

**2024/FYUG/ODD/SEM/
ZOODSC-202T/068**

FYUG Odd Semester Exam., 2024

**ZOOLOGY
(3rd Semester)**

Course No. : ZOODSC-202T

(Principles of Ecology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any *two* from the following : $2 \times 2 = 4$
 - (a) Define autecology and synecology.
 - (b) What is brome? Give examples of two grassland bromes.
 - (c) Differentiate between habitat and niche.

2. Discuss Liebig law of minimum and Shelford's law of tolerance with suitable illustrations. $5 + 5 = 10$

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(Turn Over)

(2)

OR

3. Write an essay on different adaptations of animal to its physical environment. 10

UNIT—II

4. Answer any *two* from the following : $2 \times 2 = 4$
(a) Define food chain and food web.
(b) Define ecological efficiency.
(c) Categorize the biotic components of an ecosystem.

5. Discuss in detail the principle and the process of flow of energy through the ecosystem. $3 + 7 = 10$

OR

6. Write notes on the following : $5 + 5 = 10$
(a) Productivity of an ecosystem
(b) Nitrogen cycle

UNIT—III

7. Answer any *two* from the following : $2 \times 2 = 4$
(a) Define commensalism and ammensalism.
(b) Define antibiosis. Cite example.
(c) Differentiate between crude density and ecological density.

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(Continued)

(3)

8. What do you mean by population interaction? Give an account of positive and negative interactions among organisms with suitable examples. $2 + 8 = 10$

OR

9. Write notes on the following : $5 + 5 = 10$
(a) Logistic growth pattern of a population
(b) Lotka-Volterra predator-prey model

UNIT—IV

10. Answer any *two* from the following : $2 \times 2 = 4$
(a) What is species richness? Explain with example.
(b) Define pioneer and climax community.
(c) What do you mean by ecotone and edge effects?

11. What is meant by stratification in ecology? Write an essay on vertical stratification in terrestrial habitats. $2 + 8 = 10$

OR

12. Who propose polyclimax theory? Discuss the theories pertaining to climax community with suitable illustrations. $1 + 9 = 10$

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(4)

UNIT—V

13. Answer any *two* from the following : $2 \times 2 = 4$

- (a) What is project tiger? In which year the project was launched?
- (b) Name at least two national parks of NE India.
- (c) Give the scientific names of two endangered mammals of NE India.

14. Discuss in detail the causes of depletion of wildlife in India. Add a note on the need for wildlife in conservation and management.

$6 + 4 = 10$

OR

15. Define GIS and remote sensing. Write an essay on application of GIS and remote sensing in wildlife biology. $2 + 4 + 4 = 10$

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