

Ph.D. Course Work Examination, July-2023

ZOOLOGY
Course-I: Research Methodology

Time: 3Hours

Maximum Marks: 70

Instructions to the candidates:

- 1) *Answer all questions*
- 2) *Draw diagram wherever necessary*

- 1) Describe the procedure and criteria for sample selection with a note on different types of sample designs. (14)

OR

Discuss the format for submission of research proposals and elaborate the importance funding agencies.

- 2) Explain the principle, design and functions of microtome and cryostat techniques. (14)

OR

Mention the types of fixatives and add a note on the importance of fixation in histochemical and immunological studies.

- 3) Write the principle, procedure and its applications. (14)

OR

Describe the principle and applications of northern blotting techniques.

- 4) Write a detailed note on ANOVA and its significance in data analysis (14)

OR

Write an explanatory note on bivariate analysis with suitable example.

- 5) Explain the role of Institutional Animal Ethics Committee (IAEC) and legal provisions to experimental animals. (14)

OR

Discuss the safety measures. code of conduct to be followed in laboratory with and add a note on disposal of chemical waste.
