

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, Nirvrittivisheshakrama (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. Rasopalabधि, Rasaskandha.

5- Vipaka:

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

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

6- Veerya:

Etymological derivation, definition and Swarupa of Virya, Number of Virya.

(Dvidha & 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. Vajeekarana	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, Katakapanchamoola, Trinapanchamoola, Madhyamapanchamoola, Jeevaneeya panchamoola, Panchapallava, Panchavalakala, Triphala, Trikatu, Trimada, Chaturusana, Panchakola, Shadusana, Chaturbeeja, Jeevaniya gana, Ashtavarga, Trijataka, Chaturajataka, Katuchaturjataka Panchatikta, Amlapanchaka, Chaturbhadra, Trikarshika, Swalptriphala, Madhuratriphala, Mahavisha, Upavisha, Agrya aushadh varga- Knowledge of Agrayaaushadha 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 pratinidhi 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.

(II)**30 Marks**

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, antirabies 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
Agnimantha	Haritaki	Pippali-Pippalimula
Ahiphena	Hingu	Prishniparni
Amalaki	Jambu	Punarnava
Apamarga	Jatamansi	Pushkarmoola
Aragvadha	Jatiphal	Rasna
Aragvadha	Jeerakadvaya	Rasona
Ardraka-Sunti	Jyotishmati	Rohitaka
Arjuna	Kalamegha	Saireyaka
Arjuna	Kampillaka	Sarivadvaya
Arkadvaya	Kanchanara	Sarpagandha
Ashvagandha	Kantakari	Shalaparni
Asoka	Kapikacchu	Shallaki
Ativisha	Karkatakshringi	Shalmali
Bakuchi	Karpura	Shankhapushpi
Baladvayam.	Katuki	Shatavari
Bhallataka	Khadira	Shigru
Bharangi	Kiratatikta	Shirisha
Bhrungaraj	Kumari	Shyonaka
Bibhitaka	Kumkum Kesara	Talisa Patra
Bijak/ Vijaysar	Kupilu	Tila
Bilva	Kushta	Trivrut
Brahmi	Kutaja	Tulasi
Bruhati	Lavanga	Tvak
Chandanadvaya,	Lodhra	Ushira
Chitraka	Madanaphala	Vacha
Dadima	Mandukaparni.	Varahi
Devadaru	Manjishtha	Varahi
Dhataki	Maricha	Varuna
Durva	Musta	Vasa
Eladvayam	Nagakeshara	Vatsanabha
Eranda	Nimba	Vidanga
Gambhari	Nirgundi	Vidari
Gokshura	Palasha	Yastimadhu
Guduchi	Parpata	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	Jati	Palandu
Ajamoda	Jayapala	Parasika Yavani
Akarkarabh	Jeevanti	Parijata
Amlavetasa	Kadali,	Parisha
Amra	Kadamba	Parnabija

Amragandhiharidra	Kaidarya	Parnayavani
Ankola	Kakamachi	Parpataka
Aparajita	Kamala	Parushaka
Ashvagol	Kankola	Patalagarudi
Ashvattha	Karanja	Patha
Asthishrunkhala	Karavellaka	Patola
Atasi	Karavira	Patranga
Avartaki	Karira	Pilu
Avartani	Karpasa	Plaksha
Babbula	Kasamarda	Prasarani
Badara	Kasha	Priyala
Bakula	Kasni	Priyangu
Bhumyamalki	Kataka	Puga
Bijapoor	Katphala	Putiha
Bola	Kebuka	Putranjivaka
Chakramarda	Kharjura	Rajika/Sarshapa
Champaka	Kitmari	Rohitaka
Chandrashura	Kokilaksha	Saptachakra
Changeri	Koshataki	Saptaparna
Chavya	Kulatha	Saral
Chirbilva	Kumuda	Sarja
Chopachini	Kusha	Shala Shara
Danti	Kusmanda	Sharapunkha
Darbha	Lajjalu	
Dattura	Langali	Shatahwa
Dhanvayasa	Latakaranja	Shati
Dhanyaka	Latakasturi	Snuhi
Draksha	Madayantika	Sringataka
Dronapushpi	Mahanimba	Svarnakshiri
Gandhaprasarini	Mandukaparni	Tagara .
Garjara	Markandika	Tailaparni
Gojihva,	Masha	Talmuli
Gorakshaganja	Mashaparni	Taruni
Gunja	Matulunga	Tavakshira
hinsapa	Mayaphala	Teja Patra
Hinstra	Meshashrungi	Tuvaraka
Hribera	Methika	Udumbara
Hrutpatri	Mudgaparni	urana
Ikshu	Mulaka	Vamsha
Indravaruni	Murva	Vata
Ingudi	Nagabala	Vatada
Irimeda	Nala	Vrudhadaru
Ishvaku	Narikela	Vrukshamla
Isvari	Nili	
Japa	Padmaka	

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

1. Kasturi

2. Gorochana

3. Mrigasringa

IV- Introductory Knowledge of Following Annapana Varga:

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|----------------|---------------------|----------------------|
| 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. Nirayasa (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
Bhritrtrayis | - | Thakur Balwant Singh & Vd.
Krishna Chandra Chunekar |
| 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 Dhyani |
| 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, Sushurut, - and
Vagbhata.
37. Uttarakand Ki Vanaspatiya - Dr. Gyanendra Pandey
38. Vanoaushadi Darshika - Thakur Balwant Singh
39. Vanoaushadi Nidarshika - Dr. Ram Sushil Singh
40. Vedic Vanaspatiyam - Dr. Dinesh Chandra Sharma

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