### CENTRAL COUNCIL OF INDIAN MEDICINE  
NEW DELHI

SYLLABUS OF AYURVEDACHARYA (BAMS) COURSE

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1.1 **PADARTHA VIGYAN EVUM AYURVEDA ITIHAS**  
(Philosophy and History of Ayurveda)

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

**PAPER-I**  
Padartha Vigyanam  
100 marks

**PART A**  
50 marks

1. **Ayurveda Nirupana**  
1.1 Lakshana of Ayu, composition of Ayu.  
1.2 Lakshana of Ayurveda.  
1.3 Lakshana and classification of Siddhanta.  
1.4 Introduction to basic principles of Ayurveda and their significance.

2. **Ayurveda Darshana Nirupana**  
2.1 Philosophical background of fundamentals of Ayurveda.  
2.2 Etymological derivation of the word "Darshana". Classification and general introduction to schools of Indian Philosophy with an emphasis on: Nyaya, Vaisheshika, Sankhya and Yoga.  
2.3 Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda).  
2.4 Padartha: Lakshana, enumeration and classification, Bhava and Abhava padartha, Padartha according to Charaka (Karana-Padartha).

3. **Dravya Vigyaniyam**
   
3.1 **Dravya**: Lakshana, classification and enumeration.  
3.2 **Panchabhuta**: Various theories regarding the creation (theories of Taittiriyanapaddhati, Nyaya-Vaisheshika, Sankhya-Yoga, Sankaracharya, Charaka and Susruta), Lakshana and qualities of each Bhoota.  
3.3 **Kaala**: Etymological derivation, Lakshana and division / units, significance in Ayurveda.  
3.4 **Dik**: Lakshana and division, significance in Ayurveda.  
3.5 **Atma**: Lakshana, classification, seat, Gunas, Linga according to Charaka, the method / process of knowledge formation (*atmanah jnasya pravrittih*).  
3.6 **Purusha**: as mentioned in Ayurveda - Ativahikapurusha/ Sukshmarshira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shaddhatvatmakapurusha.  
3.7 **Manas**: Lakshana, synonyms, qualities, objects, functions, dual nature of mind (*ubhayaatmakatvam*), as a substratum of diseases, penta-elemental nature (*panchabhutatmakatvam*).  
3.8 Role of Panchamahabhuta and Triguna in Dehaprakriti and Manasaprakriti respectively.  
3.9 Tamas as the tenth Dravya.  
3.10 Practical study/application in Ayurveda.
PART B  

50 marks

4. **Gunavigyanīyam**
   4.1 Etymological derivation, classification and enumeration according to Nyaya-Vaisheshika and Charaka, Artha, Gurvadiguna, Paradiguna, Adhyatmamaguna.
   4.2 Lakshana and classification of all the 41 gunas.
   4.3 Practical / clinical application in Ayurveda.

5. **Karma Vigyaniyam**
   5.1 Lakshana, classification in Nyaya.
   5.2 Description according to Ayurveda.
   5.3 Practical study/ application in Ayurveda.

6. **Samanya Vigyaniyam**
   6.1 Lakshana, classification.
   6.2 Practical study/ application with reference to Dravya, Guna and Karma.

7. **Vishesha Vigyaniyam**
   7.1 Lakshana, classification.
   7.2 Practical study/ application with reference to Dravya, Guna and Karma.
   7.3 Significance of the statement “Pravṛtti-rubhayasya tu”.

8. **Samavaya Vigyaniyam**
   8.1 Lakshana
   8.2 Practical study /clinical application in Ayurveda.

9. **Abhava Vigyaniyam**
   9.1 Lakshana, classification
   9.2 Clinical significances in Ayurveda.

**PAPER II**  

Padartha Vigyan and Ayurveda Itihas  

100 marks

**PART A - Pramana/ Pariksha- Vigyaniyam**  

75 marks

1. **Pariksha**
   1.1. Definition, significance, necessity and use of Pariksha.
   1.2. Definition of Prama, Prameya, Pramata, Pramana.
   1.3. Significance and importance of Pramana, Enumeration of Pramana according to different schools of philosophy.
   1.4. Four types of methods for examination in Ayurveda (Chaturvidha-Parikshavidhi), Pramana in Ayurveda.
   1.5. Subsudation of different Pramanas under three Pramanas.
   1.6. Practical application of methods of examination (Parikshavidhi) in treatment (Chikitsa).

2. **Aptopadesha Pariksha/ Pramana**
   2.1. Lakshana of Aptopadesha, Lakshana of Apta.
   2.2. Lakshana of Shabda, and its types.
   2.4. Vaakya: Characteristics, Vaakyarthagyanahehtu- Aakanksha, Yogyata, Sannidhi.
3. **Pratyaksha Pariksha/ Pramana**
   3.1. Lakshana of Pratyaksha, types of Pratyaksha- Nirvikalpaka- Savikalpaka with description, description of Laukika and Alaukika types and their further classification.
   3.2. Indriya-prapryakaritvam, six types of Sannikarsha.
   3.3. Indriyanam lakshanam, classification and enumeration of Indriya. Description of Panchapanchaka, Penta-elemental nature of Indriya by Panchamahabhuta (*Panchabhautikatwa* of Indriya) and similarity in sources (*Tulyayonitva*) of Indriya.
   3.4. Trayodasha Karana, dominance of Antahkaran.
   3.5. Hindrances in direct perception (*pratyaksha-anupalabdhikaaran*), enhancement of direct perception (Pratyaksha) by various instruments/ equipments, necessity of other Pramanas in addition to Pratyaksha.
   3.6. Practical study/ application of Pratyaksha in physiological, diagnostic, therapeutics and research grounds.

4. **Anumanapariksha/Pramana**
   4.2. Characteristic and types of Vyapti.
   4.3. Lakshana and types of Hetu, description of Ahetu and Hetwabhasa.
   4.4. Characteristic and significance of Tarka.
   4.5. Practical study/ application of Anumanapramana in physiological, diagnostic, therapeutics and research.

5. **Yuktipariksha/ Pramana**
   5.1. Lakshana and discussion.
   5.2. Importance in Ayurveda.
   5.3. Practical study and utility in therapeutics and research.

6. **Upamana Pramana**
   6.1 Lakshana.
   6.2 Application in therapeutics and research.

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

**PART B - Ayurved Itihas**

25 marks

1. Etymological derivation (Vyutpatti), syntactical derivation (Niruktti) 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.

2. Introduction to the authors of classical texts during Samhitakaal and their contribution: Atreya, Dhanwantari, Kashyapa, Agnivesha, Sushruta, Bhela, Harita, Charaka,
Dridhabala, Vagbhata, Nagarjuna, Jivaka.


4. Introduction to the authors of compendiums (Granthisamgrahakaala) – Bhavmishra, Sharngadhara, Vrinda, Madhavakara, Shodhala, Govinda Das (Author of Bhaishajyaratnawali), Basavraja.

5. Introduction to the authors of Modern era – Gana Nath Sen, Yamini Bhushan Rai, Shankar Daishastri Pade, Swami Lakshmiram, Yadavji Tikramji, Dr. P. M. Mehta, Ghanekar, Damodar Sharma Gaur, Priyavrat Sharma.


7. a) Developmental activities in Ayurveda in the post-independence period, development 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.

8. 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 Vigyan Vaidya Ranjit Rai Desai
3. Ayurved Darshana Acharya Rajkumar Jain
4. Padartha Vigyan Kashikar
5. Padartha Vigyan 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 Vigyan Dr. Ayodhya Prasad Achal
10. Padartha Vigyan Dr. Vidyadhar Shukla
11. Padartha Vigyan Dr. Ravidutta Tripathi
12. Ayurvediya Padartha Vigyan Vaidya Ramkrishna Sharma Dhand
13. Ayurvediya Padartha Vigyan Parichaya Vaidya Banwarilal Gaur
14. Ayurvediya Padartha Darshan Pandit Shrivhare
15. Scientific Exposition of Ayurveda  Dr. Sudhir Kumar
16. Relevant portions of Charakasamhita, Sushrutasamhita.

B) History of Ayurveda:-
1. Upodghata of Kashyapasamhita  Rajguru Hem Raj Sharma
   Paragraph of acceptance of Indian medicine
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 Commentaries (Chapters highlighting history)  Dr. G.J. Mulenbelt
    Commentaries (Chapters highlighting history)
14. Ayurveda Ka BrihatItihasa  Vaidya Atridev Vidyalankara
15. Ayurveda Ka VaigyanikaItihasa  Acharya Priyavrata Sharma
16. Ayurveda Ka PramanikaItihasa  Prof. Bhagwat Ram Gupta
17. History of Medicine in India  Acharya Priyavrata Sharma
18. Vedomein Ayurveda  Vaidya Ram GopalS hastri
19. Vedomein Ayurveda  Dr. Kapil Dev Dwivedi
20. Science and Philosophy of Indian Medicine  Dr. K.N. Udupa
21. History of Indian Medicine from Pre-Mauryan to Kushana Period  Dr. Jyotirmitra
22. An Appraisal of Ayurvedic Material in Buddhist literature  Dr. Jyotirmitra
23. Mahayana Granthon mein nihita Ayurvediya Samagri  Dr. RavindraNathTripathi
24. Jain Ayurveda Sahitya Ka Itihas  Dr. Rajendra Prakash Bhatnagar
25. Ayurveda- Prabhashaka Jainacharya  Acharya Raj Kumar Jain
26. CharakaChintana  Acharya Priyavrata Sharma
27. Vagbhata Vivechana  Acharya Priyavrata Sharma
28. Atharvaveda and Ayurveda  Dr. Kambelkara
29. Ayurvedic Medicine Past and Present  Pt. Shiv Sharma
30. Ancient Scientist  Dr. O.P. Jaggi
31. Luminaries of Indian Medicine  Dr. K.R. Shrikanta Murthy
32. Ayurveda Ke Itihasa Ka Parichaya  Dr. RaviduttaTripathi
33. Ayurveda Ke Pranacharya  Ratnakara Shastri
34. Ayurveda Itihasa Parichaya  Prof. Banwari Lal Gaur

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1.2 संस्कृतम्

THEORY - ONE PAPER - 100 marks

TEACHING HOURS - 90 hours

50 marks

PART-A

संस्कृतव्याकरणाध्ययनम्

1- संज्ञाप्रकरणम्

2- विभक्त्यथा:

3- सन्धिप्रकरणम् (सन्धिविच्छेदः, सन्धिकरणम्)

4- वद्विलिङ्गप्रकरणम् (वद्विलिङ्गप्रकरणम्)

5- धातुप्रकरणम् (धातुप्रकरणम्)

(भाविगणिय धातुनां पौर लट्टोट्टलडीडीविलिङ्गकारेः रूपाणि)

6- वाच्यप्रयोगः (कर्तिरि कर्मणि भाववाच्यप्रयोगः)

7- समासप्रकरणम्

8- प्रत्ययः:

(णिच्, क्, कवतु, शत्, शानत्, तुमुन्, तव्यत्, तृच्, कक्ता, ल्यप्, ल्युट्, अनीयर्, मतुप्, इनिन्, तन्, इतच्, अण्, इज्, इक्, ल्य, ता, धन्, इम्, निच्, त्, त्र, दा, धा, तरप्, तमप्, टाप्, डाप्)

9- अनुवादः

A) From English / Hindi / regional language to Sanskrit
B) From Sanskrit to English / Hindi / regional language
C) 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) Brihattrayee- (Charaka Samhita, Sushruta Samhita, Ashtanga Hridayam)
3) Anuvada Chandrika-Chakradhara Hansa Nautiyal
4) Sanskruta Ayurved Sudha- Dr. Banwari Lal Gaur
5) Rachananuvada Kaumudi- Dr. Kapildev Dwivedi
6) Bhasha Sopanam- Published by Rashtreeya Samskruta Samsthanam, New Delhi
PART- B

50 marks

1.) आयुर्वेदार्थर्ग्नथाच्या०णा०म्:—अम्बूलम उम्बिकक वा जनकल के लकलतमक: (ती व्यत्वत: तीतनज्य:ध्रुप्तं)
   तिमतम् जीवितेः भेषजमत: 4०
   25 marks

2.) वैद्यकोयः—सुभाषितसाहित्यम् (अध्याया: १–१०)
   15 marks

3.) पञ्चतत्त्रम्—अपरीक्षितकारकम् (क्षपणक कथात: मूखपण्डितकथापयन्तम्
   पञ्चकथा:)
   10 marks

REFERENCE BOOKS–

1.) Sushruta Samhita, Shareera Sthanam, Chapter-4
2.) Prabhashanam Work Book, Su.sam.chap.4
   Published by-AYURVEDA ACADEMY® BANGALORE;
   Email-ayuacademy@gmail.com
3.) Vaidyakeeya Subhashita Sahityam - Dr. Bhaskara Govinda Ghanekar
4.) Panchatantra-(Apareekshitakarakam) -Pt. Vishnu Sharma

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1.3 KRIYA SHARIR
(PHYSIOLOGY)

Theory-Two Papers-200 Marks (100 marks each)
Teaching hours-180 hours

PAPER- I
   PART- A

100 marks
50 marks

1. Conceptual study of fundamental principles of Ayurvediya Kriya Sharir e.g - Panchamahabhuta, Tridosha, Triguna, Loka-Purusha Samya, Samanya-Vishesha. Description of basics of Srotas.


3. Dosha- General description of Tridosha. Inter relationship between Ritu-Dosha-Rasa-Guna. 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. Prakriti and Vaikriti 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, Śleśhaka ) 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.

   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.

**PART- B**

**Modern Physiology**

a) Definition and mechanisms of maintenance of homeostasis. Cell physiology.
   Membrane physiology. Transportation of various substances across cell
   membrane.

b) Resting membrane potential and action potential.

c) 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.

d) 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.

e) 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.

f) 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**

**PART- A**

1. **Dhatu:**
   Etymology, derivation, definition, general introduction of term Dhatu, different
   theories related to Dhatuposhana (Dhatuposhana Nyaya)

2. **Rasa Dhatu:**
   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-Aashravyi 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. Panchabhatikatva 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 Praman of Meda Dhatu, physiology of Medovaha Srotasa, 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 Majja 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 Praman 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.

11. **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.

12. **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 Kshhaya 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 Kshhaya of Mutra.
   c) Sveda: Etymological derivation, definition, formation and functions of Sveda. Manifestations of Vriddhi and Kshhaya of Sveda. Discription of Svedvaha Srotas
   d) Dhatumala: Brief description of each type of Dhatumala.


14. **Manas**: Etymological derivation, definition, synonyms, location, properties, functions and objects of Manas. Physiology of Manovaha Srotas.

15. **Atma**: Etymological derivation, definition, properties of Atma. Difference between Paramatma and Jivatma; Characteristic features of existence of Atma in living body.

16. **Nidra**: Nidrotpatti, types of Nidra, physiological and clinical significance of Nidra; Svaentpati and types of Svapna.

**PART –B**

**50 marks**

**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

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.


9. Endocrine glands – General introduction to endocrine system, classification and characteristics of hormones, physiology of all endocrine glands, their functions and their effects.

PRACTICAL 100 marks
Teaching hours-180

Ayurvedic practical
1. Assessment of Prakriti
2. Assessment of Dosha (Features of Vridh- Kshaya )
3. Assessment of Dhatu (Features of Vridh-Kshaya)
4. Assessment of Agni
5. Assessment of Koshtha
6. Assessment of Sara
7. Nadi pariksha

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 Hemoglobin
5. Microscopic examination of blood
   a. Total RBC count
   b. Total WBC count
   c. Differential leucocyte 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
12. Examination of Nervous System- Sensory & Motor.

**Distribution of Practical marks**

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

**REFERENCE BOOKS:**

- Ayurvediya Kriyasharir - Ranjit Rai Desai
- Kayachikitsa Parichaya - C. Dwarkanath
- Prakrit Agni Vigyan - C. Dwarkanath
- Sharir Kriya Vigyan - Shiv Charan Dhyani
- Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma
- Dosh 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 Vigyana (Part 1 and 2) - Nandini Dhargalkar
- Dosh Dhatu Mala Vigyana - Basant Kumar Shrimalk
- Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur
- Pragyogik Kriya Sharir - Acharya P.C. Jain
- Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
- Concept of Agni - Vd. Bhagwan Das
- Purush Vichaya - Acharya V.J. Thakar
- Kriya Sharir - Prof. Yogesh Chandra Mishra
- Sharir Kriya Vigyana - Prof. Jayaram Yadav &Dr. Sunil Verma.
- Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology ) by Dr. Srikant Kumar Panda
- Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe
- Human Physiology in Ayurveda - Dr Kishor Patwardhan
- Sharirkriya Vigyan Practical Hand Book- Dr.Ranade, Dr.Chobhe, Dr. Deshpande
- Sharir Kriya Part 1 – Dr.R.R.Deshapande, Dr.Wavhal
- Sharir Kriya Part 2 – Dr. R.R.Deshapande, Dr.Wavhal
- 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

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1.4 **RACHNA SHARIR**  
(ANATOMY)

**Theory- Two Papers-200 Marks- (100 marks each)**  
**Teaching Hours-180 hours**

**PAPER-I**  
100 marks

**PART-A**  
50 marks

1. **Shariropkramaniya Shaarira**  
Sharira and shaarira vyakhyya (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, panchabautikutvatvam, trigunatmakatvam, tridoshayatvatvam, 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 vridhi-krama, garbhottpadakbhava, garbvahrvirdhikara bhava, garbha poshana, aparirnana , nabhinadi nirmana. Aanga pratyanga utpatti.

4. **Pramana Shaarira**: Anguli pramana.

5. **Asthi Shaarira**  
Asthi vyakhyya, number, types, asthi swaroopa, vasa, meda and majja.

6. **Sandhi Shaarira**  
Sandhi vyakhyya, numbers, types of asthi sandhi.

7. **Sira, Dhamani, Srotas Shaarira**  
a) Definition, types and number of sira and dhamani.  
b) Description of Hridaya.  
c) Sroto shaarira: Definition, types of srotas and srotomula.

8. **Peshi Shaarira**  
a) Peshi vyakhyya, structure, types, number and importance.  
b) Description of Peshi.

9. **Koshtha Evam Ashaya Shaarira**  
a) Definition of kostha and number of koshthanga.  
b) 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 adhishthan, their number and importance. Description of gyanendria, karmendriya and ubhayendriya (manas).

**PART-B**

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**

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

7. **Lymphatic system**
Definition, types and structure of lymph vessels, lymph glands with their clinical aspect.

8. **Myology**
a) Structure and types of muscles.
b) Description of muscles; their origin, insertion, actions, nerve supply and clinical anatomy.

**Paper II**

**Part A**

1. **Respiratory System**
a. Bronchial tree and lungs with their clinical aspects.
b. Respiratory tract: nasal cavity, pharynx, larynx, trachea, bronchial tree.
c. Pleura with its clinical aspects.
d. Diaphragm.

2. **Digestive system**
a. Organs of digestive tract (alimentary tract) with their clinical aspects.
b. Digestive glands: liver, spleen and pancreas.
c. 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
a. Male Reproductive system: reproductive organs, tract and glands (prostate and seminal vesicles) with their clinical aspects.
b. 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

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, and 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
a. Study of radio-imaging of limbs, abdomen, pelvis and vertebral column with its clinical application.
b. Surface anatomy of thoracic and abdominal viscera.

PRACTICAL

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 :-
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Book</th>
<th>Author</th>
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<tbody>
<tr>
<td>1</td>
<td>Brihat Shariram Vaidyaratna-</td>
<td>P.S. Varrier</td>
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<td>2</td>
<td>Abhinava Shariram-</td>
<td>Acharya Damodar Sharma Gaur</td>
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<td>3</td>
<td>Manava Sharir (Revised Edition)-</td>
<td>Prof. Dinkar Govind Thatte</td>
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<td>4</td>
<td>Manava Bhruna Vigyana -</td>
<td>Prof. Dinkar Govind Thatte</td>
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<td>5</td>
<td>Manava Anga Rekhankan Vikrian -</td>
<td>Prof. Dinkar Govind Thatte</td>
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<tr>
<td>6</td>
<td>Sharir Rachana Vigyan (English)-</td>
<td>Vaidya P.G. Athawale</td>
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<tr>
<td>8</td>
<td>Clinical Anatomy in Ayurveda -</td>
<td>Prof. D.G. Thatte &amp; Prof. Suresh Chandra</td>
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<tr>
<td>9</td>
<td>Sharir Rachna Vigyan (English)-</td>
<td>Prof. D.G. Thatte</td>
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<tr>
<td>10</td>
<td>Ayurvedic Human Anatomy -</td>
<td>Prof. Dr. Giridhar M. Kanthi</td>
</tr>
<tr>
<td>11</td>
<td>Regional Anatomy -</td>
<td>B. D. Chaurasia</td>
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<tr>
<td>12</td>
<td>Rachana Sharir Vigyana -</td>
<td>Dr. Mahendra Sing</td>
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<td>13</td>
<td>relevant chapters of Brihtrayee and Laghuthrayee</td>
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<td>14</td>
<td>Gray's Anatomy</td>
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<td>15</td>
<td>Text Book of Human Anatomy-</td>
<td>Inderbir Singh</td>
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<td>16</td>
<td>Clinical Anatomy-</td>
<td>Richard S Snell</td>
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<td>17</td>
<td>Fundamentals of Human Anatomy-</td>
<td>Dr. Chakraborthy</td>
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<tr>
<td>18</td>
<td>Human Osteology -</td>
<td>Poddar</td>
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1.5 Maulik Siddhant avum Ashtang Hridaya  
(Basic Principles and Ashtang Hridaya- An ancient text of Ayurveda)  

Theory- One Paper- 100 marks  
Teaching Hours -120 hours  

Part A  

Ashtang Hridaya Sutrasthana Adhyaya 1 to 15  

Part B  

1. Ashtang Hridaya Sutrasthana Adhyaya 16 to 30  
2. Description of Ashta Prakriti  
3. 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 Hemadri  
6. Astang Hridaya : Sanskrit commentary by Arunadatta  

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