

KERALA UNIVERSITY OF HEALTH SCIENCES

THRISSUR – 680 596, KERALA



REGULATIONS, CURRICULUM, AND SYLLABUS OF

POST GRADUATE COURSE (MD/MS) IN AYURVEDA

(With effect from 2012-13 admission)

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1. INTRODUCTION

1.1 Preamble

The regulations of the MD/MS COURSES being conducted by the Kerala University of Health Sciences is in accordance with the recommendations of the C.C.I.M, with an emphasis on the health needs of the State of Kerala.

1.2 Nomenclature of the degree

The nomenclature of Post-graduate degree in respective specialties shall be as follows.

1. Ayurveda Vachaspati (M.D.-Ayurveda) – Ayurveda Sidhanta
2. Ayurveda Vachaspati (M.D.-Ayurveda) – Kriya Sharir (Dosha-Dhatu-Mal Vigyana)
3. Ayurveda Vachaspati (M.D.-Ayurveda) – Dravya Guna Vigyana
4. Ayurveda Vachaspati (M.D.-Ayurveda) – Ras Shastra
5. Ayurveda Vachaspati (M.D.-Ayurveda) – Bhaishajya Kalpana
6. Ayurveda Dhanwantri (M.S.-Ayurveda) – Prasuti Tantra avum Stri Roga
7. Ayurveda Vachaspati (M.D.-Ayurveda) – Kaumar Bhritya-Bala Roga
8. Ayurveda Vachaspati (M.D.-Ayurveda) – Kayachikitsa
9. Ayurveda Vachaspati (M.D.-Ayurveda) – Swastha Vritta
10. Ayurveda Vachaspati (M.D.-Ayurveda) – Rog Nidan avum Vikriti Vigyana
11. Ayurveda Dhanwantri (M.S.-Ayurveda) – Shalya Tantra Samanya
12. Ayurveda Dhanwantri (M.S.-Ayurveda) – Shalya Tantra-Kshar Karma avum Anushastra Karma
13. Ayurveda Dhanwantri (M.S.-Ayurveda) – Shalakya Tantra Netra Roga
14. Ayurveda Dhanwantri (M.S.-Ayurveda) – Shalakya Tantra Shiro-Nasa-Karna avum Kantha Roga
15. Ayurveda Vachaspati (M.D.-Ayurveda) – Mano Vigyan avum Manas Roga
16. Ayurveda Vachaspati (M.D.-Ayurveda) – Panchakarma
17. Ayurveda Vachaspati (M.D.-Ayurveda) – Agad Tantra avum Vidhi Vaidyaka

2 AIMS AND OBJECTIVES OF MD/MS COURSES

The aims of the Post-graduate degree courses shall be to provide orientation of specialties and super specialties of Ayurveda and to produce experts and specialist who can be competent and efficient teachers, physicians, surgeons, obstetricians and gynaecologists (Stri Roga, Prasuthi Tantragra) pharmaceutical experts researchers and profound scholars in various fields of specialization of Ayurveda.

3. REGULATIONS

3.1 Academic eligibility for admission

3.1.1 A candidate must possess BAMS or equivalent Degree from recognized University with minimum 55% marks.

3.1.2 A candidate should qualify the Entrance Examination conducted by the competent authority as per the existing Rules of Government of Kerala and the Central council of Indian Medicine (CCIM).

3.2 Selection of students

The selection of students for the Post Graduate course shall be made based strictly on merit as decided by the Entrance Examination conducted by the competent authority approved by the Government of Kerala/Kerala University of Health Sciences and as per guidelines of the Central Council of Indian Medicine (CCIM).

3.3 Registration

3.3.1 By making a formal application in the prescribed format.

3.3.2 Original degree certificate and mark lists of qualifying examination.

3.3.3 Original Council registration certificate.

3.3.4 Allotment letter from the competent authority who conducted the Entrance Examination/ allotment letter from the Principal in the case of NRI candidates.

3.3.5 Equivalency and migration certificate wherever needed.

3.3.6 Original SSLC/equivalent certificate.

3.3.7 The fees prescribed for the course.

3.4 Duration of course

Every candidate seeking admission to the training programme to qualify for the Degree of MD/MS in the subjects conducted under the University shall pursue a regular course of study, in the concerned Department under the guidance of a recognized Post Graduate teacher for a period of three years.

3.5 Medium of instruction

The medium of instruction is English.

3.6 Period of study and attendance

3.6.1 The student shall have to undergo a study for a period of three years after the admission, out of which first year shall be devoted to preliminary course and following two years for specialty course.

3.6.2 The students shall have to attend at least eighty percent of total lectures, practicals and clinical tutorials or classes to become eligible for appearing in the examination.

3.6.3 The students shall have to attend the hospital and other duties as may be assigned to them during the course of study.

3.6.4 The students shall have to do house job duties and Clinical Registrar's duties in their respective departments during preliminary and final courses.

3.6.5 The students shall have to attend special lectures, demonstrations, seminars, study tours, and such other activities as may be arranged by the teaching department.

3.6.6 The graduate teachers having three years teaching experience shall be allowed to undertake Post-graduate training as regular student.

3.7 Post graduate department

3.7.1 Only a Department, defined as an independent academic entity of a teaching Institution, having the minimum facilities as per Norms of the C.C.I.M shall be permitted to commence a Post Graduate training programme to qualify for the award of the MD/MS Degree.

3.7.2 Minimum requirements for a Post Graduate Institution, bed strength in clinical Department, out-patient Departments, laboratory facilities, equipments, prescribed strength of faculty, number of Post Graduate students to be admitted and general aspects of training programme are in accordance with the C.C.I.M Regulations.

3.8 Minimum requirement for Post-graduate teaching centre

3.8.1 The Post-graduate education centre shall satisfy the entire minimum requirements of under graduate training as prescribed by the Council.

3.8.2 Facilities regarding training in basic sciences of Ayurveda and other supporting subjects as specified by the Council shall be provided by the Centre.

3.8.3 All the facilities of ancillary departments shall be made available by the Centre.

3.8.4 The Centre shall have adequate equipment and research facilities required for training in the related specialty and subject.

3.8.5 The minimum additional teaching staff required for starting Post-graduate course shall be one Reader and one Lecturer of concerned subject. In addition to the teachers stipulated for under graduate teaching. The specialty, which does not exist as independent department at UG level shall have one Professor, one Reader and one Lecturer for starting PG and in the absence of professor, one Reader and two Lecturers of the concerned specialty can start PG Course with intake capacity of 4 students.

3.8.6 In department of Rachana Sharir, Kriya Sharir, Dravyaguna, Rasa Shastra, Bhaishajya Kalpana, Rog Nidan and Vikriti Vigyan, Shalya Tantra, following non-teaching staff shall be posted:-

- i) Laboratory Technician (one)
- ii) Laboratory Assistant (one)
- iii) Multipurpose worker (one)

3.8.7 The Centre shall have a fully equipped hospital consisting of at least one hundred fifty beds with specialty wise adequate facilities in all departments.

3.8.8 The student bed ratio in the clinical department shall be 1:5.

3.8.9 The annual average bed occupancy in the hospital shall be more than sixty percent.

3.8.10 The teacher in post-graduate teaching shall necessarily be recognized by the University as Post-graduate teacher in concerned subject.

3.8.11 In clinical departments one Registrar or Senior Resident shall be appointed for every twenty beds.

3.9 Facilities for Post-graduate students

The stipend and contingency shall be provided at the rates prevailing in the state for other medical Post-graduate students.

3.10 Students teacher ratio

The teacher student ratio shall be such that the number of Post-graduate teachers to the number of Post-graduate students admitted per year is maintained at 1:2 in case of Professors and Readers and 1:1 for Lecturer(s). Maximum number of students per year per specialty shall not exceed six.

3.11 Qualification for Post-graduate teachers

3.11.1 The teachers deputed/appointed for Post-graduate teaching shall possess Post-graduate degree qualifications in the concerned subject.

3.11.2 For the post of Professor, thirteen years teaching experience including five years as Reader in Post-graduate teaching in the concerned subject shall be required.

3.11.3 For the post of Reader, eight years teaching experience as Lecturer including three years in Post-graduate teaching or total ten years experience of undergraduate teaching in the concerned subject shall be required.

3.11.4 For the post of Lecturer, three years professional experience after Post-graduation as Clinical registrar or Senior Resident or three years research experience in a recognized institution or three year teaching experience in the concerned subject in a recognized college shall be required.

3.11.5 Wherever there is a post of Senior Lecturer, the Lecturer with four years regular service shall be designated as Senior Lecturer.

3.12 Criteria for recognition

3.12.1 The Post-graduate education centre shall satisfy the entire minimum requirements of undergraduate training as prescribed by the Council; and in addition shall fulfill additional

requirements of Post-graduate training depending upon the type of work to be carried out in the department:

Provided that the Post-graduate Centre established by the Central Government shall satisfy the requirement specified in these regulations.

3.12.2 Facilities regarding training in Basic sciences of Ayurveda and other supporting subjects as recommended by the council shall be provided.

3.12.3 All the facilities of ancillary departments shall be available.

3.12.4 The centre shall have adequate equipment and research facilities required for training in the related specialty and subject.

3.12.5 The Centre shall have a fully equipped hospital consisting of at least one hundred fifty beds with specialty wise adequate facilities in the concerned departments.

3.12.6 The student-bed ratio in the clinical departments should be 1:5.

3.12.7 The annual average bed-occupancy should be more than sixty percent.

3.13 Method of training

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

3.13.2 The emphasis shall be given on theoretical and intensive applied training and not in dictative lectures.

3.13.3 The students shall have to acquire the knowledge about the methods and technique of research in the respective fields making use of Information Technology.

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

3.13.5 The students shall have to participate in the teaching and training programmes of Under-graduate students or interns in the respective subjects.

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

3.13.7 In the clinical training the students shall have to acquire the knowledge of independent work as specialist.

3.13.8 In the specialties of Shalya, Shalakya and Stri Roga and Prasutitantra, the students shall have to undergo training of investigative procedures, techniques and surgical performance of procedures and management in the respective specialty.

3.13.9 The student shall have to undertake training in teaching technology and research methods during the course of studies.

3.14 Examination

3.14.1 Examination and assessment

1. The Post-graduate degree course shall have two examinations in the following manner:
 - (a) The preliminary examination shall be conducted at the end of one academic year after admission.
 - (b) The final examination shall be conducted on completion of two academic years after passing preliminary examination.
 - (c) Examination shall ordinarily be held in the month of June or July and November or December every year
 - (d) For being declared successful in the examination, student shall have to pass all the subjects separately in preliminary examination.
 - (e) The result of student shall be announced as pass or fail only.
 - (f) If a student fails in one subject only in preliminary examination, he/she shall have to pass in that subject before he/she is allowed to appear in the final examination.
 - (g) If the student fails in theory or practical in the final examination, he/she can appear in the subsequent examination without requiring to submit a fresh dissertation
 - (h) The Post-graduate degree shall be conferred after the dissertation is accepted and the student passes the final examination.
2. The examination shall be aimed to test the clinical acumen ability and working knowledge of the student in the practical aspect of the specialty and his/her fitness to work independently as a 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 the specialty.

3.14.2 Subjects of examination

1. The preliminary examination at the end of one academic year after admission shall be conducted in the following subjects:-
 - (a) Medical statistics and research methodology
 - (b) Fundamentals of concern subjects of Ayurveda with an emphasis on applied aspects along with relevant studies of basic sciences of modern medicine.
2. The students shall have to undergo training in the department concerned and shall maintain month wise record of the work done during the last two years of study in the specialty opted by him/her as under:-

- a. The study of literature related to specialty
 - b. Regular clinical training in the hospital
 - c. Practical training of research work carried out in the department
 - d. Active participation in various seminars, symposia and discussions
 - e. Finalization of topic of dissertation and synopsis
 - f. The assessment of the work done during the first year on the above points shall be done at the time of preliminary examination
3. The final examination being conducted at the end of two academic years shall consist of:-
 - (a) Dissertation
 - (b) Written papers
 - (c) Clinical, oral and practical examination, as the case may be.
4. There shall be four theory papers in each specialty and one practical or clinical and viva-voce examination in the concerned specialty or group of sub-specialties' selected by the student for special study.

3.14.3 Scheme of examination

The scheme of preliminary examination and final examination to be followed in practical, clinical and oral examination shall be as follows:-

1. The examiners shall not be appointed for a period of more than three years at a time and may be re-appointed after an interval of two years
2. The examiner shall possess teaching experiences of five years Post-graduate teaching.
3. Medium of instructions shall be English.

3.14.4 Dissertation.

1. Before a student is allow to undertake the work of dissertation, the title of the dissertation shall be registered with the University within a period of six months from the date of admission and the synopsis not later than six months after passing the preliminary examination.
2. The application for registration of the title of the dissertation shall clearly mentioned the full title of the dissertation with a synopsis of the proposed scheme of the work indicating the familiarity of the student with proposed theme of work, the name of the department and the name of the designation of the guide of supervisor and co-guide, if any.
3. For approving the title a scrutiny committee shall be constituted by the University.
4. One copy of the synopsis of the dissertation shall be submitted to the Registrar, Central Council of Indian Medicine as soon as the title is approved.
5. The subjects of every dissertation shall be practical oriented, devoid of unpromising specialties and helpful in the development of Ayurveda.
6. Once the title for dissertation is approved by the scrutiny Committee of the University, the student shall not be allowed to change the title or the proposed theme of work without permission of the University.
7. The registration of the student shall be cancelled if he/she fails to submit the title.

8. No student shall be allowed to submit the dissertation before the expiry of one calendar year after approval of the topic and before six months of final year: Provided that the students shall continue his or her regular studies in the institution after submission of dissertation.
9. The subject of the dissertation shall have relation with the subject matter of the specialty.
10. The dissertation shall contain the methods and data of the research carried out by the student on the problem selected by him and completed under the guidance of the teacher approved by the University.
11. The dissertation shall consist critical survey of relevant literature, results of the research, discussion on the basis of existing literature of the subject, summary conclusion, and references cited in the dissertation.
12. The dissertation shall consist of not more than two hundred typed pages.
13. 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.
14. The guide or supervisor shall be a person of status of a Professor or Reader or Lecturer with five years teaching experience in the subject.
15. A Professor or Reader can register maximum two students in each academic year and a Lecturer can register only one student in one academic year.
16. The dissertation shall be a literary presentation and suitable for publication either as such or in an abridged form.
17. Five copies of the bound dissertation along with a certificate from the supervisor or guide should reach the office of the Registrar of the University six months before the final examination.
18. The dissertation shall be assessed by two external and one internal examiners appointed by the University.
19. The dissertation shall be accepted only after the approval of examiners appointed under sub regulation (17) and in case of disapproval by one external examiner; the dissertation shall be referred to third examiner.
20. If the dissertation is not accepted, the same shall be returned to the student with the remarks of the examiners and the student can resubmit the dissertation after making necessary improvement in the light of examiners report to the University within a further period of six months
21. The student shall be permitted to appear in the final examination of post graduate degree course only after the examiners appointed for the purpose have approved the dissertation.

Dissertation and synopsis within the period specified under sub regulation (1)

3.15 Award of degree

A candidate who has passed in all subjects of MD/MS will be eligible for award of Degree during the ensuing convocation.

3.16 Migration and transfer

Migration/ Transfer of students undergoing any Postgraduate course (Degree) shall not be permitted under any circumstances.

4. COURSE CONTENT

4.1 Syllabus and scheme of examination of existing MD/MS course

The syllabus, scheme of examination and model question papers of existing M.D/M.S. courses is appended herewith.

KERALA UNIVERSITY OF HEALTH SCIENCES
THRISSUR

SYLLABUS FOR POST - GRADUATE COURSE IN AYURVEDA

Preliminary Examination

Research Methodology & Medical Statistics
Basic Principles of Ayurveda (Sidhanta and Samhita)

Final Year Examination

1. AYURVED SIDDHANT
2. KRIYA SHARIR
3. DRAVYAGUNA VIGYAN
4. RASASHASTRA
5. BHAISHAJYA KALPANA
6. AGADA TANTRA EVUM VYAVAHARA AYURVED
7. SWASTHAVRITTA
8. ROGNIDAN & VIKRITI VIGYAN
9. MANOVIGYAN EVUM MANASROG
10. PRASUTI & STRI ROG
11. KAUMARBHRITTYA
12. KAYACHKITSA
13. SHALYA TANTRA (SAMANYA)
14. SHALYA KSHAR EVUM ANUSHAstra KARMA
15. SHALAKYA (NETRA ROG VIGYAN)
16. SHALAKYA (KARNA-NASA-KANTHA-SHIROROG)
17. PANCHKARMA

Syllabus for MD (Ayu) Preliminary Examination

PAPER – I **RESEARCH METHODOLOGY AND MEDICAL STATISTICS**

(A) METHODS OF RESEARCH

Aims and objects of research in Ayurveda, Ancient modern methods of Research. Setting up of a basic research laboratory including Animal House.

Principles and methods of fundamental, clinical, drug, and literary research, Manuscriptology principles and methods of survey of medical plants.

Radio-isotopes and their role in medical research. Radiation and their biological effects.

Introduction of specific research instruments like chromatography Spectrometer, Calorimeter, Electrophoresis apparatus and other latest research instruments.

(B) MEDICAL STATISTICS

1. Application of statistical methods to Ayurvedic research, collection, compilation and tabulation of medical statistics, methods of presentation of data. Calculation of mean, median and mode, measurement of variability, standard deviation, standard error, and normal probability curve.
2. Concept of regression and co-relation and their interpretation.
3. Tests of significance, t_x^2 and F test and their simple application.
4. Principle of medical experimentation on variation in experimental design.
5. Vital statistics.

Reference Books

- | | |
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| 1. Ayurvediya Anusandhan paddhati | - P.V.Sharma |
| 2. Research Methodology | - Prof. V.J.Thakar |
| 3. Drug Survey | - Mayaram Uniyal |
| 4. Methods in Biostatistics for Medical Students | - B.K.Mahajan |
| 5. Introduction to Biostatistics | - Huldali Bancroft |
| 6. Practical Problem in Statistics | - D.N.Elhance. |
| 7. Health Statistics | - N.S.N.Rao |
| 8. A Short text book of medical Statistics | - Sir.A.B.Hill |
| 9. Introduction to Clinical Research- William C Scheffer | |
| 10.A short text book of Medical Statistics | - Sir.Austin Brocdtord Hill
(Indian edition) |

PAPER- II
MAULIK SIDDHANT

Basic Principles of Ayurveda (Sidhanta and Samhita)

Basic Principles of Ayurveda, Principles and technical terms of other darshan along with Sankhya and Vaisheshik darshana.

Specific knowledge of principles of Sankhya & Vaisheshik along with other darshana (Philosophy) incorporated in Ayurvedic literature. Importance of Ayurvedic Philosophical concept, determination of padartha, determination of tetra, description of vada-marga, proper knowledge of Basic principle of Ayurveda, theory of evolutions, determination of purusha according to dhatu-bheda, description of tantraukti its utility, number and knowledge of technical terms of Ayurveda. Ayurvedic concept of body. Purusha-akadhaddhupurusha, shad dhadhupurusha. chaturvimsati purusha, concept of genetics in relation with sukra sonitha, Agni types relation with digestion. Immunity, ojus, balam. Definition of mana. Different types of prakrithi. General knowledge of investigation technics, X-ray, ECG, EEG, USG, CTscan, and MRIscan.

Basic principles of Kriya Sharir

Study of the main principles of practical rachana sharir & Kriya sharir (anatomy and physiology). Specific study of the following matters in the preview of prakriti & vikriti: Definition and synonyms of sarir. Types of purusha. Ayurvedic concept of body, concept of prakrithi.

- 1) Study of Sira & Dhamani along with the study of Snayu, Nadi, and Kandara.
- 2) Analysis of srotas according to Charak & Sushrut.
- 3) Detailed study of marma, with definition, variety, description, site anatomical distribution, specific action & establishment of its importance.
- 4) Knowledge of Agni, its importance, specific variety and characteristics.
- 5) Narration of Mahasrotas, description of kostha, anatomical & physiological study of Hridya (Heart), Kloma, Phuphus (Lungs) Yakrit, Pliha, Unduk, Vrikka (Kidney), Nabhi, Dimba, Basti etc. Functional study of Dhatu, Oja, Gyanedriya, Mana, Buddhi etc. & other related structures.
- 6) Knowledge of modern investigation techniques, x-ray, ECG, EEG, USG, CTscan, MRIscan etc.

Racana Sareera

1. Basic principles of racana sareera
Nirukti and interpretation of sareera. Importance of sareera jnana, shadanga sareera, pancha bhouthikatva and sukshmatva of sareera, trigunatmakatva, tridoshamayatva and dosha dhatu mala moolakatva of karma purusha sareeras.
2. Garbha paribhasha, garbha sareera, sookshma garbha sareera, beeja bhaga, beeja bhaga avayava, anuvamsikata (hereditary), garbhadanam, garbhavriddhikara bhava, garbha poshanam, garbhavakranti. Study of Sira & Dhamani along with the study of lasika, tvak, pesi, kala, grandhi, snayu, Nadi, and Kandara. Detailed study of marma, with definition, variety, description, site anatomical distribution, specific action & establishment of its importance. Nirukti, division and number of srotas. Analysis of srotas according to Charak & Sushrut. description of kostha, anatomical & physiological study of Hridya (Heart), Kloma, Phuphus (Lungs) Yakrit, Pliha, Unduk, Vrikka (Kidney), Nabhi, Dimba, Basti etc. indriya vijñana sareera. Knowledge of human anatomy.
3. Knowledge about Panchekarana, pancha bhautikatva of - sareera, dosha, dhatu and mala
4. Investigation techniques. Xray, ECG, EEG, USG, CT, MRIscan.

Basic Principles of Dravyaguna Vigyan

(A) Fundamentals ayurveda related to Dravyaguna vijñana.

History of dravyaguna from ancient period to Vedas.

Study of ashtanganighantu, dhanwanthari nighantu, shodalanighandu, madanapalanighandu, rajanighandu, kayyadevanighandu, their authors and contents.

Panchabhoutika and samanya vishesha sidhandha.

(B) Basic principles in relation to the dravya guna vijñana

Comparative knowledge regarding the quality of the drugs mentioned by aacarya Caraka, Sus'ruta and Vaagbhata.

The classification system followed by the above mentioned aacaaryaas as well as the authors of other nighantu.

The classification, definition, general knowledge regarding gurvaadi and paraadi guna, importance of guna.

Definition, classification as per different aacaaryaa, etymology, the paancabhautikata of rasa
Differentiation between rasa and anurasa, the effect of rasa in different rtu

The features of different rasa, their qualities and functions.

The administration of food and medicine as per the different rasa.

The etymology of vipaakam, classification, characteristics of different vipaaka, qualities and functions.

The hypothesis of multiple vipaaka

The etymology of veerya, characteristics, classification, functions.

The hypothesis of multiple veeryas, a discussion on veerya samkhya.

The etymology of prabhaavam, its characters and functions.

The hypothesis of vicitra pratyaraabhata as well as the importance of vipaaka.

The etymology of karma, characteristics, classification

Knowledge about deepanam, paacana, samshodhanam, samshamanam, anulomanam, sramsanam, recanam, bhedanam, graahi, lekhnam, stambhanam, madakaari, pramaathi, vyavaayi, vikaashi

(C) The basic principles of dravya guna & rasashastra in relation to dravyagunavijñanam.

The definition of the science of dravya gunam

The knowledge of sapta padaartham, the characteristics of dravya, the importance of dravya.

The collection of drug, purification, prevention of decay, shelf life.

Detailed study of following drvyas 1,vatsanabha,ativisha,gudoochi,pada,daruharidra, ahibhena,varuna,tuvaraka,nagakesara,saal,baladwaya,nagabala,salmali,gokshura,charngeri,n imbuka,bilwa,guggulu,thejahwa,nimba,jyothishmati,karkadakasringi,bhallathaka,sigru,palas a,aparajitha,yashtimadhu,yavasa,saliparni,prasniparni,karanja,kapikachu,sarapungcha,baguji, kanchanara,asoka,sirisha,aragwadha,khadira,haritaki,vibhitaki,lavanga,dadima,ghathaki,indr avaruni,koosmanda,mandukaparni,ptola,hingu,satapushpa,dhanyaka,ajamoda,yavani,jeeraka ,krisnajeeraka,manjishta,madanaphala,jadamanji,bhringaraja,pushkaramula,kishta,chitraka,v idanga,lodhra,sapthaparni,kutaja,sarpagandha,karaveera,arkadwaya,saribadwaya,kapeelu,kir atatikta,sankapushpi,trivrith,kantakari,bhrhruthi,aswagandha,dattoora,katuki,bhrmhi,syonaka, padala,vasa,nirgundi,agnimandha,bharnagi,gambhari,thulasi,punarnava,apamarga,maricha,pi ppali,jatiphala,twak,karpura,agaru,chandana,eranda,danthi,arjuna,udhumbara,bhanga,devada ru,taleesapatra,haridra,arddraka,eladwaya,rasona,kumara,satavari,vacha,mustaka,useera,pipp alimoola,palandu,misreya,lathakaranja,dronapushpi.Basic principles of drug standadisation. Basic knowledge of ethnomedicine. Basic knowledge of adulterance and substitutes.

(D) The application of the basic principles in treatment

The rogapareeksha vidhi- the darshanaadi trividha pareeksha

The aaptopadeshaadi pareeksha

The shadvidha pareeksha

Ashta sthaana pareeksha

Dashavidha pareeksha

Srotopareeksha

Dwidhopakramam

Shadvidhopakramam

The differential analysis of various disorders.

The timings of drug administration

The use of anupaanam.

Knowledge of modern investigations, X-ray, ECG, EEG USG, CTscan and MRIsan.

(A) Basic Principles of Rasa-shastra

Definition of rasa, difference between rasa and rasayana. Development of Rasasastra and its importance.

Construction of rasasala, collection of materials needed for its construction.

A critical analysis of dehavaada, dhaatuvaada, and their importance. The selection and training of a student. The features of an ideal student and teacher of rasa shastra.

Important acharyas and their disciples.

The construction and placement of rasalinga.

Rasa darshanam- the study of texts like rasaratna samuccayam, rasatarangini, rasaratnaakaram.

(B) Basic principles of shareera in relation to rasashaastram.

The relevance of paribhaasha

Knowledge of kajjali, rasapishti, rasapangha, bhavana, sodhana, avapa nirvapa, marana, yantra, moosha, koshta, puta etc

Bhasma pareeksha

(C) The basic principles of dravya guna and rasa shaatra in relation to rasa shaastram

The etymology of rasa, synonyms, types, pratisthaanam, ideal qualities, graahya and agraahya lakshana, morphological features, parade dosha, shodhanam

Ashtasamskara, parada gati, parada bandha, hingulodha parada study detail.

Classification of Rasa-mahaarasa, uparasa and saadhaarana rasa. Description of Dhatu, Updhatu, Ratna, Uparatna, Visha, & Upavisha, sudhaadi varga& their shodhana methods

The preparation of rasa aushadhi- paarada muurchanam, the description of sagandha, nirgandha, saagni and niragni types with two examples, their therapeutic administration with dosage.

Description of Kuupipakwam, kharaleeyam, parpati, potali rasa with examples. Their therapeutic application with dosage.

Drugs and cosmetics act.

The knowledge of modern instruments in the manufacture of rasa aushadhi

Maana paribhaasha

Drug standardization technique of rasa aushadhi

(D) Application of basic principles in treatment

The rogapareeksha vidhi- the darshanaadi trividha pareeksha

The aaptopadeshaadi pareeksha

The shadvidha pareeksha

Ashta sthaana pareeksha

Dashavidha pareeksha

Srotopareeksha
Dwidhopakramam
Shadvidhopakramam
The differential analysis of various disorders.
The timings of drug administration
The use of anupaanam.

Knowledge of modern investigations, X-ray, ECG, EEG, USG, CTscan and MRIscan.

Basic Principles of Bhaishajyakalpana

Definition, etymology, history and development of bhaishajyakalpana. Drugs and cosmetic act. Routes of administration and excretion of drugs (Ayurveda&Modern). Modern view of preparation useful in oral diseases. Medicaments administered through nasal route. Rules of application of lepa and mechanism of its absorption. Mechanism of action of vasti according to ayurveda and modern sciences. Knowledge of yantras used in bhaishajya kalpana
Panchavidha kashaya kalpana, expiry period, dosage, misrakalpana-ahara kalpana, sneha kalpana, sandhana, leha, vadika, choorna, lepa varthi, guggulu, lavana, mashi, kshara, ayaskriti, satwa, dhoopana and malahara.
Padhya kalpana. Different kalpanas used in mukharoga and netraroga. nasya kalpana, vasti kalpana. Collection, purification and storage of drugs. Adoption of modern pharmaceutical techniques to prepare Ayurvedic medicines. Good manufacturing practice. Intellectual property rights. Drug standardisation techniques. Oushadha sevana kala. Anupana. Investigation techniques. Xray, ECG, EEG, USG, CT, MRIscan.

Basic Principles of Rog -Nidan & Vikriti Vigyanam

A] Basic knowledge of nidana and chikitsa

Nirukti, paryaya, bheda, nirvachana, vyavacheda nidana.
Purvarupa-nirvachana, lakshana, bheda, paryaya
Roopam-lakshana, paryaya, bheda
Upasaya-anupasaya nirupanam
Samprapti-lakshana, bheda, paryaya etc
Basic knowledge of arishta, upadrava, udarka.
Importance of nidana panchaka in chikitsa
Basic concept of doshagati.
Dosha-dhatu-mala: swaroopa, sthana, bheda, vridhi kshaya lakshanas
Asrayasrayi bhava, kriyakala varnana
Vyadhikshamatva.
Rogamarga, dhatupradoshaja vyadhis.
Concept of ama, nirukti, parichaya, Sama nirama lakshana
Chikitsa chatushpada, concept of srotas.
Vyadhi-nirukti, nirvachanam, bheda.
Ashtanindita purusha and endocrinological disorders.
Nidanarthakara rogas.
Different opinions about ashtamahagadas in classics.
Doshapakam, dhatupakam
Samanyaja vyadhi and nanatmaja vyadhi.
Doshaprakopa hetus.
Kayam-nirukti, paryaya, bheda.
Chikitsyapurusha niroopanam, chikitsa prayojanam.
Relation between saririka and manasika, nija and agantu vikaras.
Role of margavarodha and dhatukshaya in vatavidhi hetus.
Deha prakriti-modern considerations

Relation between tridhatu (vayu, mayu, valasa) and tridosha with modern correlations.

B] Basic concept in shalya and shalakya

Types of vyadhi according to sushruta.

Samanya nidana of urdhwa jatrugata rogas.

Vrana-samanya nidana, nija agantu bheda, sadhyaasadyata.

Sadyovrana-nidanam and types.

C] Basic principles in prasooti streeroga and kaumarabhrutya

Yoni-roga samanya nidana, importance of vata in yoni-roga.

Balaroga nidana, sahaja vyadhis

Garbhopaghatakara bhavas, garbhavriddhikara bhavas.

D] Rogeepariksha vidhi

Detailed study of various methods of the examination of diseases and patients specially Dvididha, Trividha, chaturvidha, Panchavidha, Shadvidha, Astavidha & Dasavidha pariksha and their specific utility in medical science.

Srotopareeksha.

Dwidhopakrama, shadwidha upakrama, roga vyavachhedaka niroopanam

Oushadha sevana kalam, anupanam,

Classification of diseases according to modern science

Detailed study of all investigative procedures ayurvedic and modern. Xray, ECG, EEG, USG, CT and MRI scan

Basic Principles of Shalya Tantra

A] Basic principles of shalyatantra

Nija and agantu type of vyadhi, sadhyaasadyata.

Vrana sapham, vidradhi-nirukti, nidanam, samprapti, prakara, lakshana, upadrava, amapachyamana-pakwavastha, samanya chikitsa.

Vrana, vranasopha-samanya pariksha

Dwivraneeya chikitsa

Nadeevrana- prakara, lakshana, samanya chikitsa

Sadyovrana-nidana, prakara, lakshana, upadrava, samanya chikitsa and raktastambhana upayas

Bhagna-samanya lakshana, vargeekarana, samanya chikitsa.

Pranashtasalya vijnana and its chikitsa

Arsa, bhagandara, mootraghata, asmari, arbuda, apache, galaganda-samanya lakshana and chikitsa.

B] Basic principles of shalya and shalakya

Shalya nirukti, shalyatantrasya nirukti.

Knowledge of dhanwantari, sushruta, and their period.

Importance of shalyatantra among ashtangas

Agropaharaneeya, yogyasutreeyam-samanya parichaya

Concept of rakta as 4th dosha

Yantra shastra samanya parichaya

Trividha karma and ashtavidha karma

Kshara, Agni, raktamoksha-basic concept.

Marma-nirukti, bheda, sthanam, marmaghata samanya lakshana, chikitsa, importance of trimarma in shalyatantra.

Yantra shastras in shalyatantra

Armachedana vidhi,

Karna, oshta, nasa sandhana vidhi

C] Prasooti, streeroga, kaumarabhrutya

Yantra shastra in prasooti and streeroga.

Garbhasayamukhavistriteekarana, garbhasayalekhana, and garbhasayamukha dahanam.

Moodagarbha samanya parichaya.

Nabheenali chedana vidhi and its upadrava vyadhis.

Karnavyadhana vidhi.

Sastrakarma vidhi in karna Paliroga [karnasandhana vidhi]

D] Principles of chikitsa

Roga pareeksha vidhi-darshanadi trividha pariksha, aptopadeshadi pariksha,shadwidha pariksha,dashavidha pariksha,sroto pariksha,dwividhopakrama,shadvidhopakrama

Differential diagnosis, oushadha sevana kala, anupana.

Pre operative, operative and post operative technics, surgical ethics. Study of investigation, Xray, ECG, EEG, USG, CT, MRIscan.

Basic Principles of Shalakya Tantra

Proper knowledge of diseases above the clavicle, their etiology and clinical features. Netra-karna-mukha- siroroga nidana, poorvaroop, lakshana, samprapthy and management. Samanya chikitsa of netra rogaga, mukha roga, karnaroga, nasaroga and siroroga. Knowledge of different yantras and sastras used in diagnosis and treatment in salakyatantra. Knowledge of different surgical procedures like chedana, bhedana, lekhana, bhedana, kuttana etc. Knowledge on application of agnikarma, ksharakarma and jalukavacharana in salakya thantra. Knowledge of anatomy and physiology of eye based on panchabhoota principles. Knowledge of anatomy and physiology of ear, nose, mouth etc.

Knowledge of practical application and method of preparation of different procedures applicable in diseases above the clavicle like ashchyotan, vidalaka, putapaka, tarpana, Anjan, Dhumpna, Kavala, Gandusha, karnapurana, moordhataila Raktamokshan, nasya, Sirovasti etc. Knowledge of different yogas used in salakya thantra-chandanadi varti, paasupata varti, jaateemukuladi varti, saptaamrita lauham, kshara tailam, anutailam, shadbindu tailam, padoladi ghritam, jeevantiyadi ghritam, traibhala ghritam, ilaneer rasakriya, mukkadividala yoga etc. Knowledge of Proper care of nasa, karna and netra of newborn. Karna vedana vidhi, complications. Teeth extraction and its complication-kukunakam. Examination of patients. Description along with practical application of newer instruments applied in different diseases depicted in Shalakya Tantra. Knowledge of Xray, CT, MRI, ECG, EEG and USG.

Basic Principles of Prasuti tantra and Stri Rog

Description of importance of female anatomy, anatomy of uterus, associated hormones of menstrual cycle, ovum, fertilization & implantation, formation of twin pregnancy, underlying causes of the formation of fetus, Sada-dhatvatmka form of fetus, Maternal factors, and development of fetus, foetal implantation, Endometrial membrane, Nutrition of the fetus, Sex formation in fetus and ante-natal and pre-natal care, formation of Jarayu (amniotic membrane) and Placenta.

Different stages of labour management, haemorrhage and its control, types of foetal expulsion, Therapeutic measures of normal labour, Abnormal labour, knowledge of cephalo-pelvic disproportion, Mudhagarbha (Obstructed labour), complications and treatment of abortion and miscarriage, Post-labour measures, cutting of umbilical cord, abnormalities of lactation.

Yoni-Vyapada, Stanya Rog, general disease in female, Rakta gulma (hydatidiform mole), Breast and Uterine cancer, Uterine prolapse, exogenous vaginal diseases. Etiology, pathogenesis and symptomatic treatment of diseases occurring in females, knowledge of methods uttrar Basti, pichu, Varti, lepa, dhupan (fumigation), dhavan (douching), agnikarma

(Cauterisation) etc. Different types and uses of various surgical methods in different female disorders. Knowledge of investigative procedures such as USG, x-ray, ECG, EEG, CT, MRI.

Basic Principles of Kaumarbhritya

A) Knowledge of nidana and chikitsa of disease related to kumara.

Definition of vyadhi, seven types of vyadhi, sahaja vyadhi, adhibalapravrutha, janmabalapravrutha, sanghathabala pravvrutha daivabalapravrutha. General knowledge and treatment of birth injuries, mooda garpha janya vyadhis, nabhi sambandha roga, stanya dushti nidana, mrthbakshajanya pandu, parigarbika nidana, dantolpathijanya vikara, danta samrakshana, vatavikara, krimijanya vyadhaya kriminirharanam, unmada and apasmara, kuposhanajanya vikara, phakka roga nidana and chikitsa, Neonatal examination and related topics of vedanadya in kasyapa samhita.

B) Principles of Salya and salakya related to koumarabruthya

Definition of moodagarbha and its nirharanopaya. resection of umbilical cord in neonates. complications due to improper cutting of umbilical cord. Treatment of umbilical herniation. Surgical treatment of jalasirsha. Karnavedhanam, obstructed anus (sannirudha gudha), Phimosi (avapadika), nirudhaprakasa, kukunaka (ophtalmic neonatorum), sahaja timira (congenital cataract), lingana, karnapuyam, karnapalivikruthami, badiryam (hearing loss), mukatwam, minminatwam, khandoshtam (cleft lip), krimidantham, dental caries, tarunya pidaka.

C) Basic principles of prasoothithanthra & streeroga related to koumarabruthya:

Definition & knowledge of prasoothithanthra. special knowledge in kasyapa samhita, menstruation, menstrual cycle, description of treebija & pumbija. Garbiniparicharya, garbhavikruthi, garbasrava, mudagarbha, garbopakramam, prasavakalam, navajatha prsavasambandhi abhigatha (birth injuries), Purpeurial woman (suthika), sthanyam-sudhasthanyalakshanam, sthanya dosham, dhathri, vajram, sthanakeelakam, diseases of yoni and its prabhava on garbha, definition of koumar bhruthya, importance of koumarabruthya among ashtangas, balye swasthanirupamam, knowledge of doshadhathu malasina apakwasarira. Definition of garbha, Garbhasareeram, sareera utpathikramam, garbhavakranthi, sukra sonitham-especially knowledge about beeja, beejabhaga, beejabhaga avayava. Matrujathi shadbhavas and its importance in garbhavrudhi, order of garbhavrudhi and garbhavrudhikarabhavas. Nutrition of New born (neonate), jathamathra, ksheerapa (those who take milk only), ksheerannada (those who take both food and milk), balasamskarasjathakarma, namakarana (naming ceremony), karnavedana, annaprasana (food intake), upavesana, padagamana, stanyapanayanam (weaning), danthothbeda (eruption of teeth) dushta stanyajanya Balaroga, balagraha and apatharpanaganya disease.

D) Application of basic principles in treatment:

Examination of rogi-darsanadi trividha pareeksha
Asthopadesa dipareeksha, shodhidhupareeksha, ashtasthanapareeksha, sthrothopareeksha, dwividhopakramam (two fold line of treatment), shodhidhupakramam, rogavyavachhedaka niroopanam (differential diagnosis of disease), oushadasevana kalam (time of drug administration), anupanam, General knowledge of X ray, CT, MRI, ECG, EEG, and USG,

BASIC PRINCIPLES OF MANO VIJNANAM

A) Fundamentals of nidana and chikitsa related to mano vigyan and manas roga.

Definition of Manas – swarupa, sthana, vishaya, guna, dosha. atma nirupana, atmaguna. General knowledge about manovaha srotas, manovyaparam. Origin of knowledge, manasodayitwam. Lobha, krodha, moha, soka, vilapa, preethi, bhaya, irshya etc and its relation between the aetiopathogenesis of manas roga. Detailed knowledge of prajnaparadha and satwadi prakrithi.

Psychiatric patient assessment. general symptoms of psychiatric diseases, their classifications. Basic knowledge about organic psychosis, neurosis, schizophrenia, mood disorders, personality disorders, psychosomatic disorders, sexual perversions, sleep disorders, mental retardation. Knowledge of signs, symptoms, samprapthi and chikitsa about unmada and , apasmara, atetwabhini, vesagraham, intoxication (gadodwegam) etc. Types of nidra, nidranasa causes and treatment. Types of chikitsa- daivavyapasraya, yuktivyapasraya, satwajaya, and dravya adravaya. General treatment for manodosha. Importance of panchakarma in manas roga chikitsa. Study of moorthataila, doopana, anjana, doomapana etc. Psycho pharmacology, forensic psychiatry, community psychiatry and psychiatric emergencies.

B) Application of principles of salya and salakya in psychiatric disorders.

Raktamokshna in unmada, apasmara and other manasika rogas, manosthanam-. Relation between mind, trimarma, and role of marmabhiksha in mano roga.

C) Application of principles of prasoothithantra, streeroga, koumarabhruthya in psychiatric diseases

General knowledge Yoshapasmara, pseudocycosis, garbini chardi, child psychiatry, bhootapratisheda, nidana lakshana and treatment of grahavesa, nidana chikitsa of bed-wetting.

D) Application of basic principles in treatment:

Examination of rogi-darsanadi trividha pareeksha

Aphopadesadi pareeksha, shadvidhapareeksha, ashtasthana pareeksha, dasavidhapareeksha, srothopareeksha, dwividhopakramam (twofold line of treatment), shadvidhopakramam

rogavyavachedaka niroopanam (differential diagnosis of disease), oushadasevana kalam (time of drug administration), anupanam, General knowledge of X ray, CT, MRI, ECG, EEG, and USG,

KAYACHIKITSA

A) Fundamentals of nidana and chikitsa related to general medicine.

Definition, etymology, types and synonyms of the word kaya, chikitsa and vyadhi, chikitsapurusha description, vyadhinamakarana sidhantha. General knowledge of nidana panchaka nidana-definition, synonyms, types with examples and nidanarthakara rogas. Vyadhi-avastha ghatakam, kriyakala vivechanam, sama nirama vivechanam, origin of ama, lakshanas and examination of sama & nirama dosha, dathu malas. Detail study of avarana- dosha avarana-dhathu-mala and anyonya avarana. Knowledge of srotas, types & symptoms of srothodushti with examples. Poorvarupa, roopa, upasaya, anupasaya. Rogamarga, prognosis of diseases, arishta, vyadhi kshamatwa, complications, pada chthushtayam, vyadhi pratikara sutras- (vividhopakrama), six fold line of treatment (shadvidhopakrama), management of dosas. treatment principles of dosa kshaya & vridhi, treatment principles of ama dosa, avarana & dhatu pradoshaja vyadhi, importance of dosa & dusya in chikitsa. Daivavyapasraya, yukthivyapasraya and sathwavachaya chikitsa. General treatment principles of different rogas.

B) Basic principles of salya & salakya (in relation to kaya chikitsa)

Knowledge of rakta as fourth dosha, general knowledge of types and procedure of raktha moksha. Treatment principle of arsas, mootraghata, asmari and udara. Shiras as uthamangam. Prayoga of shashtirupakrama in kayachikitsa. General knowledge of kriyakalpa mentioned in salakyathantra - doomapana, karnapurana, nasya and moorthataila

C) Application of principles of prasoothithantra, streeroga, koumarabhruthya in kayachikitsa:

General treatment principles of yoni vyapat.Importance of vata dosha in yonivyapat.panchakarma chikitsa in garbhini .Yukthi of chikitsa in garbhini.Importance of panchakarma in balaroga.Chikitsa yukthi in balaroga.

D) Practical principles of treatments Examination of rogi-darsanadi trividha pareeksha

Aphthopadesadi pareeksha,shadvidhapareeksha,ashtasthana pareeksha,dasavidha pareeksha,srothopareeksha,dwividhopakramam(twofold line of treatment),shadvidhopakramam,rogavyavachedaka niroopanam(differential diagnosis of disease),oushadasevana kalam(time of drug administration),anupanam, General knowledge of X ray, CT,MRI,ECG, EEG, and USG,

SWASTHAVRITHA

A) Basic principles of nidana &chikitsa (related to swsthavrtha)

Knowledge of dosha,dhathu,agni,mala, srotas & their vitiation.discussion of aprasannakarana of atma,indriya, mana.importance of dinacharya,nishacharya,sadvrta,swasthyasamrakshana in maintaining susthithi of ekadashaindriyas.Detailed study of

ojas,importans,location,quality,quantity,types of vitiation including visramsas,vyapath & kshaya.classification of kala into six seasons,measures for maintenance of health during rithusandhi.measures for maintanance of homeostasis of dosas during dosa chaya,prkopa & prasama.etiopathogenesis of seasonal communicable diseases.methods to prevent spread of infection.types of immunity-natural,acquired & induced. Management of diseases due to eating disorders.annaswaroopam. Ahara kalpana, upayoga vidhi, satmya asatmya, anupana, padhya apadhy gun karma.assesment of bhumi, vayu, jala prakasham, nadi, tadaka. Definition of swastha, arogya. Pollution of air, water, food, earth etc. and their purification. Qualities of different types of water-based on its direction of flow,parvathbheda, knowledge of sarasa, tadaka,prasavana,oudbhida, choundya, vaikira, kedara, palvala & samudra.jalaguna based on desa & ritu bheda.time of collection of bhouma jala.diseases due to contamination of water,air and earth and their management. Individual,family,social and community hygiene,preventive measures and management.kalaviparyaya,prangyaparadha,parinama-sabda,sparsha,roopa, rasa gandhash ch asatmaya janya vyadhi lakshana.definition ,importance & explanation of the term brahmacharya.knowledge of viruddha ahara vihara.ideal food(adarsha bhojana) Epidemic disease their cause root of spread preventive measures and management. Knowledge of nidra, types, nidra nasa and management. Etiology, Signs and symptoms of tantra.niyathathanka aniyathanka parayahethu boumothpatha, anthrikshautpada& divyothpadadi utpada vishadikarana—sudarunayojyam karma

Defenition of yoga, types,different asanas, physiology of yoga, structural identity and preventive aspect of yoga.dasavidha nadi based on yogashastra.anatomical & physiological description in yogashastra.Importance of nisurgopachara.Role & timely administration of panchakarmavidhi in swasthasya samrakshana. Study of different rasayanas-general assessment of vatatapika & kudeepravesika rasayanaprayoga.

B) Basic principles of salya & salakya (in relation to swasthavritha)

Signs and symptoms of toxicated food in amasaya,pakwasaya.Toxicated toothbrush,anjana,abyanga,udwarthana,siroabyanga,karnapoorana & their purification.Protective measures & pathyapathya for diseases of netra ,karna,mukha,sira.Vrnithakaram,pathyapathyas for vranarogi.Pathyapathya during fracture.signs and symptoms & their purification methods of vitiated pandhanam,udakam,chaya,bhaktham,dhavasam,indhanam.Bhruhaspathikrtha yoga prokshanam,dhoopanam.Detoxicating methods for sayana asana,geha.Prakrthika bouthika visamkramanakari.

C) Application of principles of prasoothithantra, streeroga, koumarabhruthya in swasthavritha:

Garbhini charya, soothika charya, garbhopakrama, garbhotpathakara bhavas, soothikagaravidhi, kumaragaravidhi, navajatha sisuparicharya.

Immunization schedule and management of mother and child.

D) Practical principles of treatments Examination of rogi-darsanadi trividha pareeksha

Aphopadesadipareeksha,shdvidhapareeksha,ashtasthana pareeksha,dasavidha pareeksha, srothopareeksha,dwividhopakramam(twofold line of treatment), shadvidhopakramam, rogavyavachedaka niroopanam(differential diagnosis of disease),oushadasevana kalam(time of drug administration),anupanam, General knowledge of X ray, CT,MRI,ECG, EEG, and USG,

PANCHAKARMA

A) Basic principles of nidana &chikitsa (related to Panchakarma)

Knowledge of agni,srotoparichaya,shat kriya kala,immunity,panchakarma according to seasons,lamghana brimhana chikitsa,shad vidha chikitsa(as in charaka samhitha),

bheshajakala.Definition of the term panchakarma,its importance,prayogavidhi,its usage according to age.Sneha swedana-indication contraindication dose samyak ayoga atiyoga lakshanas prayogavidhi,description of the yantras & drugs used & their importance.Vamana virechana anuvasana nirooha –indications contraindications dose samya heena ati ayoda lakshanas prtayogavidhi pravara Madhya avara doshanam nirnayam & importance.Dosha of Vasthinetra & vasthiputaka.Samanyavyapat & chikitsa.General knowledge about peyadikrama & rasayana.Mode of action of vamana virechana & vasthi.

B) Basic principles of salya & salakya (in relation to PANCHAKARMA)

Types and procedure of rakthamoksha. General knowledge of ksharakarma and agni karma.Nasya-indication contraindication types dose samyak ayoga atiyoga lakshanas prayogavidhi, upayogadravya, prayojanamBasic knowledge about-doomapana gandoosha kabalam prathisarana moordhatailavidhi.

C) Application of principles of prasoothithantra, streeroga, koumarabruthya in panchakarma

Utharavasthi-indication contraindication yantrasused dose ayogaatiyogajanya roga chikitsa .Basic knowledge about pichu kshalanadi.Importance of panchakarma in streeroga.

D) Practical principles of treatments Examination of rogi-darsanadi trividha pareeksha

Aphopadesadi pareeksha,shdvidhapareeksha,ashtasthana pareeksha,dasavidhapareeksha, srothopareeksha,dwividhopakramam(twofold line of treatment),shadvidhopakramam, rogavyavachedaka niroopanam(differential diagnosis of disease),oushadasevana kalam(time of drug administration),anupanam, General knowledge of X ray, CT,MRI,ECG, EEG, and USG,

AGADATHANTHRA

A) Basic principles of nidana &chikitsa (related to agadatantra)

Definition etymology and synonyms of agada. Visha paribhasha, Visha ulpathi, visha yoni, visha kriya, visha guna and visha bheda. General knowledge of sthavara and jangama visha their adhithanam.Visha swaroopa andpanchabouthika examination. Knowledge of toxicated food, drink and dress their symptoms and management.visha sangatham, sankha visham. Contamination of lakes and pools of water.contamination of bouma, Annam, trinam, vayu.basic knowledge about upavisha.sthavara visha lakshnam & chikitsa.jangama visha damshtra lakshna. Detailed study of dooshi visha, causes, symptoms and management. Visha Vega lakshana and chikitsa. Difference between ojas and visha.General management of visha (upakrama as in charaka samhitha). Detailed study of snakes, snakebite, their symptoms and management. Study of anti venom and dailisis. Study of alcoholism and abuse of

drugs.madatya lakshana, stages& treatment.khanija visha- pradham, nagam, vangam, pashanam, tamram.

Forensic medicine, police inquest, oaths, professional secrets, types of witness, medical certificate, dying declaration, recording of evidence, determination of age and identification. Death—medicolegal aspects,modes of death,signs of death,changes afterdeath, mrthyukalanirnayam.chikitsaka kartavyam,acharam,rules, vyavasayika adhikaram.different types of asphyxial death,death due to cold and heat. Insanity- medicolegal aspects. Sexual offences, sexual perversion.

B) Basic principles of salya & salakya (in relation to agadatantra)

Study of injuries and accidents.Knowledge of surgery, raktha moksha, siraveda use of kshara and agnikarma, anjana, nasya, doomapana kakapadam in agadatantra.

C) Basic principles of prasoothithanthra & streeroga (related to agadatantra)

Vyabhichar apakrithi karma, garbhapatham, brunahathya, napumsaka vandyathvam -basic knowledge, kaumarasya vyavhara ayurveda parigyanam.

D) Practical principles of treatments Examination of rogi-darsanadi trividha pareeksha

Aphopadesadi pareeksha,shdvidhapareeksha,ashtasthana pareeksha,dasavidha pareeksha,srothopareeksha,dwividhopakramam(twofold line oftreatment), shadvidhopakramam, rogavyavachedaka niroopanam(differential diagnosis of disease),oushadasevana kalam(time of drug administration),anupanam, General knowledge of X ray, CT,MRI,ECG, EEG, and USG,

MD (Ay) PART II EXAMINATION
1. AYURVEDA – SIDDHANT-DARSHANA

PAPER – I
Ayurvediya Siddhant

Introduction and description of main basic principles described in Charak Samhita, Sushrut Samhita, Ashtang Hridya,Ashtang Samgraha etc.,analysis of principles specially loka-purusha samya, panchmahabhuta, tanmatra, tridosha, sapta dhatu, mala, oja, agni, ama, ashtahar-vidhi visehsaytana,upstambha, srotas, bij chatushtaya, dravya –guna-rasa-virya-vipaka; vad-vidhi, gyanopaya, description of karanarupa padartha according to ayurveda.

PAPER II
Darshanika siddhant

Speciality of philosophy of Ayurveda, discussion, and critical study of philosophical principles incorporated in ayurvedic text especially avyaktam (parkriti), shirshtikarma,chatuvidha pariksha,pramanvada (epistemology), shat padartha, karan karya vada, description of karya and karana along with their variety, description of karya, vivartavada, satkaryavad, parinamvada, arambhavada, parmanuvada etc., analytical study of basic principles of samkhya –nyaya-vaisheshika darshana, clinical/practical applications of above mentioned principles in therapeutics and research fields.

PAPER III
Itardarshananam Paryalochanam

Comparative study of the depicted principles of Ayurveda for achieving the goal along with the principles of other philosophical schools. Manovimarsha, atma-vicara, moksha, punarjanma, svabhavoparamvada,ashtangyoga, anekantavada, syatvada, chatuviddha siddhant, tantra yukti,

tachhilya,kalpana, arthashrya, vyakhya, vakyartha bodhak vrittis, tantraguna, tantradasha, vadamarga, pada - analytical study of above mentioned principles with applying these in therapeutics and research.

PAPER – IV

Ayurveda - Darshan Vangamayasya Itihas

Introduction and description of tantra kartas (authors), pratisamskartas(redactors), tika-karas (commentators), famous personalities of rasashastra,nighantukaras and their works from ancient times till date; Introduction and contribution of famous authors of ayurvedic texts in

Twentieth century; developmental studies of braches of Ayurveda. Recognition of education and research in Ayurveda by the government,globalisation of science of ayurveda, introduction of department of AYUSH established by central government health ministry and councils under AYUSH – CCIM, CCRAS. Formation, introduction and activities of organisations like Rashtriya Ayurveda Vidhyapitha.

Practical

1. Clinical/practical study of panchmahabhuta, tridosha, dhatu, mala etc. referring to karana and karya.
2. Application of methods of examination of charak in the examination of dravya, guna, rog and rogi.
3. Examination of minimum 100 patients in hospital is essential with practical study and application of essential secondary principles in those.

Reference Books

1. Charak Samhita with Chakrapani commentary
2. Sushruta samhita With Dalhana Commentary
3. Ashtanga Samgraha
4. Ashtanga Hridaya
5. Vaisheshika Darashan - Prashastapada bhasya
6. Nyaya Darshan - Vatsyayan Bhasya Patanjala
7. Yoga Darshan - Vyas Bhasya
8. Vedantsara
9. Sarvadarshan Samgraha
10. Bhartiya Darshan - Baidev Upadhyaya
11. Ayurved Darshanam - Acharya Rajkumar Jain

2. KRIYA SHARIR

PAPER – I

Deha Kriya Vigyan Sahitam Dosha Dhatu Mala Vigyaniam

1. **Dosha dhatu mala mulam hi shariram. Tatra shariram namachetanadhishtanabhutam. Panchamahabhuta vikara samudayatmakam samayogavahi.**

Physiological study of Human body as a composite of Dosha, Dhatu and Mala
Different levels of organisation of human body; Cell – Tissue – Organ - System;
mechanism of Hemeostasis. Cell physiology, Membrane physiology and Membrane potentials.

2. **Dosha dhatu malanam guna karma sthana prakara dhatutwa panchabhautikatwa Nirupanam.**
Properties, functions, locations and types of Dosha, Dhatu and Mala, their Panchabhautika composition and their function as Dhatu in their normal state.
Basic classification of tissues – Epithelial tissue, Muscular tissue, Connective tissue and Nervous tissue and their functions.
3. **Dosha dhatu malanam vrudhi kshaya karani lingani cha**
Causes and features of Vriddhi and Kshaya of Dosha, Dhatu and Malas.
4. **Dhatu paka, dhatupake tatposhane cha Agni (jatharagni, bhutagni, dhatwagni) srotasam karma vivechanam agni vivekaha, aharapaka vivechanam.**
Study of physiological function of Jatharagni, Bhutagni and Dhatvagni. Basic biochemistry digestion absorption and metabolism of fats, proteins, carbohydrates, vitamins, nucleic acids, minerals and water.
5. **Srotovivekaha srotasam swarupam lakshana samkhya prakaradinam samyak gyanam**
Physiological and clinical significance of Srotamsi, their properties, features, number and types.
6. **Mutra purisha swedadi malanam nirmana karma utsarga vivechanam**
Mechanisms of formation of urine, feces and sweat, their functions and mechanisms of excretion according to ayurveda and modern science.
7. **Ojo nirupanam**
Conceptual study of ojas. Physiological and clinical importance of Ojas. Description of Immunity and its types - Innate, acquired and artificial. Mechanisms involved in Cellular (T-cell mediated) and humoral (B-cell mediated) immunity, hypersensitivity, allergy and autoimmunity.
8. **Siddhantnam kriyashariropayogi vyavaharikam gyanam navyamatena vividha jivabhautika – jivarasayanika**
Study of recent advances in the understanding of different biophysical and biochemical mechanisms involved in physiology and their correlation with Ayurvedic fundamentals. Basics of Biophysics and Biochemistry. Effect of physical Agents on living system: Ultrasound, aviation and space physiology, deep sea physiology, Hypergravics and hypogravics, Hyperbraics. Filtration, diffusion, osmosis, ultrafiltration, surface tension and adsorption, colloid, acid-base and pH buffers reduction oxidation reactions.
9. **Shatkriyakala varnanam tatha chikitsiya mahatvam cha**
Physiological and clinical study of Kriyakala and their significance
10. **Introductory Study of Kriya Sharir in relation to environment.**

PAPER II

Prakriti Satva Saradi Vigyanam

1. **Prakritidyanasaya mahatvam**
Physiological study of Deha and Manas Prakriti. Classification and features of different types of Prakriti. Concept of somatotypes, psychological traits; classification of personality according to views of different scholars, application of the concept of personality in modern psychology.

2. **Sharirika evam manasika doshanam parasparika sambandha**
Psychosomatic and somato-psychological effects, Ayurvedic and Modern methods of determination of Prakriti of an individual.
3. **Satva – Sara – Samhanana – Pramana - Satmaya – Aharashakti - Vyayamashakti – Vaya**
Ityesham bhavanam bhedopadeyata purassaram samyak gyanam Conceptual study and physiological, clinical significance of assessment of Satva – Sara – Samhanana – Pramana – Satmya – Aharashakti –Vyayamashakti – Vaya and description of modern and ayurvedic methods to assess these factors.
4. **Manasa swarupam sthana vishaya karma tasya guna – gyanotpatii – nidra swapnotpatti.**
Physiological study of Manas – its properties, locations, objects, functions and mechanism of gyanotpatti, physiology of sleep and dreams, physiology of cognitive processes.
5. **Ayurvedasammata atmanah tasya astitvam lakshanam cha**
Conceptual study of atma – consciousness –and its features.
6. **Pramanavischayasya navyavidhinam parichayah**
Modern methods of quantitatively assess various body components; Development of possible objective parameters of assessing body components Introduction to modern anthropometry and its co-relation with Ayurvedic Pramana study.

PAPER III **Koshthanga Kriya Shariram**

1. **Koshtanganam yakrit hridaya phuphusa plihadi avayavanam kriya vivechanam.**
Ayurvedic and Modern Physiological study, embryological development, histology and functional importance of different viscerae like liver, heart, lungs, spleen etc.

Physiology, histology and functional anatomy of Gastro–intestinal tract, descriptive physiology of digestion and absorption in Gastro – intestinal tract, mechanism of secretion and composition of digestive juices, metabolic, secretory, vascular, and other functions of liver, functions of spleen and pancreas.

Physiology, histology and functional anatomy of cardiovascular system. Properties of cardiac muscles, cardiac cycle, cardiac output, venous return, Blood pressure and its control. Hypertension, Heart rate and its regulation. Physiological basis of ECG, Hemodynamics.

Physiology, histology and functional anatomy of respiratory system, define ventilation, mechanism of perspiration, gaseous exchange, transportation of gases, control of respiration, hypoxia, dyspnoea, artificial respiration, applied physiology of respiration.

Physiology of male and female reproductive system.

Foetal and neonatal physiology.
2. **Prachya – navyamata samanvaya paraspara tantrika gyanendriya vigyanam**
(Ayurvedic and modern views on physiology of nervous system including physiology of special senses)

Physiology of nervous system. Functioning and regulation of central nervous system. Physiology of autonomic nervous system and somatic nervous system. Physiology of special senses and general senses. Functions of the cerebellum, brainstem and spinal cord. Functional significance of cerebral cortex, basal ganglia, limbic system, pyramidal system and extra pyramidal system. Physiology of learning and motivation, long term and short-term memory, human behaviour.

3. **Nisrota granthimnam Nama swarupa, karma, antahsravadinam vishesha gyanam – antahsravigranthinam antahsrava tesham sharirvayaveshu prabhavaha**
Physiological study of Endocrinology, Enumeration of endocrine glands their nomenclature, properties and secretions. Study of various physiological effects of hormones on different systems.
4. Recent advance in the understanding of neuro – immuno – endocrinology
5. Introduction to sports physiology
6. Introduction to fetal and neonatal physiology

PAPER IV **Prayogik Kriya Sharir**

1. **Sharirbhavanam upadhatu maladinam prayoga sharir parikshana vigyanam**
Modern laboratory and ayurvedic and clinical methods of assess the functional mechanism of dosha, dhatu, mala and other factors.
2. **Mamsa – peshi -nadi – hridayadi anga avayavanam karmanam prayogik parikshan**
(Experiments/records to demonstrate nerve muscle physiology, arterial pulse, cardiac muscles and others).
3. Clinical examination of different systems in human body
4. Physical, chemical and microscopic examination of urine, determination of specific gravity and reaction. Detection of glucose, ketone bodies, proteins, bile salts, bile pigments and occult blood in urine.
5. Study of different types of microscopes and their care and use. Preparation of peripheral blood smear. Identification of RBC, WBC, platelets. Methods of total WBC count, total count, ESR, differential WBC count, absolute eosinophil count, reticulocyte count and platelet count.
6. Estimation of haemoglobin concentration in the blood, Blood groups, bleeding and clotting time, haematocrit value and red cell indices.
7. Practical knowledge of care and usage of equipments like stethoscope, sphygmomanometer, haemoglobinometer, haemocytometer, spirometer, kymograph, thermometer etc.
8. Methods of estimating blood sugar, serum lipids, serum protein, serum creatinine, serum cholesterol and blood urea.
9. Physico – chemical techniques and principles of associated instruments –centrifuge, chemical, physical, electronic balance, PH meter, spectrophotometer and calorimeter, radioactive counters and use of radioisotopes. Transducers, oscilloscopes, recording of bio – potentials: EEG, EKG and EMG, magnetocardiography, physiograph USG, MRI etc.

Requirements to be fulfilled by MD (Ay) Students during the period of 3 years

1. Engaging at least 25 theory classes for First Prof. BAMS students in the presence of teachers as a part of training in Teaching Methodology.

2. Presentation of at least 20 seminars in the department with submission of full PAPERS of all presentations and submission of Power Point Presentations of at least 5 seminars.
3. Appearing in at least 6 assessments at departmental level in theory and practical.
4. Participation and presentation of PAPERS in at least 2 National /International Seminars.
5. Publication/Communication of at least 1 research PAPER and 1 Article in journal /magazine.

Reference Books

- | | |
|---|-------------------------|
| 1. Relevant Parts of Charak, Sushut and Vaghata | |
| 2. Ayurvediya Kriyasharir | - Ranjit rai Desai |
| 3. Dehadhatvagni Vigyan | - Pt.Haridatt Sastri |
| 4. Kayachikitsa Parichaya | - C.Dwarkanth |
| 5. Prakrit Agni Vigyan | - C.Dwarkanth |
| 6. Prakrit Dosha Vigyan | - Acharya Niranjana Dev |
| 7. Sharir Kriya Vigyan | - Shiv Charan Dhyani |
| 8. Sharir Kriya Vigyanasya Adhunik Grantha | |

3. DRAVYAGUNA VIGYAN

PAPER I

Namarupa Vigyan

1. Dravya and its classification, importance of Namagyana of Dravya, origin of Namaraupagyana of Oushadhi in the Vedas, study on etymological derivation of various names and synonyms of oushadhas.
2. Objective of Dravya – Rupagyana in relation with the Oushadhas. Sthula and Sukshuma description (Macroscopic and Microscopic study) of Oushadas.
3. Study of synonyms of Oushadha / Ahara dravya mentioned in Vedic literature and in Bhava Prakash and Rajnighantu.
4. Analysis of Synonyms related to external morphology of medicinal plants.
5. Introduction of Pharmacognosy – following methods of classification of crude drugs – Morphological, Microscopical, chemical, Taxonomical, Alphabetical, Pharmacological, Therapeutical, Chemotaxonomical etc.
6. Brief knowledge regarding Nomenclature, Identification and Classification of drugs in Ayurveda based on Samhita and Nighantus.
7. Organized and unorganised drugs and their methods of evaluation.
8. Study of Distinguishing morphological characteristic features of important medicinal plants including following minimum 100 medical plants: -

Ahiphena	2.Agnimantha	3.Agaru
4.Amalaki	5.Apamarga	6.Aragvadha
7.Ardraka –shunthi	8.Arjuna	9.Arka
10.Ashvagandha	11.Ashvagola	12.Asoka
13.Ativisha	14.Bakuchi	15.Baladvayam
16.Bharangi	17.Bhallataka	18.Bidhitaka

19.Bijaka/Vijayasara	20.Bilva	21.Brahmi
22.Bringaraj	23.Brihati	24.Chandanadvaya
25.Citraka	26.Dadima	27.Danti
28.Daruharidra	29.Dhanyaka	30.Dhataki
31.Draksha	32.Durva	33.Ela
34.Eranda	35.Gambhari	36.Gokshura
37.Guduchi	38.Guggulu	39.Haridra
40.Haritaki	41.Hingu	42.Jambu
43.Jatamamsi	44.Jatiphal	45.Jirakdvaya
46.Jyotishmati	47.Kalamegha	48.Kampilla
49.Kanchanara	50.Kantakari	51.Kapikacchu
52.Karkatakshringi	53.Karpura	54.Katuki
55.Khadira	56.Kiratatikta	57.Kumari
58.Kupilu	59.Kumkum kesara	60.Kushmanda
61.Lavang	62.Kutaja	63.Lodhra
64.Madanaphala	65.Manjishtha	66.Maricha
67.Markandika	68.Musali	69.Musta
70.Nagakeshara	71.Nimba	72.Nirgundi
73.Palasha	74.Palandu	75.Pashanabheda
76.Patala	77.Patola	78.Pippali pipplimula
79.Punarnava	80.Rasna	81.Rasona
82.Saireyaka	83.Shallaki	84.Saptaparna
85.Sarpagandha	86.Sariva	87.Shalparni
88.Shalmali	89.Shankhapushpi	90.Shatavari
91.Shatapushpa	92.Shigru	93.Shirish
94.Shyonaka	95.Thalisa Patra	96.Tila
97.Tivrit	98.Tulasi	99.Tvak
100.Ushira	101. Vacha	102.Varuna

103.Vasa	104.Vata	105.Vatsanabha
106.Vidari	107.Vidanga	108.Yashtimadhu
109.Yavani	110.Deodaru	

- Drug research methods – Ayurvedic and conventional, process of Drug development.
- Standardisation of Crude Drugs as per Ayurvedic Pharmacopoeia of India (API) and WHO guidelines.
- Cultivation, Collection, Storage and preparation for the market of ASU Drugs. Introduction of Good Agricultural practices (GAP), Good Field Collection Practices (G.F.C.P) and Good storage Practices (G.S.P.) etc.
- Environmental (Desha, kala, Ritu etc), Genetic and Geneder factors affecting qualities of crude drugs.
- Introduction of tissue culture techniques used for Ayurvedic Drugs.
- Anukta dravya, (extra pharmacopeal Drugs).
- Controversial aspects of Ayurvedic Drugs.
- Adulteration and substitutes of Crude drugs, and methods of detection of adulterants.
- Knowledge of TKDL, IPR, Publications and related issues.
- Introduction of Pharmacogenomics.

Practical

- Field Identification of medicinal plants - At least three local Dravyaguna study tours within the state for field identification and one study tour should be organised out of state.
- Preparation of Minimum 50 herbarium sheets of the plants collected during study tour.
- Macroscopical, Organoleptic, and Microscopic evaluation of five different parts of plants including their powders.
- Extraction and phytochemical evaluation pertaining to TLC separation of various parts of plants (Minimum five)
- Project – Quality assessment of market sample of crude Drugs. Three crude drugs report should be produced at the time of final practical examination.

PAPER II **Guna Karma Vigyan**

- Fundamental principles of drug action both Ayurvedic and modern perspective.
- Detailed study of rasa, guna, virya, vipaka and prabhava with their applied aspects, based on views of commentators like Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu.
- Elaborate study of karmas mentioned in Brihatrayi – etimological derivation and definition along with examples.
- Detailed study of Guna karmas (Properties and Actions) and Review of Research studies carried out on important Ayurvedic Medicinal Plants during 20th century including following minimum 110 plants.

1.Ahiphena	2.Agnimantha	3.Agaru
4.Amalaki	5.Apamarga	6.Aragvadha
7.Ardraka – Shunthi	8.Arjuna	9.Arka
10.Asvagandha	11.Ashvagola	12.Asoka

13.Ativisha	14.Bakuchi	15.Baladvayam
16.Bharangi	17.Bhallataka	18.Bidhitaka
19.Bijaka/Vijayasara	20.Bilva	21.Brahmi
22.Bringaraj	23.Brihati	24.Chandanadvaya
25.Citraka	26.Dadima	27.Danti
28.Daruharidra	29.Dhanyaka	30.Dhataki
31.Draksha	32.Durva	33.Ela
34.Eranda	35.Gambhari	36.Gokshura
37.Guduchi	38.Guggulu	39.Haridra
40.Haritaki	41.Hingu	42.Jambu
43.Jatamamsi	44.Jatiphal	45.Jirakdvaya
46.Jyotishmati	47.Kalamegha	48.Kampilla
49.Kanchanara	50.Kantakari	51.Kapikacchu
52.Karkatakshringi	53.Karpura	54.Katuki
55.Khadira	56.Kiratatikta	57.Kumari
58.Kupilu	59.Kumkum kesara	60.Kushmanda
61.Lavang	62.Kutaja	63.Lodhra
64.Madanaphala	65.Manjishtha	66.Maricha
67.Markandika	68.Musali	69.Musta
70.Nagakeshara	71.Nimba	72.Nirgundi
73.Palasha	74.Palandu	75.Pashanabheda
76.Patala	77.Patola	78.Pippalipippalimula
79.Punarnava	80.Rasna	81.Rasona
82.Saireyaka	83.Shallaki	84.Saptaparna
85.Sarpagandha	86.Sariva	87.Shalparni
88.Shalmali	89.Shankhapushpi	90.Shatavari
91.Shatapushpa	92.Shigru	93.Shirish
94.Shyonka	95.Thalisa patra	96.Tila

97.Tivrit	98.Thulasi	99.Tvak
100.Ushira	101. Vacha	102.Varuna
103.Vasa	104.Vata	105.Vatsanabha
106.Vidari	107.Vidanga	108.Yashtimadhu
109.Yavani	110.Deodaru	

- Detailed study of aharadravyas as per Bhavamishra, and a brief knowledge about contemporary food items.
- Introduction to general pharmacology.
- Knowledge on procedures, Equipments and instruments used in pharmacological evaluation.
- Toxicological and safety Evaluation of Ayurvedic Drugs – Acute, subacute and chronic as well as specific toxicity studies.
- Introduction to experimental pharmacology with special reference to drug evaluation like analgesic, anti pyretic, anti inflammatory, anti diabetic, anti hypertensive, Anti lipidemic, anti ulcer, Anti microbial, Hepatoprotective, Diuretics, Adaptogens, CNS activity etc.

Practical

- Preparation of minimum one Herbal Monogram – Not less than 50 pages (to be prepared in the first year and to be submitted before examination).
- Experimental/Clinical observations of Rasapanchaka like-
 - * Taste threshold experiment (24 drugs –both ahara and oushadha dravyas)-
 - *Exothermic and endothermic evaluation of 10 ushna virya and 10 shitaviraya dravyas.
- Observation of animal experimentation models (both in vitro and in vivo)

PAPER III **Prayoga Vigyan**

- Principles of drug administration and drug delivery regimen Bhaishajya Marga (routes of drug administration), Matra (Dosage), Anupana (Vehicle), Sevenkala (Time of drug administration), Sevankalavadhi (duration of drug administration), Pathyapathyam (Do's /Don'ts) Contraindication/Adverse drug reaction etc.
- Clinico-pharmacological evaluation/Amayic Prayoga (Therapeutic administration) of drugs which including following minimum 110 plants.

111.Ahiphena	112.Agnimantha	113.Agaru
114.Amalaki	115.Apamarga	116.Aragvadha
117.Ardra – shunhi	118.Arjuna	119.Arka
120.Ashvagandha	121.Ashvagola	122.Asoka
123.Ativisha	124.Bakuchi	125.Baladvayam
126.Bharangi	127.Bhallataka	128.Bibhitaka
129.Bijaka/Vijayasara	130.Bilva	131.Brahmi

132.Bringaraj	133.Brihati	134.Chandanadvaya
135.Citraka	136.Dadima	137.Danti
138.Daruharidra	139.Dhanyaka	140.Dhataki
141.Draksha	142.Durva	143.Ela
144.Eranda	145.Gambhari	146.Gokshura
147.Guduchi	148.Guggulu	149.Haridra
150.Haritaki	151.Hingu	152.Jambu
153.Jatamamsi	154.Jatiphal	155.Jirakdvaya
156.Jyotishmati	157.Kalamegha	158.Kampilla
159.Kanchanara	160.Kantkari	161.Kapikacchu
162.Karkatakshringi	163.Karpura	164.Katuki
165.Khadira	166.Kiratatikta	167.Kumari
168.Kupilu	169.Kumkum kesara	170.Kushmanda
171.Lavang	172.Kutaja	173.Lodhra
174.Madangaphala	175.Manjishtha	176.Maricha
177.Markandika	178.Musali	179.Musta
180.Nagakeshara	181.Nimba	182.Nirgundi
183.Palasha	184.Palandu	185.Pashanabheda
186.Patala	187.Patola	188.Pippali pippalimula
189.Punarvana	190.Rasna	191.Rasona
192.Saireyaka	193.Shallaki	194.Saptaparna
195.Sarpagandha	196.Sariva	197.Shaiparni
198.Shalmali	199.Shankhapushpi	200.Shtavari
201.Shatapushpa	202.Shigru	203.Shirish
204.Shyonaka	205.Thalisa patra	206.Tila
207.Tivrit	208.Tulasi	209.Tvak
210.Ushira	211.Vacha	212.Varuna
213.Vasa	214.Vata	215.Vatsanabha

216.Vidari	217.Vidanga	218.Yashtimadhu
219.Yavani	220.Deodaru	

3. Consideration of Samyoga – Virodha (Drug incompatibility).
4. Principles of clinical pharmacology
5. Introduction to reverse pharmacology.
6. Knowledge about Pharmacovigilance (ADR) in Ayurveda and conventional system of medicine.
7. Clinical trial-stages of clinical drug Research as per GCP guidelines, protocol designing, clinical Research & data management.
8. Bioethics in Clinical Research.
9. Introduction of Pharmacovigilance/ observational study

Practical

1. Pharmacovigilance/observational study-minimum one drug.
2. Survey of Adverse Drug Reaction (ADR) in prescribed format of national pharmacovigilance programme of ASU Drugs (Minimum 3).
3. Regular clinical training in the hospital for submission of Ekala Aushadhi Prayoga (Single drugs trial/clinicopharmacological studies) (Minimum 20)

PAPER IV

Ninghantu Parichaya – Yogavigyanam

1. History of Dravyaguna.
2. Up-to-date knowledge of literature of Dravyaguna – up-to recent editions of medicinal plant database etc.
3. Utility of Nighantu. Salient features of the following Nighantus (including following nighantus) with authors, name and period – Paryaya ratnamala, Sushruta nighantu, Dhanvantari nighantu, Hridayadipika nighantu, Ashtang nighantu, Bhavaprakasha nighantu, Siddhamantranighantu, Madhanapala nighantu, Rajavallabha nighantu, Madhava Dravyaguna, Kaiyadeva nighantu, Shodhala nighantu, Chamatkari nighantu, Saligram nighantu, Nighantu adharsha, Nighantu ratnakara, Priya nighantu and other contemporary works.
4. Importance and principles of formulations as per Ayurveda.
5. Introduction to relevant provisions of Drugs and Cosmetic Act, Magic Remedies Act, Intellectual Property Right (IPR) and publication issues, Regulations pertaining Import and Export of Drugs.
6. Good Manufacturing practice (GMP).
7. Quality control procedures of formulations prescribed by Drug Regulatory Authorities.
8. General awareness about Nutraceuticals, Cosmeceuticals, food additives, Excipients etc.
9. Detailed study of five formulations /Yogas from each kalpana of crude drugs delineated in Sharangadhara samhita and Ayurvedic formulary of India (AFI).
10. Knowledge about herbal extracts colours, flavours and preservatives.
11. Standardization of various Ayurvedic kalpana eg – Churna, Vati, Avaleha, Siddha Sneha, Asava Arishta etc.

Practical

1. Shodhana methods of Visha dravyas.
2. Preparations of two yoga from each kalpana of Ayurvedic formulary of India.

3. Microscopical evaluation of certain churna formulation e.g. Sitopaladi, Hingvashtak, Trikapu, Triphala etc.
4. Chemical evaluation of Asavas & Arishtas.

Dessertation

A Dissertation containing any aspects pertaining to drug identity, purity, quality, safety, and efficacy (experimental/clinical study) etc. should be prepared under the guidance of approved supervisor in Dravyaguna and submitted 6 months before the final examination.

A certificate endorsed by scholar and supervisor should be submitted regarding original study. The approval of Dissertation shall be essential before appearing the final examinations.

Reference Books

- | | |
|---|------------------------------|
| 1. Rigvedasya Aushadhi Suktam | - Sayana Bhashya Sahitam |
| 2. Relevent parts of Charak, Sushrut and Vagbhata | |
| 3. Dravyaguna Vigyanam | - Yadavji Trikamji Acharya |
| 4. Dravyaguna Vigyanam | - Acharya Priyavrat Sharma |
| 5. Aushadhiguna Vigyanam | - Pt. Vishwanth Dwivedi |
| 6. Kriyatmak Aushadh Parichaya vigyan | |
| 7. Dhanwantri Nighantu Rajnighantu Sahit | |
| 8. Sharangdhar Samhita | |
| 9. Yogaratnakar | |
| 10. Aushadgunadharma Shastra | - Pt. Gangadhar Shastri Gune |
| 11. Modern Texts Related to Dravyaguna Vigyan | |

4. RASA SHASTRA

PAPER I

Adharabhuta Siddhant, Rasa Chikitsa and Pharmacy Management

PART – A

Adharabhuta Siddhant and Rasa chikitsa

1. **History and Chronological evaluation** of Rasa shastra, Concept of Raseshwar darshan and study of Rasa granthas with special emphasis on Rasarnava, Rasahridaya tantra, Rasa Ratna Samucchaya, Sharngadhara Samhita, Rasendra Chintamani, Rasa Ratnakar, Rasadhyaya, Rasa kamdhenu, Anandkanda, Ayurveda Prakash, Bhavaprakash, Rasatarangini and Relevant portions of Brihatrayi.
2. **Concept of Rasamandapa** and establishment of Rasashala in accordance with GMP
3. **Fundamental Principles** of Rasashastra and Bhaisajya kalpana including principles of designing different formulations with reference to Samslesha Vishleha and other principles.
4. **Study of ancient and metric** systems of weights and measures including kala mana with their correlation.
5. **Technical terminologies** (Paribhasha) used in Rasa shastra and Bhaishajya kalpana.
6. **Concept of Kshetrikaran**, Importance of association of Rasa with Loha and Rasa-abhraka with loha (Rasyoga and Rasabhrayog), Study of Kramana (Anupana) yoga as described in Rasa Ratnakar, Rasayan khanda and Ananda kand, Study of Ashuddha, Apakva, Avidhi sevitā Rasa Dravya sevana dosha and its management. Concept of lohajirna and Rasajirna.

PART B
Pharmacy Management

1. Management of Pharmacy, Store and Inventory Management, Personnel Management, Good Manufacturing Practices related to Ayurvedic Drug Industry.
2. Marketing Pharmaceutical Services.
3. Product Release and Withdrawals
4. Community Pharmacy
5. Laws Governing Pharmacy.
- a) Relevant regulatory provisions of Ayurvedic drugs in Drug and Cosmetic Act 1940 and Rules 1945
- b) Laws pertaining to Drugs and Magic remedies (objectionable advertisement) Act – 1954.
- c) Prevention of Food Adulteration (PFA) act.
- d) Laws pertaining to Narcotics.
- e) Factory and Pharmacy Acts.
- f) Consumer Protection Act – 1986
6. Regulatory Affairs related to International Trade and Practices of Ayurvedic Drugs.
7. Introduction to Ayurvedic Pharmacopoeia of India, Ayurvedic Formulary of India.
8. Introduction to Indian Pharmacopoeia, British and United States Pharmacopoeia, Pharmacopoeial Codex.
9. Introduction to Traditional Knowledge Digital Library.

PAPER II
Aushadh Prasamsaskaran evam Rasa dravya Vigyan
PART – A
Aushadh Prasamsaskaran dravya Vigyan

1. Detailed knowledge of ancient and contemporary Yantropakarana and their accessories used in Aushadhikaran and their contemporary modification such as yantras, mushas, patas, Koshthis, Bhrashtis, Muffle furnances and other heating appliances, ovens, driers etc. used in manufacturing of Rasaushadhis in small scale and large scale along with their applications.
2. Study of Samskara, definition, types and its effect on Physico-chemical and Therapeutic properties of Samskaraha dravya. Role of Agni (Heat) – Jala and other dravas (Water and other processing liquids), Kala (Time span), Patra (Container) and other processing materials and their significance in Aushadhikaran.
3. Detailed knowledge of Shodhana with special emphasis on Shodhan dravya, instrumentation and processing techniques in relation to Shodhya dravya.
4. Study of Mardana and its Significance in Aushadhikaran. Concept of Bhavana, detailed knowledge of ancient and contemporary grinding and trituration techniques.
5. Concept of Puta, definition, types and specifications of different Putas. Significance of different Putas in relation to Bhasmikaran and therapeutic efficacy or dravya under process. Bhasma pariksha vidhi and its significance in relation to contemporary testing procedures.
6. Detailed knowledge of Marana, with special emphasis on Marak dravya, Instrumentation, Processing technique in relation to Martya Dravya.
7. Detailed knowledge of Amritikaran and Lohitikaran and its significance in preparation of Bhasma with reference to dravya under process.
8. Detailed knowledge of Satvapatan; Shodhan, Mridukaran and Maran of Satva, its significance, in relation to therapeutic efficacy of dravya under process.
9. Detailed knowledge of Druti, its processing and its significance in relation to therapeutic efficacy.
10. Concept of Jarana, Moorccana, Bandhan, Pakshaccheda and Maran in relation to Parad.

PART – B
Rasa Dravya Vigyan

1. Detailed ancient and contemporary knowledge of Parada and its compounds with reference to Source, Occurrence, availability, Physico – chemical characterisation, Grahya Agrahyatva, Shodhan maranadi vidhi, Therapeutic Properties and uses.
2. Detailed ancient & contemporary knowledge with Geochemical/mineralogical/Biological identification, source, occurrence, availability, physico-chemical characterization, grahya –agrahyatva, Shodhan Maranadi Vidhi and Therapeutic properties and uses of drvyas included in Maharasa, Uparasa, Sadharana rasa, Dhatu, Upadhatu, Ratna, Uparatna, Visha, Upavisha, Sudha Varga, Lavan Varga, Kshar Varga and other varga used in Rasashastra.
3. Detailed knowledge of Standard Operating Procedure of manufacturing, Standardisation, Quality control, storage, therapeutic efficacy, Mechanism of action, Dose, Anupan and Method of administration of following Bhasma and pishti viz:

Bhasma – Abraka Bhasma, Svarnamakshika Bhasma, Kasis Bhasma, Svarna Bhasma, Rajat Bhasma, Tamra Bhasma, Loha Bhasma, Mandur Bhasma, Naga Bhasma, Vanga Bhasma, Yashad Bhasma, Trivanga Bhasma, Pittal, Kamsya and Varthaloha Bhasma, Shankha Bhasma, Shukti Bhasma, Kapardika Bhasma, Godanti Bhasma, Praval Bhasma, Mrigashringa Bhasma, Mayurpiccha Bhasma, Kukutand twaka Bhasma, Hiraka Bhasma, Manikya Bhasma.

Pishti – Praval Pishti, Manikya Pishti, Mukta Pishti, Jahara mohara pishti, Trinakanta mani pishti.

4. Principles of Aushadhi Patha Samyojan, Standard Operating Procedure of Preparation , Quality Control, Storage and Stability of Kharaliya, Parpati, Kupipakwa and Pottali Kalpa.

PAPER III
Aushadha Yoga Vigyan
PART – A

Rasa Yoga Vigyan

Detailed knowledge of Aushadhi Patha Samyojan, Therapeutic efficacy, Mechanism of action, Dose, Anupan and Method of administration of following Aushadhi Yogas.

1. Kharaliya Yoga

Shwasakuthara Rasa, Tribhuvanakirti Rasa, Higuleshwara Rasa, Anandabharirava Rasa, Mahalakshmvilasa Rasa, Vasnathakusumakara Rasa, Vasantamalti Rasa, Bhrihatvata Chintamani Rasa, Laghusutashekhar Rasa , Sutashekhar Rasa, Ramban Rasa, Chandrakala Rasa, Yogendra Rasa, Hridyarnava rasa, Grahanikapata Rasa, Garbhapala Rasa, Chandrakala Rasa, Yogendra Rasa, Hridyarnava rasa, Grahanikapata Rasa, Grabhapala Rasa, Jalodarari Rasa, Mrityunjaya Rasa, Madhumalini vasanta Rasa, Arshakuthara Rasa, Krimimudgara Rasa, Suchikabharana Rasa, Trinetra Rasa, Smrutisagara Rasa, Vatagajankusha Rasa, Agnikumar Rasa, Ekangavir Rasa, Kamadudha Rasa, Purnachandrodaya Rasa, Prataplankeshwara Rasa, Mahavata vidhwansaka Rasa, Kasturibhairava Rasa, Ashwakanchuki Rasa, Gulmakuthara Rasa, Mahajwarankusha Rasa, Chandramrita Rasa, Kaphketu Rasa, Prabhakara Vati, Pravala Panchamrita, Gandhaka Rasayana, Chaturbhuj rasa, Navajivan rasa, Shonitargal rasa, Raktapitta kulakandan rasa, Amavatari Rasa, Kravyada Rasa, Garbhachintamani Rasa, Chintamani Rasa, Trilokyachintamani Rasa, Pradarantaka Rasa, Vangeshwara Rasa, Brihatvangeshwara Rasa, Shwasakasa Chintamani Rasa, Smritisagar Rasa, Arogyavardhini Vati, Chandraprabha Vati, Agnitundi vati, Shankha Vati.

2. Loha Kalpa

Ayaskriti, Loha Rasayana, Amlapittantaka loha, Chandanadi loha, Dhatri loha, Navayasa loha, putapakva vishamajwarantaka loha, Shilajatwadi loha, Tapyadi loha, Saptamrita loha, Amiapittantaka loha, Chandanadi loha, Dhatri loha, Punarnava Mandura, Amritasara Loha, Shankaramat loha, Pradarantaka loha, Rohitaka loha.

3. Kupipakva Yoga

Rasa Sindura, Makaradhwaja, Sidhamakuradhwaja, Samirapannaga, Swarnavanga, Malla sindura, Rasa Karpura, Rasa Pushpa, Maniikya Rasa.

4. Parpati Yoga

Rasa Parpati, Loha Parpati, Tamra Parpati, Suvarna Parpati, Gagana Parpati, Vijay Parpati, Panchamrit Parpati, Shwet Parpati, Bola Parpati.

5. Pottali Yoga

Rasagarbhapottali, Hemagarbhapottali, Mallagarbha pottali, Pottali, Hiranyagarbha Pottali, Shankagarbha Pottali, Lokanatha rasa, Mriganka Pottali.

PART – B **Bhaishajya Yoga Vigyan**

Detailed knowledge of Aushadhi Path Samyojan, Therapeutic efficacy, Mechanism of action, Dose, Anupan and Method of administration of following Aushadhi Yogas:

1. Panchavidha Kashayas and their Upakalpa

Aradraka swarasa, Tualsi swarasa, Vasa putapaka swarasa, Nimba kalka, Rasona kalka, Kulattha Kwath, Punarnavasthaka Kwatha, Rasna saptaka kwatha, Dhanyak hima, Sarivadi hima, Panchakola phanta, Mustadi pramathya, Kharjuradi mantha, Shadanga Paniya, Laksha rasa, Ajamoda arka, Yavanyadi arka, Chinchapa naka, Candana panaka, Banapsha sharkara, Nimbu sarkara, Darvi rasakriya, Amrita satva, Ardraka satva, Arjuna kshirapaka, Rasona kshirapaka.

Pathya Kalpana

Yavagu, (Krita and Akrita), Ashtaguna manda, Laja manda, peya, Vilepi, Krishara, Yusha, Mudga yusha, Kulattha yusha, Saptamushtika yusha, khad, Kambalika, Raga, Shadava Mamsarasa, Veshavara, Takra, Udasvita, Katvar, Mathita, Chhacchika, Dadhi, Tandulodaka, Neutraceuticals and Food Supplements.

2. Churna

Sitopaladi Churna, Talisadi Churna, Triphala Churna, Hingvashtaka Churna, Yashtimadhu Churna, Avipattikara Churna, Swadishta Virechana Churna, Trimada Virechana Churna, Lavana Bhaskar Churna, Sudarshana Churna, MahaSudarshana Churna, Ajanodadi Churna, Hingvadi Churna, Eladi Churna, Dadimashtaka Churna, Trikatu Churna, Vaishwanara Churna.

3. Gutika

Arogya vardhani vati, Chandraprabha vati, Chitrakadi Gutika, Sanjivani Vati, Lasundi vati, Lavangadi Vati, Vyoshadi vati, Khadiradi vati, Kankayan Vati, Abhayadi Modak, Marichyadi gutika, Amalakyadi gutika, Samshamini Vati, Kutaja Ghana vati.

4. Guggulu

Yogaraja Guggulu, Maha yogaraja Guggulu, Trayodashanga Guggulu, Kanchanara Guggulu, Rasnadi Guggulu, Triphala Guggulu, Simhanada Guggulu, Gokshuradi Guggulu, Kaishora Guggulu, Panchatikta Guggulu, Amritadi Guggulu, Vatari Guggulu, Lakshadi Guggulu, Abha Guggulu.

5. Snehapaka

Sneha Moorchhana – Ghrita Murchana, Taila Murchhana

Siddha Ghrita – Shatavari Ghrita, Jatyadi Ghrita, Phala Ghrita, Dadimadi Ghrita, Kshira shatpala Ghrita, Triphala Ghrita, Dhanvantri Ghrita, Amritaprasha Ghrita, Kalyanaka Ghrita, Brahmi Ghrita, Changeri Ghrita, Panchatikta Ghrita, Sukumara Ghrita.

Siddha Taila – Maha Narayana Taila, Maha Masha Taila, Bala Taila, Nirgundi Taila, Shadbindu Taila, Vishagarbha Taila, Sahacharadi Talla, Jatyadi Taila, Apamarga Kshara Taila, Tuvaraka Taila, Kshirabala Talla, Lakshadi Taila, Anu Taila, Kumkumadi Taila, Hingutriguna Taila, Kottumchukadi Taila, Prasarinyadi Tila, Dhanwantari Taila, Balashwagandhadi Taila, Balaguduchyadi Taila, Nilibhringyadi Taila, Brihadavadi Taila, Irimedadi Taila, Chandanadi Taila, Panchaguna Taila, Arka Taila.

6. Avaleha

Vasa Avaleha, Brahma rasayana, Chyavanprasha Avaleha, Kushmanda Avaleha, Vyagri Haritaki Avaleha, Dadima Avaleha, Bilvadi Avaleha, Kantakarayavaleha, Haridra Khanda, Narikela khanda, Saubhagya shunthi paka.

7. Sandhan Kalpa

Shukta -Ikshu shukta, Tushambu, Kanjik, Sandaki.

Madya-Sura, Shidhu, Varuni

Asava Arishta – Lodhrasava, Kumaryasava, Ushirasava, Chandanasava, Kanakasava, Sarivadyasava, Pippalyasava, Lohasava, Vasakasava, Kutajarishta, Draksharishta, Raktamitrarka, Dashamularishta, Abhayarishta, Amritarishata, Ashokarishta, Sarasvatarishta, Arjunarishta, Khadirarishta, Ashwagandha Arishta, Vidangarishta, Takrarishta.

8. Miscellaneous – Phala varti, Chandrodaya varti, Arka lavana, Narikela lavana, Triphala masi, Apamarga kshara, Snuhi kshara, Ksharasutra, Atasi upanaha, Sarjarasa malahara, Gandhaka malahara, Sinduradi Malahar, Shatadhouta Ghrita, Sahasra Dhouta Ghrita, Sikta taila, Dashanga lepa, Doshaghna lepa, Bhallataka taila, Jyotishmati Taila, Bakuchi Taila, Dashanga dhupa, Arshoghna dhupa, Nishadi Netra bindu, Madhutailika Basti, Sneha Basti, Matra Basti, Yoga Basti, Karma Basti, Kala Basti.

PAPER IV

Pharmaceutical Science

PART – A

Pharmaceutical technology

1. Scope and Evolution of Pharmacy
2. Information Resources in Pharmacy and Pharmaceutical Science
3. Posology
4. Colloidal and Coarse dispersion and pharmaceutical Rheology
5. Preformulation
6. Separation
7. Principles of Distillation, Methods of Extraction, Infusion, Décoction, Maceration, Percolation and Fusion
8. Sterilization & Sterile products, Ophthalmic and Parenteral Preparations.
9. Preservation and stabilization of pharmaceutical products

10. Drying, Open and Closed Air drying, Freeze drying, Vacuum drying and other drying methods.
11. Pharmaceutical Excipients
12. Oral Solid Dosage Forms, Powder, Size reduction & size separations, Principles of mixing Micrometrics – Methods of determination of particle size, shape & Surface area, Methods of compression & Consolidation of powder solids, Tablets, Sustained release dosage forms, Suppositories & Pessaries, Capsules – Hard capsules & soft gelatin capsules & micro encapsulation.
13. Semisolid Dosage Forms Emulsion, Suspensions and Extracts.
14. Liquids - Solution, Solubility Phenomenon, Diffusion & Dissolution , pH, Buffers & Isotonic solutions, Clarification & Filtration: Techniques of filtration & Centrifugation , Syrup , Elixirs
15. Pharmaceutical aerosols.
16. Topical drugs and Cosmetics
17. Packaging Materials and Labeling
18. Standardization of Raw Material, In process Material and Finished Product

PART – B **Pharmacology & Toxicology**

Pharmacology

1. **Principles of Pharmacology** Pharmacodynamics & Pharmacokinetics: Absorption, distribution, mechanism of action & Excretion, Dose response relationship, structure activity relationship
2. Routes of administration of drug
3. Factors modifying drug effect, Drug interactions, Adverse drug reaction and Drug toxicity.
4. Detailed knowledge of Pharmacovigilance - National and International Scenario, Pharmacovigilance of Ayurvedic Drugs Clinical pharmacology: Preclinical & clinical evaluation, Bioavailability and Bioequivalence.

Toxicology

1. Principles of Toxicology
2. Toxicology of Metallic , Mineral, Plant & Animal products General principles of Management of Acute and Chronic Toxicity

Practicals

Minimum 150 practicals to be performed covering all the dosage forms, Educational Visits to minimum Five (5) GMP approved Ayurvedic Pharmacies.
Ten days posting in R&D/Production unit in Ayurvedic Pharmacy.

Reference Books

1. Rasendra Chintamani
2. Rasakamadhenu
3. Rasaratna Samucchaya
4. Anand Kanda
5. Rasarnava
6. Bharatiya Rasashastra - Vishvanath Dwivedi
7. Rasa – Bhaishaja Kalpana Vigyan - Santhosh Khandal
8. Modern texts related to Rasashastra
9. Rasahridaya tantra

10. Rasa Ratnaka
11. Arka Prakash
12. Rasatarangini
13. Rasajala Nidhi
14. Kupipakwa Rasayana - Harisharananand
15. Parad Vigyaneeeyam - Vasudeva Moolashankar Dvivedi
16. Rasaadhyaya
17. Rasa Chandanshu
18. Chakradatta - Ratnaprabha commentary
19. Gada Nigraha
20. Vangasena
21. Vaidyaka Paribhasha Pradeepa
22. Rsayoga Sagara
23. Bhasma vigyan - Harisharananand
24. Ratna Dhatu Vigyan - Badrinarayana Shastri
25. Remington: Science and Practice of Pharmacy
26. Industrial Pharamacy - Lackma
27. Text Book of Phrmacology - Goodman and Gilman
28. Dana's Text Book of Minerology
29. Quality Control of Ayurvedic Drugs - PLIM, Gaziabad publication
30. Ayurvedic Pharmacopeia of India
31. Ayurvedic Formulary of India
32. Indian Pharmacopeia
33. British Phamacopeia
34. United States Pharmacopeia
35. Pharamacopeia Codex
36. Current Good Manufaturing Practices
37. Drugs and Cosmetic Act 1940 and Rules 1945
38. Drugs and Magic remedies (Objectionable advertisement) Act 1954
39. Prevention of Food Adulteration (PFA) act
40. Laws pertaining to Narcotics
41. Factory and Pharmacy Acts
42. Consumer protection Act – 1986
43. History of Hindu Chemistry - P.C.Roy
44. Ayurvedeeya Shodhan Vidhi - Dhootpapeswar Publication
45. Siddha Yoga Sangriha - Yadavaji Trikamji Acharya
46. Rasamritam - Yadavaji Trikamji Acharya
47. Dravyaguna Vijnan Part -1 and 2 - Yadavji Trikamji Acharya
48. Dravyaguna -Chakradatta CCRAS Publication
49. Sahasrayoga
50. Rasa –tantra sara evam Siddha prayoga Sangriha - KrishnagopalKaleda publication

5. BHAISHAJYA KALPANA

PAPER – I
Adharabhuta Siddhant and Pharmacy Management

PART –A
Adharabhuta Siddhant

1. Concept of Bhesaja and Kalpana, difference between Aushadh and Bhesaj, History and Chronological evaluation of Bhaishajya kalpana. Knowledge about classical texts related to Bhaishajya kalpana with special emphasis on Bruhatrayi, Sharangdhar Samhita, Chakradatta, Bhesaj Kalpa, Bhaishajya Ratnavali, Bhava Prakash Nighantu, Vaidyaka Paribhasha Pradipa.
2. Fundamental Principles of Bhaishajya kalpana and Rasa shastra including principles of designing different formulations with reference to Samslesha Vishieha and other principles.
3. Study of ancient and metric systems of weights and measures including Kala mana with their correlation.
4. Technical terminologies (Paribhasha) used in Bhaishajya Kalpana and Rasa shastra.
5. Collection, Storage and Preservation methods of different Fresh and Dry Aushadhi dravyas, their Grahya Agrahyatva.
6. Detailed knowledge of Dose, Anupana, Aushadha sevan kala and Route of Drug Administration.
7. Ancient view of Aushadha nirmana shala and Ayurvedic pharamacy in accordance with GMP.

PART –B
Pharmacy Management

1. Management of Pharmacy, Store and Inventory Management, Personnel Management, Good Manufacturing Practices related to Ayurvedic Drug Industry.
 - a. Marketing Pharmaceutical Services
 - b. Product Release and Withdrawals
 - c. Community Pharmacy
 - d. Laws Governing Pharmacy
 - i. Relevant regulatory provisions of Ayurvedic drugs in Drug and Cosmetic 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. Laws pertaining to Narcoties
 - v. Factory and Pharmacy Acts
 - vi. Consumer Protection Act – 1986
2. Regulatory Affairs related to International Trade and Practices of Ayurvedic Drugs
3. Introduction to Ayurvedic Pharmacopeia of india, Ayurvedic formulary of India.
4. Introduction to Indian Pharmacopeia, British and United States Pharmacopeia, Pharmacopial Codex
5. Introduction to Traditional Knowledge Digital Library

PAPER - II
Aushadha Prasamsaskarana
PART –A

1. Detailed ancient & contemporary knowledge with Pharmacognostical /Geochemical/Mineralogical identification, source, occurrence, availability, classification, physic-chemical characterization, grahya-agrahyatva, therapeutic properties and uses of raw material of plant, mineral and animal origin.
2. Detailed knowledge of ancient and contemporary Yantropakarana and their accessories used in Aushadhikaran and their contemporary modification such as Khalva yantras, Peshani Yantra, Pulveriser, Disintegrator, Sieve Shaker, Tableting Machine, Pill thread making and Pill cutting Machine, Mixer, Mass Mixer, Grinder, Emulsifier, Strip/Blister Packing Machine, Bottle sealing, Pouch packing Machine, Ointment Making Machine, Chullika, Koshtis, Bhrashtis, and other heating appliances, Svedan Yantra, Ovens, driers etc. used in manufacturing of small scale and large scale manufacturing of Ayurvedic Formulations along with their applications.
3. Study of Samskara, definition types and its effect on Physico – chemical and Therapeutic properties of Samskarha dravya. Role of Agni (Heat),Jala and other dravas (Water and other processing liquids), Kala (Time span), Patra (Container) and other processing materials and their significance in Aushadhikaran.
4. Study of Mardana and its significance in Aushadhikaran. Concept of Bhavana, detailed knowledge of ancient and contemporary grinding and trituration technique

PART – B

Detailed knowledge of Concept, Standard Operating Procedure of manufacturing, Standardization, Quality control, Storage, Technological development in processing and modification in following dosage forms in relation to their usage and acceptability

1. Panchavidha Kashaya, Satva, Nisyand, Kshira, Sara, Kshara, Arka Lavana. Ushnodaka, Aushadha Siddha Udaka, Pramathya, Panaka, Mantha, Tarpana, Saktu.
2. Curna, Gutika, Vatika, Modaka, Guggulu, Varti
3. Pathya kalpana
4. Sneha Kalpana
5. Sandhan kalpana
6. Bahya Prayogartha Kalpana
7. Lepa, Upanaha, Malahara, Udvartan, Avadhupan, Abhyanga\
8. Dhupan and Dhumrapan
9. Mukha, karna, Nasa and Netra Kalpana
10. Basti Kalpana

PAPER III
Aushadha Yoga Vigyan

PART – A
Bhaishajya Yoga Vigyan

Detailed knowledge of Aushadhi Path Samyojana, Therapeutic efficacy, Mechanism of action, Dose, Anupan and Method of administration of following Aushadhi Yogas:

1. Panchavidha Kashayas and their Upakalpa

Ardraka swarasa, Tulasi swarasa, Vasa putapaka swarasa, Nimba kalka, Rasona kalka, Kulattha Kwath, Punarnavasthaka Kwatha, Rasna saptaka kwatha, Dhanyak hima, Sarivadi hima, Panchakola phanta, Mustadi pramathya, Kharjuradi mantha, Shadanga paniya, Laksha rasa, Ajamoda arka, Yavanyadi arka, Chinchapa, Candana panaka, Banapsha sharkara, Nimbu sarkara, Darvi rasakriya, Amrita satva, Ardraka satva, Arjuna kshirpaka, Rasona kshirapaka.

Panthya Kalpana – Yavagu, (Krita and Akrita), Ashtaguna manda, Laja Manda, Peya, Vilepi, Krishara, Yusha, Mudga yusha, Kulattha yusha, Saptamushitka yusha, Khad, Kambalika, Raga, Shadava Mamsarasa, Veshavara, Takra, Udasvita, Katvar, Mathita, Chhacchika, Dadhi Tandulodaka, Neutraceuticals and Food Supplements.

2. Churna

Sitopaladi Churna, Talisadi Churna, Triphala Churna, Hingvashtaka Churna, Yashtimadhu Churna, Avipattikara Churna, Swadishta Virechana Churna, Trimada Virechana Churna, Lavana Bhaskar Churna, Sudarshana Churna, Mahasudarshana Churna, Gandharva Haritaki Churna, Navayasa Churna, Pushyanuga Churna, Ajamodadi Churna, Hingvadi Churna, Eladi Churna, Dadimashtaka Churna, Trikatu Churna, Vaishwanara Churna

3. Gutika

Arogya vardhani vati, Chandraprabha vati, Chitrakadi Gutika, Sanjivani Vati, Lasunadi vati, Lavangadi Vati, Vyoshadi vati, Khadiradi Vati, Kankayan Vati, Abhayadi modak, Marichyadi gutika, Amalakyadi gutika, Samshamini Vati, Kutaja Ghana vati.

4. Guggulu

Yogaraja Guggulu, Maha yogaraja Guggulu, Trayodashanga Guggulu, Kanchanara Guggulu, Rasnadi Guggulu, Triphala Guggulu, Simhanada Guggulu, Gokshuradi Guggulu, Kaishora Guggulu, Panchatikta Guggulu, Amritadi Guggulu, Vatari Guggulu, Lakshadi Guggulu, Abha Guggulu.

5. Snehapaka

Sneha Moorchhana – Ghrita Murchana, Taila Murchhana

Siddha Ghrita – Shatavari Ghrita, Jatyadi Ghrita, Phala Ghrita, Dadimadi Ghrita, Kshira Shatpala Ghrita, Triphala Ghrita, Dhanvantri Ghrita, Amritaprasha Ghrita, Kalyanaka Ghrita, Brahmi Ghrita, Changeri Ghrita, Panchatikta Ghrita, Sukumara Ghrita.

Siddha Taila - Maha Narayana Taila, Maha Masha Taila, Bala Taila, Nirgudi Taila, Shadhindu Taila, Vishagarbha Taila, Sahacharadi Taila, Jatyadi Taila, Apamarga Kshara Taila, Tuvaraka Taila, Kshirabala Taila, Lakshadi Taila, Anu Taila, Kumkumadi Taila, Hingutriguna Taila, Kottumchukadi Taila, Prasarinyadi Taila, Dhanwantari Taila, Balashwagandhadi Taila, Balaguduchyadi Taila, Nilibhrigyadi Taila, Brihadavadi Taila, Irimedadi Taila, Chandanadi Taila, Panchaguna Taila, Arka Taila.

6. Avaleha

Vasa Avaleha, Brahma rasayana, Chyavanprasha Avaleha, Kushmanda Avaleha, Vyagri Haritaki Avaleha, Dadima Avaleha, Bilvadi Avaleha, Kantakaryavaleha, Haridra Khanda, Narikela khanda, Saudhagya shunthi paka.

7. Sandhan Kalpa

Shukta - Ikshu shukta, Tushambu, Kanjik, Sandaki

Madya - Sura, Shidhu, Varuni.

Asava Arishta – Lodhrasava, Kumaryasava, Ushirasava, Chandanasava, Kanakasava, Saridadyasava, Pippalyasava, Lohasava, Vasakasava, Kutajarishta, Draksharishta, Raktamitrarka, Dashamularishta, Abhayarishta, Amritarishta, Ashokarishta, Sarasvatarishta, Arjunarishta, Khadirarishta, Ashwagandha Arishta, Vidangarishta, Takrarishta.

8. Miscellaneous – Phaka varti, Chandrodaya varti, Arka lavana, Narikela lavana, Triphala masi, Apamarga kshara, Snuhi kshara, Ksharasutra, Atasi upanaha, Sarjarasa malahara, Gandhaka malahara, Sinduradi Malahar, Shatadhouta Ghrita, Sahasra Dhouta Ghrita, Sikta taila, Dashanga lepa, Doshaghna lepa, Bhallataka taila, Jyotishmati Taila, Bakuchi Taila, Dashanga dhupa, Arshoghna dhupa, Nishadi Netra bindu, Madhutailika Basti, Sneha Basti, Matra Basti, Yoga Basti, Karma Basti, Kala Basti.

PART – B **Rasa Yoga Vigyan**

Detailed knowledge of Aushadhi Patha Samyojan, Therapeutic efficacy, Mechanism of action, Dose, Anupan and Method of administration of following Aushadhi Yogas.

1. Kharaliya Yoga

Shwasakuthara Rasa, Tribhuvanakirti Rasa, Higuleshwara Rasa, Anandabhairava Rasa, Mahalakshmvilasa Rasa, Vasnathakusumakara Rasa, Vasantamalti Rasa, Bhrihatvata chintamani Rasa, Laghusutashekhar Rasa, Sutashekhar Rasa, Ramban Rasa, Chandrakala Rasa, Yogendra Rasa, Hridyarnava rasa, Grahanikapata Rasa, Garbhapala Rasa, Jalodarari Rasa, Mrityunjaya Rasa, Madhumalini vasanta Rasa, Arshakuthara Rasa, Krimimudgara Rasa, Suchikabharana Rasa, Trinetra Rasa, Smrutisagara Rasa, Vatajankusha Rasa, Agnikumar Rasa, Ekangavir Rasa, Kamadudha Rasa, Purnachandrodaya Rasa, Pratapankeshwara Rasa, Mahavata vidhwansaka Rasa, Kasturibhairava Rasa, Ashwakanchuki Rasa, Gulmakuthara Rasa, Mahajwarankusha Rasa, Chandramrita Rasa, Kaphaketu Rasa, Prabhakara Vati, Pravala Panchamrita, Gandhaka Rasayana, Chaturbhuj rasa, Navajivan rasa, Shonitargal rasa, Raktapitta kulakandan rasa, Amavatari Rasa, Kravyada Rasa, Garbhachintamani Rasa, Chintamani Rasa, Trilokyachintamani Rasa, Pradarantaka Rasa, Vangeshwara Rasa, Brihatvangeshwara Rasa, Shwasakasa Chintamani Rasa, Smritisagar Rasa, Arogyavardhini Vati, Chandraprabha Vati, Agnitundi vati, Shankha Vati.

2. Loha Kalpa

Ayaskriti, Loha Rasayana, Amlapittantaka loha, Chandanadi loha, Dhatri loha, Navayasa loha, Putapakva vishamajwarantaka loha, Shilajatwadi loha, Tapyadi loha, Saptamrita loha, Amlapittantaka loha, Chandandi loha, Dhatri loha, Punarnava Mandura, Amritasara Loha, Shankaramat loha, Pradarantaka loha, Rohitaka loha.

3. Kupipakva Yoga

Rasa Sindura, Makaradhwaja, Sidhamakaradhwaja, Samirapannaga Swarnavanga, Malla sindura, Rasa karpura, Rasa pushpa, Manikya Rasa.

4. Parpati Yoga

Rasa Parpati, Loha Parpati, Tamra Parpati, Suvarna Parpati, Gagana Parpati, Vijay Parpati, Panchamrit Parpati, Shwet Parpati, Bola Parpati

5. Pottali Yoga

Rasagarbhapottali, Hemagarbhapottali, Mallagarbha Pottali, pottali, Hiranyagarbha pottali, Shankagarbha pottali, Lokanatha rasa, Mriganka Pottali.

PAPER – IV
Pharmaceutical Science

PART – A
Pharmaceutical Technology

1. Scope and Evolution of Pharmacy
2. Information Resources in Pharmacy and Pharmaceutical Science
3. Posology
4. Colloidal and Coarse dispersion and Pharmaceutical Rheology
5. Preformulation
6. Separation
7. Principles of Distillation, Methods of Extraction, Infusion, Decoction, Maceration, Percolation and Fusion.
8. Sterilization & Sterile products, Ophthalmic and Parenteral Preparations
9. Preservation and stabilization of pharmaceutical products
10. Drying, Open and Closed Air drying, Freeze drying, Vacuum drying and other drying methods.
11. Pharmaceutical Excipients.
12. Oral Solid Dosage Forms, Powder, Size reduction & size separations, Principles of mixing Micrometrics – Methods of determination of particle size, shape & Surface area, Methods of Compression & Consolidation of powder solids.
Tablets sustained release dosage forms, Suppositories & pessaries
Capsules – Hard capsules and soft gelatin capsules and micro encapsulation
13. Semisolid Dosage Forms Emulsion, Suspensions and Extracts
14. Liquids - Solution, Solubility Phenomenon, Diffusion & Dissolution, pH, Buffers & Isotonic Solutions, Clarification & Filtration Techniques of filtration & Centrifugation, Syrup, Elixirs
15. Pharmaceutical aerosols
16. Topical drugs and Cosmetics.
17. Packaging Materials and Labeling
18. Standardization of Raw material, In process Material and Finished product

PART – B
Pharmacology & Toxicology

Pharmacology

1. Principles of Pharmacology

- Pharmacodynamics & Pharmacokinetics: Absorption, distribution, mechanism of action & Excretion, Dose response relationship, structure activity relationship.
2. Routes of administration of drug
 3. Factors modifying drug effect, Drug interactions, Adverse drug reaction and Drug toxicity.
 4. Detailed Knowledge of Pharmacovigilance - National and International Scenario. Pharmacovigilance of Ayurvedic Drugs.
 5. Clinical pharmacology: Preclinical & clinical evaluation, Bioavailability and Bioequivalence.

Toxicology

1. Principles of Toxicology
2. Toxicology of Metallic, Mineral, Plant & Animal products General principles of Management of Acute and Chronic Toxicity.

Practicals

Minimum 150 practicals to be performed covering all the dosage forms. Educational Visits to minimum Five (5) GMP approved Ayurvedic Pharmacies.

Ten days posting in R & D/Production unit in Ayurvedic Pharmacy.

Reference Books

1. Relevant parts of Charak, Sushrut, Vagbhata and Sharngadhar
2. Bhesaj Kalpa
3. Bhavaprakash
4. Siddha Bhaishajya Manimala
5. Bhaishajya Ratnavali
6. Ayurvediya Aushadhikarana - Puranika and Dhamanakar
7. Rasa Bhaishajya Kalpana Vigyan - Santhosh Khandal
8. Bharat Bhaishajya Ratnakar
9. Vaidyaka Paribhasha Pradeepa
10. Kriyatmak Aushadhi Parichaya Vigyan
11. Ayurvedeeya Aushadhikarana - Puranika and Dhamanakar
12. Dravyaguna Vijnan Pat – 1 and 2 - Yadavji Trikamji Acharya
13. Dravyaguna - Chakradatta CCRAS Publication
14. Remington: Science and Practice of Pharmacy
15. Industrial Pharmacy - Lackman
16. Text Book of Pharmacology - Goodman and Gilman
17. Data Base of Medicinal Plants - CCRAS Publication
18. Quality and Standards of Medical Plants - ICMR publication
19. Quality Control of Ayurvedic Drugs - PLIM, Gaziabad publication
20. Ayurvedic Pharmacopeia of India
21. Ayurvedic Formulary of India
22. Indian Pharmacopeia
23. British Pharmacopeia
24. United States Pharmacopeia
25. Pharmacopeia Codex
26. Current Good Manufacturing Practices
27. Drugs and Cosmetic Act 1940 and Rules 1945
28. Drugs and Magic remedies (Objectionable advertisement) Act 1954
29. Prevention of Food Adulteration (PFA) act
30. Laws pertaining to Narcotics
31. Factory and Pharmacy Acts
32. Consumer Protection Act 1986
33. Siddha Yoga Samgriha - Yadavaji Trikamji Acharya
34. Sahasrayoga

6. AGADA TANTRA VYAVAHARAYURVED EVUM VIDHIVAIDYAKA

PAPER – I

Agada Tantra (Ayurvedic & Contemporary Toxicology)

1. Agada Tantra, its sequential development. Shaiva, Vaishnava, Boudha & Contemporary Toxicology.

2. Definition of Visha, properties of visha with its comparison with madya an doja, visha samprapti, visha prabhava, visha-vega, vegantara and visha karmukatha (toxicodynamic and toxicokinetic study).
3. Descriptive and comparative study of Upavisha in union with Contemporary Toxicology.
4. Examination of poisons as per Contemporary and Ayurvedic Methods
5. Descriptive study of sthavara visha, definition, classifications, classical signs and symptoms of poisoning including Vanaspatic (phyto poison), Khanija (mineral) and compound sthavara visha.
6. Study of Jangama visha and their sources (Animal poisoning and Zoonotic Diseases). Descriptive study of the snakes according to ancient & contemporary knowledge. Causes of snakebite and its types. Composition of snake venom and its pharmacological actions. Signs and symptoms of envenomation and its prognostic signs. Clinical features of Vrishchika (scorpion), Luta (spider), Grihagadhika (Lizard), Mushaka (rats), Alarka (dogs), Makshika and Mashaka (Mosquitoes) and their pathologic manifestations. Shanka visha and its management. Visha sankat and Visha Kanya.
7. Garavisha & Dushi visha, their varieties, signs, symptoms and management with contemporary relevance.
8. Detailed study of Madya visha (Alcoholism) and substances acting on the nervous system; substance abuse.
9. Detailed study of the contemporary knowledge about vishajanya Janpadodhvasaniya rog (community health problems due to poisons – Environmental pollution, soil pollution, air pollution etc their features and management according to ancient & recent concepts).
10. Concept of Virudhahara, Ahara visha and Satmyasatmyata in contemporary and Ayurvedic views.
11. Drug interactions and Incompatibility.

PAPER – II

Visha Chikitsa Vigyan (Management of Poisoning)

1. Fundamental Principles of the treatment of poisoning
2. General and specific treatments of different types of Sthavara visha.
3. General and specific treatments of different types of Jangama visha (animal poisons, insect poisons, snake bites and other zoonotic diseases).
4. Emergency medical management of poisoning including preparation administration and complications of antivenoms/ antisera.
5. Chaturvimsati upakrama (24 management procedures)
6. Management of Garavisha and Dushivisha
7. Management of the toxic manifestations caused by the contact poisons. (paduka, vasthra, abharana, mukhalepa – vishabadha etc)
8. Management of food poisoning
9. Death due to poisoning, Duty of physician in poisoning, in cases of suspected poisoning. Post mortem findings in poisoning
10. Extra – corporeal techniques (dialysis etc) for removal of poisons.

PAPER – III

Vyavaharayurved Evum Vidhi Vaidyaka (Forensic Medicine and Medical Jurisprudence)

1. Definition of Vyavahara Ayurveda, its evolution in ancient & 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
6. Medico – legal autopsy
7. Injuries due to explosions, chemical and nuclear warfare
8. Medico-legal aspects of injuries and wounds.
9. Impotence and sterility - Its medico-legal aspects, Regulations of Artificial Insemination
10. Sexual offences and perversions
11. Medico – legal aspects of virginity, pregnancy, delivery, abortion, infanticide and legitimacy.its related acts.
12. Indian Penal Code, Criminal procedure code and study of different related acts like Indian Evidence Act, Pre Natal Diagnostic Test act, Nursing Home Act. Organ transplantation act and Anatomy act etc. Any related act enacted by the government time to time.
13. Courts and Legal procedures
14. Forensic Science Laboratory
15. Medico legal aspects of mental illness
16. Duties and privileges of physician
17. Structure of Central Council of Indian Medicine, its jurisdiction & functions. Code and Conducts as per the CCIM, Rules and Regulations there under.
18. Respective State Council of Indian Medicine, its structure, power, voluntary duties.
19. Doctor – patient relationship
20. Rights and privileges of patients. Euthanasia.
21. Professional secrecy and privileged communication
22. Professional negligence and malpraxis
23. Indemnity Insurance scheme
24. Consumer Protection Act related to medical practice
25. Ethics as in classics. Types of physicians and methods of identification, Pranabhisara and Rogabhisara Physicians, qualities of physician, responsibilities of physicians, Chaturvidhavidya vriti, duties of physicians to his patients, Vaidya sadvritam, Apujya vaidya who is accepting fees, relationship with females.

PAPER IV **Aushadha Yoga Vigyan**

1. Study of the process of sodhana, marana, and samskara of poisonous drugs.
2. Pharmacodynamics of different formulations used in Agadatantra.
3. Study of pharmacology and usage of antidotes as per the Ayurvedic and contemporary science.
4. Fundamentals of pharmaceuticals according to Ayurvedic and contemporary point of view.
5. Chemical, analytical, laboratory examination of poisons and suspicious substance
6. Introduction of Different instruments / equipments used in the examination of poisons.
7. Introduction of Clinical toxicology
8. Introduction to Experimental toxicology
9. Introduction to Toxic – genomic
10. Survey and study of the traditional and folklore vishachikista sampradayas.

Reference Books

1. Useful portion of Charak – Sushruta – Vagbhata

2. Dravyaguna Vigyan - Acharya Yadavji
3. Aushadhigunadharm Shastra - Pt. Visvanth Dvivedi
4. Kriyatmat Aushada parichaya Vigyan - Pt Visvanth Dvivedi
5. Ayurvedic Vyadhi Vigyan - Acharya yadavji Trikamji
6. Madhavanidan with Madhukosha Commentary
7. Sharangadhara Samhita
8. Yogaratnakara
9. Aushadigunadharm Shastra-Pt Gangadhara Shastri Gune
10. Rasendracintamani
11. Rasaratna samuchachaya
12. Visehavigyan - Dr.Krishna Kumar
13. Related matter of Kautilya Artha Shastra
14. Harmekhlatantra
15. Anupana manjari
16. Ayurvedaprakash
17. System of clinical Medicine - Savil
18. Forensic Pharmacy - B.M.Mhithal
19. Hand book of Forensic Medicine and toxicology - Dr. P.V.Chandha
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.Krishan's Handbook of Forensic Medicine
26. Text book of Medical Jurispudence and Toxicology - Dr.C.K.Parikh
27. Atlas of Forensic Medicine - Dr.Tomio Watenbe
28. Medico legal Post Morterns (Atlas) - Dr.Parikh & Others
29. T.B.of F.M.T -Dr.Pillay
30. T.B.of F.M.T - Dr. Karmakar
31. T.B. of F.M. -Dr.Singhal
32. T.B. of F.M.T - Dr.Krishnan Vij
33. Forensic Pathology -Dr. Bernard Knight
34. T.B.of F.M.T - Lyon's
35. Pocket picture guide to Forensic - Gowers Medical Publication
36. Forensic Medicine -Simpson Knight
37. Taylor's Principals & Practical of Medical -Jurisprudence J & A Churchis
38. Doctor & Law - Singhal
39. T.B. of Toxicology - Singhal
40. Medicine Harrison's Principal of Internal Medicine
41. Agad Tantra - Dr.ShekharNamboodri
42. Modern Medical toxicology - Pillay
43. Critical care toxicology - Bruent Wallace
44. Diagnosis & Management of common poisoning -Agarwal wali
45. Colour Atlas of F.M - Govindaiah
46. Guidelines of poisons - W.H.O
47. Doctors patients relationships - Dr.Lavekar

7. SWASTHAVRITTA

PAPER – I

Vaiyaktika Swasthavrittam Sadvrittam Cha

(Personal Hygiene and Moral Hygiene)

1. Concept of holistic health according to Ayurveda
2. Spectrum of health, Iceberg phenomenon of diseases, dimensions of health
3. Dinacharya - Detailed accounts by Charak, Sushrut, Vagbhata and Bhavamishra
4. Ratricharya – Bhavamishra
5. Possible Physiologic effect of different dinacharyas
6. Ritucharya – Classifcal description by Charak, Sushrut, Vagbhata, Bhela Samhita and Bhavamishra.
7. Ritus prevalent in various Indian states.
8. Ritu pattern in various continents of the world
9. Day and night pattern in various countries
10. Shodhana Schedule for Ritu sandhis.
11. Concept of Vegas, types and physiology behind each vega and vegadharana
12. Ahara – Classical food items in Charak, Sushrut, Vagbhata and Sharngadhara
13. Ahara vargas and comparison with today's food items.
14. Staple diet of various States of India
15. Staple diet of various countries and correlation with their climate.
16. Principles of dietetics, Balanced diet for healthy adult, adolescent, elderly people, pregnant ladies and lactating mothers.
17. Food intervention in malnutrition, under nutrition and over nutrition
18. Rules of food intake according to Charak, Sushrut and Vagbhata.
19. Pros and Cons of Vegetarian and Non Vegetarian Foods.
20. Viruddhahara – Classical and modern day examples.
21. Sadvritta – Compare Charak, Sushrut and Vagbhata
22. Pragyaparadha - Causes, effects and solution
23. Achara Rasayana
24. Rejuvenation for Swasthas (Kamya Rasayana, vatatapika Rasayana)
25. Aphrodisiacs for Swastha (Vajikarana)
26. Mental Health and the role of Ayurveda in it
27. Immunity - Modern and Ayurvedic concepts
28. Disinfection - Principles and practice
29. Principles of Health Education
30. Genetics and Ayurveda

PAPER - II
Roganutpadaniyam Samajikam Cha Swasthavrittam
(Community Health)

1. Concept of community health.
2. Concept of Prevention according to Ayurveda.
3. Concept of prevention, Levels of prevention and stages intervention
4. Web of causation of diseases, Multifactorial causation.
5. Natural History of diseases.
6. Ecology and community health.
7. Disinfection practices for the community – Modern and Ayurvedic.
8. Immunisation programmes. Possible contribution of Ayurveda.
9. Environment and community health (Bhumi, Jala, Vayu, Prakasha).
10. Occupational Health, Ergonomics, Role of Ayurveda in ESI and W.H.O programmes.
11. Medical Entomology and Medical Parasitology.
12. School Health Programme according to Ayurveda.
13. Demography and Family Planning.
14. Role of Ayurveda in Family Planning and Modern concept of Contraception.
15. Old age problems in community, Role of Ayurveda in Geriatrics.
16. Care of the disabled and Importance of Teritary prevention.

17. Life Style disorders (Non Communicable diseases) in community and the role of Ayurveda in them
18. Health tourism
19. Ayurvedic Resort Management
20. Medical Sociology

PAPER – III
Samkramaka Roga Pratishedham

(Epidemiology of Communicable Diseases)

1. Modern Concept of Epidemiology
2. Critical evaluation of Janapadodhwamasa
3. Epidemiology of Communicable diseases
4. Investigation of an Epidemic
5. Control of Epidemics
6. Immunization Programmes
7. Ayurvedic method of Community immunization
8. Sexually Transmitted Disorders and their control
9. Health advice to travellers
10. Hospital, Isolation ward and bio medical waste management
11. General Investigations for Communicable diseases
12. Health administration under Ministry of H & FWD
13. AYUSH, its administration, functions and programmes
14. Disaster management
15. Statistics related with Infectious diseases at International , National and State levels
16. Bio Statistics

PAPER IV
Yoga and Nisargopachara

1. Development of Yoga according to different period
2. Schools of Yoga
3. Rajayoga – Philosophy of Patanjali according to Yogasutras
4. Hathayoga - according to Hathayoga pradipika and Gheranda Samhita
5. Karmayoga – Philosophy according to Bhagavad Gita
6. Physiologic effect of Yoga on different systems of Body
7. Concept of Sthula, Sukshma and Karana Sharirs
8. Concept of Panchakoshas
9. Concept of Shad chakras and Kundlini
10. Therapeutic effect of yogic practice in the following diseases – Diabetes, Hypertension, Cardiovascular disorders, Obesity, Asthama, Piles, Irritable Bowel Syndrome , Eczema, Psoriasis, Stress Disorders, Eye disorders, Headache, Juvenile Delinquency, Mental retardation, Depression, Neurosis, Sexual Dysfunction, Uterine Disorders, Cancer,
11. History of Nature cure.
12. Basic Principles of Western School of Nature Cure -
13. Basic Principles of Indian School of Nature Cure – Panchabhuta Upasana
14. Different types of Massage and their therapeutic effects
15. Elements of Acupuncture and Acupressure
16. Chromotherapy
17. Magnetotherapy
18. Methods of Nature Cure in various diseases
19. Principles of Physiotherapy.

Reference Books

1. Relevant portions of Charak, Susruta, Vagbhata Sarangadhara
Bhavaprakasha, Madhavanidan & Yogaratnakara, Bhela Samhita
2. Hathayoga Pradipika
- 1) Swastavritta Samuchaya - Vaidya Pt.Rajesvar Dutta Shastri
- 2) Swasthya Vignyana - Dr.B.G.Ghanekar
- 3) Yoga and Ayurveda
- 4) Prakritika Chikitsa - Kedarnath Gupta
- 5) Reddy's Comprehensive Guide to Swasthavritta - Dr.P.Sudhakar Reddy

8. ROG NIDAN

PAPER - I

Dosha - Dushya Vigyaniam

1. Concept of Troidosha and its Pathological implications. 63 permutations and combination of Tridosha. Lina and Stambhita Dosha, their cause and importance in manifestation of Samparti.
2. Concept of Rakta as a Chaturtha Dosha. Importance of Rakta in context of Vidhi shonitiya adhyaya.
3. Concept of Ashrayashrayi bhava and its applied utility.
4. Different types of Dosha Gati.
5. Causative factors and practical utility of movement of Doshas from Kostha to Shakha and Shakha to Koshtha. Concept of Ashyapakarsha.
6. Trayo rog marga their diseases and clinical importance of rog marga.
7. Concept and classification of Avarana, its role in pathogenesis, mode of diagnosis of Avarana and its importance in chikitsa sutra.
8. Applied aspect of Dhatu Poshana Krama and Dhatu Samvahana. Concept of Margaga and Sthanastha Dhatus.
9. Concept and applied aspects of Doshapaka and Dhatupaka
10. Fundamental and applied aspect of Dhatu, Upadhatu and Mala. Diseases developed due to their vitiation (pradoshaja vikara)
11. Concept and applied aspects of Srotas, their importance in health and diseased conditions. Concept and applied aspects of Sroto Dushti and Khavaigunya.
12. Description of Dosha Dushya Sammurchhana. Importance of Dosha Dushya Sammurchhana in Diagnosis and treatment.
13. Concept of Vikara Vighata bhavabhava prativishesha
14. Concept of Agni and its role in manifestation of health and disease.
15. Concept and pathogenesis of Ama. Contemporary interpretation of Ama and its role In pathogenesis.
16. Sama, Nirama, Pachyamana and Pakwa stages of Dosha, Dhatu and Mala
17. Understanding Samprapti of Santarpanottha and Apatarpanottha Vyadhi

PAPER II

Vishishta Samprapti Vigyaniam

1. Detailed classification of diseases as described in Ayurveda . ICD and DSM classification.
2. Detailed understanding of Nidan Panchaka with their classification and clinical importance.
3. Relation between ‘ Hetu & Lakshana’ and 'Samprapti & Lakshna’
4. Explanation and applied aspects of Kriyakala and its utility in diagnosis and treatment.
5. Study of Samprapti in Detail of the diseases mentioned in Brihatrayi and Laghutrayi.
6. Importance of Upadrava, Arishta, Sandhyasadhyata, and Udaka.
7. Indirya Pradoshaja Vikara
8. Gara Pradoshaja Vikara; Iatrogenic disorders.
9. Concept and tools for the study of Anukta Vyadhi (Unexplained and newly emerging diseases)
10. Natural History of the Diseases.
11. Explanation of Chikitsa Sutra of different diseases described in Brihatrayi and Laghu Trayi in context of Rog Samprapti.
12. Understanding the diagnostic aspects of Bhuthavidhya.
13. Concept of Karmaja vyadhi
14. Epidemiology of diseases as described in modern medicine.

PAPER III **Pariksha Vigyaniam**

1. Aims and Objectives of Rog-Rogi Pariksha
2. Methods, applied aspect and importance of various Rogi and Rog Pariksha as per classics
3. Ayurvedic interpretation of all relevant findings of modern clinical examinations, various Laboratory and other Diagnostic tools.
4. Understanding of dagnostic procedures in medical emergencies.
5. Concept of Good clinical practice in Ayurveda and modern medicine.
6. Set up of standard clinical laboratory.
7. Follwing laboratory investigations for diagnosis of diseases, their methods, normal and abnormal values, factors influencing values and their Ayurvedic interpretations & clinical Significance.
 - a. **Blood** haematological tests, CBC, BT, CT, Ferritin, HbF, HbA1C, Iron, Iron Binding Capacity, methemoglobin, sulpho haemoglobin etc.
 - b. **Biochemical tests** related to various organ panels – Liver, Kidney, Heart, Thyroid, Pituitary and Bones.
 - c. Importance of Bio markers their utility in clinical researches
 - d. **Sero –Immunological tests**
 - e. **Urine** : Physical, chemical, microscopic, biochemical, bacteriological examinations
 - f. **Stool** : Physical, chemical, microscopic, biochemical and bacteriological examinations
 - g. **Sputum examination**
 - h. **Semen analysis**
 - i. Estimation of various electrolytes
 - j. Physical, chemical, microscopic, biochemical and bacteriological tests for various kinds of body aspirates.
 - k. Knowledge of emerging tools and technologies for Diagnosis
 - l. Knowledge of various Ayurvedic diagnostic softwares/programmes available
 8. Srotas Pariksha, Shadanga Pariksha vis-à-vis general & systemic examination of patient.
 9. Avayava Pariksha -Radio – Imaging Techniques, Sonological Techniques, ECG, EEG etc and their clinical interpretation.

PAPER – IV
Vikriti Vigyan Sahitam Jivanu Vigyanam

1. Basics of pathology i.e. inflammation and repair, reversible and irreversible cell injury, degeneration, necrosis, thrombosis, embolism, coagulation, haemorrhage, caculi formation, Neoplasia.
2. Hereditary and Congenital disorders
3. Geriatrics in Ayurveda and understanding of aging process and geriatric disorders.
4. Ojas –vis-à-vis Bala and immunity. Immune mechanism in body and its role in manifestation of diseases with Immunopathology.
5. Concept of Viruddha Ahara, Satmya and Asatmya along with knowledge of hypersensitivity reactions. Nutritional disorders.
6. Concept and applied aspect of Janapadodhvamsa
7. ‘Krimi vigyan’ mentioned in Ayurveda and its possible correlation with Helminthes and other Parasites mentioned in modern medical science. Hemo parasites and intestinal parasites, their mode of infection and life cycle. Description of common symptoms and diseases caused by intestinal worms infestation.
8. Knowledge of following microorganisms with their disease processes: Bacteria, Virus, Parasites, Fungi and their classification.
9. Morphology, Nutrition requirements, culture media and methods, classification and identifications of common micro organisms.

Practicals

1. Regular posting in O.P.D.
2. Regular posting in I.P.D.
3. Regular posting in Laboratories
4. Regular posting in other departmental units.
5. Practical training of all the laboratory investigations as mentioned in theory papers. Maintenance of Daily work diary, Practical Record book, Case record books.

Reference Books

1. Sutra-nidana-viman-indriya Sthan of Charak Samhita
 2. Related Portion of Sushrut Samhita
 3. Related Portion of Ashtanga Hridaya & Ashtanga Samgraha
 4. Madhava Nidana With Madhukosh Commentary
 5. Siddhanta Nidana
 6. Ayurvediya Vydhi
 7. Rogi Pariksha vidhi
 8. Abhinav Vikriti Vigyan
- Gananath Sen
- Yadavji Trikamji
- P.V.Sharma
- Raghuvir Prasad Trivedi

9. MANOVIGYANEVUM MANAS ROG

PAPER – I
Manovyapara Sahita Manovigyanam

1. Prachya – arvachya matanusara Mano vigyansya Bhutavidyayah, Amanusha tatha Grahadinam parichya, setihasa.
2. Controversies, myths and misconcepts regarding Bhutavidya.

3. Prachya arvachya matanusara Manasah Nirupanam – Concept of Manas from Ayurveda and modern perspective.
4. Vividha darshanausara manasah varnanam.-concept of mind in various philosophies.
5. Manasah Svarupam - Structure of mind.
6. Manasah Sthanam – Location of mind.
7. Manovishayah - Objects of mind.
8. Manogunah (Anutva and Ekatva) – Attributes of mind – Minuteness and oneness.
9. Manasah Ubhayatmakatvam - Duality of Manas.
10. Manasah Dravyatvam Karanatvam cha – mind as a substance and tool.
11. Manasah Karanadravyatvam –mind as causative substance.
12. Manodoshah - (Rajas an Tamas)
13. Manasah Bhoutikatvam - Elemental nature of Manas.
14. Introduction to concept of Buddhi and Ahamkara etc – intellect and ego etc.
15. Manasah Ahamkarikatvam – orgin of mind from ego (samkhya).
16. Manasah Annamayatvam – Relationship between food and mind.
17. Manasah trigunatmakatvam-mind and the three major attributes.
18. Manasah jadatvam – inertia of mind.
19. Manasah dhatutvam-mind as a component of living being.
20. Manasah Karma – Actions of Manas
21. Manovyapara Nirupanam.
22. Manovyapare Pranodana sadhaka Bodhakadi doshanam Sambandhah – Relation of humoral fractions such as Prana, Udana, Sadhaka – Bodhaka in the activity of Manas.
23. Katham prakopayanti Manodoshah Sharirdoshan – How does manasika doshas aggravate sharirika doshas?
24. Indriya panchapanchakam – five factors in relation to the mental faculties.
25. Gyanendriyanam vishayah – the objects of sense faculties.
26. Gyanotpatti prakriyayam Manaso pradhanyam –Importance of Manas in cognitive process.
27. Indriyarthagrahananantaram manasah vyapara-Action of Manas in cognition after reception by respective Indriyas.
28. Indriyarthagrahananantaram gyanotpattou manaso dayitvam- responsibility of manas in cognition after reception by respective indriyas.
29. Knowledge of Dirgha Sahshkuli nyaya, Alata-chakra nyaya, Vichi-taranga nyaya, Kadamba-mukula nyaya.
30. Shabda – sparsha – rupa – rasa – gandhanam grahakam manah, tasya mahatvam cha – Manas as conductor of sense objects and its importance.
31. Vayuh indriyanam udyojakah tatha manasah preranam – Vayu as stimulator of indriyas and initiator of manas.
32. Vakpravrittou manasah yogadanam – Role of Manas in production of speech.
33. Pratisharire manasah bhinnatvam – Concept of individuality of mind.
34. Chikitsya purushah – treatable person (living being).
35. Atma nirupanam – description of Atma.
36. Sukshma sharirsya varnanam – description of subtle body.
37. Atma manasoh sambhandhah – relation of Manas and Atma.
38. Antah karana chatustaya – the four internal faculties.
39. Importance of Dhi, Dhriti and Smriti – importance of intellect, will power and memory.
40. Role of manas in achieving Tri eshana and Chaturvidha Purushartha / Chatur varga – role of manas in attaining the pursuits and foru goals of life.
41. Concept of Satya buddhi and Upadha – concept of true and false knowledge.
42. Concept of Punarjanma, Purvajanma krita karma, karma phala.
43. Manovaha Srotasam Parichayah – Introuduction of Manovaha srotas (channels of mind)

44. Manovaha, Samgyavaha, Buddhivaha, Chetanavaha, Vatavaha, Raktavaha adi upayukta Srotasam Manasaroge varnanam – Description of Manovaha, Sangyavaha, Buddhivaha, Chetanavaha, Vatavaha, Raktavaha srotas etc in relation to Manasarog
45. Shadchakra nirupanam
46. Concept of Ojas and Manas.
47. Satvasarapurusha - person with mental excellence.
48. Nidravichara – Concept of sleep.
49. Swapna vichara – Concept of dream.
50. Tandravichara – Concept of stupor.
51. Concept of manasprakriti – mental temperament.
52. Concept of Manas bhava in Shareerika prakriti.
53. Manasaroge Manovigyane cha upayukta Paribhashika shabdanam vishleshanam – technical terms used in psychiatry.
54. Manasa roge upayukta samhitanam satika adhyayanam – study of portions of treatises useful in psychiatry along with their commentry.
55. Arvachina mano vigyansya adhishtana siddhanth, mastishka karmanam sthapanam cha- Fundamentals of modern psychology and establishment of functions of brain.
56. Applied Neuro-anatomy and physiology, Neurotransmitters, Psychoneuro immune endocrinology.
57. Manasah swabhavika pratirodh – Defence mechanism of mind.
58. Shishu manasashastra, vikasatmaka Manasa shastra – Shishu, Bala, Kumarah, Proudah, Vriddhah cha – Essential elements of psychology, developmental psychology: child, adolescence, adult and aged.
59. Bhava, Shila , Buddi, Smriti, Prerakatva adinam gyanam – Concept of Mood, behaviour, attitude, emotions, intelligence, memory, motivation, perception etc.
60. Manasarogvigyanasya mahatvam, phalam, prayojanam, prabhavashcha.

PAPER – II

Manovaiikariki Evam Bhutavidya

1. Manovega.
2. Mano vikarah
3. Manodosha.
4. Manashariryoh paraspara anuvaidhayitvam – mutual symbiosis of sharir and manas.
5. Manasah chanchalatvam.
6. Manaso vyadhinam ashrayatvam.
7. Manasrogeshu doshanam paraspara anubandhah.
8. Manasavyadhi utpattou sharirdoshanam vikarakaritvam.
9. Indriyadinam hinamithyatiyogah.
10. Prajnaparadha.
11. Purva janma krita karma tatha Papa Karmasya rogkarakatvam.
12. Adharmasya Achararasayana upekshanasya cha rogkarakatvam.

Bhutavidya – Definition and scope

1. Types and Charateristic features of Bhutas & Grahas.
2. Amanushopasarga Vikara caused by Bhutas & Grahas.
3. Aetio – Pathogenesis of Bhutas & Grahas
4. Relationship of Bhuta with jwara, Ojakshaya, manovikara, Arishta Lakshana and Daivabala Pravritta diseases.
5. Grahavesha, affecting time of Grahas, their specific features, prodromal featuares and prognosis.
6. Differential understanding of Balagraha andGrahabadha.
7. Sushrut’s concept of invasion of Bhuta /Graha.

8. Manasa Rognam Nidan, Sampraptischa.
9. Manobuddhyadi Vibhramsha.
10. Manas dharaniya vegas.
11. Kayika-Vachika-Manasika hinamithyati yoga of karma in Manasa rog samprapti.

Manovikriti –Psychopathology

1. Bijapradosha and Kulaja bhava in manasrog – Genetics & hereditary factors in Psychiatry.
2. Manasrognam prachya arvachina matanusarena vargikaranam.
3. Classification of manas rogs yatha kevalamanas, manas sharir, Shariramanasika, agantuja adayah.
4. Recent ICD and DSM classification.

Manasa Rogi praiksha vidhi- Psychiatric examination

1. Prachya arvachina matanusarena rogi pariksha visheshena sattva pariksha – Examination of patient according to Ayurvedic and modern methods.
2. Trividha Sattva Pariksha
3. Charakokta avastha Pariksha
4. Manasika avastha Pariksha – Mental Status Examination
5. Vividha pariksha manakah – Different psychiatric assessment inventories like Hamilton's scale, Bech's Depression inventory etc.
6. Manarog chikitsiya manomapaka upakaranani cha – Psychiatric and psychometric tools for diagnosis, Evidence based diagnostic methods.
7. Prayogashaliya pariksha – Investigations – Haematological, Biochemical, neuro-physiological, endocrinal, EEG, radio imaging MRI etc.
8. Manasarognam sadhyasadhata – Prognosis of psychiatric diseases.
9. Manasa Rog Sandharbhe Vidhi Vaidyakasya vistritya gyanam.
10. Forensic psychiatry – Knowledge about legal and ethical issues in psychiatry, Indian lunacy act, mental health act etc.

PAPER -III **Manasa Rog Chikitsa**

1. Manasa Swasthya Paribhasha – Definition of Mental Health
2. Samasta manas rognam vivechanam - Adho likhithanam Vikaranam Nidanpanchaka vivechanam Chikitsa cha.
3. Unmada (Nija , Agantuja Unmada, Bhutonmada, Vishaja Unmada, Sutikonmada, Smaronmada, Tattvonmada – Paronoiya)
4. Apasmara.
5. Apatantraka and Yoshapatntraka
6. Tandavarog -Chorea
7. Yoshapasmara
8. Atatvabhinivesha
9. Vishada
10. Gadodvega
11. Mada, Murcha , Sanyasa
12. Madatyaya, Panatyaya (Panavibhrama, Paramada, Panajirna)
13. Nidra vikara, Klama, Tandra, Glani
14. Bhrama, Vibhrama
15. Chittodvega
16. Smriti vikara
17. Mastishka chayapachaya, Mastishka Vepana

18. Manasa Klaibya, Sushrutokta Napumsakata
19. Manovikara, Lobha, Moha, Irshya, Krodha , Bhaya, Mana, Dambha, Ahamkara, Harsha ityadayah
20. Mood and affective disorders – major depressive disorders, mania and their Ayuredeic co-relation and management.
21. Substance abused disorders and their management
22. Delusional disorders and their management
23. Schizophrenia
24. Personality disorders
25. Behavioral disorders.
26. Organic mental disorders.
27. Stress related disorders – Mano dukhaja Unmada
28. Post traumatic stress disorders.
29. Generalized Anxiety disorders.
30. Psycho sexual disorders.
31. Sleep disorders
32. Eating disorders
33. Attention deficit disorders
34. Somatoform and dissociative disorders.
35. Obsessive compulsive disorders.
36. Senile psychiatric disorders – Dementia, Alzhiemer's disease, Parkinsonism, Menopause, Andropause and their Ayurvedic co-relation and management.
37. Adhi Vyadhi Rognam Manasika Prabhava Chikitsa Cha – Psychosomatic disorder (Bhayaja and Shokaja Atisara, Kama, Shokaja Jwara, Tamakashwasa, Prameha, Amlapitta, Parinamashula, Grahani, Uccha rakta chapa (Hypertension), shula (pain disorders), Twak Vikaranam Chikitsa).
38. Jirna – Asadhya Sopadrava vyadhinam Vivechanam tatha Chikitsa – Mental problems in chronic incurable diseases like AIDS, Cancer etc and their management.
39. Mano prakriti vikara – psychopathic personality
40. Jivana Shaili Tatha mano sammarda janya rogh tesham chikitsa cha – Life style and stress related disorders and their management.
41. Shishu tatha Kumara Manorog Chikitsa – Child and adolescent psychiatry.
42. Jadata, Buddhimandya, Adhyayana Akshamata – Mental retardation and learning disabilities.
43. Achara vaikalya – Conduct disorders.
44. Manobhava vikara – Emotional disorders.
45. Cerebral palsy, infantile autism, attention deficit disorders, Tourette's disorder etc.
46. Manasa rognam samanya vishesha chikitsa siadhantanam varnanam,
47. Daiva vyapashraya, Yukti vyapashraya, Sattvavajaya, Adravyabhuta chikitsa Upayah.
48. Manasa rogopayogi vividha aushadhenam vivechanam.
49. Ekamulika (Single drug), Panchavidha kashaya kalpana, Rasa Rasayana.
50. Brihatrayi, Yogaratnakara, Sharngdhara, Gadanigraha, Bhavaprakasha, Sahasrayoga ukta vividha yoganam vivechanam.

Brahmi, Mandukaparni, Vacha, Jatamansi, Yashtimadhu, Shankhapushpi, Kushmanda, Ashwagandha, Kushtha, Tagara, Guduchi, Jyotishmati, Srikhandadichurnam, Saraswathachurnam etc. Swarna, Swarnamakshika Bhasma, Rajata, Pravala, Mukta, Manahshila, Krishna Chaturmukharas, Krishna Chaturbhujras, kshirodadhira, Vata kulantaka rasa, Manasamitra vati, Smritisagar rasa, Unmada gajakesari ras, Apatantrakari vati, Kumarakalyana rasa etc. Kalyanaka ghrita, Brahmi ghrita, Mahapanchagavya ghrita, mahapaishachika ghrita, Mahabhutarava ghrita, Kushmanda ghrita, Purana ghrita, Panchagavya ghrita etc.

Saraswatarishta, Ashwagandharishta, Chittachandirasava , etc

Himasagara taila, Tunga drumadi taila, Gandharajataila, Brahmi taila, Sidharthaka agadoa,etc.

Dhupa, Nasya, Lepa, Anjana yogas useful in Manas Rog Aushadh Karmukata and prayoga vidhi.

51. Pharmacodynamics of the above explained drugs

52. Mano Bhesaja vigyanam – Essentials of Psycho pharmacology.

PAPER – IV

Itara Manas Chikitsa Evam Yoga

Panchakarma

1. Importance of Panchakarma and other allied procedures including Keraliya Karmas in the management of Manasa rog.
2. Theoretical knowledge and application of the following karmas in Manas rog – Snehan, Svedana, Vamana, Virechana, Basti, Nasya, Raktamokshana, Shiro lepa, Murdhni taila, Anjana, Dupa , Dhupana etc.

Yoga

1. Manovigyan sandharbhe yogasya vaishishtyam. Yogashastrasya upayogita mahatvam cha.
2. Yogasya darshnika svarupgyanasahitam tasya astanganam samichinam Gyanam.
3. Ayurveda drishtya yoga adhyayanasya upayogita.
4. Ayurveda shastre pratipaditah yogasya siddhanth.
5. Satvavajaye gyana-bhakti-karma yoganam manasa roge vivechanam – Hatha yogascha.
6. Role of Shadkarma – Kapalabhati, trataka in Manasa rog
7. Naishthiki chikitsa in manasa rog
8. Therapeutic potential of yoga, psycho biological effects of yoga spiritual therapy and yoga,
9. Sudarshana kriya yoga,transcendental meditation, yoga nidra and other allied yogic techniques in manasa rog chikitsa.
10. Manas and prana (bio energy), pranic healing, means of bio energy modulation in manas rog.

Sattvavajaya

Its application and techniques in detail.

Psychotherapy

1. Various methods of psychotherapy and counselling techniques, transational analysis, behavioural therapy, psychoanalysis.
2. Hypnotherapy in Manasa rog.
3. Role of Rasayana, Medhya Rasayana and Vajikarana in Manas rog
4. Pathyapathya in Manas rog
5. Achara Rasayana in Manas rog.
6. Manas roge itara Chikitsanam cha Varnanam
7. Knowledge of psychiatric emergency an their management
8. Knowledge of surgical intervention in Manas rog
9. Recent advances in Manas rog.

Reference Books

1. Related matter of Charak, Sushrut & Vagbhata & other ancient texts.
2. Prachin Manovikara Vigyanam - Ayodhya Prasad Achal
3. Ayurvediya Padarth Vigyan - Ranjit Rai Deshai

- | | |
|-----------------------------|--------------------------|
| 4. Ayurveda Darshan | - Acharya Rajkumar Jain |
| 5. Purusha Vichaya | - Prof. V.J.Thakkar |
| 6. Ayurvediya Manasa Vigyan | - Prof. Ram Harsha Singh |
| 7. Yoga evum Ayurveda | - Acharya Rajkumar Jain |

10. PRASUTI & STRI ROG

PAPER - I

Garbhagarbhini Vigyanam

1. Shroniguha – yoni – Garbhashayadi samasta stri prajanangadinam prakrititah rachana shariram. Applied anatomy of female Genito urinary system, pelvis and Pelvic floor. Pelvic assessment and foetal skull.
2. Physiopathology of puberty. Artava, Rituchakra, Stribijam Pumbijam cha.(Neuroendocrine control of menstrual cycle).
3. Garbhadhanam (prenatal Counseling), Pumsavanam, Garbhopadanani, Garbhasya shaddhatvatmaktvam, Garbhavakranti, Matrijadayobhavaha, Garbhabhivridhhi, role of panchamahabhutas in the formation and development of fetus. Garbhasyavayotpatti, Fundamentals of reproduction – gamatogenesis, Fertilization, Implantation and early development of human embryo.
4. Apra, Garbhodaka Jarayu., Nabhinadi prabhrutyadinam nirmanam Karmani Vikarani cha (Placenta, amniotic fluid, membranes and umbilical cord - their formation, structure, Functions and abnormalities), Garbhasyaposhanam Garbhasharirkriyavaishishtyam (Foetal physiology), Garbhalingotpatti, Garbha varnotpatti Garbhasya masanumasika vridhhi (Foetal growth and development)
5. Bija – Bijabhaga – Bijabhagavayava janya, anya cha garbhanga vikarah (Birth defects, Genetics and other teratologic abnormalities)
6. Garbhininidanm, Garbhakalina lakshanani, Matrigata parivartanani Dauhridam, Physiological changes during pregnancy, Endocrinology related to pregnancy, Immunology of pregnancy.
7. Garbha sapekshanidanm, Garbhiniparicharya swasthavrittam cha, Masanumasika Pathya Apathyam cha. Ante Natal care, (examination investigation and management) Garbha upaghata kara bhavah.
8. Garbhasankhya nirnay, Bahu apatyata cha (Multiple pregnancy)
9. Garbhavyapadani – Garbhasrava and Garbhapata (abortions), Upavishtaka, Nagodara / Upashushkaka, Lina Garbha, Goodagarbha, Jarayu dosha, Antarmrita garbha (Intrauterine Foetal death), Garbha shosha, Garbha kshaya, Mithyagarbha (pseudocyesis), Bhutahrita garbha, Raktagulma (Hydatidiform mole), Ectopic pregnancy I.U.G.R, causes , clinical features, complications and treatment.
10. Garbhini vyapadani – Garbhinyah Garbhajanya anyavikaranam nidan purvarupa, rupa purassaram chikitsa cha. Early recognition differential diagnosis and prompt management of pregnancy complications. Hyperemesis gravidarum, Pregnancy Induced Hypertention, Pre-eclampsia, Eclampsia, Antepartum hemorrhage, Rh-incompatibility. Management of pregnancies complicated by medical, surgical or Gynecological diseases in consultation with the concerned specialities by team approach.
 - a) Anaemia, pyrexia, Heart disease, Diabetes mellitus, Liver disorders, Respiratory diseases, renal diseases, epilepsy, Hypertensive disorders.
 - b) Fibroids, Ovarian tumors, Carcinoma Cervix, Genital prolapse.
 - c) Recent advances in medical and surgical management.

Infections in pregnancy
Toxoplasmosis, Viral infections (Rubella, CMV, Hepatitis –B, and Herpes), Syphilis and other sexually transmitted infections including
HIV Preventi on of mother to child transmission of HIV infection (PMTCT).
11. Jataharini related to garbhini avastha

12. Evaluation of Foetal and maternal health in complicated pregnancies by making use of diagnostic modalities.
13. Prenatal diagnosis of fetal abnormalities and appropriate care. PNDT Act and its Implications.

PAPER II
Prasava – Vigyana
Prakrit prasav

1. Prasav paribhasha, Prasav kal, Prasava prarambha karanani, Prasava kalina garbha sthiti, Avi, Sutikagara.
 - a) Initiation and onset of parturition.
 - b) Examination and evaluation of patient in labour.
 - c) Physiology of labour.
 - d) Mechanism of labour.
 - e) Selection of place of delivery and labour room
2. Prasava avastha evam paricharya
 - a) Stages of normal labour.
 - b) Intrapartum maternal and foetal monitoring.
 - c) Mangement of normal labour.

Prasava vyapada

- a) Etiopathogenesis, clinical features, prevention and management of Garbhasanga, vilambita prasav & Mudhagarbha.
 1. Prolonged labour
 2. Cephalo pelvic disproportions
 3. Malpresentation
 4. Obstructed labour
 5. Methods of Induction and Augmentation of labour
- b) Complications of different stages of labour
- c) Obstetric management of high risk Pregnancies – PET, Eclampsia, Diabetes, cardiac Disease, asthma, Epilepsy, Cases of APH, Multiple pregnancy, Preterm, Post term and IUGR cases.
- d) Still birth – diagnosis, complications and management.

Jatamatra /Navajata shishu paricharya

1. Examination and management of neonate.
2. Management of birth asphyxia.
3. Detection of congenital malformation in newborn and timely referral for correction.

Sutika Vignyana

1. Sutika Paribhasha, kala maryada, paricharya, normal puerperium.
2. Sutika vyadhi and their chikitsa; stana shotha, stana vidhradhi
3. Stana sampat, Stanya utpatti, Srava, Stanya vriddhi, kshaya and dusti karana, Lakshan and its Chikitsa, Stanya pariksha.
4. Suppression of lactation.

Obstetric shock and management

1. Raktadhana: - blood transfusion and replacement of blood constituents.
2. Management of fluid & electrolyte imbalance in obstetrics.

Drugs used in obstetric practice, indications/contra indications, doses and side effects

PART – III
Stri Rog

- 1. Etiology, Pathogenesis, Signs, Symptoms and Treatment of disorders of menstruation And Female reproductive and urinary system.**
 - A. Congenital malformations of female genital tract
 - B. Artav dushti, asrigdara, anartava and alpartav.
 - C. Genital infections including sexually transmitted infections.
 - D. Abnormal vaginal discharges.
 - E. Granthi, Gulma, Arbuda, Arsha, Yonikanda, and Neoplastic growth of female genital organs.
 - F. Endocrinological disorders.
 - G. PCOS
 - H. Somarog.
- 2. Detailed study of yoni vyapad mentioned by different Acharyas with their commentaries and all possible correlations with modern gynaecological diseases.**
- 3. Vandyatva**
 - 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.
- 5. Measures of contraception**
 - A. Ayurvedic view of Garbha nirodha and Garbhapatkara yogas.
 - B. Recent studies in the field of contraception in Ayurveda.
 - C. Temporary Contraceptions – Mechanical and medicinal.
 - D. National Health programme to improve maternal and Child health, social obstetrics and vital statistics (maternal and perinatal mortality).
- 6. Sthanik Chikitsa**

Detailed study of Uttarabasti, Pichu, Varti, Dhupan, Dhavana, Parisheka, Kalkadharana etc.
- 7. Rajo Nirvritti – menopause, H.R.T, and geriatric health care**
- 8. Study of modern diagnostic techniques and Investigations.**
- 9. Important drugs used in Stri Rog.**

PAPER – IV
Prasuti – Stri Rog-Shalya Karmani

General principles of Gynecological and Obstetric Surgeries. Analgesia and Anaesthesia in Obstetrics and Gynaec operative procedures.

Operative Obstetrics

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

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

Cervical encirclage.

Instrumental delivery (Forceps, vacuum extraction), Caesarean Section, Manual removal of Placenta, Caesarean Hysterectomy.

Operative gynecology

Selection of cases, technique and management of complications of minor and major gynaecological procedures.

Dilatation and Curettage, Cervical cauterization.

Polypectomy, Myomectomy, Cystectomy, Oophorectomy.

Surgical sterilization procedures.
 Abdominal and Vaginal Hysterectomy.
 Surgical procedures for genital prolapse.
 Surgical management of benign genital neoplasm.
 Recent advances in Gynecology and obstetrics – Diagnostic and therapeutics
 Shock and its management, Blood Transfusion, Fluid and electrolyte imbalance, Fluid therapy,
 Medico – legal aspects – ethics, communication and counselling in obstetrics and Gynecology.
 Intensive care in Obstetrics and Gynecology.

Practical Training

Seminar presentations, teaching and vigorous training in IPD, OPD and department.
 Practical knowledge and practice of all the relevant equipments, procedures, their complications with management including emergencies. Submission of dissertation on selected topic.

Reference Books

1. Related matter of Charak, Sushrut and Vagbhata
2. Kashyapa Samhita
3. Abhinav Prasutitantra - Ayodhya Prasad Achal
4. Abhivan Stri Roga Vigyan - Ayodhya Prasad Achal
5. Abhivan Stri Roga vigyan - Rajendra Prasad Bhatnagar

11. KAUMARBHRITTYA (BAL ROG)

PAPER – I

Bija, Garbha evam Balavikas Vigyaniya

(Human Genetics, Embryology and Growth & Development)

A. Prakrita Bija-Bijabhaga-Bijabhagavayava evam Tadjanya Vikriti (Genetics and related disorders)

1. Ayurvedic genetics: Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya
2. Modern genetics

(I) Basic concepts

- a. Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular screening.
- b. Human Chromosomes – Structure, number and classification, methods of chromosome preparation, banding patterns.
- c. Single gene pattern inheritance: Autosomal & Sex chromosomal pattern of inheritance, Intermediate pattern and multiple alleles, Mutations, Non Mendelian Inheritance, mitochondrial inheritance, Genomic imprinting, parental disomy.
- d. Criteria for multifactorial inheritance.

(ii) Pathogenesis

- a. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, Genetic inheritance, inborn errors of metabolism.
- b. Chromosomal abnormalities: Autosomal & Sex chromosomal abnormalities

- syndromes.
- c. Multifactorial pattern of inheritance: Teratology, Cancer Genetics – Haematological malignancies, Pharmacogenetics.
- d. Chromosomal disorders
- e. Chromosomal aberration (Klinefelter, Turner and Down's syndrome)
- f. Sex Determination
- g. Genetic Counseling, Ethics and Genetics

B.Garbha – Vigyaniya (General Embryology)

1. Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum.
2. Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm.
3. Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development)
 - I. First week of development
 - II. Second week of development
 - III. Third week of development
 - IV. Fourth to eighth week of development (Embryonic period)
 - V. Development from third month till birth (Fetal period)
4. Apra (Placenta)
 - Apara Nirmana (Formation of placenta), Apra Karya (Functions of placenta); Apra Vikara (Placental abnormalities)
5. Nabhinadi (Umbilical Cord)
6. Garbha Poshana (Fetal nutrition including fetal circulation)
7. Yamala Garbha (twins)
8. Garbha Vriddhikara Bhavas, Garbhopaghata Bhavas:
9. Effect of maternal medication, diet and illness over fetus.
10. Teratology: Causative factors for teratogenicity, mode of actions of teratogens,
11. Perinatal Care and Perinatal complications
12. Jataharini (Related to pediatric)
13. Prenatal diagnosis for congenital abnormalities
14. Samanya Janmajata Vikara (Common congenital anomalies of different systems).

C. Sharirika Vriddhi, Mansika evam Samarjika Vikasa (Physical Growth, mental and Social development of child)

1. Vriddhi Vikasa Karma evam Vikara
 - a. Mile stones in infancy and childhood in respect of gross, fine motor, cognitive, language and personal-social development.
 - b. Adolescent: Growth & development, and associated problems
 - c. Anthropometry –measurement and interpretation
2. Childhood Samskara

PAPER II

Navajata Shishu Vigyan evam Poshana (Neonatology and nutrition)

1. Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates).
2. Navajata shishu paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation)
3. Samanya Navajata Shishu Paricharya (General Neonatal Care – Labour room onwards)

4. Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn)
5. Prasava Kalina Abhighataja Vyadhi (Birth injuries): Upashirshaka (Caput, cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdurai haemorrhage)
6. Navjat Shishu Pariksha (Examination of newborn - Ayurveda and Modern methods)
7. Kumaragar: Navajata Shishu Kaksha Prabandhana – (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramanikarana(sterilization), Knowledge of equipments used in nursery.
8. Navajatha Shishu Vyadhi (Early neonatal disorders): Hypothermia, Shavasavarodha (Asphyxia Neonatorum), Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal septicaemia), Kamala (Neonatal Jaundice), Akshepaka (Neonatal convulsion), Pandu (Anemia), Atisara (Diarrhea), Asamyaka Nabhinal Kartanjanya vyadhi.
9. Navjata Kshudra Vikara (Minor neonatal ailments): Chharadi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).
10. Sadyojatasya Atyayayika Chikitsa (Management of neonatal emergencies): Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.
11. Procedures: Shiro-Pichu, Abhyana, Parisheka, Swedan-Hasta-Pata sweda, Pralepa, Garbhodaka Vamana (Stomach wash), Ashchytana Neonatal resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, phototherapy, Naso-Gastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture.
12. Nutrition:
 - a. Navjat Shishu Ahara (Neonatal feeding):
 - I. Specific Feeding methodology as per Ayurveda and recent advances; Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby.
 - II. Stanyotpatti and Prasruti (Lactation physiology), Matridugdha Samghatana(Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampata evam Mahatva (Properties & Importance of pure milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate production and absence of breast milk), Stanya parikshana (examination of breast milk) , Stanyabhava pathya vyavastha (Alternative feeding methods in absence of breast milk), Various feeding methods, TPN (Total Parenteral Nutrition)
 - III. Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation)
 - IV. Dhatri (Wet nurse) : Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking.
 - V. Lehana (Elucturies)
 - b. Bala-Poshana (Child Nutrition):
 - i. Daily requirements of nutrients for infant and children
 - ii. Common food sources
 - iii. Satmya and Asatmya Ahara (Compatible and incompatible diet)
 - iv. Pathya evam Apathya Ahara (Congenial and non – congenial diet)
 - v. Stanyapanayana (Weaning)

PAPER – III
Balrog (Pediatric Disorders)

- i. Fundamentals of Ayurvedic treatment in pediatric disorders
- ii. Atura Balaka Pariksha(Examination of sick child)
- iii. Daiva Bala-Pravrita Rog (Indiopathic and Infectious disorders):
 - a) Krimi evam Aupsargika Rog (Infections and Infestations): Common bacterial, viral and prarasitic infections with special reference to vaccine-preventable diseases: Rohini (Diphtheria), Whooping cough, Aptanaka(Tetanus including neonatal tetanus), Romantika (Measles), Karnamula shotha (Mumps), Rubella and Masurika (Chickenpox), Antrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis, Pravahika (Amoebiasis)Glardiasis and intestinal helminthiasis; Vishama Jwar (Malaria) and Kala-azar, Dengu fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis).
 - b) Tvaka Vikara (Skin disorders): Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis)
 - c) Pranvaha Srotasjanya Vyadhi (Respiratory disorders) – Kasa (Cough), Shvasa (Respiratory distress Syndrome), Tamaka Shwasa (Childhood Asthama), Bronchilolitis, Shvasanaka Jwara (Pneumonia – bacterial , Viral etc) Rajyakshma (tuberculosis), Vaksha – Puyata (Pyothorax), Vaksha Vata – Purnata(Pneumothorax)
 - d) Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders): Jwar (Fever), Chhardi (Vomiting), Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Vibandha (Constipation, Gudukutta (Napkin rashes), Jaiodar (Ascites), Udarshula (Pain in abdomen).
 - e) Rakta evam Raktavaha Srotasjanya Vyadhi (Hematological and Circulatory disorders): Pandu (Anemia), Raktapitta (Bleeding disorders), Vishishta Hrida Rog (Specific cardiac diseases – RHD etc), Raktagat-vata (Hypertension),Thalasemia, Leukemia, Hemorrhagic disorders.
 - f) Mamsavaha Srotasjanya Vyadhi: Myopathy
 - g) Mutravaha srotasjanya Vyadhi (Urinary System disorders): Vrikkashotha (Glomerulonephritis and nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria),
 - h) Vatavaha Sansthanjanya Vyadhi (Nervous system disorders): Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia), Adaranga Vayu (diplegia), Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis), Amavata (Juvenile Rheumatoid arthritis)
 - i) Manovaha Srotasa Vyadhi: Breath holding, Shayya mutra (Bed wetting), Autism-ADHD(Attention Deficit andhyperactive disorders), Learning Diability, Mental retardation, Temper tantrum , Pica
 - j) Antahsravi evam Chayapachayajanya Rog (Endocrine and Metabolic disorders)

- k) Kuposhanjanya Vyadhi (Nutritional disorders): Karshya-Phakka-Balshosha-Parigarbhika (PEM and allied disorders), Vitamin-Mineral and trace elements deficiency disorders, Hypervitaminosis.
- l) Anya Vyadhi (Miscellaneous disorders): Gandamala, Apachi (Cervical lymphadenitis), Galganda (Goiter), Kukunakadi Akshi Rog, Hodgkin & non Hodgkin Lymphoma, disability and Rehabilitation, Abnormal growth patterns, Short stature.
- m) Samghata-Bala Pravrita Rog: Dog bite, Snake bite, Scorpion bite etc
- n) Atyayika Balarog Prabandhana (Pediatric emergency management): Shock and Anaphylaxis, Fluid and electrolyte management, Drowning, Foreign body aspiration, Status epilepticus, Acute haemorrhage, Acute renal failure, Febrile convulsion, Status asthmaticus, Burn, Acute Poisoning
- o) Balagraha: Scientific study of Graha Rogs.

PART –IV

Ancient Status and Advancements in the field of Kaumarabhritya

1. Significant contributions of Kashyapa samhita and other texts /treatises of Ayurveda in the field of Kaumarabhritya
2. Panchakarma: Principles of Panchakarma and their application in pediatric practice.
3. Concept of Vyadhi-kshamatva evam Vardhanopaya (Concept of Immunity and recent immuno-enhancing measures including padiatrics immunization)
4. National Programs related to pediatrics
5. Update knowledge of clinical pediatrics
6. Application of Research methodology in the field of Pediatrics

Practical

- a) Seminars, presentations, teaching & training in IPD, OPD and department.
- b) Knowledge and practice of all the relevant equipments, procedures and disease management including life-threatening conditions of children.

Reference Books

1. Related matter of Sushruta Samhita, Charaka Samhita and Vagbhata
2. Kshyapa Samhita
3. Harita Samhita
4. Kumar Tantra Samucchaya – Ramanath Dwivedi

12.KAYACHKITSA

PAPER – I

1. General principles, concepts and clinical methods of Ayurveda and Modern medical science.
2. Study of different compound preparations of different kalpanas commonly used in day to day practice
3. Ability to identify the role of Ayurved in National health programmes.
4. Study of Charak samhita, Sutra sthana chapter 21 to 24, and 28, Vimana sthana chapter 5, 7, 8, all chapter 9.
5. Communication and management skills in Chikitsa

PAPER -II

Nidana, Chikitsa including Atyayika Chikitsa and advances in modern diagnostic methods of the diseases pertaining to following srotas/systems.

1. Pranavaha srotas/disorders of respiratory system. Chest diseases: Bronchial Asthma, Pulmonary Koch's, Bronchitis Bronchiectasis, COPD, Silicosis etc.
2. Udakavaha srotas / disorders of acid base and electrolyte imbalance.
3. Mahasrotas / disorders of gastrointestinal system.
4. Rasa rakta vaha srotas/disorders of cardiovascular system. Hepatic diseases: Hepatitis, Cirrhosis, Ascites and recent advances in diagnosis and treatment. CVS Disorders: CHF, Anginal disorders, LVH RVH, RHD & Valvular diseases IHD and Hypertension, congenital heart diseases. Skin & Venereal diseases: Syphilitic disorders, gonorrheal diseases, skin allergies and Infection, AIDS and recent advances in diagnosis & treatment of genral skin diseases, leprosy, psoriasis, Atopic dermatitis. Blood disorders: Different Anemia, Leukemic Diseases, Coagulation & Blood Parasitic Disease (Malaria, Kalazar etc.)
5. Annavaha Srotasa . Disorders related to GIT: Diarrhoea, Dysentery, Ulcerative diseases of GIT, IBS etc.
6. Mutra and Shukra vaha srotas / disorders of urogenital systems. Renal and urinary diseases: Nephrotic & Nephritic diseases, UTI, ARF, CRF, Uremia, Renal Hypertension etc. Renal complications of other diseases.

PAPER -III

Nidana, Chikitsa including Atyayika chikitsa and advances in modern diagnostic methods of the diseases pertaining to following srotas / systems.

- I. Mamsa, Asthi and Majja and Vata vaha srotas /disorders of musculo skeletal disorders and neuro muscular disorders. Locomotor diseases: Rheumatoid arthritis, Osteo arthritis, chronic fatigue syndrome etc.
 - II. Nidana and Chikitsa of Vatavyadhis / Neurological disorders. Psycho-Neurological disorders: Sexual disorders, CVA, Epileptic disorders, parkinsonism etc. Psychosis, Anxiety Disorders, Depression etc.
 - III. Nidana and Chikitsa of Maovaha Sroto disorders / Psychiatric disorders
1. Sankramaka and Janapadodhvamsa vikaras / communicable epidemic and environmental disorders.
 2. Occupational hazards.
 3. Endocrinal disorders: Diabetes mellitus, Thyroid diseases viz. Hyperthyroidism, Hypothyroidism, Graves's disease, Endocrinal sexual dysfunction, Addison's disease, Cushing syndrome.
 4. Auto immune diseases.
 5. Metabolic disorders: Gout, Hypercholesterolemia and other lipid disorders.
 6. Water and Electrolytic disturbances.
 7. Study of disorders not mentioned in Ayurvedic classics such as AIDS, Chikungunya, Alzheimer's disease, and Monkey fever, (KFD), Hepatitis, Dementia and Neoplastic disorders and their Ayurvedic Management.
 8. Management of emergency conditions / Critical care management in ICU and ability of referral Judgment.
 9. Recent advances in modern medicine and diagnostic aids.

PAPER – IV
Speciality in Kayachikitsa - Any one as student's choice

1.Rasayan

- a. Definition
- b. Classification of Rasayana & its application in Health and Disease
- c. Rasayana drugs, yogas and their uses
- d. Role of Rasayana in the management of Manas & Sharir Rogs.
- e. Scope of Rasayana, Chikitsa in present times.

2. Vajikaran

- a. Definition
- b. Classification of Vajikaran & its application in Health and Disease
- c. Vajikaran drugs, yogas and their uses.
- d. Vajikarana, concept, practices and remedies
- e. Scope of Vajikaran Chikitsa in present times.

Reference Books

1. Related matters of Charak Samhita, Sushrut Samhita, Ashtanga Samgraha and Ashtanga Hridaya
2. Madhav Nidana with madhukosha Commentary
3. Ayurvediya Vyadhi Vigyana -Yadavji Trikamji
4. Roga Pariksha Vidhi - Priyavrat Sharma
5. Panchakarma Vigyan - Haridasa Sridhar Kasture
6. Cikitsadarsha - Pandit Rajesvardutta Shastri
7. Kayachikitsa - Ramaraksha Pathaka
8. Cakradatta
9. Modern texts of kaya chikitsa

13. SHALYA TANTRA SAMANYA – GENERAL SURGERY

PAPER -1

Shalyatantra Siddhant – Fundamentals of Surgery

1. Etymology and Definition of Shalya Tantra.
2. Scope of Shalya Tantra and its importance.
3. Descriptions of Sosha, Dhatu and Mala Vigyan.
4. Significance and importance of Rakta as the fourth Dosha.
5. Yantras and Shastras – ancient and recent.
6. Trividha Karma – Purva, Pradhan and Pashchat Karma. Importance of trividha karma.
7. Asepsis and Antisepsis.
8. Nirjantakarana – Sterilization – Methods, Types and O.T.fumigation
9. Surgical infections – Sepsis, tetanus, hepatitis, HIV-AIDS etc.
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 in Shalya Tantra.
13. Concept of shock – Its varieties and management.

14. Rakta srava – Types & clinical features. Concept of Raktastambhana – Haemostasis.
 15. Bandana – bandaging techniques.
 16. Vranasopha, Vidradhi and Prameha Pidaka.
 17. Arbuda and Granthi.
 18. Gulma and Udararog
 19. Kshudra Rog.
 20. Fluid, electrolyte, Acid Base Balance and Nutrition
 - a. Introduction to physiology of fluids and electrolytes
 - b. Dehydration and over hydration,
 - c. Specific electrolyte losses and symptomatology and management of Acidosis, Alkalosis and Acid balance.
 - d. Electrolyte changes are specific diseases like pyloric stenosis, intestinal obstruction and anuria.
 - e. Various replacement fluids in surgery, mode of administration and complications.
 - f. Nutrition – pre-operative, post-operative and intravenous alimentation.
1. Blood Transfusion – Indications, blood groups, components, compatibility and complications with management.
 2. Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice.
 3. Knowledge of imaging and diagnostic techniques – X-ray, Ultra Sonography, CAT scan, MRI and recent advances.

PAPER - II

Vishista Shalya Karma

1. Yogya – Practical and Experimental training

- a. Practice of surgical procedures on different models.
- b. Description of Yogya mentioned in texts.
- c. Specific knowledge of surgical procedures in different diseases.

2. Vrana – Wound

- a. Management of Nija Vrana, Agantuja Vrana, Dushta Vrana and Nadi Vrana.
- b. Vrana Chikitsa – Pathya-apathya and Shashti Upakramas
- c. Varieties and management of Dagdha Vrana – Burn and scalds, Diabetic wound and its management
- d. Gangrene – management.

Mutra Rog – Urological diseases.

Anatomical and physiological knowledge of kidney, ureter, urinary bladder, prostate, seminal vesicles, urethra and penis.

Investigations of Mutravaha Srotas – urinary tract.

Complete knowledge of pathogenesis, causes and surgical

Procedures of Ashmari - urinary calculi and other disorders.

Specific knowledge of swelling abscess, tumor, benign

Hypertrophy of prostate, Mutraghata, Mutrakruccha and

Traumatic injury of urinary system their causes, pathogenesis and Management.

Penis Congenital, traumatic, inflammatory and neoplastic Disorders.

Asthi rog – Orthopaedics/Marma chikitsa.

Anatomy and physiology of bone.

Diseases of bone and joints – Infection, congenital, exogenous diseases, generalized diseases, abscess, osteoporosis,

Osteomyelitis, tumours of bones and chronic joint diseases.

Aetiopathogenesis, treatment along with surgical procedures of

- Bhagna – fracture, Sandimoksha – dislocation and bone transplantation.
 Diseases of Spine, vertebral column and spinal cord.
 Sandhana Karma – plastic reconstructive and cosmetic surgery,
 Fundamentals of Sandhana Karma.
- e. Karna Sandhana – Earplasty
 - f. Nasa Sandhana – Rhinoplasty
 - g. Ostasandhana – Chelloplasty
 - h. Skin grafting
 - i. Plastic surgery of urethra, penis, testicles, vasdeference and scrotum.
3. **Anushalya Karma** –Parasurgical procedures
 - a. Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana.

PAPER – III

Shalya Vigyaniya Nidan – Operative surgery

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and Surgical treatment of head injury, thoracic trauma, and abdominal trauma.
3. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid etc.
4. Diagnosis and Surgical management of breast diseases.
5. Diagnosis and Surgical measures of diseases of Gastrointestinal system – stomach, pancreas, peritoneum, omentum, mesentery, retroperitoneal space, small intestine, large intestine and vermiform appendix
6. Diagnosis and surgical management of proctological disorders.
7. Diagnosis and surgical measures of diseases of Hepatobiliary system liver, gall bladder, bile ducts and spleen.
8. Diagnosis and surgical management of diseases of urogenital system.
9. Diagnosis and surgical management of traumatic disorders.
10. Diagnosis and surgical measures for disorders of vein, artery, ligaments, joints and muscles.
11. Diagnosis and surgical management of diseases of scrotum and testis. -Hydrocele, ectopic testis, undescended testis etc.
12. Diagnosis and surgical management of Hernias – Inguinal, femoral, umbilical, incisional, abdominal wall and other hernias.
13. Endoscopic procedures – Gastroduodenoscopy, Sigmoidoscopy, Colonoscopy etc.
14. Diagnostic and therapeutic laparoscopy.
15. Anaesthesia – Definition, Types, anaesthetic agents, indications, contraindications, procedures, complications and management.

PAPER – IV

Shalya Vangmaya – Shalya literature, research and development

1. Thorough study of the text including portions of Brihat treya and Laghu treya related to surgical aspects.
2. Knowledge and importance of Surgical audit.
3. Value of research and teaching in surgery.
4. Medico legal issues – Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act, medical profession, national health policy – Implications in a medico-legal case like accidents, assaults etc.
5. Surgical ethics including Informed consent.

Reference Books

1. Sushrut Samhita with Dalhana Commentary
2. Sushrut with Ghanekar Commentary
3. Related matters of Astanga Sangraha, Astanga Hridaya, Madhava Nidan etc.
4. The Surgical instruments of the Hindus Mukhopadhyaya. - Girindranath
5. Shalya Tantra Samuchchaya - Pandit Ramadesh Sharma
6. Shalya Vijyan (part 1-2) - Dr. Surendra Kumar Sharma
7. Shalya Samanvaya (part 1-2) - Vd. Anantaram Sharma
8. Shalya Pradipika - Dr. Mukund Swarup Verma
9. Sushruti - Dr. Ram Nath Dwivedi
10. Clinical Shalya Vigyan - Dr. Akhilanand Sharma
11. Bhagha Chikitsa - Dr. Prabhakar Janardhan Deshpande
12. Kshara sutra management in anorectal ailments -Dr. K.K.Sharma, Dr. K.R.Sharma and Dr.Kulwant Singh
13. Anorectal diseases in Ayurveda - Dr. Sizoria & Dr. Praveen Kumar
14. Adhunka Shalya Chikitsa Siddanta - Dr. Katil Narshingham Udupa
15. Agnikarma Technology Inovation - Dr. P.D. Gupta
16. Shalya tantra Ke Sidhant - Dr. K.K. Takrai
17. Surgical Ethics in Ayurveda - Dr. Singhal
18. Susruta's Contribution to Surgery - Dr. S. Sankaran
19. Recent advances in the management of Arshas/Haemorrhoids -Dr. P. Hemantha Kumar
20. Arsha Evam Bhagandar Men Sutravacharan - Vd. Kanak Prasad Vyas
21. Kshara Sutra - Dr. S.N. Pathak
22. Surgical ethics of Ayurveda - Dr. S. Sankaran
23. Anushastra Karma - Dr. D.N. Pande
24. Concept of Vrana is Ayurveda - Dr. Lakshman Singh
25. Significance for Purva Karma in Surgical Patient - Dr. Lakshman Singh
26. Sangyahan Prakash - Dr. D.N. Pande
27. Text book of Surgery - Sabistan
28. Operative Surgery - Rob and smith
29. Fractures and joint Injuries - Watson-Jones
30. Text books of Operative Surgery - Farquharsons'
31. Principles of Surgery - Schwartz
32. Emergency Surgery - Hamilton Balley's
33. Surgical pathology - Willing Worth
34. Clinical methods in surgery - S. Das
35. Methods of Surgical Procedure - S. Das
36. Short practice of surgery - Balley and love's
37. A concise text book of surgery - S. Das
38. A manual on clinical surgery - S. Das
39. A system of surgical diagnosis - Prof. Tribhuvan. N. Patel
40. A practical guide to operative surgery - S. Das
41. Text book of Surgery – Surgeons Association of India
42. Clinical Anatomy/Surgical Anatomy - Snell
43. Essential P.G. Surgeon - Filinge, Davice
44. Outline of Orthopaedics - J.C. Adams
45. Outline of Fracture - J.C. Adams
46. Clinical orthopaedic diagnosis - Suresh Pandey