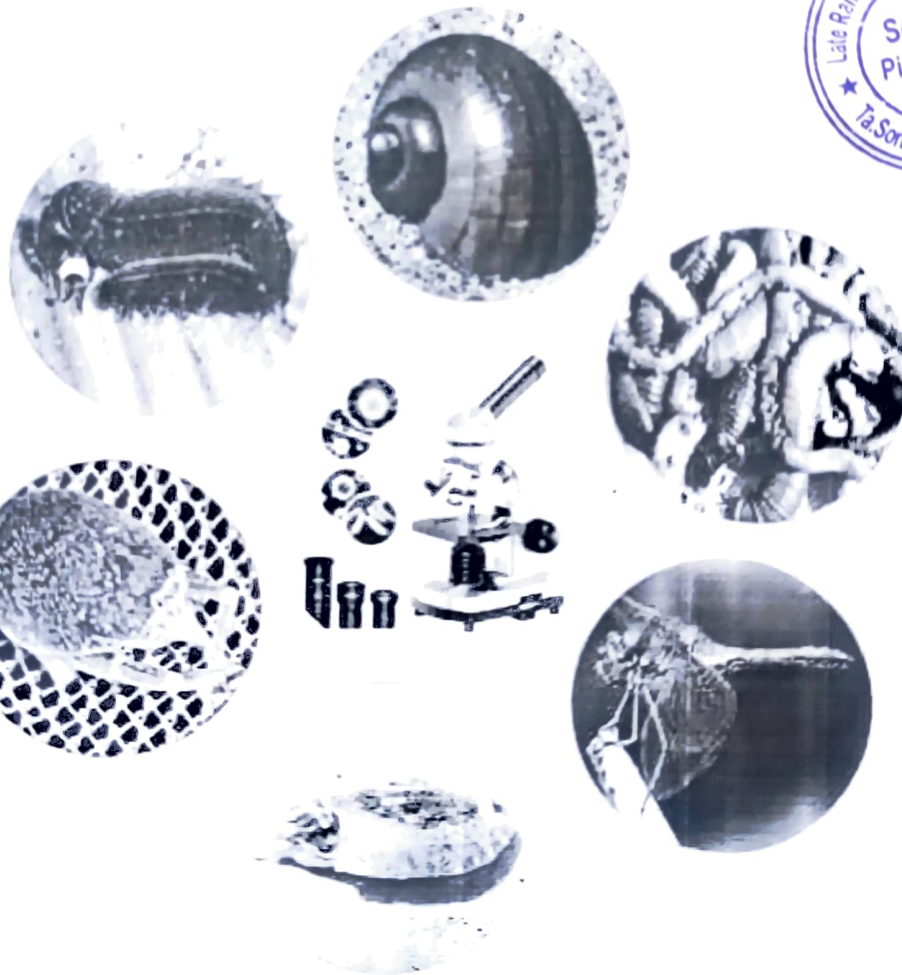


# PRACTICAL ZOOLOGY

B.Sc. First Year



Dr. Pathan T. S.

Dr. Shaikh Yasmeen

Dr. Rankhamb S. V.

As per  
**Dr. Babasaheb Ambedkar Marathwada University, Aurangabad**  
(This is effective from the Academic Year 2022-23)

A Concise Book of  
**PRACTICAL ZOOLOGY**

**B.Sc. First Year**  
**(Paper III)**

By

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## PREFACE

We take immense pleasure in writing this book in a simple, comprehensive and lucid language to make the matter interesting and easy. This book is original in style and written strictly according to the revised syllabus recommended by U.G.C. and implemented by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

Designing of the manual is such that the students will be benefited as far as the knowledge and experiments are concerned. We hope that the manual will be more useful to the B.Sc.I<sup>st</sup> Year students in understanding the Paper-III Practical

We express our deep sense of gratitude to Principal, Kalikadevi Arts, Commerce and Science College, Shirur (Ka), Dist. Beed (M.S.) India, Capt., Dr. Maqdoom Farooqui, Principal, Dr. Rafiq Zakaria College for Women Aurangabad (M.S.) India and Dr. V. D. Satpute Principal, Late Ramesh Warpudkar Arts, Commerce and Science College, Sonpeth, Dist. Parbhani, Maharashtra, India for their inspiration in writing this book.

Dr. Vidya Pradhan, Professor and Head Dept. of Zoology, Dr. Rafiq Zakaria College for Women Aurangabad, and Dr. Julfikhar Dastagir, Professor and Head, Department of Zoology, Maulana Azad College of Arts, Science and Commerce, Aurangabad, for their encouragement in writing this book. Our sincere thanks are due to our colleagues and friends of various colleges for their suggestions in writing this book.

We welcome any corrections and constructive suggestions to improve this manual and those will be incorporated in the next edition.



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Dr. Santosh V. Rankhamb



**B. Sc. First Semester**  
**Credit: 02**  
**Zoo-103**  
**Paper-III PRACTICAL**



**PROTOZOA TO ECHINODERMATA & Cell Biology**

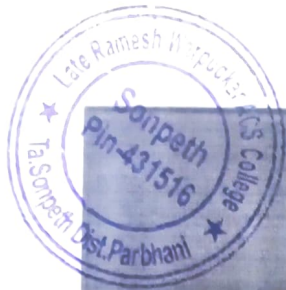
1. **Study of animals belonging to** Protozoa, Porifera, Cnidaria, Ctenophora, Platyhelminthes, Aschelminthes and Annelida with special reference to systematic position up to class level, habit, habitat, characteristic features and economic importance (one example of each class and Local examples are to be given more emphasis) with the help of Museum specimens, models, charts, Microslides, Photographs and Digital sources.
  2. **Study of animals belonging to** Onychophora, Arthropoda, Mollusca, and Echinodermata with special reference to systematic position up to class level, habit, habitat, characteristic features and economic importance. (One example of each class and Local examples are to be given more emphasis) with the help of Museum specimens, Models, Charts, Microslides, Photographs and Digital sources.
  3. Method of protozoan culture (Any one)
  4. Identification of Protozoan's and Coelenterates in pond water sample
  5. Temporary mounting of:-
    - Gemules and Spicules of sycon
    - Obelia colony
    - Parapodium of Neries
  6. Study of diversity of mouth parts in insect: - Mosquito, Housefly, Honey bee, Cockroach, Butterfly
  7. Digestive and Nervous system of Earthworm (Museum specimen/Charts/digital sources)
  8. Digestive system of Cockroach (Museum specimen/digital sources)
  9. Study of Prokaryotic cells –Grams staining technique
  10. Study of Eukaryotic cells using suitable staining technique (Buccal epithelial cells)
  11. Study of cytoplasmic movements in paramecium
  12. Localization of Mitochondria by Janus Green stain
  13. Study of cancer cells through permanent slides
  14. Study of cell organelles through electron micrographs/charts
  15. Study of Mitosis using suitable material /Meiosis using permanent slides.
- Note:** Demonstration of animal dissections through Computer Aided Techniques as per U.G.C Guidelines.



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*Signature*

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