Scheme of Examination of Pre-PhD (Course Work) Examination

Paper No.	Nomenclature of the Paper	Internal Assessment	Theory	Seminar (if any)	Max. Marks
SOR-P01	Research Methodology	40	60	-	100
SOR-P02	Basic computer and Scientific communication	40	60	-	100
SOR-P03	Principal of management and social ethics	40	60	-	100
SOR-P04	Review writing and presentation/Seminar	00	50	50	100
Grand Total					400

SYLLABUS OF THE PRE-PhD COURSE WORK

SOR: P01 RESEARCH METHODOLOGY

UNIT-A

Meaning of Research in - Purpose, Characteristics and Types of Research - Process of Research -Formulation of objectives - Formulation of Hypotheses - Types of Hypotheses - Methods of testing Hypotheses - Research plan and its components - Methods of Research (Survey, Observation, case study,experimental, historical and comparative methods) .

UNIT-B

Identification and formation of research problem (Hypothesis). Elements in research methodology: Research design. Parametric & non parametric methods.

UNIT-C

Ethical, legal, social and scientific issues in research. Role of IPR in Research and Development.

UNIT-D

Writing of Research Proposal, Report and Research Paper: Meaning and types - Stages in preparation - Characteristics - Structure - Documentation: Footnotes and Bibliography - Editing the final draft-Evaluating the final draft- Checklist for a good proposal/report/research paper. Basic knowledge of organizing conferences, symposia,workshop, exhibition etc.

Suggested Books:

1) Research Methodology-Dalip Kumar Bhattacharyya.

2) Research Methodology- C.H. Chaudhary, RBSA Publication

3) Research Methodology – C.R. Kothari

4) Statistical Techniques-S.P. Gupta

SOR-P02: BASIC COMPUTER AND SCIENTIFIC COMMUNICATION

Computer and Internet basics; Introduction and need of Computers, Operating system and basics of Windows, User Interface, File management, File Transfer (ftp ,WSftp), DOS, UNIX, Difference between presentation and document, introduction to Notepad, MS-Office word, MS-Excel, Power Point, Opening Documents and Closing documents, introduction to Paint and Photoshop. Computer Communication and Internet, Electronic mails, Communication on Internet, Surfing the Internet.

SCIENTIFIC COMMUNICATION

1 Types of Scientific Communications.

2 Importance of publishing research papers

3 Publishing Reearch paper :

   a) Preliminaries, Format, Choosing Journal

   b) Title, Running Title

   c) Authors: Single and Multi authorship

   d) Writing Abstract

   e) Introduction section

   f) Materials and Methods Section

   g) Result Section

   h) Figures : Design Principles, Legends, Table components, Graphs: Types, Style,Tables v/s Graph

   i) Discussion Section: Format, Grammar Style, Content.

   j) Acknowledgements

   k) References : Different Styles

   l) Selecting Keywords

m) Communication with the Editor, Handling Referees' Comments, Galey Proofs

5. Writing Review Articles

6. Preparing and Delivering of Oral and Poster Presentations

7. Avoiding Plagiarism

8. Preparing documents for MoUs, Confidentiality Agreements.

Suggested Books:

1 P.K Sinha `Computer Fundamentals`, BPB Publications, 1992

2 Guy Hart-Davis "The ABCs of Microsoft Office 97 Professional edition", BPB Publications, 1998

3 Karl Schwartz, "Microsoft Windows 98 Training Guide", 1998

4 Write and Publish a Scientific Paper by *Robert A. Day* Oryx Press

5 Scientific Easy when you know how by *Jennifer Peat* BMJ Books

6 Research Projects and Research Proposals A Guide for Scientists Seeking Funding by *Paul G. Chapin* Cambridge University Press

SOR-P03-PRINCIPLE OF MANAGEMENT AND SOCIAL ETHICS

Unit – 1

Nature and importance of management- meaning, definition, importance, characteristics and function of management, management as a science and art, objective of management, Principle of management- meaning, definition.

Scientific management principle fayols principles.

Planning – meaning, importance, principles, characteristics, planning process, limitations of planning.

Organising- meaning, definition, importance, and principle, process of organizing, formal and informal organization.

Unit – 2

Staffing & Directing (Supervision)

Staffing- meaning, definition, characteristics, staffing is a part of HRM, process of HRM, limitation.

Directing- meaning, definition, importance, meaning of supervising, role & function of a supervisor.

Directing(Communicatin) & Controlling

Directing (Communication) – meaning of communication, communication process, importance of communication, types of communication.

Controlling – meaning, definition, importance, process of controlling, techniques of controlling, evaluation of controlling techniques.

Unit – 3

Introduction to value education; Understanding value education, self-exploration as the process for value education, The basic human aspirations – continuous happiness and prosperity, The program to fulfil basic human aspirations.

Understanding the harmony at various levels; Understanding the human being as Co-existence of self and body, Harmony in self – understanding myself, Harmony with the body – understanding sanyama and svasthya, Harmony in the family – understanding value in human relationships, Harmony in society – from family order to world family order, Harmony in nature – understanding the interconnectedness and mutual fulfilment, Harmony in existence – understanding existence as Co-existence.

Unit – 4

Implications of the right understanding; Providing the basis for universal human values and ethical human conduct, basis for holistic alternative towards universal human order, Professional ethics in the light of right understanding, Vision for holistic technologies, Production systems and management models.

Suggested Readings:-

1. L. M. Prasad
2. R R Gaur and R Sangal

SOR: P04 REVIEW WRITING AND PRESENTATION/SEMINAR

Each student will submit a review report on any general topic of subject or area of interest in subject which will carry 50 marks and student will also give a presentation/seminar of the same which will also carry 50 marks.