Tantia University

Sri Ganganagar

Ph.D. Course Work Syllabus

(Revised as Per UGC Regulation 2022)

Ayurveda (Dravya Guna)

Maximum Marks-120 **Minimum Marks-66**

PART-A

Part A- 60 Marks

Total Credits = 6 **Total Hours=6x45= 270 Hours**

Introduction to Research

Introduction of Research, Research methodology, Defining Research problem and formulation of hypothesis, research design, sampling design, measuring and scaling techniques, methods of data collection.

Pure and Applied Research, Exploring or Formulative Research, Descriptive Research, Diagnostic Research/Study, Evaluation Research/Studies, Action Research, Experimental Research, Historical Research, Surveys, Case Study, Field Studies

Research Ethics: Characteristics and format of research paper, article, thesis writing, review of Related Literature, Purpose of the review, Identification of the related literature. Organizing the related literature.

Statistics

Concept of statistics, relevance in research, parametric and non-parametric data; graphical representation of data: histogram, frequency polygon, ogive and pie chart; Measures of Central Tendency, Correlation, t-test chi square test

Computer Application

Basic and fundamental knowledge of Computer and its Applications. Introduction, Application Area, Operating System, Windows, Office, Internet**.**

PART-B

Part B- 60 Marks (Subject based)

Total Credits = 6 **Total Hours=6x45= 270 Hours**

1. Panchamahabhuta Siddhanta, Samanya Vishesha Siddhanta, Tridosha Siddhanta. Extensive Study on classifications of Dravya As described in Brihattrayi
2. Applied aspects of Rasa, Guna, Virya, Vipaka and Prabhava
3. Applied aspects of Aushadha karma with reference to sharangadhara and bhavaprakasha
4. Importance of Namarupa Vigyan and concept of Basonyms and synonyms of Dravyas

5. Applied knowledge of Bhaishajya Prayoga (Marga, Kalpana, matra, anupana, sevankala etc)
6. Basic principles of Desh Pravichara, Dravya Sangrahana (collection), samrakshana (Preservation)
7. Prashasta bheshaj lakshana
8. Profound knowledge on applied aspects of Agrya aushadha
9. Methodology of studying controversial, pratinidhi (substitute), Apmishrana (adulterant) and unidentified dravya
10. Pharmacognosy and its relevance in Dravyaguna vigyan
11. An integrated study of charakokta Bheshaj pariksha and scientific method of drug evaluation with special reference to quality, safety and efficacy
12. Brief knowledge and importance of clinical pharmacology
13. General principles of various good cultivation practices, collection practices, storage practices and manufacturing practices
14. Pharmacovigilance and ADR issues
15. Knowledge on the Ayurvedic Pharmacopoeia of India. The formulary of India and international Pharmacopoeias
16. Importance of Namgyana of Dravya, the origin of Namarupagyana of Aushadhi in Veda, etymological derivation of various names and synonyms of Aushadhi.
17. Rupagyana in relation to Aushadhi. Sthula and sukshma description (Macroscopic and Microscopic study) of different parts of the plant.
18. Knowledge of Anukta Dravya (Extrapharmacopoial drugs) with regards to namarupa.
19. Sandigdha dravya (Controversial drugs) vinischaya.
20. 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.
21. Knowledge of tissue culture techniques
22. Knowledge of Genetically modified plants
23. Fundamental principles of drug action in Ayurveda and conventional medicine.
24. 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
25. Comprehensive study of karma as defined in Brihatrayee & Laghutrayee
26. Detailed Study of aharadravya/ahara varga ascribed in Brihatrayee and various nighantus along with Kritanna varga
27. Pharmacological principles and knowledge on drugs actiong on various system.
28. Basic knowledge on experimental Pharmacology for the evaluation of analgesic, antipyretic anti-inflammatory, antidiabetic, antihypertensive, hypolipidemic, antiulcer, cardioprotective, hepatoprotective, diuretics, adaptogens, CNS activities.
29. Knowledge of an evaluation of antimicrobial and antimycotic activities.
30. Bhaishajya Prayog siddhant [Principles of drug administration]- Bhaishajya Marga (routes of drug administration), vividha Kalpana (Dosage forms), principles of Yoga Vijnan (compounding), Matra (dosage), Anupana (vehicle), Aushada grahankal (Time of drug administration), Sevankal avadhi (duration of drug administration), Pathyapathya (Dos'/ Donts'/ Contraindications), complete prescription writing (Samagra Vyavastha patraka)

31. Samyoga-Viruddh Sidhanta and its importance
32. Amayika prayoga (therapeutic uses) of important plants ascribed in as well as Brithattrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.
33. Knowledge of Pharmaco-vigilance in Ayurveda and conventional system of medicine.
34. Knowledge of clinical pharmacology and clinical drug research as per GCP guide lines.
35. Ethymology of nighantu, their relevance, Utility and salient features.
36. Chronological history of the following Nighantus with their authors name, period and content-Paryaya ratnamala, dhanvantari nighantu, Hridayadipaka nighantu, Ashtanga nighantu, Rajanighantu, siddhamantra nighantu, Bhavarprakasha nighantu, Madanpala nighantu, Rajavallabha nighantu, Madhava Dravyaguna, Kaiyadeva nighantu, Shodhala nighantu, Shaligram nighantu, Nighantu ratnakara, Nighantu adarsha and Priya nighantu
37. Detailed study aushadha kalpana mentioned in Sharangadhara samhita and Ayurvedic Formulary of India (AFI)
38. General awareness on poshaka ahara (Nutraceuticals), Varnya (cosmoceuticals), food additives, excipients Etc.
39. Knowledge of plant extracts colors, flavors and preservatives.
40. Review of important modern works on classical medicinal plants published by Govt. of India, department of AYUSH and ICMR