



ರಾಜೀವ್ ಗಾಂಧಿ ಆರೋಗ್ಯ ವಿಜ್ಞಾನಗಳ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಕರ್ನಾಟಕ

4ನೇ ಟಿ ಬ್ಲಾಕ್, ಜಯನಗರ, ಬೆಂಗಳೂರು - 560 041.

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AUTH/AY/CCIM/045/2013-14

10/10/2013

Ref. :

Date :

NOTIFICATION

Sub: Ordinance Governing Revised Regulations and Curriculum for II Professional BAMS Course 2013.

Ref: 1) GOI Gazette Notification of Central Council of Indian Medicine (Minimum Standards of Education in Indian Medicine) (Amendment) Regulations, 2012, dated 25/04/2012.

2) University Notification No. ACA/CDC/Revd syl/UG/AY/141/2012-13, dated: 05/11/2012.

3) Orders of Hon'ble Vice-Chancellor dated: 08/10/2013.

Preamble:

The Central Council of Indian Medicine has revised the regulations & course curriculum of BAMS from 2012 vide GOI Gazette Notification cited under reference (1) above. Rajiv Gandhi University of Health Sciences has already notified the I Professional BAMS course contents vide notification cited under reference (2) above. The Board of Studies in Ayurveda (UG) now recommended for implementation of revised course contents for II Professional BAMS Course in its meeting held on 07.10.2013. Hence, this notification.

Notification:

In exercise of the powers conferred by Section 13(2) of Rajiv Gandhi University of Health Sciences Act 1994, Hon'ble Vice-Chancellor is pleased to notify the revised Ordinance governing Regulations and Curriculum for the BAMS course as shown in the annexure appended herewith.

The above ordinance comes into effect from the academic year 2013-14.

By Order,


REGISTRAR

To

The Principals of all Ayurveda Medical Colleges affiliated to RGUHS.

Copy to:

1. The Secretary to his Excellency, the Governor of Karnataka, Raj Bhavan, Bangalore- 560 001.
2. The Secretary to Government, Health and Family Welfare Department (Medical Education) Vikasa Soudha, Bangalore - 560 001.
3. PA to VC/ PA to Reg/PA to Reg (Eva)/PA to F.O.
All section heads of RGUHS.
4. The Home Page of RGUHS Website
5. <http://www.rguhs.ac.in/>
6. Guard File / Office Copy



Rajiv Gandhi University of Health Sciences, Karnataka

4th 'T' Block, Jayanagar, Bangalore - 560 041

SYLLABUS OF AYURVEDACHARYA (2nd BAMS) COURSE

INDEX

2ND PROFESSIONAL

DRAVYAGUNA 1.1 VIGHYAN	2-8
1.2 AGADTANTRA	9-11
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2.1 DRAVYAGUNA VIJNAN

(PHARMACOLOGY & MATERIA MEDICA)

Lectures: 200 Hrs.

Practicals: 200 Hrs.

Total Marks -400

Theory Two Papers- 100 Marks Each

Practical/Viva voce – 200 Marks

Paper I 100 Marks

Part A 50 Marks

1- Dravyaguna Shastra Paribhasa- Lakshana of Sapta Padartha of Dravyaguna Vijnana viz Dravya- Rasa-Guna- Virya- Vipaka- Prabhava and Karma.

2- Dravya:

Etymological derivation, definition, panchbhoutikatwa.

Classification of Dravya according to Samhitas and Nighantus Taxonomical classification.

3- Guna:

Etymological derivation, definition and Classification of Guna. Detailed knowledge of Gurvadi Guna & Paradi gunas.

4- Rasa:

Etymological derivation, definition, Meaning of "Rasa" in various contexts. Shad Rasas

(Madhura, Amla, Lavana, Katu, Tikta, and Kashaya), Panchabhautik constitution of Rasas, Nirvritivisheshakrama (manifestation in general and particular), Ritu and shad rasa Rasanurasayoh bheda (Difference between rasa and anurasa), Lakshana (characteristics),Guna and Karma of shad Rasas, Kopana and Shamana of Dosha and dushya by Shad rasas. Effects of excess usage of Rasa. Rasopalabdhi, Rasaskandha.

5- Vipaka:

Etymological derivation and definition, difference between Avasthapaka and Vipaka, Types of Vipaka, (Dvididha-Trividha,Panchavidha) Guna and karma of Vipaka.

Grades of Vipaka (taratamya), Vipakopalabdhi hetu (Factors to determineVipaka).

6- Veerya:

Etymological derivation, definition and Swarupa of Virya, Number of Virya. (Dwividha & Ashtavidha), Panchabhauthikatva

Virya karmani (Effects of Virya), General principles in determination of virya along with exceptions.

7- Prabhava:

Definition, Effects of Prabhava.

8- Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength (balabal nirupana). Samanapratyayarabdha and Vichitrapratyayarabdha dravyas.

9- Karma:

Lakshana, swarupa and bheda of karma (Definition, nature and types of action).

Explanation of the following Karmas with examples:

1. Deepana	2. Pachana	3. Samshodhana
4. Samshamana	5. Anulomana	6. Sransana
7. Bhedana	8. Rechana	9. Chhedana
10. Lekhana	11. Grahi	12. Sthambhana
13. Madakari	14. Pramathi	15. Abhishyandi
16. Vyavayi	17. Vikashi	18. Rasayana
19. Vajeeekarana	20. Jeevaneeya	21. Balya
22. Brimhana	23. Langhana	24. Medhya

10. Brief information on Karmas of dashemani gana of Charak Samhita.

11- Mishraka Gana:

11a)- Audbhida Gana (Vegetable origin) Brihatpanchamoola, Laghupanchamoola, Vallipanchamoola, Kantakapanchamoola, Trinapanchamoola, Madhyamapanchamoola, Jeevaneeya panchamoola, Panchapallava, Panchavalakala, Triphala, Trikatu, Trimada, Chaturusana, Panchakola, Shadusana, Chaturbeeja, Jeevaniya gana, Ashtavarga, Trijataka, Chaturajataka, Katuchaturjataka Panchatikta, Amlapanchaka, Chaturbhadra, Trikarshika, Swalpatriphala, Madhuratriphala, Mahavisha, Upavisha, Agrya aushadh varga- Knowledge of Agrayaushadha Varga with example.

11 b)- Jangama Gana (Animal origin)- Ksheerashtaka, Mutrashtaka, Pitta panchaka.

11 c)- Parthiva Gana (Mineral origin) - Lavana Panchaka, Kshara dvaya, Kshara Ashtaka.

12- Basis of nomenclature:

Basis of nomenclature of dravya, Basis and Derivation of synonyms.

13. Bheashaja Pariksha vidhi (as described in Charaka samhita vimana sthana 8), Dravya Sangrahana (collection of dravya)- Ecology- Classification of desha (geographical area) and bhumi (soil), swarupa of sangrahaniya dravya of (Nature and quality of drug to be collected). Sangrahana vidhi (Method of collection) -Vegetable and Animal origin drugs according to part used. Period of collection according to virya, samrakshana vidhi (preservation of collected dravyas), bheshajagara (Storehouse), study on different prayojyanga (useful plant parts).

Part B**50 Marks****(I)****20 Marks**

14 a) Concept of dravya shodhan (purification of dravya). 14 b) Brief knowledge of Apamishran (adulterants)

14 c) Concept of Abhava pratidinidhi dravya (substitutes)

15- Prashasta bhesaja (ideal drug), plant extracts. Concept of viruddha Dravya (incompatibility of the dravya).

16- Introduction to Nighantu Vigyan - Dhanwantari Nighantu, Bhavaprakashanighantu, Rajanighantu.

17- Brief knowledge of cultivation, conservation of medicinal plants and information about endangered species.

30
Marks

(II)

18. - Introduction, Definition & scope of Pharmacology and Principles of general Pharmacology. Brief Knowledge about pharmacology of the following - Anaesthetics, CNS depressants, Sedatives, Hypnotics, Tranquilisers, Antipyretics, Analgesics, Antiepileptics, Antihypertensive, Antianginal, Antiplatelet, Hypolipidaemic, Haemopoetic, Coagulants, Bronchodilators, Aerosols/ Inhalants, Expectorants, Digestants, Carminatives, Antacids, Antiulcer, Laxatives, Antidiarrhoeals, Antiemetic, Hepatoprotective, Diuretic, Antidiuretic, Lithotriptic, Antiinflammatory, Hormonal therapy, Antiobesity, Antidiabetic, Antithyroid, Oxytocic. Galactagogues, Contraceptives, Styptics, Antihistamines, Antimicrobial, Antibiotics, Antimalarial, Amoebicidal, Antifilarial, Anthelmintic, Antifungal, Vitamins, Minerals, Water imbalance and IV fluids, Vaccines, antivenom, antirabbies serum, Local anti septics, drugs in ophthalmic practice, Anti cancer drugs and immunomodulators.

Paper II

100 Marks

Part A

70 marks

1-Detailed Knowledge of Following Dravya –

1- Detailed knowledge of following drugs with respect to Basonym of drug, Main Synonyms, Regional Name, Botanical Name, Family, Classification of Dravya (Gana) as described in Charak and Sushrut, External morphology, Useful parts, Important phytoconstituents, Rasa panchaka, Action on Dosha, Dhatu, Mala, Prayogarha vyadhi (therapeutic indications), Amayikaprayoga and Matra (Therapeutic administration and Dose), Vishishta yoga (names of important formulations), Vishakta Lakshan (adverse effects), Chikitsopachara (remedial measures) and Shodhana (as required)

[Alphabetical order and Botanical names to all the drugs are to be added]

Agaru	Guggulu	Pashanabheda
Agnimantha	Haridradvaya	Patala
Ahiphena	Haritaki	Pippali-Pippalimula
Amalaki	Hingu	Prishniparni
Apamarga	Jambu	Punarnava
Aragvadha	Jatamansi	Pushkarmoola
Ardra-Sunti	Jatiphal	Rasna
Arjuna	Jeerakadvaya	Rasona
Arkadvaya	Jyotishmati	Rohitaka
Ashvagandha	Kalamegha	Saireyaka
Asoka	Kampillaka	Sarivadvaya
Ativisha	Kanchanara	Sarpagandha
Bakuchi	Kantakari	Shalaparni
Baladvayam.	Kapikacchu	Shallaki
Bhallataka	Karkatakshringi	Shalmali
Bharangi	Karpura	Shankhapushpi
Bhrungaraj	Katuki	Shatavari
Bibhitaka	Khadira	Shigru
Bijak/ Vijaysar	Kiratatikta	Shirisha
Bilva	Kumari	Shyonaka
Brahmi	Kumkum Kesara	Talisa Patra
Bruhati	Kupilu	Tila

Chandanadvaya,
Chitraka
Dadima
Devadaru
Dhataki
Durva
Eladvayam
Eranda
Gambhari
Gokshura
Guduchi

Kushta
Kutaja
Lavanga
Lodhra
Madanaphala
Mandukaparni.
Manjishtha
Maricha
Musta
Nagakeshara
Nimba
Nirgundi
Palasha
Parpata

Trivrut
Tulasi
Tvak
Ushira
Vacha
Varahi
Varuna
Vasa
Vatsanabha
Vidanga
Vidari
Yastimadhu
Yavani

Part B-

II- Brief Knowledge of following dravyas with Respect to Sanskrit Name, Botanical Name, Family, Habit (Samanya Swarupa), Parts Used and Indications.

Agastya
Ajamoda
Akarkarabh
Amlavetasa
Amra
Amragandhiharidra
Ankola
Aparajita
Ashvagol
Ashvattha
Asthishrunkhala
Atasi
Avartaki
Avartani
Babbula
Badara
Bakula
Bhumyamalki
Bijapoor
Bola
Chakramarda
Champaka
Chandrashura
Changeri
Chavya
Chirbilva
Chopachini
Danti
Darbha
Dattura
Dhanvayasa
Dhanyaka
Draksha
Dronapushpi

Jati
Jayapala
Jeevanti
Kadali,
Kadamba
Kaidarya
Kakamachi
Kamala
Kankola
Karanja
Karavellaka
Karavira
Karira
Karpasa
Kasamarda
Kasha
Kasni
Kataka
Katphala
Kebuka
Kharjura
Kitmari
Kokilaksha
Koshataki
Kulatha
Kumuda
Kusha
Kusmanda
Lajjalu
Langali
Latakaranja
Latakasturi
Madayantika
Mahanimba

Palandu
Parasika Yavani
Parijata
Parisha
Parnabija
Parnayavani
Parushaka
Patalagarudi
Patha
Patola
Patranga
Pilu
Plaksha
Prasarani
Priyala
Priyangu
Puga
Putiha
Putranjivaka
Rajika/Sarshapa
Saptachakra
Saptaparna
Saral
Sarja
Shala
Shara
Sharapunkha
Shatahwa
Shati
Snuhi
Sringataka
Svarnakshiri
Tagara .
Tailaparni

Gandhaprasarini
Garjara
Gojihva,
Gorakshaganja
Gunja
hinsapa
Hinstra
Hribera
Hrutpatri
Ikshu
Indravaruni
Ingudi
Irimeda
Ishvaku
Isvari
Japa

Mandukaparni
Markandika
Masha
Mashaparni
Matulunga
Mayaphala
Meshashrunji
Methika
Mudgaparni
Mulaka
Murva
Nagabala
Nala
Narikela
Nili
Padmaka

Talmuli
Taruni
Tavakshira
Teja Patra
Tugaraka
Udumbara
urana
Vamsha
Vata
Vatada
Vrudhadaru
Vrukshamla

III .-Introduction, Guna, Karma and Uses of following Jantava Dravya (Drugs of Animal Origin).

1. Kasturi
2. Gorochana
3. Mrigashringa

IV- Introductory Knowledge of Following Annapana Varga:

- 1.Jala Varga
- 2.Dugdha Varga
3. Madhu Varga
- 4.Taila Varga
- 5.Sukadhanya Varga
- 6.Shamidhanya Varga
- 7.Phala Varga
- 8.Shaka Varga
9. Mamsa Varga

10.Aharayogi

PRACTICALS

1.A. Study of Macroscopic, Microscopic characters and Demonstration of organoleptic characteristics and grahya-agrahyatva of following plants and their useful parts.

- i.Kanda (stem) - Guduchi or Ashtishrinkhala
- ii.Patra (leaves) - Vasa or Kumari
- iii.Pushpa (flower and Parts of flower)- Dhataki or Japa
- iv.Phala (fruit) – Maricha or Madanaphala or Vidanga
- v.Beeja (seeds) – Eranda or Kapikacchhu
- vi.Twak (bark) – Kutaja or Arjuna or Ashwattha
- vii.Moola(Root)- Punarnava or Chitraka
- viii.Niryasa (exudate) – Guggulu or Mocharasa
- ix.Jangama dravya - Madhu or Ghrita.

2.Records of Herbarium sheets of 50 medicinal plants Compulsory study tour other state/s for field knowledge and procurement of plant species.

PRACTICAL MARKS DIVISION

1	Herbarium	20 Marks
2	Practical record	20 Marks
3	Drug identification- spotting –Raw/crude drugs	30 marks
4	Plant identification spotting –fresh	30 marks
5	Practical	40 marks
6.	Viva-Voce	60 Marks
Total		200 marks

Reference Books

1. Abhinav Buti Darpan (Vol.1-2) -Vd. Roop Lal Vaishya
2. Aushadna Vigyna Shastra -Acharya Pt. Vishvanatha Dwidevi
3. Ayurvediya Aushadnkarma vigyana -Acharya V.J. Thakur
4. Bedi Vanaspati Kosha -Prof. Ramesh Bedi
5. Bhaishajyaguna Vigyana -Dr. Alakhnarayan Singh
6. Bhav Prakash Nigantu (English) -Shreekanthamurti
7. Bhav Prakash Nighantu -With Vd. Krishna Chandra Chunekar commentary
8. Bhrinad dravyagunadarsha -Mahendra Kumar Shastri
9. Classical Uses of Medicinal Plants -Acharya Priyavrata Sharma
10. Controversial Medicinal Plants -Vd. G. Bapa Lal
11. Dalhana Ka Dravyaguna Shastra Ke Kshetra Me Yogadana -Vd. Shiv Kumar Vyas
12. Dravyaguna Kosha -Acharya Priyavrata Sharma
13. Dravyaguna Sutram -Acharya Priyavrata Sharma
14. Dravyaguna Vigyana -Dr. Gyanendra Pandey
15. Dravyaguna Vigyana(Vol. 1-2) -Acharya Yadavji Tikram Ji
16. Dravyaguna Vijyana -Dr. V.M. Gogate
17. Dravyaguna Vigyana (Vol. 1-5) -Acharya Priyavrata Sharma
18. Dravyaguna Shastrum -Vaidya G.A. Phadake
19. Dravyaguna Vijyana -Dr. A.P. Deshpande
20. Dravyagunavijnana basic Principles -Prof.D.S.Lucas
21. Forgotten Healers (Indian Medicinal Plants) -Dr. Prakash Pranjape
22. Glossry of Vegetable Drugs in Bhritrays -Thakur Balwant Singh & Vd. Krishna Chandra Chunekar

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|---|---------------------------------|
| 23. Introduction to Dravyaguna | -Acharya Priyavrata Sharma |
| 24. Kriyatamka Aushadi Parichaya | -Acharya Pt. Vishvanath Dwidevi |
| 25. Materia Medica | -Acharya Ghosh |
| 26. Nighantu Adarsh (Vol. 1-2) | -Vd. Bapa Lal |
| 27. Pharmacological basis of Medical Practice | -Goodman & Gillman |
| 28. Pharmacology and Pharmacotherapeutics | -Satoskar Bhandarkar & Ainapure |
| 29. Prayogatamaka Dravyaguna Vigyana | -Dr. Maya Ram Uniyal |
| 30. Priya nighantu | -Acharya Priyavrata Sharma |
| 31. Raspanchaka/Dravyaguna Siddhanta | -Prof. Shivcharan Dhyan |
| 32. System of Plant Nomenclature in Ayurveda | -Dr. Gyanendra Panday |
| 33. Text Book of Pharmacognosy | -Trees & Valis |
| 34. Textbook of Dravyaguna | -Dr.K.Nishteswar |
| 35. Unani Dravyaguna Vigyana | -Hakim Daljeet Singh |
| 36. Useful parts of Charaka, Sushrut, and Vagbhata. | - |
| 37. Uttarakand Ki Vanaspatiya | -Dr. Gyanendra Pandey |
| 38. Vanoaushadi Darshika | -Thakur Balwant Singh |
| 39. Vanoaushadi Nidarshika | -Dr. Ram Sushil Singh |
| 40. Vedic Vanaspatiyan | -Dr. Dinesh Chandra Sharma |

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2.2. AGADTANTRA, VYAVAHAR-AYURVED EVUM VIDHIVAIDYAK
(TOXICOLOGY, FORENSIC MEDICINE AND MEDICAL JURISPRUDENCE)

Theory One Paper – 100 Marks
Practical/Viva voce -50 Marks
Theory -200 hrs
Practical - 100 hrs

Part- A

50 Marks

- 1 Derivation, definition of Visha and Agadatantra. Scope of Agadatantra. Visha Utpatti, Visha Prabhava, Visha Pranaharana Kriya, Visha Guna, Visha Gati, Visha Vega Visha Sankata, Shanka Visha.
- 2 Definition of toxicology, Definition of poison, suicidal and homicidal poisons, classification of poisons, their action and route of administration, absorption, excretion, metabolism, diagnosis and general principles of treatment, duties of a medical practitioner in case of suspected poisoning.
- 3 Origin and Classification of Visha:-Its sources, Difference between Visha, Madya and Oja guna, Visha Upadrava and Visha Mukta Lakshana.
- 4 Tests for detection of Visha, and Modern Toxicological Techniques of detection of poisons Visha Data Lakshana, Visha Peeta Lakshana, Signs and symptoms of Visha afflicted organs and personal effects. (Poisoning with Anjana, Lepa paduka, Abharana etc.
- 5 Introduction to Environmental Toxicology- Samuhika Vishaprayoga- effect of chemical and nuclear warfare.
- 6 Vishopakrama described by Charak, General principles of Management of poisoning.
- 7 Manifestation of poisoning due to poisons of plant origin their fatal Dose, fatal period, management of poisoning, post mortem appearance and its medico legal importance. Visha and Upavisha- Arka, Snuhi, Langali, Karaveera, Gunja, Ahiphena, Dhatura, Bhallataka, Vatsanabha, Kupeelu, Jayapala, Bhanga & Tobacco, Parthenium hysteriphorus, Chitraka, Eranda, Digitalis and Cerebra Odallam.
- 8 Garavisha, Dooshivisha, Viruddhahara. Food adulteration and poisoning-classification, diagnosis, management and contemporary significance.
- 9 Jangama Visha – Detailed study of Sarpa, Keeta, Loota, Vrishchika, Mooshika, Alarka – Visha; Lakshana, Bheda, Chikitsa and their Sadhyasadyata (contemporary and classical views).
- 10 Introduction to poisoning due to Acids, Alkalis, metals, Non-metals, Asphyxiants and others, their Fatal Dose, Fatal period, Manifestation, management, medico legal importance and postmortem appearance of poisoning due to:
 - a) Acid and Alkalis– Sulphuric acid, Hydrochloric acid, Nitric acid, Hydrocyanic acid, Oxalic acid, Carbolic acid, Formic acid, alkalis in general.
 - b) Asphyxiants – Carbon monoxide, Carbon dioxide, Hydrogen sulphide
 - c) Nonmetallic poisons – Phosphorous, Iodine
 - d) Metallic poisoning – Arsenic, Mercury, Lead, Copper, Zinc, Tin.
 - e) Others - Petroleum – Kerosene Organo phosphorus compounds -Aluminum phosphate, Organo Chlorinated Compounds, Household poisons.
- 11 Madya and Madatyaya. Alcohol poisoning (Ethanol and Methanol).
- 12 Introduction to Narcotic drugs and Psychotropic substances Act 1985.

5. Library Hours for compilation

Distribution of Practical Marks

1. Post Mortem examination and Court posting – Case Record	10 Marks
2. Practical/Clinical Record Book	10 Marks
3. Identification (spotting)	10 Marks
4. Viva – voce	20 Marks
Total	50 Marks

Reference Books

1. Topics related to Agada Tantra from Charak Samhita, Sushrut Samhita, Ashtanga Hridaya, Ashtanga Samgraha, Kasyapa Samhitha, Yogaratanakara, Bhavaprakasha and Madhava Nidana.
2. Vidhivaidyaka (Vyavahar Ayurveda Vijnan) Dr.Charuchandra Pathak Modi
3. Medical Jurisprudence and Toxicology Edited by Vd.Govardhan
4. Basavarajeeyam Sh. Ramanath Dwivedi
5. Agada Tantra Edited by Dr Huparikar, Dr.Joglekar
6. Text book of Agada Tantra Edited By Dr Huparikar, Dr.Joglekar
7. Agadatantra ki Pathyapustaka Dr. Shekher Namboodri Vaidya Balakrishnan Nair, Kerala
8. Agad Tantra
9. Vishachikitsa (Ayurveda Toxicology English Translation) Dr. H.S. Mehta
10. Medical Ethics and Medical Laws in India VPSV Ayurveda college Kottakkal
11. Toxicology Ayurvedic Perspective Prof. Kangle
12. Kautilya Arthashastra (English) Dr. Raghunath Singh
13. Kautilya Arthashastra (Hindi) Dr.Ayodhya Prasad Achal
14. Vyavahar Ayurveda Dr.Indramohan Jha (Sachchan)
15. Vyavahar Ayurveda Vigyanam Dr. V.V.Pillay
16. Textbook of Forensic Medicine and Toxicology Dr. B. Umadathan
17. Forensic Medicine Govt. of India
18. Relevant Acts
19. Relevant topics from Manu Smriti

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2.3. Rasashastra Evam Bhaishajyakalpana

(IATROCHEMISTRY AND AYURVEDIC PHARMACEUTICS)

Theory -Two Papers

Total Marks- 200

Teaching hours-200

Practical :-

Total Marks-200

Teaching hours-200

RASASHASTRA

Paper 1

100 Marks

Part A

50 Marks

1. Definition and etymology of Rasa, History of Rasashastra, Importance of Rasaushadhi, Concept of Rasa-Rasayana, Concept of Raseshwar Darshana. Concept of Rasashala and Rasamandap.
2. Brief Description and Application of Technical terminologies (Paribhasha): Avapa, Nirvapa, Dhalana, Bhavana, Jarana, Murchana, Shodhana, Marana, Amrutikarana, Lohitikarana, Mruta Loha, Satwa Patana, Druti, Apunarbhava, Niruttha, Rekhapurna, Varitara.
3. Dravya Varga: Amlavarga, Panchamrittika, Panchagavya, Panchamrita, Ksharashtaka, Dravakagana, Mitra panchaka, Rakta varga, Lavanapanchaka.
4. Brief description of Yantras and their application Ulukhala Yantra, Khalwa Yantra, Kachhapa Yantra, Damaru Yantra - Vidhyadhara Yantra- Urdhwapatan, Addhapatan & Tiryakpatana Yantra, Jaranartha Tulayantra, Dolayantra, Patalayantra, Palika Yantra, Baluka Yantra, Bhudhara Yantra, Sthali Yantra, Swedana Yantra.
5. Brief description & application of Musha (Crucible): Samanya Musha, Gostani musha, Vajra Musha, Maha musha, Yoga musha, Vrintaka Musha, Malla / Pakwa musha. Different types of crucibles e.g. Silica crucible, platinum crucible. Mudra and Sandhi Bandhana.
6. Brief description & applications of Chullika, Satwapatana Koshti, Patala Koshti, Gara Koshti, Angarakoshti and knowledge of various heating appliances viz. Gas stove, Hot plate, Heating mantle, Induction Stove, Hot Air Oven.
7. Concept, definition and types of Puta: Suryaputa, Chandraputa, Gomayaputa, Lawakaputa, Kukkutaputa, Kapotaputa, Varahaputa, Gajaputa, Mahaputa, Kumbhaputa, Valukaputa, Bhudharaputa, Applications of Electric muffle furnace and fuel (diesel) dependent furnace. Brief introduction to thermocouple and pyrometer.
8. Knowledge of Parada: Synonyms, Occurrence, natural and artificial sources of Parada, Hingulottha parada, Types of Parada, Parada Dosha: Naisargika, Yougika, Aupadhika (Kanchuka). Grahya-Agrahya Parada, Parada gati, Parada bandha, Shodhana of Parada. Parada sanskara and brief description of Ashtasamskara.
9. Concept of Murchhana and Jarana of Parada, Preparation of Kajjali, Classification of Rasaushadhi: Khalvi rasa e.g. Tribhuvana Keerti Rasa, Parpati Rasa- Rasa Parpati, Kupipakva Rasa- Rasa sindur, Pottali rasa - Hemagarbha pottali. Rasa sevana vidhi and pathya and apathya.

10. Brief introduction of quality control, standardization and GMP of Rasaoushadhies.

50 Marks

Part B

Occurrence, Synonyms, Mineralogical identification, Sources, Types, Grahya and Agrahyata, Shodhana, Marana and other processing techniques. Properties, dose, anupan and therapeutic uses, pathya – apathya and ashuddha, apakwa and avidhee sevanjanya dosha and its management, important formulations of the following:

1. **Maharasa** – Abhraka (Biotite Mica), Vaikrantha, Makshika (Chalco-pyrite), Vimala (Iron Pyrite), Shilajatu, Sasyaka (Peacock ore), Chapala and Rasaka (Sphalerite).
2. **Uparasa** – Gandhaka (Sulfur), Gairika (Red Ochre), Kasisa (Green Vitriol), Kankshi (Alum), Haratala (Orpiment), Manahshila (Realgar), Anjana and Kankustha.
3. **Sadharana Rasa** – Kampillaka, Gauri pashana (Arsenic oxide), Navasadara (Ammonium chloride), Kaparda (Cowry), Agnijara, Giri Sindura (Red oxide of Hg), Hingula (Red Cinnabar) and Mriddara shringa (Litharge).
4. **Dhatu** – Swarna (Gold), Rajata (Silver), Tamra (Copper), Loha (Iron), Vanga (Tin), Naga (Lead), Yashada (Zinc), Kamsya (Bronze), Pittala (Brass), Vartaloha. Dhatu -grahasambandha.
5. **Ratna** – Manikya (Ruby), Mukta (Pearl), Pravala (Coral), Tarkshya (Emerald), Pushparaga (Topaz), Vajra (Diamond), Nilam (Sapphire), Gomeda (Zircon or Cinnamome stone), Vaidurya (Cats eye). Ratnapariksha, Ratnadosha, Ratna-graha sambandha.
6. **Uparatna** – Vaikranta (Tourmaline), Suryakanta (Sun stone), Chandrakanta (Moon stone), Rajavarta (Lapis lazuli), Perojaka (Turquoise), Sphatikamani (Quartz), Trinakanta, Palanka, Putika, Rudhir.
7. **Sudha varga** – Sudha (Lime stone), Kaparda (Cowries), Shukti (Oyster Shell), Shankh (Conch Shell), Mriga shringa (Stag horn), Khatika, Godanti (Gypsum) and Samudraphena (Cattle Fish bone), Kukkutanda twak (Hen's Egg Shell).
8. **Sikata varga** – Sikata (Silica), Dugdhapashana (Talc), Nagapashana / Jaharmohara (Serpentine), Badarshama (silicate of lime), Vyomashma (Sangeyashab - Jade), Kousheyashma (Asbestos) and Akika (Agate).
9. **Kshara varga** – Sarja kshara (Sodium bicarbonate), Yava kshara, Tankana kshara (Borax), Surya Kshara (Potassium Nitrate).
10. **Miscellaneous** – Mandura, Bola, Dam-ul Akhawayan (Raktabandhini), Kasturi, Bhoonag, Mayurpiccha, Sarjarasa, Madhoochchishta.
11. **Visha and Upavisha** – Introduction, collection and storage, classification, synonyms, shodhana, antidote, therapeutic and toxic doses, anupan, therapeutic uses, and formulations of following

Visha and Upavisha-Vatsanabha, Kuchala, Jayapala, Dhattura, Bhanga, Bhallataka, Gunja, Arka, Snuhi. Langali, Karaveera, Ahiphena and Chitrakmool.

12. Aushadhi Yoga Gyanam- ingredients, manufacturing process, and bhashajprayogvidhi. Arogya Vardhini Gutika, Kasturibhairava Rasa, Kumara Kalyana Rasa, Garbhapala Rasa, Chandraprabha Vati, Chandramrita Rasa, Pratapalankeshwara Rasa, Pravalapanchamrita Rasa, Anandbhairava Rasa, Yogendra Rasa, Laxmivilas Rasa, Vasantakusumakara, Vasantamalati Rasa, Brihat Vata Chintamani Rasa, Shankha vati, Shwaskuthara Rasa, Hinguleswara Rasa, Hemagarbhapottali, Hridyarnava Rasa, Swarnavanga, Makaradhwaaja, Putapakwavaisham Jwarantaka Loha, Vatvidhvamsan Rasa, Kamadugha Rasa, Laghusutshekhar Rasa, Navayasa Loha, Saptamrita Loha, Tamra Parpati, Panchamrita Parpati, Sveta Parpati.

13. Introduction to pharamcovigilance and its status in India, with reference to Ayurvedic drugs.

- A) Necessary to know – From part A and B : S. No. 1 to 9
B) Desired to know – From part B : S. No. 10

Practical

100 Marks

Minimum Twenty five practicals to be performed

- | | |
|--------------------------------|--|
| 1. Rasa [Parada] | Samanya Shodhana of Parada
Kajjali
Mugdha rasa |
| 2. Maharasa varga | Shodhana of Abhraka
Dhanyabhraka nirmana
Shodhana of Makshika
Shodhana of Shilajatu
Shodhana of Sasyaka.
Shodhana of gowripashana
Shodhana of Gandhaka |
| 3. Uparasa varga | Shodhana of Gairika
Shodhana of Kasisa
Shodhana of Kankshi
Shodhana of Haratala
Shodhana of nilanjana
Rasa manikyana nirman |
| 4. Sadharana rasa varga | Shodhana of Hingula
Shodhana of
mruddarashringa
Shodhana of Navasagara
Shodhana of Kapardika |
| 5. Sudha Varga | Shodhana of Shankha
Shodhana of Shukti
Shodhana of Pravala mula
Shodhana of Godanti |
| 6. Dhatu varga | Samanya Shodhana of Lauha
Shodhana of Mandura
Samanya Shodhana of Tamra
Shodhana of Naga |

7.Kshara Varga

8.Parpati

9.Visha varga

Shodhana of Vanga
Shodhana of Yashada
Shodhana of Tankana
Preparation of Rasaparpati,
Bola
Parpati and Swetaparpati
Shodhana of Vatsanabha,
Bhallataka, Kupilu, Dhattura
beeja,
Jayapala, Gunja,
Chitrakamoola.

PRACTICAL FOR DEMONSTRATION / GROUP PRACTICALS

1.Hingulad rasakrishti (Hingulottha Parada).

2.Bhasma: 4 (One from each group)

i.Abhraka bhasma, Swarna Makshika bhasma, Tamra bhasma

ii.Vanga bhasma, Naga bhasma, Yashada bhasma

iii.Mandura bhasma, Kasisa bhasma

iv.Shankha bhasma, Kapardika bhasma, Godanti bhasma.

3.Pishti : 1 Pravala pishti, Jaharmohara / Akika pishti,
Trina kantha mani pishti, Mukta pishti.

4.Druti : 1 Gandhaka druti.

5. Jarana - naga , vanga, yashada

6.Formulations 4 (one from each group)

i.Rasasindura, Swarna vanga, Sameer pannaga rasa

ii.Saptamruta lauha, Punarnava mandura, Navayasa lauha

iii.Agnitundi vati, Tribhuvana kirti rasa, Sootshekhara rasa, Laghusutashekhara Rasa

iv.Arogyavardhini vati, Laghumalinivasanta rasa, Hinguleshwar rasa, Anandbhairav rasa,
Rajapravartini vat

BHAISHAJYAKALPANA

Paper II

100 Marks

Part A

50 Marks

- 1. History and Chronological (kramika vikasa) development of Bhaishajyakalpana.** Concept of Aushadha and Bhesaja.
- 2. Fundamental principles of Bhaishajya Kalpana.**
- 3. Study of Ancient and Contemporary systems of 'Maana' (Units of measurement), Shushka -ardra -drava- dravya grahan niyam (Rules of measures of dry, fresh, liquid drugs); Grahyagrahyatva, Nava Puran dravya grahan niyam.**
- 4. Guidelines and Methods of collection, storage, preservation of Aushadhi dravya. Concept of Saviryatavadi (shelf life) and stability in ancient and contemporary science.**
- 5. Bhesajprayogavidhi : Aushadha Matra, Anupana and sahapan and Aushadh sevan kaala. (Posology).**
- 6. Panchavidha kashaya kalpana and Other kalpana :** Kashaya Yoni, Swarasa, Kalka, Kwatha, Hima and Phanta, Pramathya, Aushadha siddha paniya, Tandulodaka, Laksha rasa, Mantha, Panaka, Arka, Churna, Rasakriya, Ghana, Phanita, Avaleha, Prasha, Gudapaka, Sharkara, Syrups, Ksheerapaka, Satva, Guggulu kalpana, Vati, Gutti, Pinda, Modaka, Varti Preparation of Tablets, pills, capsule and Suppositories. Masi kalpana, Lavana kalpana, Kshara kalpana and Kshara sutra.
- 7. Introduction and general knowledge of useful instruments/ Equipments -**
Disintegrator, Mixer, Grinder, End Runner, Edge Runner, Sieve-Shaker, Granulator, Tableting machine, Pill making machines, coating and polishing pan, capsule filling machine, sieves and mesh.

PART B

50 marks

- 1. Sneha kalpana :** Sneha yoni, Types of Sneha, Sneha murchana vidhi, Sneha paka vidhi, patra paka, types and their use. Sneha siddhi lakshana, dose, Preparation and uses of Triphala Ghrita, Bramhighrita, Narayana taila, Anutaila.
- 2. Sandhana Kalpana and its types:** Madya Kalpana, Asava, Arishta, Sura (Prasanna - Kadambari - Medaka - Jagala - Bakkasa), Maireya, Surasava, Shukta, Kanjika, Sauvira, Tushodaka, Sidhu kalpana their methods of preparation, siddhi lakshana, properties, uses, doses. Takrarishta, Draksharishta, Ashokarishta, Dashamoolarishta, Kumaryasava, Chandanasava.

3. Kritanna and Aushadhisiddha Anna Kalpana: Definition of Kritanna, Concept of Pathya and Apathya, Yavagu –types of yavagu, Manda, Peya, Vilepi, Anna, Bhakta, Odan, Yush-types, Krishara, Mansa rasa, Vesavara, Khad Kamblika, Raga, Shadava, Dadhi and Takra Varga – Takra, Udasvita, Katvar, Mathita, Chhachika.

4. Bahyopacharartha kalpana (External Applications)-Lepa -Types of Lepa, methods of preparation and mode of application. Udvartan and Avachurnan, Method of preparation of Siktha Taila, Malahara – Sarjarasa Malahara, Gandhak Malahara, Upanaha, Atasi upanaha, Shatadhouta and Sahastradhouta Ghrita. Brief introduction of semi solid dosage forms- Ointments, Creams, Emulsions, Gels, Lotions.

5. Principles and method of preparation of formulations for following:

5.1 Method of preparation of different Netraopachara kalpanas (Ophthalmic preparations) like Seka, Drava, Pindi, Anjana - Ashchyotana - Tarpana - Putapaka and Vidalaka, Methods of preparation of eye drops, eye ointments.

5.2 Method of preparation of various formulations used in different types of Nasya like Navana, Avapidana, Pradhman, Marsha and Pratimarsha nasya.

5.3 Method of preparation of various formulations used for Dhumapana - Method of preparation of dhumvarti and it's therapeutic uses. Dhupan: Vranadhupan, arshodhupan.

5.4 methods of preparation of different Mukhaprayogarth kalpana like Gandoosha - Kavala - Pratisaran, Tooth paste, Tooth powders and Mouth wash.

5.5 methods of preparation of various formulations used in Basti - Method of preparation of various formulations usefull in different types of basti such as Niruha and Anuvāsana Basti and their Therapeutic properties.

6. Brief knowledge of Standardization of Ayurvedic formulations- Kastaushadhi.

7. Brief introduction of Drug and Cosmetics Act 1940 and Rules 1945.

8. Concept of, Aushadhi Nirmanshala, with respect to Good Manufacturing Practices (GMP) in accordance to Schedule T.

Practical Bhaishajya Kalpana

Following practicals to be performed- (Minimum one from each category)

Method of preparation, therapeutic uses, dose and anupana of the following

1. Swarasa- Ardraka swarasa, Tulasi swarasa, Kumari Swarasa, Vasa putapaka swarasa

2. Kalka- Nimba kalka, Rasona kalka.

3. Kwatha- Punarnavasthaka kwatha, Rasna Sapthaka kwatha, Kulattha kwath.

4. Hima- Dhanyaka hima, Sarivadi hima .

5. Phanta- Panchakola phanta, Yastimadhu Phanta.

6. Pramathya- Mustadi pramathya

7. Mantha- Kharjuradi mantha

8. Aushadh siddha paniya- Shadanga paniya

9. Laksha Rasa.

10. Arka - Yavani arka, Gulab arka, Misreya arka

11. Panaka- Chinchā panaka, Chandan panaka.

12. Sharkara- Banapsha sharkara, Nimbu sarkara.

2.4 CHARAKASAMHITA -PURVARDHA

(Sutrasthana, Nidanasthana, Vimanasthana, Sharirasthana and Indriyasthana)

**Theory- One Paper- 100 Marks
Lectures - 200 Hours**

Part A

- | | |
|-----------------|-----------|
| 1.Sutrasthana | -40 Marks |
| 2.Indriyasthana | -10 Marks |

Part B

- | | |
|-----------------|-----------|
| 1.Nidanasthana | -15 Marks |
| 2.Vimanasthana | -20 Marks |
| 3.Sharirasthana | -15 Marks |

Reference Books

- 1.Charakasamhita –Ayurveda Dipika commentary by Chakrapani.
- 2.Charakasamhita (Hindi Commentary): Vaidya Jayadev Vidyalankar or Vd. Atridev Vidyalankar or Prof. Gorakha Nath Chaturvedi & Kashinath Shastri or Dr. Brahmanand Tripathy or Dr. Ravi Dutta Tripathy
- 3.Charakasamhita (English Commentary): Dr. Ram Karan Sharma & Vd. Bhagwan Dash or Acharya Priyavrata Sharma.
- 4.Charakasamhita-Ayurveda Dipika Commentary-Hindi Translation by Dr. B L Gaur, published by Rashtriya Ayurved Vidyapeeth.

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