

2025

M.Sc. 1st Semester Examination

ZOOLOGY

Paper : ZOOC403X0

[Research Methodology and Ethics]

Full Marks : 50

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *four* questions : 2×4=8

1. Distinguish between research method and research methodology.
2. Distinguish between Induction and Deduction.
3. Differentiate sample from population.
4. Distinguish between explanatory and descriptive research designs.
5. Distinguish between positivistic and phenomenological researches.
6. What are the sources of secondary data?

P.T.O.

(2)

Group - B

Answer any *four* questions : $4 \times 4 = 16$

7. Explain the concept of IMRAD. What is the significance of control groups in research design? $2+2$
8. (a) Mention the features of snow ball sampling.
(b) With suitable example explain, *a posteriori* hypothesis. $2+2$
9. Schematically represent the different steps involved in research process.
10. (a) What is duplicate (redundant) publication?
(b) In the context of biological experiments, what is a replicate? $2+2$
11. Impact factor is significant indicator of the citation of an article. Explain highlighting the method of calculation of impact factor. $2+2$
12. Explain conflicts of interest. Discuss various forms of publication misconduct and their consequences. $1+3$

Group - C

Answer any *two* questions : $8 \times 2 = 16$

13. (a) What are the components of a research problem? Write down the importance of pilot survey while defining the research problem.
(b) Briefly discuss the CaRS model (by John Swales) for writing the introduction of a research article.

(3)

What are the key elements of a reference entry?

Give a suitable example. (2+2)+(3+1)

14. Discuss research misconduct in detail, highlighting fabrication, falsification, and plagiarism. What are the common penalties? 6+2
15. Write short notes on any *two* : 4×2=8
- (a) Systematics vs. stratified sampling
 - (b) Hourglass model vs. King's model of writing papers
 - (c) Significance of Abstract section and descriptive abstract
 - (d) Forms of sampling errors
16. Elucidate different research designs. Differentiate between Probability and non-Probability sampling. 4+4

Internal Assessment : 10 marks
