AYURVEDA VACHASPATHI MD(Ay)/AYURVEDA DHANVANTRI MS(Ay)
POST GRADUATE DEGREE COURSE IN AYURVEDA

REVISED ORDINANCE

2014

Rajiv Gandhi University of Health Sciences, Karnataka
4th ‘T’ Block, Jayanagar, Bangalore 560041

Schedule annexed to University Notification No.UA/SYN/ORD/PG (Ayu)- /2013-14 dated ………..

Revised Ordinance Governing Post Graduate Courses in Ayurveda
Vachaspathi MD(Ay)/ Ayurveda Dhanwantri MS(Ay) -2014

JUNE 2-14

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**Section II**
Goals and Objectives of the Courses

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**Section IV**
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**Section V**
Ayurveda ethics-Sensitization and Practice

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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 Hermis 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.

Rajiv Gandhi University of Health Sciences, Karnataka
Bangalore.

Vision Statement

The Rajiv Gandhi University of Health Sciences, Karnataka aims at bringing 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 Health Policy.

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
Revised Ordinance Governing Post Graduate Degree in Ayurveda
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 Education Regulation, 2005” vide The Gazette of India Notification dated 4th February 2005 was notified on 15th March 2006 by Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore. This was effective from 2005-2006 onwards.

Central Council of Indian Medicine, by the Notification published in The Gazette of India on 19th March 2012, in supersession of the earlier (Post Graduate Education) Amendment Regulations, 2005. In view of this, RGUHS has published a fresh “Ordinance called Ayurveda Vachaspati M.D./Ayurveda Dhanvantri M.S. Post Graduate Degree Course in Ayurveda- Revised Ordinance 2014” 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 because Goals and Objectives of the course are given in section II, course Description for various subject except Shalakya tantra 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 continue to be in force.
**SECTION 1**

**REGULATIONS**

1. **Title of Course & Post-graduate Specialities**  
   a. Branches of Specialties in which Post-graduate degree can be conducted: The Post-graduate degrees may be allowed in following specialties

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Specialty</th>
<th>Nearest terminology of modern subject</th>
<th>Department in which PG degree can be conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ayurveda Samhita &amp; Siddhant</td>
<td>Ayurved Samhita &amp; Basic Principles of Ayurveda</td>
<td>Samhita &amp; Basic Principles of Ayurved</td>
</tr>
<tr>
<td>2</td>
<td>Rachna Sharira</td>
<td>Anatomy</td>
<td>Rachana Sharira</td>
</tr>
<tr>
<td>3</td>
<td>Kriya Sharira</td>
<td>Physiology</td>
<td>Kriya Sharira</td>
</tr>
<tr>
<td>4</td>
<td>Dravyaguna Vigyana</td>
<td>Materia medica &amp; Pharmacology</td>
<td>Dravyaguna Vigyana</td>
</tr>
<tr>
<td>5</td>
<td>Rasa Shastra &amp; Bhaisajya Kalpana</td>
<td>Ayurveda Pharmaceuticals</td>
<td>Rasa Shastra &amp; Bhaisajya Kalpana</td>
</tr>
<tr>
<td>6</td>
<td>Prasuti &amp; Stri Roga</td>
<td>Obstetrics &amp; gynecology</td>
<td>Prasuti &amp; Stri Roga</td>
</tr>
<tr>
<td>7</td>
<td>Kaumarbhritya – Bala Roga</td>
<td>Pediatrics</td>
<td>Kaumarbhritya – Bala Roga</td>
</tr>
<tr>
<td>8</td>
<td>Swastavritta &amp; Yoga</td>
<td>Preventive Social Medicine &amp; Yoga</td>
<td>Swastavritta &amp; Yoga</td>
</tr>
<tr>
<td>9</td>
<td>Kayachikitsa</td>
<td>Medicine</td>
<td>Kayachikitsa</td>
</tr>
<tr>
<td>10</td>
<td>Rasayana &amp; Vajikaran</td>
<td>Rasayana &amp; Vajikaran</td>
<td>Kayachikitsa</td>
</tr>
<tr>
<td>11</td>
<td>Mano Vigyan Avum Manas Roga</td>
<td>Psychiatric</td>
<td>Kayachikitsa</td>
</tr>
<tr>
<td>12</td>
<td>Rog Nidan Avum Vikriti Vigyan</td>
<td>Pathology &amp; Diagnostic Procedure</td>
<td>Rog Nidan Avum Vikriti Vigyan</td>
</tr>
<tr>
<td>13</td>
<td>Chhaya Avum Vikiran Vigyan</td>
<td>Imaging and Radio Diagnosis</td>
<td>Rog Nidan Avum Vikriti Vigyan</td>
</tr>
<tr>
<td>14</td>
<td>Shalya Samanya</td>
<td>General surgery</td>
<td>Shalya</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Name of Specialty</td>
<td>Abbreviation</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Ayurveda Vachasaspati - Ayurveda Samhita &amp; Siddhant</td>
<td>M.D. - Ayurveda Samhita &amp; Basic Principles of Ayurveda</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ayurveda Vachasaspati - Rachna Sharira</td>
<td>M.D. – Anotomy</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ayurveda Vachasaspati - Kriya Sharira</td>
<td>M.D. – Physiology</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Ayurveda Vachasaspati - Dravyaguna Vigyana</td>
<td>M.D. - Materia medica &amp; Pharmacology</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Ayurveda Vachasaspati - Rasa Shastra &amp; Bhaisajya Kalpana</td>
<td>M.D. - Ayurveda Pharmaceuticals</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ayurveda Dhanvantri - Prasuti &amp; Stri Roga</td>
<td>Obstetrics &amp; gynecology</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Ayurveda Vachasaspati - Kaumarbhritya – Bala Roga</td>
<td>M.D. – Pediatrics</td>
<td></td>
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</tbody>
</table>

b. The nomenclature of Post-graduate degree in respective specialties shall be as follows:-
<table>
<thead>
<tr>
<th>No.</th>
<th>Specialization</th>
<th>Degree</th>
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<tbody>
<tr>
<td>8</td>
<td>Ayurveda Vachasaspati - Swastavritta &amp; Yoga</td>
<td>M.D. - Preventive Social Medicine &amp; Yoga</td>
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<tr>
<td>9</td>
<td>Ayurveda Vachasaspati – Kayachikitsa</td>
<td>M.D. – Medicine</td>
</tr>
<tr>
<td>10</td>
<td>Ayurveda Vachasaspati - Rasayana &amp; Vajikaran</td>
<td>M.D. - Rasayana &amp; Vajikaran</td>
</tr>
<tr>
<td>11</td>
<td>Ayurveda Vachasaspati - Mano Vigyan Avum Manas Roga</td>
<td>M.D. – Psychiatric</td>
</tr>
<tr>
<td>12</td>
<td>Ayurveda Vachasaspati - Rog Nidan Avum Vikriti Vigyan</td>
<td>M.D. - Pathology &amp; Diagnostic Procedure</td>
</tr>
<tr>
<td>13</td>
<td>Ayurveda Vachasaspati - Chhaya Avum Vikiran Vigyan</td>
<td>M.D. - Imaging and Radio Diagnosis</td>
</tr>
<tr>
<td>14</td>
<td>Ayurveda Dhanvantri - Shalya Samanaya</td>
<td>M.S. - General surgery</td>
</tr>
<tr>
<td>15</td>
<td>Ayurveda Dhanvantri - Shalya – Kshar Karma Avum Anushastra Karma</td>
<td>M.S. - Surgery in Kshar Karma and Para Surgical measures</td>
</tr>
<tr>
<td>16</td>
<td>Ayurveda Dhanvantri – Sangyaharana</td>
<td>M.S. – Anesthesiology</td>
</tr>
<tr>
<td>17</td>
<td>Ayurveda Dhanvantri - Ashti Sandhi &amp; Marmagata Roga</td>
<td>M.S. - Orthopedics</td>
</tr>
<tr>
<td>18</td>
<td>Ayurveda Dhanvantri - Netra Roga</td>
<td>M.S. – Ophthalmology</td>
</tr>
<tr>
<td>19</td>
<td>Ayurveda Dhanvantri - Karn, Nasa, Kantha &amp; Shiro Roga</td>
<td>M.S. - ENT &amp; Head</td>
</tr>
<tr>
<td>20</td>
<td>Ayurveda Dhanvantri - Danta Avum Mukha Roga</td>
<td>M.S. - Dentistry and Oral Disease</td>
</tr>
<tr>
<td>21</td>
<td>Ayurveda Vachasaspati – Panchakarma</td>
<td>M.D. – Panchakarma</td>
</tr>
<tr>
<td>21</td>
<td>Ayurveda Vachasaspati - Agad Tantra Avum Vidhi Vigyan</td>
<td>M.D. - Toxicology &amp; Forensic Medicine</td>
</tr>
</tbody>
</table>

*The PG degree holder in the old nomenclature will be appointed in the concerned department like holder of Kriya Sharir (Dosha Dhatu malvigyan) in the department of kriya Sharir and PG holder of Kriya Sharir will be appointed on the basis of teaching experience in kriya Sharir. Similarly, holder of PG of newly developed specialty will be considered for appointment in their basic department mentioned under provision ‘2’ of the Regulations.*
2. **Eligibility for Admission**

A person possessing a degree in Ayurveda of a University or Board or Medical institution specified in the Second Schedule of Indian Medicine Central Council Act 1970 shall be eligible for admission to Post-graduate degree course.

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

Only those who have passed all the examinations at degree level in first attempt shall be eligible for admission.

3. **Mode of admission**

1) The University shall constitute an admission Committee, which shall supervise the admission procedure.

2) Selection of candidates shall be made strictly on the basis of final merit index calculated out of total of 100 marks based on written test.

3) The written test of 100 Marks shall consist of one common written test of MCQ.

4) The minimum eligibility marks of the entrance test for admission in the case of general candidates shall be 50 percent of the total marks and in case of candidates belonging to the Schedule Castes, Scheduled Tribes and regular Government service candidates shall be 40 percent.

5) The sponsored/deputed candidates shall also be required to posses the percentage of marks specified under sub-regulation (4) mentioned above except foreign nationals.

6) Reservation of all categories shall be applicable as per State Government/Central Government policies.

7) 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.

4. **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 may be.
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.

5. **Intake of students**

The intake of students to each course shall be in accordance with the Regulations of the CCIM.

6. **Period of study and attendance**

a. The student shall have to undergo the study for a period of three years after the admission.

b. The student pursuing Post-graduate degree should work in the concerned department of the institution for the full period as full time student. No candidate is permitted to run a clinic or work in other clinic or laboratory or Nursing home or medical centers while studying in the post-graduate course. No candidate should join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of studying this course.

c. The student should attend the hospital and other duties as may be assigned to them during the course of study.

d. The student should do house job duties and Clinical registrar’s duties in their respective departments during preliminary and final course.

e. The student should attend special lectures, demonstrations, seminars, study tours and such other activities as may be arranged by the teaching department.

f. The student should attend a minimum of 80% of training in each subject in all theory and practical classes separately during each academic year of the course.

7. **Method of training:**

1. Intensive training shall be provided on classical knowledge along with comparative and critical study in the respective specialty.

2. The emphasis shall be given on intensive applied and hand on training.

3. The students shall have to acquire the knowledge about the methods and techniques of research in respective fields making use of information technology.

4. In clinical subjects the students shall undertake responsibility in management and treatment of patients independently and deal with emergencies.

5. The students shall undertake training in teaching technology and research methods and shall have to participate in the teaching and training programs of undergraduate students or interns in the respective subjects during the course of studies.

6. In the first year of the course, the students shall have to acquire knowledge in the applied aspects of the fundamentals of Ayurveda.

7. In clinical training the student shall have to acquire the knowledge of independent work as specialist.
8. In the specialties of Shalya, Shalakya and Prasuti & Stri Roga the student shall have to undergo training of investigative procedures, techniques and surgical performance of procedures and management in the respective specialty.

8. **Medium of Instruction:**
   Medium of instruction shall be in English with a working knowledge of Sanskrit.

9. **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.

10. **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.

11. **Study tour:**
   2nd year Students of Non-clinical subject PG courses should undertake study tour based upon the subject & its requirement as decided by the HOD of the concerned department. Such students should be accompanied by one Departmental teaching staff. Students who undertake such tour should submit a report of such study tour to the Department.

12. **Dissertation**
   1. The title of dissertation along with synopsis, with approval of the ethics committee constituted by the institute as per regulations of concerned university, shall be submitted to the university with in a period of six months from the date of admission to PG course.
   2. If the student fails to submit the title of dissertation and synopsis within the period specified under sub regulation (1) as above, his term for final exams will be extended for six months or more in accordance with time of submission of the synopsis to the university.
   3. The synopsis of the proposed scheme of work should indicate the familiarity of the student with 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 should approve the synopsis not later than three months after submission of the synopsis.
4. For approving the title, a scrutiny committee shall be constituted by the university.
5. The university should display the approved synopsis on its website.
6. The subject of every dissertation shall be research, practical oriented, innovative and helpful in the development of Ayurveda. The subject of the dissertation shall be related to the subject matter of the respective specialty.
7. Once the title for the dissertation is approved by the scrutiny committee of the university, the student shall not be allowed to change the title of the proposed theme work without permission of the university.
8. No students shall be allowed to submit the dissertation before six months of the final year. However, the student shall continue his or her regular study in the institution after submission of dissertation to complete three years.
9. 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 teacher approved by the universality.
10. The dissertation shall consist 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 should be suitable for the publication.
11. The dissertation shall consist of not less than forty thousand words.
12. The dissertation shall contain, at the end, a summary of not more than one thousand five hundred words and the conclusion not exceeding one thousand words.
13. The Guide shall be a person of status of a Professor or a Reader/ Asst. Professor, Lecturer with minimum five years university approved teaching experience in the concerned subject or three years as Co-guide.
14. A Co-guide may be included provided the work requires substantial contribution from a sister department or from other institution recognized for teaching or training by RGUHS. The Co-guide shall be recognized Post-graduate teacher of RGUHS.
15. Five copies of the bound dissertation along with a certificate from the Guide should reach the office of the registrar of the university six months before the final examination.
16. The dissertation shall be valued by two external and two internal examiners appointed by the university.
17. Approval of dissertation work is an essential precondition for a candidate to appear for the final examination. The dissertation shall be accepted only after approval of the four examiners appointed and in case of disapproval by one examiner, the same shall be referred to fifth examiner. If it is not approved by the fifth examiner also, the same shall be returned to the student with the remarks of the examiner and the student can resubmit the dissertation after...
making the necessary improvement in the light of examiner’s report to the university within a further period of six months.

18. If the dissertation is not accepted by two examiners, the same shall be returned to the student with the remarks of the examiners and the student can resubmit the dissertation after making the necessary improvement in the light of examiners report to the university within a further period of six months.

19. **The dissertation should be written under the following headings:**

   - Introduction
   - Aims and Objectives of study
   - Review of literature
   - Methodology (Materials & Methods)
   - Results
   - Discussions
   - Summary
   - Conclusion
   - Bibliography/References
   - Annexures

**Guide Students ratio:-**

The teacher student ratio shall be such that the number of post graduates teachers to the number of post graduate students admitted per year is maintained at 1:3 in case of Professor 1:2 in case of Reader/Asst. Professor and 1:1 in case of Lecturer having **minimum 5 years** concerned PG subject teaching experience.

**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.

**13. Scheme of Examination**

1. The post graduate degree course shall have two examinations in the following manners:-
   a. The preliminary examination shall be conducted at the end of one year after admission;
b. The final examination shall be conducted on completion of three academic years after the admission to PG course;

c. Examination ordinarily held in the month of June or July and November or December every year;

d. For being declared successful in the examination, students shall have to pass all the subjects separately in the preliminary examinations;

e. The post-graduate degree shall be conferred after the dissertation 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 students in practical aspect of the specialty and his/her fitness to work independently as specialist.

3. The clinical examination shall aim at a careful assessment of the competence of the student, so that his/her familiarity with Ayurveda and scientific literature in the specialty could be judged.

4. The viva-voce part of the practical examination shall involve extensive discussion on any aspect of subject/specialty.

**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.

14. **Schedule for Examination – for First year (Preliminary) & Final year PG Course:**

There shall be two examinations as follows:

1) **Preliminary examination** shall be conducted at the end of the one year after commencement of the course as notified in the calendar of events issued by the University.

**Subjects for Preliminary examinations:**
Paper- I Part A: Research methodology & Part B: Biostatics – The number of teaching hours and allotment of marks for theory examination shall be as per revised CCIM syllabus for Preliminary subjects as given here under Section III.

- Practical examination shall be conducted as class examination by the respective institution and the results of the same shall not be considered for the preliminary examination.

Paper – II with Part-A & Part-B: Applied aspects and basics of concerned Subject as per CCIM revised syllabus as given here under section III. The number of teaching hours for theory shall be 100 hours and practicals shall be 100 hours in an academic year. Allotment of marks for theory and practicals/Clinical & Viva voce examination shall be as per revised CCIM syllabus for Preliminary subjects as given here under Section III.

2) Final examination shall be conducted on completion of two academic years after passing preliminary examination.

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

The student shall have to publish at least one Research paper on the basis of his dissertation in one Journal and one paper presentation in Regional level seminar.

The total theory classes in Paper-I, Paper-II, Paper-III, Paper-IV shall be 100 hours each. The total number of Practical/Clinics classes in 2\(^{nd}\) year & 3\(^{rd}\) year shall be 200 hours each year.

Examinations in any branch of study shall consist of

(a) Dissertation, (b) written paper (Theory), (c) Practical/Clinical and Viva voce.

(a) Dissertation: Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

(b) Written Examination (Theory): Written examination shall consist of four question papers pertaining to Paper-I, Paper-II, Paper-III & Paper-VI each of three hours duration. Total marks for each paper will be 100. There shall be 2 long essay questions each carrying 20 marks and 6 short essay questions each carrying 10 marks.

(c) Practical / Clinical and Viva voce Examination:
In case of practical examination, it should be aimed at assessing competence and skills of techniques and procedures. It should also aim at testing student’s ability to make relevant and valid observations, interpretation and inference of laboratory or experimental or clinical work relating to his/her subject for undertaking independent work as a specialist.

The actual format of Practical/clinical and Viva voce examination & distribution of marks for each specialty subject is given in the syllabus of CCIM and the same has to be followed.

15. Appointment of Examiners:-

The Preliminary examination shall be conducted by two examiners, one internal and one external both for theory and Practical/Viva voce examinations.

The final examination shall be conducted by a team of 4 examiners (Retired or serving) out of which two shall be external & two shall be internal examiners who should be possessing the post of Professor or Reader/Asst. Professor level or a Lecturer having minimum 8 years PG teaching experience.

16. Criteria for declaring results

Classification of results in preliminary examination shall be as follows:-

- Below 50% - Fail
- 50% and above - Pass

Classification of results in Final year examination shall be as follows:-

- Below 50% - Fail
- 50-59% aggregate in theory and practicals/clinical and viva voce: Grade-C
- 60-74% aggregate in theory and practicals/clinical and viva voce: Grade-B
- 75% and above aggregate in theory and practicals/clinical and viva voce: Grade-A

Number of chances for appearing final year examination

Failed students in the preliminary examination should pass in all subjects before taking up the final year examination. Otherwise the student shall not be allowed to take up the final year examination.

Failed students in the final year examination will have maximum of three consecutive chances to appear for the examination for pass. If the dissertation has been approved and the student fails in theory or practical in the examination, he/she can appear in the subsequent examination without requiring to submit a fresh dissertation.
SECTION II

GOALS AND OBJECTIVES OF THE COURSES

The same contents given in Section II of Revised Ordinance Governing Ayurveda Vachaspathi MD (Ay) / MS (Ay) PG degree courses in Ayurveda 2002 of RGUHS shall continue to be in force.

SECTION III

Syllabus
**SYLLABUS FOR POST – GRADUATE COURSE IN AYURVED**

**Preliminary Examination**

| I. RESEARCH METHODOLOGY AND BIOSTATISTICS | 2-10 |
| II. CONCERN SUBJECT :- | |
| 1. AYURVED 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. KAYACHI KITSA | 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 |
PG 1st Year Syllabus-1

M.D./M.S.-AYURVEDA PRELIMINARY
PAPER-I
RESEARCH METHODOLOGY AND MEDICAL STATISTICS

PART-A
RESEARCH METHODOLOGY

60 Marks
Teaching hours 120

1 Introduction to Research

A. Definition of the term research
B. Definition of the term anusandhan
C. Need of research in the field of Ayurveda

2 General guidelines and steps in the research process

A. Selection of the research problem
B. Literature review: different methods (including computer database) with their advantages and limitations
C. Defining research problem and formulation of hypothesis
D. Defining general and specific objectives
E. Research design: observational and interventional, descriptive and analytical, preclinical and clinical, qualitative and quantitative
F. Sample design
G. Collection of the data
H. Analysis of data.
I. Generalization and interpretation, evaluation and assessment of hypothesis.
J. Ethical aspects related to human and animal experimentation.
K. 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.
   a. Familiarization with publication guidelines- Journal specific and CONSORT guidelines.
   b. Different types of referencing and bibliography.
   c. Thesis/Dissertation: contents and structure
   d. 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.

7. Different fields of Research in Ayurveda

   Fundamental research on concepts of Ayurveda
   a. Panchamahabhuta and tridosha.
   b. Concepts of rasa, guna, virya, vipak, prabhav and karma
   c. Concept of prakriti-saradi bhava, ojas, srotas, agni, aam and koshtha.

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
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).


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.

13. **Survey studies**

- Methodology, types, utility and analysis of Qualitative Research methods. Concepts of in-depth interview and Focus Group Discussion.

14. **Pharmacovigilance for ASU drugs**

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


16. **Intellectual Property Rights**

- Different aspect and steps in patenting. Information on Traditional Knowledge Digital Library (TKDL).
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, Kruskall – 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
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):

1. Instrumental spotting test – 20 marks
2. Clinical protocol writing exercise on a given problem – 20 marks
3. Records:
   4. Research methodology -10 Mark
   5. Medical statistics -10 marks
   6. Viva- Voce -40 Marks

REFERENCE BOOKS:-

Pharmacognosy:

2. Drug Survey by Mayaram Uniyal
6. Trease G E and Evans W C, Pharmacognosy, Bailliere Tindall, Eastbourne, U K.
12. WHO guidelines on good agricultural and collection practices- (GACP) for medicinal plants

PG 1st Year Syllabus-6

Pharmaceutical chemistry, quality control and drug standardization:

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

Biochemistry and Laboratory techniques:

1. Asokan P. (2003) Analytical Biochemistry, China publications,
6. Harold Varley. Practical Clinical Bio-chemistry
8. GradWohl, Clinical Laboratory-methods and diagnosis, Vol-I
10. Satyanarayanan,U. Essentials of Biochemistry, Books and allied(P) Ltd.2002
Research methodology:

2. Ayurvediya Anusandhan Paddhati – P.V. Sharma
12. Relevant portions of Ayurvedic Samhitas and other texts

Drug research and development:

9. 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.html
Biotechnology and Bio-informatics:

5. Satyanarayana, U.: Biotechnology, Books and Allied (P) Ltd, Kolkata, 2005
7. http://www.iitb.ac.in/~crnts
10. www.consort-statement.org
11. www.strobe-statement.org
12. www.icmr.nic.in

Clinical Evaluation:

9. William C. Scheffer Introduction to Clinical Researchs
Medical Statistics:

8. Indrayan. (2008). Basic Methods of Medical Research. AITBS Publishers- India
15. Suhas Kumar Shetty- Medical statistics made easy

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PG 1st Year Syllabus-10

M.D.-AYURVEDA PRELIMINARY

1. AYURVED SAMHITA & SIDDHANTA (Ayurvedic Compendia & Basic Principle

<table>
<thead>
<tr>
<th>PAPER-II</th>
<th>THEORY - 100 marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART-A</td>
<td>Practical- Viva-Voce-100 50 marks</td>
</tr>
</tbody>
</table>

1. Learning and Teaching methodology available in Samhita- Tantrayukt, Tantraguna, Tantradosha, Tachchilya, Vadamarga, Kalpana, Arthashraya, Trividha Gyanopaya, teaching of Pada, Paada, Shloka, Vakya, Vakyarth, meaning and scope of different Sthana and Chatushka of Brihatrayee.
2. 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.
3. Concept of Bija chatustaya (Purush, Vyadhi, Kriyakaal, Aushadha according to Sushrut Samhita).
5. Importance and utility of Samhita in present era.
6. Importance of ethics and principles of ideal living as mentioned in Samhita in the present era in relation to life style disorders.
7. Interpretation and co-relation of basic principles with contemporary sciences.

PART-B

50 marks

1. Definition of Siddhanta, types and applied examples in Ayurveda.
2. Ayu and its components as described in Samhita.
3. Principles of Karana-Karyavada, its utility in advancement of research in Ayurveda.
4. Theory of Evolution of Universe (Srishti Utpatti), its process according to Ayurveda and Darshana.
5. Importance and utility of Triskandha (Hetu, Linga, Aushad) and their need in teaching, research and clinical practice.
7. Importance of knowledge of Sharir Prakriti and Manas Prakriti.
8. Comparative study of Principles of Ayurveda and Shad Darshanas.

1. REFERENCE BOOKS:-

1. Charak Samhita
   Chakrapani commentary
2. Sushrut Samhita
   Dalhana Commentary
3. Ashtanga Samgraha
   Indu commentary
4. Ashtanga Hridaya
   Arundutta and Hemadri commentary
5. Vaisheshika Darshan
   Prasthapadap Bhasya
6. Nyaya Darshan
   Vatsyayan Bhasya Patanjala
1. 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.

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

1. Types of tissues, histological study of liver, spleen, uterus, kidney, endocrine glands, mammary gland, skin, tongue, lungs, bronchi, bones, muscles, cartilages and nervous tissue.
Paribhasha Sharira (Anatomical terminology)

1. Pramana Sharira – Anguli and Anjali Pramana, Sama pramana Sharira, Ayama – Vistara and their prognostic values.
2. Fundamental aspects of Asthi, Sandhi, Peshi Sharir.
6. Mrita shodhan (as per Sushruta) and Mrita Samrakshana (preservation method of human cadaver).

PRACTICAL

Contents:

1. Practical study of bones
2. Practical study of organs
3. Practical study of surface and radiological anatomy.
4. Shava Vichhedana – detailed dissection of the whole body.
5. Practical study of location of Marma
6. Demonstration of histology slides (10 slides)

PG 1st Year Syllabus-13

1. Distribution of marks (Practical)
   1. Spotting                              - 20 Marks
   2. Surface Anatomy                      - 20 Marks
   3. Dissection                           - 30 Marks
   4. Imaging Anatomy – Basic Principles and Application - 10 Marks
   5. Viva-Voce                            - 20 Marks

REFERENCE BOOKS:

6. Relevant matters of Brihatrayee and Laghutrayee
7. PratyakshaShariram                    - GananathSen
8. AbhinavaShariram                     - Damodar Sharma Gaur
9. Parishadyam Sabdartha Shariram       - Damodara Sharma Gaur
10. Brihat Shariram                      - P S Varier
13. Human Anatomy - B D Chaurasia
15. Developing Human - Keith L Moore
16. Clinically oriented Anatomy - Richard Snell
17. Clinically oriented Neuro Anatomy - Richard Snell
18. Surface and Radiological Anatomy - Halim
19. Grant’s Methods of Anatomy - Grant
20. Grant’s dissector - Grant
21. Human Embryology - I. B. Singh
22. Ayurvediya Human Anatomy - G. M. Kanthi

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PG 1st Year Syllabus-14

M.D.-AYURVEDA PRELIMINARY

3. KRIYA SHARIR

(Psychology)

PAPER-II Theory 100 Marks

PART-A 50 marks

1. Theory of Loka-Purusha Samya
2. Theory of Panchamahabhuta
3. Physiological aspects of Samanya – Vishesha siddhanta
4. Concepts of Tridosha and Triguna
5. Concept of Dhatu
6. Concept of Mala
7. Description of Ojas
8. Process of Ahara Parinama including Aharaparinamakara Bhava and Asta Ahara Vidhi Visesayatana
9. Physiological importance of Agni, its classification and functions
10. Dhatuposana theories
13. Concept of Srotas

PART-B 50 marks

Description of essential and relevant understandings related to contemporary physiology, both general physiology and systemic physiology.
1. Essentials of cell physiology – organization of cell.
3. Homeostasis- negative and positive feedback mechanisms.
5. Essentials of cardiovascular physiology- cardiac cycle, regulation of heart rate and blood pressure.
7. Gastrointestinal physiology- various digestive juices and their actions, gastrointestinal hormones, enteric nervous system.
8. Nervous system physiology- ANS, somatic nervous system, reflexes, general and special sensations, higher mental functions, functions of brain, brainstem and spinal cord.
10. Muscle physiology: properties and mechanisms of contraction of skeletal, cardiac and smooth muscles.
11. Physiology of excretion- mechanism of urine formation, micturition.
12. 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 Syllabus-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)  

1. Laboratory Practical  - 20  
2. Human Experiment  - 15  
3. Spotting  - 15  
4. Prakriti Saradi pariksha  - 20  
5. Practical Record  - 10  
6. Viva-voce  - 20  

REFERENCE BOOKS:  

1. Ayurvediya Kriyasharir  - Ranjit Rai Desai  
2. Kayachikitsa Parichaya  - C. Dwarkanath  
3. Prakrit Agni Vigyan  - C. Dwarkanath  
4. Sharir Kriya Vigyan  - Shiv Charan Dhyani  
5. Abhinava Sharir Kriya Vigyana  - Acharya Priyavrata Sharma  
6. Dosh Dhatu Mala Vigyana  - Shankar Gangadhar Vaidya  
7. Prakrita Dosha Vigyana  - Acharya Niranjana Dev  
8. Tridosha Vigyana  - Shri Upendranath Das  
9. Sharira Tatva Darshana  - Hirlekar Shastri  
10. Prakrita Agni Vigyana  - Niranjana Dev  
12. Sharir Kriya Vigyana (Part 1-2)  - Acharya Purnchandra Jain  
13. Sharir Kriya Vigyana  - Shri Moreshwar Dutta Vd.  
14. Sharira Kriya Vijnana (Part 1-2)  - Nandini Dhargalkar  
15. Dosh Dhatu Mala Vigyana  - Basant Kumar Shrimal  

16. Abhinava Sharir Kriya Vigyana  - Dr. Shiv Kumar Gaur  
17. Pragyogik Kriya Sharir  - Acharya P.C. Jain  
18. Kaya Chikitsa Parichaya  - Dr. C. Dwarkanath  
19. Concept of Agni  - Vd. Bhagwan Das  
20. Purush Vichaya  - Acharya V.J. Thakar  
21. Kriya Sharir  - Prof. Yogesh Chandra Mishra  
22. Sharir Kriya Vigyana  - Prof. Jayaram Yadav & Dr. Sunil Verma  
23. Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology)  - Dr. Srikant Kumar Panda  
24. Sharir Kriya – Part I & II  - Dr. Ranade, Dr. Deshpande & Dr. Chobhe  
25. Human Physiology in Ayurveda  - Dr Kishor Patwardhan  

PG 1st Year Syallabus-16
<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Author(s)</th>
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<tbody>
<tr>
<td>26.</td>
<td>Sharirkriya Vignyan Practical Hand Book</td>
<td>Dr. Ranade, Dr. Chobhe, Dr. Deshpande</td>
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<tr>
<td>27.</td>
<td>Sharir Kriya Part 1&amp;2</td>
<td>Dr. R.R. Deshapande, Dr. Wavhal</td>
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<tr>
<td>28.</td>
<td>Textbook of Physiology</td>
<td>Gyton &amp; Hall</td>
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<td>29.</td>
<td>Review of medical physiology</td>
<td>William Ganong</td>
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<td>30.</td>
<td>Essentials Of Medical Physiology</td>
<td>Chaudhari, Sujit. K.</td>
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<td>31.</td>
<td>Concise Medical Physiology</td>
<td>Martini</td>
</tr>
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<td>32.</td>
<td>Fundamental of Anatomy &amp; Physiology</td>
<td>Tortora &amp; Grabowski</td>
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<td>33.</td>
<td>Human Physiology</td>
<td>Richards, Pocock</td>
</tr>
<tr>
<td>34.</td>
<td>Samson Wrights Applied Physiology, Keele, Neil, joels</td>
<td>Steriade, Mirce</td>
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<tr>
<td>35.</td>
<td>Brainstem Control of Wakefulness And Sleep</td>
<td>Green, J.h.</td>
</tr>
<tr>
<td>36.</td>
<td>An Introduction to Human Physiology</td>
<td>Kutumbiah P.</td>
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<tr>
<td>37.</td>
<td>Ancient Indian Medicine</td>
<td>Srikanthamurthy KR</td>
</tr>
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<td>38.</td>
<td>Biographical History of Indian Medicine</td>
<td>Yogesh Chandra Mishra</td>
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<td>39.</td>
<td>Ayurveda Kriya Sharira</td>
<td>Indu Khurana</td>
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<tr>
<td>40.</td>
<td>Textbook of Medical Physiology</td>
<td>Subrahmanya Shastri</td>
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<tr>
<td>41.</td>
<td>Tridosha Theory</td>
<td>K. Syamalan</td>
</tr>
<tr>
<td>42.</td>
<td>Statistics in Medicine</td>
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**M.D.-AYURVEDA PRELIMINARY**

**4. DRAVYAGUNA VIGYAN**

**PAPER-II**

(Materia Medica & Pharmacology)

**PART-A**

Theory 100 Marks

50 marks

1. Panchamahabhuta siddhanta, Samanya Vishesha siddhanta, Tridosha siddhanta. Extensive study on classifications of Dravya as described in Brihattrayi.
2. Applied aspects of Rasa, Guna, Virya, Vipaka and Prabhava
3. Applied aspects of Aushdha karma with reference to Sharngadhara and Bhavaprakasha
4. Importance of Namarupa vigyan and concept of basonyms and synonyms of Dravyas
5. Applied knowledge of Bhaishajya Prayoga (marga, kalpana, matra, anupana, sevan, kala etc.)

PART-B

6. Basic principles of Desha pravichara, Dravya sangrahana (collection), Samrakshana (preservation)
7. Evolution of Dravyaguna vigyan with special emphasis on Nighantus
8. Prashasta bhashaj lakshana
9. Profound knowledge on applied aspects of Agrya aushadha
10. Methodology of studying controversial, pratinidhi (substitute), apamishrana (adulterant) and unidentified dravya
11. Pharmacognosy and its relevance in Dravyaguna vigyan
13. Brief knowledge and importance of clinical pharmacology
14. General principles of various good cultivation practices, collection practices, storage practices and manufacturing practices
15. Pharmacovigilance and ADR issues
16. Knowledge on the Ayurvedic Pharmacopoeia of India, The Formulary of India and international pharmacopoeias

PRACTICAL

Contents:

1. Field visits for the Identification of important classical medicinal plants (Minimum two visits to neighboring forest areas)
2. Macroscopic and microscopic identification of minimum two plants of each of prayojyanga (useful parts of plants)
3. Preliminary study of pharmacopeial standards (API) of minimum 5 plants
4. Minimum two experiments on Animals

Distribution of marks (Practical)

1. Herbarium sheets - 10 Marks
2. Practical of macroscopic and microscopic identification of prayojyanga (one part of the plant) - 30 Marks
3. Practical record book of pharmacopeial standards and animal experimentations - 10 Marks
4. Spotting - 30 Marks
5. Viva-voce - 20 Marks

PG 1st Year Syllabus-18
<table>
<thead>
<tr>
<th>Reference Books</th>
<th>Authors/Editors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Abhinav Buti Darpan (Vol.1-2)</td>
<td>Vd. Roop Lal Vaishya</td>
</tr>
<tr>
<td>2. Aushadna Vigyna Shastra</td>
<td>Acharya Pt. Vishvanatha Dwidevi</td>
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<tr>
<td>3. Ayurvediya Aushadnkarma vigyana</td>
<td>Acharya V.J. Thakur</td>
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<tr>
<td>4. Bedi Vanaspati Kosha</td>
<td>Prof. Ramesh Bedi</td>
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<tr>
<td>5. Bhaishajyaguna Vigyana</td>
<td>Dr. Alakhnarayan Singh</td>
</tr>
<tr>
<td>6. Bhav Prakash Nigantu (English)</td>
<td>Shreekanthamurti</td>
</tr>
<tr>
<td>7. Bhav Prakash Nighantu</td>
<td>With Vd. Krishna Chandra Chunekar commentary</td>
</tr>
<tr>
<td>8. Bhrinad Dravyagunanadarsha</td>
<td>Mahendra Kumar Shastri</td>
</tr>
<tr>
<td>9. Classical Uses of Medicinal Plants</td>
<td>Acharya Priyavrata Sharma</td>
</tr>
<tr>
<td>10. Controversial Medicinal Plants</td>
<td>Vd. G. Bapa Lal</td>
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<tr>
<td>11. Dalhana Ka Dravyaguna Shastra Ke Kshetra Me Yogadana</td>
<td>Vd. Shiv Kumar Vyas</td>
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<tr>
<td>12. Dravyaguna Kosha</td>
<td>Acharya Priyavrata Sharma</td>
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<td>13. Dravyaguna Sutram</td>
<td>Acharya Priyavrata Sharma</td>
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<tr>
<td>14. Dravyaguna Vigyana</td>
<td>Dr. Gyanendra Pandey</td>
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<tr>
<td>15. Dravyaguna Vigyana (Vol. 1-2)</td>
<td>Acharya Yadavji Tikram Ji</td>
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<tr>
<td>16. Dravyaguna Vijyana</td>
<td>Dr. V.M. Gogate</td>
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<tr>
<td>17. Dravyaguna Vigyana (Vol. 1-5)</td>
<td>Acharya Priyavrata Sharma</td>
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<tr>
<td>18. Dravyaguna Shastrum</td>
<td>Vaidya G.A. Phadake</td>
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<tr>
<td>19. Dravyaguna Vijyana</td>
<td>Dr. A.P. Deshpande</td>
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<tr>
<td>20. Dravyagunavijnana basic Principles</td>
<td>Prof.D.S.Lucas</td>
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<tr>
<td>21. Forgotten Healers (Indian Medicinal Plants)</td>
<td>Dr. Prakash Pranjape</td>
</tr>
<tr>
<td>22. Glossary of Vegetable Drugs in Bhiritrayi</td>
<td>Thakur Balwant Singh &amp; Vd. Krishna Chandra Chunekar</td>
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<tr>
<td>23. Introduction to Dravyaguna</td>
<td>Acharya Priyavrata Sharma</td>
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<td>24</td>
<td>Kriyatamka Aushadi Parichaya</td>
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<td>25</td>
<td>Materia Medica</td>
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<td>26</td>
<td>Nighantu Adarsh (Vol. 1-2)</td>
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<td>27</td>
<td>Pharmacological basis of Medical Practice</td>
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<td>28</td>
<td>Pharmacology and Pharmacotherapeutics</td>
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<td>29</td>
<td>Prayogatamaka Dravyaguna Vigyana</td>
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<td>30</td>
<td>Priya nighantu</td>
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<tr>
<td>31</td>
<td>Raspanchaka/Dravyaguna Siddhanta</td>
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<tr>
<td>32</td>
<td>System of Plant Nomenclature in Ayurveda</td>
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<tr>
<td>33</td>
<td>Text Book of Pharmacology</td>
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<td>34</td>
<td>Textbook of Dravyaguna</td>
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<td>35</td>
<td>Unani Dravyaguna Vigyana</td>
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<td><strong>PG 1st Year Syllabus-19</strong></td>
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<tr>
<td>36</td>
<td>Useful parts of Charaka, Sushrut, and Vagbhata.</td>
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<tr>
<td>37</td>
<td>Uttarakand Ki Vanaspatiya</td>
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<tr>
<td>38</td>
<td>Vanoaushadi Darshika</td>
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<td>39</td>
<td>Vanoaushadi Nidarshika</td>
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<td>40</td>
<td>Vedic Vanaspatiyan</td>
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<tr>
<td>41</td>
<td>Pharmacopia of India –all the volumes</td>
</tr>
<tr>
<td>42</td>
<td>Database on medicinal plants all the volumes of CCRAS</td>
</tr>
<tr>
<td>43</td>
<td>Ayurveda formulary of india – all the volumes</td>
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<td>44</td>
<td>All the nighantoos</td>
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<td>45</td>
<td>Laghutrayar</td>
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M.D.-AYURVEDA PRELIMINARY

5. RASA SHAstra AND BHAISHAJYA KALPANA
(Iatrocemistry & Pharmaceuticals Science)

PAPER-II

1. 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).
2. Introduction to basic principles of Aushadha Yoga (formulations).
3. Classification of Rasa Dravya - concept and relevance.
4. Introduction to principles of Aushadha Nirmana, concept of Shodhan, Marana, Jarana, Murcchhana, Sattvapatan and Amritikaran.
5. Concept of Kashaya, Panchavidha Kashaya and other Kalpana.
6. Concept of Rasashala, Rasa Mandapa with introduction to pharmacy in accordance with the Good Manufacturing Practices (GMP).
7. Critical study of Rasa Ratnasamuchchaya, Rasendra Chintamani, Rasa Tarangini, Sharngadhara Samhita, Chakradutta and Bharat Bhaishajya Ratnakara with special reference to Aushadha-Nirmana.

PART-B

1. Introduction to methods of analytical, toxicity, experimental and clinical validation of classical and proprietary Ayurvedic formulations.
2. Introduction to new dosage forms.
3. 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.
4. Concept of Pharmacopoeia and Formulary with introduction of ‘The Ayurvedic Pharmacopoeia of India’ (API) and ‘The Ayurvedic Formulary of India’ (AFI).
5. Introduction to databases of medicinal plants published by CCRAS, ICMR and others.

PRACTICAL

Contents:
1. 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**
   
   1. Physical form - Crystal and Amorphous
   2. Hardness on Moh’s scale
   3. Brittleness test
   4. Fracture and Cleavage
   5. Streak test
   6. Luster

---

2. **Plant Material**
   
   **Macroscopic and Microscopic examination**
   
   a. Orgnaoleptic testing
   b. Estimation of Foreign materials
   c. Microbial load
   d. Moisture content
   e. Determination of ash value - total, water soluble and acid Insoluble ash
   f. Specific gravity
   g. Solubility- water and alcohol
   h. Extract values- water and alcohol
   i. TLC
   j. Determination of optical density
   k. Refractive index
   l. Aflatoxins
   m. Limit tests for heavy metals
   n. 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)

1. Particle size
2. Bulk density
3. Solubility
4. Estimation of Foreign material
5. Microbial load
6. Moisture content
7. Determination of ash value - total, water soluble and acid insoluble ash
8. Solubility - water and alcohol
9. Extract values - water and alcohol
10. TLC
11. Determination of Optical density
12. Refractive Index
13. Aflatoxins
14. Limit tests for Heavy metals
15. pH Value estimation

b. Tablets

1. Uniformity in weight and size
2. Tablet hardness
3. Tablet friability
4. Tablet disintegration
5. Tablet dissolution

c. Semisolid dosage forms

a. Moisture content
b. Sugar content
c. Microbial load

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
  o Major practical- one                                - 20 Marks
  o Minor practical- one                                - 10 Marks
• Drug analysis
  o Major practical- one                                - 20 Marks
  o Minor practical- one                                - 10 Marks
• Spotting                                                  - 10 Marks
• Viva-voce                                                 - 20 Marks

REFERENCE BOOKS:
1. Rasahridaya Tantra
2. Rasarnava
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. Bharat Bhaishajya Ratnakara
18. Rasayoga Sagara
19. Siddha Bhaishajya Manimala
20. Sahasrayoga
21. Siddha Yoga Sangraha – Yadavaji Trikamji Acharya
22. Vaidyaka Paribhasha Pradeepa

PG 1st Year Syllabus-23

23. Ayurvediya Aushadhikarana – Puranik and Dhamanakar
24. Dravyaguna Vijnan Part - 1 and 2 - Yadavji Trikamji
25. Chakradatta - Ratnaprabha, Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya,
26. Remington: Science and Practice of Pharmacy
27. Theory and Practice of Industrial Pharmacy – Leon Lachman et al
28. Clinical Pharmacology, KD Tripathi
29. Clinical Pharmacology, Lawrence Benette
30. Drug Discovery and Evaluation (Pharmacological assays) HG Vogel
31. Pharmacological Basis of therapeutics – Goodman and Gilman
32. Data Base of Medicinal Plants of CCRAS
33. Quality and Standards of Medicinal Plants – ICMR publication
34. Quality Control of Ayurvedic Drugs – PLIM, Gaziabad
35. Ayurvedic Pharmacopeia of India
36. Ayurvedic Formulary of India
37. Indian Pharmacopeia
38. British Pharmacopeia
39. United States Pharmacopeia
40. Pharmacopeia Codex
41. Current Good Manufacturing Practices
42. Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments
43. Drugs and Magic remedies (Objectionable advertisement) Act-1954
44. Prevention of Food Adulteration (PFA) act
45. Laws pertaining to Narcotics
46. Factory and Pharmacy Acts
47. Consumer Protection Act -1986
48. Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)
49. Rutleys Elements of Mineralogy
50. Bhasma Vigyaniyam
51. Kupipakva Vigyaniyam
52. Anupana Manjari

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PG 1st Year Syllabus-24
1. Introduction to Agadatantra, its sequential development, traditional and contemporary toxicology.
2. Examination of poisons as per contemporary and Ayurvedic methods.
3. Ancient and contemporary classification of Visha.
4. Knowledge about Sthavara visha, Jangama visha and Kritrima visha, their clinical and pathological manifestations and management.
5. Garavisha and Dushi visha, signs, symptoms and management with contemporary relevance.
6. 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.
7. Concept of Viruddhahara with contemporary views.
8. Definition of Vyavahara Ayurveda.

PART-B

1. Introduction to Forensic medicine.
2. Techniques of pathology, pharmacology, pharmacognosy and microbiology used in toxicology.
3. Death and its medico-legal aspects (Medical Thanatology), Medico-legal autopsy, Legal procedures in clinical forensic medicine.
4. Forensic Science Laboratory:- Structure and functions
5. Introduction to Medical Jurisprudence.
7. Ancient and contemporary fundamentals of medical ethics.
8. Madya visha (Alcoholism).
9. Diagnosis and Management of food poisoning.
10. General and Emergency medical management of poisoning including preparation, administration and complications of antidotes, antivenoms, antisera.
11. Management of the toxic manifestations caused by the contact poisons (paduka, vastra, abhushana, mukhalepa-vishabadha etc).
12. Diagnosis and management of dermatological manifestations of Visha.
13. Death due to poisoning, duty of physician in poisoning and cases of suspected poisoning.
14. Post mortem findings in poisoning.
PRACTICAL

100 marks

Contents:

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

PG 1st Year Syllabus-25

Distribution of marks (Practical)

1. Case records (20 Cases) - 20 Marks
2. Bedside clinical case taking - 20 Marks
3. Long Case - 20 Marks
4. Short Case - 10 Marks
5. Identification of specimens, models and equipments of jurisprudence importance. - 15 Marks
6. Spotting related to Visha, Upavisha and other poisonous drugs - 15 Marks
7. Viva-voce -20 marks

REFERENCE BOOKS:

1. Useful Portion of Charak-Sushrut-Vagbhata - Acharya Yadavji
2. Dravyaguna Vigyan - Pt Visvanath Dvivedi
3. Aushadhigunadharma 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. Aushadigunadharma Shastra - PtGangadhara Shastri Gune
10. Rasendracintamani
11. Rasaratna samuchhaya
12. Vishavigyan - Dr. Krishna Kumar
13. Related matter of Kautilya Artha Shastra
14. Harmekhlatantra
15. Anupana manjari
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. Textbook 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

34. Forensic Medicine - Simpson Knight
35. Taylor’s Principles and Practical of Medical Jurisprudence - J and A Churchis
36. Doctor and Law - Singhal
37. Textbook of Toxicology - Singhal
38. Medicine Harrison’s Principal of Internal Medicine
39. Agad Tantra - Dr. Shekhar Namboodri

PG 1st Year Syllabus-26

1. Modern Medical Toxicology - Dr. V.V. Pillay
2. Critical care toxicology - Bruent Wallace
3. Diagnosis and Management of common poisoning - Agarwal wali
5. Guidelines of poisons - W.H.O.
6. Doctors patients relationships - Dr. Lavekar
7. Bhavaprakasha.
8. Vishavaidya Jyotsnika -- English translation By VPSV Ayurveda college, Kottakkal.
9. Lakshnamritham.
10. Toxicology, Ayurvedic perspective - VPSV Ayurveda college, Kottakkal
11. Textbook of Agadatrantra - Edited By Dr Huparikar, Dr. Joglekar
12. Agadatrantra ki Pathyapustaka - Edited By Dr Huparikar, Dr. Joglekar
13. Vyavahar Ayurveda Vigyanam - Dr. Indramohan Jha (Sachchan)

Practice

1. Forensic Medicine - Dr. B. Umadathan
2. Visha Chikitsa - Dr. M. Balakrishnan Nair
3. Park Text book of Preventive and Social Medicine - K. Park
5. Veterinary Toxicology - Dr. Satish K. Gargi
PG 1st Year Syllabus-27

M.D.-AYURVEDA PRELIMINARY
7. SWASTHAVRITTA & YOGA
(Preventive, Social Medicine & Yoga)

PAPER-II

PART A

Theory 100 marks

50 marks

1. Importance and relevance of Swasthavritta and Community Medicine. History of community medicine.
2. Concept of health and disease as per Ayurveda and Modern Medicine. Various definitions and dimensions of health as per Ayurveda and World Health Organization.
3. Relevance of Dinacharya, Ratricharya and Ritucharya in Health Promotion.
4. Basic concept of Vega. Concept of Adharaniya and Dharaniya Vega in health promotion and prevention of diseases with examples.
5. Concept of Trayopastambha in health promotion and prevention of diseases.
6. Concept of nutrition as per Ayurveda and modern science.
7. Concept of Vyadhikshamatva. Concept of Bala and Ojas in relation to health.
8. Role of Panchakarma in preventive medicine.
10. The concept of Ashtanga Yoga and its relation to health. Concept of Moksha.
11. Basic concepts of Nisargopachara including Panchabhautika Chikitsa.

PART B

50 marks

1. Concept of Janapadodhwamsa and tools of its prevention.
3. Concept of disease control and intervention strategies.
4. Levels of disease prevention
5. Basic principles of Samkramak Vikara- causes, modes of disease transmission, epidemiological triad
6. Principles of Health Education
7. Environmental Health- concept of water, soil and air purification as per Ayurveda and modern science.
8. Introduction to Meteorology
9. Role of Swasthavritta in maternal and child health care.
11. Role of Swasthavritta in communicable and non-communicable diseases and lifestyle disorders.
12. Biomedical waste management.

PG 1st Year Syllabus-28

PRACTICAL  

Contents:

1. Duty in OPD and IPD with regard to Pathyapathya, Yoga and Nisargopachar
2. Preparation of different Kritanna Kalpana
3. Practice of the following
   A. Pratimarsha Nasya
   B. Anjana
   C. Kavala and Gandusha
   D. Abhyanga
   E. Udvartana
   F. Prayogika Dhoomapana
   G. Matra basti
4. Health awareness lectures to the community (minimum 5)
5. Participation in observance of National & International days related to health.
6. Proficiency in performing the following Asanas

Standing Postures- Ardhakatichakrasana, Padahastasana, Ardhachakrasana, 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, Shalbhasana, Dhanurasana, Makarasana.

Distribution of marks (Practical)

1. Records - 20 Marks
2. Long Procedures - 20 Marks
3. Short Procedures - 10 Marks
4. Spotting - Aahar dravyas, Family Planning Devices, Vaccine/Serum and Models/Specimens,
Naturopathic and Yogic specimens etc. - 10 Marks

1. Yogasana - 20 Marks
2. Viva-voce - 20 Marks

REFERENCE BOOKS:

1. Relevant portions of Charak, Sushruta, Vagbhata (AshtangHrudaya), Ashtang Samgraha, Sarangadhara, Bhavaprakasha, Madhavanidan&Yogaratnakara, Bhela Samhita with the respective commentaries
2. Swasthavritta Samuchaya – Vaidya Pr Rajesvar Dutta Shastri
3. Swasthya Vigyana - Dr. B.G. Ghanekar Shastri
4. Prakritika Chikitsa - Kedarnath Gupta

Swasthavritta

- Swastha Vigyan - Dr. Mukundswaroop Verma
- Ayurvediya Hitopdesh - Vd. Ranjit Rai Desai
- Yoga and Ayurveda - Dr. Rajkumar Jain
- Swasthvrittam Vigyan - Dr. Ramharsha Singh.

PG 1st Year Syallabus-29

1. Swasthvrittam - Dr. Bramhanand Tripathi
2. Ayurvediya Swasthvrittam - Vd. Jalukar
3. Hathayog Pradipika – Swatmaram Yogendra (Kaivalyadhama)
4. Yogik Yog Paddhati – Bharatiyaprakrutik Chikitsa Padhat
5. Yogik Chikitsa - Shri Kedarnath Gupta
6. Prakritik Chikitsa Vigyan – Verma
7. Janasankhyashikhasidhanta evam Upadesa - S.C. Seel

Swasthvrittam

- Dr. Shivkumar Gaud
- Health and Family Welfare - T.L. Devra
- Sachitra Yogasan Darshika - Dr. Indramohan Jha
- Preventive and Social medicine - J.K. Park
- Yogadeepika - Shri B.K.S. Iyengar
- Swasthvrittam - 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
11. Yogasidhanta evum Sadhna - H.S.Datar
12. Patanjal Yoga Sutra - Maharshi Patanjali, Karambelkar
13. Prakrutik Chikitsa Vidhi - Sharan Prasad
14. Text book of Swasthavritta - Dr.Ranade, Dr.Bobade, Dr.Deshpande
15. Gherand Samhita
17. Swasthavritta Vidnyan - Dr.Mangala Gauri
19. Light on Yoga - Shri. B.K.S. Iyengar
20. Light on Pranayama - Shri. B.K.S. Iyengar
21. Light on Patanjala Yogasutra - Shri. B.K.S. Iyengar
22. Shiva Samhita - Kaivalyadhama
23. Gheranda Samhita - Kaivlyadhama
24. Swasthavritta Vigyan - Vd. Patrikar Vijay
25. Swasthavritta - Vd Yashwant Patil and Vd. Vhawal
26. Food and Nutrition - Swaminathan
27. Preventive and Social Medicine - Mahajan
28. Preventive and Social Medicine - B.N.Ghosh
29. Preventive and Social Medicine - Gupta
30. Yoga and Nisargopachar - Vd. Prama Joshi

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PG 1st Year Syllabus-30

M.D.-AYURVEDA PRELIMINARY
8. ROGA NIDANA AVUM VIKRITI VIGYAN
(Pathology and Diagnostic Procedure)

PAPER-II

PART-A

1. Understanding of Samprapti of diseases in Charaka Nidana Sthana in contemporary context
2. Clinical aspects of Dosha, Dhatu, Upadhatu, Mala, Agni, Ama, Srotas and Indriya
3. Understanding of the role of Trividha Avasthapaka in the vitiation of Dosha
4. Concept of Nanatmaja and Samanyaja Vikara
5. Clinical application of Avarana in diagnosis of various diseases
7. Clinical and applied aspects of concept of Upadrava and Arista
PART-B

1. Ayurvedic interpretation of various laboratory investigations to derive treatment principles.
2. Interpretation of various Rogi Bala and Roga Bala technique to plan Chikitsa Sutra
3. Clinical examination of Deha Bala, Roga Bala, Agnibala And Chetas Bala
4. Knowledge of current diagnostic tools like ECG, X-Ray, CT scan, MRI and USG

PRACTICAL

Contents:

1. Duty in hospital OPD and IPD.
2. Duty in pathology laboratory.
3. Case taking – 25 cases
4. Performance of pathology and biochemistry practicals – 10 cases
5. Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG

Distribution of marks (Practical)

1. Case record (25 Cases)                                                   - 10 marks
2. Bed side clinical case taking                                           - 20 Marks
3. Long case                                                             - 10 Marks
4. Short case                                                            - 10 Marks
5. Laboratory Practicals                                                 - 20 Marks
6. Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG– 10 Marks
7. laboratory experiment record                                          - 10 marks
8. Viva-voce                                                            - 20 Marks

REFERENCE BOOKS:

1. Madhav Nidan (Madhukosha Commentary)
2. Relevant portions of Charak Samhita, Sushrut Samhita and Vaghbhta
3. Doshakaranatwa Mimamsa                                               - Acharya P.V. Sharma
4. Nadi pariksha                                                        - Vb Athavale
5. Nadi Pariksha –                                                      - GP Upadhyay
6. Rogi Pariksha vidhi                                                  - Acharya Priyavrata Sharma
7. Nidan Panchak                                                       - Shivcharan Dhyani

PG 1st Year Syllabus-31
8. Vyadhivigyan I and II - Yadav Thrikamji
10. Ayurvediya Nidan Evum Chikitsa Ke Siddhanta - Prof. Ram Harsh Singh
12. Parameswarappa’s Ayurvediya Vikriti Vigyan & Roga Vikriti Vigyan - Dr. P.S. Byadgi.
13. Oxford Handbook of Clinical Examination and Practical Skills
14. Symptoms & Signs in Clinical Medicine - Chamberlains
15. Hutchison’s Clinical Methods
16. Bedside Clinics in Medicine Part- I & II - Kundu
17. Practical Pathology - Dr. K. Uma Chaturvedi
18. Medical Laboratory Technology - R. Sood
19. Clinical Diagnosis and Management by Laboratory methods - Todd, Sanford and Davidson

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M.D.-AYURVEDA PRELIMINARY

9. CHHAYA AVUM VIKIRAN VIGYAN
   (Imaging and Radio diagnosis)

PAPER-II

PART A

Theory- 100 marks

50 marks

1. Objectives of Chhaya avum Vikiran Vigyan.
2. History, development and concept of Chhaya avum Vikiran Vigyan
3. 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.
4. Review of fundamental principles of Ayurveda.
5. 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.
6. Ethical and legal issues related to Chhaya avum Vikiran Vigyan.
7. Precautions and preventions in Chhaya avum Vikiran Vigyan unit.
10. Management of Chhaya avum Vikiran Vigyan department. Relation between consultant, student, technical staff, patients (with their attendants).
11. Basic concept of research methodology related to Chhaya avum Vikiran Vigyan.
1. Preliminary knowledge of various modalities of Chhaya avum Vikiran Vigyan.
2. Efficiency and limitations of various radiological modalities.
3. Introduction of surface and applied anatomy, patho-physiology related to Chhaya avum Vikiran Vigyan.
4. Preliminary knowledge of equipments related to radiology.
5. Selection of appropriate radiological modalities- basis of selection, correct radiological investigation advice, further assessments and diagnostic advice.
7. Pharmacology and application of emergency drugs, analgesics, muscle relaxants, fluids, plasma expanders, oxygen and various contrast media used in Radio-diagnosis and imaging.
8. Drug and contrast media reactions and shock - its management, cardio-cerebro-pulmonary resuscitation (CCPR), endo-tracheal intubation, tracheostomy.
9. Anesthesiology related to radiology.
10. Short review of common diseases, frequently investigated in the Chhaya avum Vikiran Vigyan department especially their clinical findings, anatomical and patho-physiological changes.
11. Skills of transfer of knowledge- Teaching methodology, audio-visuals preparation and presentations.
13. Record keeping.
14. Documentation, books and journals, research paper writing.

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PRACTICAL 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):

1. Case Records of 25 patients 20
2. Chhaya avum Vikiran Vigyan procedures -
   1. Long procedure 20
   2. Short procedure 10
3. Identification and functioning of instruments and equipments 15
4. Interpretation of Radiograph and images 15
REFERENCE BOOKS:-

Shusruta Samhita
Charak Samhita
Astang Hridaya/Sangrah
Text Book of Radiographic Positioning and Related Anatomy
John P Lampignano
Radiographic interpretation to general practitioner
Procedures in diagnostic Radiology
Thomson.
Radiographic positioning
Radiobiology for the Radiologist
Radiotherapy
- By Curry T S, Dowdey J E

Farr’s Physics for Medical Imaging
Radiobiology for the Radiologist
- By Brant.

Fundamental of Diagnostic Radiology
Diagnostic Imaging
Diagnostic Imaging
- By Peter Armstrong,
Martin Wastie, Ansrea

Gastrointestinal Radiology
Uro-radiology
- By R.L. Eisenberg
- By T. Sherwood, A.J. Davidson,
Robert L.S.

Grainger and Allison’s Diagnostic Radiology Imaging
- Text book of medical imaging

Text Book in Radiology and Imaging
Introduction to Vascular Ultrasonography
Text book in Ultrasonography
Manual of Medical Diagnostic Ultrasonography
Scientific
- By D. Sutton.
- By Zwiebel, Pellerito
- By Roumack
- By W.H.O.

Computed Tomography & MRI of the whole body
- By Hagga.
Surface and Radiological Anatomy
- By A. Halim
X-Ray equipment for student Radiographers
- By DN and MO Chesney
Clinical Sonography, A Practical Guide
- By Roger C. Sanders, Tom Winter
Ultrasonography in obstetrics and gynaecology
- Callen

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Audio-visual aids
- CDs & DVDs

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M.D.-AYURVEDA PRELIMINARY
10. KAYACHIKITSA
(General Medicine)

PAPER II

PART A


4. 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


2. Emergency medicine: Acute Severe Asthma, pulmonary oedema, myocardial infarction, cerebro-vascular 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.

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

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

Asavas-Arista:

<table>
<thead>
<tr>
<th>Herbal Formulations</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vati</td>
<td>Sanjivani, Chandraprabha, Agnitundi, Chittrakadi, Khadiradi, Vyoshadi, Shankha Vati, Shiva Gutika.</td>
</tr>
<tr>
<td>Guggula-Kalpana</td>
<td>Triphalaguggula, Kaishoramguggula, Trayodasharguggula, Simhanadaguggula, Yogarajaguggula, Gokshuradi guggula, Kanchanaraaraguggula.</td>
</tr>
<tr>
<td>Taila</td>
<td>Mahanarayana Taila, Pindataila, Prasarinyadi Taila, Ksheerabala Taila, Brihat Saindhavadi Taila, Panchaguna Taila, Amritadi Taila, Marichyadi Taila, Mahamasha Taila.</td>
</tr>
<tr>
<td>Ghrita</td>
<td>Mahatriphaladi Ghrita, Brahmi Ghrita, Panchtikta Guggulu Ghrita, Sukumara Ghrita, Dadimadya Ghrita, Kantakari Ghrita, Kalyanaka Ghrita.</td>
</tr>
</tbody>
</table>

**PRACTICAL**

<table>
<thead>
<tr>
<th>Content</th>
<th>100 marks</th>
</tr>
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<tbody>
<tr>
<td>Daily hospital duties in OPD, IPD and casualty</td>
<td></td>
</tr>
<tr>
<td>Bed-side case taking – 25 patients</td>
<td></td>
</tr>
</tbody>
</table>

**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

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

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


5. 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.


7. 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.

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

10. Relation of psychology with parapsychology.

**PART B**

50 marks


2. 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.

3. 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.

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

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


7. Nidra and Swapna, its types and role in psychopathogenesis.

8. Basic understanding of Chikitsa bhedha, 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.

9. 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.


11. 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.

12. 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:

1. Daily hospital duties in OPD, IPD and casualty
2. Practical Record Book
   1. Psychiatric – 5 cases
   2. Psychosomatic – 5 cases
   3. Paediatric / Geriatric Psychiatry – 5 cases
   4. Psychosexual / Substance abuse – 5 cases
3. Psychiatric Inventories- MMSE, Hamilton Anxiety Depression Rating Scale, Brief Psychiatric Rating Scale, Bech’s Depressive Inventory, Weschlers’ scale, GRISS questionnaire -2 Cases each
4. Manasa Bhava assessment scales- Sattvabala, Manasa Kaya, Smriti, Buddhi, Raja and Tama rating, Manas Bhava Pariksha –2 cases each

Distribution of marks (Practical)

1. Case records of Patients in Detail (25 Cases)          - 20 Marks
2. Bedside clinical case taking

Long case
   - 20 Marks
Short case
   - 10 Marks

• Procedure
   - 15 Marks
• Instruments & Spotting
   - 15 Marks
• Viva - voce
   - 20 Marks

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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 Pardarth 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 Pardartha Vigyan - Dr Yogesh Chandra Mishra
9. Synopsis of Psychiatry - Harold kaplon and Benjamin saddock
1. Oxford textbook of Psychiatry - Michaeal Gerlder, Paul Harrison

1. General psychology and Abnormal psychology - S.K. Mangal
2. A text book of Post Graduate Psychiatry - Neeraj Ahuja
3. Mind in Ayurveda and other Indian Traditions - A.R.V.Murthy
4. Psychopathology in Indian medicine - Satyapal Gupta
5. Body-Mind-Spirit Integrative Medicine - Prof. Ram Harsh Singh
6. Rationale of Ayurveda Psychiatry - Dr. A.R.V. Murthy
7. Foundations of contemporary Yoga and Yoga Therapy - Prof. Ram Harsh Singh
8. Stress and its Management - Dr. K.N. Udupa
9. Concept of Mind - Edited by Prof. C.R. Agnivesh, Kottakkal
11. Panchakarma Illustrated - Prof. Shrinivasa Acharya
12. Unified Dimensions of Ayurvedic Medicine - Dr. J.S. Tripathi
13. Essential Psychiatry - Bhatia MS
14. Sahassrayoga - Nishteswar and

Vaidyanath

1. Ayurveda and the Mind - David Frawley
2. Manasa Roga Vijnana - Balakrishna
3. Comprehensive Textbook of Psychiatry - Kaplan and Sadock’s
4. Psychiatry for medical students - Robert J Waldinger
5. Introductions to Psychology - Morgan / King.

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D.-AYURVEDA PRELIMINARY
12.RASAYAN & VAJIKARAN
(Rejuvenation & aphrodisia)

PAPER-II

PART A

Theory- 100 marks

1. Concept of Bheshaja, classification and understanding of Swasthasya Urjaskara and Artasya Roganut.
2. Etymology, derivation, definition, synonyms and scope of Rasayana, Vajikarana & Vrishya.
3. Historical aspects of Rasayana & Vajikarana
4. Rasayana-Vajikarana Arha & Anarha

50 marks
5. Classification of Rasayana & Vajikarana.
6. Knowledge of Dosha, Dhatu & Mala.
10. Concept of Ojas.
11. Knowledge of Prakriti, Sara & Satwa.
12. Knowledge of concept of Agni: all components of Agni, levels of Agnimandya, Agnimandyajanya Vikara.

PART B

1. Applied anatomical & physiological aspects of male reproductive system.
2. Applied aspects of physiology of puberty.
3. Spermatogenesis.
5. Applied aspects of reproductive endocrinology.
6. Semen formation, knowledge of various components of semen.
8. Knowledge of metabolism and metabolic disorders.

PRACTICAL

Contents:

1. Daily hospital duties in OPD, IPD and casualty.
3. Rasayan and Vajikarana in geriatric patients – 10 patients.
4. Semen analysis- Retopariksha – 10 cases.
5. Uttarbasti – 5 cases.
6. Technique of psychosexual counseling.
7. Applied knowledge of assessment scales pertaining to Vajikarana /sexual functions.
8. Practical aspects of Panchakarma pertaining to Rasayana & Vajikarana.

Distribution of Marks (practical):

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1. 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:-

1. Relevant chapters from Brihatrayee and Laghutrayee and their commentaries
2. Panchakarma by Prof. H.S. Kasture
3. Kayachikitsa Vol I & II (Including Panchakarma, Rasayana & Vajikarana) by Prof. RH Singh
4. Illustrative Panchakarma by Dr. Sreenivasa Acharya
5. Campbell-Walsh Urology by Alan J. Wein MD PhD (Hon), Louis R. Kavoussi MD, Andrew C. Novick MD, Alan W. Partin MD PhD
6. Clinical Endocrinology 2013 The (Clinical Medicine Series) by MD., CG Weber
7. Sex and Human Loving -Masters and Johnson
10. Infertility- Practical guide for the physician, Hommond GM, Talbert LM (eds) Black well scientific publications, Oxford
11. Rasayana vajeekarana- Darpan by Om prakash Upadhyaya, Soi Balachandra yantralaya, Manavashram, Jaipur
12. Vatsayana kamasutra
13. Ananga ranga
14. Kelikutuhala
15. Infertility manual by kamini Rao
16. Advanced infertility management- Mehroo Hansotia
17. Endocrine and Reproductive systems – Sanders
18. Proceedings of WHO Symposium on advances in fertility regulation, Moscow: USSR
20. WHO (1973) Reproductive function in the human male. World Health Organization, Geneva(Mannual)
22. Decision making in infertility; DeCherney AH, Polan ML, Lee RD, Boyers SP (Eds), JP Brothers, New Delhi
25. Kaplan and Saddocks Synopsis of Psychiatry, Lippincott Williams and Wilkins
1. Chikitsa and its classifications; Antah-Parimarjana and Bahir-Parimarjana Chikitsa
3. Applied aspects of Trividha, Shadvidha, Ashta Vidha and Dasha Vidha Pariksha.
4. 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.
5. 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).
7. Knowledge and method of examination of various skin lesions.

PART B

2. Importance of Panchakarma in health and disease.
5. Samsarjana Krama. General knowledge of various Aushadha and Ahara Kalpana used for Panchakarma.
6. Areas of research in Panchakarma.
7. Knowledge of equipments and instruments used in Panchakarma 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.

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PRACTICAL

1. Duty in Panchakarma ward and theatre.
2. Performance of 5 Cases each of Snehana, Svedana, Vamana, Virechana, Basti and Nasya with maintaining detailed record.
3. Record of detailed examination of 25 patients treated with Panchakarma and effects observed thereon.

Distribution of marks (practical):

1. Case records of 25 patients in detail 20 marks
2. Performance of long Karma 20 marks
3. Performance of short Karma 10 marks
4. Panchakarmal procedures 15 marks
5. Instruments and spotting 15 marks
6. Viva voce 20 marks

REFERENCE BOOKS:

1. Charak Samhita with commentary of Ayurveda Dipika by Chakrapanidatta and Jalpakalpa taruby Gangadhara
2. Sushrutha Samhita with the Nibhandha Samgraha commentary of Dalhana and Nyayachandrika panjika of Gayadasa on nidangsthana
3. Ashtang Hridaya with Sarvanga sundara and Ayurved rasayana commentaries
4. Ashtanga Sangraha with Shashilekha commentary
5. Bhela Samhita
6. Kashyapa Samhita
7. Bhavaprakasha of Bhavamishra
8. Sharangadharma Samhita
9. Vangasen
10. Gadanigraha
<table>
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<tr>
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<tr>
<td>11</td>
<td>Ayurvediya Panchkarma chikitsa</td>
<td>Dr Mukundilal Dwivedi</td>
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<td>Panchkarma Vigyan</td>
<td>Dr Haridas Shreedhar Kasture</td>
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<td>13</td>
<td>Illustrated Panchkarma</td>
<td>Dr. G Srinivasa Acharya</td>
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<td>14</td>
<td>Ayurveda-Principles and Practice of Panchakarma</td>
<td>Dr. Mandip and Dr Gurdip Singh</td>
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<td>15</td>
<td>The Panchkarma Treatment of Ayurved with Kerala Specialities</td>
<td>Dr. T.L. Devaraj</td>
</tr>
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<td>16</td>
<td>Panchkarma Therapy</td>
<td>Dr. R.H. Singh</td>
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<td>17</td>
<td>Principles and practice of vasti</td>
<td>Dr. Vasudevan Nampoothiri and Dr. L. Mahadevan</td>
</tr>
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<td>Claiton’s Physiotherapy</td>
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<td>Harrison’s Principles of Internal Medicines</td>
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<td>Guyton’s Physiology</td>
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**M.S.-AYURVEDA PRELIMINARY**

**14. PRASUTI AVUM STRI ROGA**

(Gynecology & obstetrics)

**PAPER-II**

**PART A**

Theory- 100 marks

50 marks

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

PRACTICAL

1. Applied anatomy and physiology of genito-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, inguinal ligament, inguinal canal, vulva, rectum and anal canal.
2. Abnormal development, structure and function of female and male urogenital systems
3. Development, structure and function of placenta, umbilical cord and amniotic fluid.
4. Physiological and neuro-endocrinal changes during puberty, adolescence and menstruation.
6. Pre-natal, Natal and Postnatal counseling and examination.
7. Pharmacological study of drugs used in gynaecology and obstetrics.
8. Knowledge of diagnostic techniques used in gynaecology and obstetrics.
9. Basic Knowledge of pathological and biochemical investigation used in gynaecology and obstetrics.
11. Knowledge of contraception and sterilization procedures.
12. Pre-operative and post-operative care in gynaecology and obstetrics.

PRACTICAL

100 marks

Contents:

1. Hospital duties in OPD, IPD, labor room, OT and casualty
2. History taking and counseling - 25 cases.
3. Labor cases - observation/performing - 10 cases
4. Knowledge of instruments required in gynaecology and obstetric practices.
5. Ayurvedic diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. Contraception and sterilizations.

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8. Pre-operative, operative and post operative procedures.

Distribution of marks (Practical)

1. Case records of Patients in Detail (25 Cases) - 20 Marks
2. Bedside clinical case taking

Long case - 20 Marks
Short case - 10 Marks

1. Procedures - 15 Marks
2. Identification of instruments, X-ray etc & Spotting - 15 Marks
3. Viva - voce - 20 Marks

REFERENCE BOOKS:

1. 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
8. Text book of obstetrics- Williums
10. Text book of gynaecology - D C Dutta
13. Jeffcoat’s principles of gynaecology

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M.D.-AYURVEDA PRELIMINARY
15. KAUMARBHRITYA - BALA ROGA
(Pediatrics)

PAPER-II

PART A

Theory- 100 marks

50 marks
1. Development of Kaumarbhritya tantra including ancient and modern literature. Strength of Ayurveda specific to child health care.
2. Vayobheda (Classification of age) according to different classics
3. Anatomical and physiological differences in child compared to adult.
4. Ayurvedic consideration of physiology and pathology of Dosha, Dhatu, Mala, Oja, Agni, Prakriti (sharirikamanasika), Kaya and Dhatuposhana in children.
5. Basic Concepts of growth and development, and its assessment.
6. Ayurvedic and modern clinical methods of examination of healthy and diseased newborn and children.
7. Knowledge of modern diagnostic tools like clinical and laboratory investigations, X-ray, USG, MRI etc.
9. Applied pharmacological considerations: Ayurvedic and modern concepts of drug doses, administration, distribution, metabolism, excretion, and other important factors of consideration.
11. Childhood Samskara

**PART B**

13. Concept of Bala Rasayana and its application in physical and mental health of children.
14. Concept of Vyadhi-Kshamatva avam Vardhanopaya. Concept of immunity and immune enhancing measures including immunization.
15. Concept of Dhupana and Raksha karma and their clinical application in pediatric practice
17. 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, Dantodheda-Gadantaka Rasa, Rajanyadi Churna (Ashtanga Hridaya), Samvardhana Ghrita, Ashta Mangal Ghrita.
18. Methods of preparation of various specific Kalpana (e.g. Lehya, Syrup, drops etc.) according to needs of children.
20. Specific considerations in research methods related to Pediatrics.
1. a) In-patient case history record -(25 Patient)
   b) Child Health record - (50 Case)

1. Involvement in Outreach and National programs:
2. School Child health checkup
3. Adolescent education
4. Adolescent counseling etc

3. Pediatric ward/nursery management.

**Distribution of marks (Practical)**

1. a) Case History Record - (25 Patient) - 10 Marks
   b) Child Health record - (50 Case) - 10 Marks

2. 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:**

1. Kashyapa Samhita Complete Hindi translation by Satyapal Vidhyalankara English translation by Prof. Premvati Tiwari
3. Child Health Care in Ayurveda: 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 Shivshu 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
15. Care of New Born by Meharban Singh

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M.S.-AYURVEDA PRELIMINARY
16.SHALYA TANTRA – SAMANYA
(General Surgery)

PAPER-II

PART A

1. Etymology and definition of Shalya Tantra.
2. Scope and importance of Shalya Tantra.
4. Study of modern surgical clinical methodology.
5. Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.
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.
11. Concept and applicability of Sadhya-Asadhya (Prognosis) - Arishtha lakshana.
14. Diagnosis and management of Pranashtha Shalya.

PART B

- Yantra and Shastra – Surgical Instruments - Ancient and recent advances.
- Sterilization – methods and types.
- Basic knowledge of Sangyaharan – 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 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 Syllabus-49

PRACTICAL 100 marks

Content:-

1. Hospital duties in OPD, IPD, OT and casualty
2. Case record – 25 cases
3. Surgical cases - observation/performing- 10 cases
4. Knowledge of instruments required in surgical practices.
5. Ayurvedic diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. Contraception and sterilisations.
8. 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:-

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. Soushruti - 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. Adhunika Shalya Chikitsa Siddanta - 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

1. Arsha Evum Bhagander Mein sutra Avacharan- Vd. Kanak Prasad Vyas
2. Recent advances in Kshara Sutra - Dr. M. Bhaskar Rao
3. Leech application in Ayurveda - Dr. M. Bhaskar Rao
4. Kshara Sutra - Dr. S.N.Pathak
5. Shalya Shalakya Tantra - Vd. S.G. Joshi
6. Surgical ethics of Ayurveda - Dr. D.N. Pande
7. Text book of Surgery - Sabistan
8. Operative Surgery - Rob and smith

PG 1st Year Syllabus-50

2. Fractures and Joint Injuries - Watson-Jones
3. Text books of Operative Surgery - Farquharsons’
4. Principles of Surgery - Schwartz
5. Emergency Surgery - Hamilton Bailey’s
6. Surgical pathology - Willing Worth

1. Clinical methods in surgery - S. Das
2. Textbook of Operative Surgery - S. Das
3. Shalya Vigyan (Sachitra) - Anantram Sharma
4. Anushastra Karma - Dr. D.N. Pande
5. Concept of Vrana is Ayurveda - Dr. Lakshman Singh
6. Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh
7. Sangyaharan Prakash - Dr. D.N. Pande
8. A concise Text Book of Surgery - S. Das
9. A manual on Clinical Surgery - S. Das
10. A System of Surgical Diagnosis - T.N. Patel
11. A Practical Guide to Operative Surgery - S. Das
12. Drugs and Equipment for Anaesthesia - Arun kumar
15. Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar

1. Primary Anaesthesia - Maurice King
2. Synopsis of Anaesthesia - Lee
3. Clinical Anatomy/ Surgical Anatomy - John E. Skandalakis
4. Surgical Instruments of the Hindus - Girindarnath Mukopadyay
5. Outline of Orthopedics - John Crawford Adams and David Hamblen. L
6. Outline of Fracture - John Crawford Adams
7. Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha Kumar
8. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekorkar.

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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

PART A

Theory- 100 marks

1. Etymology and definition of Shalya Tantra.
2. Scope and Importance of Shalya Tantra.
4. Study of modern surgical clinical methodology.
5. Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.
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.
11. Concept and applicability of Sadhya-Asadhya- Prognosis – Arishtha Lakshana.
14. Diagnosis and management of Pranastha Shalya.

PART B

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.
5. Ashtavidha Shastra Karmas.
10. Raktamokshana – Introduction, types and applications.

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PRACTICAL

Content :

1. Hospital duties in OPD, IPD, OT and casualty
2. Case record – 25 cases
3. Parasurgical cases - observation/performing- 10 cases
4. Knowledge of instruments required in parasurgical practices.
5. Ayurvedic diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. 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
- Sushrutti - 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.
- 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 - Dr. P. Hemantha Kumar
- Arshas / Haemorrhoids
- 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 Shalakya Tantra - Vd. S.G. Joshi
- Surgical ethics of Ayurveda - Dr. D.N. Pande
- Text book of Surgery - Sabistan
- Operative Surgery - Rob and smith

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1. Bailey and Love’s Short Practice of Surgery - Norman.S. Williams, Charles.V. Mann and
R.C.G. Russell
2. Fractures and Joint Injuries - Watson-Jones
3. Text books of Operative Surgery - Farquharson’s
4. Principles of Surgery - Schwartz
5. Emergency Surgery - Hamilton Bailey’s
6. Surgical pathology - Willing Worth
7. Clinical methods in surgery - S. Das
8. Textbook of Operative Surgery - S. Das
9. Shalya Vigyan (Sachitra) - Anantram Sharma
10. Anushastra Karma - Dr. D.N. Pande
11. Concept of Vrana is Ayurveda - Dr. Lakshman Singh
12. Significance for Poorva Karma in Surgical Patient - Dr. Lakshman Singh
13. Sangyaharan Prakash - Dr. D.N. Pande
15. A manual on Clinical Surgery - S. Das
16. A System of Surgical Diagnosis - T.N. Patel
17. A Practical Guide to Operative Surgery - S. Das
18. Drugs and Equipment for Anaesthesia - Arun kumar
21. Recent trends in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
22. Primary Anaesthesia - Maurice King
23. Synopsis of Anaesthesia - Lee
25. Clinical Anatomy/ Surgical Anatomy - John E. Skandalakis
26. Surgical Instruments of the Hindus - Girindharnath Mukopadyay
27. Outline of Orthopedics - John Crawford Adams and David Hamblen. L
28. Outline of Fracture - John Crawford Adams
29. Recent trends in the management of Bhagandara / Fistula-in-ano - Dr. P. Hemantha Kumar
30. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekoker.
31. Manipal Manual of Surgery - Dr. Rajgopal Shenoy

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PG 1st Year Syllabus-54

M.S.-AYURVEDA PRELIMINARY
18.ASTHI SANDHI AND MARMAGAT ROGA
1. Etymology and definition of Shalya and Shalya Tantra. Scope and importance of Shalya Tantra.
2. Dosha, Dhatu, Mala and Sarotas vigyan.
5. Asepsis and Antisepsis. Sterilisation (Nirjantuki karana)-methods and types. O.T. Fumigation.
10. Shatkriyakaala and its applicability in the pathogenesis of surgical diseases.
12. Rogi and Rog Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and its application in the diagnosis of diseases.
13. Vranashopha and Inflammation, Nadivrana and Sinuses / Fistulae, Vidradhi and abscesses.
15. Anu Shastra Karma like Ksharakarma, Agnikarma, Raktavasechana etc. and their application in orthopedic practice.
17. Fluid, Electrolyte, Acid Base Balance and Nutrition
   1. Introduction to physiology of fluids and electrolytes.
   2. Dehydration and over hydration.
   3. Specific electrolyte losses, symptomatology and management of Acidosis, Alkalosis and Acid-Base balance.
   4. Various replacement fluids in surgery, mode of administration and complications.
   6. Intravenous fluid therapy.
18. Knowledge of imaging and diagnostic techniques – X-ray, Ultra Sonography, CT scan, MRI and recent advances.

PG 1st Year Syallabus-55
1. **Scope of Asthi Sandhi evam Marmaghata Roga specialty and its importance. Historical aspect of Ayurvedic and modern orthopedics and Marma.**

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


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

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

6. **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.**

7. **Systemic response to injury.**

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

9. **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.**

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

**PRACTICAL**

**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):**

1. Case Records (25 cases)  20marks
2. Bed Side examination-
   - Patient History (Long case)  20 marks
- Patient History (Short case)  10 marks
3. Instruments / equipments / models identification  15 marks
4. Medical procedures  15 marks
5. 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
15. Operative Surgery  S. Das
16. Schwartz Principles of Surgery
17. Bailey and Love’s short practice of Surgery
1. Shisyopanayana, Vishikhanupravesha, Agropaharaniay and Shatkriyakala.
2. Etymology and definition of Sangyahan and its scope, application and importance in surgical practice.
4. Concept of Vedana (pain), pathophysiology and modalities of pain management in Ayurveda.
5. Agni Karma in pain management.
6. 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.
7. Raktamokshana (blood letting) in pain management.
8. Introduction, fundamentals, importance, types, methods of application, duration, instruments, equipments and various materials used for Raktamokshana. Indications, contraindications, complications of Raktamokshana and their management.
10. Types of Raktamokshana and determination of appropriate amount of blood loss during Raktamokhana according to diseases and patients.
11. Methods of Raktastambhana.
12. Leech Therapy in pain management. Varieties, importance, methods of applications, indications, contraindications,
complications and their management and method of maintenance of leeches.

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

14. Concept of Marma, their importance and application in Sangyaharan.

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

PART-B

50 marks

History of anesthesia.

1. Molecular basis of anesthesia, cell physiology and body fluids.

2. 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.

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

Physiology of sleep, sleep disorders, physiology of pain, physiology of neuromuscular junction, autonomic nervous
system – sympathetic and parasympathetic.

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

6. Pathophysiology of renal failure, renal function tests.

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9. Pathophysiology of hepatic failure, liver function tests.

10. Shock and its management.

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

12. Thermoregulation.

13. Pre anesthetic assessment and permedication.

14. 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.

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

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


18. 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.

19. Anaesthisa documentation and record keeping.
PRACTICAL

100 marks

Contents:

1. Anesthetic Drugs.
2. Demonstration of induction of Anesthesia.
3. Preanaesthetic assessment of patients.
4. Post anesthesia management.
5. Complications of anesthesia and their management.
6. Identification of instruments and knowledge of their use.

Distribution of marks (Practical)

1. Anesthesia documentation & record keeping - 20 Marks
2. Bedside clinical case taking
3. Long Case - 20 Marks
4. Short Case - 10 Marks
5. Procedure - 15 Marks
6. Identification of instruments & Spotting - 15 Marks
7. Viva-voce - 20 Marks

REFERENCE BOOKS

1. Sushruta Samhita
2. Charka samhita
3. Ashtang Hridaya
4. Practice of Anesthesia - Churchill Davidson
5. Miller’s Anesthesia - Ronald D Miller
6. Synopsis of Anesthesia - Alfred Lee
7. Sangyaharan Prakash - Dr. D. N. Pande
8. Agni karma-Technological Innovation - Dr. P.D. Gupta
9. Practice of Anesthesia and Resuscitation - Dr. P.K. Gupta et al
10. Essentials of Anesthesiology - Prof. A.K. Paul
11. Clinical Anesthesia - Prof. A.K. Paul
12. Anu Shastra karma - Dr. D.N. Pande
13. Textbook of Anesthesia - Aitkenhead
14. Anesthesia and co-existing disease - Stoelting’s

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M.S.-AYURVEDA PRELIMINARY
20. SHALAKYA - NETRA ROGA
(ophthalmology)
1. Shalakya Tantra Parichaya, Itihas and Pradhanyam.
2. Netra Sharir and related Marmas
3. Study of Dosha, Dhatu, Mala and Srotas in context to Netra chikitsa.
4. Updated knowledge of Agropaharaniya in Netra chikitsa- incorporating sterilization, Sangyarahana (Anaesthesia).
5. Basic pharmacology of common drugs required in ocular diagnostic and therapeutic procedures.
7. Swasthavritta related to Netra.
8. Chaturvidha Chikitsa Siddhanta and Raktamokshana in Netra chikitsa.
9. Applied knowledge of various Kriyakalpas and other therapeutic procedures related to Netra chikitsa.
10. Role of Panchkarma in Netra chikitsa.
11. 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.

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PRACTICAL 100 marks

Contents:

1. Clinical posting in OPD/IPD/Kriyakalpa Kaksha & OT
2. Clinical case presentation (10 cases)
3. Case record (20 cases)
4. Hands on training in Kriyakalpa

**Distribution of marks (practical):**

1. Case Record - 20 Marks
2. Bed side examination
3. Long case - 20 Marks
4. Short case - 10 Marks
5. Kriyakalpa procedure - 15 Marks
6. Identification of specimens and Instruments - 15 Marks
7. 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. Relevant part of Chakradhatta, Bhel Samhita, Harita Samhita
9. Shalakya Tantra - Ramanath Dwivedi
10. Shalakya 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
17. Modern Ophthalmology - Dutta, L.C. Jaypee Brothers
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M.S.-AYURVEDA PRELIMINARY

21. SHALAKYA- DANTA AVUM MUKHA ROGA
(Dentistry and Oral Disease)

Theory- 100 marks

PAPER-II
PART-A
marks 50

2. Mukhasharir.
3. Study of Dosha, Dhatu, Mala and Srotas in context to Danta and Mukha Roga.
4. Agropaharaniya in Danta and Mukha Roga incorporating sterilization, Sangyaharana and diagnostic and therapeutic pharmacological agents.
5. Vrana Siddhanta-Trividha Shopha, Shuddha-Dushta Vrana, Vrana Bandha and Vranitopasana in relation to Danta and Mukha Roga.
6. Swasthavritta related to Danta and Mukha Roga.
7. Chaturvidha Chikitsopaya (Bheshaja-Shastra-Kshara-Agni) Siddhanta and Raktamokshana related to Danta and Mukha Roga.
8. Applied knowledge of various Kriyakalpa and other therapeutic procedures related to Danta and Mukha Roga.
9. Role of Panchkarma in Danta and Mukha Roga.

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

PART-B

1. Applied orodental anatomy and physiology.
2. Clinical methods adopted in orodental practices.
3. Knowledge of advanced diagnostic techniques, equipments and tests of importance in orodental practices with their interpretations.
4. Classification, aetiopathogenesis, clinical features and therapeutics of Oshtha, Danta, Dantamula, Jihva, Talu and Sarvasar Mukharogas in the light of modern knowledge.
5. Basics of Sandhana Vidhi in Mukha and Danta Roga.
6. Applied aspect of Dysphagia, Manyastambha, Hanumoksha, Apachi (Cervical Lymphadenopathy) and Herpes.
7. Handling of biomedical waste.

PG 1st Year Syllabus-62

PRACTICAL

Contents:

1. Clinical posting in OPD, IPD, Kriyakalpa Kaksha and OT.
2. Clinical case presentation (10 cases).
3. Case record (20 cases).
4. Hands on training in Kriyakalpa.

Distribution of marks (practical):

1. Case Record - 20 Marks
2. Bed side examination - 20 Marks
3. Long case - 20 Marks
4. Short case - 10 Marks
5. Kriyakalpa procedure - 15 Marks
6. Identification of specimens, radiograph and instruments - 15 Marks
7. 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. Shalakya Vijnanam - Ravindra Chandra Chaudhary
5. Nimi Tantra - Ramanath Dwivedi
6. Dental Anatomy Histology - Dr. S.I. Bhalajhi
7. Essentials of Preventive and Community Dentistry - Dr. Soben Peter
8. Complete Denture Prosthodontics - Dr. J.J. Manappallil
9. Orthodontics the Art and Science - Dr. S.I. Bhalajhi
10. Text book of Pediatric Dentistry - Dr. S.G. Damle
11. Dental Anatomy Histology - Dr. Vinod Kapoor
13. Clinical Periodontology - Indervee Singh
14. Anatomy for Dental Students - Carranza, Newman
15. Clinical Periodontology - M A Marzouk
16. Operative Dentistry - Carranza, Newman
17. Oral and maxillofacial surgery secrets - Girdon R Seward
18. Clinical Dentistry - John Gibson
19. Synopsis of Oral Pathology - S N Bhaskar
20. Oral Pathology - Stone

PG 1st Year Syllabus-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

2. Shiro-Nasa- Karna- Avum Kantha Shariram and knowledge of related Marmas.
5. Basic pharmacology of common modern drugs used in diagnostic and therapeutic procedures related to Shiro-Nasa- Karna- Evum Kantha Chikitsa.
8. Chaturvidha Chikitsopaya (Bheshaja- Shastra-Kshar -Agni ) and Raktamokshan related to Shiro-Nasa- Karna- Evum Kantha Chikitsa.
9. Applied knowledge of various therapeutic modalities like Shirobasti, Shirodhara, Shirovirechana, Nasya, Karna Pooran, Karna Dhooopan, Kaval, Gandusha etc.

PART B


PG 1st Year Syllabus-64

PRACTICAL

Contents:

1. Clinical posting in OPD, IPD, Kriyakalpa Kaksha and OT.
2. Clinical case presentation (10 cases).
3. Case record (20 cases).
4. Hands on training in Kriyakalpa.

Distribution of marks (practical):
1. Case Record - 20 Marks
2. Bed side examination
   A. Long case - 20 Marks
   B. Short case - 10 Marks
   C. Kriyakalpa procedure - 15 Marks
3. Identification of specimens and Instruments - 15 Marks
4. Viva-voce - 20 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.
10. Text book of Ear Nose Throat diseases – Dhingra
11. Textbook 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

SYLLABUS FOR II & III YEAR PG COURSE

Syllabus for final year

Subject 1. AYURVED SAMHITA & SIDDHANT

Theory- 400 marks(100 Each)
Practical and Viva-Voce - 100 marks

PAPER –I Charaka

1. Charaka Samhita with Ayurved Dipika commentary by Chakrapani.
2. Introduction to all available commentaries on Charak Samhita.
PAPER –II Sushruta & Vagbhata

3. Ashtang-Sangraha Sutra Sthananam with Induteeka
4. Introduction to all available commentaries on Sushruta Samhita, Ashtanga Hridaya and Ashtanga-Sangraha.

PAPER – III Darshanika Siddhanta

Understanding of Indian philosophical principles available in Charak Samhita, Sushruta Samhita, Ashtanga Hridaya and Ashtanga Samgraha.

2. Clinical importance of Satkaryavad, Asatkaryavada, Parmanuvada, Swabhavoparamvada.
3. Practical applicability of principles of Samkhya- Yoga, Nyaya-Vaisheshika, Vedanta and Mimansa Darshan.
4. Introduction to the principles of Charvak, Jain & Baudhha Darshan.

PAPER – IV Prayogika Siddhant.

3. Introduction to Laghuttaryee with available Sanskrit commentaries.

Practical- Viva-voce - 100 Marks
(At list one paper should be published/accepted in journal, Long Case, Topic Presentation, Thesis Viva, General Viva, =100)

Reference Books

2. Sushruta Samhita - Dalhana Commentary.
3. Ashtanga Samgraha - Indu Teeka.
4. Ashtanga Hridaya - Sarvangasundara.
5. Vaisheshika Sutra – Prashastapada Bhasya
6. Nyaya Sutra - Vatsyayan Bhasya
7. Ayurveda nyayah
8. Nyayas in Brihattriyee
9. Yoga Sutra - Vyas Bhasya
10. Vedantasara
11. Sarvadarshan Samgraha
15. Ayurvediy Jeevak Su -Dr O.P. Upadhyay.
17. Scientific Exploration of Ayurved – Dr. Sudhir Kumar.
18. Charak Samhita – Prof. B.L. Gaur
19. Ashtang Hridaya – Dr T. Shri Kumar
2. RACHANA SHAARIRA

Marks - Theory : 400
Practical: 100

PAPER-I
GARBHA SHAARIRA

100 Marks

2. Explanation of Basic Embryology and Systemic Embryology.
3. Knowledge of basic facts of advancement in Anuvamshiki (Genetics) and Garbha vikaras (Teratology).

PAPER –II
KOSHTHANGA SIRA DHAMANI SROTAS SHAARIRA

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 Kalaas with their Modern component and applied aspects.
4) Paribhashaa Shaarira: - Snayu, Kandara, Rajju, Sanghata, Jala etc. 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 Avedhya Sira (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), Abhigata (Prognostic) classification, Trimarma according to Charaka. Knowledge of ‘Marmaabhighata’, MarmaViddha, Detail 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 Sandhis (Joints).
4) Peshee Shaarira :- Etymological derivation, description, features, number, types and Applied anatomy of all Peshees (Muscles).
3. 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 Tridosha theory
- Mutual relationship between Triguna-Tridosha-Pancamahābhūta-Indriya.
- Mutual relationship between Rtu-Dosa-Rasa-Guna.
- Biological rhythms of Tridosha on the basis of Day-Night-Age-Season and Food intake.
- Role of Dosa in the formation of Prakṛti of an individual.
- Role of Dosa in Health and Disease.

**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, Śādhaka*). 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*).  

- **Dhātu Posana:** Process of nourishment of Dhātu. Description of various theories of Dhātu Posana (*Kṣīra-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 Vṛddhi 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, Asthvaha, Majjāvaha and Śukravaha Srotāmsi.

- **Ojas:** Definition, locations, synonyms, Formation, Distribution, Properties, Quantity, Classification and Functions of Ojas. Description of Vyādhikṣamitva. Bala Vṛddhikara Bhāva. Classification of Bala. Relation between Ślesmā, Bala and 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 Šuddha and Dūsita Stanya, Manifestations of Vṛddhi and Ksaya of Stanya.

• **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 Vṛddhi and Kshaya of Purīsa and Mūtra.

• **Sveda** – Definition, Formation, Properties, Quantity and Functions of Svedavaha Srotāmsi. Formation of Sveda. Manifestations of Vṛddhi and Ksaya of Sveda.

• **Dhātumala** – Definition, Formation, properties, Quantity, Classification and Functions of each Dhātumala.

**Paper-II – Prakṛti Evam Sattva Vijñāna**

• **Deha-Prakṛti**: Various definitions and synonyms of the term ‘Prakṛti’. Factors influencing the Prakṛti. Classification of Deha-Prakṛti. Characteristic features of the individuals belonging to each kind of Deha-Prakṛti. Recent advances in understanding the Prakṛti.

• **Manas Prakṛti**: Types of Manas Prakṛti with their characteristic features and its Practical implication, Properties of Satwa, Rajas, Tamas and their effect on mind.

• **Pancajnanendriya**: Physiological description of Pancajnanendriya and physiology of perception of Śabda, Sparśa, Rūpa, Rasa, Gandha. Indriya-panca-panca; 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, Dhṛti and Smṛti.

• **Nidrā** – Definition of Nidrā, Classification of Nidrā. Tanda, physiological and clinical significance of Nidrā; Svapnotpatti and Svapnabheda.

• Physiology of special senses

• Physiology of 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-vidhi-vidhiṇāna. Asta āhāravidhi viñāyatanā, Āhāraparīnmānakara bhāva.


• 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 Dhātvagni.
• Applied physiology of Agni in Kriyā Śārīra and Cikitsā.
• Description of the aetiology and features of Annava ha Srotodusti. Applied physiology of Annava ha Srotās: Arocaka, Ajīrna, Atisāra, 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.
• 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 advances related to the gut microbes 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**

**General Physiology:**


**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 nervou system. Functions of different parts of brain and spinal cord, Hypothalmus 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, lactation and Parturition.
• 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:

- 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 proteins- synthesis and functions. Applied physiology: Anaemia, Jaundice.

Musculoskeletal Physiology:

- Physiology of muscles. Classification of muscles. Electrical and mechanical properties of Cardiac, skeletal and smooth muscles.

Physiology of Excretion:

- Structure and functions of skin, sweat glands and sebaceous glands.

Physiology during special states:

- Space Physiology
- Exercise Physiology
- Physiology of high altitude and deep sea
- Physiology of Yoga
- Physiological response to environmental changes
- Physiological response to Vega Vidharana (Holding Natural urges)

Learners should be well versed with the following instruments-

- Physiograph, Computerised spirometry, Biochemical Analyzer, Pulse oxymeter, ELISA Reader, Hematology Analyzer, Tread mill, etc.

Bridge areas including recent advances:

- Recent studies in biorhythms.
- Recent advances in Neuro-Immune-Endocrine physiology.
- Recent advances in understanding the Prakrti. Brief description related to some of the recent studies exploring the genetic / biochemical / haematological /
electrophysiological basis for prakrti. Introduction to the recent tools to assess prakrti (questionnaires and software.)

• Recent advances in tissue engineering and stem cell research.

PRACTICAL

Ayurvedic practicals

• Assessment of Prakrti
• Assessment of Sāra
• Assessment of Dosa Vṛddhi Ksaya Laksana
• Assessment of Dhātu Vṛddhi – Ksaya Laksana
• Assessment of Agni
• Assessment of Kostha
• Assessment of Śarīra Bala through Vyāyāma Śakti
• Mütra Parīkṣa
• 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, chemical and microscopic examination

• Specific gravity and reaction of urine
• Detecting the presence of Albumin in urine
• 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
• Detecting the presence of pus cell, casts etc. 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)

**Requirements to be fulfilled before final examination**

• Atleast 10 theory classes for First Prof. BAMS Students
• Participation and presentation of papers in at least 2 National / International Seminars.
• Publication / acceptance of at least 1 research paper / article in a scholarly journal.

**PATTERN OF EXAMINATION**

**Theory**

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<th>Paper</th>
<th>Marks</th>
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**Practical**

**Marks Distribution**

• Practical Record Book - 05
• Ayurvedic Practical - 10
• Modern Practical - 10
• Assesment of Teaching skill- 10
• Project work - 10
• Presentation of Thesis - 15
• Viva Voce – 40

Total marks 100

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
• Dosa Dhatu Mala Vigyana - Shankar Gangadhar Vaidya
• Prakrita Dosh Vigyana - Acharya Niranjana Dev
• Tridosha Vigyana - Shri Upendranath Das
• Sharira Tatva Darshana - Hirlekar Shastri
• Prakrita Agni Vigyan - Niranjana Dev
• Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri
• Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain
• Sharir Kriya Vigyana - Shri Moreshwar Dutten Vd.
• Sharira Kriya Vijnana (Part 1 and 2) - Nandini Dhargalkar
• Dosa 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
• 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
• Sharirkiya Vigyana Practical Hand Book Deshpande - Dr. Ranade, Dr. Chobhe, Dr.
• 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
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

Recent Research Papers in Kriya Sharir / Physiology to refer

### 4. DRAVYAGUNA VIGYAN

**Theory : 400 marks**

**PAPER-INamarupa Vigyana 100 marks**

( Ayurveda & modern Pharmacognosy )

**Part – A: 50 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.
4. Distinguishing morphological characteristic features (Swaroopa)of medicinal plants listed in Ayurvedic Pharmacopoeia of India(API).
5. Knowledge of Anukta dravya (Extra-pharmacopoiial drugs) with regards to Namarupa.
6. Sandigdha dravya (Controversial drugs) vinischaya.

**Part – B: 50 marks**
1. Pharmacognostical study of different parts of the plant with reference to Macroscopic and Microscopic study and Qualitative and Quantitative analysis like foreign matter, extractive (Water and alcohol), ash value, acid insoluble ash and TLC separation.

2. Methods of drug Standardization and Quality control


5. Knowledge of tissue culture techniques.


7. Knowledge of advances in cultivations of medicinal plants.

PAPER –II  Guna Karma Vigyan (Ayurvedic & Modern pharmacology)

100 marks

Part – A: 50 marks

1. Fundamental principles of drug action in Ayurveda

2. Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their applied aspects and views of commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) 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 and krit anna varga described in Brihatrayee and various nighantus.

6. Knowledge of guna and karma of anukta dravya.

Part – B: 50 marks

7. Fundamental principles of General pharmacology.

8. Modern pharmacological principles and knowledge of drugs acting on various systems.

9. 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, anti microbial and antimycotic activities.

10. Studies on changes occurring in purification of poisonous plants drugs.
Part – A: 75 marks
1. Bhaishajya Prayoga 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 Sevanakal, (schedules of drug administration), Sevankal avadhi (duration of drug administration), Pathyapathy (Dos’ &Don’ts), Complete Prescription writing (Samagra Vyavastha patraka).
2. Amayika prayoga (therapeutic uses) of important plants described in Brihattrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.

Part – B: 25 marks
5. Adverse drug reactions & Drug interaction of medicinal plants.
6. Knowledge of clinical pharmacology and clinical drug research as per GCP guidelines.
7. Knowledge of Pharmacogenomics.

PAPER- IV Nighantu & Yoga Vigyana 100 marks
(Materia Medica & Formulations)
Part- A: 75 marks
1. Etymology of Nighantu, their relevance, utility and salient features.
2. Details of the following Nighantus with regards to author’s name, period and content- Paryaya ratnamala, Dhanvantari nighantu, Hridayadipika nighantu, Ashtanga nighantu, Rajanighantu, Siddhmantra 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 of Ekala Aushadha kalpana (manufacturing of dosage forms of single drugs) mentioned in Sharangadhara samhita and Ayurvedic Formulary of India (AFI).

Part- A: 25 marks
3. General awareness on Aharayogi(Nutraceuticals), Soundarya prasadana (cosmeceuticals), Food additives, Excipients etc.
4. Knowledge of plant extracts, coloring and flavoring agents and preservatives.
5. Knowledge of Pharmacopies of India different contries- e.g. API, BHP,
6. Knowledge of important scientific publications of various Departments & ministeries of Govt. of India- Like department of AYUSH, CCRAS,RAV,ICMR, CSIR etc.

Syllabus of the Practical training of Part two M.D. (Ayu.) - Dravyaguna
1. **Study tours:**
Field identification of medicinal plants through at least five local Dravyaguna study tours. Within the state and one study tour out of state and preparation of minimum 50 **herbarium sheets** along with prayojyanga (raw drug). Field visit should also include demonstration of cultivation practices of important medicinal plants.

2. **Evaluation of Crude drugs:**
   Macro- and micro-scopical methods of examining three drugs of each of different useful parts of plants, including their powders.

3. **Phytochemical evaluation of raw material:**
Qualitative and Quantitative analysis 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.

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) for any five pharmacological activities cited in paper II.

5. **Practical training –**
   a) **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
   b) Regular clinical training in the Teaching hospital for submission of record of Ekala Aushadhi Prayoga (Single drug trial/ Clinico-pharmacological studies.) & Adverse drug reactions (ADR).

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 in Dravyaguna and submitted 6 months before the final examination. The approval of Dissertation shall be pre-requisite for appearing in the final examinations. post Graduate Scholar is expected to present minimum two scientific papers in National /international seminars during the course of study.

7. Post Graduate Scholar is expected to publish / get accepted at least one paper in journal as per PG regulations under the supervision of guide.

### Pattern of Practical Examination - Total = 200 marks

<table>
<thead>
<tr>
<th>Practical Examination</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Herbarium</td>
<td>- 10 Marks</td>
</tr>
<tr>
<td>2. Pharmacognosy practical record</td>
<td>- 10 Marks</td>
</tr>
<tr>
<td>3. Pharmacology practical record</td>
<td>- 10 Marks</td>
</tr>
<tr>
<td>4. Clinical records record</td>
<td>- 10 Marks</td>
</tr>
<tr>
<td>5. Practical examination (Identification of green and dry raw drugs, microscopic examination, Ekala aushadha pariksha)</td>
<td>- 60 Marks</td>
</tr>
<tr>
<td>6. Thesis Presentation</td>
<td>- 20 Marks</td>
</tr>
</tbody>
</table>
7. Viva voce
Marks

Reference Books-
1. Rigvedasya Aushadhi Suktam – Sayana Bhashya Sahitam
2. Relevant portions of classical texts of Charak, Sushrut and Vagbhata
3. All available Nighantus
4. Dhanwantari Nighantu Rajnighantu Sahit
5. Sharmadhar Samhita
6. Yogaratnakar
7. Sharmadhar Samhita
8. Yogaratnakar
9. Dravyaguna Vigyanam – Yadavji Trikamji Acharya
10. Dravyaguna Vigyanam – Acharya Priyavrat Sharma
11. Aushadhiguna Vigyanam - Pt. Vishwanath Dwivedi
12. Kriyatmak Aushadhi Vigyan - Pt. Vishwanath Dwivedi
13. Abhinav Buti Darpana -Roopalal Vaishya
15. Bhavprakash Nighantu Dr.K.C.Chunekar
16. Books on Dravyaguna by contemporary authors
17. Books on Pharmacognosy
18. Books on General, Experimental & Clinical Pharmacology
19. Ayurvedic Pharmacopoeia of India, & other pharmacopias of the world
20. Indian Pharmacopia
21. All the classical texts related to medicinal plants
22. All the scientific publications on medicinal plants
23. Journals on medicinal plants
24. Different Floras

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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 aushadhikarana and their contemporary modification such as yantras, mushas, putas, Koshthis, bhrashtris, 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 (Water) and other dravas (Liquids), Kala (Season), Patra (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.
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 (Substitute) 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-agraahyatva, 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, Uparsa, 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 following Bhasmas and Pishtis

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.


Paper II Bhaishajya Kalpana

Part - A

1. History and Chronological evolution of Bhaishajya Kalpana, Concept of Bhashaja 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. Knowledge about Good Collection and Storage Practices (GCP and GSP) as per WHO and NMPB guidelines.


4. Detailed knowledge of manufacturing, standardization, quality control, pharmacopeial standards, storage, shelf life and development of innovative technology with Standard Operating Procedures of following dosage forms


iii) Kritanna and Bhashaja Siddha Anna Kalpana, Shuka and Shmibi Dhanya Kalpana, Dugdha, Dadhi and Takra Vikar and Mansarasadi Krutanna Kalpana, Aharopayogi varga, concept of medicinal and functional food, dietary supplements and neutraceuticals etc.

v) Bahya Prayogarthana Kalpana: Lepa, Upanaha, Udvartan, Avachurnana / Avadhulana, Abhyanga, Dhupana, Malahara.

vi) Mukha, Karna, Nasa, Netropacharartha Kalpana:


Part B

All the following procedures are to be studied in relevance to Ayurvedic Bhaishajya Kalpas.

2. Drying, open and closed air drying, freeze drying, vacuum drying and other drying methods pharmaceutical excipients.
3. Liquids: Clarified liquid, Syrup, Elixir,
5. Semisolid dosage forms- Emulsions, Suspensions, Creams and Ointments, Sterilization of Ophthalmic preparations.
6. An introduction to various cosmetic preparations such as Toiletories, Shampoo, Shaving creams, Hair oils, Face Powders (Talcum powders). Vanishing creams, lotions and Moisturisers, Face pack, Deodourents and Perfumes.
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, Ashuddha, Apakva, Avidhi Rasadravya Sevanajanya Vikara evam Vikara shanti upaya (Management and knowledge of untoward effects of inappropriately processed and administered drugs).
2. Detailed knowledge of Aushadhi patha Nischiti and Sanyojan (Formulation design and 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

ii. Kupipakva Rasa: Rasa Sindura, Makaradhwaaja, Sidha makaradhwaaja, Samira pannaga Swarnarajvangesvar, Malla sindura, Rasa karpura, Rasa pushpa, Manikya Rasa.

iii. Parpati Rasa: Rasa Parpati, Loha Parpati, Tamra Parpati, Suwarna Parpati, Gagan Parpati, Vijay Parpati, Panchamrit Parpati, Swet Parpati, Bola Parpati

iv. Pottali Rasa: Rasagarbha pottali, Hemagarbha pottali, Mallagarbha pottali, Hiranyakagarbha Pottali, Shankagarbha pottali, Lokanatha rasa, Mriganka Pottali


vi. Knowledge of Essential Ayurvedic drug list as prescribed by Dep. Of AYUSH (Got. Of India) and its significance.

Part B

Detailed knowledge of Aushadhi patha Nischiti and sanyojan (Formulation designing and 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, Nimba kalka, Rasona kalka, Kulattha Kwath, Punarnavasthaka kwatha, Rasna saptaka kwatha, Dhanyak hima, Sarivadi hima, Panchakola phanta, Tandulodaka, Mustadi pragamthya, Kharjuradi mantha, Shadanga paniya, Laksha rasa, Arjuna kshirapaka, Rasona kshirapaka, Chincha panaka, Candana panaka, Banapsha shankara, Nimbu shankara, Amrita satva, Ardraka satva, Ajamoda arka, Yavanyadi arka

ii. Kritanna and Bhesha 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, Dugdha Vikara – Piyush, Kilata, Kshirashka, Hyaiyangavina, Morata, Santanika, Dadhi and Dadhi Vikara, 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, Dadimashataka Churna, Trikatu Churna, Vaishwanara Churna, Gangadhara Churna, Jati phaladi Churna, Narayana Churna etc.


vi. Sneha Kalpa

Sneha Moorchna - Ghrita Murchana, Taila Murchhana

Siddha Ghrita - Shatavari Ghrita, Jatyadi Ghrita, Phala Ghrita, Dadimadi Ghrita, Kshirashatpala Ghrita, Mahatrimphala 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, Amaparga Kshara Taila, Tuvaraka Taila, Kshirabala Taila (Avartita), Lakshadi Taila, Anu Taila, Kumkumadi Taila, Hingutriguna Taila, Kottumchukadi Taila, Prasarinyadi Taila, Dhanwantari Taila, Balashwagandhari Taila, Balaguduchadi Taila, Nilibhringyadi Taila, BrihadSindhadhavi Taila, Irmedadi Taila, Chandanadi Taila, Panchaguna taila, Arka taila, Pinda Taila, Kasisadya Taila


PART - A

1. General Pharmacology:
   b. Routes of drug administration
   c. Factors modifying drug effect, Bioavailability and Bioequivalence, drug interactions, Adverse drug reaction and Drug toxicity


3. Elemental constituents of human body such as Iron, Copper, Zinc, Calcium, Manganese etc. and its physiological importance. Deficiencies and excess of various elements.

4. Toxicity of heavy metals and chelation therapy.

5. Knowledge of toxicity and pharmacological activities of herbo-mineral compounds.


Part B


2. Pharmaceutical formulation designing and dosage form design (Pre-formulation).

3. Packaging materials and Labeling.


5. Pharmaceutical Marketing, Product release and withdrawals.

6. Hospital, Dispensing and Community pharmacy.


8. Laws Governing Ayurvedic drugs

   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
   viii. Knowledge of Good Clinical Practices and Inspecion Manual prescribed by Dept. of AUYUSH, Govt. of India.


10. Introduction to Ayurvedic Pharmacopedia of India, Ayurvedic Formulary of India.
11. Introduction to Indian Pharmacopeia, British and United States Pharmacopeia, Pharmacopial 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.

posting in R & D / Production unit in GMP certified Ayurvedic Pharmacy.

Minimum attendance in three National Conferences within three academic years.

Minum 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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Marks</th>
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<tbody>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

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 Practicals: 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.

7. Documentation 15 Marks
   a. Journals (Practical Records) of minimum 150 practicals from Rasa Shastra, Bhaishajya Kalpana and Drug Analysis.
   b. Reports of the Visits.
c. Case Records

8. Viva Voce examination

Marks

Reference Books:-

1. Rasahridaya Tantra
2. Rasarnava
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
49. Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)
6. AGADA TANTRA EVUM VIDHIVAIDYAKA

PAPER-I Agada Tantra (Ayurvedic and Contemporary Toxicology) 100 marks

Part - A

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. Detailed study of the following:

   Visha and Upavisha - Arka, Snuhi, Langali, Karaveera, Gunja, Ahiphena, Dhattura, Bhallataka, Vatsanabha, Kupeelu, Jayapala, Bang, Tobacco, Parthenium historiferous, Chitraka Eranda, Digitalis, Cerebra Odollum etc.

   Acids and Alkalis – Sulphuric acid, Hydrochloric acid, Nitric acid, Hydrocyanic acid, Oxalic acid, Carbolic acid, Formic acid and alkalis etc.

   Asphyxiants – Carbon monoxide, Carbon dioxide, Hydrogen sulphide etc.

   Antihistamines, Cocaine Hallucinogens – LSD Sedatives and Hypnotics – Barbiturates Petroleum – Kerosene Poisoning Organo phosphorus compounds - Aluminium phosphate, Zinc phosphate etc.
i) Nonmetallic poisons – Phosphorous, iodine etc.

ii) Metallic poisoning – Arsenic, Mercury, Lead, Copper, Zinc, Tin, Radiation metals etc.

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.

Shankaa visha and its management. Visha sankat

Part-B

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

Part -A

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).

**Part - B**

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).

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.

**PAPER –III Vyavahara Ayurveda Evam Vidhi Vaidyaka 100 marks**

**Part - A**

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, lightening and electricity. Suspended Animation.
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

10. Sexual offences and perversions.


**Part –B**


14. Forensic Science Laboratory.

15. Medico legal aspects of mental illness.


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.


20. Rights and privileges of patients; Euthanasia.

21. Professional secrecy and privileged communication.

22. Professional negligence and malpractice.

23. Indemnity Insurance scheme.


25. Ethics as in classics. Types of physicians and methods of identification, Pranabhisara and Rogabhisara Physicians, qualities of physician, responsibilities of Physicians, Chathurvidha vaidya vriti, duties of physicians towards patients, Vaidya sadvritam, Apuja Vaidya who is accepting fees, relationship with females.
Part-A

1. Pharmaco-dynamics of different formulations used in Agadatantra.
2. Study of pharmacology and usage of antidotes as per the Ayurvedic and contemporary science.
3. Fundamentals of pharmaceutics according to Ayurvedic and contemporary point of view.
4. Chemical, analytical, laboratory examination of poisons and suspicious substance.

Part-B

5. Introduction of different instruments /equipments used in the examination of poisons.
6. Introduction to Clinical toxicology
7. Introduction to Experimental toxicology
8. Introduction to Toxico-genomics
9. 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. Medico-legal cases (20 cases)
4. Chemical Identification of various acids, alkalies, alcohols – Hydrochloric acid, Nitric acid, Sulphuric acid, Ascorbic acid, Sodium Hydroxide and Potassium Hydroxide
5. Detection of minerals Copper, Mercury, Lead, Arsenic and their compounds.
6. Physical and Chemical analysis of Dattura, Karaveera, Vatsanabha, Jayapala, Arka and Bhallataka with Microscopy, powder microscopy, TLC, solvent extraction, detection of Phenol, tannins etc. (10 studies)
7. Detection of human blood, hair, semen and other biological secretions of Forensic importance
8. As per MSR, at least one paper to be published/accepted in a peer reviewed journal.

Clinical Postings

- Regular clinical postings in the Agadatantra OPD / IPD
- Modern medical hospitals – 2 weeks

(For emergency management of poisoning)

9. Other Postings

- Postmortem postings - 2 weeks
- Court postings - 1 week
Visit to

1. Forensic Laboratory
2. Anti snake venom serum manufacturing Unit(Optional).

Pattern of practical examination

1. Post mortem / Medico-legal case record and clinical record - 10 Marks
2. Clinical case presentation. - 30 Marks
3. Spotting related to Visha, Upavisha and others poisonous drugs - 10 Marks
4. Thesis presentation - 25 Marks
5. Viva-voce - 25 Marks
Total 100 Marks

Reference Books:-

1. Useful Portion of Charak-Sushrut-Vagbhata - Acharya Yadavji
2. Dravyaguna Vigyan - Acharya Yadavji
3. Aushadhi gunadharma Shastra - Pt Visvanath Dwivedi
4. Kriyatmat Aushada parichaya Vigyan - Pt Visvanath Dwivedi
5. Ayurvedic Vyadhi Vigyan - Acharya Yadavji
6. Madhavanidan with Madhukosha commentary
7. Sharangadhara Samhita
8. Yogaratnakara
9. Aushadigunadharma Shastra -Pt Gangadhara Shastri Gune
10. Rasendracintamani
11. Rasaratna samuchhaya
12. Vishavigyan - Dr. Krishna Kumar
13. Related matter of Kautilya Artha Shastra
14. Harmekhlatantra
15. Anupana manjari
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 Jurispudence 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
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
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.

Rajakumari

59. Veterinary Toxicology - Dr. Satish K. Gargi
60. Guide to Drinking Water Quality (3 Volumes) - WHO Publication

***************
SUBJECT: SWASTHAVRITTA AND YOGA

Total Theory Marks: 400

Each paper of 100 marks

PAPER I  VAIYAKTIKA SWASTHAVRITTMAM SADVRITTAM CHA 100

(PERSONAL HYGIENE AND MORAL CONDUCT)

PART A

50 Marks

1. Concept of holistic health according to Ayurveda. Parameters of Health.
2. Spectrum of health, Iceberg phenomenon of diseases, dimensions of health.
5. Ratricharya – Bhavamishra and other classics.
6. Ritucharya – Classical description by Charaka, Sushruta, Vagbhata, BhelaSamhita and Bhavamishra.
7. Ritus prevalent in various Indian states.
8. Ritu, Day and night pattern in various countries.
10. Concept of Vegas, types and the importance of vegadharana in swasthyarakshan.
11. Sadvrittama – As perCharaka, Sushruta and Vagbhata.
12. Prajnaparadha – Causes, Effects and solution.
15. Vajeekarana for Swastha.
16. Mental Health and the role of Ayurveda in it.
17. Principles of Health Education.
18. Genetics in Ayurveda and Modern Science.

PART B

50 Marks

20. Details of Ahara, Nidra, Brahmacarya.
22. Aharavargas and comparison with todays’ food items.
23. Staple diet of various States of India.
24. Staple diet of various countries in correlation with their climate.
27. Rules of food intake according to Charaka, Sushruta and Vagbhata.
28. Pros and Cons of vegetarian and non vegetarian foods.
29. Viruddhahara – Classical and modern day examples.

PAPER II SAMAJIKA SWASTHAVRITTAM (COMMUNITY HEALTH) Marks

PART A

50 Marks

1. Concept of community health.
2. Concept of Prevention according to Ayurveda.
4. Web of causation of diseases, Multifactorial causation.
5. Natural History of diseases.
6. Medical Entomology– Arthropods of Medical Importance and their control measures.
7. Primary knowledge of parasites in relation to communicable diseases.
8. Old age problems in community. Role of Ayurveda in Geriatrics.
9. Care of the disabled. Palliative Health Care
10. Life Style disorders (Non Communicable diseases) in community and the role of Ayurveda in them.
11. Disinfection practices for the community – Modern and Ayurvedic.
12. Immunization programmes. Possible contribution of Ayurveda

PART B

50 Marks


15. Effect of Pollution and Global Warming on Health
16. Housing – W.H.O Standards. Design of Aaturalaya(hospital), Sutikagara, Kumaragara, Panchakarmagara and Mahanas (Kitchen)
19. School Health Services and possible contribution of Ayurveda.
23. Medical Sociology.

PAPER III SAMKRAMAKA ROGA PRATISHEDHAM EVAM SWASTHYAPRASHASANAM (EPIDEMIOLOGY AND HEALTH ADMINISTRATION)
Marks 100

PART A

50 Marks

1. Modern Concept of Epidemiology.
2. Disease Surveillance.
4. Epidemiology of different Communicable diseases in detail.
5. General investigations for Communicable diseases
6. Investigation and control of Epidemics
7. Sexually Transmitted Diseases and their control
8. Ayurvedic view of SamkramakaRogas.

PART B

50 Marks

12. Health advice to travellers.
13. Isolation ward in Hospital.
14. Bio medical waste management
16. AYUSH, NRHM, administration, functions and programmes. Role of Ayurved in Rural and Urban Health Mission
17. Central, State and District Health administration including Panchayat Raj system.
18. National Health Policy and Role of Ayurved in it.
19. National and International Health Agencies and their current activities.
20. Disaster management and Preparedness
21. Statistics related with Infectious diseases at International, National and State levels
22. Vital Statistics

PAPER IV YOGA

Marks 100

PART A

50 Marks

1. History and evolution of Yoga
2. Different Schools of Yoga
3. Concept of Rajayoga
4. Ashtanga yoga philosophy of Patanjali including the Yogasutras.
5. Hathayoga - according to Hathayogapradeepika, GherandaSamhita and Shivasahita.
6. Karmayoga – Philosophy according to Bhagavad Gita
7. Mantrayoga, Layayoga, Jnanayoga and Bhaktiyoga.

**PART B**

50 Marks

9. Concept of Sthula, Sukshma and Karana Sharirhas
10. Concept of Panchakoshas
11. Concept of Shad chakras and Kundalini
12. Shad Kriyas- Classification, procedure and their effects.
13. Interventions of yogic practices in the following diseases - Diabetes, Hypertension, Cardiovascular disorders, Obesity, Piles, Irritable Bowel Syndrome, Skin diseases viz.Eczema, Psoriasis, Stress Disorders, Eye disorders, Musculoskeletal disorders, Mental retardation, Depression, Neurosis, Sexual Dysfunction, Uterine Disorders, Cancer, Asthma and Upper respiratory diseases.
14. Yoga in Ayurveda – Concept of moksha, Tools for Moksha, Naishthikichikitsa, TatvaSmriti, Satyabudhhi, YoginamBalamAishwaram (CharakaSamhitaSharirasthana chapter 1 & 5)
15. Introduction to Nisargopachara, Basic Principles of Western School of Nature Cure and Indian School of Nature Cure – PanchabhattaUpasana and its therapeutic utility.
16. Different types of Massage and their therapeutic effects

**Scheme of Practicals- Duration 2 years**

**Total no. of practical Hours: 200**

Practical exam marks: 200

1. Health promotive and protective practices of Dinacharya procedures viz. Dantadhavana, Anjana, Nasya, Kavala, Gandusha, Dhumapana, Abhyanga, and Udvartana

2) **Practical Demonstration of Yoga**
   
a) **Aasanas (26)**
   1) Swastikasan
   2) Gomukhasan,
   3) Ushtrasan,
   4) Kukuttasana,
   5) Uttankurmasan,
   6) Dhanurasan,
   7) Matsyendrasan,
   8) Mayurasan,
   9) Bhadrasan,
   10) Sinhasan,
   11) Sarvangasan,
   12) Shirshasan,
   13) Pavanmuktasana,
   14) Bhujangasan,
   15) Supta Vajrasan,
   16) Katichakrasan,
17) Siddhasan,
18) Padmasan,
19) Trikonasana,
20) Paschimatanasan,
21) Vajrasan,
22) Shavasan,
23) Makarasan,
24) Uttanpadasana
25) Setubandhasana
26) Tadasana

& Suryanamaskara

Knowledge of different props for yogasanas (if possible)

b) Pranayama
1) Nadishudhhi - Anulom, Vilom Pranayam,
2) Suryabhedini,
3) Ujjayi,
4) Sheetali,
5) Sitkari
6) Bhasrika,
7) Bhramari,

c) Mudra
1) Viparitakarani
2) Yoga Mudra
3) Maha Mudra
4) Brahma Mudra
5) Ashwini mudra

d) Bandha
1) Jalandhara, uddiyana, mulabandha

e) Meditational Practices

f) Shuddhikriya – JalaNeti, Sutra Neti, JalaDhauti, Kapalbhati, Tratak Basti, Nauli, vastradhauti (if possible), shankhapralakhana (if possible)
3) Practical Demonstration of Naturopathy procedures
a. Mruttika Patti
b. Pada and Hasta Snana
c. Bashpasnana (Steam bath)
d. Awagahana (Immersion bath)
e. Prishtasnana (Spinal bath)
f. Katisnana (Hip bath)
g. Alternate hot and cold bath
h. Observe Jacuzzi and whirlpool bath at available places.

4) Long case sheets for Pathya, Apathya, Aushadhi (if needed), and Yoga advice to

a) Non communicable diseases 20
   (Proforma attached as Annexure ‘A’/ ‘E’)
b) Communicable diseases 10
   (Proforma attached as Annexure ‘B’)
c) GarbhnParicharya05
   (Proforma attached as Annexure ‘C’)
d) Mal Nutrition treatment cases 05
   (Proforma attached as Annexure ‘D’)
e) Case studies of Immunization cases 10
   (Proforma attached as Annexure ‘F’)

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 the Supervisor 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 Disinfection- Fumigation,
12) Govt. Psychiatric Hospital,
13) Isolation Hospital,
14) Anti Retroviral Treatment Centre,
15) 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-
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 Reviews
5. Submit minimum 1 paper in journal/magazine as per MSR.
6. Practical knowledge of AharaDravya & Adulteration of Food
7. Proper planning, beginning, completion of Dissertation work under the supervisor
9. Weekly minimum 5 hours Library attendance

Format of Practical / Oral Examination

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Heading of Practicals</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Daily work book-Log book</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Case Record Sheets</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>One Long Case (Pathya-Apathya advice)</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Two Short Cases(10X2) (Yoga and naturopathy advice each)</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Spots on Instrument/Equipment/ Medicine/Solve a Problem-</td>
<td></td>
</tr>
</tbody>
</table>
(10 Spots x2)20
6  Dissertation 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
2) SwasthavrittaSamuchaya –VaidyaPt.RajesvarDuttaShastri
3) SwasthyaVignyana -Dr.B.G.Ghanekarshastri
4) Swasthavritta - Dr.Shivkumar Gaud
5) SwasthvrittamVigyan - Dr.Ramharsha Singh.
6) SwasthavrittaVigyan - Dr.BramhanandTripathi
7) SwasthaVigyan - Dr.MukundswaroopVerma
8) AyurvediyaHitopdesh - Vd.RanjitRai Desai
9) AyurvediyaSwasthvrittam - Vd.Jalukar
10)Swasthavritta - Vd.Sakad
11)PatanjalYogadarshan,
12)HathayogPradipika – SwatmaramYogendra (Kaivalyadhama)
13) GherandSamhita
14) Shiva samhita – Kaivalyadhama
15)Yoga and Ayurveda - Dr.Rajkumar Jain
16) PatanjalYogasutra- Karambelkar,
17) Patanjalyogadrashanarthatbhаратiyamanasshastra- Kolhatkar
18) YogikYogPadhati - BharatiyaprukritikChikitsaPadhat
19)YogikChikitsa - ShriKedarnath Gupta
20)SachitraYogasanDarshika - Dr.IndramohanJha
21)Yogadeepika - Shri. B.K.S. Iyengar
22) Positive Health - Dr. L.P. Gupta
23) Yoga and Yogikchikitsa - Ramharsha Singh
24) The Foundation of Contemporary Yoga - R.H. Singh
25) YogasidhantaevumSadhna - H.S. Datar
26) Light on Yoga - Shri. B.K.S. Iyengar
27) Light on Pranayama - Shri. B.K.S. Iyengar
28) Light on Patanjalayogasutra - Shri. B.K.S. Iyengar
29) Biogenic Secretes of Food In Ayurveda - Dr. L.P. Gupta
30) Preventive and Social medicine - J.K. Park
34) Community Medicine - Baride and Kulkarni.
35) Preventive and Social Medicine – Mahajan
36) Preventive and Social Medicine – B.N. Ghosh
37) Preventive and Social Medicine – Gupta
38) JanasankhyashikhasidhantaevamUpadeysa - S.C. Seel
39) Health and Familywelfare - T.L. Devraj
40) Text book of Swasthavritta - Dr. Ranade, Dr. Bobade, Dr. Deshpande
41) Bio-Statistics - B.K. Mahajan
42) Reddy’s comprehensive Guide to Swasthavritta- Dr. P. Sudhakar Reddy
43) Swasthavruttavidnyan - Dr. Mangala Gauri
44) Swasthavrittavigyan – Vd. Patrikar Vijay
45) Swasthavritta – Vd. Yashwant Patil and Vd. Vhawal
46) Food and nutrition – Swaminathan
47) Yoga and Nisargopachar- Vd. Prama Joshi
48) Yoga a Gem for Women (English and Hindi) - Geeta S Iyengar
49) Asana Pranayam Mudra Bandha- Swami Satyananda Saraswati
50) The Science of Yoga- Dhirendra Brahmachari
51) PrakrutikChikitsaVigyan – Verma
52) PrakritikaChikitsa - Kedarnath Gupta
53) PrakrutikChikitsaVidhi - Sharan Prasad
Annexure ‘A’

PROFORMA

(Non - Communicable Disease case)

A] General Information :

1. Name of the Patient:____________________________________________________


5. Date of Admission:_____________________________________________________

6. Address:________________________________________________________________

7. Occupation: _____________________ 8. Education: _________________________


10. Socio economic class (Modified______________) 

B] Present illness:

Chief complaints (chronological order):______________________________

C] History of past illness:

1. Similar complaints in past:__________________________________________

2. Any other significant history:_________________________________________

D] History of illness in Family:

1. Type: _____________________ 2. Composition: ___________________________

3. Similar illness in family: Yes /No If yes, give details:_____________________

E] Life Style and personal history:

1. Occupation: Manual Work /Table Work/ Field Work/ Administration /Any other (Specify)
2. Muscular exertion (occupational / domestic etc.) Minimum / Moderate /Heavy

3. Exercise: Nil / Walking / Running / Jogging/ Cycling / Swimming / Weight Lifting/ Anyother specify

4. Mental Stress & Strain : Occupational/ domestic/ any other specify

5. Hobby , Recreation :

6. Diet :
   a. Veg / Non Veg / Mixed
   b. Total calorie intake ________________calorie /day
      adequate / inadequate/ excess
   c. Fat :
      adequate / inadequate/ excess
      Vegetable / Animal fats
      Predominantly saturated / unsaturated
   d. Spice & Hot foods (Specify)
   e. Regularity in taking meals
   f. Type of diet : balanced / Non balanced (Give reason)

7. Sleep and rest : adequate / inadequate

8. Habits & addictions
   Smoking : Yes / No /Past Smoker
   If yes : Type /duration /quantity/ frequency. ______________________
   Alcohol : Yes / No /Past Alcoholic
   If yes : Type /duration /quantity/ frequency. ______________________
   Any Other : Specify, give details.

F) General Examinations : ____________________________
G] Systemic Examination : ___________________________________________

RS/CVS/CNS/PA : _______________________________________________

H] Diagnosis :

i. Provisional : _______________________________________________

ii. Differential : _______________________________________________

I] Investigations :

Investigation done : _____________________________________________

Any further investigations required : _____________________________

J] Final Diagnosis : _____________________________________________

K] Management : _______________________________________________

Drug therapy (give details) : _____________________________________

Diet modification : ______________________________________________

Health Education / Life Style modification : _________________________

Follow up : ____________________________________________________

L] Prevention & Control Measures

Primary Prevention : _____________________________________________

Secondary Prevention : ___________________________________________

Tertiary Prevention : _____________________________________________

Sign.of Student:

Sign.of Supervisor:

Date :- ________________________________
Annexure 'B'

PROFORMA

(Communicable Disease case)

A] General Information :

1. Name of the Patient :

2. Age : ____________________________yrs. 3. Sex : Male / Female

4. Date of Examination :

5.Address : : _______________________________________________

6. Locality : Urban – Slum / Non-Slum / Rural/Other (Specify)

7 Duration of Stay in the Locality ;

________________________ (years/months)

8. Hospital Registration No. : _________________ 9. Date of Admission :

10. Religion / Caste : ________________ 11. Education :

12. Occupation : ___________________ 13. Type of Family :

14. Total No. of Family Members : ______ 15. Total Family income:

16. Per Capita income per month :

___________________________Rs.

17. Socio-economic Status (As per _________classification) :

B) Chief Complaints (In Chronological order)
C] H/O Present illness : _________________________________________

D] H/O Past illness : __________________________________________

i. Similar complaints in past :
__________________________________________

ii. Any other significant history :
__________________________________________

E] History of illness in the family :
__________________________________________

F] Personal History

a. Dietary : __________________________________________

b. Immunization : __________________________________________

c. Habits : __________________________________________

G] Environmental history (Pertinent to the route of transmission)


viii] insect nuisance ix] Courtyard of house etc.

H] Epidemiological information (Backward tracing of index case.)

i. Any similar case in the family / neighborhood / School / Place of recreation / any other
Specify.

________________________________________________________________

ii. History of attending to similar case – if yes, when?
_____________________________

iii. History of visiting any unaccustomed place if yes, when?
________________________

iv. Total contacts ____________________v. High risk contacts.
________________________

I] Provisional Diagnosis (with justification in brief)
________________________

J] Differential Diagnosis:
________________________

1. __________________________
________________________

2. __________________________
________________________

3. __________________________
________________________

4. __________________________
________________________

5. __________________________
________________________

K] Investigation Done:
________________________

a. If yes, reports & your comments.
________________________

b. Other investigations required (with reason) if any.
________________________

L] Final Diagnosis:
________________________
M] Management of Patients:

1. Chemotherapy / Other drugs (Specify with name, dose schedule, route of administration, duration of treatments and precautions if any)

2. Diet modification

3. Personal Hygiene

4. Health Education

5. Any other (Specify)

6. Follow up:

N] Preventive & Control Measures at

a. Family Level

i. Chemoprophylaxis

ii. Immunization (Active / Passive)

iii. Personal Hygiene (specify)

iv. Chemical disinfections of (Specify)

v. Follow up

vi. Care of Contacts

b. Community Level
i. General Intervention measures
_______________________________________

ii. Specific measures against the illness
______________________________________

iii. Any other (Specify)
_________________________________________________

c. National Level
__________________________________________________________

National Health Programme for control / Eradication of the disease or related health programmes.

Sign.of Student:

Sign.of Supervisor:

Date :-

Annexure ‘C’

PROFORMA

(ANTE-natal case)

A] General Information :

1) Date of Examination :
____________________________________________________

2) Name :
____________________________________________________

3) Age : ________________ yrs.

4) ANC Registered : Yes/No If yes, place/date/month of registration __________________

5) Education of pt __________________ Occupation of pt __________________

6) Education of Husband ____________ Occupation of Husband ____________

7) No of family members ____________ Total family income ____________Rs/month
8) Socio-economic class ____________ (as per Modified ______________ classification)

9) Address :
_____________________________________________________________

B] Complaints – if any: __________________________________

C] Menstrual History: Menarche, cycles-day/month, regularity, flow etc.

L. M. P _______________________ E.D.D. _________________________

D] Obstetric History:

Gestational

Age (wks)

Type of

Delivery

Hosp./

Home

Conducted By

Baby alive/stillborn/abortion

Live birth/interval

Use of contraceptives (specify)

1.

2.

E] Family History:

___________________________________________________

F] Past History: Hypertension/ Diabetes/ S.T.D./T.B./Leprosy etc.

G] Personal History: Bowel/Bladder/Sleep/Appetite/Habits/Addictions etc.

Immunization status: Tetanus toxoid / Any other (specify)

a) For current pregnancy

____________________________________________
b) For previous pregnancy

____________________________________

Nutritional status (based on Calorie Intake, other nutrients, anthropometry etc.)

H] General Examination :
• Height ____________Cms./ Wt. _____________kgs, / TPR / B.P__________mm of Hg

• Pallor/Icterus/ Cyanosis/Oedema/ Lyphadenopathy. any other ( specify)

• Cleanliness of : Skin /Nails/Hair/Clothes/Eyes/Ears/Nose/Oral Cavity / breasts & Nipples

etc.

I] P/A Examination:
• Ht. of uterus/presentation and lie of foetus /Head-floating or engaged/foetal movements/FHS/ Any other (specify)

____________________________________

J] Systemic Examination:

RS/CVS/CNS __________________________________________________________

- Hb % Blood grouping & cross matching/VDRL/HIV/Blood Sugar
- Any other ( specify) ____________________________________________

L] Clinical impression :
• Whether high risk ? If yes, mention the risk factors.__________________________

M] Advice to the Patient and Management :
• Immunization/Diet/Supplementary nutrition/personal hygiene/preparation for motherhood/

drugs given (if any) / Warning signals/fallow up visits

• Whether the patient/ family members are availing services from Anganwadi / Other
Community Health Centre/Private Health Agency? If yes – Give details.

- Give details of referral in high risk cases.

[ ] Follow up:

Findings & Remarks (including advice)

During subsequent visits (mention the date of visits)

O) Comments:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

Sign of Student:
Sign of Supervisor:

Date:-

Annexure ‘D’

PROFORMA

MALNUTRITION CASE (UNDER FIVE YEARS AGE)

A] General Information:

i. Date of Examination:

_________________________________________________________________

ii. Name of the informer & his/her relationship with the child (case)

1. Name of the child:

_________________________________________________________________

2. Date of birth: ____________ 3. Age: ____________ 4. Sex: Male/Female

5. Caste/Religion:

_________________________________________________________________

6. Address: ___________________________________________________________________
7. Whether the child is attending Balwadi/Nursery etc.: ____________________________

8. Father ___________________________________________ Mother ___________________________________________

I. Name: _______________________________________________

II. Age: _______________________________________________

III. Education: __________________________________________

IV. Occupation: __________________________________________

V. Income: _______________________________________________

9. I Total number of family members and family composition ___________________________

II. Total family income __________________________ Rupees per month

III. Per Capita Income __________________________ Rupees per month

IV. Socio economic Status ________________ as per ___________ classification

B] Complaints (if any): _________________________________

C] History of Present illness: ______________________________

D] History of Past illness (if any): ___________________________

E] Family history: ________________________________

F] Birth history of the case: ________________________________

i. Place of delivery: Home/ Hospital /Other (Specify) _________________________

ii. Delivery conducted by : Untrained or trained Dai / Nurse / Doctor etc. __________

iii. Type of delivery: FTND/ Pre mature/SFD/Assisted delivery etc. __________

iv. Congenital anomaly: if any give details. _________________________
G] Anthropometry

i. Weight : _____________________Kgs. ii. Height ______________________Cms.

iii. Chest Circumference ________ Cms. Iv. Head Circumference _______________Cms

iv. Mid arm Circumference ________Cms.

H] Immunization History

i. B.C.G./ OPV/ DPT/Measles/Any other give details ______________________________________

ii. Immunization card available : Yes / No.

I] Dietary History

i. Breast feeding : Yes/ No

a. If yes : Only breast feed or weaning started

b. If weaned : Age at weaning, type of weaning foods etc.

c. If not breast feed : At what age breast feeding stopped? (give reason if any)

ii. a. Total calorie intake __________________________Calorie /day

b. Total Protein intake __________________________gram/day

 iii. Calorie / Protein deficient if any : Yes/No.

If yes mention percent of deficient ______________________________________

iv. Any other nutritional deficiency (Specify) ______________________________________

J] General Examination :

1) Built, nourishment & general appearance

2) TPR 3) Pallor 4) Icterus 5) Cyanosis 6) Lymphadenopathy

7) Oedema 8) Dehydration 9) Eyes 10) Ears

11) Face, Nose, Lips & Tongue 12) Teeth gums oral cavity 13) Skin, nails hair

14) Rachitic changes. 15) Any other (specify)
K] Systemic Examination :RS/CVS/PA/CNS/Gonads

L] Milestones of growth & development

Physical / Psychological / Motor / intellectual / behavioral / Social

Milestones : Normal / Augmented / Delayed

M] Provisional diagnosis / Differential Diagnosis :

______________________________________________

N] Investigations :

_________________________________________________________

O] Diagnosis :

_________________________________________________________

P] Management, Advise and Comments :

_________________________________________________________

Sign.of Student:
Sign. of Supervisor:

Date : -

Annexure ‘E’

PROFORMA

PathyaApathya, RutuShodhan, Yoga Advice to Patients of Attached Hospital.

A) General Information :

1) Sr. No. : ________________________________

2) Name of the Patient : ________________________________

3) Address : ________________________________

4) OPD No. : ________________ IPD NO. ________________

5) Diagnosis : ________________________________

6) Date of Advice : ________________________________

B) Advice given

a) Pathya - Apathya
PROFORMA

CASE STUDIES – IMMUNIZATION CASE RECORD

1) Name of Child or Mother: ________________________________

2) Address: ____________________________________________

3) Age: ____________ Sex: ________________

4) Date of Birth: _________________________________________

5) Name of Vaccine given: __________________________________

6) Type of Vaccine: _______________________________________

7) Dose: _______________________________________________

8) Route of Administration: _________________________________

9) Site of Administration: _________________________________

Annexure ‘F’
10) Instructions to Mother: ________________________________

Sign. of Student:
Sign. of Supervisor:

Date :-
8. ROGA NIDANA

Theory- 400 Marks (100 Each)

Practical and viva-Voce - 100 Marks.

PAPER- I FUNDAMENTAL PRINCIPLES OF ROGANIDANA

100 Marks

PARTA 50 Marks

1. Paribhasa( Definitions): comprehensive definitions of technical terminologies such as:
Roga, Nidana, Vikriti, Vijnana, Purvarupa, Rupa, Upashaya, Samprapti, Arishtha,
Upadrava, Dosha, Dushya, Vyadhi, Vyadhi avastha, Ama, Kleda, Srotas, Srotodushti,
SrotovaiyunyaA, varana, Prajnyaparadhae tc.

2. Concept and Pathological implications of Tridosha. 63 permutations and combination of
Tridosha. Leena and Stambhita Dosha. Cause and importance of Tridosha in Manifestation of
Samprapti.

3. Concept of Rakta as a Chaturtha Dosha. Importance of Rakta in the manifestation of
diseases.


5. Different types of Dosha Gati.

6. Causative factors and practical utility of movement of Doshas from Kostha to Shakha
and Shakha to Koshtha. Concept of Ashayapakarsha.

7. Trayo roga marga their diseases and clinical importance of Rogamarga.

8. Concept and classification of Avarana, Its role in pathogenesis, mode of diagnosis of
Avarana and its importance in chikitsa sutra,

9. Applied aspect of DhatuP shanaKrama and Dhatu Samvahana Concept of Marga and
Sthanastha Dhatus.

10. Concept and applied aspects of Doshapaka and Dhatupaka.

11. Fundamental and applied aspect of Dhatu, U padhatua nd Mala. Disease developed due
to their vitiation (pradoshajanyvai kara).
12. Concept and applied aspects of Srotas, their importance in health and diseased conditions concept and applied aspects of Srotodushti and Khavaigunya. Understanding the various srotas which are not included in classical srotas but enumerated while describing the samprapti of diseases.

13. Description of Dosha-Dushya-Sammurchhana, Concept of Prakriti SamaSamaveta and Vikriti Vishama Samaveta Sammurchhana Importance of Dosha-Dushya-Sammurchhana in Diagnosis and treatment

14. Concept of Vikara vighata bhavabhava prativisesha,

PART B 50 Marks

1. Concept of Agni and its role in manifestation of health and disease,


3. Sama, Nirama stages of Dosha, Dhatu and Mala.

4. Understanding samprapti of Santarpanottha and Apatarpanotth Vayadhi.

5. Detailed classification of diseases as described in Ayurveda, Knowledge of ICDD SM and other systems of classification of diseases.

6. Detailed understanding of NidanPanchaka in their classification and clinical importance

7. Nidanakaratva of contemporary food items and lifestyle.

8. Relation between Hetu& Lakshana and Samprap & Lakshana.


10. Importance of Upadvara, Arishta and Sadhyasadhyata and Udarka.


PAPER – II ROGA VIJNANA Marks=100

PART A= 50 Marks

• Comprehensive knowledge of diseases mentioned in Samhitas
• Knowledge of classical Samprapti of following diseases with interpretation of Nidana Panchaka including Upadava, Arishta and Sadhyasadhyata and Chikitsa Sutra. Knowledge of commonly occurring diseases of the respective systems mentioned in contemporary medicine.


3. Diseases of Udakavaha Srotas- Trishna, Daha and knowledge of water and electrolyte imbalance disorders


6. Diseases of Mansavaha srotas- Introduction to Granthi, Arbuda, Galaganda and Arsha. All types neoplasia.

Part B=50 Marks

1. Diseases of Medovaha srotas- Sthoulya - Karshya – Prameha and common clinical entities like Obesity and Diabetes Mellitus.


4. Diseases of Sukravaha srotas- Klaibya and Vandhyatv a and understanding of male and female Infertility, Impotence.


7. Diseases of Manovaha Srotas - Vishada, Udvega, Bhaya, Bhrama, Anidra, Mada, Murchha, Sanyasa, Apasmar, Unmada, Atatwabinivesha and common clinical entities like Depression, Anxiety neurosis, Phobia, Personality disorders.

8. Indriya Pradoshaja Vikara.


10. Concept and tools for the study of Anukta Vyadhi- Unexplained and newly emerging diseases such as AIDS,Dengue, Chickungunia, H1N1, Leptospirosis, Metabolic syndrome etc.

11. Understanding the concept of karmaja vyadhi
PAPER – III  PARIKSHA VIJNANA [CLINICAL EXAMINATION AND LABORATORY DIAGNOSTICS]
Marks=100

Part A= 50 Marks
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.
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.
7. Charakokta dashavidha and Sushrutokta Dwadashavidha pariksha along with the use of modern supportive tools for understanding of rogibala and roga bala concept to derive chikitsa sutra

Part B= 50 Marks
1. Ayurvedic interpretation of all relevant findings of modern clinical examinations.
2. Understanding of diagnostic procedures in medical emergencies.
3. Concept of Good clinical practice in Ayurveda and modern medicine.
4. Knowledge of standard clinical laboratory set up.
5. Knowledge of Ancillary common laboratory investigations for diagnosis of diseases, their methods, normal and abnormal values, factors influencing values & clinical significance as mentioned in practical syllabus.
6. Importance of Bio markers and their utility in clinical researches
7. Update knowledge of emerging diagnostic tools and technologies.

PAPER - IV  VIKRITI VIJNANA AND JIVANU VIJNANA [GENERAL PATHOLOGY, PARASITOLOGY AND MICROBIOLOGY]
Marks=100

Part A= 50 Marks
1. Introduction to general pathology.
2. Cell injury and cellular adaptations
3. Immunopathology including amyloidosis. The concept of Ojas vis-à-vis Bala, Anurjata, Asatmya, Hypersensitivity.
4. Concept of Shotha ; Inflammation, oedema and healing
5. Derangement of Homeostasis and Hemodynamic disorders
7. Concept of genetic diseases and Bija dosha
Part B= 50 Marks

1. Upasargajanya Vyadhi (Communicable diseases)- Romantika –Measles, Chickenpox Upadamsha – Phirang and introduction to Syphilis, AIDS, Leprosy, Tuberculosis
2. Detail study of Krimi Vigyanam with classification and diseases caused.
3. Concept of Snayuka, Shleepada and introduction to Filariasis and classification, mode of infection, life cycle and diseases caused by common parasites.
4. Concept and applied aspects of Janapadodhvansa and Environmental diseases
5. Knowledge of common Bacteria, Virus, 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 / Hospital O.P.D.
2. Regular posting in Roga nidana / Hospital 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.
   b. Physical Examination, Chemical Examination, and Microscopic Examination
   c. Dipstic 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
    a. Ayurvendiya anusara Retas pariksha.
    b. 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.
14. Physical, chemical, microscopic, biochemical and bacteriological tests for various kinds of body aspirates.
15. Knowledge of histopathological techniques.

BEDSIDE PRACTICAL /CLINICAL METHODS

1. Practical knowledge of ECG, USG and Imaging techniques and their clinical interpretation
2. Understanding of various Ayurvedic diagnostic softwares/programmes available like Ayu soft, Rudra, Ayut Nidana etc.
9. PRASUTI TANTRA- STREE ROGA

PAPER – I Garbhagarbhini Vigyana 100 Marks


5. Bija – Bijabhaga – Bijabhagavayava janya garbhanga vikrithi. Genetics, Ayurgenomics Birth defects and other teratologic abnormalities


8. Garhasankhya nirnay, Bahu apatyata, Multiple pregnancy.


   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.

   Infections in pregnancy:

   Toxoplasmosis, Viral infections, Tuberculosis, UTI, Rubella, CMV, Hepatitis-B, Herpes, Syphilis and other Sexually Transmitted Infections including HIV etc., Prevention of mother to child transmission of HIV infection (PMTCT).

11. Jataharini related to garbhini avastha
14. **Panchakarma and Yoga in Prasuti tantra**

14. Vishesh adhyayana of –

  - **Ashtanga Hriday Sharira** - Adhyaya 1st – Garbhavkranti
  - **Sushruta Samhita Sharira** - Adhyaya 3rd – Garbhavkranti
  - **Charak Samhita Sharira** - Adhyaya 8th Jatisutriya

*High risk pregnancy, bad obstetrical history, teenage and elderly pregnancy, scar dehiscence.*

**PAPER – II Prasava – Vigyana 100 Marks**

**Prakrit Prasava**

1. Prasava paribhasha, Prasava kaal, Prasava prarambha karana, Prasava kalina garbha sthiti, **Aavi**, 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 prasava, Mudhagarbha and Apara sanga.
   a. Prolonged labour
   b. Cephalo pelvic disproportions
   c. Malpresentations
   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 **eclampsia**, Eclampsia, Diabetes, cardiac diseases, **Asthma**, Epilepsy, Ante partum haemorrhage, **Preterm & Premature** rupture of membranes, Preterm, Post term, Multiple pregnancy, IUGR & HIV -AIDS
**5. Foetal distress**

**Jatamatra/ Navajata shishu paricharya**

1. Examination and management of neonate.
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.
4. Suppression of lactation
5. Normal and abnormal puerperium.

Obstetric shock and management

1. Raktadhana: blood transfusion and replacement of blood constituents.

Drugs used in obstetric practice, indications/contra indications, doses and side effects. (Modern and Ayurvedic)

Recent studies and advancement in the field of Prasuti Tantra.

Vishesha 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

PAPER – III Stree Roga vigyana 100 Marks

1. Disorders of menstruation and Female reproductive system.
   A) Congenital malformations of female genital tract
   B) Artava dushti, Artava vriddi, Artava kshaya, Asrigdara, Anartava, and Kashtartava.
   C) Genital infections including sexually transmitted infections.
   D) Abnormal vaginal discharges. Sweta pradara
   E) Arsha, Yonikanda, 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) Somaroga.
   I) Urinary disorders, VVF, RVF etc.

2. Detailed study of Yoni Vyapada mentioned by different Acharyas with their commentaries and all possible correlations with modern gynecological diseases.

3. Bandhyatva
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.

Fibrodenoma, Fibroadenosis breast, ANDI, Carcinoma breast.
   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) National Health programme to improve maternal and Child health, Social Obstetrics and Vital Statistics (maternal and perinatal mortality and morbidity).

6. Sthanik chikitsa
   Detailed study of Pichu, Varti, Dhupan, Dhavana, Parisheka, lepa, Kalkadharana, Uttarabasti, Agnikarma and Kshara Karma.

   - Geriatric health care

8. Study of modern diagnostic techniques and Investigations.

9. Important drugs used in Streeroga (Modern & Ayurvedic)

10. Panchakarma & Yoga in streeroga

11. Recent studies and advancement in the field of Stree Roga.

12. 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 Tantra–Stree Roga-Shalya Karma 100 Marks

General principles of Gynecological and Obstetrical Surgeries. suturing, suture materials, sterilization, autoclaving etc, Analgesia and Anaesthesia in Obstetrical and Gynaecological operative procedures.
Operative Obstetrics

Decision making, techniques, diagnosis and management of surgical complications.

Dilatation and evacuation, Hysterotomy, Provision of safe abortion services – selection of cases, techniques and management of complications, septic abortion, criminal abortion, MTP Act.

Cervical encirclage.

Instrumental delivery (Forceps, vacuum extraction), Episiotomy, perineal tear repair, 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. cryosurgery

Polypectomy, Myomectomy, Cystectomy, Oophorectomy. Marsupilisation, punch biopsy, endometrial biopsy, IUI

Surgical sterilization procedures.

Hysterectomy.

Surgical procedures for genital prolapse.

Surgical management of benign genital neoplasm.

Laparoscopic surgeries in Gynaecology

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

**EMERGENCY** 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 vridhi.
3. Practical training to perform Obstetrical and Gynaecological Surgeries.
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 Roga and Prasuti Tantra.
7. Practical knowledge of Panchakarma and Sthanik Chikitsa used in Stree Roga and Prasuti Tantra.
8. Practical Knowledge of recent advances in Gynaecology and Obstetrics.

**Pattern of Practical Examination**

<table>
<thead>
<tr>
<th><strong>Total Marks: 200</strong></th>
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<tbody>
<tr>
<td>1. Practical Record Book</td>
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<tr>
<td>2. Bed side examination</td>
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<tr>
<td>Short Case</td>
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<tr>
<td>Long Case</td>
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<tr>
<td>3. Identification of the Instruments/x-ray/USG plate</td>
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<tr>
<td>4. Thesis Presentation</td>
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<tr>
<td>5. Viva Voce</td>
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</tbody>
</table>

**Reference Books**

1. 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
8. Text book of Obstetrics- Williams
13. Jeffcoat’s principles of Gynaecology
**10. KAUMARBHRITYA-BALA ROGA**

**PAPER – I**

**Bija, Garbha Vigyaniya (Human Genetics, Embryology)               Marks: 100**

**Part A**

1. Ayurvedic genetics with modern interpretations: Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavyaya Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya; Measures for obtaining good progeny.
2. Human genetics
   Basic concepts:
   1. Cell, cell division, nucleus, DNA, chromosomes, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening.

**Pathogenesis**

1. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism
2. Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities and syndromes
4. Chromosomal disorders
5. Chromosomal aberration (Klinefelter, Turner and Down’s syndrome)

**Part B.**

1. Garbha, Garbhawastha, 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.
   - Development from third month till birth.

5. Apara (Placenta) Apara Nirmana (Formation of placenta), Apara Karya (Functions of placenta); Apara Vikara (Placental abnormalities)

6. Nabhinadi (Umbilical Cord)
7. Formation and features of umbilical cord

8. Garbha Poshana (Nutrition) from conception to birth.

9. Yamala Garbha (twins)


12. Perinatal Care and Perinatal complications


14. Prenatal diagnosis

15. Samanya Janmajata Vikara (Common congenital anomalies of different systems): Causative Factors (Beeja, Atamakarma, Ashaya, Kala etc.) Sahaja Hridaya Vikara (Congenital Cardiac Disorders) Jalashirshaka (Hydrocephalus), Spina bifida, Meningocele, Meningomyelocele, Khandaoushtha (cleft lip), Khanda-Talu (cleft palate), Sanniruddha Guda (Anal stricture/imperforated anus), Pada-Vikriti (Talipes equanovarus and valgus), Tracheoesophageal Fistula (TOF), Pyloric Stenosis.

PAPER-II

Navajata Shishu Vigyana evam Poshana Marks: 100

PART-A

1. Navajata Shishu Paribhasha, Vargikarana.
2. Navajata Shishu Paricharya evam Prana-Pratyagamana.
5. Prasava Kalina Abhigataja Vyadhi (Birth injuries): Upashirshaka (Caput Succedanum, cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdural hemorrhage).
7. Kumaragara: Navajata Shishu Kaksha Prabandhana (Nursery management; Nursery plan, staff pattern, medical records.), Neonatal Intensive Care Unit, Visankramanikarana (sterlization), Knowledge of equipments used in nursery.

PART-B

9. Navjata Kshudra Vikara (Minor neonatal ailments): Chhardi (Vomiting), Vibandha (constipation), Udara shula (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).

10. Sadyojatasya Atayika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.

11. Procedures: Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Yamana (Stomach wash), Ashchyotana, Neonatal resuscitation, Collection of Blood sample, Intravenous canalization, 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. Navjata Shishu Ahara (Neonatal feeding):
      Specific feeding methodology as per Ayurveda and recent advances. Fluid, milk and calory requirement for the newborn, feeding technique for the preterm baby.
      Stanyotpatti and Prasruti (physiology of Lactation), Stanya Sanghatana (Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampat evam Mahatva (Properties & importance of breast milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate/ absence of breast milk), Stanya parikshana (Examination of breast milk), Stanyabhave Pathya Vyavastha (Alternative feeding in absence of breast milk), Total Parenteral Nutrition.
      Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk).
      Dhatri (Wet nurse): Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking.
      Lehana (Elucturies).

   B. Bala-Poshana (Child Nutrition):
      Daily requirements of nutrients for infant and children
      Common food sources
      Satmya and Asatmya Ahara (Compatible and incompatible diet)
      Pathya evam Apathya Ahara (Congenial and non-congenial diet)
      Stanyapanayana (Weaning)

PAPER-III

Balroga (Pediatric Disorders)   Marks: 100

PART-A

1. Disorders of Pranvaha Srotas (Respiratory disorders)- Kasa (Cough), Shwasa (Respiratory distress Syndrome), Tamaka Shwasa (Childhood Asthma), Bronchiolitis, Shvasanaka Jwara (Pneumonia- bacterial, viral etc) Rajyakshma (Tuberculosis), Vaksha-Puyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax).

2. Disorders of Annavaha Srotas (Gastrointestinal disorders): Jwara (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea),
Pravahika, Vibandha (Constipation, Udarshula (Pain in abdomen), Guda bhramsha (Rectal prolapse).

3. Disorders of Rasa evam Raktavaha Srotas (Hematological and circulatory disorders): Pandu (Anemia) and Raktapitta (Bleeding disorders), Vishishta Hridroga (Specific cardiac diseases), Hypertension, Leukemia.

4. Disorders of Mansavaha Srotas: Myopathies

5. Disorders of Mutravaha srotas (disorders of Urinary System): Vrikkshotha (Glomerulonephritis and nephrotic syndrome), Mutrakrichra (Dysuria), Mutraghata (Anuria).

6. Disorders of Vatavaha Sansthana (disorders of Nervous system) : Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis).

7. Disorders of Manovaha Srotas : Breath holding spell, Shayya mutra (Bed wetting), Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation, Temper tantrum, Pica.

8. Pediatric disabilities and Rehabilitation: Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekanaghata (Monoplegia), Adharanga Vayu (diplegia), Amavata (Juvenile Rheumatoid arthritis).

9. Antahsravi evam Chayapachayajanya Vyadhi (Endocrine and Metabolic disorders).


11. Krimi evam Aupsargika Vyadhi (Infestations and Infections): Krimi (Giardiasis and intestinal helminthiasis, Amoebiasis) Common bacterial, viral infections with special reference to vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptonaka (Tetanus including neonatal tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella, Masurika (Chickenpox), Antrika Jawara (Typhoid and Paratyphoid), Viral Hepatitis, Vishama Jwara (Malaria), Kala-azar, Dengue fever, HIV (AIDS), Poliomyelitis, Chickengunia.

12. Tvak Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta.


14. Sanghata- Bala Pravrita Vyadhi (damstra): Dog bite, Snake bite, Scorpion bite etc


17. Life Style disorders

PAPER-IV

Kaumarbhriyta 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 Samhita in the field of Kaumarbhriyta including relevant parts from Brihatrai.
3. Update knowledge of clinical pediatrics including recent researches in Kaumarbhritya.

Practical/ Clinical Exposure (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, venepuncture, cord blood sampling, stomach wash, suction, resuscitation, etc.
3. Practical skill of Pediatric Panchakarma procedures
4. Child Health Check up
5. IQ Assessment in Children
6. Exposure to National Health Programmes related to Children, including Immunization Program.
7. Patient case Records (50 Records)
8. Practical knowledge of modern diagnostic tools (invasive & non invasive) and techniques used in pediatrics.
10. Participation in UG teaching/training.
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.

Pattern of practical examination:

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
3. Child Health Care in Ayurveda: 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, Harita Samhita, Ashtang Sangrah, Ashtang Hridayam etc.
11. KAYACHIKITSA

PAPER- I Fundamentals of Kayachikitsa
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, Shadang pariksha (Systemic examination) as per ayurveda and recent advances.
2. Interpretation of investigations: ECG, Echo cardiology, TMT, Spirometry, X-ray, USG, CT-Scan, MRI, EEG, EMG, Etc in different pathological conditions.
4. National Health Programmes/NRHM and prospective role of Ayurveda services and therapeutics in them with special reference to Kayachikitsa.
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, nebulizations, lumber puncture, etc.

PAPER – II Samanya Roga Chikitsa
marks

Nidana/ Chikitsa including Nidana Parivarjana, Pathya, Apathaya, Chikitsa siddhanta, Shamana, Shodhana, Panchakarma, Rasayana and Atyayika Chikitsa (Anupana, Drug/Non-drug) as per Ayurvedic and conventional therapeutics of following Srotogata vyadhi including Kshaya, Vriddhi srotodushti janya vyadis such as:

Cardio-respiratory system: Bronchitis, Bronchiectasis, Bronchial asthma, COPD, Cor-pulmonale, Pneumonias, Occupational lung diseases, Pulmonary tuberculosis,
Congenital Heart disorders, IHD, RHD- Valvular diseases, Cardiac failures, Cardiomyopathy, Pericarditis, Endocarditis, Hypertension.

   Gastrointestinal disorders: GERD, APD, Malabsorption Syndrome.

3. Udayahasrotas: Trishna, Shotha, Udararoga, water and electrolyte imbalance
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 such as Psoriasis, Eczemas.
8. Shukravahasaratras: Such as Klavyya, Dwajabhanga, Impotence.
9. Mutravahasrotas: Mutrakricchra, Mutraghata, Arshamari, Urinary disorders: UTI, Lithiathisis, ARF, CRF, Uraemia, BPH.
8. Autoimmune diseases: Myopathies, Rheumatic fever, SLE.
9. Common poisonings and their management like Insecticide/Pesticide poisoning, Snake poisoning, Vegetable and chemical poisoning, Substance abuse.
11. Ashtonindhataya Prusha and their clinical relevance.

PAPER – IV Advances in Kayachikitsa

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.
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.
10. Scope and methods of independent and collaborative research in Kayachikitsa.
11. Disaster management strategies.
12. Application of advances in Rasayana and Vajikarana therapies
14. Physical medication and rehabilitation.

PRACTICALS -100 Marks

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. Publication of One Scientific paper based on Thesis Research preferably in indexed journal is essential. Should have taken minimum 20 Theory and Practical classes of BAMS in concerned subject.

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  20 Marks.

**Academic Competence evaluation**- 40 marks based on:

1. Viva  30 Marks.
2. Teaching and communication skills/Thesis presentation in PPT /:  10 Marks.

**Reference Books**

1. Relevant portions of Brihattrayi 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
8. The Holistic Principles of Ayurvedic Medicine - Prof. R.H.Singh.
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.Sadasiv 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.
25. Relevant texts of concerned subjects.

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### 12. MANOVIGYAN AVUM MANASAROGA

**PAPER-I** Manovyapara Evam Manovigyanam  

100 marks

1. Prachya - arvachya matanusara Mano vigyanasya Bhutavidyayah, Amanusha tatha Grahadinam parichaya, setihasa.
2. Prachya arvachya matanusara Manasah Nirupanam-Concept of Manas from Ayurved and modern perspective.
3. Vвидhа darshhananusara Manasah varnam:- concept of mind in various philosophies.
4. Manasah Svarupam – Structure of mind, Manasah Sthanam- Location of mind, Manovishayayah- Objects of mind, Manogunah (Anutva and Ekatva) –Attributes of
mind- Minuteness and oneness, Manasah Udbhayatmakatvam-Duality of Manas, Manasah Dravyatvam Karanatvam cha- mind as a substance and tool,Manasah Karanadrayatvam-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 SharirDoshan?- How does manasika Doshas aggravate sharirika Doshas?

8. Indriya panchapanchakam- five factors in relation to the mental faculties.

9. Gyanendriyanam vishayah- the objects of sense faculties.

10. Gyanotpatti prakriyayam Manasopradhanyak- Importance of Manas in cognitive process.

11. Indriyarthagrahananantaram Manasah vyapara avum gyanotpattou manaso dayitvam - Action of Manas in cognition after reception by respective Indriya.


14. Vayuh indriyanaudyojakah tatha Manasah preranam -Vayu as stimulator of indriya and initiator of manas.

15. Vakpravrittou Manasah yogadanam - Role of Manas in production of speech.


17. Chikitsya purushah- treatable person (living being).


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 varga-role 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 Puranjanma, Purvajanmakrita karma, Karmaphala.

24. Manovaha Srotasam Parichaya- Introduction of Manovaha srotas(channels of mind)

25. Manovaha, Samgyavaha, Buddhivaha, Chetanavaha, Chetovaha, Vatavaha, Raktavaha adi upayukta Srotasam Manasroge varnamam- Description of Manovaha, Sangyavaha, Buddhivaha, Chetanavaha, Vatavaha, Raktavaha srotas etc in relation to Manasroga


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 vishleshanam-technical terms used in psychology and psychiatry
31. Manas roge upayukta Samhitana satika adhyayanam- study of portions of treatises useful in psychiatry along with their commentary.
32. Arvachina mano vigyanasya adhishthana siddhantah, mastishka karmanam sthapana 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.
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. Manasrogyangya mahatvam, phalam, prayojanam, prabhavashcha

**PAPER –II  Manovaikariki Evam Bhutavidya**

<table>
<thead>
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<th>Marks</th>
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**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 Grhabadha.
5. Sushrut’s concept of invasion of Bhuta/Graha.
6. Manas Rognam Nidan, Sampraptischa
7. Manobuddhyyadi Vibhramsha
8. Manas dharaniya vega.

**Manovikriti –Psychopathology**

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

**Manas Rogi pariksha vidhi- Psychiatric examination**

1. Prachya arvachina matanusarena rogi pariksha visheshana 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.
7. Pragyashaliya pariksha - Investigations - Haematological, biochemical, neuro-physiological, endocrinal, EEG, radio imaging- MRI etc.
8. Manasrognam sadhyasadhyata – Prognosis of psychiatric diseases.
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 (Psychosis)- Nija, Agantuja Unmada, Bhutonmada, Vishaja Unmada, Sutikonmada, Smaronmada, Tattvonmada- Paronoia, 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.
14. Smriti vikara (memory disorders)
15. Manasika klaibya, Sushrutokta Napumsakata
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
26. Senile psychiatric disorders - Dementia, Alzheimer’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, Uccha Raktachapa(Hypertension), Shula (pain disorders), Twak Vikara.
28. Jirna- Asadhya Sopadrava Vyadham Vivechanam – Mental problems in chronic incurable diseases like AIDS, Cancer etc.
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
38. Sattavavajaya Chikitsa: Its application and techniques viz. Dhi, Dhairya, Atma Janya, Kula Janya, Kala Janya, Desha Janya, Bala Janya, 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, Gadanigrha, Bhavaparakasha, Sahasrayoga ukta vividha yoganam vivechanam:Brahmi, Mandukaparni, Vacha, Jatamansi, Yashtimadhu, Shankhpushpi, Kushmanda, Ashwagandha, Kushtha, Tagara, Guduchi, Jyotishmati, Srikhandadichurna,Saraswatachurna etc.
43. Swarna, Swarnamakhshika Bhasma, Rajata, Pravala, Mukta, Manahshila, Krishna Chaturmukha Rasa, Krishnahchaturbhuj Rasa, Brihatvatchintamani Rasa,Vata kulantaka Rasa, Manasmitra vataka, Smritisagar Rasa, Unmada gajakesari Rasa, Apanantrakari vati,Kumarakalyana Rasa etc. Kalyanaka ghrita, Brahmi ghrita, Mahapanchagavya ghrita, Mahapashachika ghrita, Mahabhutarava ghrita, Kushmanda ghrita, Purana ghrita, Panchagavya ghrita etc.
44. Saraswatarishta, Ashwagandharishta, Chittachandirasava etc.
45. Himasagara taila, Tungadrumadi taila, Gandharaja taila, Brahmi taila, Sidharthaka agada etc.
46. Dhupa, Nasya, Lepa, Anjana yogas useful in Manas Roga.
47. Folk Medicine in Manasa Roga.
48. Mano Bheshaja 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.
49. Psychological aspects of Disaster Management- Apada evam Manovigyan.
**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, Rakta-mokshana, Mastishkya-Shiro-Basti, Shiro-Dhara, Shiro-Pichu, Shiro-Abhyanga, Murdhni taila, Anjana, Dhupa, Dhupana etc.

**Yoga**

3. Ayurveda drishtya yoga adhyayanasya upayogita, Ayurveda shashtra pratipaditah yogasya siddhantah.
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. Pranayama and contemporary yoga practice in Manas 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**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Topic</th>
<th>No. of Cases</th>
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<tr>
<td>1.</td>
<td>Hypnotherapy techniques</td>
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<td>2.</td>
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<td>Psycho Sexual disorders</td>
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<td>Psychogenic headache</td>
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</table>
Visit to Mental Hospitals

Pattern of Practical Examination

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 Charaka, Sushruta and Vagbhata and other ancient texts with commentaries
2. Prachin Manovikara Vigyanam - Ayodhya Prasad Achal
3. Ayurvediya Padarth Vigyan - Ranjit Rai Deshai
4. Ayurved Darshan - Acharyar 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 Mishra - Dr Yogesh Chandra
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
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:
  ▪ Neutraceutical action.
  ▪ Immunomodulation.
  ▪ Oxygen free radicals & Antioxidant activity.
  ▪ Adaptogens.
  ▪ Cell proliferative activity.
  ▪ Cell regenerative activity.
  ▪ Genoprotective activity.
  ▪ Micronutrients.
  ▪ Anabolic activity.
• Interpretation of different types of Rasayana.
• Prakriti-Guna/character wise Rasayana.
• Sara wise rasayana.
• Dhatu specific rasayana.
• Indriyanusararasayana like netryya, hridya, tvacchya etc.
• Srotas wise rasayana.
• Rasayana for specific occupation.
• Season wise rasayana.
• Molecular biology in relation 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-kaarbhava.
• 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 svabhavabalaprabhavvyadyah 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:
   • Kutipraveshika Rasayana
   • Dronipraveshika Rasayana
   • Karapratichiya Rasayana
   • Indraproktaka Rasayana
   • Vaatatapika Rasayana
6. Concept & practice of Achararasayana/Moral and Social code of conduct.
7. Knowledge & application of svasthavritta measures.
8. Swasthyanuvartaka Rasayana.
9. Rasayana as nutritional supplements.
11. Application of Kamya Rasayana to achieve - Smriti, Medha, Bala, Prabha, Varna, Svara.
12. Knowledge of Vayasthaapan/or Ayushya Rasayana.

PAPER – II Concepts and Practice of Supraja and vandhyatva.
Marks: 100

1. Etymology, derivation, definition, synonyms of vandhya, apatya, santaankara, supraja.
2. Importance of fertility.
5. Garbhaadana paricharya.
7. Shukra vriddhi-kshaya hetu, lakshana and chikitsa.
8. Shukrapradoshajavyadyadh and its management.
10. Retodustiprakara, hetu, lakshana and chikitsa.
11. Sukravahasrotodusti karana, lakshana, diagnosis and management.
12. Disorders of spermatogenesis (etio-pathogenesis, diagnosis and management)
   a. Oligozoospermia, asthenozoospermia, teratozoospermia, azoospermia, aspermia, pyospermia, necrozoospermia, OAT syndrome, sertoli cell only
syndrome, Klinefelter’s 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.
19. Chromosomal, genetic disorders pertaining to fertility and management.
20. Practice of Genetic counseling.
21. Normal and abnormal sexual differentiation
25. Pumsavana karma for healthy progeny.
26. Introduction to MART (Medically Assisted Reproductive Technologies): IUI, IVF-ET, ICSI, etc.
27. Testicular biopsy – indications, surgical procedure, interpretation of HPE results.
29. Scrotal scan & Doppler.
30. Varicocele: diagnosis, medical and surgical management.
31. Disorders of accessory sex glands and their management.

PAPER – III 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.
5. Haemodynamics and different stages of erection.
6. Psychological aspects of sexual functions.
8. Sukrasrutikarabhava.
10. Maithunavidhi – asthagamaitthuan, 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.
14. Sex education & counseling including pre-marital counseling.
15. Knowledge of contraception and contraceptives.
17. Klaibya – definition, nidana, prakara, spamprapati, 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
22. Knowledge of paraphilia, abnormal sexual behavior, perversions and management.
23. Knowledge of diagnostic aids pertaining to sexual disorders:
   a. ICIVAD (Intra Cavernosal 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.
27. Knowledge of Sexual performance assessment scales: MSP, GRISS, GRIMS, HARDs, Libido score, IIEF-5 scoring system for ED, Androgen deficiency score.
29. Theories of andropause and management.

PAPER – IV  Pharmaco-Therapeutics of Rasayana & Vajikarana  Marks: 100

1. Definition, derivation, etimology, synonyms of vajikara, vrishya.
2. Pharmacology and pharmacodynamics of rasayana and vajikarana drugs.
3. Definition, scope and understanding of:
   a. Rasayana
      i. Vyadhibalavirdhi
      ii. Vyadyuptadakapratibandhak
      iii. Vayasthapana
   b. Sukrajana/sukrala
   c. Sukrapravartha/rechaka
   d. Shukrashodhana
   e. Shukrastambhaka
   f. Sukrashoshaka, vyavayi/vikashi
   g. Kamoddeepana/kamottejaka etc.
4. Pharmacology of drugs belonging to:
   a. Sukrajana/sukrala
   b. Sukrapravartha/rechaka
   c. Shukrashodhana
   d. Shukrastambhaka
   e. Sukrashoshaka, vyavayi/vikashi
   f. Kamoddeepana/kamottejaka etc.
5. Pathya and apathya in relation to shukradhatu
6. Formulation, indications & uses of various Vasis in Vajikarna such as: Vrishyabasti, Vajikaranaabasti, Yapanabasti,etc.
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. Indrapropta Rasayanaa

8. Pharmacology of following Rasaushadhis:
   a. Abhraka, 
   b. Naga, 
   c. Rajata, 
   d. Shilajit, 
   e. Svarna, 
   f. Svarnamakshika, 
   g. Vanga, 
   h. Yashada 
   i. Loha, etc.

9. Ingredients, properties, indications and phalasruti of:
   • Agasthya Rasayanaa, 
   • Ajamamsa Rasayanaa 
   • Akarakarabhadiivati, 
   • Amrita Prasha Gritha, 
   • Aswagandha Gritha, 
   • Avalguja Rasayanaa 
   • Balaswagandha Taila, 
   • Bhallathaka Rasayana, 
   • Brahma Rasayana, 
   • Brihatcchagalladyagritha 
   • Chandraprabhavati, 
   • Chyavanaprasha, 
   • Gokshuradi Guggulu, 
   • Haritakyadi Rasayana, 
   • Jatiphaladi Vati, 
   • Kaminividravana Rasa, 
   • Khadira Rasayana, 
   • Kushmanda Rasayanaa 
   • Lasuna Rasayana, 
   • Mahamasha Taila, 
   • Makaradhwaja, 
   • Nagabala Rasayana, 
   • Narasimha Rasayanaa, 
   • Pippali Vardhamana Rasayanaa, 
   • Pippali Rasayana, 
   • Purnachadrodaya Makaradhwaja, 
   • Shatavari Ghrita, 
   • Shilajatu Rasayana, 
   • Siddha Makaradhwaja, 
   • Srigopala Taila, 
   • Vanari Gutika 
   • Vasantakusumakara rasa, 
   • Veeryastambha Vati, 
   •
• Vidanga Rasayana,
• Vidaryadi Ghrita,
• Vrishya Ghrita
10. Pharmacology & Pharmacodynamics of various vajikara, vrishya and rasayana vasti.
12. Endocrinological aspects of rasayana,vajikarana drugs, prajasthapak and Shukravardhak/shodhak 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.
7. Post coital test, semen & cervical mucus interaction test.
8. Technique of ICIVAD.
10. Technique of psychosexual counseling.
11. Applicatory knowledge of assessment scales pertaining to vajikaranaa/sexual functions.
12. Technique of genetic counseling.
13. Practical aspects of Panchakarma pertaining to rasayana & vajikarana.
14. Technique of measuring penile BP.

PRACTICALS -100 Marks

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. Publication or acceptance of One Scientific paper based on Thesis Research preferably in indexed/peer reviewed journal is essential. Should have taken minimum 20 Theory and Practical classes of BAMS in concerned subject.

Clinical Ability Evaluation-60 marks based on

5. Case records of 40 IPD Patients in Detail 10 marks
6. Long case History-1: 20 Marks
7. Short Case history-1 : 10 Marks
8. Medical procedures demonstration 20 Marks.

Academic Competence evaluation- 40 marks based on:

3. Viva 30 Marks.
4. Teaching and communication skills/Thesis presentation in PPT /: Marks.

Reference Books:

****************************************************************************************
1. Relevant portions of Brihattrayi and Laghutrayar with commentaries
5. Kayachikitsa Vol. I-IV. - Prof. Ajay Kumar Sharma
6. Panchakarma Therapy - Prof.R.H.Singh
7. Panchakarma Illustrated -Prof.G.Shrinivasa Acharya
8. Practice of Ayurvedic Medicine(Kayachikitsa) - Prof.A.K.Tripathi
9. Nidanachikitsa Hastamalaka - Prof. R.R.Desai
10. Clinical Methods in Ayurveda - Prof. K.R. Srikantamurthy
11. Aushadhi Gunadharma Shastra - Gangadhar shastri Gune
12. Davidson’s Principles and Practice of Medicine.
13. Rasayan and Vajikarana by Dr.O.P.Upadhaya.
14. Rasayan and vajikarana by Dr. Singla.
15. Harrison’s Text Book of Medicine.
17. Relevant texts of concerned subjects.

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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 their Importance.
6. Asepsis and Antisepsis.
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.
15. Concept of Raktaastambhana –Haemostasis.
17. 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.
vi. Various replacement fluids in surgery, mode of administration and complications.


18. Vranasopha – Inflammation and Vidradhi - Abscess
20. Gulma and Udara Roga.

PAPER – II Vishishta Shalya Vighyana - 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-apathy.
   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.

   i. Applied anatomy and physiology of urogenital system.
   ii. Investigations of Mutravaha Srotas – Urinary tract.
   iii. Aetiopathogenesis and surgical procedures of Ashmari – Urinary stone diseases.
   vii. Prostate and seminal vesicles – Benign and malignant enlargement of prostate, Prostatitis, Prostatic abscess and Calculi.
   x. Urinary diversions- Indications, types and techniques.
   xi. Retention of urine – Mutraghata and Mutrakruccha- Etiology, diagnosis and management.
   xii. Saraktamutra, Haematuria - Etiology, Clinical features and management.
xiii. Renal failure – Causes, Diagnosis, Investigations and Management.

4. Asthi roga and Marma Chikitsa - Orthopaedics
   i. Anatomy and physiology of bone.
   iii. Aetiopathogenesis, treatment along with surgical procedures of Bhagna - Fracture, Sandimoksha - Dislocation and bone grafting.

PAPER – III Adhunik Shalya Karma - Modern surgery

Marks

2. Diagnosis and Surgical treatment of head and spine injury, thoracic 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 Lympadenopathies.
4. Diagnosis and Surgical management of breast diseases- Benign and Malignant breast tumours.
5. Diagnosis and Surgical measures of diseases of Gastrointestinal system -
   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.
   vi. Abdominal mass - Diagnosis and Management.
   viii. Large intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebic ulcer 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.

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, Choledocholithiasis, 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.


PAPER –IV Shalya Vangmaya – Shalya literature, Research and Development

1. Critical study of the Sushruta Samhita and relevant portions of Shalyatantra in Brihattrayee 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 in medical profession, National Health Policy, Implications in medico-legal cases like accidents, assaults etc.

4. Surgical ethics including Informed consent.


   i. Karna Sandhana – Auroplasty
   ii. Nasa Sandhana – Rhinoplasty
   iii. Ostasandhana – Cheiloplasty
   iv. Grafts and Flaps – Techniques and applications.
   v. Vascular anastomosis and grafts.

7. Anushalya Karma – Parasurgical procedures
   i. Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana.

Pattern of Practical examination

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Reference Books

1. Sushruta Samhita
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<td>4.</td>
<td>Charaka Samhita</td>
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<td>5.</td>
<td>The Surgical instruments of the Hindus</td>
<td>Girindranath Mukhopadhyaya</td>
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<td>Shalya Tantra Samuchchaya</td>
<td>Pandit Ramadesh Sharma</td>
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<td>Shalya Vigyan (Part 1-2)</td>
<td>Dr. Surendra Kumar Sharma</td>
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<td>8.</td>
<td>Shalya Samanvaya (Part 1-2)</td>
<td>Vd. Anantaram Sharma</td>
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<td>Shalya Pradeepika</td>
<td>Dr. Mukund Swaroop Verma</td>
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<td>Soushruti</td>
<td>Dr. Ram Nath Dwivedi</td>
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<td>Clinical Shalya Vigyan</td>
<td>Dr. Akhilanand Sharma</td>
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<td>12.</td>
<td>Bhagna Chikitsa</td>
<td>Dr. Prabhakar Janardhan</td>
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<td>13.</td>
<td>Kshara sutra management in anorectal ailments</td>
<td>Dr. S.K. Sharma, Dr. K.R. Sharma and Dr. Kulwant Singh.</td>
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<td>14.</td>
<td>Anorectal diseases in Ayurveda</td>
<td>Dr. Sizoria and Dr. Praveen Kumar Chowdary.</td>
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<td>15.</td>
<td>Adhunika Shalya Chikitsa Siddhanta</td>
<td>Dr. Katil Narshingham Udupa</td>
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<td>16.</td>
<td>Agnikarma Technology Innovation</td>
<td>Dr. P.D. Gupta</td>
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<td>17.</td>
<td>Shalya Tantra Ke Siddhanta</td>
<td>Dr. K.K. Takral</td>
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<td>Recent advances in the management of Arshas / Haemorrhoids</td>
<td>Dr. P. Hemantha Kumar</td>
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<td>Arsha Evum Bhagander Mein sutra Avacharan</td>
<td>Vd. Kanak Prasad Vyas</td>
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<td>Recent advances in Kshara Sutra</td>
<td>Dr. M. Bhaskar Rao</td>
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<td>Leech application in Ayurveda</td>
<td>Dr. M. Bhaskar Rao</td>
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<td>Kshara Sutra</td>
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<td>Shalya Shalakya Tantra</td>
<td>Vd. S.G. Joshi</td>
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<td>Surgical ethics of Ayurveda</td>
<td>Dr. D.N. Pande</td>
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<td>Text book of Surgery</td>
<td>Sabistan</td>
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<td>26.</td>
<td>Operative Surgery</td>
<td>Rob and Smith</td>
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<td>Bailey and Love’s Short Practice of Surgery</td>
<td>Norman.S. Williams, Charles.V. Mann and R.C.G. Russell</td>
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<td>Fractures and Joint Injuries</td>
<td>Watson-Jones</td>
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<td>Text books of Operative Surgery</td>
<td>Farquharsons’</td>
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<td>Principles of Surgery</td>
<td>Schwartz</td>
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<td>31.</td>
<td>Emergency Surgery</td>
<td>Hamilton Bailey’s</td>
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<td>32.</td>
<td>Surgical pathology</td>
<td>Willing Worth</td>
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<td>33.</td>
<td>Clinical methods in surgery</td>
<td>S. Das</td>
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<td>34.</td>
<td>Textbook of Operative Surgery</td>
<td>S. Das</td>
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<td>Shalya Vigyan (Sachitra)</td>
<td>Anantram Sharma</td>
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<td>Anushastra Karma</td>
<td>Dr. D.N. Pande</td>
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<td>Concept of Vrana is Ayurveda</td>
<td>Dr. Lakshman Singh</td>
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<td>Significance for Poorva Karma in Surgical Patient</td>
<td>Dr. Lakshman Singh</td>
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<td>Sangyaharan Prakash</td>
<td>Dr. D.N. Pande</td>
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<td>40.</td>
<td>A concise Text Book of Surgery</td>
<td>S. Das</td>
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<td>41.</td>
<td>A manual on Clinical Surgery</td>
<td>S. Das</td>
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<td>42.</td>
<td>A System of Surgical Diagnosis</td>
<td>T.N. Patel</td>
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<td>43.</td>
<td>A Practical Guide to Operative Surgery</td>
<td>S. Das</td>
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<td>44.</td>
<td>Drugs and Equipment for Anaesthesia</td>
<td>Arun Kumar</td>
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<td>45.</td>
<td>Manual of Surgical Instruments</td>
<td>M.M. Kapur</td>
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<td>46.</td>
<td>Ward Procedures</td>
<td>Patel Mansukh. B</td>
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<td>Recent trends in the management of Arshas / Haemorrhoids</td>
<td>Dr. P. Hemantha Kumar</td>
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<td>Primary Anaesthesia</td>
<td>Maurice King</td>
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<td>49.</td>
<td>Synopsis of Anaesthesia</td>
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<td>Clinical Anatomy/ Surgical Anatomy</td>
<td>John E. Skandalakis</td>
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</table>
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

***************

15. SHALYA – KSHARA EVUM ANUSHAASTRA KARMA

PAPER - I Shalya Siddhanta – Fundamentals of Surgery 100 Marks

23. Sushruta’s contributions in surgical concepts and practices.
24. Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.
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33. Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants.
34. Concept of Marma and their clinical application.
35. Shock - Its varieties and management.
36. Raktasrava / Haemorrhage – Types, Clinical features and Management.
37. Concept of Raktastambhana –Haemostasis.
38. Blood Transfusion – Blood groups, compatibility, Indications, Contraindications and complications with management.
39. Fluid, electrolyte, Acid Base Balance and Nutrition
   viii. Introduction of physiology of fluids and electrolytes.
   ix. Dehydration and over hydration.
   x. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management.
   xi. Electrolyte changes in specific surgical conditions and their management.
   xiii. Various replacement fluids in surgery, mode of administration and complications.
   xiv. Nutrition – Indications, types, mode of administration and complications.
40. Vranasopha – Inflammation and Vidradhi - Abscess
41. Granthi – Cyst and Arbuda – Benign and malignant Neoplasm – Concept of Oncogenesis and genetics of cancer.
42. Gulma and Udara Roga.
43. Kshudra Roga.
44. Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.

PAPER – II Vishista Anushastra Karma

   i. Introduction of different types of Kshara, Method of preparation, Standardization, pH value, Application, Complications and its management.
   ii. Preparation and standardization of Kshara sutra and Kshara Picchu- their application and complications.
   iii. Surgical Anatomy and Physiology of Anus and Rectum.
   x. 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.
   xi. Parikartika - Nidana, Samprapti and its Chikitsa.
   xiii. Sannirudhaguda and its Chikitsa.
   xv. Anal Incontinence - Aetio-pathogenesis and surgical management.
   xvi. Gudagatashalya – Diagnosis and its Management.
   xvii. Foreign body in rectum and anal canal - Method of diagnosis and its management.
   xix. Gudaaruba and Granthi and its Chikitsa.
   xx. 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 burn, Dhumopaghata, Ushnavata, Sunburn, Frost bite and Electric burn.
   iv. Knowledge of modern thermal equipment - Diathermy, Laser therapy, microwave, Ultrasonic 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. Rakta- Importance, Formation, Panchabhoutikatva, RaktaSthana, Guna, Prakurta Karma and Rakta Sara Purashalakshanas. Suddha and Dushta Rakta Lakshanas. Rakta Pradoshaja Vyadhis.

ii. Introduction and importance of Raktamokshana.

iii. Indication and contraindication of Raktamokshana.

iv. Justification of usage of different types of Raktamokshana in various therapeutic applications.

v. Different types of Raktamokshana – Shastrakritha - Siravyadhana, Prachana and Ashastrakritha - Shringa, Jaluka, Alabu and Ghati.


vii. Knowledge of Leeches - Morphology, Anatomy, Physiology, Bio-chemical effects of its various constituents present in its saliva.

PAPER – III Adhunika Shastra Karma - Modern Surgery 100 Marks


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.

7. Diagnosis and surgical management of Proctological disorders.

8. Diagnosis and surgical measures of diseases of Hepatobiliary system - Liver, gall bladder, bile ducts.

9. Diagnosis and surgical management of diseases of the spleen

10. Diagnosis and surgical management of diseases of the Urogenital system.

11. Diagnosis and surgical management of diseases of scrotum and testis. – Hydrocele, Ectopic testis and Undescended testis.

12. Diagnosis and surgical management of Hernias – Inguinal, femoral, umbilical, incisional, abdominal wall and other hernias.


14. Diagnostic and therapeutic laparoscopy.


1. Thorough study of the Sushruta Samhita including other relevant portions of Brihattrayee 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 in medical profession, National Health Policy - Implications in a medico-legal case like accidents, assaults etc.
5. Surgical ethics including Informed consent.

Pattern of Practical examination

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. Adhuniika Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa
72. Agnikarma Technology Innovation - Dr. P.D. Gupta
73. Shalya Tantra Ke Siddhant - Dr. K.K. Takral
74. Recent advances in the management of Arshas / Haemorrhoids - Dr. P. Hemantha Kumar
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 Shalakya 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. Textbooks of Operative Surgery - Farquharson's
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. Sangyaharan 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
100. Drugs and Equipment for Anaesthesia - Arun Kumar
101. Manual of Surgical Instruments - Patel Mansukh B
102. Ward Procedures - Dr. P. Hemanth Kumar
103. Recent trends in the management of Arshas / Haemorrhoids - John Crawford Adams and David Hamblen L
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 Bhagandara / Fistula-in-ano - Dr. P. Hemanth Kumar
111. Principles and Practice of Agnikarma - Dr. Anand Kumar and Dr. Kanchan Shekokar
112. Manipal Manual of Surgery - Dr. Rajgopal Shenoy
113. A manual of Kshara Sootra Karma - Prof. Ramesh Chand Arya

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16. AYURVED DHANVANTRI - ASTHI SANDHI AND MARMAGAT ROGA
(ORTOPEDICS AND TRAUMATOLOGY)

Paper – 1 ASTHI SANDHI MARMA ABHIGHAT SIDDHANTA 100 marks


   Classification, Applied Anatomy and Physiology of Joints and Healing Mechanism of a joint.


6. 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).


9. Knowledge of Orthopedic implants (e.g. wires, screws, plates, nails, pin etc.) and Instruments, equipments (e.g. C-arm image intensifier and drill machines etc), Splints, Orthotics and Prosthetics.

10. Orthopedic Radiology - Knowledge of Radiological imaging techniques (X-ray, CT Scan, MRI, USG, Radioisotop scanning) in Orthopedics.


12. 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.

13. Concept of Pain according to Ayurved and Modern Medical science.

14. Principles of Reconstruction, Transplantation, Bone grafting, Bone Banking, Bone transportation and Amputation.

15. Knowledge about National Health Policies and relevant guidelines by State Govt. or Govt. of India.

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Paper – II ASTHI SANDHI MARMA GATA VYADHI VISESHE 100 marks

   a. Congenital, Degenerative, Infective, Metabolic, Neoplastic and Miscellaneous Disorders of Bones.


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 Lumbarisation etc.

6. Diseases and Congenital anomalies of Cervical Spine


8. Diseases and Congenital anomalies of Hand

9. Diseases and Congenital anomalies of Foot

10. Diseases and Congenital anomalies of Limbs


15. Introduction of Peripheral Vascular Diseases.

16. Pediatric Orthopedics

17. Orthopedic Oncology


Paper – III Abhighata Vigyan – Traumatology 100 marks


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 Kusha - splints, Plaster of Paris Technique, Knowledge of different splints and Plasters

5. Pathological Fractures including Fragility fractures, Stress Fractures and Peri-prosthetic 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


10. Diagnosis and management principles of injuries of Vessels, Nerves, Tendons and Ligaments.

11. Head, Chest and Abdominal Injuries and management principles.


2. Fumigation of Operation Theatre and sterilization of Instruments, Equipments, Linen and Implants by various techniques.
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.
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

Sushrut Samhita Ghanekar Commentary

Sushruta Samhita (Dalhana Commentary)

Charak samhita

Ashtang Hridaya

Ashtang Sangraha

Bhava Prakash

Yog Ratnakar

Bhaishajya Ratnavali

Sharangdhar Samhita

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
### 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

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Adhunika 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 is Ayurved - Dr. Lakshman Singh

Marma Chikitsa - Dr. C. Suresh Kumar

Joint Affections and their Ayurvedic Prospective - Vaidya Vilas M. Nanal

Marma Vimarda - 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)

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. Kulkarini)

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
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:
  - 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
  - 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.

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17. SANGYAHARAN

Paper 1 Sangyaharan siddhant avum vangmaya: Literary, Research And Development-100 Marks.

- History of Sangyaharan and its development in Ayurveda.
- Importance of anesthesia in Ayurveda.
- Contribution of AAIM and other pioneers in the development of Sangyaharan.
- Applied aspects of Ayurveda with respect to sangyaharan Vrihattrayee and Laghuttryee.
- 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 Stabdhtata 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 Sangyaharan.
• Aroma therapy as complementary and alternative therapy in pain management and Palliative care.

Paper 2 Sangyaharan Bheshaja Vigyan (Pharmacology related to Anesthesia)-100 Marks.

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 Sangyahanar – Applied Anesthesia-100 marks**

- Airway management- Intubation, failed intubation drill, LMA, Bag and mask ventilation.
- Anesthesia For: General surgery, Obstetric and Gynecology ,E.N.T. and Ophthalamic, Orthopedic ,Dental ,Pediatric , Urology , plastic and Outpatient / Day care surgery.
- Anesthesia for patients with: Diabetes mellitus, Hypertesion, Jaundice, 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
  - Surface anesthesia, infiltration and field blocks
  - Regional anesthesia for thorax and abdomen
  - Complications of Regional and general anesthesia, morbidity, mortality and medico-legal aspects.
- Anesthesia for Endoscopic, laparoscopic and Laser Surgery
- Anesthesia for Trauma and mass casualty
- Emergency anesthesia.

**Paper 4 Monitoring Advances and Research in Sangyahanar -100 marks**

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
  - Peri-operative Fluid management and Blood transfusion.
  - Pt’s positioning in anesthesia, its hazards and management
  - 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
  - Post operative pain Management.

d. Misalleneous-
  - HDU,ICU, CCPR- BLS & ACLS.
  - Parentral 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 Sangyahrana.
i. Recent advances in research in Sangyahrana, Pain Management and Palliative Care. Scope and Application of principles of Ayurveda in Sangyahrana Research.

**METHODS OF TRAINING AND TEACHING FOR M.D. (Ayu) ANAESTHESIOLOGY -**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Presentation</td>
<td>Once a Week</td>
</tr>
<tr>
<td>Seminar / Symposia</td>
<td>Once a Week</td>
</tr>
<tr>
<td>Pre Anesthesia Care / Clinic</td>
<td>Thrice a Week</td>
</tr>
<tr>
<td>Critical Care unit / Recovery Room</td>
<td>Once a Week</td>
</tr>
<tr>
<td>Classroom Lectures</td>
<td>Twice a Week</td>
</tr>
<tr>
<td>Morbidity / Mortality</td>
<td>Once a Week</td>
</tr>
<tr>
<td>Audit</td>
<td>Once a month</td>
</tr>
<tr>
<td>Journal Club</td>
<td>Once a month</td>
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<tr>
<td>Record Keeping</td>
<td>Once a month</td>
</tr>
<tr>
<td>Emergency Drills / Protocols</td>
<td>Once a Week</td>
</tr>
<tr>
<td>Interesting Cases</td>
<td>Once a Month</td>
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**Practical Examination**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mark</th>
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</thead>
<tbody>
<tr>
<td>1. Case Record(25)</td>
<td>-50 Marks</td>
</tr>
<tr>
<td>2. Presentation of different types of Anesthesia</td>
<td>-50 Marks</td>
</tr>
<tr>
<td>3. Thesis Presentation</td>
<td>-50 Marks</td>
</tr>
<tr>
<td>4. Viva-Voce</td>
<td>-50 Marks</td>
</tr>
<tr>
<td>Minimum pass marks</td>
<td>50%</td>
</tr>
</tbody>
</table>

Result:- Pass/Fail

Staff required

- Teaching- Professor-1
- Reader/Asso. Prof-1
- Lecturer/Assi Prof-2
- Sen.Resident-2
- Non Teaching staff
- Anesthesia Technician- 1
- Anesthesia Attendent-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. Sangyaharan 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
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

18. AYURVEDA DHANWANTRI-SHALAKYA - NETRA ROGA

Theory Four papers of- 100 marks each
Practical and Viva-voce - 100 marks

PAPER- I Netra Rog Vangmaya

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.
5. Update chronological development of Netra roga vigyana right from Vedic period.

PAPER- II Ayurvediya Netra Rog Vigyan

1. Enumeration and classification of Netra Rogas.
2. Descriptive knowledge of etiology, pathogenesis, prodomal symptoms, clinical features, complications and prognosis of pakshma -vartma- sandhi- - shukla-Krishna- 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 Aushadha kalpanas.
4. Study of nayanabhighbhata 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.
3. Advanced technologies & techniques in the medical & surgical management of Netra roga.
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 etc.

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 of the 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 etc 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 resident has to compulsarily work for 6 terms of posting. Each term shall be of 4 months.
- The student should also contribute in the academic work of the department.

### Pattern of Practical Examination

<table>
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<td>1. Bed side examination</td>
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<td>4. Teaching skill</td>
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<td>5. Viva Voice</td>
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### Reference Books

1. Charka Samhita with commentaries
2. Sushrut Samhita and vaghhbata 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 Sangrah
8. Relevent part of Chakradhatta, Bhel Samhita, Harita Samhita
9. Shalakya tantra Kriya kalpa vigyan - Prof. K.S. Dhiman
10. Shalakya Tantra Chaudhary - DR. R.C.
11. The Actions and uses of Indigenous Ophthalmic Drugs - DR. 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
17. Modern Ophthalmology - Dutta, L.C.
   Worth, Bailliere Tindal and Castell

   C.V. Louis.

20. Ocular Differential Diagnosis
    Hamptn

21. Clinical Ophthalmology
    R.Verghese

22. Abrahm Manual of Refraction
    Company

23. Hand Book of ophthalmology
    - B.M. Chaterjee

24. Text Book of ophthalmology
    - Dr.Nitin Nema, DR.H.V.

25. Clinical ophthalmology
    Kansi

26. Parsons Diseases of Eye

27. Stallard’s Eye Surgery

19. AYURVEDA DHANWANTRI- SHALAKYA - SHIRO- NASA-
   KARNA EVUM KANTHA ROGA (M.S. Ayurved ENT& Head)
   Theory Four Papers of -100 marks each
   Practical and Viva Voce- 100 marks

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 with special reference to Shiro – Nasa - Karna - Kantha Roga Vigyan with
   comparative and critical study of rogas explained by these classics.
2. Syntactical derivation, definition and importance of the word “Shalaka”. Update
   chronological 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’.
3. 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.

4. Detailed applied knowledge of recent advanced diagnostic and therapeutic techniques and equipments (Yantra and Shastra) used for Shiro – Nasa - Karna - Kantha ( ENT) and Shira disorders.

5. General knowledge of ‘vrana bandhana’ (bandaging of wounds) and applied bandage in ear etc.

6. Study of essential modern drugs, anaesethic agents of diagnostic and surgical importance.

**PAPER – II  Ayurvediya Shiro – Nasa - Karna - Kantha Roga Vigyan**

1. Examination of the ear, nose, throat and head in patients.
2. Karna-Nasa –Kantha –and Shira rogas samkhya samprapti, descriptive knowledge of etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (prognostic measures) sadhyasadhyatwa and, complications of ear disorders described in the classics of Ayurved. Detail description along with practical orientation of their management.


5. Shira and Kapala (cranial vault) disorders samkhya samprapti, descriptive knowledge, etiology, pathogenesis, prodromal symptoms, classification, clinical features, Upasaya-Anupsaya (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 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.


**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. Karna-Sandhan Nasa-Sandhan, fundamental and applied aspects of Ayurveda with 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, Anstral puncture, Anstral lavage, Turbinectomy, Polyectomy, Various surgical procedures done for malignancy of Nose and paranasal sinuses, Young’s surgery, etc.

4. Throat - Adenoidectomy, Tonsillectomy, Surgical procedures for pharyngeal abscesses, cautерization 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 Bheshaj– 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.

**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, instrumentation 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.

**Pattern of Practical Examination:**

1. Bed side examination
   - Long Case: -20 Marks
   - Short Case 2 @ 10 marks each: -20 Marks

2. Identification of specimen / Instrument / Radiograph/Photo: -10 Marks

4. Thesis Presentation: -10 Marks

5. Teaching Skill: -10 Marks

5. Viva Voce: -30 Marks

**Reference Books**

1. Sushrut Samhita
2. Charak Samhita
3. Ashtang Hridaya
4. Ashtang Samgraha
5. Laghutrayi
6. Shalaky tantra – Dr. R.C. Choudhary
7. Shalakya Tantra- KRIYAKALP VIGYAN -Prof K.S.Dhiman
8. Modern books related to ENT disorder
9. Diseases of Nose Throat and Ear - Bhargav Shah
10. Diseases of Nose Throat and Ear, Head and Neck- EB Edr.
12. Text book of Ear Nose Throat diseases – Dhinra
14. Logan Turner’s book on ENT
15. Ballengers text book of ENT
17. Rob Smith’s book of ENT surgery
18. Paprela’s book of ENT
19. Hazarika’s text book on ENT
20. Books on examination of ENT
21. Audiology Anirwan Biswas
22. Kurt’s Audiology
23. Books on Speech therapy

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20. AYURVEDA DHANWANTRI-SHALAKYA - DANTA EVUM MUKHA ROGA

**ER – I Ayurveda Siddhanta and Vangmaya Marks 100**
1. Etymology, definition and importance of the word ‘Shalakya’, 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.
5. Applied and detailed study of therapeutic measures for oral and dental disorders, like Kavala, Gandusha, Dhumapana, Nasya, Murdhaitsai 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 Modern and ancient and modern commentaries of different Samhita.

**ER – II Ayurvediya Danta evum Mukha Rog Vijnana**
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 – Danta Rogas detailed in the classics of Ayurved; their etiology, pathogenesis, prodromal symptoms, clinical features, complication and Management along with 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 Ousha, Danta-Mula Gata Roga (gum-periodontia) and Jihwa as detailed in the classics of Ayurved. Practical approach/orientation in Treatment of Ousta, Dantamula and Jihwa Rogas.
4. Talu (palate) and Kantha Rogas, detailed study of etiology, pathogenesis, prodromal -symptoms, clinical features, complications and, prognosis. Detailed description of their treatment along with Applied Viewas.
5. Sarvasara Mukharogas (Generalized oral diseases) available in ayurvedic classics. Detailed study of etiology, pathogenesis, prodromal-symptoms, clinical features, complications, prognosis and management of Sarvasara mukha rogas along with practical orientation.
6. Knowledge of Dantabhighbata (dental trauma) and Mukhabhighbata (oral injury) along with diagnostic and referral skills.

**ER – III Adhunik Danta evum Mukha Rog Vijnana**
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 Management along with advanced technics.
2. Detail description of diagnostic technology in the establishment of oral and dental disease.
3. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance.
20. PANCHKARMA

PAPER–I

Purva Karma-Snehana and Svedana

Marks :100

Part-A

INTRODUCTION

1. Detail knowledge of Shadupakram and relation of Shodhan with it
2. Panchkarma in Ashtanga Ayurved and Significance of Shodhana
3. Ama and Shodhana, benefits of Shodhana, Samikshya Bhavas in Shodhana,
4. 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 Sneha-
   Ghrita, 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, Padaghata, Samvahana,
    Udvartana/Utsadana, Udgharshana, Avagaha, Pariseka, Lepa, Pralepa, upadeha etc
    various types of lepa having cosmetic values along with the drugs and methods;
    Ayurveda face pack;lepa for cosmetic problems such as tilakalak, neelika ,
    nyaccha,mukha dushika etc with drugs and methods. Gandusha, Kaval; Karn and
    Nasa Purna, Akshi Tarpana; Murdhni Taila: Shiro-abhyanga, Shirodhara, Siro Pichu
    and Siro Basti, Shiro Lepa (Talapotichil), Talam and Takradhara, etc.
11. Knowledge of digestion and metabolism of fat: absorption of fatty substances
    through skin; types of skin like dry, moist etc and their Ayurvedic management.
12. Karmukata of Abhyantara and Bahya Snehan
13. Knowledge of different contemporary massage techniques
14. Abhyantra Snehana: Definition of Brimhartha, Shamanartha and Shodhanartha,
    method and utility of Brimhanartha and shamanartha Snehana; difference between
    Shamanartha and Shodhanartha Snehana
15. Methods of Abhyantara Snehana
16. Shodhanartha Snehana: Acchapana and Vicharana, Utility and various methods of
    Sadyasnehana, Avapidaka Sneha
17. Matra of Sneha: Hrasiyasi, Hrasva, Madhyama and Uttama Matra with their indications, specific utility of Ghrita, taila, Vasa and majja; Anupana of Sneha along with justification and their role in the drug action.
18. Need and method of Rukshana before performing Snehana in specific conditions and Samyak Rukshana Lakshana
19. Shodhananga Snehana Vidhi and methods of fixation of dose
20. Diet and Pathya during Snehana
21. Observation of sneha Jiryanama, Jirna and Ajirna Lakshana
22. Samyak, Asnigdhana and Atisnigdha Lakshana of Snehana
23. Sneha vyapata and their management
24. Pariharya vishaya and Parihara Kala

PART – B

Svedana

1. Etymology and definition of Svedana
2. General considerations about Svedana
3. Properties of Svedana and Svedopaga Dravya
4. Indications and contraindications of Svedana
5. Various Classifications of Sveda and Svedana
6. Detailed knowledge of four types of Sveda of Sushruta with their utility.
7. Hina, Mridu, Madhya and Mahana Sveda; Ekanga and Sarvanga sveda with their utility
8. Utility and method of each of 13 types of Saagni and 10 types of Niragni Sveda
9. Shodhananga and Samshamaniya Sveda
10. Methods to protect the vital organs (varjya anga) during Svedan Procedure
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; kleda and sveda; pathophysiology of sweat and sebum; fat metabolism and skin and its appendages; secretory and excretory function of skin; skin as sparshanendriya; various types of nerve endings in skin; effects of stimulation by touch, friction pressure and temperature etc.
16. Current sudation modalities like Sauna bath, Steam Bath, Infrared, etc. along with their effects and mode of action, role of snehana and svedana in promotion of skin health.
17. Svedana with Kati Basti, Janu Basti and Griva Basti etc along with karmukata.
18. Study of Snehana and Svedana related portions in classics with commentaries

PAPER - II

Vamana and Virechana Karma

100 Marks
Vamana Karma: 50 Marks

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)
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. Preparation and management of Patients on the morning of Vamana
13. Administration of food articles prior to Vamana
14. Selection of Drug and time of administration; Anupana, Sahapana, dose and method of administration of Vamana and Vamanopaga preparations
15. Method of Vamana Karma, waiting period for Sva-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 along with its phramaco-dynamics.
17. Observation; and assistance to the patient during Vamana
18. Vega and Upavega of Vamana 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 Shuddhi 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, Atiyoga and Vyapat of Vamana with Ayurveda and modern drugs
25. Parihara Vishaya and Kala for Vamana
26. Vamana Karmukata with Pharmaco-dynamics of Vamana
27. Study of Vamana related portions in classics with commentaries
28. Recent advances of researches on the effect of Vamana
29. Scope of research in vamana.
30. Role of Vamana in promotion of health, prevention and treatment of diseases

Virechana Karma: 50 Marks

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 virechana Karma
8. Contraindications of Virechana with reasons
9. Utility of Virechana for the specific conditions and stages of the diseases
10. Internal Snehana for Virechana with diet
11. Management of 3 gap days and importance of low Kapha for proper Virechana
12. Abhyanga and Svedana as Purvakarma of Virechana
13. Preparation and Management of Patients on the morning of Virechana
14. Reason for performing Virechana on empty stomach
15. Selection of virechana Drug and time of administration; 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 faeces and its weighing
18. Samyak, Ayoga and Atiyoga of Virechana
19. Laingiki, Vaigiki, Manaki and Antiki Shuddhi of Virechana
20. Hina, Madhya and Pravara Shuddhi and Samsarjana Krama accordingly
21. Detail knowledge of methods of Samsarjana Krama and its importance, and Tarpana krama and its importance
22. Management of Ayoga, Atiyoga and Vyapat of Virechana with Ayurveda and modern drugs
23. Parihara Vishaya and Kala for Virechana
24. Virechana Karmukata along with its Pharmacodynamics
25. Applied anatomy and physiology of Gastrointestinal system related with Vamana and Virechana
26. Study of Virechana related portions in classics with commentaries
27. Recent advances of researches on the effect of Virechana
28. Scope of research in Virechana.
29. Role of virechana in promotion of health, prevention and treatment of diseases

PAPER - III

Basti Karma and Nasya Karma

Basti Karma: 50 Marks

1. Etymology, definition and general considerations of Basti
2. Importance of Basti in Kayachikitsa and other branches of Ayurveda
3. Classifications of Basti and Basti drugs
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
8. Dose schedules of Niruha and Anuvasana basti

9. 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,

Niruha vasti and its relation with other shodan therapies: Relation of niruha vasti with anuvasa vasti.

Purvakarma for Niruha Basti; Pathya before, during and after Niruha Basti; all the aspects of administration of various Niruha Bastis. Method of preparation of various Niruha vasti dravya; rationale behind use of various ingredients, sequential mixing and position of patient.

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,

10. 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

11. Various combined basti schedules such as Karma, Kala, yoga Basti etc.

12. Detailed knowledge of sneha basti and Matra Basti


15. Concept of ‘Gut Brain’ and its relevance to Basti Therapy.

16. Study of relevant portions of Basti in classics with commentaries.

17. Recent advances of researches on the effect of Basti

18. Scope of research in Basti.

19. Role of Basti in promotion of health, prevention and treatment of diseases

Uttara basti: 10 Marks

2. Detailed knowledge of Purvakarma and Administration of uttara Basti in male and female; precautions, aseptic measures, complications and their management

Nasya Karma: 40 Marks

1. Etymology, synonyms, importance and definition of Nasya
2. Nasya drugs according to various Samhita
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 type 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 Shadbindu Taila, Anu taila, Kshirabala Taila, Karpasastyadi Taila, Bramhi Ghrita etc.
10. Samyak yoga, Ayoga and Atiyoga of each types of Nasya, its Vyapat and their management
11. Pashchat 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 Siraso 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
16. Recent advances of researches on the effect of Nasya
17. Scope of research in Nasya.
18. Role of Nasya in promotion of health, prevention and treatment of diseases

PAPER - IV

Raktamokshana, Physiotherapy and Disease wise Panchakarma

100 marks

A. Raktamokshana-

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
7. Pariharya vishaya and Parihara kala
8. Karmukata of different types of Raktamokshana

B. Clinical Physical Medicine-

1. Definition and terminology of clinical physical medicine.
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, electromagnetic therapy, ultra sound therapy, convection heating devices, Cold as a therapeutic agent
   b. 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.

**PART B C. Disease-wise Panchakarma**

1. Role of Panchakarma in different Stages of the diseases mentioned in Ayurveda particularly in followings:


2. 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 fascitis, GB syndrome, Alzhiemer’s disease, Irritable Bowel Syndrome, ulcerative colitis, psoriasis, hypothyroidism, hyperthyroidism, hypertension, allergic rhinitis, Ecema, diabetes mellitus, Chronic obstructive pulmonary Disease, Insomnia, Rheumatoid Arthritis, Gout, Osteoarthritis, multiple sclerosis, SLE, male & female infertility, cirrhosis of liver, Jaundice, General Anxiety Disorders.

**Practical and viva-voce: 100 Marks**
1. Case presentation along with justification of Shodhana intervention 30 marks
2. Preparation and execution of shodhana therapy Marks 30
3. Viva marks 30
4. Lecture/Presentation on a given topic Marks 10

Reference Books:

1. Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpa taruby Gangadhara
2. Sushrutha 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
   Ashtanga Sangraha with Shashilekha commentery
   Bhela Samhita
   Kashyapa Samhita
   Bhavaprakasha of Bhavamishra
   Sharangadhara Samhita
   Vangasen
   Gadanigraha
4. Ayurvediya Panchkarma chikitsa Dr Mukundilal Dwivedi
5. Panchkarma Vigyan Dr Haridas Shreedhar Kasture
6. Illustrated Panchkarma Dr.G Srinives Acharya
7. Ayurveda-Principles and Practice of Panchakarma Dr. Mandip and Dr Gurdip Singh
8. The Panchkarma Treatment of Ayurved with Dr. T.L. Devaraj
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Author(s)</th>
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<tr>
<td>9</td>
<td>Panchkarma Therapy</td>
<td>Dr. R.H. Singh</td>
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<tr>
<td>10</td>
<td>Principles and practice of vasti</td>
<td>Dr. Vasudevan Nampoothiri and Dr. L. Mahadevan</td>
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<td>11</td>
<td>Claiton’s Physiotherapy</td>
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<td>Teddy’s Physiotherapy</td>
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<td>Harrison’s Principles of Internal Medicine</td>
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<td>14</td>
<td>Guyton’s Physiology</td>
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</table>
Chhaya Avum Vikiran Vigyan

(Imaging and Radio-diagnosis)

(FINAL YEAR)

Paper-1

Fundamentals of Chhaya Avum Vikiran Vigyan (Imaging and radio-diagnosis)

Part-A

1. Detail knowledge of principles of Ayurveda and their applied aspects, specially Panch Mahabhuta, Dosh, Dhatu, Mala, Panch Nidan, Prakriti, Shatkriyakaal, Praman, Chhya-Pratichchhaya, Prabha, Rogi pariksha (Trvidha, Shatvidha especially Darshan pariksha), their relevance with Chhaya avum Vikiran Vigyan.
2. Study of Ayurvedic classics and modern Medical Science texts related to Chhaya avum vikiran vigyan
3. Chhaya avum Vikiran vigyan as a means of Darshan priksha.

Part-B

1. Infrastructure of an ideal Chhaya avum vikiran unit.
2. Fundamental principles of Chhaya avum vikiran vigyan
3. Detail knowledge of equipments (yantra) used in Chhaya avum Vikiran Vigyan.
4. Dark room techniques
5. Ionizing and non ionizing energies related to Chhaya avum Vikiran Vigyan - relevant hazards, prevention and precautions, their management by Ayurvedic and modern measurements.
6. Trividh Karma –Poorva, Pradhan avum Pashchat Karma in Chhaya avum Vikiran Vigyan
7. Occupational disorders of consultants related to imaging and Radio-diagnosis.

Paper-2

Applied Anatomy, Physio-pathology and Procedures in Chhaya avum Vikiran Vigyan (Imaging & Radio-diagnosis)

Part-A

Applied Anatomy, Physiology & Pathology in Chhaya avum vikiran Vigyan (Imaging & Radio-diagnosis)
1. 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(Tooth), Mastulunga(Brain), Lasika granthi( Lymph glands )etc.

3. Koshtha (Trunk) parts-Sushumna( Spinal cord) and Kaseruka( vertebrae).
   a. Vaksha(Thoracic) parts- Phupphus(Lungs),Hridaya( Heart) &Sira( Vessels), Shwashnalika(Trachea, Bronchi), Annamarg (Esophagus), Lymph nodes, Baksha( Breast),Hridayabandhan( Diaphragm )etc.
   b. Udar(Abdominal)parts- Audaryyakalaa ( Peritoneum ) Aamashaya(Stomach),Kshudrant(Smal-intestine), Viридantra (Large- intestine), Guda (Rectum and Anal canal), Aantrapuchchha (Appendix) , Yakrit(Liver), Pitashaya(Gall bladder), Billiary channels, Pleeha(Spleen), Agnyashaya(Pancreas), Vrikka (Kidney),Gavini(ureter), Basti(urinary bladder), Shishna(penis),Paurushgranthi (prostate) ,Vrishan(testes),Shukrashaya (seminalvesicles),Dimbashaya(ovaries), Perineum Garbhshaya(uterus), Yoni, Dimbvahini (fallopian tubes), Lasika granthi (lymph nodes) etc.

4. Shakha-parts of upper and lower extremities.

Part –B

Procedures in Chhaya avum Vikiran Vigyan (Imaging & Radio-diagnosis)
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 Garbha vrittuli (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 Imaging & Radio-diagnosis.

- 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, Radio- Nuclides imaging etc.

- Biology related to Chhaya avum Vikiran Vigyan

**Paper-4**

Applied Chhaya avum Vikiran Vigyan (Imaging & Radio-diagnosis )

**Part-A**
- Applied aspects of radiographic interpretation and reporting of various diseases related to systems, organs (as mentioned in paper-2\textsuperscript{nd}, part-A) and metabolism.

\textbf{Part-B}

- Applied aspects of Ultrasonography, interpretation and reporting of various diseases related to system, organ (as mentioned in paper-2\textsuperscript{nd}, part-A,) and metabolism, routine joint study, various Endo-USG, Obstetrics - Garbha vinishchaya (confirmation of pregnancy), Masanumas Garbh vridh (fetal development), Garbha swastha (fetal well being, biophysical profile) and Vyadhi (fetal diseases), Vikrita garbha (congenital anomalies, 2\textsuperscript{nd} level obstetric USG). Apara (Placenta), Nabhindar 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.

- Application of Chhaya avum vikiran vigyan in context to Ayurvedic fundamentals, diagnosis, management and research.

\textbf{Examination -}

\textbf{1} Final Year

\textbf{1 - Theory –}

- Paper 1 (100 marks, 3 hours duration)
- Paper 2 (100 marks, 3 hours duration)
- Paper 3 (100 marks, 3 hours duration)
- Paper 4 (100 marks, 3 hours duration)

\textbf{2} a) \textbf{Dissertation}

- b) \textbf{Practical} - Clinical oral procedures, interpretation and reporting – 100 marks

Guidelines for conducting practical examination (100 marks)

\textbf{Contents:}

\textit{(A) Adhitya cha karma parichaya (Preliminary knowledge of Chhaya avum Vikiran vigyan)}

1- Spotting / Short cases for radiological diagnosis

2- Equipments
3- Selection of appropriate diagnostic radiological modalities for the patients, correct advice / instructions to the patient.

4- Purva karma, Pradhan karma, Pashchat karma.

(B) Krita yogyata (Practical skills)

1- Quality control of X-rays and imaging equipments

2- X-ray—plain/contrast, spot films, fluoroscopy, digital x-rays—procedures, performance of dark room technique, their principles, pathological changes and applied interpretation and reporting.

3- Various USG procedures performance, their principles, pathological changes and applied interpretations and reporting. Various diagnostic Ultrasonography [routine, 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 obstetric 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.

4- CT scan, MRI, Radionuclide scan, PET, Mammography, Bone densitometry, Interventional radiological performance / reading, their principles, pathological changes and applied interpretations and reporting.

(C) Shastram nigadata (Teaching and Research ability)

1- Role of radiology in the field of Ayurvedic research, dissertation, research methodology, paper and project writing.

2- Teaching and audio-visual presentation performance.

3- Dissertation
(D) Adhigata tantrenopasita tantrartha, Shasatra vijaniyata (Comprehensive assessment of acquired knowledge) -

- Role of radiology in the field of Ayurvedic diagnosis, management and research.

- Ethics, environmental and legal issues related to radiology.

- Management of department of radiology.

- Safety measurements in Radio-diagnosis and imaging.

- Management of emergencies in the department of radiology .

- Further assessments and advice etc.

Pattern:

- Viva voce - 40 Marks

- Practical ability assessment - 60 Marks

  a. Adhitya cha karma parichaya (Preliminary knowledge of Chhaya avum Vikiran Vigyan) - 15 Marks

  b. Krita yogyata (Practical skills) - 25 Marks
      
      (i) Procedures - 15 Marks

      (ii) Viva on procedures - 10 marks

  c. Shastram nigadata (Teaching and Research ability) - 20 Marks

      (i) Dissertation work - 10 Marks

      (ii) Teaching ability - 10 Marks

Reference Books;

<table>
<thead>
<tr>
<th>Shusruta Samhita</th>
<th>Relevant part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charak Samhita</td>
<td>-do-</td>
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<tr>
<td>Astang Hridaya/Sangrah</td>
<td>- do-</td>
</tr>
</tbody>
</table>
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 skills 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 dairy 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.

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**FORMAT OF MODEL CHECKLISTS AND EVALUATION OF LEARNING PROGRESS**

**Checklist-1. Model Check list for evaluation of Seminar presentations**

<table>
<thead>
<tr>
<th>Name of the Candidate:</th>
<th>Date:</th>
</tr>
</thead>
</table>

| Name of the Faculty/Observer: |

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Items of observation During presentation</th>
<th>Poor 0</th>
<th>Below Average 1</th>
<th>Average 2</th>
<th>Good 3</th>
<th>Very good 4</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Whether other relevant publication</td>
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<td>Below Average 1</td>
<td>Average 2</td>
<td>Good 3</td>
<td>Very good 4</td>
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<td>Below Average 1</td>
<td>Average 2</td>
<td>Good 3</td>
<td>Very good 4</td>
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<tr>
<td>1</td>
<td>Regularity of attendance</td>
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<tr>
<td>2</td>
<td>Punctuality</td>
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<tr>
<td>3</td>
<td>Interaction with colleagues and supporting staff</td>
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<td>4</td>
<td>Maintenance of case records</td>
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<td>5</td>
<td>Investigations work up</td>
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<td>6</td>
<td>Chair side manners</td>
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<td>7</td>
<td>Rapport with patients</td>
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<td>Overall quality of clinical work</td>
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**Checklist-1. Model Check list for evaluation of Clinical Presentations**

**Name of the Candidate:**

**Date:**

**Name of the Faculty/Observer:**

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<tr>
<th>Sl. No.</th>
<th>Items of observation During presentation</th>
<th>Poor</th>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Very good</th>
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<td>1</td>
<td>Completeness of history</td>
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<td>2</td>
<td>Whether all relevant points elicited</td>
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<td>3</td>
<td>Clarity of presentation</td>
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<td>4</td>
<td>Logical order</td>
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<td>5</td>
<td>Mentioned all positive and negative</td>
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<td>6</td>
<td>Accuracy of general physical examination</td>
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<td>7</td>
<td>Diagnosis: whether it follows logical from history and findings</td>
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<td>Sl. No.</td>
<td>Strong points</td>
<td>Weak points</td>
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<tr>
<td>1</td>
<td>Communication of the purpose of the talk</td>
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<tr>
<td>2</td>
<td>Evokes audience interest in the subject</td>
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<td>3</td>
<td>The introduction</td>
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<td>4</td>
<td>The sequence of ideas</td>
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<tr>
<td>5</td>
<td>The use of practical examples and/or illustration</td>
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<tr>
<td>6</td>
<td>Speaking style (clear, monotonous, etc. Specify)</td>
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<td>7</td>
<td>Attempts audience participation</td>
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<td>8</td>
<td>Summary of the main points at the end</td>
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<tr>
<td>9</td>
<td>Ask question</td>
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<td>10</td>
<td>Answer question ask by the audience</td>
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<tr>
<td>11</td>
<td>Rapport of the speaker with his audience</td>
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<td>12</td>
<td>Effectiveness of the talk</td>
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<td>13</td>
<td>Use AV aids appropriately</td>
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</table>

**Checklist-6. Model Check list for evaluation of Dissertation presentation**

Name of the Candidate:   
Date:
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Points to be considered</th>
<th>Poor</th>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Very good</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Interest shown in selecting topic</td>
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<td>2</td>
<td>Appropriate review</td>
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<td>Discussion with guide and the faculty</td>
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<td>4</td>
<td>Quality of the protocol</td>
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<td>5</td>
<td>Preparation of proforma</td>
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<tr>
<td></td>
<td><strong>Total score</strong></td>
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</table>

**Checklist-7. Model Check list for evaluation of Dissertation progress with Guide**

Name of the Candidate: ___________________________ Date: ___________________________
## Checklist-8. Overall assessment Sheet

Name of the Candidate: ____________________________ Date: ____________

Name of the Faculty/Observer: ______________________

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Items of observation During presentation</th>
<th>Poor</th>
<th>Below Average</th>
<th>Average</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Periodic consultation with guide / co-guide</td>
<td></td>
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<tr>
<td>2.</td>
<td>Regular collection of case material</td>
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<td>3.</td>
<td>Depth of Analysis / Discussion</td>
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<td>4.</td>
<td>Department presentation of findings</td>
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<td>5.</td>
<td>Quality of final output</td>
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<td>6.</td>
<td>Others</td>
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<th></th>
<th>Total Score</th>
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- **Checklist-8. Overall assessment Sheet**

Name of the Candidate: ____________________________ Date: ____________

Name of the Faculty/Observer: ______________________

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<thead>
<tr>
<th>Name of the candidate * and Mean score</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
<td>1. Seminar</td>
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<td>2. Journal presentations</td>
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### LOG BOOK

**Table 1**

Academic activities attended

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<tr>
<th>Name:</th>
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<tr>
<td>Admission Year:</td>
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<td>College:</td>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Type Of Activity- Specify Seminar, Journal Club, Presentation, UG Teaching</th>
<th>Particulars</th>
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LOG BOOK

Table 2'

Academic Presentation made by the candidate
Name:
Admission Year:
College:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Type Of Activity- Specify Seminar, Journal Club, Presentation, UG Teaching</th>
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LOG BOOK

Table 3

Diagnostic and operative practical (Prayoga)/Chikitsa (Therapeutic)

Procedure performed

Name:

Admission Year:

College:

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<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>OP No.</th>
<th>Procedure</th>
<th>Category</th>
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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)
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 sushrutha 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 conductive to the increase of this span by (rasayan or) rejuvenation, maintenance of health (swastya), by physical (aadhibhoutika) measures, medication (bhaishajya) and concern of the soul or spirit (adhyatmika). 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 determintion (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 their 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)

- 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 Vagbha’s Astanga Hridaya), health (see all vridhhatrayee) 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 Kasyapa 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/-
4. The Indian Medicine for Central Council Act, 1970, Bare Act – 2002, Delhi Law House, Delhi, Rs. 20/-