries, Inflammation, Ulcer, Neoplasm, Pyloric stenosis, Acute dilatation, Hiatus hernia and Foreign bodies. iv. Pancreas - Congenital anomalies, Acute and Chronic pancreatitis, Calculi Neoplasm and Cysts of pancreas. PG Final Year Syllabus-63 v. Peritoneum, Omentum, Mesentery, Retroperitoneal Space – Peritonitis, Abscess, Neoplasm, Mesenteric cyst, Torsion of mesentery, Vascular thrombosis, Retroperitoneal cyst and Fibrosis. vi. Abdominal mass - Diagnosis and Management. vii. Small intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Peutz-jeghers syndrome, Chron's disease, Carcinoid tumours, Enteric perforation and Intestinal fistula. viii. Large



intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebiasis and Familial polyposis coli. ix. Caecum and Vermiform appendix- Appendicitis, Appendicular abscess, Appendicular mass, Perforation, Carcinoid Tumor and other Neoplasm. x. Gastrointestinal bleeding – Haemetemesis, Malaena, Haemobilia, Bleeding per anum - Causes, Diagnosis and Management. xi. Rectum and anal canal - Diagnosis and Surgical management of Congenital Anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Prolapse, Haemorrhoids, Fistula-in-ano, Fissure-in-ano, Anorectal Abscess, Incontinence, Injuries, Foreign bodies, Sacrococcygeal Teratomas and Pilonidal sinus .

6. Umbilicus and abdominal wall – Congenital anomalies, Umbilical infections, Sinus, Neoplasm, Abdominal dehiscence, Divarication of recti, Desmoid tumor and Meleney’s gangrene.

7. Diagnosis and surgical measures of diseases of Hepatobiliary system - i. Liver – Abscess, Cyst - Hydatid cyst, Primary and Secondary malignant tumours, Portal Hypertension and Budd-Chiari Syndrome. ii. Gall bladder and Bile duct - Congenital anomalies, Acute and Chronic Cholecystitis, Cholelithiasis, Neoplasm, Cholangitis, Stenosis, Choledocholith iasis, Choledochal cyst and Cholangiocarcinoma. iii. Spleen – Splenomegaly and Splenic Injury.

8. Diagnosis and surgical measures for disorders of Artery, Vein, Ligaments, Muscles and Tendons. 9. Diagnosis and surgical management of Hernias – Inguinal, Femoral, Umbilical, Incisional, Abdominal wall and other hernias.

10. Endoscopic procedures - Oesophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy.

11. Diagnostic and therapeutic laparoscopy.

12. Anaesthesia - Definition, Types, Anesthetic agents, Indications, Contraindications, Procedures, Complications and management.

## **PAPER –IV**

### **Shalya Vangmaya – Shalya literature, Research and Development**

1. Thorough study of the Sushruta Samhita including other relevant portions of Brihatrayee and Laghutrayee.

2. Knowledge and importance of Surgical Audit.

3. Medico legal issues – Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act, medical profession, national health policy - Implications in a medico-legal case like accidents, assaults etc.

4. Surgical ethics including Informed consent.

5. Knowledge of different type of experimental Surgical Model for Research in Surgery.

6. Sandhana Karma – Plastic reconstructive and cosmetic surgery. Fundamentals of Sandhana Karma –

i. Karna Sandhana – Auroplasty ii. Nasa Sandhana – Rhinoplasty iii. Oostasandhana – Cheiloplasty iv. Grafts and Flaps – Techniques and applications. v. Vascular anastomosis and grafts. PG Final Year Syllabus-64

7. Anushalya Karma – Parasurgical procedures i. Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana. Pattern of Practical examination 100 Marks 1. Case record (25) -10 Marks 2. Short case -10 Marks 3. Long case -20 Marks 4. Identification of specimen / radiograph and Instruments -20 Marks 5. Thesis Presentation - 20 Marks 6. Viva-voce -20 Marks Reference Books 1. Sushruta Samhita 2. Ashtanga Sangraha 3. Ashtanga Hridaya 4. Charaka Samhita 5. The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya 6. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma
7. Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma
8. Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma
9. Shalya Pradeepika - Dr. Mukund Swaroop Verma
10. Sushruti - Dr. Ram Nath Dwivedi
11. Clinical Shalya Vigyan - Dr. Akhilanand Sharma
12. Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande
13. Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh.
14. Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar Chowdary.
15. Adhunik Shalya Chikitsa Siddhanta - Dr. Katil Narshingham Udupa
16. Agnikarma Technology Innovation - Dr. P.D. Gupta
17. Shalya Tantra Ke Siddhant - Dr. K.K. Takral
18. Recent advances in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
19. Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas
20. Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao
21. Leech application in Ayurveda - Dr. M. Bhaskar Rao
22. Kshara Sutra - Dr. S.N. Pathak
23. Shalya Shalaky Tantra - Vd. S.G. Joshi
24. Surgical ethics of Ayurveda - Dr. D.N. Pande
25. Text book of Surgery – Sabistan
26. Operative Surgery – Rob and smith
27. Bailey and Love's Short Practice of Surgery - Norman.S. Williams, Charles.V. Mann and R.C.G. Russell
28. Fractures and Joint Injuries - Watson-Jones
29. Text books of Operative Surgery - Farquharsons'

- 30.Principles of Surgery - Schwartz
- 31.Emergency Surgery -Hamilton Bailey's
- 32.Surgical pathology - Willing Worth
- 33.Clinical methods in surgery - S. Das
- 34.Textbook of Operative Surgery - S. Das
- 35.Shalya Vigyan (Sachitra) - Anantram Sharma
- 36.Anushastra Karma - Dr. D.N. Pande
- 37.Concept of Vrana is Ayurveda - Dr. Lakshman Singh
- 38.Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh PG Final Year Syllabus-65
- 39.Sangyahan Prakash - Dr. D.N. Pande
- 40.A concise Text Book of Surgery - S. Das
- 41.A manual on Clinical Surgery - S. Das
- 42.A System of Surgical Diagnosis - T.N. Patel
- 43.A Practical Guide to Operative Surgery - S. Das
- 44.Drugs and Equipment for Anaesthesia - Arun kumar
- 45.Manual of Surgical Instruments - M.M. Kapur
- 46.Ward Procedures - Patel Mansukh. B
- 47.Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
- 48.Primary Anaesthesia - Maurice King
- 49.Synopsis of Anaesthesia - Lee
- 50.Clinical Anatomy/ Surgical Anatomy - John E.Skandalakis
- 51.Surgical Instruments of the Hindus - Girindharnath Mukopadyay
- 52.Outline of Orthopedics - John Crawford Adams and David Hamblen. L
- 53.Outline of Fracture - John Crawford Adams
- 54.Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha Kumar
- 55.Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekokar.
- 56.Manipal Manual of Surgery - Dr. Rajgopal Shenoy

**PG Final Year Syllabus-66 15.**

**SHALYA – KSHARA EVUM ANUSHAstra KARMA PAPER - I**

**Shalya Siddhanta – Fundamentals of Surgery 100 Marks**

- 1 Sushruta's contributions in surgical concepts and practices.
- 2 Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.

- 3 Significance and importance of Rakta as the Chaturth Dosha.
- 4 Yantras and Shastras – Surgical Instruments - Ancient and recent advances.
- 5 Trividha Karma – Purva, Pradhana and Pashchat Karma and its Importance.
- 6 Asepsis and Antisepsis.
- 7 Nirjantukarana – Sterilization – Various methods for surgical equipments, laparoscopes, linen and Operation theatre.
- 8 Surgical infections – Sepsis, Tetanus and Gas gangrene.
- 9 Care of patients suffering from Hepatitis, HIV-AIDS, STD and other associated infectious diseases.
- 10 Ashtavidha Shastra Karma – Critical knowledge and their application in surgical practice.
- 11 Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants.
- 12 Concept of Marma and their clinical application.
- 13 Shock - Its varieties and management.
- 14 Raktasrava / Haemorrhage – Types, Clinical features and Management.
- 15 Concept of Raktastambhana –Haemostasis.
- 16 Vranasopha – Inflammation and Vidradhi - Abscess
- 17 Granthi – Cyst and Arbuda – Benign and malignant Neoplasm – Concept of Oncogenesis and genetics of cancer.
- 18 Gulma and Udara Roga.
- 19 Kshudra Roga.
- 20 Fluid, electrolyte, Acid Base Balance and Nutrition a. Introduction of physiology of fluids and electrolytes. b. Dehydration and over hydration. c. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management. d. Electrolyte changes in specific surgical conditions and their management. e. Plasma volume expanders and their use in surgical condition. f. Various replacement fluids in surgery, mode of administration and complications. g. Nutrition – Indications, types, mode of administration and complications.
- 21 Blood Transfusion – Blood groups, compatibility, Indications, Contraindications and complications with management. 22 Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

## **PAPER – II**

### **Vishista Anushastra Karma 100 Marks**

1. Kshara Karma and Prayoga – Therapeutic Chemical Cauterization. i. Introduction of different types of Kshara, Method of preparation, Standardization, pH value, Application, Complications and its management. ii. Surgical Anatomy and Physiology of Anus and Rectum. iii. Arshas - Nidana,

Purvaroop, Roopa, Samprapti, Prakara and Chikitsa. iv. Haemorrhoids - Aetio-pathogenesis, types and its surgical management. v. Knowledge of different methods of treating Haemorrhoids - Rubber band ligation, D.G.H.A.L, Radiofrequency, Ablation, Cryo-surgery, Cautery, Laser, Infrared coagulation and other advanced techniques. vi. Bhagandara - Nidana, Samprapti, Prakara, Doshanusarachikitsa, Knowledge and application of Kshara Sutra. PG Final Year Syllabus-67 vii. Fistula-in-ano - Definition, Aetio-Pathogenesis, Types, Diagnostic methods and its Surgical, Para Surgical Management including knowledge of Fibrin Glue, Advanced Flap Therapies and other recent techniques. viii. Parikartika - Nidana, Samprapti and its Chikitsa. ix. Fissure-in-ano - Aetio-pathogenesis, types and its surgical management. x. Sannirudhaguda and its Chikitsa. xi. Anal Stenosis - Aetio-pathogenesis and its surgical management. xii. Gudavidradhi - Nidana, Purvaroop, Roopa, Samprapti, Prakara and its Chikitsa. xiii. Anorectal abscesses – Aetio- pathogenesis, types, complications and its surgical management. xiv. Gudagatashalya – Diagnosis and its Management. xv. Foreign body in rectum and anal canal - Method of diagnosis and its management. xvi. Congenital Anorectal disorders and its surgical management. xvii. Gudaarbuda and Granthi and its Chikitsa. xviii. Anorectaltumour - Types and its surgical management.

2. Agnikarma – Therapeutic cauterization i. Introduction, definition and importance of Agnikarma. ii. Agnikarma - Poorva, Pradhana and Paschat karma, various substances and Shalakas used for Agnikarma and their indications, contra-indications and complications. iii. Diagnosis and management of Oil burn, Dhumopaghata, Ushnavata, Sunburn, Frost bite and Electric burn. iv. Knowledge of modern thermal equipment - Diathermy, Laser therapy, microwave, Ultracission technique, Cryo Technique and its uses. v. Effect of Agnikarma on skin, muscle tissue, nerves, metabolism, blood circulation and infective lesions.

3. Raktamokshana – Bloodletting Procedures i. Introduction and importance of Raktamokshana. ii. Indication and contraindication of Raktamokshana. iii. Justification of usage of different types of Raktamokshana in various therapeutic applications. iv. Different types of Raktamokshana – Sastrakritha - Siravyadhana, Prachana and Asastrakritha - Shringa, Jaluka, Alabu and Ghati. v. Jalauka - Nirukti, Paryaya, Bhedha, Sangrahana, Samrakshana, Jalaukavacharana Vidhi - Poorva, Pradhana and Paschat karma. vi. Knowledge of Leeches - Morphology, Anatomy, Physiology, Bio-chemical effects of its various constituents present in its saliva. vii. Rakta- Importance, Formation, Panchabhoutikatva, RaktaSthana, Guna, Prakurta Karma and Rakta Sara Purashalakshanas. Suddha and Dushta Rakta Lakshanas. Rakta Pradoshaja Vyadhis.

### **PAPER – III**

#### **Adhunika Shastra Karma - Modern Surgery 100 Marks**

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and surgical measures for disorders of vein, artery, ligaments, joints and muscles.
3. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid tumours, etc. 4. Diagnosis and Surgical management of breast diseases.
5. Diagnosis and surgical management of traumatic disorders - Head injury, thoracic and abdominal trauma.
6. Diagnosis and surgical management of diseases of Gastrointestinal system- stomach, pancreas, peritoneum, omentum, mesentery, retroperitoneal space, small intestine, large intestine and vermiform appendix. PG Final Year Syllabus-68
7. Diagnosis and surgical management of Proctological disorders.
8. Diagnosis and surgical measures of diseases of Hepatobiliary system - Liver, gall bladder, bile ducts and spleen.
9. Diagnosis and surgical management of diseases of Urogenital system.
10. Diagnosis and surgical management of diseases of scrotum and testis. – Hydrocele, Ectopic testis and Undescended testis.
11. Diagnosis and surgical management of Hernias – Inguinal, femoral, umbilical, incisional, abdominal wall and other hernias.
12. Endoscopic procedures – Oesophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy.
13. Diagnostic and therapeutic laparoscopy.
14. Anaesthesia - Definition, Types, Anaesthetic agents, Indications, Contraindications, Procedures, Complications and Management.

#### **PAPER – IV**

##### **ShalyaVangmaya 100 Marks**

1. Thorough study of the Sushruta Samhita including other relevant portions of Brihatrayee and Laghutrayee.
2. Knowledge and importance of Surgical Audit.
3. Value of research and teaching in surgery.
4. Medico legal issues - Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act, medical profession, national health policy - Implications in a medico-legal case like accidents, assaults etc.
5. Surgical ethics including Informed consent.
6. Knowledge of different type of experimental Surgical Model for Research in Surgery. Pattern of

Practical examination 100 Marks

7. Case record (25) -10 Marks

8. Short case -10 Marks

9. Long case -20 Marks

10. Identification of specimen / radiograph and Instruments -20 Marks

11. Thesis Presentation -20 Marks

12. Viva-voce -20 Marks Reference Books 57.Sushruta Samhita 58.Ashtanga Sangraha 59.Ashtanga Hridaya 60.Charaka Samhita 61.The Surgical instruments of the Hindus - Girindranath Mukhopadhyaya 62.Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma 63.Shalya Vigyan (Part 1-2) - Dr. Surendra Kumar Sharma 64.Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma 65.Shalya Pradeepika - Dr. Mukund Swaroop Verma 66.Soushruti - Dr. Ram Nath Dwivedi 67.Clinical Shalya Vigyan - Dr. Akhilanand Sharma 68.Bhagna Chikitsa - Dr. Prabhakar Janardhan Deshpande 69.Kshara sutra management in anorectal ailments - Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh. 70.Anorectal diseases in Ayurveda - Dr. Sizoria and Dr. Praveen Kumar Chowdary. 71.Adhunika Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa 72.Agnikarma Technology Innovation - Dr. P.D. Gupta 73.Shalya Tantra Ke Siddhant - Dr. K.K.Takral PG Final Year Syllabus-69 74.Recent advances in the management of - Dr. P. Hemantha Kumar Arshas / Haemorrhoids 75.Arsha Evum Bhagander Mein sutra Avacharan - Vd. Kanak Prasad Vyas 76.Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao 77.Leech application in Ayurveda - Dr. M. Bhaskar Rao 78.Kshara Sutra - Dr. S.N.Pathak 79.Shalya Shalakyta Tantra - Vd. S.G. Joshi 80.Surgical ethics of Ayurveda - Dr. D.N. Pande 81.Text book of Surgery - Sabistan 82.Operative Surgery - Rob and smith 83.Bailey and Love's Short Practice of Surgery - Norman.S. Williams, Charles.V. Mann and R.C.G. Russell 84.Fractures and Joint Injuries - Watson-Jones 85.Text books of Operative Surgery - Farquharsons' 86.Principles of Surgery - Schwartz 87.Emergency Surgery -Hamilton Bailey's 88.Surgical pathology - Willing Worth 89.Clinical methods in surgery - S. Das 90.Textbook of Operative Surgery - S. Das 91.Shalya Vigyan (Sachitra) - Anantram Sharma 92.Anushastra Karma - Dr. D.N. Pande 93.Concept of Vrana is Ayurveda - Dr. Lakshman Singh 94.Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh 95.Sangyahan Prakash - Dr. D.N. Pande 96.A concise Text Book of Surgery - S. Das 97.A manual on Clinical Surgery - S. Das 98.A System of Surgical Diagnosis - T.N. Patel 99.A Practical Guide to Operative Surgery - S. Das 100. Drugs and Equipment for Anaesthesia - Arun kumar 101. Manual of Surgical Instruments - M.M. Kapur 102. Ward Procedures - Patel Mansukh. B 103. Recent trends in the management of - Dr. P. Hemantha Kumar Arshas / Haemorrhoids 104. Primary Anaesthesia - Maurice King 105. Synopsis of Anaesthesia - Lee 106. Clinical Anatomy/ Surgical Anatomy - John E.Skandalakis 107. Surgical Instruments of the

Hindus - Girindharnath Mukopadyay 108. Outline of Orthopedics - John Crawford Adams and David Hamblen. L 109. Outline of Fracture - John Crawford Adams 110. Recent trends in the management of - Dr. P. Hemantha Kumar Bhagandara / Fistula-in-ano 111. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekokar. 112. Manipal Manual of Surgery - Dr. Rajgopal Shenoy

**PG Final Year Syllabus-70 16.**

**AYURVED DHANVANTRI - ASTHI SANDHI AND MARMAGAT ROGA Paper – 1**

**ASTHI SANDHI MARMA ABHIGHAT SIDDHANTA 100 marks**

1. Asthi Sharira - Etymology, Embryology, Applied Anatomy and Physiology of Asthi. Its Panchbhautik constitution, Poshan (Nutrition), Asthivaha Srotas, Upadhatu and Mala. Total Number and classification of Asthi. Concept of Dhatwagni in Ayurveda. Asthi Dhatu Kshaya and Vriddhi lakshana. Knowledge about Tarunasthi. Embryology, Ossification, Histology, Metabolism, Blood Supply, Types and Biomechanics of Bone and cartilage.
2. Healing mechanism of bone and factors influencing the bone healing according to Ayurvedic and Modern concept. Biological and Biophysical technologies for the Enhancement of Fracture Repair. Knowledge of Sandhaniya and Ropaniya drugs.
3. Sandhi Sharira – Classification, Applied Anatomy and Physiology of Asthi Sandhi. Classification, Applied Anatomy and Physiology of Joints and Healing Mechanism of a joint.
4. Marma Sharira – Basic concept of Marma, etymological derivation, definition, classification, Pramana, importance & applied aspect of individual Marma. Interpretation of each Marma in present context (Regional surgical anatomy). Detailed discription of Tri-Marma and Rogamarga. Prognosis of Marmaghata.
5. Sira, Dhamni, Lasika, and Snayu Sharira - Applied Anatomy and Physiology of Vessels, Lymphatic, Ligaments, Tendons, Muscles, Peripheral Nerves and Plexuses.
6. Knowledge of Splints, Orthotics & Prosthetics.
7. Disability calculation, Bio-mechanics of gait.
8. Vrana Vigyan – Etiology, classification, symptomatology, prognosis, complications and management principles of Nija and Sadyo Vrana. Knowledge of Shashti Upakrama, Seevana - Suturing and Vrana Bandhana -Bandaging. Wounds and Ulcers – Etiology, classification, symptomatology, complications. prognosis and management principles. Advanced wound closure techniques, suture materials, dressing / bandaging materials and techniques. Wound Healing Mechanism.
9. Vranitopasniya - Management of Vranita - Wounded person. Management Principles of wounded persons. Assessment and immediate management of poly-trauma patient , crush syndrome and Acute



Respiratory Distress Syndrome.

10.Vranashotha and Vidradhi - Inflammation and Abscess – Etiology, Pathogenesis, classification, stages and management.

11.Knowledge of Orthopedic implants (e.g. wires, screws, plates, nails) and Instruments. Knowledge of equipments (e.g. C-arm image intensifier and drill machines etc).

12.Orthopedic Radiology - Knowledge of Radiological imaging techniques (X-ray, CT Scan, MRI, USG, Radioisotop scanning) in Orthopedics.

13.Medico-legal aspects in Orthopedics - Handling of Medico- legal cases and issuing of MLCs, Understanding the implications of relevant acts e.g. Consumer Protection Act, Motor Vehicle Act, Right to information Act and other relevant acts in force time to time.

14.Concept of Pain according to Ayurved and Modern Medical science.

15.Principles of Reconstruction, Transplantation, Bone grafting, Bone Banking, Bone transportation and Amputation.

16.Knowledge about National Health Policies and relevant guidelines by State Govt. or Govt. of India.

## **Paper – II**

### **ASTHI SANDHI MARMA GATA VYADHI VISESHA 100 marks**

1. Diseases of Asthi & Asthi Dhatu - Asthigata Vata, Asthivaha srothodushti, Asthi Dhatu Kshaya & Vriddhi, Adhyasthi, Asthi Vidradhi. a. Congenital, Degenerative, Infective, Metabolic, Neoplastic and Miscellaneous Disorders of Bones. PG Final Year Syllabus-71

2. Diseases of Sandhi – Sandhigat Vata, Vatarakta, Amavata and Kroshtukashirshaka. a. Different diseases of joints – Etiology, classification, and treatment principles.

3. Vata Vikara – Asthi, Sandhi and Marma related Vata Vikara like Gridhrasi, Bisvachi, Avabahuka, Manyastambha, Khalvi, Dhatugata vata, Snayugata vata, Katishoola, Katigraha.

4. Diseases pertaining to Muscles, Tendons, Ligaments, Fascia and Bursae.

5. Diseases and Congenital anomalies of Spine e.g. Ankylosing spondylitis, Infective conditions, Tuberculosis, Spondylolisthesis, Inter-vertebral Disc Prolapse, Spondylosis, Scoliosis, Kyphosis, spina bifida, Hemivertebra, Block vertebra, Sacralisation and Lumbrisation etc.

6. Diseases and Congenital anomalies of Cervical Spine

7. Diseases and Congenital anomalies Sacroiliac Joint and Bony Pelvis.

8. Diseases and Congenital anomalies of Hand

9. Diseases and Congenital anomalies of Foot

10. Diseases and Congenital anomalies of Limbs

11. Orthopedic Neurological Disorders. Post Polio Paralysis & Cerebral Palsy.

12. Snehana, Swedana and Panchakarma in Marma, Asthi and Sandhi Vyadhi.
13. Yogic Practices in Orthopedics.
14. Principles of Arthroplasty- Joint Replacement.
15. Introduction of Peripheral Vascular Diseases.
16. Pediatric Orthopedics
17. Orthopedic Oncology
18. Introduction of Radiotherapy, Chemotherapy, Hormone Therapy, Immunotherapy and gene therapy.

### **Paper – III**

#### **Abhighata Vigyan – Traumatology 100 marks**

1. Bhagna - Etiology, classification and General Management principles and Prognosis.
2. Modern concept of Bone and Joint injuries - Etiology, Epidemiology, Classification and General management principles.
3. Individual Bone and Joint injuries - Etiology, Epidemiology, Classification and management principles.
4. External immobilization techniques - Classical and traditional Kusa -splints, Plaster of Paris Technique, Knowledge of different splints and Plasters
5. Pathological Fractures including Fragility fractures, Stress Fractures and Periprosthetic Fractures. 6. Fractures in Children – Etiology, Epidemiology, Diagnosis, management and complications.
7. Prognosis of skeletal injuries, Complications of Fractures and Joint Injuries e.g. Myositis ossificans, Volkman's ischemic contracture, Compartment syndrome, Crush Syndrome, DVT, Thromboembolism, Fat Embolism.
8. Rehabilitation of trauma patient and Principles of Sukhchestaprachara - Physiotherapy and its use in skeletal injuries
9. Treatment Principles of Asahanta Bhagna - Non-unions, Vishmolvana Sahanta - Malunions and Ignored or un-reduced dislocations.
10. Diagnosis and management principles of injuries of Vessels, Nerves, Tendons and Ligaments.
11. Head, Chest and Abdominal Injuries and management principles.
12. Pelvis and Spine injuries and their management principles.
13. Sports Medicine – Sports medicine and sports related Shoulder injuries, Elbow injuries, Knee injuries, Ankle Injuries, Recurrent Dislocations and other sports related injuries.

14. Knowledge of Marma Chikitsa like Kalari Marma - Martial Art, Adankal - Marmaghata Chikitsa in Siddha Marma in trauma and sports medicine. PG Final Year Syllabus-72 Paper – IV Shalya Kriyatmaka - Operative Orthopedics 100 marks

1. Agropharniya Vigyan – Knowledge about Pre-operative preparation and Post operative care, Operation Theatre and its requirements regarding Instruments / Equipments and Personnel.
2. Fumigation of Operation Theatre and sterilization of Instruments, Equipments, Linen and Implants by various techniques.
3. Anu Shalya Karma (Para surgical procedures) in orthopedics – Role of Kshara Karma, Agni Karma, Raktavsechana in orthopedic disorders.
4. Knowledge of various Implants regarding their material, types, mechanics and practical use.
5. Knowledge of Conventional and advanced procedures being done for Different Bone and Joint Injuries e.g. Open Reduction and Internal Fixation, Closed Reduction and Internal Fixation, External fixators and other operative techniques.
6. Knowledge of Plastic Surgery in orthopedics and Bone grafting techniques.
7. Knowledge of various surgical procedures being done for Different Bone and Joint Diseases.
8. Hand Surgery for Diseases, Deformities and Injuries.
9. Foot Surgery for Diseases, Deformities and Injuries.
10. Amputations and Arthrodesis – General Principles of Amputations /Arthrodesis and regional Amputations.
11. Knowledge of Diagnostic and Therapeutic Arthroscopy.

Reference Books

Sushruta Samhita Relevant Parts Sushrut Samhita Ghanekar Commentary Sushruta Samhita (Dalhana Commentary) Relevant Parts Charak samhita Relevant Parts Ashtang Hridaya Relevant Parts Ashtang Sangraha Relevant Parts Bhava Prakash Relevant Parts Yog Ratnakar Relevant Parts Bhaishajya Ratnavali Relevant Parts Sharangdhar Samhita Relevant Parts The Surgical instruments of the Hindus – Girindranath Mukhopadhyaya. Bhagna Chikitsa (Dr. P.J. Deshpandey) Agni Karma – Technological Innovations - Prof. P.D. Gupta Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma Shalya Vijyan (Part 1-2) - Dr. Surendra Kumar Sharma Shalya Samanvaya (Part 1-2) - Vd. Anantaram Sharma Shalya Pradipika - Dr. Mukund Swarup Verma Adhunik Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa Shalya tantra Ke Sidhant - Dr. K.K. Takral Surgical Ethics in Ayurved - Dr. G.D. Singhal Susruta's Contribution to Surgery - Dr. S. Sankaran Anushastra Karma - Dr. D.N. Pande Concept of Vrana in Ayurved - Dr. Lakshman Singh Marma Chikitsa - Dr. C. Suresh Kumar Joint Affections and their Ayurvedic Prospective - Vaidya Vilas M. Nanal Marma Vimarsha - Vaidya Vilas M. Nanal Significance for Purva Karma in Surgical Patient - Dr. Lakshman Singh Medical Varmalogy - Dr. N. Shunmugom et.al. Siddha Varmalogy - T. Vasanthakumar Watson and Jones - Fracture and Joint Injuries (J.N. Wilson) Practical Fracture Treatment (R. McRae) PG Final Year Syllabus-73 Clinical Orthopedic Examination (R. McRae) Apleys System of Orthopedics (Apley Louis Solomon) Orthopedics – Principles & Their Application Vol. I-II (Samuel L. Turek) Textbook of Orthopedics and Trauma Vol. I-IV (G.S. Kulkarni) Fractures in Adults Vol. I – II (Rockwood and Green's) Fractures in Children Vol. I (Rockwood and Wilkins)

Campbell's Operative Orthopedics Vol. I – IV A Concise Text Book of Surgery (S. Das) Pye's Surgical Handicraft Clinical Methods in Surgery (Sriram Bhatt) Clinical Methods in Surgery (S. Das) Operative Surgery (S. Das) Schwartz Principles of Surgery Surgical Exposures in Orthopedics - J.B. Lippincott Comp. Publication Pattern of Practical Examination 100 marks • Discipline and regularity 10 Marks • Bed side examination Short case 10 Marks Long case 20 Marks • Identification of specimen / instruments/Radiographs 10 Marks • Dissertation Presentation 25 Marks • Viva –Voce 25 Marks PRACTICAL TRAINING • Training of History taking, bed side clinical examination and case presentations. • Identification and demonstration of surgical instruments. • Training of orthopedic related Diagnostic imaging techniques. • Training of Local anesthetic techniques in orthopedics. • P.G. Scholar shall develop the skills by observing, assisting and performing independently the following procedures: o Non-operative Manipulative reductions and external immobilization techniques.♣ Application of POP cast, Splints and Braces.♣ Bandaging Techniques♣ External medicaments and Procedures like Snehana, Swedana, Vasti,♣ Kati Vasti, Janu Vasti, Greeva Vasti etc. Training in various massage techniques.♣ Corrective POP casts for club foot♣ & other congenital deformities o Operative External fixation of compound fractures♣ Debridement of crush injuries♣ Amputations♣ Internal fixation of common simple fractures♣ Polio surgery such as TA lengthening.♣ Sequestrectomy in chronic osteomyelitis♣ Biopsy from a mass♣ Internal fixation of Fractures.♣ • Training in Vrana (Wound) Management techniques. • Practical training of Physiotherapy in orthopedic and trauma patients. • Training of Anu Shalya Karma like Agni Karma, Kshara Karma and Rakta Mokshna in orthopedic disorders. • Orthopedic related Panchakarma Procedures.

### **PG Final Year Syllabus-74 17.**

#### **SANGYAHARAN Paper 1**

Sangyahan siddhant avum vangmaya: Literary, Research And Development

- History of Sangyahan and its development in Ayurveda. • Importance of anesthesia in Ayurveda. • Contribution of AAIM and other pioneers in the development of Sangyahan.
- Applied aspects of Ayurveda with respect to sangyahan Vrihatrayee and Laghutryee.
- Instruments for anesthesia in ancient era and their development.
- Rakta, its importance, Raktadhana and Raktstambhana.
- Knowledge of disorders like Unmada, Apasmara, Mada, Murrcha, Sanyasa and Stabdhatata etc.
- Madataya, Stages of Madataya and its management.
- Pharmacology of Medhya, Vednasthapak, Madkari, Sangyasthapak, Nidrajanan, Akshepjanan and shamana , Svedjanan, Hridyae, Hridyotejak, Raktbharshamak, Shoolprashaman, Vaman and hrillashar

(Antiemetic) dravya as mentioned in Ayurvedic samhita & their application in Sangyahan.

- Aroma therapy as complementary and alternative therapy in pain management and Palliative care.

Paper 2 Sangyahan Beshaja Vigyan (Pharmacology related to Anesthesia) Pharmacology of:

- Drugs acting on Autonomic nervous system: a .Cholinergic system and drugs- Agonist and antagonist b .Adrenergic system and drugs- Agonist and antagonist
- Autocoids and related drugs: a. Histamine and Antihistaminic b. 5HT and antagonist c. NSAID'S d. Prostaglandins and leukotrienes
- Drugs acting on Respiratory system
- Drugs acting on Somatic nervous system a. Skeletal muscle relaxants – Depolarizer and Non-Depolarizer. b. Local anesthetics 5. Drugs acting on central nervous system a. General Anesthetics- Fixed and Volatile anesthetic agents. b. Sedative and hypnotics c. Anti epileptics d. Anti psychotic and anti-maniacs e. Opioids Analgesics and antagonists 6. Drugs acting on cardiovascular system a. Cardiac glycosides b. Anti arrhythmic drugs c. Anti anginal and other anti ischemic drugs d. Anti hypertensive drugs 7. Drugs acting on Kidneys a. Diuretics b. Anti diuretics 8. Coagulants and anti coagulants Paper 3 Vishishta Sangyahan – Applied Anesthesia

• Airway management- Intubation, failed intubation drill, LMA, Bag and mask ventilation. PG Final Year Syllabus-75

• Anesthesia For: General surgery, Obstetric and Gynecology ,E.N.T. and Ophthalmic, Orthopedic ,Dental ,Pediatric , Urology , plastic and Outpatient / Day care surgery.

• Anesthesia for patients with: Diabetes mellitus, Thyroid diseases, inherited metabolic diseases, Obesity, Respiratory diseases, Cardiac diseases, Renal diseases, Geriatric problems and neuromuscular diseases. • Regional anesthesia

: • Sub-arachnoid and epidural anesthesia, analgesia.

- Plexus and nerve blocks for upper and lower limb
- Regional anesthesia for thorax and abdomen • Surface anesthesia, infiltration and field blocks
- Complications of Regional and general anesthesia, morbidity, mortality and medico-legal aspects. •

Anesthesia for Endoscopic, laparoscopic Surgery and Laser Surgery

• Anesthesia for Trauma and mass casualty • Emergency anesthesia. Paper 4 Monitoring Advances and Research in Sangyahan a. Monitoring in anesthesia:

- Cardiovascular, Respiratory, Renal function, Neurologic and neuromuscular monitoring.
- Peri- operative Thermo- regulation and monitoring
- Peri- operative awareness and monitoring depth of anesthesia with BIS.
- Peri- operative acid-base balance
- Pt's positioning in anesthesia, its hazards and management

- Peri- operative Fluid management and Blood transfusion.
- Risks and hazards of anesthesia b. Anesthesia equipments –
- Medical gas systems • Breathing systems • Ventilators • Anesthesia machine c. Post operative management- • Post anesthesia care • Post operative nausea and vomiting • Post operative Intra-Venous fluid therapy • Acute post operative pain d. Miscellaneous-
  - HDU,ICU, CCPR- BLS & ACLS.
  - Parenteral nutrition.
- Environmental factor and electrical safety e. Management of Acute / Chronic Pain:
  - Assessment of pain
    - Peri-operative pain,
    - Chronic pain syndrome-detection and prevention,
    - WHO regime for Cancer pain,
    - TENS, Behavioral therapy f. Anesthesia in remote locations g. Clinical care in extreme environments (At high and low pressure and space). h. Relevance of Sammohana (Hypnosis), Acupressure and Acupuncture in Sangyahan. i. Recent advances in research in Sangyahrana, Pain Management and Palliative Care. Scope and Application of principles of Ayurveda in Sangyahrana Research. PG Final Year Syllabus-76

METHODS OF TRAINING AND TEACHING FOR M.D. (Ayu)

ANAESTHESIOLOGY - Practical Examination 1. Case Record(25) -50 Marks 2. Presentation of different types of Anesthesia -50 Marks 3. Thesis Presentation -50 Marks 4. Viva-Voce -50 Marks

Minimum pass marks 50% Result:- Pass/Fail Staff required Teaching- Professor-1 Non Teaching staff Reader/Asso. Prof-1 Anesthesia Technician- 1 Lecturer/Assi Prof-2 Anesthesia Attendent-2 Sen.Resident-2 Ward boy-2 Sweeper-2

Reference Books a. Sushruta Samhita - b. Charka samhita - c. Ashtang Hridaya - d. Practice of Anesthesia - Churchill Davidson e. Miller's Anesthesia - Ronald D Miller f. Synopsis of Anesthesia - Alfred Lee g. Sangyahan Prakash - Dr. D. N. Pande h. Agni karma-Technological Innovation - Dr. P.D. Gupta i. Practice of Anesthesia and Resuscitation - Dr. P.K. Gupta et al j. Essentials of Anesthesiology - Prof. A.K. Paul k. Clinical Anesthesia - Prof. A.K. Paul l. Anu Shastra karma - Dr. D.N. Pande m. Textbook of Anesthesia - Aitkenhead

Case Presentation Once a Week Seminar / Symposia Once a Week Pre Anesthesia Care / Clinic Thrice a Week Critical Care unit / Recovery Room Once a Week Classroom Lectures Twice a Week Morbidity / Mortality Once a Week Audit Once a month Journal Club Once a month Record Keeping Once a month Emergency Drills / Protocols Once a Week Interesting Cases Once a Month PG Final Year Syllabus-77 n. Anesthesia and co-existing disease - Stoelting's o. Physiology and Pharmacology - Stoelting's p. Understanding Anesthesia Equipments - Dorsch & Dorsch's q. Clinical anesthesiology - G. Edward Morgan

## **PG Final Year Syllabus-78 18.**

### **AYURVEDA DHANWANTRI-SHALAKYA - NETRA ROGA**

**Theory Four papers of- 100 marks each Practical and Viva-voce - 100 marks**

#### **PAPER- I**

Netra Rog Vangmaya

1. Available literature of Netra roga vigyana in Brihatrayi, Laghutrayi, Yogaratnakar, Chakradutta, Bhel Samhita, Harita samhita and Kashyap samhita.
2. Critical analysis of the available literature of netra roga vigyana in the above given classics e.g. Puyalasa and Vatahata Vartma In Sushruta samhita and Vagabhat samhita.
3. Unique/ specific contribution of different classics, Acharyas and commentators in the development of Netra roga vigyana.
4. Analytical determination of subjects related to eye disorders in ancient and modern literatures.
5. Update chronological development of Netra roga vigyana right from Vedic period.
6. Update chronological development of Ophthalmology.

#### **PAPER- II**

##### **Ayurvediya Netra Rog Vigyan**

1. Enumeration and classification of Netra Rogas.
2. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications and prognosis of pakshma -vartma- sandhi- - shuklaKrishna- dristi & sarvagata rogas along with exogenous eye diseases available in Ayurvedic classics. Medical and surgical Management of the above diseases with special skill development in Ashtavidha shastra & Trividha Anushastra chikitsa related to Netra roga.
3. Netra kriya kalpa procedures like seka, ashchyotana, vidalaka, pindi, tarpan, putapaka & anjana and their practical application and analysis based on ocular pharmacology. Standard operative procedures for Kriyakalpas including Aushada kalpanas.
4. Study of nayanabhighata and , its management and prevention.
5. Knowledge of preventive and community ophthalmology along with national programme for control of blindness and role of Ayurveda.
6. Ayurvedic Concept of Congenital, developmental and neoplastic diseases of netra.

### **PAPER – III**

#### **Adhunik Netra Rog Vigyan**

1. Knowledge and application of current diagnostic techniques and equipments and therapeutics in Ophthalmology.
2. Detailed study of refractive errors along with defects of accommodation and their management.
3. Detailed knowledge of classification, etiology, pathogenesis, signs and symptoms, differential diagnosis, prognosis and complications of diseases of eye orbit, lacrimal apparatus, lids, conjunctiva, cornea, sclera, uveal tract, lens, vitreous, retina, optic nerve and visual pathway with comprehensive knowledge of their medical and surgical management.
4. Ocular trauma , its emergencies and management.
5. Ocular motility disorders and their medical and surgical management
6. Neurological and systemic disorders affecting the eyes and their management.

### **PAPER – IV**

#### **Recent Advances in Netra Chikitsa & Ophthalmology.**

1. Update advances in the development of Ayurvedic drug formulations, therapeutic procedures and treatments of Netra roga. PG Final Year Syllabus-79
2. Advanced technologies in the diagnosis of eye diseases.
3. Advanced technologies & techniques in the medical & surgical management of Netra roga.
4. Advanced management and technologies in Ophthalmology.
5. Detailed study of recent research works on chakshushya dravyas.
6. Comparative and critical study of modern advances in surgical techniques over the surgical methods described in Ayurvedic classics  
Pattern of practical/Clinical training  
1. Posting in OPD,IPD,OT & Kriya kalp Kaksha.  
2. Case presentation ,clinical discussion, Seminars & Work shops.  
3. Skill development in Ashtavidha shastra karma, Trividha Anushastra Karma and Modern Ophthalmic Surgical procedures viz lid surgery, pterygium surgery, cataract surgery, squint surgery, glaucoma surgery, DCR & DCT ect.  
Methods of Training  
• Intensive integrative training would be imparted to scholars in understanding the classical Ayurvedic aspects with an emphasis of critical comparative interpretation.  
• Mandatory participation of scholars in seminars, group discussions, clinical demonstrations , journal review meetings, case study, continuing education activities and research clinical projects.  
• During the first year course the emphasis would be laid to impart adequate knowledge on fundamental aspects and their applications, with a focus on latest diagnostic tools , instrumentations and laboratory procedures. Practical orientation and hospital based clinical training is



an integral part of the curriculum all through. • In the second year ,training would stress upon extending the knowledge on techniques and imparting skill for surgical performance, ophthalmic procedure based therapies, surgical/para surgical procedures so that the scholar is able to perform ophthalmic surgical procedures like Ashtavidha shastra karma, Trividha Anushastra Karma and Modern Ophthalmic Surgical procedures viz lid surgery, pterygium surgery, cataract surgery, squint surgery, glaucoma surgery, DCR & DCT ect independently. • In the third year the scholar should concentrate on the clinical work and research work based on the dissertation. • The participation of the scholars in all the aspects of educational process is mandatory. • Hospital postings – The student has to work for 6 terms of resident posting is compulsory out of which first 2 postings will be as a junior resident and the next four postings will be as a senior resident. • The student should also develop in the academic work of the department. Pattern of Practical Examination 100 Marks 1. Bed side examination Short Case 2 of 10 marks each -20 Marks Long Case -20 Marks 2. Identification of specimen / Instrument / Radiograph -10 Marks 3. Thesis Presentation / Viva -10 Marks 4. Teaching skill -10 Marks 5. Viva Voce -30 Marks PG Final Year Syllabus-80 Reference Books 1. Charka Samhita with commentaries 2. Sushrut Samhita and vaghbhata with commentaries 3. Astanga hridaya and Astanga sangraha with commentaries 4. Madhava nidan with commentaries 5. Bhavaprakasha with commentaries 6. Sarangadhara Samhita with commentaries 7. Sahstrayoga Sangraha 8. Relevent part of Chakradhatta, Bhel Samhita, Harita Samhita 9. Shalakyia Tantra - Ramanath Dwivedi 10 Shalakyia Tantra - R.C. Chaudhary 11 The Actions and uses of Indigenous Ophthalmic Drugs - N.Srikanth 12 Clinical Examination of Ophthalmic Cases - Agarwal and Gupta 13 Alder’s Physiology of the Eye and Clinical Applications - Cotlier, St. Louis 14 Disease of the Lens and Vitrous, Glaucoma and Hypotony - Duke Elder, St. Louis 15 A Text Book of Ophthalmology - Ahmed E. 16 A Text book of clinical ophthalmology - Dhanda 17 Modern Ophthalmology - Dutta, L.C. Jaypee Brothers 18 Manual of the Diseases of the Eye - May,C. and Worth, C. Bailliere Tindal and Castell 19 Ophthalmology – Principles and Concepts - Newell, F.W., C.V. Mosby Co., St. Louis. 20 Ocular Differential Diagnosis - Roy Fedrick Hamptn Lea and Febiger 21 Clinical Ophthalmology - Smith, R.Vergheese Company 22 Abrahm Manual of Refraction - Duke and Elder 23 Hand Book of ophthalmology - B.M. Chaterjee 24 Hand Book of ophthalmology - Khurana 25 Clinical ophthalmology - Kanski 26 Parsons Diseases of Eye 27 Stallard’s Eye Surgery

### **PG Final Year Syllabus-81 19.**

### **AYURVEDA DHANWANTRI- SHALAKYA - SHIRO- NASAKARNA EVUM KANTHA ROGA PAPER – I**

Shiro- Nasa- Karna - Kantha Roga Vigyan Maulik Siddhanta and Vangmaya

1. Detailed study of Shalakyatantra from Bruhat trayee, Laghutrayee, Kashyap samhita, Yoga ratnakar, Chakradutta, Bhel samhita , Harita samhita and other granthas.
2. Comparative and critical study of rogas explained by various granthas.
3. Syntactical derivation, definition and importance of the word “Shalakya”. Sequential development and history of science of ear, nose, throat and Shiras disorders. Establishment of “Superiority of shiras’ among the organs. Determination and importance of the verse ‘Nasa Hi Shiraso Dvaram’. Syntactical derivation and the synonyms of the words Karna, Nasa, Kantha, Shiras etc.
4. Descriptive knowledge of the anatomy and Physiology of ear, nose, throat and Shiras as per ancient and modern science.
5. Examination of the ear, nose, kantha and shira as per Ayurveda and modern science.
6. Common etiology of ear, nose, throat and shiras disorders, their pathogenesis, prodromal symptoms, classification, clinical features and general treatment.
7. Importance of shaman and sodhana therapy in ear, nose, throat and shira disorders with general introduction to local therapeutic procedures of ear nose and throat and shira e.g. kaval, gandusha etc.
8. Detailed applied knowledge of recent advanced diagnostic and therapeutic techniques and equipments (Yantra and Shastra) used for ENT and Shira disorders.
9. General knowledge of ‘vrana bandhana’ (bandaging of wounds) and applied bandage in ear etc.
10. Update chronological development of ENT from Vedic period.
11. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance.

## **PAPER – II**

### **Ayurvediya Shiro – Nasa - Karna - Kantha Roga Vigyan**

1. Examination of the ear, nose, throat and shira patients.
2. Karna-Nasa –Kantha –and Shira rogas samkhyasamprapti, descriptive knowledge of etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (prognostic measures) sadhyasadyatwa and, complications of ear disorders described in the classics of Ayurved. Detail description along with practical orientation of their management.
3. Nasa rogas samkhyasamprapti, descriptive knowledge, etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (prognostic measures), sadhyasadyatwa and complications of nasal diseases described in the classics of Ayurved. Detail description along with practical orientation of their treatment.
4. Kantha rogas samkhyasamprapti, descriptive knowledge about etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya- Anupsaya (prognostic measures), sadhyasadyatwa and complications of kantha diseases described in the classics of

Ayurved. Detail description along with practical knowledge of treatment.

5. Shira and Kapala (cranial vault) disorders samkhya samprapti, descriptive knowledge, etiology, pathogenesis, prodromal symptoms, classification, clinical features, UpasayaAnupsaya (prognostic measures) and complications of Shira and kapala diseases described in the classics of Ayurved. Detail description along with practical knowledge of treatment.

### **PAPER – III**

#### **Adhunika Shiro- Nasa- Karna - Kantha Roga vigyan**

1. Descriptive knowledge of instruments and recent equipments available for diagnosis of ear – nose – throat – head disorders along with their practical application.
2. Descriptive knowledge of etiology, pathogenesis, clinical features, differential diagnosis, classification along with complications of different ear – nose- throat and PG Final Year Syllabus-82 head disorders. Detail knowledge of the treatment (including conservative and surgical) of the above mentioned disorders.
3. Imaging in ENT and Head disorders, detailed knowledge of LASERS, radiotherapy, chemotherapy and other recently advanced treatment modalities like speech therapy, cochlear implant, rehabilitation of the deaf and mute, etc. related to ear – nose – throat – and head disorders.
4. Management of emergencies in ENT and head disorders.

#### **PAPER – IV Shiro- Nasa- Karna -Kantha Roga Vigyan Shalya Chikitsa**

1. Knowledge of agropaaharniya and d trividha karma i.e pre operative, operative and post operative measures. Knowledge of eight types of surgical procedures (Astavidha Sasthra Karma) and post operative care of the patient with respect to ENT disorders (Vranitopasaniya).
2. Practical knowledge of updated surgical procedures in ear – like constructive surgery of external and middle ear, excision of pre auricular sinus, Tympanoplasty, Mastoidectomy, Stapedectomy, Endolymphatic sac surgery, Facial nerve decompression surgery, Cochlear implant, etc with their complications and their management.
3. Nose – Septo-rhinoplasty, SMR, Functional Endoscopic sinus surgery, Caldwell luc surgery, Antral puncture, Antral lavage, Turbinectomy, Polypectomy, Various surgical procedures done for malignancy of Nose and paranasal sinuses, Young's surgery, etc
4. Throat - Adenoidectomy, Tonsillectomy, Surgical procedures for pharyngeal abscesses, cauterization of pharyngeal wall granulations, tracheostomy, vocal cord surgery, surgery of vocal cord paralysis, management of laryngeal trauma, laryngectomy, etc.
5. General introduction of four treatment procedures like Bhashaj- Kshar – Agni- Shastra and

Raktavsechana with their applied aspects in ear nose throat and shiro disorders . Chaturvidha upakrama in raktasandhan vidhi related to ear nose throat and head disorders. Haemostatic management in ENT.

6. Removal of foreign bodies in the ear nose throat and shira as per Ayurveda and modern science. 7. Karna-Sandhan Nasa-Sandhan, fundamental and applied aspects of Ayurveda. Methods of Training • Intensive integrative training would be imparted to scholars in understanding the classical Ayurvedic aspects with an emphasis of critical comparative interpretation. • Mandatory participation of scholars in seminars, group discussions, clinical demonstrations , journal review meetings, case study, continuing education activities and research clinical projects. • During the first year course the emphasis would be laid to impart adequate knowledge on fundamental aspects and their applications, with a focus on latest diagnostic tools , instrumentations and laboratory procedures. Practical orientation and hospital based clinical training is an integral part of the curriculum all through. • In the second year ,training would stress upon extending the knowledge on techniques and imparting skill for surgical performance, ENT procedure based therapies, surgical/para surgical procedures so that the scholar is able to perform ENT surgical procedures independently. • In the third year the scholar should concentrate on the clinical work and research work based on the dissertation. • The participation of the scholars in all the aspects of educational process is mandatory. • Hospital postings – The student has to work for 6 terms of resident posting is compulsory out of which first 2 postings will be as a junior resident and the next four postings will be as a senior resident. • The student should also develop in the academic work of the department. PG Final Year Syllabus-83 **Pattern of Practical Examination:** 1. Case Record(25) -10 Marks 2. Bed side examination Long Case -20 Marks Short Case -10 Marks 3. Identification of specimen / Instrument / Radiograph -10 Marks 4. Thesis Presentation -25 Marks 5. Viva Voce -25 Marks Reference Books 1. Sushrut Samhita 2. Charak Samhita 3. Ashtang Hridaya 4. Ashtang Samgraha 5. Laghutrayi 6. Modern books related to ENT disorder 7. Diseases of Nose Throat and Ear - Bhargav Shah 8. Diseases of Nose Throat and Ear, Head and Neck EB Edr. 9. A Text book of otorhinololaryngology - Scott Browns editions. 10.Text book of Ear Nose Throat diseases – Dhingra 11.Text book on ENT – Mohd. Maqbool 12.Logan Turner’s book on ENT 13.Ballengers text book of ENT 14.Kumin’s text book of ENT 15.Rob Smith’s book of ENT surgery 16.Paprella’s book of ENT 17.Hazarika’s text book on ENT 18.Books on examination of ENT 19.Audiology Anirwan Biswas 20.Kurt’s Audiology 21.Books on Speech therapy

#### **PG Final Year Syllabus-84 20.**

#### **AYURVEDA DHANWANTRI-SHALAKYA - DANTA EVUM MUKHA ROGA**

**PAPER – I** Danta evum Mukha Roga – Ayurveda Siddhanta and Vangmaya Marks 100

1. Etymology, definition and importance of the word 'Shalakyā', History and development of the science of oral and dental diseases. Etymology and synonyms of the word 'Mukha' and 'Danta'. Ancient and recent knowledge of anatomy of oral cavity and teeth along with the knowledge of salivary glands.
2. Detailed study of Oral cavity and gustatory physiology.
3. Oral hygiene, Social aspect of oral hygiene, preventive measures in oral cavity diseases, general etiology, pathogenesis, prodromal symptoms, clinical features and general management of oral cavity diseases.
4. Agropaharaniya, knowledge of purva, pradhan and pashchat karma. Study of Ashta Vidha Shastra Karmas in relation to Danta and Mukha Roga.
5. Applied and detailed study of therapeutic measures for oral and dental disorders, like Kavala, Gandusha, Dhumapana, Nasya, Murdhtaila Mukhalepa and Pratisarana and their definition, types, indications, contraindications, procedure, features of proper, excess, deficient application and their management.
6. Importance of shodhan and shaman treatment in oral and dental diseases and knowledge of common recipes useful in oral and dental diseases.
7. General introduction of four types of treatment (Bheshja, Shastra, Kshara, Agni). Detail description of Anushastra karma; their practical knowledge in oral and dental diseases.
8. Analytical determination of related subjects of danta-mukha disorders available in ancient and modern commentaries of different Samhita.

## **PAPER – II**

### **Ayurvediya Danta evum Mukha Rog Vijnana Marks 100**

1. Examination of oral cavity, periodontia and teeth. Teeth eruption and its systemic disturbances in a child, Classification, Number of teeth along with detail knowledge of abnormal tooth eruption. Dental disorders in paediatric age group, their prevention and treatment.
2. Danta gata rogas - Dental diseases detailed in the classics of Ayurved; their etiology, pathogenesis, prodromal symptoms, clinical features, complication and applied approach in the treatment of dental diseases.
3. Detailed study of etiology, pathogenesis, prodromal-symptoms, clinical features, complications and prognosis of diseases of the Danta-Mula Gata Roga (gumperiodontia) as detailed in the classics of Ayurved. Practical approach/orientation in Treatment of the periodontal diseases.
4. Oshtha (lip), Jihva (tongue) and Talu (palate) Rogas, detailed study of etiology, pathogenesis, prodromal - symptoms, clinical features, complications and, prognosis. Detailed description of their

treatment along with practical orientation.

5. Sarvasara Mukharogas (Generalized oral diseases) available in ayurvedic classics. Detailed study of etiology, pathogenesis, prodromal-symptoms, clinical features, complications, prognosis and management of mukha rogas along with practical orientation.

6. Knowledge of Dantabhighata (dental trauma) and Mukhabhighata (oral injury) along with diagnostic and referral skills.

### **PAPER – III**

#### **Adhunik Danta evum Mukha Rog Vijnana Marks : 100**

1. Detail study of etiology, pathogenesis, clinical features, classification and complication of various oral and dental diseases available in literature of Modern sciences. Detail study of their recent available medical therapeutics.

2. Detail description of diagnostic technology in the diagnosis of oral and dental disease.

3. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance. PG Final Year Syllabus-85

4. Descriptive Knowledge of up-to-date available modern instruments and their application for examination, diagnosis and management of oral, periodontal and dental diseases.

5. Up-to-date knowledge of applied and available surgical procedures indicated in various dental diseases like tooth extraction, RCT, Dental filling, filling materials, tooth fixation and tooth implants etc.

6. Systemic Effects of oral, periodontal and dental diseases.

### **PAPER – IV**

#### **Danta evum Mukha Rog Vijnana & Dentistry Marks – 100**

1. Jaalandhara Bandha, its importance and application in Tooth extraction without anaesthesia.

2. Vishishta Upadanta parikalpana (Dental Material and Prosthesis).

3. Recent Research studies and advanced clinical applications of Kriya Kalpas in Danta and Mukha Rogas.

4. Detailed study of recent available medical therapeutics and Research studies in Dental and oral cavity disorders.

5. Advanced diagnostic technology in Dentistry and oral pathology.

6. Benign and malignant tumors of Oral Cavity, their management and role of Ayurveda in Such conditions.

7. Useful conducts for treatment of oral and dental diseases with study of related medicolegal aspects. Methods of Training • Intensive integrative training would be imparted to scholars in understanding the classical Ayurvedic aspects with an emphasis of critical comparative interpretation. • Mandatory participation of scholars in seminars, group discussions, clinical demonstrations, journal review meetings, case study, continuing education activities and research clinical projects. • During the first year course the emphasis would be laid to impart adequate knowledge on fundamental aspects and their applications, with a focus on latest diagnostic tools , instrumentations and laboratory procedures. Practical orientation and hospital based clinical training is an integral part of the curriculum all through. • In the second year, training would stress upon extending the knowledge on techniques and imparting skill for surgical performance, Dental procedure based therapies, surgical / para surgical procedures so that the scholar is able to perform Dental surgical procedures independently. • In the third year the scholar should concentrate on the clinical work and research work based on the dissertation. • The participation of the scholars in all the aspects of educational process is mandatory. • Hospital postings – The student has to work for 6 terms of resident posting is compulsory out of which first 2 postings will be as a junior resident and the next four postings will be as a senior resident. • The student should also develop in the academic work of the department. Pattern of Practical Examination:

1. Bed side examination Short Case 2 of 10 marks each -20 Marks Long Case -20 Marks 2. Identification of specimen / Instrument / Radiograph -10 Marks 3. Thesis Presentation / Viva -10 Marks 4. Teaching skill -10 Marks 5. Viva Voce -30 Marks PG Final Year Syllabus-86 Reference Books 1. Sushrut Samhita - Dalhana 2. Useful Portion of Charak Samhita-Ashtang Samgraha -Ashtang Hridaya 3. Useful portion of Laghutrayi related to Danta and Mukha Roga 4. Shalakyia Vijnanam - Ravindra Chandra Chaudhary 5. Nimi Tantra - Ramanath Dwivedi 4. Dental Anatomy Histology - Dr. S.I. Bhalajhi 5. Essentials of Preventive and Community Dentistry -Dr. Soben Peter 6. Complete Denture Prosthodontics - Dr. J.J. Manappallil

7. Orthodontics the Art and Science - Dr. S.I. Bhalajhi

8. Text book of Pediatric Dentistry - Dr. S.G. Damle

9. Text book of Oral and Maxillofacial surgery -Dr. Vinod Kapoor

10. Clinical Periodontology - Dr. B.R.R. Varma

11. Anatomy for Dental Students - Inderveer Singh

12. Clinical Periodontology - Carranza , Newman

13. Operative Dentistry - M A Marzouk

14. Oral and maxillofacial surgery secrets - A.Omar Abubaker

15. Killey and Kay's Outline of Oral Surgery - Girton R Seward
16. Clinical Dentistry - Ivor G. Chestnut , John Gibson
17. Synopsis of Oral Pathology - S N Bhaskar
18. Oral Pathology - Stone

**PG Final Year Syllabus-87 21.**

**PANCHKARMA PAPER-I**

Purva Karma-Snehana and Svedana

1. Panchkarma in Ashtanga Ayurved and Significance of Shodhana
2. Ama and Shodhana, benefits of Shodhana, Samikshya Bhavas in Shodhana,
3. Importance of Pachana prior to Snehana, methods, drugs, duration and dose for Pachana, samyak Lakshana of Pachana Snehana 1. Etymology and definition of Sneha and Snehana 2. General considerations about Snehana 3. Classifications of Sneha, Sneha-Yoni, detailed knowledge of four types main SnehaGhrita, Taila, Vasa and Majja with their characteristics, importance and utility, various aspects of Uttama Sneha 4. Properties of Snehana Dravya and their interpretation 5. Effects of Snehana 6. Sneha Kalpana, various types of Sneha Paka with their utility 7. Indications and contraindications of Snehana 8. Classification of Snehana: Bahya and Abhyantara Snehana 9. Bahya Snehana and Bahir-Parimarjana, utility and importance of Bahya Snehana 10. Classification of Bahya Snehana Methods, indications, contraindications, specific utility of the followings Abhyanga, Mardana, unmardana, Padaghta, Samvahana, Udvartana/Utsadana, Udgharshana, Avagaha, Pariseka, Lepa, Pralepa, updeha, Gandusha, Kavala; Karana and Nasa Purna, Akshi Tarpana; Murdhni Taila: Shiro-abhyanga, Shirodhara, Siro Pichu and Siro Basti, Shiro Lepa (Talapotchil), Talam and Takradhara, etc. 11.Knowledge of digestion and metabolism of fat 12.Karmukata of Abhyantara and Bahya Snehana 13.Knowledge of different western massage techniques 14.Abhyantara Snehana: Brimhanartha, Shamanartha and Shodhanartha, definition, method and utility of Brimhanartha and shamanrtha Snehana; difference between Shamanartha and Shodhanartha Snehana 15. Methods of Abhyantar Snehana 16. Shodhanartha Snehana: Acchapana and Vicharana, Utility and various methods of Sadyasnehana, Avapidaka Sneha 17. Matra of Sneha : Hrasiyasi, Hrasva, Madhyama and Uttma Matra with their indications, specific utility of Ghrita, taila, Vasa and majja; Anupana of Sneha 18. Need and method of Rukshana before performing Snehana in specific conditions and Samyak Rukshana Lakshana 19. Shodhannga Snehana Vidhi and methods of fixation of dose 20. Diet and Pathya during Snehana 21. Observation of sneha Jiryamana, Jirna and Ajirna Lkashana 22. Samyak, Asnidgha and Ati Yoga Lakshana of Snehana 23. Snehs vyapta and their management 24. Pariharya vishaya and Parihara Kala Svedana 1. Etymology and definition of Svedana 2. General considerations



about Svedana 3. Properties of Svedan and Svedopaga Dravya 4. Indications and contraindications of Svedana 5. Various Classifications of Sveda and Svedna 6. Detailed knowledge of four types of Sveda of Sushruta with their utility; PG Final Year Syllabus-88 7. Hina, Mridu, Madhya and Mhana Sveda; Ekanga and Sarvanga sveda with their utility 8. Utility and method of each of 13 types of Sagni and 10 types of Niragni Sveda 9. Shodhannga and Samshamaniya Sveda 10. Methods to protect the vital organs (varjya anga) during Svedan Procedure 11. Detailed Knowledge about Utility of below mentioned Svedan procedures:- Patrapinda Sveda, Shashtika Shalipinda Sveda, Churna Pinda Sveda, Jambira Pinda Sveda, Dhanya Pinda Sveda, Kukkutanda Sveda, Anna lepa, Valuka Sveda, Ishtika Sveda, Nadi Sveda, Bashpa Sveda, Kshira bashpa Sveda, Avagaha Sveda, Parisheka Sveda, Pizichil, Dhanyamla Dhara, Kashaya Dhara, Kshira Dhara and Upanaha Sveda. 12. Avasthanusari Svedana in various disorders 13. Samyak, Ayoga and Atiyoga Lakshana, Sveda Vyapat and their management 14. Diet and regimens during and after Svedana 15. Karmukata of Svedana 16. Current sudation modalities like Sauna bath, Steam Bath, Infrared, etc. 17. Svedana with Kati Basti, Janu Basti and Griva Basti 18. Study of Snehana and Svedana related portions in classics with commentaries.

## **PAPER – II**

### **Vamana and Virechana Karma Vamana Karma**

1. Etimology, definition and general considerations of vamana
2. Properties of Vamaka and Vamanopaga drugs
3. Knowledge and utility of important Vamaka drugs and their preparations (Vamana Yoga)
4. Avasthanusara Vamana and its utility.
5. Indications of Vamana
6. Contraindications of Vamana with reasons
7. Pachana prior to Snehana
8. Detailed knowledge and method of preparation of patient with Snehana
9. Abhyanga and Svedana as Purvakarma of Vamana
10. Diet and management of gap day
11. Need of increasing of Kapha for proper Vamana, Kapha increasing diet
12. Management of Patients on the morning of Vamana
13. Administration of food articles prior to Vamana
14. Drug, time, Anupana, Sahapana, dose and method of administration of Vamana and Vamanopaga preparations
15. Method of Vamana Karma, waiting period for automatic Vamana Vega and manipulation in its absence

- 16.Observations prior to beginning of Vamana such as sweat on forehead, horripilation, fullness of stomach and nausea
- 17.Observation and assistance of the patient during Vamana
- 18.Vega and Upavega of Vamaana and its counting, observations and preservation of vomitus matter and its weighing
- 19.Samyak, Ayoga and Atiyoga of Vamana
- 20.Laingiki, Vaigiki, Manaki and Antiki Shuddhi,
- 21.Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly
- 22.Detail knowledge of methods of Samsarjana Krama and its importance
- 23.Kavala and Dhumapana after vamana
- 24.Management of Ayoga, Atiyog and Vyapat of Vamana with Ayurveda and modern drugs
- 25.Parihara Vishaya and Kala for Vamana PG Final Year Syllabus-89
- 26.Vamana Karmukata with Pharmaco-dynamics of Vamana Virechana Karma 1. Etymology, definition and general considerations of Virechana 2. Importance of Vamana and Virechana as shodhana, Virechana better than Vamana 3. Necessity of Vamana prior to Virechana 4. Preparation of patients for Virechana after Vamana 5. Preparation of patients directly for Virechana 6. Properties of main Virechaka and Virechanopaga drugs, Classifications of Virechana drugs with definition, example and utility of each type 7. Indications of Vamana Karma 8. Contraindications of Virechana with reasons 9. Utility of Virechana for the specific conditions and stages of the disease 10. Internal Snehana for Virechana with diet 11. Management of 3 gap day with diet and importance of low Kapha for proper Virechana 12.Abhyanga and Svednana as Purvakarma of Virechana 13.Management of Patients on the morning of Virechana 14.Virechana should be performed in empty stomach 15.Drug, dose, time, Anupana, sahapana and method of administration of Virechana and Virechanopaga preparations 16.Method of performing of Virechana Karma 17.Observations during Virechana, Vega and Upavega of Virechana and its counting, observations and preservation of fecess and its weighing 18.Samyak, Ayoga and Atiyoga of Virechana 19.Laingiki, Vaigiki, Manaki and Antiki Shuddhi of Virechana 20.Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly 21.Detail knowledge of methods of Samsarjana Krama and its importance, and Tarpana krama and its importance 22.Management of Ayoga, Atiyog and Vyapat of Virechana with Ayurveda and modern drugs 23.Parihara Vishaya and Kala for Virechana 24.Virechana a Karmukata with Pharmaco-dynamics of Virechana 25.Applied anatomy and physiology of Gastrointestinal system related with Vamana and Virechana 26.Study of Vamana and Virechana related portions in classics with commentaries 27.Recent advances of researches on the effect of Vamana and Virechana 28.Scope of research for Vamana and Virechana. 29.Role of Vamana and virechana in promotion of health

prevention and treatment of diseases.

### **PAPER – III**

#### **Basti Karma and Nasya Karma Basti Karma**

1. Etymology, definition and general considerations of Basti
2. Importance of Basti in Kayachikitsa and other branches of Ayurveda
3. Classifications of Basti
4. Drugs useful in Basti
5. Indications of Basti, its role at the various stages of diseases
6. Contraindications of Basti with reasons
7. Description of Basti yantras, Basti netra and Basti putaka and their Doshas. Modified Basti Yantra, their merits and demerits PG Final Year Syllabus-90
8. Dose schedules of Niruha and Anuvasana basti Niruha basti Etymology, synonyms, definition and classifications and subclassifications of Niruha Basti and detailed knowledge of each type of Niruha Basti along with indications and contraindications and benefits Contents of various types of Niruha Basti, their proportions, methods of mixing basti Dravya, Relation of Virechana, Shodhana, Anuvasana Basti with Niruha Basti Purvakarma for Niruha Basti; Pathya before, during and after Niruha Basti; all the aspects of administration of various Niruha Basti Observations during and after Niruha Basti Basti Pratyagamana, Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Niruha Basti and their management according to Ayurved and Modern Systems of Medicines Management during and after Niruha Basti Pariharya vishaya and pariharakala, Anuvasana basti Etymology, synonyms, definition and classifications of Anuvasana Basti and detailed knowledge of each type of Anuvasana Basti along with indications and contraindications and benefits Various types of Ghrita and Taila useful in Anuvasana Basti; Anuvasana Basti with Vasa and Majja along with their merits and demerits Relation of Virechana, Shodhana, Niruha Basti, Snehana with Anuvasana Basti Purvakarma for Anuvasana Basti; Pathya before, during and after Anuvasana Basti; all the aspects of administration of Anuvasana Basti including Kala Observations during and after Anuvasana Basti Anuvasana Basti Pratyagamana, Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Anuvasana Basti and their management. Management during and after Anuvasana Basti Pariharya vishaya, Pathya and pariharakala for Anuvasana Various combined basti schedules such as Karma, Kala, yoga Basti etc. Detailed knowledge of Matra Basti Detailed Knowledge of different basti formulations like Piccha Basti, Kshira Basti, Yavana Bastis, Madhutailika Basti, Erandamuladi Niruha Basti, Panchaprasrutika Basti, Kshara Basti, Vaitarana Basti, Krimighna Basti, Lekhana Basti, Vrishya Bsti, Manjishtadi Niruha Basti, Dashamula Basti, Ardhamatrika Basti, Sarva roghara Niruha

Basti, Brimhana Basti, Vataghna Basti, Pittaghna Basti and Kaphaghna Basti etc, and their practical utility. Uttara basti 1. Definition and Classification of Uttara Basti, its Netra and Putaka. Dose of Uttara Basti Sneha and Kashaya Basti. Different Uttara Basti Kalpanas in various diseases. 2. Detailed knowledge of Purvakarma and Administration of Uttara Basti in male and female, precautions, aseptic measures, complications and their management Karmukata of Basti. Applied anatomy and physiology of colon, Pharmacodynamics of Basti. 3. Concept of 'Gut Brain' and its relevance to Basti Therapy. 4. Study of relevant portions of Basti in classics with commentaries. Nasya Karma 1. Etymology, synonyms, importance and definition of Nasya 2. Nasya drugs according to various Samhita PG Final Year Syllabus-91 3. Classifications and sub-classifications of Nasya with detailed knowledge of each type 4. Indications and contraindications of each type of Nasya with reasons 5. Drugs useful for Nasya with Dose and methods of preparations and their doses 6. Nasya Kala and Pathya before, during and after Nasya; Duration of different Nasyas 7. Purvakarma of each types of Nasya 8. Detailed knowledge of administration of each type of Nasya with management during and after Nasya. 9. Detailed knowledge of common Nasya formulations such as Shadabindu Taila, Anu taila, Kshirabala Taila, Karpasastyadi Taila, Bramhi Ghrita. 10. Samyak yoga, Ayoga and Atiyoga of each types of Nasya, its Vyapat and their management 11. Pashchata Karma; Role of Dhumapana, Kavala after Nasya, 12. Diet and Pathya before, during and after Nasya Karma 13. Pariharya vishaya, Parihara Kala, 14. Nasya Karmukata, Applied anatomy and physiology related to Nasa hi Sirso Dvaram, blood and nerve supply to nose, Shringataka marma, olfactory nerve and centers, aroma therapy, trans nasal administration of drug, recent advances in nasal drug delivery 15. Study of relevant portion in classics with commentaries

#### **PAPER – IV**

#### **Raktamokshana, Physiotherapy and Diseasewise Panchakarma A. Raktamokshana-33 Marks**

1. Definition, importance, classifications and detailed knowledge of each type of Raktamokshana with their methods of performance
2. General principles, indications, contraindications of Raktamokshana
3. Detailed knowledge of Jalaukavacharana: Indications and contraindications of Jalaukavacharana, various types of Jalauka with their beneficial and harmful effects.
4. Purvakarma and method of Jalaukavacharana, observations and Pathya before, during and after Jalaukavacharana
5. Management during and after Jalaukavacharana
6. Symptoms of Samyak, Ayoga and Atiyoga and Vyapat of Raktamokshana and their management

with Ayurveda and Modern medicines.

7. Pariharya vishaya and Parihara kala

8. Karmukata of different types of Raktamokshana B. Clinical Physical Medicine-33 Marks 1. Definitions and terminology 2. Biomechanics of human movements; Physiology of exercise 3. Treatment modalities used in Physical Medicine- general properties and detailed clinical use of each a. Heat – general physiological properties and mode of action as a treatment agent, Forms of heat therapy – superficial and deep heating. General knowledge of Infrared, Paraffin Wax bath, short wave diathermy, electro magnetic therapy, ultra sound therapy, convection heating devices, b. Cold as a therapeutic agent c. Prescription of physical modalities and their applications in medicine. 4. Clinical use of massage, manipulation, stretching 5. Principles of occupational therapy, training in activities of daily living for rehabilitation, self-help devices (walking aids, wheelchairs, tricycles & modified vehicles), instrumental activities of daily living, 6. Physiotherapy exercises for Paralytical disorders, cervical spondylosis, frozen shoulder and slip disc. PG Final Year Syllabus-92 C. Disease-wise Panchakarma-34 Marks Role of Panchakarma in Different Stages of the following Diseases: Jvara, Raktapitta, Madhumeha, Kushtha, Shvitra, Unmada, Apasmara, Shotha, Plihodara, Yakridaluodara, jalodara,, Arsha, Grahani, Kasa,Tamaka Shwasa, Vatarakta, Vatavyadhi, Amlapitta, Parinama Shula, Ardhavabhedaka, Ananta Vata,, Amavata, Sheetapitta, Shleepada, Mutrakruchchra, Mutrashmari, Mutraghata, Hrudroga, Pinasa, Drushtimandya, Pandu, Kamala, Sthaulya, Krimi, Madatyaya, Moorchcha, Padadari, Mukhadushika, Khalitya, Palitya, Use of Various panchakarma Procedures in the following disorders - Migraine, Parkinson's Disease, trigeminal neuralgia, Bell's palsy, cerebral palsy, Muscular dystrophy, hemiplegia, paraplegia, Lumbar Disc disorders, Spondylolisthesis, Ankylosing spondylosis, Carpel Tunnel Syndrome, Calcaneal Spur, Plantar fasciitis, GB syndrome, Alzhiemer's disease, Irritable Bowel Syndrome, ulcerative colitis, psoriasis, hypothyroidism, hyperthyroidism, hypertension, allergic rhinitis, , Eczema, diabetes mellitus, Chronic obstructive pulmonary Disease, Insomnia, Rheumatoid Arthritis, Gout, Osteoarthritis,multiple sclerosis, SLE, male & female infertility, cirrhosis of liver, Jaundice, General Anxiety Disorders, Reference Books: 1 Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpa taruby Gangadhara Agnivesha 2 Sushrutha Samhita with the Nibhandha Samgraha commentary of Dalhana and Nyayachandrika panjika of Gayadasa on nidansthana Sushrutha 3 Ashtang Hridaya with Sarvanga sundara and Ayurved rasayana commentaries Ashtanga Sangraha with Shashilekha commentery Bhela Samhita Kashyapa Samhita Bhavaprakasha of Bhavamishra Sharangadhara Samhita Vangasen Gadanigraha Vagbhata Vagbhata 4 Ayurvediya Panchkarma chikitsa Dr Mukundilal Dwivedi 5 Panchkarma Vigyan Dr Haridas Shreedhar Kasture 6 Illustrated Panchkarma Dr.G Srinivasa Acharya 7 Ayurveda-Principles and Practice of Panchakarma Dr. Mandip and Dr Gurdip Singh 8 The

Panchkarma Treatment of Ayurved with Kerala Specialities Dr. T.L. Devaraj 9 Panchkarma Therapy  
Dr. R.H. Singh 10 Principles and practice of vasti Dr. Vasudevan Nampoothiri and Dr. L. Mahadevan  
11 Claiton's Physiotherapy 12 Teddy's Physiotherapy 13 Harrison's Principles of Internal Medicines  
14 Guyton's Physiology

## **PG Final Year Syllabus-93 22.**

### **Chhaya Avum Vikiran Vigyan**

#### **Paper-1**

Fundamentals of Chhaya Avum Vikiran Vigyan (Radio-diagnosis & Imaging) Part-A Detail knowledge of principles of Ayurveda and their applied aspects, specially Panch Mahabhuta, Dosh, Dhatu, Mala, Panch Nidan, Prakriti, Shatkriyakaal, Praman, ChhyaPratichchhaya , Prabha, , Rogi pariksha (Trividha, Shatvidha especially Darshan pariksha),their relevance with Chhaya avum Vikiran Vigyan. -Study of Ayurvedic classics and modern Medical Science texts related to Chhaya avum vikiran vigyan - Chhaya avum Vikiran vigyan as a means of Darshan priksha.Part-B • Infrastructure of an ideal Chhaya avum vikiran unit. • Fundamental principles of Chhaya avum vikiran vigyan • Detail knowledge of equipments (yantra) used in Chhaya avum Vikiran Vigyan. • Dark room techniques • Ionizing and non ionizing energies related to Chhaya avum Vikiran Vigyan - relevant hazards, prevention and precautions, their management by Ayurvedic and modern measurements. • Trividha Karma –Poorva ,Pradhan avum Pashchat Karma in Chhaya avum Vikiran Vigyan • Occupational physical disorders of consultants related to Radio-diagnosis and imaging. Paper-2 Applied Anatomy, Physio-pathology and Procedures in Chhaya avum Vikiran Vigyan (Radio-diagnosis & Imaging) Part-A Applied Anatomy, Physiology & Pathology in Chhaya avum vikiran Vigyan (Radiodiagnosis & Imaging) Detail knowledge of Ayurvedic and Modern applied radiological Anatomy (including sectional), Physiology and Pathology of the human body; 1. Sira(Vessels), Gaurya Sira, (Lymphatic channels), Mansa (Muscles), Snayu (Ligaments), Kandara (Tendons), Sandhi(Joints), Nadi(Nerve), Asthi(Bones), Strotas,Marma, Antahsravi granthi (Endocrine glands) etc. 2. Urdhwajatrugata(Supraclavicular) parts-Kapaal(Skull),Karna(Ears),Chakshu( Eyes), Nasa(Nose), Paranasal sinuses, Lalagranthi( Salivary glands), Face, Greeva(Neck), Sushumna( Spinal cord) and Kaseruka (vertebrae), Mukha(Mouth), Danta(Teeth), Mastulunga(Brain), Lasika granthi( Lymph glands )etc. 3. Koshtha (Trunk) parts-Sushumna( Spinal cord) and Kaseruka( vertebrae). a. Vaksha(Thoracic)parts-Phuphphus(Lungs),Hridaya(Heart)&Sira(Vessels), Shwashnalika (Trachea, Bronchi), Annamarg (Esophagus), Lymph nodes, Kooch (Breast), Hridayabandhan ( Diaphragm) etc.

b. Udar(Abdominal)parts- Audaryyakalaa (Peritoneum) Aamashaya(Stomach) , Kshudrant (Smallintestine), Vrihadantra (Large intestine), Guda(Rectum and Anal canal), Aantrapuchchha (Appendix) , Yakrit(Liver), Tilam(Gall bladder), Billiary channels, Pleeha(Spleen), Agnyashaya(Pancreas), Vrikka (Kidney),Gavini(ureter), Basti(urinarybladder), Shishna(penis),Paurushgranthi (prostate) ,Vrishan(testes),Shukrashaya (seminalvesicles),Dimbashaya(ovaries), Perineum Garbhashaya(uterus), Yoni, Dimbvahini( fallopian tubes), Lasika granthi (lymph nodes) etc. 4. Shakha-parts of upper and lower extremities. PG Final Year Syllabus-94 Part –B Procedures in Chhaya avum Vikiran Vigyan (Radio-diagnosis & Imaging) • Various routine and special, non-contrast and contrast radiography, Digital radiography, Radiographic positions and views. • Various Ultra Sonographic procedures -Various diagnostic and therapeutic Ultrasonography [routine,,joint study, various Endo-USG, Obstetrics -Garbha vinishchaya (confirmation of pregnancy) , Masanumas Garbh vridhhi (fetal development), Garbha swastha (fetal well being) and Vyadhi (fetal diseases) ,Vikrita garbha (congenital anomalies) . Apara (Placenta) , Nabhinadi darshan (umbilical cord ),Garbhapatta (abortion ) Apara / Garbhaavayav Apaatan (Retained conceptual products), Gynaecology –Yonivyapat (gynaecological disorders), Bandhyatva (infertility) , Garbhashayabhransha (uterine prolapse)etc. Dopplers USG guided techniques and other advances. • CT, MRI, Radionuclide scanning, PET and other recent advanced procedures in Radio-diagnosis & Imaging. Mammography Bone Densitometry Interventional radiology Paper 3 Physics and Biology related to Chhaya avum Vikiran Vigyan( Radio diagnosis & Imaging) Part-A • Physics of radiography, Digital radiography, Fluoroscopy, their application. • Physics of ultrasonography, its applied aspect related to various U.S.G, Doppler procedures. • Study of contrast materials used in Radio-diagnosis and imaging. Part-B • Physics of CT scan, its applied aspect, efficiency and limitations. • Physics of MRI, its applied aspect, efficiency and limitations. • Physics and its applied aspect related to other imaging procedures e.g. PET, RadioNuclides imaging etc. • Biology related to Chhaya avum Vikiran Vigyan Paper-4th Applied Chhaya avum Vikiran Vigyan (Radio-diagnosis & Imaging) Part-A Applied aspects of radiographic interpretation and reporting of various diseases related to systems, organs (as mentioned in paper-2nd, part-A ) and metabolism. Part-B • Applied aspects of Ultrasonography, interpretation and reporting of various diseases related to system, organ (as mentioned in paper-2nd, part-A,) and metabolism, routine joint study, various Endo-USG. , Obstetrics -Garbha vinishchaya (confirmation of pregnancy) , Masanumas Garbh vridhhi (fetal development), Garbha swastha (fetal well being,bio-physical profile) and Vyadhi (fetal diseases) ,Vikrita garbha (congenital anomalies,2nd level obstretic USG ) . Apara (Placenta) , Nabhinadi darshan (umbilical cord ),Garbhapatta (abortion ) Apara / Garbhaavayav Apaatan (Retained conceptual products), Gynaecology –Yonivyapat (gynaecological disorders), Bandhyatva (infertility) , Garbhashayabhransha (uterine prolapse)etc.

Dopplers, USG guided techniques and other advances.. • Applied aspect , interpretation and reporting of CT scan, MRI scan and other advanced Radiological techniques. PG Final Year Syllabus-95 • Application of Chhaya avum vikiran vigyan in context to Ayurvedic fundamentals, diagnosis, management and research. Reference Books; Shusruta Samhita Relevant part Charak Samhita - doAstang Hridaya/Sangrah - doText Book of Radiographic Positioning and Related Anatomy - By Kenneth L Bontrager, John P Lampignano Radiographic interpretation to general practitioner -W.H.O. Procedures in diagnostic Radiology - By T. Doyle, W. have, K. Thomson. Radiographic positioning - By Clark Radiobiology for the Radiologist - By Hall.Christensen's Physics of Diagnostic Radiology - By Curry T S , Dowdey J E , Murry R C Farr's Physics for Medical Imaging - By Penelope Allisy-Roberts , Jerry Williams Fundamental of Diagnostic Radiology - By Brant. Diagnostic Imaging - By Federle Diagnostic Imaging - By Peter Armstrong , Martin Wastie , Ansrea Rockall Gastrointestinal radiology - R.L. Eisenberg Uro-radiology - T.Sherwood, A.J.Davidson, .B.Talner Grainger and Allison's Diagnostic Radiology -Text book of medical imaging Text Book in Radiology and Imaging - By D. Sutton. Introduction to Vascular Ultrasonography - By Zwiebel , Pellerito Text book in Ultrasonography - By Roumack Manual of Medical Diagnostic Ultrasonography - By W.H.O. Scientific group. Computed Tomography & MRI of the whole body - By Haggga. Surface and Radiological Anatomy - By A. Halim X-Ray equipment for student Radiographers - By DN and MO Chesney Clinical Sonography , A Practical Guige - By Roger C. Sanders , Tom Winter Ultrasonography in obstretics and gynaecology -Callen Standard Journals like Indian Journal of Radiology, Radiology,Radiological clinics of north America,British Journal of Radiology etc. Audio-visual aids -CDs & DVDs

## SECTION IV

### TEACHING & MONITERING LEARNING PROGRESS

#### 1. Seminars

The seminars shall be held at least once in a week in each post graduate department. All candidates are expected to participate actively and enter the relevant details in the log book. Each candidate shall make at least 5 seminars in each year.

#### 2. Journal club



The journal review meeting shall be held at least once in week. All candidates are expected to participate actively and enter relevant details in log book. The candidate should make the presentation from allotted journals of selected articles at least 5 times in each year.

### 3. Symposium

It is recommended to hold symposium on topics covering multiple disciplines.

4. Practicals/Clinical postings for Non-clinical/Clinical PG Courses Each trainee shall work in hospital on regular basis to acquire adequate professional skill and competency in managing various cases to be treated by the specialist.

### 5. Conducting Lectures-teaching skills

All the candidates shall be encouraged to take part in the undergraduate teaching programmes either in the form of lecturer or group discussion in their subjects.

### 6. Conducting/attending Conferences at various levels

The candidate shall be encouraged not only to attend conference/workshop/advance course but also to present at least one paper at state/national competence during their training period.

### 7. Continued Medical Education programmes

Each post graduate department shall organize these programmes on the regular basis involving the other institution. The candidates shall also be encouraged to attend the programme conducted elsewhere.

### 8. Postings by rotation to other Institutions/Departments

To bring in more integration between the competence and allied fields each post graduate department shall work out a programme to rotate the candidate in related disciplines.

### 9. Periodic tests

In case of degree courses of three years duration, the concerned departments may conduct three tests, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals/clinical and viva voce.

### 10. Work Diary/Log Book

Every candidate shall maintain a work diary and record his / her participation in the training

programmes conducted by the department such as journal reviews, seminars, etc. Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate.

The log book is a record of the important activities of the candidates during his training, Internal assessment should be based on the evaluation of the log book. Collectively, log books are a tool for the evaluation of the training programme of the institution by external agencies. The record includes academic activities as well as the presentations and procedures carried out by the candidate.

Format for the log book for the different activities is given in tables 1,2 and 3 of chapter 4. Copies may be made and used by the institutions.

#### **11. Practical records**

Records, log books and marks obtained in tests shall be maintained by the Head of the Department and shall be made available to the University or CCIM

#### **12. Procedures of defaulters**

Every department should have committee to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate to be withheld from appearing the examination, if she/ he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right.

## FORMAT OF MODEL CHECKLISTS AND EVALUATION OF LEARNING PROGRESS

Checklist-1. Model Check list for evaluation of Seminar presentations

Name of the Candidate:

Date:

Name of the Faculty/Observer:

Sl.No.	Items of observation During presentation	Poor	Below Average	Average	Good	Very good
		0	1	2	3	4
1	Whether other relevant publication consulted					
2	Whether cross reference have been consulted					
3	Completeness of the preparation					
4	Clarity of the preparation					
5	Understanding the subject					
6	Ability to answer the questions					
7	Time scheduling					
8	Appropriate use of audio-visual aids					
9	Overall performance					
10	Any other observations					
	<b>Total score</b>					

Checklist-2 Model Check list for evaluation of Journal review Presentations

Name of the Candidate:

Date:

Name of the Faculty/Observer:

1	Items of observation During presentation	Poor	BelowAverage	Average	Good	Very good
		0	1	2	3	4
1.	Article chosen					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	Whether cross-references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper/ subject					
6.	Audio - Visual aids used					
7.	Ability to discuss the paper					
8.	Clarity of presentation					
9.	Any other observation					
<b>Total score</b>						

Checklist-3. Model Check list for evaluation of Practical work in Practical classes/Clinical work in OPD

Name of the Candidate:

Date:

Name of the Faculty/Observer:

Sl. No.	Items of observation During presentation	Poor	BelowAverage	Average	Good	Very good
		0	2	3	4	5
1	Regularity of attendance					
2	Punctuality					
3	Interaction with colleagues and supporting staff					
4	Maintenance of case records					
5	Investigations work up					
6	Chair side manners					
7	Rapport with patients					
8	Overall quality of clinical work					
<b>Total Score</b>						

Checklist-4. Model Check list for evaluation of Clinical Presentations

Name of the Candidate:

Date:

Name of the Faculty/Observer:

Sl. No.	Items of observation During presentation	Poor	BelowAverage	Average	Good	Very good
		0	2	3	4	5
1	Completeness of history					
2	Whether all relevant points elicited					
3	Clarity of presentation					
4	Logical order					
5	Mentioned all positive and negative					
6	Accuracy of general physical examination					
7	Diagnosis: whether it follows logical from history and findings					
8	Investigation required complete list relevant order interpretation of investigations					
9	Ability to react to questioning. Whether it follows logically from history and findings					
10	Ability to justify differential diagnosis					
11	Ability to defend diagnosis					
12	Other					
	<b>Total score</b>					

Checklist-5. Model Check list for evaluation of Teaching skills

Name of the Candidate:

Date:

Name of the Faculty/Observer:

		<b>Strong points</b>	<b>Weak points</b>
	Communication of the purpose of the talk		
	Evokes audience interest in the subject		
	The introduction		
	The sequence of ideas		
	The use of practical examples and/or illustration		
	Speaking style (clear, monotonous, etc. Specify)		
	Attempts audience participation		
	Summary of the main points at the end		
	Ask question		
	Answer question ask by the audience		
	Rapport of the speaker with his audience		
	Effectiveness of the talk		
	Use AV aids appropriately		

Checklist-6. Model Check list for evaluation of Dissertation presentation

Name of the Candidate:

Date:

Name of the Faculty/Observer:

	Points to be considered	Poor	BelowAverage	Average	Good	Very good
		0	1	2	3	4
1	Interest shown in selecting topic					
2	Appropriate review					
3	Discussion with guide and the faculty					
4	Quality of the protocol					
5	Preparation of proforma					
	<b>Total score</b>					



Checklist-7. Model Check list for evaluation of Dissertation progress with Guide

Name of the Candidate:

Date:

Name of the Faculty/Observer:

1.	Items of observation During presentation	Poor	BelowAverage	Average	Good	Very good
		0	1	2	3	4
1.	Periodic consultation with guide / co-guide					
2.	Regular collection of case material					
3.	Depth of Analysis / Discussion					
4.	Department presentation of findings					
5.	Quality of final output					
6.	Others					
<b>Total Score</b>						

Checklist-8. Overall assessment Sheet

Name of the Candidate:

Date:

Name of the Faculty/Observer:

	Name of the candidate * and Mean score											
	A	B	C	D	E	F	G	H	I	J	K	L
1.Seminar												
2.Journal presentations												
3. Practical work in Practical classes/Clinical work in OPD												
4.Clinical Presentations												
5.Teaching skills												
6.Dissertation Presentations												
7. Dissertation progress with Guide												

## LOG BOOK

**Table 1`**

Academic Presentation made by the candidate

**Name: Admission Year:**

**College:**

<b>Date</b>	<b>Type Of Activity- Specify Seminar, Journal Club, Presentation, UG Teaching</b>	<b>Particulars</b>





**Key:**

**O** – Washed up and observed – initial 6 months of admission

**A** – Assisted a more senior surgeon – 1 year M.D. (Ay)/M.S.(Ay)

**PA** – Performed procedure under the direct supervision

of senior physician/ surgeon- 2 year M.D. (Ay)/M.S.(Ay)

**PI** - Performed independently – 3 year M.D. (Ay)/M.S.(Ay)

**Section V**

**Ayurveda Ethics Sensitization and Practice**

**Introduction:**

There is now a shift from the traditional individual patient doctor relationship and medical care. With the advance in science and technology and the needs of the patient, their families and community, there is an increasing concern with the health of the society, there is a shift to greater accountability to the society. Doctor and the health professional are confronted with many ethical problems. To accomplish the goal and general objectives stated in section II and develop human values it is urged that ethical sensitization is planned to be achieved by lecturers or discussion on ethical issues, discussion of clinical cases that have important ethical component and by including ethical aspects in discussion in all case presentation, bed side rounds and academic programmes.

**Course contents:**

The names of all the Sanskrit references below are given in bold scripts. This would serve as the Bibliography. The contents are merely indicated and not detailed excepting in the first few cases as a sample.

## 1. Introduction to Medical Ethics.

### What is ethics?

Ethics is a way of living in conformity with a moral order (niiti para) that sustains (dhaarayati iti dharmah **Manusmriti**) oneself and one's society as it harms none and helps others and thus one earns merit and no sin (paropa kaarah punyaaya, paapaaya para pidanam)

### What are values and norms?

See the section of purusharthas (psychological inclination: motivation in life) in **charaka Samhita = sutrastana** and **viman stana**, for an account on values in life and sadvrittavarana (description of good living) in both **charak samhita** and **sushruta samhita sutrastana** for norms in it. **Chakrapani's** commentary on charak samhita and **dalhana's** on sushruta samhita elaborate much on these two important ethical issues. Somatotypes in sushruta has some significant details on norms. Relationships between being ethical and human fulfillment.

Refer daivii sampat, aasurii sampat and sthitipragna lakshana in **bhagavad gita, anushaasana parva** and **shanthi parva** of **Mahabharata** for both of these topics.

- Relationships between being ethical and human fulfillment
- How to form a value system in one's personal and professional life
- Heteronomous ethics and autonomous ethics
- Freedom and person responsibility

## 2. Definition of Medical Ethics.

Medical ethics is regulating this living by the individual, the professional and the society – all doing their duties. Any transgression is a disease of the individual, the professional and the societal. Ayurveda offers rules conducive to the increase of this span by (rasayan or) rejuisense, maintainance of health (swastya), by physical (aadhibhoutika) measures, medication (bhaishajya) and concern of the soul or spirit (adhyaatmika). Of these, the spiritual concern is of the basis value, as it would treat

successfully the bodily as well as the mental life. The advice and the measures given by Ayurveda covers literally all aspects of man's life. They are of the food taken (aahara), the types of habitual sports and engagements (vihara) indulged in, and the types of the thought about the general inclination of the mind (vichara).

- 'Justice (equality)' Refers to history of Dharma Shastra by Dr. P.V. Kane and the corresponding Sanskrit originals. Self determination.
- Difference between medical ethics and bio- ethics
- Major principles of medical ethics

Beneficence = fraternity

Justice = equality

Self determination (autonomy) = liberty

### 3. Perspective of Medical Ethics.

#### ➤ The oath:

In Ayurveda there are two oaths, one at the beginning of the medical education taken by teacher and the student at the initiation ceremony or ayurvedopanayan and other at the end of the education. Both are many angled in there motivational and important to stress the needs and the many aspects of Medical ethics. The following works and their commentaries offer much of the relevant here that are worthy of being developed further in the light of modern needs: **Charaka Samhita Chikitsaastana Rasayanaadhyaya** (specially aachar rasayan . **Sushruta Sanhita And Chandogya Upanishat.**

- The declaration of Helsinki
- The declaration of Geneva
- International code of Medical Ethics (1993)

### 4. Ethics of the Individual.

- The patient as a person: See aatura pariksha in sushurauta sanhita and charaka samhita.
- The concept of disease: (see **Nidaana sthana** of **Charaka Samhita, Sushruta Samhita** and



**Vagbhata's Astanga Hridaya**), health (see all **vridhdhatrayee**) and healing ( see specially **Sushruta**)

- The physician: Patient relationship (consult **Dasemaani Pariksha**, the tenfold examination in **Charaka Samhita**).
- The right to be respected
- Truth and confidentiality
- The autonomy of decision
- The right to health
- Ethics of behavior modification
- Organ donation

### 5. The Family and Society in Medical Ethics.

- Family planning perspectives see under **samskaaras** in **dharma shastra** for eg. **Manudharma shastra** and **Yagnavalkal Smriti**.
- Prolongation of life: **aachara rarsayan** is the most effective way as **Charaka Samhita** **sutra staana** points out
- The ethics of human sexuality
- Advanced life directives – the living well
- Euthanasia
- Cancer and terminal care
- Conception: useful material on ethics exists under **Garbhadana Vidhi** in **Charaka** and **pediatrics** in **Kashyapa Samhita**.

### 6. Professional Ethics

Code of conduct

Contract and confidentiality Charging of fees, fee splitting Prescription of drugs

Over investigating the patient

Low cost drugs, vitamins and tonics Allocation of resources in health science Malpractice and negligence

## 7. Research Ethics

Animal and experimental research on human subjects Human volunteer research – informed consent

Drug trials

### Recommended readings

1. Francis C.M., Medical ethics. 1 Ed, 1993 Jaypee Brothers, New Delhi, p 189, Rs. 60/-
2. Krishnamurthy K.H., a Source book of Indian Medicine, D. K. Publishers, New Delhi, p547, Rs. 300/-
3. Ethical Guidelines for Biomedical Research on Human Subjects, ICMR, New Delhi, 2000.
4. The Indian Medicine for Central Council Act, 1970, Bare Act – 2002, Delhi Law House, Delhi, Rs. 20/-