

M.Sc. 2nd Semester Examination, 2025

ZOOLOGY

(Ecological Principles)

PAPER – ZOO-202

Full Marks : 25

Time : 1 hour

Answer all questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

1. Answer any two of the following questions : 2×2
- (a) Differentiate spatial niche from trophic niche.
- (b) What are iteroparous and semelparous animals ? Give example.

(Turn Over)

(2)

(c) What is meant by 'sixth mass extinction' ?

(d) State the difference between mutualism and proto-cooperation ?

2. Answer any *two* of the following questions :

4 × 2

(a) What is net reproductive rate ? State its importance. 2 + 2

(b) How does the functioning of ecosystem follow cybernetic System ?

(c) What are the edge species ? Give one example. Write about the significance of edge effect in an ecosystem ? 1 + 1 + 2

(d) Discuss briefly the salient features of r-selected and k-selected species with examples. 2 + 2

(3)

3. Answer any *one* of the following question :

8 × 1

(a) Discuss about non-predatory inter-specific competition model with special reference to Lotka and Volterra. 8

(b) What is bet-hedging. Describe in brief about parental bet-hedging citing suitable example. Add a note on Evolutionary Stable Strategy (ESS). 2 + 3 + 3

[Internal Assessment — 5 Marks]

