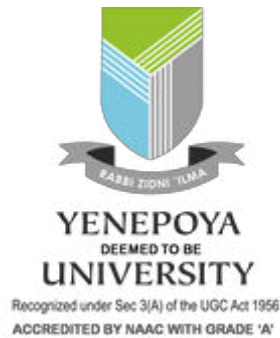




YENEPOYA AYURVEDA MEDICAL COLLEGE & HOSPITAL

(Constituent College)



YENEPOYA UNIVERSITY

(Deemed to be University)

Accredited 'A' Grade BY NAAC

BAMS CURRICULUM

2018-2019

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COURSE PARTICULARS

I. Admission, Selection and Migration – Eligibility Criteria

No candidate shall be allowed to be admitted to the Ayurveda Curriculum of first year of Bachelor of Ayurveda Medicine and Surgery (BAMS) until:

1. He / She shall complete the age of 17 years on or before 31st December, of the year of admission to the BAMS course:

2. He/she has passed qualifying examination as under:-

a. The higher secondary examination or the Indian School Certificate Examination which is equivalent to 10+2 Higher Secondary Examination after a period of 12 years study, the last two years of study comprising of physics, chemistry, biology (minimum marks as prescribed in Section II below) or any other elective subjects with English at a level not less than the core course for English as prescribed by the National Council for Educational Research and Training after the introduction of the 10+2+3 years educational structure as recommended by the National committee on education;

Note: Where the course content is not as prescribed for 10+2 education structure of the National Committee, the candidates will have to undergo a period of one year pre-professional training before admission to the Ayurveda college;

Or

b. The intermediate examination in science of an Indian University/Board or other recognised examining body with Physics, Chemistry and Biology which shall include a practical test in these subjects and also English as a compulsory subject;

Or

c. The pre-professional/pre-medical examination with Physics, Chemistry and Biology, after passing either the higher secondary school examination, or the pre-university or an equivalent examination. The pre-professional/pre-medical examination shall include a practical test in Physics, Chemistry and Biology and also English as a compulsory subject;

Or

d. The first year of the three years degree course of a recognized university, with Physics, Chemistry and Biology including a practical test in three subjects provided the examination is a "University Examination" and candidate has passed 10+2 with English at a level not less than a core course (with PCB aggregate marks as above);

Or

e. B.Sc Examination of an Indian University, provided that he/she has passed the B.Sc examination with not less than two of the following subjects Physics, Chemistry, Biology (Botany, Zoology) and further that he/she has passed the earlier qualifying examination with the following subjects-Physics, Chemistry, Biology and English.

Or

f. Any other examination which, in scope and standard is found to be equivalent to the intermediate science examination of an Indian University/Board, taking Physics, Chemistry and Biology including practical test in each of these subjects and English; In case of doubt, it is the onus of the student to get clarification from Association of Indian Universities.

Note: Marks obtained in Mathematics are not to be considered for admission to BAMS Course

II. Selection of Students

The selection of students to the Ayurveda College shall be based solely on merit of the candidate and for determining merit, the following criteria shall be adopted:

1. A competitive entrance examination (NEET) is absolutely necessary in the cases of institutions of All India character;
2. Procedure for selection to BAMS course shall be as follows:-
 - I. A candidate must have passed in the subjects of Physics, Chemistry, Biology and English individually and must have obtained a minimum of 50% marks taken together in Physics, Chemistry and Biology at the qualifying examination and in addition must have come in the merit list prepared as a result of such competitive all-India entrance examination by securing not less than 50% marks in Physics, Chemistry and Biology taken together in the competitive examination. In respect of candidates belonging to reserved category, the marks obtained in Physics, Chemistry and Biology taken together in qualifying examination and competitive entrance examination should be a minimum of 40%.
 - II. Provided that a candidate who has appeared in the qualifying examination the result of which has not been declared, he may be provisionally permitted to take up the competitive entrance examination and in case of selection for admission to the BAMS course, he shall not be admitted to that course until he fulfils the eligibility criteria as per above regulations.

III. Duration of the Course:

The undergraduate Ayurveda training programme leading to BAMS degree shall be of 4 ½ years with a minimum of 240 teaching days in each academic year and 1 year compulsory internship programme. During this period, the student shall be required to have engaged in full time study at an Ayurveda College recognised or approved by the Central Council of Indian Medicine.

IV. Migration:

- 1) Migration from one Ayurveda College to another is not a right of a student. However, migration of students from one Ayurveda college to another Ayurveda college in India may be considered by the Central Council of Indian Medicine only in

exceptional cases on extreme compassionate grounds*, provided the following criteria are fulfilled. Routine migrations on other ground shall not be allowed.

- 2) Both the colleges, i.e. one at which the student is studying at present and one to which migration is sought, are recognised by the Central Council of Indian Medicine
- 3) The applicant candidate should have passed first year BAMS examination
- 4) The applicant candidate submits his application for migration, complete in all respects, to all authorities concerned within a period of one month of passing (declaration of results) the first year Bachelor of Ayurveda Medicine and Surgery (BAMS) Examination.
- 5) The applicant candidate must submit an affidavit stating that he/she will pursue 240 days of prescribed study before appearing at II year Bachelor of Ayurveda Medicine and Surgery Examination at the transferee Ayurveda College, which should be duly certified by the Registrar of the concerned University in which he/she is seeking transfer. The transfer will be applicable only after receipt of the affidavit.

Note 1:

- I. Migration is permitted only at the beginning of II year BAMS Course in recognized Institutions.
- II. All applications for migration shall be referred to Central Council of Indian Medicine by the college authorities. No Institution/University shall allow migration directly without the prior approval of the Council.
- III. Council reserves the right not to entertain any application which is not under the prescribed compassionate grounds and also to take independent decisions where applicant has been allowed to migrate without referring the same to the Council.

Note 2: *Compassionate ground criteria:

- I. Death of supporting guardian.
- II. Disturbed conditions in the Ayurveda College area as declared by Government.

V. Attendance requirement, Progress and Conduct

- I. 75% in theory and 75% in practical/clinical in each year.
- II. In case of a subject in which there is no examination at the end of the academic year, attendance percentage shall not be less than 70%. However, at the time of appearing for the professional examination in the subject, the aggregate percentage of attendance in the subject should satisfy condition (I) above.

VI. Subjects of Study:

First Year

- I. Padartha Vijnana And Ayurveda Itihasa
- II. Sanskrit
- III. Kriya Shareera
- IV. Rachana Shareera

V. Maulik Sidhanta Evam Ashtanga Hridaya

Second Year

- I. Rasa Shastra Evam Bhaishajya kalpana
- II. Dravyaguna Vijnana
- III. Roga Vijnana Evam Vikrithi Vijnana
- IV. Charaka Samhitha Purvardha

Third Year

- I. Agadatantra, Vyavahar Ayurveda-Ayurved Evam Vidhivaidyak
- II. Swasthavritha
- III. Kaumarabhrithya parichaya
- IV. Prasuti Tantra Evum Striroga
- V. Charak Samhita Utharaardha

Fourth Year

- I. Kayachikitsa
- II. Shalya Tantra
- III. Shalakya Tantra
- IV. Panchakarma
- V. Research Methodology and Medical Statistics

VII. Examinations:

These regulations shall be applicable for the BAMS degree examinations conducted by Yenepoya University (Deemed to be).

1 Preface:

- A. Evaluation is a continuous process and is based on criteria developed by the concerned authorities with certain objectives to assess the performance of the learner. This also indirectly helps in the measurement of effectiveness and quality of the concerned BAMS programme
- B. Evaluation is achieved by two processes
 1. Formative or internal assessment
 2. Summative or University examinations

Formative evaluation is done through a series of tests and examinations conducted periodically by the institution. Summative evaluation is done by the University through examinations conducted at the end of the specified course.

2. Methods of Evaluation:

Evaluation may be achieved by the following tested methods:

1. Written test

2. Practicals
3. Clinical examination
4. Viva voce

INTERNAL ASSESSMENT EXAMINATION

The continuing assessment examinations may be held frequently at least 3 times in a given academic year and the average marks of these examinations should be considered. The student should have minimum 35% marks in their internal assessment examination to be eligible for University examination.

SCHEME OF EXAMINATION:

The scheme of examination for BAMS Course shall be divided in to 1st BAMS examination at the end of the first academic year, 2nd BAMS examination at the end of second academic year, 3rd BAMS examination at the end of third academic year, and 4th BAMS examination at the end of the last 1 ½ years. 240 days minimum teaching in each academic year is mandatory.

The examination shall be open to a candidate who satisfies the requirements of attendance, progress and other rules laid down by the University. (75% attendance in all exams appearing subjects and 70% attendance in non-exam subjects is required)

- 1) University shall organise admission timings and the admission process in such a way that teaching starts from the 15th of October in each academic year.

I BAMS Examination:

1. Padartha Vijnana Evam Ayurveda Itihasa (Paper I &II)
2. Sanskrit
3. Kriya Shareera (Paper I &II)
4. Rachana Shareera (Paper I &II)
5. Maulik Sidhanta Evam Ashtanga Hridaya

II BAMS Examination

1. Rasa Shastra Evam Bhaishajya kalpana (Paper I &II)
2. Dravyaguna Vijnana (Paper I &II)
3. Roga Vijnana Evam Vikrithi Vijnana (Paper I &II)
4. Charaka Samhitha Purvardha

III BAMS Examination

1. Swasthavritha (Paper I &II)
2. Agadatantra, Vyavahar Ayurveda-Ayurved Evam Vidhivaidyak
3. Kaumarabhrithya parichaya
4. Prasuti Tantra Evam Striroga (Paper I &II)
5. Charak Samhita Utharaardha

IV BAMS Examination

1. Kayachikitsa (Paper I &II)
2. Shalya Tantra (Paper I &II)
3. Shalakya Tantra(Paper I &II)
4. Panchakarma
5. Research Methodology and Medical Statistics

WRITTEN EXAMINATION:

1. The written examination in each subject consists of one or two paper as per the CCIM norms, each of three hours duration and shall have maximum of 100 marks
2. Each paper will be divided in to two sections, A and B of equal marks
3. The question paper should contain different types of questions such as essays, short answer, and very short answers.
4. The nature of questions set, should be aimed to evaluate students of different standard, ranging from average to excellent.
5. The questions should cover as broad an area of the content of the course. The essay questions should be properly structured and the marks specifically allotted
6. The university may set up a question bank.

PRACTICAL AND CLINICAL EXAMINATION:

1. **Objective Structured Clinical Examination:** The clinical and practical examination should provide a number of chances for the candidate to express his/her skills. A number of examination stations with specific instructions will be provided. This will include clinical procedures, laboratory experiments, spotters etc. Additionally, bedside clinical case presentations will be conducted wherever necessary.
2. **Records/Log Books:** The candidate should be given credit for his records based on the scores obtained in the records. The marks obtained for the record in the first appearance can be carried over to the subsequent appearances if necessary.
3. **Scheme of clinical and practical examinations:** The specific scheme of clinical and practical examinations, the type of clinical procedures/ experiments to be performed and marks allotted for each are to be discussed and finalised by the chairman and other examiners and it is to be published prior to the conduct of the examinations along with publication of the time table for the practical examinations. This scheme should be brought to the notice of the external examiner as and when the examiner reports. The practical and clinical examinations should be evaluated by two examiners of which one shall be an external examiner appointed from other universities preferably outside the State. Each candidate should be evaluated by each examiner independently and marks computed at the end of the examination.
4. **Viva Voce:** Viva voce is an excellent mode of assessment because it permits a fairly broad coverage and it can assess the problem solving capacity of the student. An assessment related to the affective domain is also possible through viva voce. It is desirable to conduct the viva voce independently by each examine. In order to avoid

vagueness and to maintain uniformity of standard and coverage, questions can be pre-formulated before administering them to each student. Fifty marks are exclusively allotted for viva voce and that can be divided equally amongst the examiners, i.e., 25 marks per examiner

MARKS DISTRIBUTION IN EACH SUBJECTS OF I BAMS EXAMINATION:

1. Padartha Vijnana Evam Ayurveda Itihasa

Theory: Paper I – 100 marks
Paper II – 100 marks

2. Sanskrit

Theory: 100 marks

3. Kriya Shareera

Theory: Paper I – 100 marks
Paper II – 100 marks

Practical/Viva voce: 100 marks

4. Rachana Shareera

Theory: Paper I – 100 marks
Paper II – 100 marks

Practical/Viva voce: 100 marks

5. Maulik Sidhanta Evam Ashtanga Hridaya

Theory: 100 marks
Viva Voce: 50 marks

Criteria for Pass:

Fifty percent of the total marks in any subject computed as aggregate for theory, i.e., written, viva voce and internal assessment and practical, separately is essential for a pass in all years of study.

For declaration of pass in a subject, a candidate shall secure 50% marks in the University Examination both in Theory and Practical/Clinical examinations separately, as stipulated below:

- A candidate shall secure 50% marks in aggregate in University theory including Viva Voce obtained in University written examination combined together.
- In the University Practical/ clinical examination, a candidate shall secure 50% of University practical marks and Internal Assessment combined together
- Successful candidates who obtain 65% of the total marks or more shall be declared to have passed the examination in First Class. A candidate who obtains 75% and above is eligible for Distinction. Only those candidates who pass the whole examination in the first attempt will be eligible for distinction or class. Other successful candidates will be placed in Second Class.

Grace Marks: Grace marks up to a maximum of 5 marks may be awarded to students who have failed only in one subject but passed in all other subjects.

Re-totalling: The University on application and remittance of a stipulated fee to be prescribed by Yenepoya(Deemed to be) University, shall permit a recounting or opportunity to recount the marks received for various questions in an answer paper/ papers for theory of all subjects for which the candidate has appeared in the university examination. Any error in addition of the marks awarded if identified will be suitably rectified.

Qualification and experience for eligibility for examinership in BAMS examination

1. MD/MS Degree in concerned subject from a recognised Institution
2. Five years teaching experience in the subject in a recognised Ayurveda College after MD/MS
3. Should be holding the post of a Reader or above in an Ayurveda – Institution approved/recognised by the CCIM for BAMS

Note:

In case of shortage of examiners as mentioned above, one examiner from allied subject is permissible

Fifty percent of Examiners appointed shall be external from Ayurveda Institutions approved/recognised by the CCIM for BAMS Course, from another University, preferably outside the State.

Reciprocal arrangement of Examiners should be discouraged, in that, the Internal Examiner in a subject should not accept external examinership for a college form which external examiner is appointed in his subject for the corresponding period.

No person shall be an External Examiner to the same University for more than 3 consecutive years. However, if there is a break of one year the person can be re-appointed.

GOALS & OBJECTIVES

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GOALS:

The Ayurveda graduates during training in the institutions should acquire adequate knowledge, necessary skills and reasonable attitudes which are required for carrying out all activities appropriate to general Ayurveda practice involving prevention, diagnosis and treatment of anomalies and diseases of the human body. The graduate also should understand the concept of community health education and be able to participate in the rural health care delivery programmes existing in the country.

OBJECTIVES:

The objectives are dealt under three headings (a) Knowledge and Understanding (b) Skills and (c) Attitudes.

(A) KNOWLEDGE AND UNDERSTANDING:

The graduate should acquire the following during the period of training.

1. Adequate knowledge of the scientific foundations on which Ayurveda is based and good understanding of various relevant scientific methods, principles of biological functions: ability to evaluate and analyse scientifically various established facts and data.
2. Adequate knowledge of the development, structure and function of the human body both in health and disease and their relationship and effect on general state of health and also bearing on physical and social wellbeing of the patient.
3. Adequate knowledge of clinical disciplines and methods which provide a coherent picture of anomalies, lesions and diseases of the human body and preventive diagnostic and therapeutic aspects of Ayurveda
4. Adequate clinical experience required for general Ayurveda practice
5. Adequate knowledge of the constitution, biological function and behaviour of persons in health and sickness as well as the influence of the natural and social environment on the state of health.

(B) SKILLS

A graduate should be able to demonstrate the following skills necessary for practice of Ayurveda

1. Diagnose and manage various common health problems encountered in general Ayurveda practice keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible.
2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.
3. Carry out certain investigative procedures and ability to interpret laboratory findings.

4. Promote general health and help prevent diseases where possible

(C) ATTITUDES

A graduate should develop during the training period the following attitudes

1. Willingness to apply the current knowledge of Ayurveda in the best interest of the patient and community.
2. Commitment to the science as to treat by Ayurvedic methods only and not to indulge in other systems.
3. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life
4. Seek to improve awareness and provide possible solutions for health problems and needs throughout the community
5. Willingness to participate in CME programmes to update knowledge and professional skill from time to time.
6. Refer patients for consultation and specialised treatment

COMPETENCIES

At the completion of the undergraduate training programme the graduates shall be competent in the following:

General Skills

- Apply knowledge & skills in day to day practice
- Apply principles of ethics
- Analyse the outcome of treatment
- Evaluate the scientific literature and information to decide treatment
- Participate and involve in professional bodies
- Self-assessment & willingness to update the knowledge & skills from time to time
- Involvement in simple research projects

Practice Management

- Evaluate practice location, populations dynamics & reimbursement mechanism coordinate & supervise the activities of allied Ayurvedic health personnel
- Maintain all records
- Practice within the scope of one's competence

Communication & Community Resources

- Assess patient's goals, values and concerns to establish rapport and guide patient care able to communicate freely, orally and in writing with all concerned participate in improving the overall health of the individuals through community activities.

Patient Care – Diagnosis

- Obtaining patient’s history in a methodical way
- Performing through clinical examination
- Selection and interpretation of clinical, radiological and other diagnostic information
- Obtaining appropriate consultation
- Arriving at provisional, differential and final diagnosis

Patient Care – Treatment Planning

- Integrate multiple disciplines into an individual comprehensive sequence treatment plan using diagnostic and prognostic information
- Ability to order appropriate investigations

Patient Care – Treatment

- Ability to manage general health issues of patients through Ayurvedic medicines.
- Perform basic treatment modalities of Ayurveda including panchakarma treatments
- Recognition and initial management of medical emergencies that may occur during Ayurvedic treatment

MINIMUM WORKING HOURS FOR EACH SUBJECT OF STUDY

(BAMS COURSE)

SUBJECT	LECTURE HOURS	PRACTICAL HOURS	TOTAL HOURS
Padartha Vijnana Evam Itihasa	100		100
Maulika Sidhantha Evam Ashtanga Hridaya	150		150
Sanskrit	150		150
Kriya Shareera	200	180	380
Rachana Shareera	210	180	390
Total	810	360	1170

SYLLABUS OF STUDY
(I BAMS)

PADARTHA VIGYAN EVUM AYURVEDA

ITIHAS

(Philosophy and History of Ayurveda)

GOAL

To introduce the students to the exciting world of Ancient Ayurvedic philosophies associated with the sciences like Darshana, pramana, Tarka, Tantra, etc. as well as the historical background of Ayurveda. This will help the student to understand the basic concepts of Ayurveda and its application.

OBJECTIVES

Enabling the student:

1. To analyse and understand the philosophical concepts through Ayurveda
2. To integrate the knowledge from basic sciences and Ayurveda history
3. To assess the relative contribution of Darsana and Ayurveda

Padartha Vigyanam

Theory- Two papers– 200 marks (100 each paper) Total teaching hours: 150 hours

PAPER I

Part A

1. Ayurveda Nirupana

- Lakshana of Ayu, composition of Ayu.
- Lakshana of Ayurveda.
- Lakshana and classification of Siddhanta.
- Introduction to basic principles of Ayurveda and their significance.

2. Ayurveda Darshana Nirupana

- Philosophical background of fundamentals of Ayurveda.
- Etymological derivation of the word “Darshana”.
- General introduction to classification of schools of Indian Philosophy with an emphasis on: Nyaya, Vaisheshika, Sankhya and Yoga.
- Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda).

- Padartha: Lakshana, enumeration and classification
- Types of Padartha: Bhava and Abhava padartha
- Padartha according to Charaka (Karana-Padartha).

3. Dravya Vigyaniam

Dravya:

- Etymological derivation
- Lakshana, classification and enumeration.

Panchabhuta:

- Guna and lakshana of each Mahabhootha
- Various theories regarding the creation (theories of Taittiriyanopanishad, Nyaya-Vaisheshika, Sankhya-Yoga, Sankaracharya, Charaka and Susruta), Lakshana and qualities of each Bhoota.
- Role of panchamahabhuthas in Deha and Manasa Prakriti

Kaala:

- Etymological derivation, Lakshana and division / units, significance in Ayurveda.

Dik:

- Etymological derivation, Lakshana and division
- Significance of Dik in Ayurveda.

Atma:

- Etymological derivation, Lakshana, classification, seat, Gunas, Linga according to Acharya Charaka.
- The method / process of knowledge formation (atmanah jnasya pravrittih)

Purusha:As mentioned in Ayurveda –

- Ativahikapurusha/ Sukshmasharira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shaddhatvatmakapurusha.

Manas:

- Etymological derivation, Lakshana, synonyms, qualities, objects, and functions of Manas.
- Ubhayaatmakatvam (dual nature of mind), Panchabhutatmakatvam.

Tamas as the tenth Dravya.

Practical study/application in Ayurveda.

PAPER-I

Part B

4. Gunavigyaniyam

- Etymological derivation, classification and enumeration according to NyayaVaisheshika and Charaka, Artha, Gurvadiguna, Paradiguna, Adhyatmaguna.
- Lakshana and classification of all the 41 gunas.
- Practical / clinical application in Ayurveda.

5. Karma Vigyaniyam

- Etymological derivation, Lakshana, classification in Nyaya.
- Description according to Ayurveda.
- Practical study/ application in Ayurveda.

6. Samanya Vigyaniyam

- Lakshana, classification.
- Practical study/ application with reference to Dravya, Guna and Karma.

7. Vishesha Vigyaniyam

- Lakshana, classification.
- Practical study/ application with reference to Dravya, Guna and Karma.
- Significance of the statement “Pravrittirubhayasya tu”.

8. Samavaya Vigyaniyam

- Lakshana
- Practical study /clinical application in Ayurveda.

9. Abhava Vigyaniyam

- Lakshana, classification
- Clinical significances in Ayurveda.

PAPER II

PART A

1. Pariksha

- Etymological derviation
- Definition of Priksha
- Definition of Prama, Prameya, Pramata, Pramana.
- Enumeration of Pramana according to different schools of philosophy.

- Four types of methods for examination in Ayurveda (ChaturvidhaParikshavidhi), Pramana in Ayurveda.
- Subsudation of different Pramanas under three Pramanas
- Significance and importance of Pramana
- Practical application of methods of examination (Parikshavidhi) in treatment (Chikitsa)

2. Aptopdesha Pariksha/ Pramana

- Lakshana of Aptopadesha, Lakshana of Apta.
- Lakshana of Shabda, and its types.

3. Pratyaksha Pariksha/ Pramana

- Etymological derivation
- Lakshana of Pratyaksha, types of Pratyaksha- Nirvikalpaka- Savikalpaka with description, description of Laukika and Alaukika types and their further classification.
- Indriya-prapyakaritvam
- Six types of Sannikarsha.
- Indriyanam lakshanam, classification and enumeration of Indriya.
- Description of Panchapanchaka
- Panchamahabhutatwa of Indriya
- Trayodasha Karana, dominance of Antahkaran.
- Practical study/ application of Pratyaksha in physiological, diagnostic, therapeutics and research grounds.

4. Anumanapariksha/Pramana

- Lakshana of Anumana.
- Introduction of Anumiti, Paramarsha, Vyapti, Hetu, Sadhya, Paksha, Drishtanta.
- Types of Anumana mentioned by Charaka and Nyayadarshana.
- Characteristic and types of Vyapti.
- Lakshana and types of Hetu, description of Ahetu and Hetwabhasa.
- Characteristic and significance of Tarka.
- Practical study/ application of Anumanapramana in physiological, diagnostic, therapeutic and research.

5. Yuktipariksha/ Pramana

- Lakshana and discussion.
- Practical study and utility in therapeutics and research.

6. Upamana Pramana

- Lakshana.
- Application in therapeutics and research.

- Karya- Karana Siddhanta (Cause and Effect Theory)
- Lakshana of Karya and Karana. Types of Karana.
- Significance of Karya and Karana in Ayurveda.
- Different opinions regarding the manifestation of Karya from Karana: Satkaryavada, Asatkaryavada, Parinamavada, Arambhavada, Paramanuvada, Vivartavada, Kshanabhangurvada, Swabhavavada, Pilupaka, Pitharpaka, Anekantavada, Swabhavoparamavada.

PAPER II

PART B

AYURVEDA ITIHASA

- Etymological derivation (Vyutpatti), syntactical derivation (Nirukti) and definition of the word Itihas, necessity of knowledge of history, its significance and utility, means and method of history, historical person (Vyakti), subject (Vishaya), time period (Kaal), happening (Ghatana) and their impact on Ayurveda.
 - Introduction to the authors of classical texts during Samhitakaal and their contribution: Atreya, Dhanwantari, Kashyapa, Agnivesha, Sushruta, Bhela, Harita, Charaka, Dridhabala, Vagbhata, Nagarjuna, Jivaka. PART B- Ayurved Itihas 25 marks 5
 - Introduction to the commentators of classical Samhitas – Bhattaraharicchandra, Jejjata, Chakrapani, Dalhana, Nishchalakara, Vijayarakshita, Gayadas, Arunadutta, Hemadri, Gangadhara, Yogindranath Sen, Haranachandra, Indu.
 - Introduction to the authors of compendiums (Granthasamgrahaakaala) – Bhavmishra, Sharnghadhara, Vrinda, Madhavakara, Shodhala, Govinda Das (Author of Bhaishajyaratnawali), Basavraja.
 - Introduction to the authors of Modern era –Gana Nath Sen, Yamini Bhushan Rai, Shankar Dajishastri Pade, Swami Lakshmiram, Yadavji Tikramji, Dr. P. M. Mehta, Ghanekar, Damodar Sharma Gaur, Priyavrat Sharma.
 - Globalization of Ayurveda – Expansion of Ayurveda in Misra (Egypt), Sri Lanka, Nepal other nations.
- a) Developmental activities in Ayurveda in the post-independencedevelopment in educational trends.
 - b) Establishment of different committees, their recommendations.
 - c) Introduction to and activities of the following Organizations :- Department of AYUSH, Central Council of Indian Medicine, Central Council for Research in Ayurvedic Sciences, Ayurvedic Pharmacopeia commission, National Medicinal Plants Board, Traditional Knowledge Digital Library (TKDL)
 - d) Introduction to the following National Institutions :
 - National Institute of Ayurved, Jaipur.
 - IPGT&RA, Gujrat Ayurved University, Jamnagar.
 - Faculty of Ayurved, BHU, Varanasi.

- Rashtriya Ayurveda Vidyapeetha, New Delhi. Drug and Cosmetic Act.

f) Introduction to national & international popular journals of Ayurveda. 9. Introduction to activities of WHO in the promotion of Ayurved.

REFERENCE BOOKS:-

A). Padartha Vigyan:-

- | | |
|-----------------------------------------------------------|---------------------------|
| 1. Padarthavigyan | Acharya Ramraksha Pathak |
| 2. Ayurvediya Padartha Vigyana | Vaidya Ranjit Rai Desai |
| 3. Ayurved Darshana | Acharya Rajkumar Jain |
| 4. Padartha Vigyana | Kashikar |
| 5. Padartha Vigyana | Balwant Shastri |
| 6. Sankhyatantwa Kaumadi | GajananS hastri |
| 7. Psycho Pathology in Indian Medicine | Dr. S.P. Gupta |
| 8. Charak Evum Sushrut ke
Darshanik Vishay ka Adhyayan | Prof. Jyotirmitra Acharya |
| 9. Ayurvediya Padartha Vigyana | Dr. Ayodhya Prasad Achal |
| 10. Padartha Vigyana | Dr. Vidyadhar Shukla |
| 11. Padartha Vigyana | Dr. Ravidutta Tripathi |
| 12. Ayurvediya Padartha Vigyana
Dhand | Vaidya Ramkrishna Sharma |
| 13. Ayurvediya Padartha Vigyan Parichaya | Vaidya Banwarilal Gaur |
| 14. Ayurvediya Padartha Darshan | Pandit Shivhare |
| 15. Scientific Exposition of Ayurveda | Dr. Sudhir Kumar |
| 16. Relevant portions of Charakasamhita, Sushrutasamhita. | |

B) History of Ayurveda:-

- | | |
|-------------------------------------------------------------------------------|-------------------------------|
| 1. Upodghata of Kashyapasamhita
Paragraph of acceptance of Indian medicine | Rajguru Hem Raj Sharma |
| 2. Upodghata of Rasa Yogasagar | Vaidy Hariprapanna Sharma |
| 3. Ayurveda Ka Itihas | KaviraSuram Chand |
| 4. Ayurveda Sutra | Rajvaidya Ram Prasad Sharma |
| 5. History of Indian Medicine (1-3 part) | Dr. GirindrNath Mukhopadhyaya |
| 6. A Short history of Aryan Medical Science | Bhagwat Singh |
| 7. History of Indian Medicine | J. Jolly |
| 8. Hindu Medicine | Zimer |
| 9. Classical Doctrine of Indian Medicine | Filiyosa |
| 10. Indian Medicine in the classical age | AcharyaPriyavrata Sharma |
| 11. Indian Medicine (Osteology) | Dr. Harnley |
| 12. Ancient Indian Medicine | Dr. P. Kutumbia |
| 13. Madhava Nidan and its Chief | Dr. G.J. Mullenbelt |
| 14. Commentaries (Chapters highlighting history) | |
| 15. Ayurveda Ka BrihatItihasa | Vaidya Atridev Vidyalankara |

16. Ayurveda Ka VaigyanikaItihasa	Acharya Priyavrata Sharma
17. Ayurveda Ka PramanikaItihasa	Prof. Bhagwat Ram Gupta
18. History of Medicine in India	Acharya Priyavrata Sharma
19. Vedomein Ayurveda	Vaidya Ram GopalShastri
20. Vedomein Ayurveda	Dr. Kapil Dev Dwivedi
21. Science and Philosophy of Indian Medicine	Dr. K.N. Udupa
22. History of Indian Medicine from	Dr. Jyotirmitra
23. Pre-Mauryan to Kushana Period	
24. An Appraisal of Ayurvedic Material in Buddhist literature -	Dr. Jyotirmitra
25. Mahayana Granthon mein nihita	Dr. RavindraNathTripathi
26. Ayurvediya Samagri	
27. Jain Ayurveda Sahitya Ka Itihasa	Dr. Rajendra Prakash Bhatnagar
28. Ayurveda- Prabhashaka Jainacharya	Acharya Raj Kumar Jain
29. CharakaChintana	Acharya Priyavrata Sharma
30. Vagbhata Vivechana	Acharya Priyavrata Sharma
31. Atharvaveda and Ayurveda	Dr. Karambelkara
32. Ayurvedic Medicine Past and Present	Pt. Shiv Sharma
33. Ancient Scientist	Dr. O.P. Jaggi
34. Luminaries of Indian Medicine	Dr. K.R. Shrikanta Murthy
35. Ayurveda Ke Itihasa Ka Parichaya	Dr. RaviduttaTripathi
36. Ayurveda Ke	Pranacharya Ratnakara Shastri
37. Ayurveda Itihasa Parichaya	Prof. Banwari Lal Gaur

MAULIK SIDDHANT AVUM ASHTANG HRIDAYA

(Basic Principles and Ashtang Hridaya- An ancient text of Ayurveda)

GOAL

The *Ashtanga Hridayam*, the “Heart or Essence of all the Eight Branches of Ayurveda,” is one of the fundamental ancient root texts of Ayurveda. Ashtanga Hridayam continues to serve as a root source for Ayurvedic philosophy and protocol, providing clear guidelines in all aspects of health. The students should gain knowledge and insight into the basic principles of Ayurveda also to introduce all the basics of life, regarding medicinal preparations, treatment that which are relevant to Ayurveda medical practice. During this course he/she will be carefully guided in order to gain a comprehensive understanding of the content of this text.

OBJECTIVES

By the end, student is expected to:

1. Uncover the deepest meaning behind the Ayurvedic principles
2. Build an authentic foundation of traditional Ayurvedic knowledge
3. Learn guidelines for applying the basic principles in each branch of Ayurveda

Theory- One Paper– 100 marks

Viva – 50 marks

Teaching Hours -120 hours

PART A (60 marks)

- Ashtang Hridaya Sutrasthana Adhyaya 1 to 15

PART B (40 marks)

- Ashtang Hridaya Sutrasthana Adhyaya 16 to 30
- Description of Ashta Prakriti
- Shastra Lakshan (Tantra), Tantraguna, Tantradosha, Tachitalya, Arthasraya, Kalpana

Reference Books:

1. Astang Hridaya : Hindi commentary by Lalchanda Vaidya
2. Astang Hridaya : Hindi commentary by Vd. B.L. Gaur
3. Astang Hridaya : English commentary by Dr. T. Sreekumar
4. Astang Hridaya : English commentary by Dr. Vishwavasu Gaur
5. Astang Hridaya : Sanskrit commentary by HemadriPa
6. Astang Hridaya : Sanskrit commentary by Arunadatta

SANSKRIT

GOALS

Ayurveda is an ancient Indian system of medicine. This is originally in Sanskrit language. Therefore, study of Sanskrit language for an Ayurvedic student is very much necessary. So, the broad goal of teaching Sanskrit is to make the students understand the correct meaning of the Ayurvedic medical science.

OBJECTIVES

At the end of the course, the student will be able to:

1. Understand and speak properly Ayurvedic terminologies in Sanskrit Language
2. Read and write in Devanagari Script
3. Understand the grammar part of Sanskrit Language
4. Follow the stepwise method of study of Ayurveda Shastra Granthas
5. Explain the concepts of Ayurvedic Medical Science

Theory – One paper - 100 marks

Teaching Hours – 150 hours

PART A (50 Marks)

□□□□□□□□□□□□□□□□ पाठ्ययनम्

1. संज्ञाप्रकरणम्
2. विभक्त्यर्थाः
3. □□□□□□□□□□□□□□□□ (सन्धिविच्छेदः, सन्धिकरणम्)
4. षड्-लिङ्गप्रकरणम् (शब्दरूपाण्येव)
5. धातुप्रकरणम् (धातुरूपाण्येव – भ्वादिगणीय धातूनां पञ्च लट्-लोट्-लङ्-लिट्-विधिलिङ्-लकारेषु रूपाणि)
6. वाच्यप्रयोगाः (कर्तरि कर्मणि भाववाच्यप्रयोगाः)
7. समासप्रकरणम्
8. प्रत्ययाः
9. अनुवादः
 - 9.1 From English/Hindi/Regional language to Sanskrit
 - 9.2 From Sanskrit to English/Hindi/Regional language
 - 9.3 Identification and correction of grammatical errors in the given sentences

The sentences for translation should be selected from the under mentioned reference books –

1. Laghusiddhanta Kaumudi – Acharya Varadaraja (Commentary by Shri Dhananand Shastry)
2. Brihatrayee – (Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam)
3. Anuvada Chandrika – Chakradhara Hansa Nautiyal
4. Sanskruta Ayurveda Sudha – Dr. Banwari Lal Gaur
5. Rachananuvada Kaumudi – Dr. Kapildev Dwivedi
6. Bhasha Soplanam – Published by Rashtreeya Samskruta Samsthanam, New Delhi

PART B (50 Marks)

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1. आयुर्वेदार्थग्रन्थाध्ययनक्रमः - Stepwise method of study of Ayurveda Arsha Granthas (Chapter-4 Sushruta Samhita, Shareera Sthanam)
2. वैद्यकीयसुभाषितसाहित्यम् (अध्यायाः 1-10)
3. □□□□□□□□□□ - □□□□□□□□□□□□ (□□□□□□ □□□□□□ □□□□□□□□□□□□□□□□□□ □□□□□□□□)

Reference Books:

1. Sushruta Samhita, Shareera Sthanam - Chapter 4
2. Prabhashanam workbook, Su.sam.chap 4 Published by – Ayurveda Academy, Bangalore
3. Vaidyakeeya Subhashita Sahityam – Dr. Bhaskara Govinda Ghanekar
4. Panchatantra (Apareekshitakarakam) – Pt. Vishnu Sharma

KRIYA SHAREER

(PHYSIOLOGY)

GOAL

The broad goal of teaching undergraduate students human physiology is to provide the student comprehensive knowledge of the normal functions of the human body to facilitate an understanding of the physiological basis of health and disease. In addition to this, goal is to provide a thorough understanding of human physiology in terms of basic principles and theorems in Ayurveda.

OBJECTIVES

At the end of the course the student will be able to:

1. Explain the normal functioning of all the organ systems and their interactions for well-co-ordinated total body function.
2. List the physiological principles underlying the pathogenesis and treatment of disease.
3. Conduct experiments designed for the study of physiological phenomena.
4. Interpret experimental and investigative data
5. Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.
6. Know the basic clinical examinations of a person.

Theory

Two Papers-200 Marks (100 marks each)

PAPER- I- 100 marks

PART- A 50 marks

1. Conceptual study of fundamental principles of Ayurvediya Kriya Sharira e.g - Panchamahabhuta, Tridosha, Triguna, Loka-Purusha Samya, Samanya-Vishesha, Description of basics of Srotas.
2. Definition and synonyms of the term Sharira, definition and synonyms of term Kriya, description of Sharir Dosha and Manasa Dosha. Mutual relationship between TrigunaTridosha & Panchmahabhuta. Difference between Shaarir and Sharir. Description of the components of Purusha and classification of Purusha, role of Shatdhatupurusha in Kriya Sharira and Chikitsa.
3. Dosha- General Description of Tridosha. Inter relationship between Ritu-Dosha-RasaGuna. Biological rhythms of Tridosha on the basis of day-night-age-season and food intake. Role of Dosha in the formation of Prakriti of an individual and in maintaining of health. Prakrita and Vaikrita Dosha.
4. Vata Dosha: Vyutpatti (derivation), Nirukti (etymology) of the term Vata, general locations, general properties and general functions of Vata, five types of Vata (Prana,

- Udana, Samana, Vyana, Apana) with their specific locations, specific properties, and specific functions. Respiratory Physiology in Ayurveda, Physiology of speech in Ayurveda.
5. Pitta Dosha: Vyutpatti, Nirukti of the term Pitta, general locations, general properties and general functions of Pitta, five types of Pitta (Pachaka, Ranjaka, Alochaka, Bhrajaka, Sadhaka) with their specific locations, specific properties, and specific functions. Similarities and differences between Agni and Pitta.
 6. Kapha Dosha: Vyutpatti, Nirukti of the term Kapha, general locations, general properties and general functions of Kapha, five types of Kapha (Bodhaka, Avalambaka, Kledaka, Tarpaka, Śleshaka) with their specific locations, specific properties, and specific functions.
 7. Etiological factors responsible for Dosha Vriddhi, Dosha Kshaya and their manifestations.
 8. Concept of Kriyakala.
 9. Prakriti:
 - a) Deha- Prakriti: Vyutpatti, Nirukti, various definitions and synonyms for the term „Prakriti“. Intra-uterine and extra-uterine factors influencing Deha-Prakriti, Classification and characteristic features of each kind of Deha-Prakriti
 - b) Manasa- Prakriti: Introduction and types of Manasa- Prakriti.
 10. Ahara: Definition, classification and significance of Ahara, Ahara-vidhi-vidhana, Ashta Aharavidhi Viseshayatana, Ahara Parinamkar Bhava.
 11. Aharapaka (Process of digestion): Description of Annavaha Srotas and their Mula. Role of Grahani & Pittadhara Kala.
 12. Description of Avasthapaka (Madhura, Amla and Katu). Description of Nishthapaka (Vipaka) and its classification. Separation of Sara and Kitta. Absorption of Sara. Genesis of Vata-Pitta-Kapha during Aharapaka process. Definition of the term Koshtha. Classification of Koshtha and the characteristics of each type of Koshtha.
 13. Agni – Definition and importance, synonyms, classification, location, properties and functions of Agni and functions of Jatharagni, Bhutagni, and Dhatvagni.
 14. Role of Gunas in Physiology, Importance of Guna vipareeta Chikitsa.
 15. Introducing Agantu and Sthani Doshas.

PART- B

Modern Physiology

1. Definition and mechanisms of maintenance of homeostasis. Cell physiology. Membrane physiology. Transportation of various substances across cell membrane.
2. Resting membrane potential and action potential.
3. Physiology of respiratory system: functional anatomy of respiratory system. Definition of ventilation, mechanism of respiration, exchange and transport of gases, neural and chemical control of respiration, artificial respiration, asphyxia, hypoxia. Introduction to Pulmonary Function Tests.

4. Physiology of Nervous System: General introduction to nervous system, neurons, mechanism of propagation of nerve impulse, physiology of CNS, PNS, ANS; physiology of sensory and motor nervous system, Functions of different parts of brain and physiology of special senses, intelligence, memory, learning and motivation. Physiology of sleep and dreams, EEG. Physiology of speech and articulation. Physiology of temperature regulation.
5. Functional anatomy of gastro-intestinal tract, mechanism of secretion and composition of different digestive juices. Functions of salivary glands, stomach, liver, pancreas, small intestine and large intestine in the process of digestion and absorption. Movements of the gut (deglutition, peristalsis, defecation) and their control. Enteric nervous system.
6. Acid-base balance, water and electrolyte balance. Study of basic components of food. Digestion and metabolism of proteins, fats and carbohydrates. Vitamins & Minerals-sources, daily requirement, functions, manifestations of hypo and hypervitaminosis.

PAPER- II 100 marks

PART- A

1. Dhatu: Etymology, derivation, definition, general introduction of term Dhatu, different theories related to Dhatuposhana (Dhatuposhana Nyaya)
2. Rasa Dhatu: Central Council of Indian Medicine Etymology, derivation, location, properties, functions and Praman of Rasa-dhatu. Physiology of Rasavaha Srotas, Formation of Rasa Dhatu from Aahara Rasa, circulation of Rasa (Rasa-Samvahana), role of Vyana Vayu and Samana Vayu in Rasa Samvahana. Description of functioning of Hridaya. Ashtavidha Sara (8 types of Sara), characteristics of Tvakasara Purusha, conceptual study of mutual interdependence (Aashraya-Aashrayi Bhaava) and its relation to Rasa and Kapha. Manifestations of kshaya and Vriddhi of Rasa.
3. Rakta Dhatu: Etymology, derivation, synonyms, location, properties, functions and Praman of Rakta Dhatu. Panchabhautikatva of Rakta Dhatu, physiology of Raktavaha Srotas, formation of Raktadhatu, Ranjana of Rasa by Ranjaka Pitta, features of Shuddha Rakta, specific functions of Rakta, characteristics of Raktasara Purusha, manifestations of Kshaya and Vriddhi of Raktadhatu, mutual interdependence of Rakta and Pitta.
4. Mamsa Dhatu : Etymology, derivation, synonyms, location, properties and functions of Mamsa Dhatu, physiology of Mamsavaha Srotasa, formation of Mamsa Dhatu, characteristics of Mamsasara Purusha, manifestations of Kshaya and Vriddhi of Mamsa Dhatu . Concept of Peshi.
5. Meda Dhatu : Etymology, derivation, location, properties, functions and Pramana of Meda Dhatu, physiology of Medovaha Srotas, formation of Medo Dhatu, characteristics of Medasara Purusha and manifestations of Kshaya and Vriddhi of Meda.

6. Asthi Dhatu: Etymology, derivation, synonyms, location, properties, functions of Asthi Dhatu. Number of Asthi. Physiology of Asthivaha Srotas and formation of Asthi Dhatu, characteristics of Asthisara Purusha, mutual interdependence of Vata and Asthi Dhatu, manifestations of Kshaya and Vriddhi of Asthi Dhatu.
7. Majja Dhatu : Etymology, derivation, types, location, properties, functions and Praman of Majjaa Dhatu, physiology of Majjavaha Srotas, formation of Majja Dhatu, characteristics of Majja Sara Purusha, relation of Kapha, Pitta, Rakta and Majja, manifestations of Kshaya and Vriddhi of Majja Dhatu.
8. Shukra Dhatu: Etymology, derivation, location, properties, functions and Pramana of Shukra Dhatu, physiology of Shukraravaha Srotas and formation of Shukra Dhatu. Features of Shuddha Shukra, characteristics of Shukra-Sara Purusha, manifestations of Kshaya and Vriddhi of Shukra Dhatu.
9. Concept of Ashraya-Ashrayi bhava i.e. inter-relationship among Dosha, Dhatu Mala and Srotas.
10. Ojas: Etymological derivation, definition, formation, location, properties, Pramana, classification and functions of Ojas. Description of Vyadhikshamatva.
11. Bala Vriddhikara Bhava. Classification of Bala. Etiological factors and manifestations of Ojavisramsas, Vyapat and Kshaya.
12. Upadhatu: General introduction, etymological derivation and definition of the term Upadhatu. Formation, nourishment, properties, location and functions of each Upadhatu.
 - a. Stanya: Characteristic features and methods of assessing Shuddha and Dushita Stanya, manifestations of Vriddhi and Kshaya of Stanya.
 - b. Artava: Characteristic features of Shuddha and Dushita Artava. Differences between Raja and Artava, physiology of Artavavaha Srotas.
 - c. Tvak: classification, thickness of each layer and functions.
13. Mala: Etymological derivation and definition of the term Mala. Aharamala: Enumeration and description of the process of formation of Aharamala.
 - a. Purisha: Etymological derivation, definition, formation, properties, quantity and functions of Purisha. Physiology of Purishavaha Srotas, manifestations of Vriddhi and Kshaya of Purisha.
 - b. Mutra: Etymological derivation, definition, formation, properties, quantity and functions of Mutra. Physiology of Mutravaha Srotas, physiology of urine formation in Ayurveda, manifestations of Vriddhi and Kshaya of Mutra.
 - c. Sveda: Etymological derivation, definition, formation and functions of Sveda. Manifestations of Vriddhi and Kshaya of Sveda. Description of Svedvaha Srotas
 - d. Dhatumala: Brief description of each type of Dhatumala.
14. Panchagyanendriya: Physiological description of Panchagyaanendriya and physiology of perception of Shabda, Sparsha, Rupa, Rasa and Gandha. Physiological description of Karmendriya.
15. Manas: Etymological derivation, definition, synonyms, location, properties, functions and objects of Manas. Physiology of Manovaha Srotas.

16. Atma: Etymological derivation, definition, properties of Atma. Difference between Paramatma and Jivatma; Characteristic features of existence of Atma in living body.
17. Nidra: Nidrotipatti, types of Nidra, physiological and clinical significance of Nidra; Svapnotipatti and types of Svapna.

PART –B

Modern Physiology

1. Haemopoetic system – composition, functions of blood and blood cells, Haemopoiesis (stages and development of RBCs, and WBCs and platelets), composition and functions of bone marrow, structure, types and functions of haemoglobin, mechanism of blood clotting, anticoagulants, physiological basis of blood groups, plasma proteins, introduction to anaemia and jaundice.
2. Immunity, classification of immunity: Innate, acquired and artificial. Different mechanisms involved in immunity: Humoral (B-cell mediated) and T-Cell mediated immunity. Hypersensitivity.
3. Muscle physiology – comparison of physiology of skeletal muscles, cardiac muscles and smooth muscles. Physiology of muscle contraction.
4. Physiology of cardio-vascular system: Functional anatomy of cardiovascular system. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control.
5. Adipose tissue, lipoproteins like VLDL, LDL and HDL triglycerides.
6. Functions of skin sweat glands and sebaceous glands.
7. Physiology of male and female reproductive systems. Description of ovulation, spermatogenesis, oogenesis, menstrual cycle.
8. Physiology of Excretion – functional anatomy of urinary tract, functions of kidney. Mechanism of formation of urine, control of micturition. Formation of faeces and mechanism of defecation.
9. Endocrine glands – General introduction to endocrine system, classification and characteristics of hormones, physiology of all endocrine glands, their functions and their effects.

PRACTICAL

Ayurvedic practical

1. Assessment of Prakriti
2. Assessment of Dosha (Features of Vriddhi- Kshaya)
3. Assessment of Dhatu (Features of Vriddhi- Kshaya)
4. Assessment of Agni
5. Assessment of Koshtha

6. Assessment of Sara
7. Nadi pariksha
8. Assessment of Jihva, Mootra, Pureesha in terms of Dosha.

Modern physiology practical

1. Introduction to laboratory instruments- Simple & Compound Microscope, Scalp vein set, bulbs for blood collection, Sahli's Haemometer, Haemocytometer, pipettes, Urinometer, Albuminometer, Stethoscope, B.P. Apparatus, Harpenden's caliper, Clinical Hammer, Tuning Fork, Stop Watch, Thermometer, Centrifuge machine, ECG Machine
2. Collection of blood sample – prick, vene-puncture method, use of anticoagulants
3. Preparation of blood smear and staining
4. Estimation of Haemoglobin
5. Microscopic examination of blood a. Total RBC count b. Total WBC count c. Differential leukocyte count
6. Packed cell volume (PCV) demonstration
7. ESR demonstration
8. Bleeding time, clotting time
9. Blood grouping and Rh typing
10. Examination of Cardio-Vascular system a. Pulse examination b. Arterial blood pressure measurement c. Examination of heart sounds d. ECG demonstration
11. Examination of Respiratory system a. Respiratory rate b. Breath sounds c. Spirometry, Respirometer.
12. Examination of Nervous System- Sensory & Motor.
13. Examination of GI System.
14. Urine examination –Physical examination, chemical examination. Test for normal constituents of urine. Detection of specific gravity and reaction of urine.
15. Demonstration of Colorimeter, Viscometer, Stalagmeter, Peak flow meter, Tonometer, Osmometer.

Distribution of Practical marks

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

REFERENCE BOOKS:-

- Unveiling the truths in Ayurveda –Dr. Rajkumar
- Ayurvediya Kriyasharir - Ranjit Rai Desai
- Kayachikitsa Parichaya - C. Dwarkanath
- Prakrit Agni Vigyan - C. Dwarkanath
- Sharir Kriya Vigyan - Shiv Charan Dhyan
- Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma
- Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya
- Prakrita Dosha Vigyana - Acharya Niranjana Dev
- Tridosha Vigyana - Shri Upendranath Das
- Sharira Tatva Darshana - Hirlekar Shastri
- Prakrita Agni Vigyana - Niranjana Dev
- Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri
- Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain
- Sharir Kriya Vigyana - Shri Moreshwar Dutt. Vd.
- Sharira Kriya Vijnana (Part 1 and 2) – Nandini Dhargalka
- Dosha Dhatu Mala Vigyana - Basant Kumar Shrimal
- Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur
- Pragyogik Kriya Sharir - Acharya P.C. Jain
- Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
- Concept of Agni - Vd. Bhagwan Das
- Purush Vichaya - Acharya V.J. Thakar
- Kriya Sharir - Prof. Yogesh Chandra Mishra
- Sharir Kriya Vigyana - Prof. Jayaram Yadav & Dr. Sunil Verma.
- Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) by Dr. SrikantKumar Panda
- Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe
- Human Physiology in Ayurveda - Dr Kishor Patwardhan
- Sharirkriya Vignyan Practical Hand Book– Dr.Ranade, Dr.Chobhe, Dr. Deshpande
- Sharir Kriya Part 1 – Dr.R.R.Deshapande, Dr.Wavhai
- Sharir Kriya Part 2 – Dr. R.R.Deshapande, Dr.Wavhai
- Ayurveda Kriya Sharira- Yogesh Chandra Mishra

- Textbook of Physiology – Gyton& Hall
- A Textbook of Human Physiology – A.K.Jain
- Essentials of Medical Physiology - Sembulingam, K
- Concise Medical Physiology - Chaudhari, Sujit K
- Principals of Anatomy& Physiology - Tortora & Grabowski Textbook of Medical Physiology- Indu Khurana

SHAREERA RACHANA

GOALS

The student should gain knowledge and insight into the anatomic relevance of Ayurvedic terms like shareera, asthi, sandhi, kala, indriya, marma, koshta, ashaya, garbha, pramana, sira, dhamani, srothas, peshi, shatchakra, and nadi.

He/she should also have knowledge into the functional anatomy of normal human body, functional histology and an appreciation of the genetic basis of inheritance and disease, and the embryological development of clinically important structures, so that relevant anatomical & scientific foundations are laid down for the clinical years of BAMS course.

OBJECTIVES

At the end of the 1st year BAMS course in Rachana Shareera the undergraduate student is expected to:

1. Know the anatomic relevance of Ayurvedic terms mentioned in the texts
2. Know the location of 108 marma on the body and the impact of injury on these sites
3. Know the normal disposition of the structures in the body while clinically examining a patient and while conducting clinical procedures
4. Know the anatomical basis of disease and injury
5. Know the microscopic structure of the various tissues.
6. Know the nervous system to locate the site of lesions according to the sensory and or motor deficits encountered.
7. Have an idea about the basis of abnormal development and critical stages of development
8. Know the sectional anatomy to read the features in radiographs and pictures taken by modern imaging techniques

Theory- Two Papers-200 Marks–(100 marks each)

Teaching Hours-210 hours

PAPER-I (100 marks)

PART-A (50 marks)

1. Shariropkramaniya Shaarira

- Sharira and shaarira vyakhya (definitions of sharira and shaarira).
- Shadangatvam (six regions of the body).
- Anga pratyanga vibhaga (sub divisions).
- Mrita sharir samshodhan.

- Shaarira shastra vibhaga.
- Shaarira gyan prayojana.
- Constitution of purusha according to dhatubheda, panchabhautikatvam, trigunatmakatvam, tridoshamayatvam.
- Karma purusha, and doshadhatumala-mulakatvam.

2. Paribhasha Shaarira

- Kurcha, kandara, jala, asthisanghat, seemanta, seevani, rajju, snayu and lasika.

3. Garbha Shaarira

- Garbha definitions.
- Explanation of shukra, artava, garbhadhana.
- Role of tridosha and panchmahabhuta in the fetal development.
- Beeja, beejabhaga and beejabhagavayava.
- Linga vinischaya.
- Masanumasika garbha vriddhi-krama.
- Garbhottpadakbhava.
- Garbhavriddhikara bhava
- Garbha poshana, apara nirmana , nabhinadi nirmana.
- Aanga pratyanga utpatti.

4. Pramana Shaarira

- Anguli pramana.
- Anjali Pramana.

5. Asthi Shaarira

- Asthi vyakhya, number, types, asthi swarooma.
- Vasa, meda and majja.

6. Sandhi Shaarira

- Sandhi vyakhya, numbers, types of asthi sandhi.

7. Sira, Dhamani, Srotas Shaarira

- Definition, types and number of sira and dhamani.
- Description of Hridaya.
- Srota shaarira: Definition, types of srotas and srotomula.

8. Peshi Shaarira

- Peshi vyakhya, structure, types, number and importance.
- Description of Peshi.

9. Koshtha Evam Ashaya Shaarira

- Definition of koshtha and number of koshthanga.
- Types and description of ashaya.

10. Kalaa Shaarira

- Kalaa: definition and types.

11. Uttamangiya Shaarira

- Shatchakra
- Ida, pingala and sushumna nadi - brief description.

12. Marma Shaarira

- Marma: definition, number, location, classification.
- Clinical importance with viddha lakshana.
- Explanation of trimarmas.
- Detail description of marmas.

13. Indriya Shaarira

- Definition of indriya, indriya artha and indriya adhisthan, their number and importance.
- Description of gyanendria, karmendriya and ubhayendriya (manas).

PART-B (50 marks)

1. Definition and branches of anatomy. Preservation methods of the cadaver.

2. Anatomical Terminologies

- Anatomical position, Planes, and explanation of anatomical terms related to skin, fasciae, bones, joints and their movements, muscles, ligaments, tendons, blood vessels, nerves.

3. Embryology

- Definitions and branches of embryology.
- Embryo and fetus.
- Sperm.
- Ovum.
- Fertilization.
- Cleavage. Germ layers formation and their derivatives.
- Laws of heredity.
- Sex determination and differentiation.

- Month-wise development of embryo.
- Fetal circulation.
- Placenta formation
- Umbilical cord formation.

4. Osteology

- Bone: Definition, ossification, structure and types.
- Description of bones with clinical anatomy.

5. Arthrology

- Joints: Definition, structure types and movements.
- Description of joints of extremities, vertebral joints and temporomandibular joint with their clinical anatomy.

6. Cardiovascular system

- Definition, types and structure of arteries and veins.
- Description of heart and blood vessels with their course and branches.
- Pericardium with applied aspect.

7. Lymphatic system

- Definition, types and structure of lymph vessels, lymph glands with their clinical aspect.

8. Myology

- Structure and types of muscles.
- Description of muscles; their origin, insertion, actions, nerve supply and clinical anatomy.

Paper II (100 marks)

Part A (50 marks)

1. Respiratory System

- Bronchial tree and lungs with their clinical aspects.
- Respiratory tract: nasal cavity, pharynx, larynx, trachea, bronchial tree.
- Pleura with its clinical aspects.
- Diaphragm.

2. Digestive system

- Organs of digestive tract (alimentary tract) with their clinical aspects.

- Digestive glands: liver, spleen and pancreas.
- Description of peritoneum with its clinical aspects.

3. Urinary System

- Urinary tract: kidney, ureter, urinary bladder and urethra with their clinical aspects.

4. Reproductive system

- Male Reproductive system: reproductive organs, tract and glands (prostate and seminal vesicles) with their clinical aspects.
- Female reproductive system: reproductive organs, tract and glands with their clinical aspects.

5. Endocrinology

Definition, classification & description of endocrine glands (pituitary, thyroid, parathyroid, thymus and suprarenal glands) with clinical aspects.

PART B (50 marks)

6. Nervous System

- Nervous system: definition, classification and its importance.
- Description of brain and spinal cord.
- Description of peripheral nervous system: cranial and spinal nerves, nerve plexuses.
- Description of autonomic nervous system.
- Formation and circulation of cerebrospinal fluid and blood supply of brain and spinal cord.

7. Sensory organs

- Description of structures of eye, ear, nose, tongue and skin with their clinical aspects.

8. Surface and radiological anatomy

- Study of radio-imaging of limbs, abdomen, pelvis and vertebral column with its clinical application.
- Surface anatomy of Heart, Lungs, Liver, Kidney, Stomach, Pancreas, Spleen.

PRACTICAL

Marks: 100 marks

Teaching hours: 180

Content of practical

1. Practical study of bones
2. Practical study of organs

3. Practical study of surface and radiological anatomy.
4. Shava vichhedana – detailed dissection of the whole body.
5. Practical study of location of marma
6. Demonstration of histology slides (10 slides)

Distribution of marks

1. Spotting -	20 marks
2. Dissected organs and histology slides -	20 Marks
3. Bones, joints, marma -	20 Marks
4. Surface & radiological anatomy -	10 Marks
5. Practical records -	10 Marks
6. Viva-Voce -	20 Marks
Total	100 Marks

Reference Books:-

S. NO.	NAME OF BOOK	AUTHOR
1	Relevant chapters of Brihtrayee and Laghuthrayee	
2	Brihat Shariram Vaidyaratna	P.S. Varrier
3	Pratyaksa Shareera (Part 1 to Part 4)	Gananath Sen
4	Drushtartha Shareeram (Vol 1& Vol 2)	Vaidya Atavel
5	Abhinava Shariram	Acharya Damodar Sharma Gaur
6	Secrets of Marma	Dr Avinash Lele
7	Manava Sharir (Revised Edition)-	Prof. Dinkar Govind Thatte
8	Ayurvedeeya Shareera Rachana Vijnana	Acharya Tarachand Sharma
9	Manava Bhruna Vigyana	Prof. Dinkar Govind Thatte
10	Manava Anga Rekhankan Vikrian	Prof. Dinkar Govind Thatte
11	Sharir Rachana Vigyan (English)	Vaidya P.G. Athawale
12	Clinical Anatomy in Ayurveda	Prof. D.G. Thatte & Prof. Suresh Chandra
13	Sharir Rachna Vigyan (English)	Prof. D.G. Thatte
14	Ayurvedic Human Anatomy	Prof. Dr. Giridhar M. Kanthi
15	Human Anatomy in Ayurveda	Dr.U.Govinda Raju
16	Rachana Sharir Vigyana	Dr. Mahendra Singh
17	Human Anatomy(volume 1,2,3)	B. D. Chaurasia
18	Gray's Anatomy	
19	Text Book of Human Anatomy	Inderbir Singh
20	Human Embryology	Inderbir Singh
21	Text Book of Human Histology	Inderbir Singh
22	Text Book of Human Neuroanatomy	Inderbir Singh
23	Clinical Anatomy	Richard S Snell
24	Fundamentals of Human Anatomoy	Dr. Chakraborty
25	Human Osteology	Poddar

26	Principles of Anatomy and Physiology	G.J.Tortora
27	Manual of Practical Anatomy Cunnigham Practical Manual Vol-1, Vol-2, Vol-3	
28	Netter's Atlas of Human Anatomy	