

2010

Kerala University of Health Sciences

**B.A.M.S COURSE
REGULATIONS/SYLLABUS**

BAMS DEGREE - COURSE AND CURRICULUM

2011 -2012

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1. AIMS AND OBJECTS

Ayurvedic education should aim at producing graduates of profound scholarship having deep basis of Ayurved with scientific knowledge in accordance with Ayurvedic fundamentals with extensive practical training who would be able and efficient teachers, research workers and Kaya Chikitsaks (Physicians) and Shalayachikitsaks (Surgeons) fully competent to serve in the medical and health services of the country.

2. ADMISSION QUALIFICATION

12th Standard with Science with at least 50% marks in aggregate in the subjects of Physics, Chemistry and Biology.

Wherever provision and facilities for teaching Sanskrit as optional subject are not available at 12th standard (Biology Science group), the students with 12th standard (Biology Science Group) be admitted and Sanskrit be taught in main course.

3. MINIMUM AGE FOR ADMISSION:

17 years as on 1st October in the year of admission for B.A.M.S.Course.

4. DURATION OF COURSE:

Degree Course 5-1/2 years.

- | | | |
|---------------------|---|--------------|
| a) I Professional | - | 18 months |
| b) II Professional | - | 18 months |
| c) III Professional | - | 24/18 months |
| d) Internship | - | 6/12 months. |

The period of internship will be of 12 months in case of total duration of course of study is covered under 4-1/2 years. In case of 12 months internship training, the six months of training be provided for clinical training under various departments. The State/University desiring to continue 6 months internship may adopt Third Professional Course of 24 months so that total duration of course including internship will be of 5-1/2 years.

The first 18 months shall be occupied in the study of the non-clinical subjects. No student shall be permitted to appear in Third Professional examination until he/she has passed in all the Second Professional subjects.

5. DEGREE TO BE AWARDED

Ayurvedacharya (Bachelor of Ayurvedic Medicine and Surgery).

The candidate shall be awarded Ayurvedacharya (Bachelor of Ayurvedic Medicine and Surgery) degree after completion of prescribed courses of study extending over the prescribed period and passing the final examination and satisfactorily completion of six months /one year compulsory internship after the final examination.

6. MEDIUM OF INSTRUCTION

English & Sanskrit

7. THE NUMBER OF STUDENTS TO BE ADMITTED

The admission should be made strictly in accordance with the student-bed ratio of 1:3 i.e. on the basis of 3 beds in the hospital attached with the college one student should be admitted every year.

The minimum number of students to be admitted in an Ayurved college should be 20.

8.1 FIRST PROFESSIONAL EXAMINATION:

i) The first professional period shall start from 1st day of October and end on 31st December next year. The examination shall ordinarily be completed by the end of March. The subsequent First Professional examination will be held every six months and failed candidates shall ordinarily be allowed 3 chances for passing First Professional.

* Provided a student failed in more than two subjects shall not be eligible to keep the term. Only those students who passed in all subjects, shall be allowed to take or Third Professional examination.

ii) The first part of the first Professional examination shall be held in the following subjects on completion of 12 months.

1) Padarth Vigyan

2) Sanskrit

3) Ayurveded ka Itihas

The second part of the first Professional examination shall be held in the following subjects on completion of 18 months.

4) Astang Hridayam (Sutraasthanam)

5) Rachana Sharir

6) Kriya Sharir

iii) The candidates before presenting themselves for this examination shall obtain a certificate of completing the prescribed course of theory and practical in the prescribed subjects of the First Professional examination.

iv) A Candidate fail in one or more subjects in examination shall be eligible to appear in Supplementary examination.

v) Candidates who fails to pass the First Professional examination in three opportunities shall not be allowed to continue their studies. However, in case of personal illness of a

serious nature of a candidate and in unavoidable conditions/circumstances the Vice-Chancellor of University may permit one more opportunity for passing the first professional course.

8.2 **SECOND PROFESSIONAL EXAMINATION:**

i) The Second Professional Course shall start in April following the First Professional examination and the examination shall be completed ordinarily in September of year after completion of three years.

ii) The Second Professional examination shall be held after 1-1/2 years of First Professional examination in the following subjects:-

1. Rasa Shastra avam Bhaishajya Kalpana
2. Dravyaguna Vigyan
3. Agada Tantra, Vyavhar Ayurved avam Vidhi Vaidyak
4. Roga Vigyan avam Vikriti Vigyanam
5. Charaka Samhita (Purvardha)
6. Swastha Vritta

(iii) A candidate must pass atleast one subject for being eligible to appear in supplementary examination.

(iv) The Supplementary examination to Second Professional shall be held ordinarily in September and those who remain failed in one or more subjects in supplementary examination shall be eligible to appear in the subsequent Second Professional examination which may be held every six month.

(v) Such candidates who pass First Professional examination in supplementary and register for the Second Professional afterwards shall not be allowed summer vacation and will have to undergo instructions during this period.

8.3 **THIRD PROFESSIONAL EXAMINATION**

i) The final Professional examination shall be held after three academic years after the first Professional examination and shall comprise of the following subjects:-

1. Prasuti Tantra Striroga
2. Kaumar Bhriya
3. Kaya Chikitsa
4. Shalaya Tantra
5. Shalaky Tantra
6. Charak Samhita

**7. Panchkarma

ii) If a candidate remain failed in one or more subjects in Final Professional Examinations he/she shall be eligible to appear in those subjects in subsequent Third Professional examination which may be held every sixth month.

****9. COMPULSORY INTERNSHIP**

Nine (09) months of such clinical training and three (03)months of Pharmacy/PHS/Rural Dispensaries or Hospital, shall be carried out.

Programme and time distribution will be as follows:-

1. In the beginning first three days of orientation Workshop to orient the internees to get acquainted with the details and rules of Internship training programme.
2. Distribution of Intern work-book interns.
3. Provisional Registration with concerned Board/Council before starting the internship.
4. Daily working hours not less than eight hours.
5. Nine months for clinical training, three months in a Pharmacy and three months in PHS/Rural Dispensary/Hospital/PHS as detailed below.
 - A. Posting in college concerned teaching hospital or any other approved Ayurved hospital for nine months as follows:-
 1. Kayachikitsa 2 months
 2. Shalya 2 months
 3. Shalakya 1 month
 4. Prasuti & Striroga 2 months
 5. Kaumbarbhritya 1 month
 6. Panchkarma 1 month
 - B. Three months training should be mainly in respect of National Health Programme in one or more following institutions:-
 - (a) Primary Health Centre
 - (b) Community Health Centre/District Hospital
 - (c) Any recognized Hospital of Modern Medicine by Director/Health Services/University concerned for identification of casualty and trauma cases.
 - (d) Any recognized Ayurved hospital or Dispensary by Director of Ayurveda/University concerned.

In cases where posting in a hospital of modern medicine is not feasible and also in PHC them entire three months posting may be Ayurvedic Dispensary/hospital.

Detail Guideline for training programme.

1. **Kayachikitsa** **2 months**
 - a) All routine work such as case taking, investigations, diagnosis and management of common diseases by Ayurvedic Medicine.
 - b) Routine clinical pathological work i.e. Hemoglobin estimation, haemogram, urine analysis, microscopic examination of blood parasites, sputum examination, stool examination, mutra evam mala pariksha by Ayurvedic method. etc. Interpretation of laboratory data and clinical findings and arriving at a diagnosis. Training in routine ward procedures.
 - c) Supervision of patients in respect of their diet and habits and verify medicine schedule.
2. **Panchkarma – 1 month**
 - i) Panchkarma Procedures and techniques regarding poorva karma, pradhan karma and paschat Karma.

3. Shalya

2 months

Intern should be trained to acquaint with

- i. Diagnosis and management of common Surgical disorders according to Ayurvedic Principles.
- ii. Management of certain Surgical emergencies such as Fractures and Dislocations, Acute Abdomen etc.
- iii. Practical implementation of aseptic and antiseptics techniques, sterilization etc.
- iv. Intern should be involved in pre-operative and post-operative managements.
- v. Practical use of anesthetic techniques and use of anesthetic drugs.
- vi. Radiological procedures, clinical interpretation of X-ray, IVP, Barium meal, sonography etc.
- vii. Surgical procedures and routine ward techniques such as:-
 - i. Suturing of fresh cut
 - ii. Dressing of wounds, burns, ulcers etc.
 - iii. Incision of abscesses.
 - iv. Excision of cysts.
 - v. Venesection etc.
 - vi. Application of Ksharsutra in fistula-in-ano

4. Shalakya

1 month

Intern should be trained to acquaint with

- a) Diagnosis and management of common surgical disorders according to Ayurvedic Principles.
- b) Intern should be involved in Pre-operative and Post-operative managements.
- c) Surgical procedures in Ear, Nose, Throat, Dental problems, ophthalmic problems.
- d) OPD examinations of Eye, Ear, Nose, Throat Disorders, Refractive Error examination, ophthalmic equipments for diagnosis, ophthalmic diseases, various tests for deafness etc.
- e) Procedures like Anjana Karma, Nasya, Raktamokshan, 'Karnapuran, Shirodhara, Put pak, Kawal, Gandush etc. at OPD level.

5. Prasuti & Striroga

2 months

Intern should be trained to acquaint with

- a) Antenatal and post-natal problems and their remedies, Antenatal and Post-natal care.
- b) Management of normal and abnormal labours.
- c) Minor and major obstetric surgical procedures etc.

6. Kaumarbhritya 1 month

Intern should be trained to acquaint with

- a) Antenatal and Post-natal problems and their remedies, antenatal and Post-natal care also by Ayurvedic Principles and medicine.
- b) Antenatal and Post-natal emergencies.
- c) Care of new born child alongwith immunization programme.
- d) Important pediatric problems and their Ayurvedic managements.

B. PHC/Community Health Centre/District Hospital

Intern should get acquainted with-

- i. Routine of the PHC and maintenance of their record.
- ii. They should be acquainted with the routine working of the medical/non-medical staff of PHC and be always in contact with the staff in this period.
- iii. They should be familiar with work of maintaining the register e.g. daily patient register, family planning register, surgical register and take active part in different Government health schemes/programme.
- iv. They should participate actively in different National Health Programmes of Government of the State/District.

C. Casualty Section of any recognized hospital of modern medicine.

Identification of casualty and trauma cases and their first aid treatment. Also procedure for referring such cases to the identified hospitals.

D. Rural Ayurvedic dispensary/Hospital

Diseases more prevalent in rural and remote areas and their management.

Teaching of health care methods to rural population and also various immunization programmes.

Assessment

After completing the assignment in various sections, they have to obtain a certificate from the head of the Section in respect of their devoted work in the section concerned and finally submitted to Principal/Head of the institute so that completion of successful internship can be granted.

- 10 a) The following facts may be taken into consideration in determining class work in the subject:-
- i) Regularity in attendance
 - ii) Periodical tests
 - iii) Laboratory record, Note book and clinical history sheets as required.

- b) A class schedule card shall be maintained for each student for the different examination. The Principal shall arrange to obtain the signature of the students & teachers at the end of each course of lectures and practical instructions and send the cards to each Head of the Department for final completion before the commencement of each examination. Those who have not acquired a minimum of 35% of aggregate marks in internal assessment will not be eligible to appear the University Examination.
- c) The card shall contain a statement that the student has attended not less than 80% of theory lectures and practical classes and not less than 80% of clinical instructions of which the course consists. This card shall be submitted to the examiners as required.

II. **EXAMINATION:**

- a) i) A candidate obtained 75% marks in the subject shall be awarded distinction in the subject.
- ii) A candidate obtaining an aggregate of 75% in the following subjects shall be declared passed in final examination with honours:-
1. Padarthavigyan
 2. Rachana Sharir/Kriya Sharir
 3. Dravyaguna Vigyan/Rasashastra
 4. Kayachikitsa/Rog Vigyan
 5. Shalaya Tantra/Shalakya Tantra/Prasuti Tantra
- iii) Only those candidates shall be considered for honours or distinction who have passed the degree examination in the first attempt each part. As regards for distinction in subjects, only those will be qualified for distinction who passed the respective professional examination in the first attempt.
- (b) The minimum pass marks shall be 50% in theory and practical separately in each subject.

12. **NUMBER OF PAPERS AND MARKS FOR THEORY/PRACTICAL:**

Subject	No. of Papers	Total Marks in theory	Total Marks in practical/ oral.
1	2	3	4
1. Ayurved ka Itihas	One	100	-
2. Sanskrit	Two	200	50
3. Padarth Vigyan	Two	200	50
* 4. Ashtang Hridayam	One	100	50
5. Rachana Sharir	Two	200	200
6. Kriya Sharir	Two	200	100
7. Swastha Vritta	Two	200	100

8. Dravyaguna Vigyan	Two	200	200
9.Rasa Shastra Bhaishajya Kalpana	Two	200	100
10.Agad Tantra Vyavhar Ayurved evam Vidhi Vaidyak	One	100	100
11.Rog Vigyan evam Vikriti Vigyan	Two	200	100
12.Charak Samhita	One	100	50
13.Prasutitantra evam Stiroga	Two	200	100
14. Kaumarbhrittya	One	100	100
**15. Kayachikitsa	Three	300	150
16. Shalyatantra	Two	200	100
17. Shalakyatantra	Two	200	100
18. Charak Samhita	One	100	50
**19.Panchkarma	One	100	50

**13.1 NUMBER OF LECTURES PRACTICALS AND DEMONSTRATIONS
FOR VARIOUS SUBJECTS.**

SUBJECT	Lectures	Practicals & Demonstration
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SUBJECTS OF FIRST PROFESSIONAL

1. Ayurved ka Itihas	60	--
2. Sanskrit	150	--
3. Padarth Vigyan	150	30
* 4. Ashtang Hridayam	60	--
5. Rachana Sharir	210	210
6. Kriya Sharir	210	90

SUBJECTS OF SECOND PROFESSIONAL

7. Swastha Vritta,	180	50
8. Dravyaguna Vigyan	180	90
9. Rasashastra avam Bhaishajya Kalpana	180	90
10.Agad Tantra, Vyavhar Ayurved avam Vidhi		

Vaidyak	100	50
11.Rog Vigyan Avam Vikriti Vigyan	180	90
12.Charak Samhita	100	-

SUBJECTS OF THIRD PROFESSIONAL

13. Prasuti Tantra Avam Stiroga	150	In hospital 3 months
14.Kaumar Bhritya	90	1 month
**15. Kayachikitsa	300	9 Months
16. Shalya Tantra	210	6 months
17. Shalakyta Tantra	210	4 months
18. Charka Samhita	100	--
**19. Panchkarma	100	3 Months

NOTE: The period of theory and practical shall not be less than 60 minutes (one hour) duration. The duration of the practical of clinical subjects and Rachana Sharir (Dissection) shall be of at least 120 minutes (two hours).

13.2. The clinical training in the hospital attached with college to the students shall be as below:-

- i) **Kayachikitsa (Indoor & Outdoor):** 9 Months
 - a) General 6 months
 - b) X-ray 1 month
 - c) Atyayik 2 months
- ii) **Panchakarma (Indoor & Outdoor):** 3 Months
- iii) **Shalya Tantra (Indoor & Outdoor):** 6 Months
 - a) General 5 months (atleast one month in OT)
 - b) Atyayik 1 month
- iv) **Shalakyta Tantra (Indoor & Outdoor):** 4 Months
 - a) General 3 months (atleast one month in OT)
 - b) Atyayik 1 month
- v) **Prasuti Tantra Avam Stiroga (Indoor & Outdoor):** 3 Months
- vi) **Kaumar Bhritya (Indoor & Outdoor):** 1 Month

14. **Qualifications & Experince for teaching staff:**
(Applicable for recruitments made after 1st July, 1989).

- i) **ESSENTIAL:**
 - a) A degree in Ayurved from a University established by law or a statutory Board/Faculty/Examining Body of Indian Medicine or its equivalent as recognized under Indian Medicine Central Council Act, 1970.

b) A Post-graduate qualification in the subject/specialty concerned included in the schedule to Indian Medicine Central Council Act, 1970.

(c) Adequate knowledge of Sanskrit.

ii) **EXPERIENCE:**

a) For the Post of Professor: Total teaching experience of ten years in the subject is necessary out of which there should be five years teaching experience as Reader/Asstt. Professor or ten years experience as a Lecturer in the concerned subject wherever the posts of Reader/Asstt. Professors do not exist.

b) For the Post of Reader: Total teaching experience of five years in the subject is necessary out of which there should be three years teaching experience as Lecturer in the subject concerned.

c) For the Post of Lecturer: No teaching experience is required.

d) For the Post of Principal: The qualification and experience prescribed for the Post of professor should be considered essential for the Post of Principal.

ii) **DESIRABLE:**

a) Original published papers/books on the subject.

NOTE If the Post-graduate qualification holders for the following subjects are not available, the Post-graduate qualification obtained in the subject as noted against the subject shall be admissible:-

Subject	Discipline of Post-graduate
1. Swastha Vritta	1. Kayachikitsa 2. Basic Principles
2. Agad Tantra	1. Dravyaguna 2. Kayachikitsa
3. Padarth Vigyan/Samhita/Itihas	1. Basic Prinicipal
4. Rog Vigyan	1. Kaya Chikitsa
5. Rachana Sharir/Kriya Sharir	1. Sharir 2. Basic Principle
6. Shalakyas	1. Shalakyas/Shalya
7. Nischetna Avam Kshar-kiran	Shalya and/Shalakyas
**8. Panchkarma	Kayachikitsa

15. **Appointment of Examiner in Ayurved:**

No person other than approved teacher with three years teaching experience in the concerned subject shall be considered eligible to the examiner.

SYLLABUS

1.1 SANSKRIT

Theory- Two Papers– 100 Marks Each

Practical/ Viva voice – 50 Marks

Lectures - 150

Paper I

100 Marks

1. Vyakarana

Sanjna, ach-sandhi, hal-sandhi, visarga sandhi, Ajanta pullinga, Ajanta streelinga, Ajanta napunsklinga, halanta pullinga, halanta streelinga, Halanta napunsalinga, avyaya prakaran, bhvadi-dashganah, nyanta-sannanta, yannanta-yanluganta-atmnepada-parasmaipada-bhavakam

Karma-karti, lakartha prakriya, kridanta prakarana (kriya prakriya), Purvakridantam, unadaya, uttar-kridanta), vibhaktyartha prakaran, samasa prakaran (keival samas, avyayi-bhavah, tatpurush, bahuvrihi, dvanda, samasanta), tadvita prakarnani, streepatyaya prakaranam.

TEXT BOOK- laghu siddhanta kaumudi

2. Translation

1. Translation from English / Hindi / regional language into Sanskrit
Or Essay in Sanskrit related to ayurveda
2. Translation from Sanskrit to English, Hindi and Regional languages
(Any desired language)

Reference Books

1. Anuvada Chandrika- Chakradhara Hansa Nautiyal
2. Sansrita Ayurveda Sudha- Dr B. L.gaur
3. Praudh Rachananuvada Kaumudi- Dr Kapil Dev Dwivedi
4. Concerned material from authorised texts of Ayurveda (for translation).

3. Corrections of mistakes - Matter may be selected from the Reference books.

Paper II

100 Marks

1. Vaidya Sadvrittam

1. Vaidyakiya subhashitani (1-20 chapters)
By Bhaskar Govinda Ghanenkar
2. Ayurveda Hitopadeshah
(Vaidya Ranjit Rai Desai)
3. Panchatantram- Aprikshitkarkam

Or

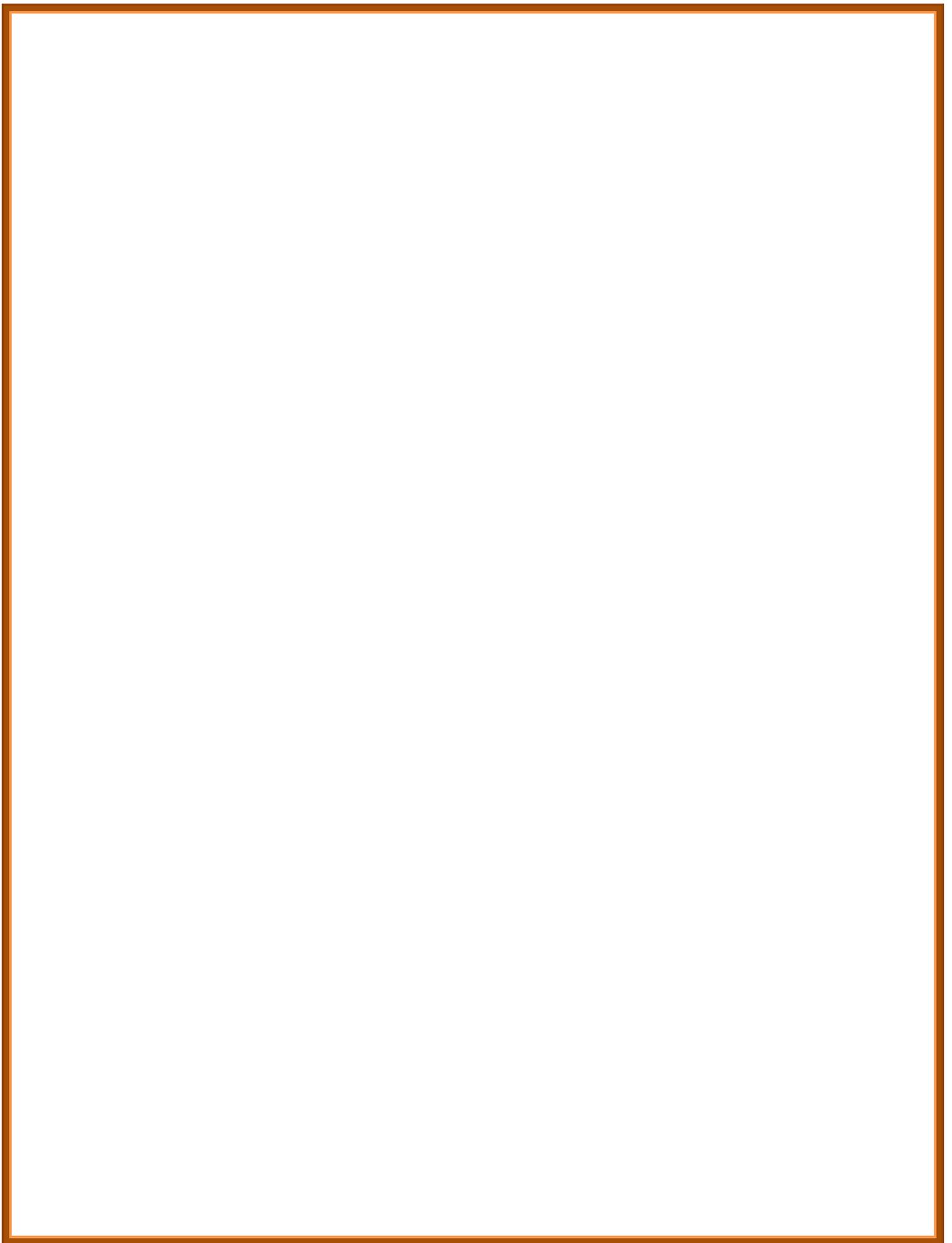
Verse from classics (brihatrayi) related to vaidya sadvritta

2. Order of reading classics (grantha-adhyayan krama parichaya)

Pathana karma / sampradana parichaya, padavibhaga, arthanvaya karma, anvayartha, bhavartha, dhvanitadi-prabhasana karma parichaya Samastapada sarthak-vingraha, dhatu-dhatvartha, pratyaya-pratyartha, subanta-tivanta-adi according to padavidhi (anvayartha smarthanane) nirupanam.

Material for practice

SushrutSamhita-SharirSthan-chapter-4 (garbhavyakarana sharirm).



1.2. PADARTH VIGYAN

Theory- Two Papers– 100 Marks Each

Practical/ Viva voice – 50 Marks

Lectures - 150

Practicals and Demonstration - 30

Paper I

100 Marks

1.1 Ayurveda Nirupana

Definition and lakshana of ayu, composition of ayu; definition and lakshana of Ayurveda; definition and types of siddhanta; introduction of basic principles of Ayurveda and their significance.

1.2 Ayurveda darshana nirupana

Philosophical background of fundamentals of ayurveda, meaning of the word "darsan" and its omnipresence; evolution of darsana, their Numbers and classification; general introductions of schools of Indian Philosophy with an emphasis on nyaya, vaisheshik and sankhya Darsana. Ayurveda as unique and independent school of thought (philosophical individuality of ayurveda), definition of padartha, lakshana of padartha. Division and number of padarthas; bhava and abhava padartha; charak's opinion regarding these; introduction & description of karana-padarthas mentioned by charak.

2. Dravya Vigyaniam

Definition, lakshana and number of dravya, panchabhutas; origin of panchamahabhuta, parasparanupravesha (mutual conglomeration), types of panchikaran; lakshana and types of prithvi, lakshana and types of tejas; lakshan and types of jala ,lakshana and types of vayu, lakshan of akasha and its aupadhika types; kala nirupana, etymological derivation, definition and lakshana of the word 'kala'; aupadhik types of kala, significance of kala in ayurveda; dig-nirupanam, significance of dig and aupadhik types, lakshana of atma, description of purusha mentioned in ayurveda- Ativahika purusha/ sukshma sharir/ rashi purusha/ chikitsiya purusha/ karma purusha/ saddhatvatmak purusha, initiation of atma towards perception of knowledge (atmanahjnana pravritti), mano nirupanam; lakshana,synonyms of manas, mana as substratam of diseases(manasah vyadhyashryatram); guna (qualities), Vishaya (subject), karma (functions), ubhayaindriyatva and seat of mana; contribution of panchamahabhuta

and triguna in physical constitution(dehaprakriti) and mental faculty; disapproval of dravyatva of tamas, practical study/application of dravya in ayurveda.

3. Guna Vigyaniam

Etymological derivation, definition and number of gunas, vaisesika guna (sartha)- shabda, sparsha, rupa, rasa, gandha; adhyatma gunah- budhi, Sukha, dukha, ichha, dwesa, prayatna; paradi guna, gurvadi guna- their introduction and clinical application.

4. Karma Vigyaniam

Definition, lakshana and types of karma, types of karma mentioned in nyaya, Description of karma in ayurveda, practical study/ application of karma in Ayurveda.

5. Samanya Vigyaniam

Definition, lakshan, types of samanya, practical study/ application of samanya in reference to dravya, guna and karma.

6. Vishesa Vigyaniam

Definition, lakshna and types of vishesa, detailed description of the verse "pravrittirubhayasyata", practical study of vishesa for clinical application in Ayurveda.

7. Samavaya Viyaniam

Definition and lakshana of samavaya, practical study of samavaya for clinical application in ayurveda.

8. Abhava Vigyaniam

Definition and lakshana of abhav padartha, classification of abhav- description of pragbhava, pradhwasabhava, atyantabhava, anyuanyabhav; clinical significance of abhava in ayurveda.

Praman/ Pariksha Vigyaniam (Epistemology)**1. Pariksha nirupana (means of getting knowledge)**

Definition , significance and necessity of pariksha. Two types of anubhav-prama and aprama. Lakshan and types of prama and prameya. Lakshna, causes and types of smriti(memory). Significance and importance of praman. Enumeration of pramana according to different school of philosophy. Four types of methods of examination according to ayurveda (chaturvidha pariksha vidhi). Pramana in ayurveda. Incorporation of different pramans into three pramans. Use of word pariksha in reference to pramana in classics of ayurveda. Practical application of methods of examination (pariksha vidhi) in treatment (chikitsa).

2. Aptopdesha pariksha/ pramana nirupana (Authoritative instruction/ spiritual testimony)

Definition of aptopdesha, lakshana of apta, lakshana of sabda, and its types, sabdavritti - abhidha, lakshana, vyanjana, tatparyakhya; shaktigraha hetu, vyakya Characteristic ; vakyartha jnanahetu- akanksha, योग्या, sannidhi.

3. Pratyaksha pariksha/ pramana nirupana (direct observation or perception)

definition and lakshana of pratyaksha. Types of origin of pratyaksha jnana. Types of pratyaksha- nirvikalpak- savikalpaka with description; description of laukika and alaukika types and their further classification. Sannikarsa Characteristic, six types of sannikarsa, characteristics of sense organs(indriyanam Characteristic lakshanam). Classification of Indriya and enumeration. Description of panchapanchaka, establishment of origin of Indriya by panchamahabhuta (bhautikatwa of Indriya) and similarity in sources (tulyayonitva) of Indriya. Dominance of antahkaran. Hindrances indirect perception (pratyaksha anuplabdhikaran), detailed description of direct perception (pratyaksha) by various instruments/ equipments; necessity of other pramans in addition to pratyaksha. Practical study/ application of pratyaksha in physiological, diagnostic, therapeutics and research grounds.

4. Anumana pariksha/pramana nirupanam (inference)

Definition and lakshan of anumana. Introduction of anumiti, paramarsha, vyapti, hetu, sadhya, paksha, dristanta etc. Types of anumana mentioned by Charak Samhita & nyaya darsana. Characteristic and types of vyapti, Characteristic and types of hetu, description of ahetu and hetwabhasa. Characteristic and significance of tarka. Practical study/ application of anumana pramana in physiological, diagnostic, therapeutics and research grounds.

5. Yukti pariksha/ pramana (epistemology of reasoning)

Definition and lakshana of yukti pariksha, discussion on yukti pramana. Importance & characteristic of yukti pariksha in ayurveda. Practical study and utility of yukti pariksha in therapeutics and research.

6. Upamana pramana nirupanam(analogy)

Definition and lakshana of upamana. Application of upamana in therapeutics and research

7. Karya- Karan siddhanta nirupanam (cause and effect theory)

Definition and lakshana of karya and karana. Types of karan. Significance of karya and karan in ayurveda. Different opinions regarding manifestation of karya from karan- satkaryavada, asatkaryavada, parinam vada, arambhavad, paramanuvada, vivartavada, kshanabhangurvada, pilupaka, pitharpaka, anekantavada, swabhavoparamvada.

8. Srishti-nirupanam

Srishti-laya nirupanam (evolution and devastation of universe), Description of tatvotpatti, Tatva-nirupanam, classification of tatva. Evolution of universe (life) according to charak, sushruta (srishti-vikaskrama); Ashtaprakriti, Shodashvikara and their description. Similarity and dissimilarity between kshetra-kshetragya, vyakta-avyakta, prakriti-purush. Triguna nirupanam, Description of theories of rebirth and salvation (punarjanma & moksha)

9.Shastrartha Bodhaka

Shastra Lakshana, tantra guna, tantra dosha, detailed description of tantrayukti, Brief description of tachhilya and arthashrya.

Practical

50 Marks

Allotted Assignment Marks – 10

Spotting – 10

Viva voice – 30

1. Panchabhautika nirupanam of karya dravya and their introduction.
2. Examination of bhautika / samanya guna and introduction.
3. Examination of physical constitution composed by panchamahabhuta (panchbhautika deha prakriti) and mental temperament composed by triguna (Trigunatmka manas prakriti).
4. Exposition or display of process of indriyarth sannikarsha in establishment of dravya and roga (dravya and rogavinishchaya).

5. Importance / significance of pariksha / pramana in examination of dravya, rog and rogi. (disease and patient).
6. Allotment of practical work according to syllabus.

Reference Books

- | | | |
|-----|--|---------------------------------|
| 1. | Padarth Vigyan | Acharya Ramraksha Pathak |
| 2. | Ayurvediya Padarth Vigyan | Vaidya Ranjit Rai |
| 3. | Ayurved Darshan | Acharya Rajkumar Jain |
| 4. | Padarth Vigyan | Kashikar |
| 5. | Padarth Vigyan | Balwant Shastri |
| 6. | Sankhya Tantra Kaumadi | Gajanan Shastri |
| 7. | Psycho Pathology in Indian Medicine | Dr. S.P. Gupt |
| 8. | Charak Evum Sushrut ke Darshnik Vishay ka Adhyayan | Prof. Jyotirmitra Acharya |
| 9. | Ayurvediya Padarth Vigyan | Dr. Ayodhya Prasad Achal |
| 10. | Padarth Vigyan | Dr. Vidyadhar Shukla |
| 11. | Padarth Vigyan | Dr. Ravidutta Tripathi |
| 12. | 0A Ayurvediya Padarth Vigyan | Vaidya Ramkrishna SharmaDhandha |
| 13. | Ayurvediya Padarth Vigyan Parichaya | Vaidya Banwari lal Gaur |
| 14. | Ayurvediya Padarth Darshan | Pandit Shivhare |
| 15. | Useful Parts of Charak , Sushrut and Vagbhata | |

1.3 AYURVED KA ITIHAS (History of Ayurveda)

Theory- One Paper - 100 Marks

Lectures-

60

1. Etymological derivation (vyutpatti), syntactical derivation (niruktti) and definition of the word itihās, necessity of knowledge of history, its significance and utility. means and method of gaining knowledge viz. historical person (vyakti), subject (vishaya), time period, (kala), happening (ghatna) and their impact on ayurveda.
2. Decent of Ayurveda, chronology of ayurveda according to different schools, introduction of eight branches of ayurveda and concerned renowned texts. Introduction of the authors of these texts.
3. Eternity of ayurveda (shashvatvam and anaditavam).
4. Status of ayurveda in Vedic period, progression of ayurveda upto tantra kala. Knowledge about available topics of ayurveda in puranas and tantras etc.
5. Introduction of authors of classical texts during Samhita kala and their contribution especially Atreya, Dhanwantri, Kashyapa, Agnivesha, Sushruta, Bhela, Harita, Charaka, Dridhbala, Vagbhatta, Nagarjuna, Jivaka – introduction and contribution.
6. Chronological development of charaka samhita, sushruta samhita and kashyapa samhita.
7. Introduction and establishment of time period of commentators of classical samhitas – bhattar harishchandra, Jejjata, Chakrapani, Dalhana, Nishchalakara, vijayarakshita, Gayadas, Arundatta, Hemadri, Gangadhara, Yonginderanath sen, Haranchandra Chakravorty.
8. Introduction and time period of authors of compendium (granthasamgraha kala) – Acharya Bhavmishra, Sharangdhara, Vrinda, madhavkara, Shodhala, Govind Das (Author of bhaisjya ratnawali), Vasavraja etc.
9. Origin of ras shastra and its development, introduction and time period of promoters of ras shastra.

10. Vrikshayurveda vijnana (Ayurveda for plant kingdom), pashu chikitsa vijnana (ayurveda for animal kingdom), promoters of ashva, gaja chikitsa Vijnana; shalihotra, palkapya, varahmir, nakula, ashvaghosh.
11. Introduction of authors of modern era –Gan Nath sen, Yamimi bhushan, Yadavji tikramji acharya, Ghanekar, Damodar Sharma Gaur, Priyavrat Sharma, Swami Laksmiram, Dr. P. M. Mehta, Daji Shastri Pade etc.
12. Globalisation of ayurveda – Sumera, Babilonia, Asiria, Misra (Egypt), China, Persia, Arabia, Kamobja, Sri Lanka, Nepal, Thailand, Mauritius, Myanmar (Burma) etc. – expansion of ayurveda in above mentioned civilisations.
13. Impact of ayurveda on Hippocrates (Father of Allopathy), Invitation to Indian physicians by yavans and translation of ayurvedic text into Arabian language, visit to Greece by Indian scholars, relation between Greece and india in ancient period (made by Alexandar), expansion of ashvavaidyaka in Greece.
14. Developmental actions for ayurveda in post-independence period, development in educational trends, establishment of different committee, their recommendations, central council of Indian medicine, central council for research and ayurveda and siddha, foundation of department of AYUSH, its introduction and activities, drug and cosmetic act, Ayurvedic pharmacopoeia Committee formation and activities of organisations and institutions like Rashtriya Ayurveda Vidyapeeta etc. Activities in field of research in ayurveda according to different subjects. Initiation for writing down a text, different councils of vaidya and their activities.

Publications of Ayurveda journals and magazines, WHO, status of Ayurveda on international grounds in present era.

Reference Books

- | | |
|--|----------------------------------|
| 1. Upodaghata of Kashyapa Samhita Paragraph of acceptance of Indian medicine | - Rajguru Hem Raj Sharma |
| 2. Upodaghata of Rasa Yogasagar | - Vaidya Hariprapanna Sharma |
| 3. Ayurveda Ka Itihas | - Kaviraj Suram Chand |
| 4. Ayurveda Sutra | - Rajvaidya Ram Prasad Sharma |
| 5. History of Indian Medicine (1-3 part) | - Dr. Girindra NathMukhopadhyaya |
| 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 - Acharya Priya Vrita Sharma
11. Indian Medicine (Osteology) - Dr. Harnley
12. Ancient Indian Medicine - Dr. P. Kutumbia
13. Madhav Nidan and its Chief Commentaries (Chapters highlighting history) - Dr. G.J. Mulenbelt
14. Ayurveda Ka Brihata Itihasa - Vaidya Atridev Vidyalankara
15. Ayurveda Ka Vaigyanika Itihasa - Acharya Priyavrata Sharma
16. Ayurveda Ka Pramanika Itihasa - Prof. Bhagwat Ram Gupt
17. History of Medicine in India - Acharya Priyavrata Sharma
18. Vedo Mein Ayurveda - Vaidya Ram Gopal Shastri
19. Vedo Mein Ayurveda - Dr. Kapil Dev Dwivedi
20. Science and Philosphy of Indian Medicine - Dr. K.N. Udupa
21. History of Indian Medicine form Premoryana to Kushana Period - Dr. Jyotiramitra
22. An Appraisal of Ayurvedic Material in Budhist literature - Dr. Jyotiramitra
23. Mahayana Granthon Main Nihita Ayurvediya Samagri - Dr. Ravindra Nath Tripathi
24. Jain Ayurveda Sahitya Ka Itihasa - Dr. Rajendra PrakashBhatnagar
25. Ayurveda-PrabhashakaJainacharya - Acharya Raj Kumar Jain

26. Charaka Chintana - Acharya Priyavrata Sharma
27. Vagbhatta Vivechana - Acharya Priyavrata Sharma
28. Atharvaveda and Ayurveda - Dr. Karambelkara
29. Ayurvedic Medicine Past and Present - Pt. Shiv Sharma
30. Ancient Scientist - Dr. O.P. Jaggi
31. Lumanaries of Indian Medicine - Dr. Shrikanthamurti
32. Ayurveda Ke Itihasa Ka Parichaya - Dr. Ravidutta Tripathi
33. Ayurveda Ke Pranacharya - Ratnakara Shastri
34. Ayurveda Itihasa Parichaya - Prof. Banwari Lal Gaur

1.4 ASHTANGA HRIDAYAM (SUTRASTHAN)

Theory –one paper – 100 Marks

Practical

cal /viva voice -50 Marks

Lectures - 60

For the convenience of learning allotted marks for sutraasthan of Ashtanga Hridaya has been divided in to following two groups:

**Thorough
study**

86 Marks

**Introductory
study**

14 Marks

• **Chapters specified for thorough study**

Chapter First to Tenth and Fourteenth (1-10&14)

44 Marks

Chapter eleventh to thirteenth (11-13)

15 Marks

Chapter sixteen to Twenty (16-20)

20 Marks

Twenty –seventh (27) and Thirtieth (30) chapters

7 Marks

• **Chapters specified for introductory study**

Chapter Fifteenth (15)

04 Marks

Chapter Twenty Two to Twenty Six & Twenty Eight &

10 Marks

Twenty ninth (22-26 & 28 & 29)

• **Fifth marks assigned for practical exam are distributed as follows**

1. For chart framing /compilation
2. Recitation & writing of minimum ten shlokas among

10 Marks

Memorized shlokas (The Shlokas should be memorized along with padavibhaga, Anvaya ,Bhavabrtha and practical applicability .)

1. Viva-voce
15 Marks
2. Internal assessment

15 Marks

Topics for chart

Ayurvedavatarna according to Ashtanga Hridaya ,Ashtanha of Ayurveda ,Agni , Prakriti, Koshtha ,tridosh rasa-guna-virya Vipaka and prabhava of dravyas ,ritucharya, dinacharya vega-udirana and vidharana ,chatuspada of chikitsa sandhyasadhyata ,differebt classification of dravyas-toya ,Kshira,ikshu,etc.Shooka shimbi ,mamsa ,Shaka , Phala etc.Dosha Samshodhana kala, vridhhi-kshaya lakshanas of dosha dhatu and malas,dosha according to ritu ,Viruddhahara ,traya Upastambha.

Parameters for internal Assessment (15 Marks)

- Memorizing and describing two shlokas weekly discipline, oral and written presentation and other activites.

Other activities include following instructions

1. Memorizing two shlokas Weekly
Marks

5

(At least 40 Sholkas should be memorized as discussed above in a span of one year and six month)

2. Passage Writing

5

Marks

3. Speech on any one topic related to Ashtanga hridaya

5 Marks

Reference Books

Ashtabga Hridayam : Hindi Commentary by Lalchanda Vaidya
: English Commentary by K.R. Srikantanmurty

1.5 RACHANA SHARIR

Theory- Two Papers– 100 Marks Each

Practical/ Viva voice – 200 Marks

Lectures (1 hour) - 210

Practicals /Demonstration (1 ½ hour) - 210

Paper I 100 Marks

Part A 50 Marks

1. Detailed description of principles of 'Sharir' and their co-relation with modern medical science.

2. Shariopkrama

Description of Sharir and Sharir, knowledge and importance of Sharir and Sharir, 'Shadangatva' of sharir, Anga pratyanga vibhaga, Preservation and Dissection Method of dead body, Divisions of Sharir.

3. Knowledge of terminologies used in Sharir

Detail knowledge of terms, position, and Planes e.g. Urdhava (Superior), Adhah (Inferior), Nikatastha (Proximal) and Doorastha (Distal), Agrima (Anterior or Ventral), Abhi pristha or Paschima (Posterior), Madhyanuga (Median), Parshava (Lateral). Abhimadhyana (Medial) and Uttana (Superficial) and Gambhira (Deep) section, Anuprastha (Vertical) and Agra paschedasa (Horizontal), Tiryaka (Oblique) sections, Mamsa peshi (Muscles), Sira, Dhamani, Tantrika, Snayu(Ligaments), Kurcha, Kandra (Tendon), Jala(Plexuses), Asthi Sanghat (Complex Joints), Seemanta (Sutures off Skull), Rajju(Cords) and Sevani.

4. Abhinivriti Sharir

Vyakta and Avyakta, kshetra and kshetraja
Constitution of 'Purusha' according to dhatu bheda, Panchabhoutikatva and sukshamatva of body, karma purusha, Trigunatamakativama, Tridoshamyatvama, Doshadhatumalamulakatva of Sharir.

5. Garbha Sharir (Embryology)

Definition of 'garbha' (embryo), 'Garbhottpadakbhava', Sukshma garbha sharir, micro anatomical description of 'dhatu and avayavas' 'Shukra' Artava, Antahpushpa, Garbhadhana (fertilization) and Kosha vibhajana (Cell division), along with role of Tridosh and Panch mahabhut in fetal development, 'Bija'-(sperm and ovum), Bijabhaga, Bijabhagavayava and Genetics in Ayurveda. Anuvamshika Siddhanta (principles of Hereditary),

Linga bheda (Sex Determination), Masanumasika Garbha Viridhi Krama (month wise development of Fetus), Garbhavidhikara bhava, (factors effecting development and growth of embryo), Deha prakriti, Satwa prakriti' etc., Garbha poshana, Apra nirmana (formation of placenta), Nabhinadi nirmana (formation of umbilical cord), Ulva, Jarayu, Akritikara bhava, Matrapartantrata of garbha, Bhuta vyapara, formation of Stanya, Angapratyanga nirmana, Development of various systems. Developmental Anomalies and their causes (Ayurveda and Modern Views).

6. Pramana Sharir:

Anthropometric -Values of body parts-
Anguli, anjali, pramana and Sankhya Sharir.

Part B

50 Marks

7. Asthi Sharir (Osteology)

Number of bones (Charaka, Sushruta and Modern Concept), Asthi swaroopa and Asthi rachana (Structure and texture of bone), Detailed description of each bone - Ossification of bones, applied anatomy of each bone.

8. Sandhi Sharir (Arthrology)

(a) Definition of Sandhi (joints), Types, structure of each Asthi sandhi (joint), various, Specific description of 'Hanu' (temporomandibular) and Shakha sandhis (joints of extremities) vertebral joints, Definition of Asthi Sanghat, number and their applied value. Sevani (Sutural Joints) Snayu (Ligaments), movements of Joints and Clinical importance of the Sandhis (joints).

9. Sira, Dhamini, Srotas Sharir (Angiology)

(a) Sira-Dhamini

Importance of Raktavaha Sansthan (cardiovascular system), Hridaya (Heart), Sira, Dhamani, Srotasa. Definition of Sira, Dhamini, their course, branches Description of Arteries and capillary, Accessory veins and Principal veins.

(b) Srotas Sharir: 1. Definition, types, their mool and Srotodusti.

10. Lasika Samsthan (Lymphatic system)

Introduction and study of Lasika pranali (Lymphatic channels), Lasika granthi (Lymphatic glands), Rasa kulya (thoracic duct), Payasvini (lacteals) and Courses of lasika vahinis (Lymphatic Ducts).

11. Peshi Sharir (Myology)

Introduction and detail Structure, shape, size and types and their Importance of Peshi (muscles) - their attachments and origin, insertion, actions nerve supply and its clinical application.

Paper II

Total Marks:100

Part A

50 Marks

1. Koshtha

Defining the terms like – Koshtha, Ashaya and Koshthanga, their names and location, koshthanga of Uraha Pradesh(thoracic cavity organs), Udara Pradesh Koshthanga (organs of abdominal cavity), Description of digestive organs and accessory digestive organs. Organs of Shwasa Prashwasa (Respiratory system), Organs of Mutravaha Sansthan (Urinary system), Description of male and female prajananang (reproductive organs) and their details.

2. Granthi Sharir

Description of the structure of Bahya Srotas (Exocrine), and Nisrotasa granthi, details study of granthi Sharir.

3. Kala Sharir

Definition of Kala, structural pattern and details study of each Kalas, study of Vishista Kalas like, Hridayavaran (Pericardium), Puppasavarana Kala (Plura), Mastiskavarana kala (Meninges), Udaravarana Kala (Peritoneum).

4. Twak Sharir (Dermatology)

Definition of Twak (Skin), its swaroop (structure), types and prayojana.

Part B

50 Marks

5. Uttamangiya Tantrika Sansthan Sharir (Nervous System)

Introduction, Definition, classification and importance of Mastishka (Brain)-
1. Brihatamastishka (Cerebrum), 2. Laghumastishka (Cerebellum), 3. Madhyamastishka (Mid brain), 4. Usnishaka (Pons), 5. Sushumna Shirsha (medulla oblongata), Sushumana Khanda (Spinal cord) Sheershanya tantrika (Cranial Nerves) and Sushmaniya Tantrika (spinal Nerves), Parisarniya Tantrika (Peripheral nervous system). Description of Swatantra Nadi Samsthan (Autonomic nervous system), Anukampiya and Paranukampiya (Sympathetic and parasympathetic nervous system and nerve plexuses).

6. Tantra Sharir (Neuro Anatomy)

Satchakra Ida, Pingala, Saraswati etc.

7. Marma Sharir

Description of the term Marma, their numbers, locations, different types and their terminological values. Importance of trimarmas Charaks & sushruta concept.

8. Anga Rekhankana Sharir - (Surface, Radiological and Imaging Anatomy)

Anga Rekhankana (Surface marking), Vikirana Rachana Sharir (Radiological Anatomy).

9. Indriya Sharir: (Sensory organs)

Derivation of the word Indriya, its number, Description of Panch Gyanendriya, Panch Karmendriya and Ubhayendriya (Mana). Description of the Eye, Ear, Nose, tongue, Skin and Indriya Adhistan.

Practical

Pratyakshika Vishaya (Practical topics)

1. Shava Samskarana and Mruta Shodhana (Dead Body Preservation and Dissection).
2. Shavachchedana - Dissection of whole body.
3. Sampurna Asthi Pradarshana - Demonstration of all bones, Practical demonstration of Komala Avayava (Macro and Microscopic structures of organs) and Koshtanga (Abdominal organs).
4. Practical knowledge of Anga Rekhankana, surface anatomy, Sharir Vikirana Radiographic.

Distribution of Practical Marks

200 Marks

- | | |
|---|----------|
| 1. Knowledge of the dissected organs. | 25 marks |
| 2. Knowledge of the delicate organs. | 25 marks |
| 3. Knowledge of bones. | 25 marks |
| 4. Knowledge of Marmas. | 25 marks |
| 5. Surface Anatomy, Diagrams and Practical records. | 25 marks |
| 6. Daily dissection of Log Book | 25 marks |
| 7. Spotting | 25 marks |
| 8. Oral (Viva-voce) | 25 marks |

Reference Books

- | | |
|---|---|
| 1. Brihat Sharirma | : Vaidyaratna P.S. Variyar |
| 2. Abhinava Sharirma | : Acharya Damodar SharmaGaur |
| 3. Manava Sharir (Revised Edition) | : Prof. Dinkar Govind Thatte |
| 4. Manava Bhruna Vigyana | : Prof. Dinkar Govind Thatte |
| 5. Manava Anga Rekhankan Vikrian EvamChayankan Sharir Vikiran | : Prof. Dinkar Govind Thatte |
| 6. Sharir Rachana Vigyanana (English) | : Vaidya P.G. Athwale |
| 7. Mannual of Practical Anatomy | : Cunnighum Practical Mannual Vol-1, Vol-2, Vol-3 |
| 8. Chapters of Charaka, Sushruta andVagbhatta Sharir Sthan | : |
| 9. Clinical Anatomy in Ayurveda | : Prof. D.G. Thatte and ProfSuresh Chandra |
| 10. Sharir Rachna Vigyan (English) | : Prof. D.G. Thatte |
| 11. Ayurvedic Human Anatomy | : Prof.-Dr. Giridhar M. Kanthi |
| 12. by Regional Anatomy | : B. D. Chaurasia |

1.6. KRIYA SHARIR

Theory- Two Papers– 100 Marks Each

Practical/ Viva voice – 100 Marks

Lectures (1 hour) - 210

Practicals and Demonstration (1 ½ hour) - 90

Paper I

100 Marks

Part A

50 Marks

1. Conceptual study of fundamental principles of Ayurvediya Kriya Sharir e.g. Panchamahabhuta, Tridosha, Triguna, Loka-Purusha Samya, Samanya Vishesha, Rasa-Virya-Vipaka etc. Description of Basics of Srotasas.
2. Definitions and Synonyms of term 'Sharir', Definitions and Synonyms of term 'Kriya', Srishti Utpatti and its adaptation in generation of Shareera, Factors responsible for Srishti Utpatti, Difference and similarities between Prakriti and Purusha, Study of components of Purusha and in context to numerical variations (Purushabheda), Role of Shatdhatupurusha in Kriya Sharir and Chikitsa
3. Doshā – General introduction of dosha, Classification of Doshas into 'Sharir dosha and Manasa dosha', 'Prakrit dosha and Vaikrit dosha, Criteria for 'dosha', Doshagati, Criteria for differentiation of types of dosha (doshabheda).
 - a. Vata dosha – Vyutpatti (derivation), Utpatti, Nirukti (etymology) of term 'Vata', General locations, general properties and general functions of Vata, Five types of Vata with their specific locations, specific properties, and specific functions (Prana, Udana, Samana, Vyana, Apana)
 - b. Pitta dosha – Vyutpatti, Utpatti, Nirukti of term 'Pitta', General locations, general properties and general functions of Pitta, Five types of Pitta with their specific locations, specific properties, and specific functions (Pachaka, Ranjaka, Alochaka, Bhrajaka, Sadhaka); Similarities and differences between Agni and Pitta
 - c. Kapha dosha- Vyutpatti, Utpatti, Nirukti of term 'kapha', General locations, general properties and general functions of kapha, Five types of kapha with their specific locations, specific properties, and specific functions (Bodhaka, Avalambaka, Kledaka, Tarpaka, Shleshaka)

- d. Etiological factors responsible for Vriddhi-Kshaya of each dosha and manifestations of Vriddhi-Kshaya of each dosha
 - e. Kriyakala of dosha in view point of Charaka, Sushruta and Vagbhata and its clinical importance.
4. a. Deha-Prakriti – Vyutpatti, Utpatti, Nirukti, various definitions and synonyms for term 'Prakriti', intra-uterine factors responsible for genesis of Prakriti, extra-uterine factors influencing Deha-Prakriti, classification of Deha-Prakriti, characteristics of each kind of Deha-Prakriti, clinical significance of Deha-Prakriti, Anukatva
- b. Manasa-Prakriti – classification, characteristics clinical significance.

5. Modern Physiology

- a. Basic principles of biochemistry. Study of basic components of food. Biochemical structure, properties, classification of proteins, fats and carbohydrates. Metabolism of proteins, fats and carbohydrates. Vitamins – sources, daily requirement, functions, manifestations of hypo and hyper-vitaminosis. Biochemical study of enzymes.
- b. Definition and mechanisms of maintenance of Homeostasis. Cell Physiology. Membrane Physiology. Resting membrane potential and action potential.
- c. Physiology of Respiratory system: Functional anatomy of respiratory system. Definition of ventilation. Mechanism of respiration. Exchange and transportation of gases. Neural and chemical control of respiration. Spirometry and lung function tests. Artificial respiration.
- d. Physiology of Cardio-Vascular system: Functional anatomy of cardiovascular system. Properties of cardiac muscles. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control. Regional circulations. Physiology of lymphatic circulation.
- e. Modern view of somato-types, biological personality and psychological traits of an individual.

Part B
Marks

50

1. Shareera-Poshana

- a. 1. Ahara – definition and significance of ahara, classification of ahara-dravya, ahara-vidhi-vidhana, Ashta-ahara-vidhi-visheshayatana, ahara-parinamakara bhava
- b. Agni – Conceptual study of Agni, Vyutpatti, Nirukti, Synonyms of term 'Agni', classification of Agni, Location-properties and functions of Jatharagni, Bhutagni, and Dhatwagni role of Agni in Kriya Sharira and Chikitsa

- c. Ahara-paka-prakriya – physiology of related organs (Maha-srotas), avasthapaka, nishthapaka, Maha-srotas-pachana kriya, sara-kitta vibhajana, saranushoshana and genesis of Vatadi dosha during ahara-pachana
- d. Definition of term 'Koshtha', criteria of classification of Koshtha and characteristics of each kind of Koshtha

2. Modern physiology

- a. Functional anatomy of gastro-intestinal tract. Descriptive physiology of digestion and absorption in gastro-intestinal tract. Mechanism of secretion and composition of different digestive juices.

Paper II

100 Marks

Part A

50 Marks

1. Dhatu

General introduction, definition and criteria of dhatu, Utpatti (during garbhavastha and janmottara kala), Vyutpatti, Nirukti of term 'dhatu'; different theories related to dhatuposhana, (dhatuposhana nyaya)

i) Rasa Dhatu

Vyutpatti, Nirukti, sthan, guna, karma, pramana of Rasa Dhatu. Physiology of Rasavaha Srotasa, Formation of Rasa Dhatu from Ahara Rasa. Circulation of Rasa (Rasa-Samvahana), Description of Ashtavidha Sara (8 types of Sara). Characteristics of Twakasara Purusha. Conceptual study of Mutual interdependence (ashraya-ashrayi bhava) between Rasa and Kapha. Manifestations of Kshaya and Vriddhi of Rasa.

ii) Raktadhatu

Vyutpatti, Nirukti, synonyms, sthan, guna, karma and pramana 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 between Rakta and Pitta.

iii) Mamsadhatu

Vyutpatti, Nirukti, synonyms, sthan, guna, karma and pramana of mamsa dhatu, Physiology of Mamsavaha Srotasa, Formation of Mamsadhatu, characteristics of Mamsasara Purusha, manifestations of Kshaya and Vriddhi of Mamsadhatu.

iv) Medo Dhatu

Vyutpatti, Nirukti, sthan, guna, karma and pramana of medodhatu, physiology of Medovaha Srotas, formation of Medo dhatu, characteristics of Medosara Purusha and manifestations of Kshaya and Vriddhi of Meda.

v) Asthi Dhatu

Vyutpatti, Nirukti, synonyms, sthan, guna, karma of Asthi dhatu; 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.

vi) Majja Dhatu

Vyutpatti, Nirukti, types, sthan, guna, karma and pramana of Majja Dhatu, physiology of Majjavaha Srotas, formation of Majja dhatu, characteristics of Majja Sara Purusha, Rakta-Pitta-Majja relation, manifestations of Kshaya and Vriddhi of Majja dhatu.

vii) Shukra Dhatu

Vyutpatti, Nirukti, sthan, guna, karma and pramana of Shukra dhatu, physiology of Shukravaha srotas and formation of Shukra dhatu; features of Shuddha and Dushita Shukra, characteristics of Shukrasara Purusha, manifestations of Kshaya and Vriddhi of Shukra dhatu.

2. Ojas

Vyutpatti, Nirukti, synonyms, definition, utpatti sthan, guna, karma and pramana of Ojas, classification of Oja (Ojobheda), conceptual study of Vyadhikshamatva; Bala vrudhikara bhava, Balabheda, Relation between shleshma, bala and ojas; Etiological factors and manifestations of Oja kshaya, Visramsa and Vyapat; physiological and clinical significance of OjaVayasthapana

3. Upadhatu

- a. General introduction, Vyutpatti and Nirukti of the term 'Upadhatu'. Utpatti, Poshan, Samkha, Praman, Guna, Sthan and Karma of Upadhatu.
- b. Stanya –Nirukti, definition, utpatti guna karma, praman of Stanya; characteristics and assessment of shuddh and dushita Stanya, manifestations of Vriddhi and kshaya of Stanya
- c. Artava –Nirukti, definition, Utpatti, guna karma of Artava, characteristics of shuddha and dushita Artava, difference between Raja and Artava, physiology of Artavavaha srotas and Artavachakra
- d. Tvak – Utpatti, Nirukti, guna, Praman, karma and bheda. Layer wise diseases of Tvak.

4. Modern physiology

- a. Haemopoetic system – composition, functions of blood and blood cells, Haemopoiesis- (stages and development of RBCs, WBCs and platelets); Introduction to bone marrow: composition and functions of bone marrow.

Structure and functions of haemoglobin, mechanism of blood clotting, anticoagulants, study of platelets, physiological basis of blood groups, principles of blood transfusion, plasma proteins- synthesis and functions. Applied physiology: anaemia, jaundice. Basics of Immunity – Classification and Mechanisms. Hypersensitivity. Physiological basis of immunization.

- b. Muscle physiology – comparative study of physiology of skeletal muscles, cardiac muscles and smooth muscles. Physiology of muscle contraction.
- c. Physiology of adipose tissue, lipo proteins like VLDL, LDL and HDL.
- d. Calcium metabolism: hormonal control of calcium metabolism. Functions of vitamin D, parathormone and calcitonin. Bone and teeth.
- e. Structure and functions of skin, sweat glands and sebaceous glands.
- f. Physiological study of male and female reproductive systems. Spermatogenesis and oogenesis. Hormonal regulation of menstrual cycle. Physiology of pregnancy and lactation.

Part B

50 Marks

1. Mala - Vyutpatti, Nirukti of term 'mala'; General introduction of Mala, Utpatti (during garbhavastha and janmottara kala),

2. Aharamala – Enumeration and formation of Aharamala

- a. Mutra –Vyutpatti, Nirukti, praman, sthan, guna, karma, and physiology of Mutravaha srotas; formation of Mutra, manifestations of Vriddhi and Kshaya of Mutra
- b. Purisha –Vyutpatti, Nirukti, praman, sthan, guna, karma, and physiology of Purishavaha srotas; formation of Purisha, manifestations of Vriddhi and Kshaya of Purisha

3. Sweda –Vyutpatti, Nirukti, praman, sthan, guna, karma, and physiology of Swedavaha srotas; formation of Sweda, manifestations of Vriddhi and Kshaya of Sweda

4. Dhatu mala – Utpatti, Nirukti, sthan, guna karma, samkhya, praman of each dhatu mala; etiological factors and clinical manifestations of each dhatu mala

5. Panchajnyanendriya – Physiological study of Panchajnyanendriya, and physiology of Shabda, Sparsha, Roopa, Rasa, Gandha. Process of Dnyana-grahana; Indriya-pancha-panchaka; Physiological study of Karmendriya.

6. Manas – Utpatti, Vyutpatti, Nirukti, synonyms, swarooka, sthan, guna, vishaya, karma of Manas, and physiology of Manovaha srotas; physiological and clinical significance of Manas

7. Atma –Nirukti, definition, sthan, guna, karma, and difference between Paramatma and Jeevatma; characteristics of existence of Atma

8. Buddhi – Sthan, prakara, karma of Buddhi; Physiology of dheer, dhriti and smriti

7. Nidra – Nidrotpatti, Nidrabhedha, physiological and clinical significance of Nidra; Swapnotpatti and Swapnabhedha

8. Modern physiology

- a. General introduction to nervous system – neurons, mechanism of propagation of nerve impulse, physiological study of CNS, PNS, ANS; physiological study of sensory and motor functions of nervous system. Functions of different parts of brain - Cerebral cortex, Hypothalamus, Limbic system, Midbrain, Pons, Medulla and Cerebellum. Physiology of special senses. Intelligence, Memory, Learning and Motivation. Physiology of sleep and dreams. Physiology of speech and articulation; EEG. Physiology of temperature regulation.
- b. Endocrine glands – General introduction to endocrine system, classification and characteristics of hormones, physiological study of all endocrine glands and their hormones.
- c. Urinary tract physiology – Functional anatomy of urinary tract. Functions of kidneys. Mechanism of formation of urine. Control of micturition. Renal function tests.

PRACTICAL

A) Ayurvedic practical

1. Assessment of Dosha (Vridhdhi kshaya lakshana)
2. Assessment of Dhatu – a. Sharirbala
b. Manasabala
3. Assessment of Mala –
 - a. Examination of Mala by Shabda, Sparsha, Roopa Rasa and Gandha
 - b. Mutra (taila bindu pareeksha)
 - c. Purisha (jale nimajjati pareeksha)
4. Assessment of Vaya
5. Anguli pariksha
6. Assessment of Ayu in Charaka-Samhita
7. Assessment of Agni
8. Assessment of Koshtha
9. Assessment of Prakriti
10. Assessment of Sara
11. Satmya Pariksha
12. Nadi pariksha
13. Stanya pariksha

B) Modern practical

1. Use and care of compound microscope
2. Types, uses and care of balances
3. Collection of blood sample – prick, venepuncture method and bulbs, apparatus for collection
4. Preparation of blood film and staining
5. Hemoglobinometry
6. Microscopic examination of blood
 - a. RBC count
 - b. WBC count
 - c. Differential leucocyte count
7. Packed cell volume(PCV) demonstration
8. ESR demonstration
9. Bleeding time
10. Clotting time
11. Blood grouping and Rh typing
12. Examination of Cardio-Vascular system
 - a. Pulse examination
 - b. Arterial blood pressure measurement
 - c. Examination of heart sounds by stethoscope
 - d. ECG demonstration
13. Examination of Respiratory system
 - a. Respiratory rate
 - b. Air entry with the stethoscope
 - c. Spirometry
14. Examination of CNS – Reflexes
15. Urine examination – Collection of urine, physical examination, chemical examination and microscopic examination.
Test for normal constituents of urine
Following chemical examinations for abnormal constituents are expected
 - a. albumin test
 - b. sugar test
 - c. acetone bodies
 - d. bile salts and pigment
 - e. occult blood
16. Stool examination – Collection of stool, physical examination, chemical examination and microscopic examination
17. Examination of semen
18. Measurement of body temperature
19. Study of instruments related to physiology practicals.

Reference Books

1. Ayurvedya Kriya Sharira - Vd. Ranjeet Roy
2. Abhinava Sharira Kriya Vigyana - Acharya Priyavrata Sharma

3. Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya
4. Prakrita Dosha Vigyana - Acharya Niranjana Dev
5. Tridosha Vigyana - Shri Upendranath Das
6. Sharira Tatva darshana - Hirlekar Shastri
7. Prakrita Agni Vigyana - Niranjana Dev
8. Deha Dhatvagni Vigyana - Vd. Pt. Haridutt Shastri
9. Sharira Kriya Vigyana (Pt. 1-2) - Acharya Purnchandra Jain
10. Sharira Kriya Vigyana - Shri Moreshwar Dutt. Vd.
11. Dosha Dhatu Mala Vigyana - Basant Kumar Shrimal
12. Abhinava Sharira Kriya Vigyana - Dr. Shiv Kumar Gaur
13. Pragyogik Kriya Sharira - Acharya P.C. Jain
14. Physiology - Gyton
15. Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
16. Concept of Agni - Vd. Bhagwan Das
17. Physiology - Chatterjee
18. Purush Vichaya - Acharya V.J. Thakar
19. Useful parts of Charaka, Sushrut, Vagbhata.

TEACHING MODULE

ASHTANGAHRIDAYA

SUGGESTIONS ON SYLLABUS & CURRICULUM

1. Number of lecture hours mentioned in CCIM syllabus is 60.
2. Number of papers and marks for theory and practical may be followed as per CCIM directions
3. The total syllabus (Ashtangahridaya Sootrasthaana 30 chapters) can be divided into the following categories for convenience of learning:
 - a. Chapters for detailed study or thorough study - 80 marks- 50 hrs
 - b. Chapters for introductory study – 20 marks-s 10 hrs
4. List of chapters under the above categories
 - a. Detailed study – 9 Chapters 1, 4, 8, 9, 10, 11, 12, 13 & 14
 - b. Introductory study –
 - i. 21 Chapters in Ashtangahridaya – 2,3,5,6,7 & 15 – 30
 - ii. Ahstangasangraha – 12, 13, 22, 23
5. Introductory study of the chapters can be limited to certain portions selected from each chapter as specified below.
6. Topics for introductory study from each chapter

Chapter No	Chapter Name	Topics for introductory study
ASHTANGAHRIDAYA		
2	Dinacharya	Abhyanga, Vyayama, udvartana, sadvritam, dasavidhapapa karma
3	Ritucharya	Name of shadritus, their division into uttarayana& dakshianaya, concept of ritusandhi, precautions in ritusandhi
5	Dravadravyavijnaneeya	General Qualities of Jala, ksheera, ghrita, madhu and taila
6	Annaswaroopavijnaneeyam	Qualities of Manda, peya, vilepee and odana, names of eight types of lavana, names of maamsavarga with examples, ingredients of triphala, trikatu, trijaata, chaturjaata, panchakola and panchapanchamoola
7	Annaraksha adhyaaya	Definition and examples of viruddha aahaara,

		trayopasthambha
15	Sodhanaadi gana sangraha	One among three Vaataghna ganas, one among pittaghna ganas, one among kaphaghna ganas, jeevaneeya gana
16	Snehavihi	Snehanadravya guna, snehadravyas, classification of snehana into achapaana, vichaarana, effect snehana
17	Swedavidhi	Types of sweda – agneya & anagneya, further types of agneyasweda – taapa, upanaaha, ooshma, drava. effect of snehasweda
18	Vamanavirechanavidhi	Application of vamana & virechana according to dosha predominance (vamana for kapha and virechana for pitta), peyaadikrama (samsarjana) and its importance, effect of s'odhana
19	Vastividhi	Importance of vasti, types of vasti
20	Nasyavidhi	Importance, classification and effect of nasya
21	Dhoomapaanavidhi	Precise procedure of dhoomapaana, effect of dhoomapaana
22	Gandooshaadi vidhi	Definition of gandoosha, kabala and moordhataila and effects
23	Aschyotana anjana	Precise description (definition) of aschyotana and anjana
24	Tarpana putapaakavidhi	Precise description /definition of tarpana and putapaaka
25	Yantravidhi	Definition of the term yantra and its uses (Ref: sloka 1-3)
26	Sastravidhi	Definition and use of sastra
27	Siravyadhavidhi	Basic knowledge of siravyadha
28	Salyaharana vidhi	General features of antah`salya (ref: solka 1,2)
29	Sastrakarma vidhi	knowledge of three stages of vrana a- aama, pachyamaana, pakwa
30	Kshaara agikarmavidhi	KShaaraguna, agnikarma and types

ASHTAANGASANGRAHA		
12	Vividhaushadhavijnaneeya	Classification of treatment into – 1. Daivavyapasraya, yuktivyapaasraya, satwaavajaya 2. Hetuvipareeta, vyaadhivipareeta, tadarthakaari
13	Agryasangraheeya	Verses 145 – 158 (bhishak chikitsangaanaam to sarvasanyaasa sukhaanaam)
22	Rogabhedeeya	Seven types of diseases – detailed knowledge
23	Bheshajavacharaneeya	Vyaadhibheshajaprabhaava tatwa, aushadhakaala

7. Oral and Practical

- a. 50 marks allotted for this purpose can be distributed as follows:
 - i. Chart framing and compilation – 10 marks
 - ii. Recitation and writing of minimum 10 slokas from chapters intended for detailed study. The sloka should be memorized along with padavibhaga, anwaya, bhaavartha and practical applicability – 10 marks
 - iii. Viva voce – 15 marks
 - iv. Internal assessment – 15 marks

8. Topics for chart

- a. Ayurveda avatarana according to AH
- b. Ashtanga of Ayurveda
- c. Description of Agni
- d. Description of Prakriti
- e. Tridosha
- f. Rasa
- g. Guna - classification
- h. Veerya – definition and classification
- i. Vipaaka
- j. Prabhaava
- k. Ritucharya
- l. Dinacharya
- m. Vegavidhaarana – complications
- n. Chatushpada
- o. Saadhyaassaadhyata
- p. Different classification of dravadravya
- q. Classification of dravya in annaswaroopa

- r. Doshasqamsodhana kaala
 - s. Vriddhikshayalakshana of dosha, dhatu and mala
 - t. Doshaprakopa according to ritu
 - u. Viruddhaahaara
 - v. Trayopasthabha
 - w. Rasaskandha
 - x. Rasa relation with bhoota
 - y. Rasa – dosha relation
 - z. Chaya – prakopa- prasama
 - aa. Gurvadi guna and their karma
9. **Parameters for internal assessment: (15 marks)**
- a. Performance in Term exam – 5 marks (average marks in term exam adjusted to 5)
 - b. Memorizing and describing studied slokas monthly in the class (assessed through chanting and writing) – 5 marks
 - c. Oral and written presentation on a specified topic – 5 marks

SUGGESTIONS ON QUESTION PAPER PATTERN

Two parts of 50 marks each part A & B with the following pattern in each:

- I. Five one word answer questions (mark 1 X 5 = 5)

Example: Chief location (viseshasthaana) of vata according to AH (ans: pakwaasaya)

- II. Five questions for short note (3 marks X 5 = 15)

Example: Write short note on Peyadi krama

- III. Four questions for brief description (5 marks X 4 = 20)

Example: Ama and its treatment

- IV. One essay type question – 10 marks (the question should contain 4-5 specific points with specified marks)

Eg: Explain doshas their nirukti, location, panchabhautikatwa and classification (marks 3+1+2+1+3 = 10)

HOUR DESTRIUTION

Total Hours - 130

Hours for detailed study – 100

Hours for non-detailed study - 30

Chapter No	Name of Chapter	Hours allotted	Trimester	Session
Detailed study				
1	Ayushkameeyam	15 hrs	First trimester	First session 10 months
4	Roganulpadaneeyam	9		
8	Maataraasiteeyam	9	Second trimester	
9	Dravyaadvijnaneeyam	12		
10	Rasabhedeeyam	8	Third trimester	
11	Doshaadvijnaaneeyam	13		
12	Doshbhedeeyam	12	First <i>dimester</i>	Second session 4 months
13	Doshopakramaneeyam	12		
14	Dwividhopakramaneeya	10	Second <i>dimester</i>	
Non- detailed study				
2 – 15		8 hrs	Second <i>dimester</i>	
16 - 20		8 hrs		
21-30		7 hrs		
AS 4 chapters		7 hrs		

Sl No	<u>AYURVEDA ITIHASAM</u> THEORY 100 MARKS LECTURE HRS 50	No of hours	Max marks
1	Etymological derivation (vyutpatti), syntactical derivation (niruktti) and definition of the word itihasa, necessity of knowledge of history , its significance and utility. means and method of gaining knowledge viz. historical person (vyakti), subject (vishaya), time period, (kala), happening (ghatna) and their impact on ayurveda.	3 hrs	10 marks
2	Descent of Ayurveda	2 hrs	
3	Chronology of ayurveda according to different schools		
4	Introduction of eight branches of ayurveda and concerned renowned texts. Introduction of the authors of these texts.	1 hr	
5	Eternity of ayurveda (shashvatvam and anaditavam).	1 hr	
6	Status of ayurveda in Vedic period ,	3 hrs	10 marks
7	Progression of ayurveda upto tantra kala .	1 hr	
8	Knowledge about available topics of ayurveda in puranas and tantras etc.	1 hr	
9	Introduction of authors of classical texts during Samhita kala and their contribution especially Atreya	1 hr	20 marks
10	Dhanwantri	1 hr	
11	Kashyapa	1 hr	
12	Agnivesha	1 hr	
13	Sushruta	1 hr	
14	Charaka	1 hr	

15	<i>Bhela, Harita etc.</i>	1 hr	
16	<i>Dridhbala</i>		
17	<i>Vagbhatta</i>	1 hr	
18	<i>Nagarjuna</i>	1 hr	
19	<i>Jivaka</i>	1 hr	
20	Chronological development of textbooks <i>Charaka samhita</i>	3 hrs	10 marks
21	<i>Sushruta samhita</i>		
22	<i>Kashyapa samhita.</i>		
23	Introduction and establishment of time period of commentators of classical samhitas <i>Bhattar harishchandra, Jejjata,</i>	3 hrs	10 marks
24	<i>Chakrapani,</i>		
25	<i>Dalhana,</i>		
26	<i>Nishchalakara, vijayarakshita, Gayadas,</i>		
27	<i>Arundatta, Hemadri,</i>		
28	<i>Gangadhara, Yonginderanath sen, Haranchandra Chakravorty.</i>		
29	Introduction and time period of authors of compendium (granthasamgraha kala) – Acharya Bhavmishra	3 hrs	
30	<i>Sharangdhara</i>		
31	<i>Vrinda, madhavkara</i>		
32	<i>Shodhala, Govind Das (Author of bhaisjya ratnawali), Vasavraja etc.</i>		
33	Origin of ras shastra and its development, introduction and time period of promoters of ras shastra.	2hr	10

34	Vrikshayurveda vijnana (Ayurveda for plant kingdom),	1hr	marks
35	Pashu chikitsa vijnana (ayurveda for animal kingdom), promoters of ashva, gaja chikitsa Vijnana;	1hr	
36	Shalihotra, palkapya, varahmir, nakula, ashvaghosh.		
37	Introduction of authors of modern era – Gan Nath sen, Yamimi bhushan, Yadavji tikramji acharya, Awareness in keraleeya ayurveda chikitsa	2hr	
38	Ghanekar, Damodar Sharma Gaur, Priyavrat Sharma,		
39	Swami Laksmiram, Dr. P. M. Mehta, Daji Shastri Pade etc.		
40	Globlisation of ayurveda – expansion of ayurveda in the following civilisations. Sumera, Babilonia, Asiria, Misra (Eypt),	1 hr	5 marks
41	China, Persia, Arabia, Kamobja,	1 hr	
42	Sri Lanka, Nepal, Thailand, Mauritius, Myanmar (Burma) etc.	1 hr	
43	Impact of ayurveda on Hippocrates (Father of Allopathy),	1 hr	5 marks
44	Invitation to Indian physicians by yavans and translation of ayurvedic text into Arabian language, visit to Greece by Indian scholars, relation between Greece and india in ancient period (made by Alexandar), expansion of ashvavaidyaka in Greece.	1 hr	
45	Developmental actions for ayurveda in post-independence period development in educational trends,	2hr	10 marks
46	establishment of different committee, their recommendations,	1 hr	
47	Organizations: central council of Indian medicine, central council for research and ayurveda and siddha, foundation of department of AYUSH, its introduction and activities,	1hr	
48	Drug and cosmetic act, Ayurvedic pharmacopoeia Committee formation and activities of organisations and institutions like Rashtriya Ayurveda Vidyapeeta etc.	1hr	10 marks

49	Activities in field of research in ayurveda according to different subjects. Initiation for writing down a text, different councils of vaidya and their activities.	1hr	
50	Publications of Ayurveda journals and magazines,	1hr	
51	WHO, status of Ayurveda on international grounds in present era.	1hr	
Total No. of hours		50	
Total marks			100

RACHANASAREERAM

SL NO	HEADINGS	TIME ALLOTTED
1	INTRODUCTION CLASSES	7 HRS
2	EMBRYOLOGY	20 HRS
3	CARDIOVASCULAR SYSTEM	16 HRS
4	DIGESTIVE SYSTEM	25 HRS
5	RESPIRATORY SYSTEM	12HRS
6	ENDOCRINE GLANDS	7 HRS
7	URINARY SYSTEM	8 HRS
8	NERVOUS SYSTEM	40 HRS
9	REPRODUCTIVE SYSTEM	10 HRS
10	SPECIAL SENSE ORGANS	8 HRS
11	LYMPHATIC SYSTEM	5 HRS
12	KALAA SHAREERAM	10 HRS
13	SANDHI SHAREERAM	10 HRS
14	MARMA SHAREERAM	15 HRS
15	TWAK SHAREERAM	3 HRS
16	TANTRA SHAREERAM	1 HRS
17	PRAMANA SHAREERAM	1 HRS
18	ABINIVRITTI SHAREERAM	
19	ANUVAMSHIKA SIDDANTHAM	
20	PRESERVATION OF DEAD BODY	12 HRS
21	IMAGING TECHNOLOGIES	

FIRST THREE MONTHS [45 HRS]

SL.NO	TOPICS TO BE DEALT	TIME ALOTTED
1	INTRODUCTORY CLASS	7 HRS
2	MODERN EMBRYOLOGY	12 HRS
3	CARDIOVASCULAR SYSTEM	11 HRS
4	DIGESTIVE SYSTEM	15 HRS

SECOND THREE MONTHS [45 HRS]

SL.NO	TOPICS TO BE DEALT	TIME ALOTTED
1	CARDIOVASCULAR SYSTEM	6 HRS
2	DIGESTIVE SYSTEM	12 HRS
3	AYURVEDIC EMBRYOLOGY	8 HRS
4	NERVOUS SYSTEM	10 HRS
5	LYMPHATIC SYSTEM	5 HRS
6	RESPIRATORY SYSTEM	4 HRS

THIRD FOUR MONTHS [60 HRS]

SL.NO	TOPICS TO BE DEALT	TIME ALLOTTED
1	NERVOUS SYSTEM	23 HRS
2	KALAA SHAREERAM	2 HRS
3	TWAK SHAREERAM	3 HRS
4	RESPIRATORY SYSTEM	10 HRS
5	GENITO-URINARY SYSTEM	12HRS
6	SANDHI SHAREERAM	10 HRS

LAST FOUR MONTHS [72 HRS]

SL.NO	TOPICS TO BE DEALT	TIME ALOTTED
1	NERVOUS SYSTEM	10 HRS
2	MARMA SHAREERAM	15 HRS
3	ENDOCRINE GLANDS	7 HRS
4	TANTRA SHAREERAM	1 HRS
5	GENITO-URINARY SYSTEM	6 HRS
6	PRAMANA SHAREERAM	1 HRS
7	SPECIAL SENSORY ORGANS	8 HRS
8	ABINIVRITTI SHAREERAM	12 HRS
9	ANUVAMSHIKA SIDDANTHA	
10	PRESERVATION OF HUMAN BODY	
11	IMAGING TECHNIQUES	12 HRS
12	REVISION AND CLASS TESTS	

1. INTRODUCTION CLASS (7 HRS)

2. MODERN EMBRYOLOGY (20 HRS)

- Spermatogenesis and oogenesis – 2 hrs
- Endometrial changes during menstruation –1 hrs
- Formation of germ layers – 4 hrs
- Formation of placenta and umbilical cord -1 hr
- Fate of germ layers -1 hr
- Fetal circulation – 1hr
- Elementary genetics – 2 hrs
- Ayurvedic embryology – 8hrs

3. CARDIOVASCULAR SYSTEM (16 HRS)

- Mediastinum and pericardium – 2 hrs
- Gross anatomy and surface anatomy of heart -7 hrs
- Arterial system – 4 hrs
- Venous system – 4 hrs

4. DIGESTIVE SYSTEM (25 HRS)

- Divisions of abdomen and anterior abdominal wall -2 hrs
- Oral cavity – 3 hrs
- Pharynx – 2hrs
- Oesophagus and stomach – 2 hrs
- Small intestine – 2 hrs
- Large intestine – 1hrs
- Rectum and anal canal – 3hrs
- Ischiorectal fossa and perineum – 3 hrs

Peritoneum – 2hrs

Liver and extra hepatic biliary apparatus – 3 hrs

Pancreas – 2 hrs

Salivary glands – 2 hrs

5. RESPIRATORY SYSTEM (12 HRS)

Nasal cavity and paranasal sinuses – 4hrs

Nasopharynx and larynx – 3 hrs

Trachea – 1 hr

Pleura – 2 hr

Lungs -3hrs

Diaphragm and respiratory muscles – 1hr

6. ENDOCRINE GLANDS (7 HRS)

Pituitary and pineal gland – 2hrs

Thyroid gland – 2 hrs

Parathyroid and thymus – 1 hr

Suprarenal gland and endocrine part of pancreas -2 hrs

7. URINARY SYSTEM (8 HRS)

Kidney – 3hrs

Ureter – 1 hr

Bladder – 2hrs

Urethra – 2 hrs

8. NERVOUS SYSTEM (40 HRS)

Introduction to CNS and classification of NS – 4 hrs

(neuron,neuroglia,myelination,synapses,neuro transmitters)

Development – 1hr

Meninges and cranial venous sinuses – 4hrs

Spinal cord

External structure – 1hr

Internal structure including tracts and nucleus- 3 hrs

Medulla – 2 hr

Pons – 1hr

Midbrain – 1hr

Cerebellum – 1hr

Cerebrum

Gross structure – 4hrs

Internal structure –internal capsule -1hr

Other nerve fibres -1hr

Basal nuclei – 2hrs

Limbic system – 2hrs

Blood supply of brain – 1hr

Diencephalon – 2hrs

Ventricles of brain – 2hrs

Cranial nerves -2hrs

5th, 7th 10th cranial nerves – 2 hrs

Spinal nerves – 1h

Plexus – 3hrs

ANS- 2hrs

9. REPRODUCTIVE SYSTEM (10 HRS)

MALE :

Scrotum with testis – 1hr

Spermatic cord	}	1hr
Epididymus		
Vasdeference		
Ejaculatory duct	}	2hrs
Seminal vesicles		
Prostrate gland		
Bulbo -urethral gland		
Penis		- 1 hr

FEMALE:

Ovary - 1 hr

Uterus - 2hrs

Uterine tube and vagina - 1 hr

External genitalia - 1hr

10. SPECIAL SENSES (8HRS)

Ear and eye-6 hrs

Optic and olfactory pathways – 2 hrs

Tongue ,nose- dealt in respective system

11. LYMPHATIC SYSTEM (5 HRS)

Structure of lymph gland

Spleen

Cisterna chili, thoracic duct

12. KALAA SAREERAM (10 HRS)

Ayurvedam- 2hrs

Pleura	}	8 hrs allotted in respective systems
Pericardium		
Peritoneum		
Meninges		

13. SANDHI SHAREERAM (10 HRS)

Classification of sandhi - 2 hrs

Structure of synovial joint – 1 hr

Major joints - 7 hrs

14. MARMA SHAREERAM (15 HRS)

15. TWAK SHAREERAM (3 HRS)

16. TANTRA SHAREERAM (1 HRS)

17. PRAMANA SHAREERAM (3 HRS)

18. ABINIVRITTI SHAREERAM

19. ANUVAMSHIKA SIDDANTHA

20. PRESERVATION OF DEAD BODY

21. IMAGING TECHNOLOGIES

12 HRS

PRACTICAL RECORD		BONES
1	ATLAS-I CERVICAL VERTEBRAE (superior aspect)	CHUDA VALAYA
2	AXIS-II CERVICAL VERTEBRAE(superior aspect)	DANTA CHUDA
3	TYPICAL THORACIC VERTEBRAE(lateral aspect)	VAKSHA KASHERUKA
4	STERNUM(anterior aspect)	VAKSHASTHI
5	TYPICAL RIB(posterior aspect)	PARSHUKASTHI
6	SCAPULA(dorsal aspect)	AMSAPHALAKA
7	CLAVICLE(superior aspect)	AKSHAKASTHI
8	HUMERUS(anterior aspect)	PRAGANDASTHI
9	RADIUS&ULNA(anterior aspect)	ANTAH PRAKOSTHA& BAHI: PRAKOSTHASTHI
10	HIP BONE(lateral aspect)	SHRONI PHALAKA
11	FEMUR(anterior aspect)	URO ASTHI
12	TIBIA&FIBULA(anterior aspect)	JANKHASTHI& ANUJANKHASTHI
13	FRONTAL BONE(inferior aspect)	PURAH KAPALASTHI
14	PARIETAL BONE(internal aspect)	PARSVAKAPALASTHI
15	OCCIPITAL BONE(internal aspect)	PASCHA KAPALASTHI
16	TEMPORAL BONE(medial aspect)	SHANKHASTHI
17	SPHENOID BONE(superior aspect)	JATHOOKASTHI
18	ETHMOID BONE(anterior aspect)	JARJARASTHI
19	MAXILLA(medial aspect)	URDHVA HANVASTHI
20	MANDIBLE(lateral aspect)	ADHAH HANVASTHI
ORGANS		
1	LUNGS(medial surface)	PHUPPHUSA
2	HEART (anterior surface)	HRIDAYA
3	FOETAL CIRCULATION	GARBHA RAKTHA CHANKRAMANAM
4	LIVER(posterior aspect)	YAKRUT
5	KIDNEY(coronal section)	VRIKKA
6	UTERUS&ASSOCIATED STRUCTURES(posterior aspect)	GARBHASHAYAM

7	BRAIN(medial aspect)	MASTHISHKAM
8	BASE OF BRAIN(inferior aspect)	MASTHISHKAM
9	EYE BALL (sagittal section)	NETRAM
10	EAR(external,middle&internal)	KARNAM

WORKING HOURS SCHEDULES FOR PRACTICAL

SCHEDULE OF RACHANA SHAREERA PRACTICAL FOR 1ST THREE MONTHS (Total 36 Hrs)

Osteology – upper limb, lower limb & cranial bones(Frontal,Parietal,Occipital,Temporal,Sphenoid,Ethmoid,),norma and sutures in detail.

SCHEDULE OF RACHANA SHAREERA PRACTICAL FOR 2ND THREE MONTHS (Total 36 Hrs)

1. Vertebral column, ribs, sternum & facial bones (Mandible,Maxilla in detail)

2. Dissection

SCHEDULE OF RACHANA SHAREERA PRACTICAL FOR 3RD THREE MONTHS (Total 48 Hrs)

1. Dissection

2. Histology

SCHEDULE OF RACHANA SHAREERA PRACTICAL FOR SENIOR BATCH (4 MONTHS-120 Hrs)

1. Dissection

MICRO ANATOMY (HISTOLOGICAL SLIDES)

1	SIMPLE SQUAMOUS EPITHELIUM
2	ELASTIC CARTILAGE
3	COMPACT BONE
4	STRIATED MUSCLE
5	SPINAL CORD
6	CEREBELLUM
7	ARTERY
8	VEIN
9	LYMPH GLAND
10	SPLEEN
11	THYROID GLAND
12	LUNG
13	OESOPHAGUS
14	STOMACH
15	DUODENUM
16	COLON
17	LIVER
18	KIDNEY
19	TESTIS
20	OVARY

Model of Dissection Log Book

NAME OF THE AYURVEDA COLLEGE

(Emblem)

DISSECTION LOG BOOK

20 - 20

NAME OF THE AYURVEDA COLLEGE

(Emblem)

DISSECTION LOG BOOK

20 - 20

Name :

Roll No :

Certified that this is the bonafied Log Book offirst professional BAMS, with Reg.Noand that he/she has satisfactorily completed the dissection work during the year 20 - 20 .

Signature of lecturer

Signature of student

Date

Reader

Professor

External Examiners

Internal examiners

INDEX

SL No.	Name of the Dissection	Page no.	Date of Dissection
1.	The scalp		
2.	The face		
3.	The pectoral region and axilla		
4.	The neck		
5.	The anterior compartment of arm, forearm and cubital fossa		
6.	The wrist and palm		
7.	The anterior abdominal wall		
8.	The front of thigh and knee		
9.	The front of leg and dorsum of foot		
10.	The dissection of the back – Scapular region		
11.	The shoulder		
12.	The lumbar region		
13.	The gluteal region		
14.	The posterior & medial sides of thigh & popliteal fossa		
15.	The back of leg and sole		
16.	The posterior compartment of the arm and forearm		
17.	The dorsum of the hand and		

	wrist		
18.	Removal of the Brain		
19.	Removal of the lungs and heart		
20.	Removal of the abdominal organs		

Figures that should be included in the Log Book

3. The pectoral region and axilla

i) Brachial plexus

ii) Axillary artery and branches

4. The neck

i) Anterior compartment of Neck

ii) Posterior compartment of Neck

5. The anterior compartment of arm,

forearm and cubital fossa

i) Boundaries and contents of cubital fossa

7. The anterior abdominal wall

i) Formation of rectal sheath

8. The front of thigh and knee

i) Femoral triangle

ii) Femoral sheath

10. The dissection of the back – Scapular region

i) Sacral plexus

14. The posterior and medial sides of thigh

and popliteal fossa

i) Popliteal fossa (Boundaries and contents)

18. Removal of the Brain

i) Circle of Willis

20. Removal of the abdominal organs

i) Abdominal aorta and its branches

Model description of index

6. The wrist and palm

Incisions

1. Horizontal incision about 1 cm proximal to the distal crease of front of wrist.

2. Horizontal incision along the distal palmar crease.

3. Vertical incision connecting 1 & 2 through the middle and extending to the middle finger to its tip.

4. Oblique incision starting from middle of '3' in palm and extending to the tip of thumb.

Reflected the skin and identified the Palmaris brevis muscle in the hypothenar eminence, which is superficial.

Removed the subcutaneous fat and identified

1. Palmar aponeurosis
2. Flexor retinaculum
3. Palmaris longus tendon
4. Ulnar nerve and its branches
5. Ulnar artery
6. Radial artery with its superficial palmar branch
7. Median nerve

Detached the palmar aponeurosis from its attachment from flexor retinaculum and reflected it to its distal attachment.

1. Superficial palmar arch and its digital branches
2. digital branches of ulnar nerve
3. digital branches of median nerve
4. Lumbrical muscles

5. Tendons of flexor retinaculum superficialis and flexor digitorum profundus

6. Deep palmar arch

Note

1. Flexor retinaculum
2. Palmar aponeurosis
3. Intrinsic muscles of hand
4. Superficial palmar arch
5. Deep palmar arch
6. Radial artery
7. Ulnar artery
8. Ulnar nerve

The book should be limited in 150 pages of A4 size

KRIYA SAREERA

CLASS PERIOD FOR FIRST PROFESSIONAL BAMS DEGREE JUNIOR-10 MONTHS

I. Schedule of kriya shareera syllabus for first 3 months (Total-40 hours)

1. Basics of physiology-consist of cell physiology, biophysics, homeostasis, membrane physiology, resting membrane potential and action potential -5 hours
2. Basic principles of biochemistry-consist of basic components. Biochemical structures (non-detail), vitamins and enzyme -5 hours
3. Haemopoetic system, immunity and lymphatic system -19 hours
4. Definition and synonymn of shareera, kriya, purusha, role of shad dhatu - purusha in kriya shareera and chikitsa and loka purusha samya (non detail) -4 hours
5. Fundamental principles like panchamahabhuta, tridosha, triguna -5 hours
6. Samanya-vishesha-rasa-guna-virya-vipaka-non detail- -2 hours

II. Schedule of kriya shareera syllabus for second 3 months (Total-50 hours)

1. Physiology of digestive tract with ayurvedic portion consist of ahara, agni, paka kriya and kostha (with metabolism of food stuffs-detail) -25 hours
2. General introduction to vata, pitta, kapha and its classification (Dosha bheda) -2 hours
3. Etiology foe dosha vriddhi kshaya non detail -2 hour

- | | |
|---|-----------|
| 4. Muscle physiology | -4 hours |
| 5. Physiology of cardio vascular system | -17 hours |

III. Schedule of kriya shareera syllabus for third 4 months (Total-60 hours)

- | | |
|---|-----------|
| 1. Dhathus all aspect (detailed) | -18 hours |
| 2. Ojas, bala, relation between sleshma, bala and ojas, and vyadhi kshamat- | 5 hours |
| 3. Upadhatu | -2hours |
| 4. Srothas | -3 hours |
| 5. Prakruti (shareera) (including kaya bheda + sara) | -10 hours |
| 6. Manasa prakruti (non detail) | -2 hours |
| 7. Modern view of somato –types .Biological and physiological personality traits (non detail) | -2 hours |
| 8. Physiology of Respiratory system | -10 hours |
| 9. Physiology of Excretory system (urinary and skin) | -8 hours |

Class period for IST professional BAMS Degree seniors-4 months (60 hours)

- | | |
|---|-----------|
| 1. Physiology of Central Nervous System | -18 hours |
| 2. Endocrinology | -16 hours |

- | | |
|--|-----------|
| 3. Special senses (Ayurvedic part- Pancha jnanendriya) | -10 hours |
| 4. Reproductive system+Astanga hrdayam-Ayurvedic part | -12 hours |
| 5. Manas-Atma-Bhuddhi-Nidra | -4 hours |

KRIYA SHAREERA

PRACTICAL SCHEDULE

MODERN PROTOCOL- Total 75 hors

No	Name of experiment	No.of hours
1	Use and care of the compound microscope	2 hour
2	Types , uses and care of balances	
3	Collection of blood sample	2 ,, ,,
4	Microscopic Examination of Blood	
5	Packed cell volume or heamatocrit	
6	Erythrocyte sedimentation rate	2 ,, ,,
7	Haemoglobinometry	2 ,, ,,
8	Osmotic fragility	1 ,, ,,
9	Enumeration of erythrocytes	4 ,, ,,
10	Total leucocyte count	4 ,, ,,
11	Pheripheral blood smear (Demonstration)	2 ,, ,,
12	Differential leucocyte count	4 ,, ,,
13	Bleeding time	1 ,, ,,
14	Clotting time	1 ,, ,,
15	Blood grouping & RH typing	1 ,, ,,
16	Blood indices demonstration	1 ,, ,,
17	Blood Bio-chemistry (Demonstration)	4 ,, ,,
18	Urine Examination	1 ,, ,,
19	Chemical Examination of urine	1 ,, ,,
20	Test for albumin	2 ,, ,,
	Test for sugar	
21	Test for acetone bodies	2 ,, ,,
22	Test for bile pigments	

23	Test for bile salts	
24	Test for occult blood	
25	Microscopic examination of urine	2 ,, ,,
26	Examination of heart sounds	2 ,, ,,
27	Lung volume and capacities(Spirometry)	2 ,, ,,
28	Arterial blood pressure examination	5 ,, ,,
29	Electrocardiogram	2 ,, ,,
30	General examination	2 ,, ,,
31	Examination of Cardio vascular system	2 ,, ,,
32	Examination of Respiratory system	2 ,, ,,
33	Examination of Higher functions and Sensory system	4 ,, ,,
34	Examination of Cranial nerves	4 ,, ,,
35	Examination of Motor system	3 ,, ,,
36	Examination of Reflexes	4 ,, ,,
37	Stool examination (non-detail)	1 ,, ,,
38	Examination of semen (non-detail)	1 ,, ,,
39	Measurement of body temperature	1 ,, ,,
40	Normal values	1 ,, ,,

AYURVEDIC PROTOCOL- SEPARATE RECORD (minor) Total 15 hors

	Name of experiment	No.of hours
1	Assessment of prakruti-10 cases(Different)	2
2	Assessment of Sara -10 cases(Different)	2
3	Assessment of Dosha (vridhikshaya lakshanas) (non-detailed)	1
4	Assessment of Dhatu (shareerabala & manasa bala) (non-detailed)	1
5	Assessment of Mala (non-detailed)	1
6	Assessment of Vaya (non-detailed)	1
7	Anguli pariksha (non-detailed)	1
8	Assessment of Ayu in Charaka samhita (non-detailed)	1
9	Assessment of Agni (non-detailed)	1
10	Assessment of koshta (non-detailed)	1
11	Satmya pariksha (non-detailed)	1
12	Nadi pariksha (non-detailed)	1
13	Sthanya pariksha (non-detailed)	1

**SCHEME OF SYLLABUS FOR FIRST PROFESSIONAL BAMS
KERALA UNIVERSITY OF HEALTH & ALIED SCIENCE
SANSKRIT**

Total Hours 175

Sl No.	Subject/Portions		Duration	Remarks
	Detailed	Non-Detailed	Hours	
1.	संस्कृत भाषा परिचयः		25hrs	Introduction to Language Naama Roopam Kriya Roopam Translation Composition
2.	लघुसिद्धान्तकौमुदि- संज्ञा प्रकरणम्		5 hrs	Sutras, Padaschedam, Meaning, Examples
3.	अच् सन्धि प्रकरणम्		15 hrs	"
4.	हल् सन्धि प्रकरणम्		10 hrs	"
5.	विसर्ग सन्धि प्रकरणम्		3 hrs	"
6.	कारक प्रकरणम्		5 hrs	"
7.	समासः -केवल समासः		2 hrs	Sutras, Vigramam, Meaning, Examples
8.	अव्ययीभावसमासः		3 hrs	"
9.	तत्पुरुषसमासः		10 hrs	"
10.	बहुव्रीहिसमासः		5 hrs	"
11.	द्वंद्वसमासः		2 hrs	"
12.		स्त्री प्रत्ययम्	4 hrs	First 10 Sutras Meaning, Examples
13.		तद्धितः	5 hrs	लट्, लिट्, लोट्, लङ्, लृट् स्थाणि
14.	आयुर्वेदीय हितोपदेशः :- • आयुर्वेद पदार्थः		1 hrs	
15.	• अष्टाध्यायुर्वेदः		1 hrs	
16.	• संभाषविधिः		2 hrs	
17.	• वयसोऽवस्थात्रयोविभागः		1 hrs	
18.	• प्रज्ञापराधः		3 hrs	
19.		त्रिविधोषधं षड्साश्रित चिकित्साः अष्टाहारविधिः चिकित्सायाः पादचतुष्टयम्	3hrs	
20.	वैदिकीयसुभाषितम् Chapters- 1,2,3,4,5,6,7,8, 11,12,13,14,17,18,20	Chapters:- 9,10,15,16,19	50 hrs	Explain the meaning of the Slokas and their significant in Ayurveda Sastra
21.	Pancha Tantra 4th Chapter		20 hrs	

Note: 80% questions will be from the detailed syllabus and 20% will be from the Non-detailed syllabus.