TANTIA UNIVERSITY, SRI GANGANAGAR

Syllabus Entrance Examination for Ph.D.

Subject- Ayurveda (Dravyaguna)

Maximum Marks-100
Part A- 50 (Research Methodology)
Part B- 50 (Subject Wise)

PART-A
Research Methodology and Statistics

UNIT 1: Meaning of Research
Aims, nature and scope of research
Prerequisites of research

UNIT 2: Research Problem
Meaning of research problem Sources of research problem Characteristics of a good research problem
Hypothesis: Meaning and types of hypothesis. Research proposal or synopsis.

UNIT 3: Types and Methods of Research
Classification of Research
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

Unit 4: Review of Related Literature
Purpose of the review. Identification of the related literature. Organizing the related literature.

UNIT 5: Data Collection (Sampling) Sampling and Population Techniques of sampling Selection Characteristics of a good sample Types of data.

UNIT 6: Tools of Data Collection
Observation, Interview, Questionnaire, Rating scales, Attitude scales, Schedules, Characteristics of good research tools.

UNIT 7: Statistics

Concept of statistics, relevance in education, parametric and non-parametric data; graphical representation of data: histogram, frequency polygon, ogive and pie chart; Measures of Central Tendency: concept, computation and interpretation; measures of variability: concept, computation and interpretation; normal probability curve: concept, application and interpretation.

Correlation: concept, computation and interpretation- Product Moment, Rank Order, Biserial, Point Biserial, Phi, Contingency, Tetrachoric; significance of mean: concept, computation and interpretation of significance of t-test(correlated and uncorrelated, matched, paired-unpaired, matching- paired); ANOVA(One way) :concept, computation and interpretation, regression and prediction; chi square: concept, computation and interpretation (equal and normal probability).

UNIT 8: Research Report

Format of the research report Style of writing the report References and bibliography

Reference books:

1. Best John W. and James Kahn, V., 1989, Research in Education, Sixth Edition, Prentice- Hall of India Pvt.Ltd, New Delhi.
2. Sharma R.A., 1992, Fundamentals of Educational Research, Loyal Book Depot, Meerut, UP, India.
3. Kulbir Singh Sidhu, 1990, Methodology of Research in Education, Sterling Publishers

   Pvt. Ltd., New Delhi.
4. Lokesh Koul, 1997 Methodology of educational Research, third edition, Vikas Publishing

   House Pvt. Ltd. , New Delhi.
5. Kothari C.R., 1990, Research Methodology Methods and Techniques, Wiley Eastern

   Limited, New Delhi.
6. Borg Walter R., Gall Meridith D., 1983, Educational Research an Introduction, Fourth

   Edition, Longaman, New York &London.
7. Nitko Anthony J., 1983, Educational Tests and Measurement an Introduction, Harcourt

   Brace Jovanovich, Inc., New York.
8. Aggarwal Y.P., 1988, Statistical Methods Sterling Publishers Pvt. Ltd., New Delhi.
9. Garret Hnery E., 1985 Statistics in Psychology and Education, Viakils, Feffer and Simon, Bombay.
10. Guilford, J.P., and Benjamin Fruchter, 1982 Fundamentals of statistics in Psychology and

    Education, Fifth edition, Mc Graw-Hill Book Company, New York.
11. Gupta S.C. and Kapoor V.K., 1999, Fundamentals of Mathematical Statistics, Sultan

    Chand& Sons Educational Publishers, New Delhi.

12. Grewal P.S., Methods of Statistics Analysis, Sterling Publishers Pvt. Ltd., New Delhi.
13. Bruce W. Tuckman, Statistics in Psychology and Education.

Part-B

Ayurveda (Dravyaguna)

A. Namarupa Vigyana

1. Importance of Namagyana of Dravya, origin of Namarupagyana of Aushadhi in Veda, etymological derivation of various names and synonyms of Aushadhi.

2. Rupagyana in relation to Aushadhi. Sthula and Sukshma description (Macroscopic and Microscopic study) of different parts of the plant.

3. Synonyms of dravyas(aushadha and Ahara) mentioned in Vedic compendia, Brihatrayee, Bhavaprakasha and Rajanighantu.

4. Basonyms, synonyms and distinguish morphological characteristic features of medicinal plants listed in Ayurvedic Pharmacopoeia of India(API).

5. Knowledge of Anukta dravya (Extrapharmacopial drugs)with regards to namarupa.

6. Sandigdha dravya(Controversial drugs) vinischaya.

7. Knowledge of biodiversity, endangered medicinal species.

8. 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.

9. Knowledge of tissue culture techniques

10. Knowledge of Genetically Modified Plants

B. Guna Karma Vigyan

1. Fundamental principles of drug action in Ayurveda and conventional medicine.

2. Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their appliedaspects and commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) views on them.

3. Comprehensive study of karma as defined in Brihatrayee & Laghutrayee

4. Detailed study of Guna and Karma of dravyas listed in API and Bhavaprakasha Nighantu along with current research review.

5. Detailed study of aharadravya/ ahara varga ascribed in Brihatrayee and various nighantus along with Kritanna varga.

6. Pharmacologycal principles and knowledge on drugs acting on various systems.

7. 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.

8. Knowledge on Heavy metal analysis, pesticidal residue and aflatoxins

9. Knowledge on evaluation of anti microbial and antimycotic activities.

C. Prayogavigyana

1. Bhaishjya 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), Aushadha grahankal (Time of drug administration), Sevankal avadhi (duration of drug

administration), Pathyapathya (Dos' /Donts' /Contraindications), complete Prescription writing (Samagra Vyavastha patraka).

2. Samyoga- Viruddh Sidhanta and its importance

3. Amayika prayoga (therapeutic uses) of important plants ascribed in as well as Brihattrayee, Chakradutta, Yoga ratnakara and Bhavaprakasha.

4. Knowledge of Pharmaco-vigilance in Ayurveda and conventional system of medicine.

5. Knowledge of clinical pharmacology and clinical drug research as per GCP guide
lines.

6. knowledge of Pharmacogenomics