

Curriculum for PhD Syllabus

In

Dravyaguna Vigyan

THEME 1 - NAMARUPA VIGYANA

- Importance of Namagyana of Dravya, origin of Namarupagyana of Aushadhi in Veda, etymological derivation of various names and synonyms of Aushadhi.
- Rupagyana in relation to Aushadhi. Sthula and Sukshma description (Macroscopic and Microscopic study) of different parts of the plant.
- Synonyms of dravyas(aushadha and Ahara) mentioned in Vedic compendia, Brihatrayee, Bhavaprakasha and Rajanighantu. Basonyms, synonyms and distinguish morphological characteristic features of medicinal plants listed in Ayurvedic Pharmacopoeia of India(API).
- Knowledge of Anukta dravya (Extrapharmacopial drugs)with regards to namarupa. Sandigdha dravya(Controversial drugs) vinischaya.
- Knowledge of biodiversity, endangered medicinal species.
- Knowledge of TKDL, Introduction to relevant portions of Drugs and cosmetic act, Magic remedies Act, Intellectual Property Right (IPR) and Regulations pertaining to Import and Export of Ayurvedic drugs. Knowledge of tissue culture techniques
- Knowledge of Genetically Modified Plants

THEME 2: GUNA KARMA VIGYAN

- Fundamental principles of drug action in Ayurveda and conventional medicine.
- Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their applied aspects and commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) views on them.
- Comprehensive study of karma as defined in Brihatrayee & Laghutrayee
- Detailed study of Guna and Karma of dravyas listed in API and Bhavaprakasha Nighantu along with current research review.
- Detailed study of aharadravya/ ahara varga ascribed in Brihatrayee and various nighantus along with Kritanna varga.

THEME 3: PRAYOGAVIGYANA

- Bhaishjya Prayog Siddhant [Principles of drug administration] - Bhaishajya Marga (routes drug administration), Vividha Kalpana (Dosage forms)
- Principles of Yoga Vijnan(of compounding), Matra (Dosage), Anupana (Vehicle),
- Aushadha grahankal (Time of drug administration), Sevankal avadhi (duration of drug administration), Pathyapathya (Dos'/Donts' /Contraindications), complete Prescription writing (Samagra Vyavastha patraka).Samyoga- Viruddh Sidhanta and its importance
- Amayika prayoga (therapeutic uses) of important plants described in
- Brihatrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.

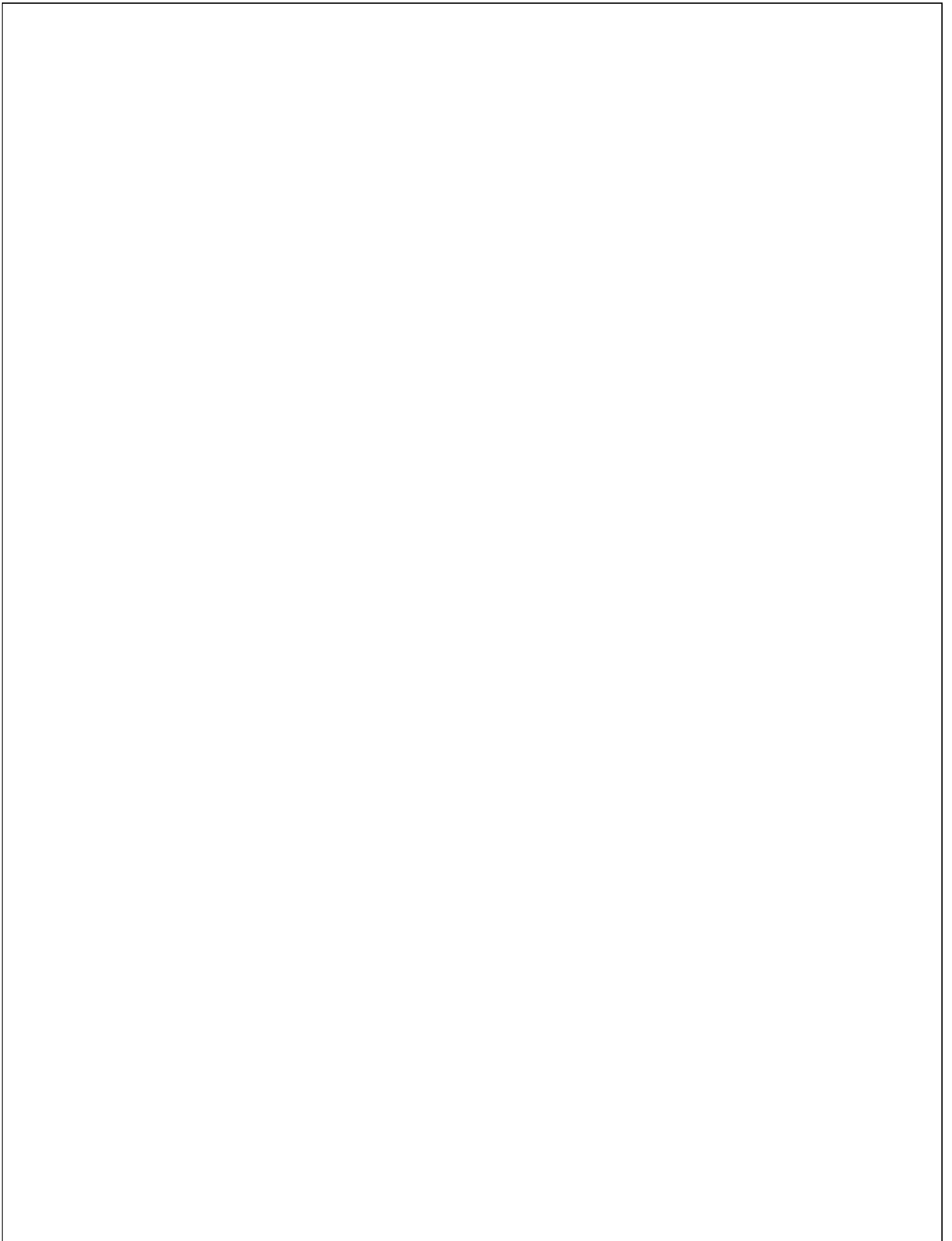
THEME 4: NIGHANTU & YOGA VIGYANA

- Etymology of nighantu, their relevance, utility and salient features.

- Chronological history of the following Nighantus with their authors name, period and content- Paryaya ratnamala, Dhanvantari nighantu, Hridayadipika nighantu, Ashtanga nighantu, Rajanighantu, Siddhamantra nighantu, Bhavaprakasha nighantu, Madanpala nighantu, Rajavallabha nighantu, Madhava Dravyaguna, Kaiyadeva nighantu, Shodhala nighantu, Saligram nighantu, Nighantu ratnakara, Nighantu adharsha and Priya nighantu
- Detailed study Aushadha kalpana mentioned in Sharangadhara samhita and Ayurvedic
- Formulary of India (AFI). General awareness on poshaka ahara(Nutraceuticals),Varnya(cosmoceuticals), food additives, Excipients etc.
- Knowledge of plant extracts, colors, flavors and preservatives.
- Review of important modern works on classical medicinal plants published by Govt of India, department of AYUSH and ICMR.

THEME 5: MODERN PHARMACOLOGY

- Pharmacological principles and knowledge on drugs acting on various systems.
- Basic knowledge on experimental pharmacology for the evaluation of - analgesic, anti pyretic, anti inflammatory, anti diabetic, anti hypertensive, hypo lipidemic, anti ulcer, cardio protective, hepatoprotective, diuretics, adaptogens, CNS activites.
- Knowledge on Heavy metal analysis, pesticidal residue and aflatoxins
- Knowledge on evaluation of anti microbial and antimycotic activities.
- Knowledge of Pharmaco-vigilance in Ayurveda and conventional system of medicine.
- Knowledge of clinical pharmacology and clinical drug research as per GCP guide lines.
- Knowledge of Pharmacogenomics



Distribution of marks (Practical

Pattern of Practical Examination

Total Marks : 100

Duration of the practical: 2 days

SN	Particular	Marks
1.	OSPE (Formulations & different doses forms)	05
2.	Practicals related to Preparation of Drugs i) Major Practical: 2 (1 Rasashastra and 1 Bhaishajya Kalpana) ii) Minor Practical: 2 (1 Rasashastra and 1 Bhaishajya Kalpana)	30
3.	Drug analysis i) Rasaushadhi – 1 ii) Kashthaushadhi – 1	10
4.	Identification of Specimen (Spotting)	10
5.	PowerPoint presentation on dissertation work-15min	10
6.	Demo Lecture on any subject topic	10
7.	Documentation 1. Journals (Practical Records) of minimum 75 practical (25 each from Rasa Shastra, Bhaishajya Kalpana and Analytical part). 2. Reports of the Visits 3. Case Records 4. Log book 5. Publications	10
9.	Viva-Voce	15
	Total	100

Reference Books:-

1. Rasahridaya Tantra
2. Rasarnava
3. Rasaratna Samuccahaya
4. Ayurved Prakasha
5. Rasendrachudamani
6. Rasendra Chintamani
7. Rasatarangini
8. Rasapraksha Sudhakar
9. Rasamrita
10. Rasa Chandanshu : CCRAS Publication
11. Sharangadhara Samhita

12. Sharangadhara Darpan (BP Pandey)
13. Bhavaprakasha
14. Yoga Ratnakara
15. Bhaishajya Ratnavali
16. Siddha Bhaishajya Manimala
17. Ayurvediya Aushadhikarana – Puranik and Dhamanakar
18. Bharat Bhaishajya Ratnakara
19. Rasayoga Sagara
20. Siddha Bhaishajya Manimala
21. Siddha Yoga Sangraha – Yadavaji Trikamji Acharya
22. Sahasrayoga
23. Vaidyaka Paribhasha Pradeepa
24. Dravyaguna Vijnan Part - 1 and 2 - Yadavji Trikamji
25. Chakradatta - Ratnaprabha,
26. Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya,
27. Remington: Science and Practice of Pharmacy
28. Theory and Practice of Industrial Pharmacy – Leon Lachman *et al*
29. Clinical Pharmacology, KD Tripathi
30. Clinical Pharmacology, Lawrence Benette
31. Drug Discovery and Evaluation (Pharmacological assays) HG Vogel
32. Pharmacological Basis of therapeutics – Goodman and Gilman
33. Data Base of Medicinal Plants of CCRAS
34. Quality and Standards of Medicinal Plants – ICMR publication
35. Quality Control of Ayurvedic Drugs – PLIM, Gaziabad
36. Ayurvedic Pharmacopeia of India
37. Ayurvedic Formulary of India
38. Indian Pharmacopeia
39. British Pharmacopeia
40. United States Pharmacopeia
41. Pharmacopeia Codex
42. Current Good Manufacturing Practices
43. Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments
44. Drugs and Magic remedies (Objectionable advertisement) Act-1954
45. Prevention of Food Adulteration (PFA) act
46. Laws pertaining to Narcotics
47. Factory and Pharmacy Acts
48. Consumer Protection Act -1986
49. Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)
50. Rutleys Elements of Mineralogy
51. Bhasma Vigyaniam
52. Kupipakva Vigyaniam
53. Anupana Manjari
