

Pre PhD Course in Zoology
Research Methodology
Paper I

- Unit I Review of literature: Review Process and Bibliography, Locating Literature Publications (scientific database: science direct and pubmed), Publication Ethics, Research Plan and its Components, Difficulties in Biological Research, Identification and formation of Research Problem.
- Unit II Materials and Methods, Details required about the Materials, General Guidelines and Brief idea about Safety, Hazards and Precautions in Laboratory, Animal Handling and Ethics, Methods of Testing Hypothesis, Methods of Research (sampling, commonly used techniques like chromatography, spectroscopy, centrifugation etc.)
- Unit III Writing results of Research Proposal, Report and Research Paper: Voice, Tense and Style, Sequence, Structure, Content and Data Analysis, Preparation of Tables, Introduction and Placement of Table, Table Format, Preparation of Figures, Types and Selection of Figures, Placement of Figures, Numbering and Caption of Tables and Figures, Preparation of Statistical Diagrams, Preparation of Photographs and Micrographs.
- Unit IV Writing Abstract, Summary, Synopsis and Discussion: Abstract and Keywords, Summary, Synopsis of Research Plan, Paper and Thesis, Style and Sequence of Discussion, Structure and Content of Discussion, Format of Discussion.
- Unit V Preparing for Oral Presentation: Preparation of Script, Presentation using Audio Visual Aid, Ethical, Legal and Social Issues in Research, A Brief idea about Funding Agencies (DST, DBT, CSIR, UGC), Role of IPR in Research and development.

Books Recommended:

1. Research Methodology- G. R. Basotia and K. K. Sharma
2. Research Methodology- C. H. Chaudhary, RBSA Publication

Pre PhD Course in Zoology

Scientific Research Methodology (Paper I)

- A. Review of literature
 - a) Review Process and Bibliography,
 - b) Locating Literature Publications
- B. Materials and Methods
 - a) General Guidelines
 - b) Details required about the Materials
 - c) Ethical Aspects
 - d) Data Analysis
- C. Writing results
 - a) Voice, Tense and Style,
 - b) Sequence,
 - c) Structure,
 - d) Content
 - e) Data Analysis,
- D. Preparation of Tables
 - a) Tabular Form
 - b) Introduction and Placement of Table
 - c) Table Format
- E. Preparation of Figures, Types and Selection of Figures,
 - a) Placement of Figures
 - b) Numbering Figures
 - c) Caption of Figures
 - d) Preparation of Statistical Diagrams,
 - e) Preparation of Photographs and Micrographs.
- F. Discussion
 - a) Style and Sequence of Discussion
 - b) Structure and Content of Discussion
 - c) Format of Discussion
- G. Writing Abstract, Summary and Synopsis
 - a) Abstract and Keywords
 - b) Summary
 - c) Synopsis of thesis
- H. Preparing for Oral Presentation
 - a) Preparation of Script
 - b) Timing
 - c) Using Visual Aid,
 - d) Presentation