

**2025/FYUG/ODD/SEM/
ZOODSC-202T/336**

FYUG Odd Semester Exam., 2025

**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

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

- (a) Who coined the term 'ecology'? Define autecology.
- (b) What do you mean by habitat and niche?
- (c) What do you mean by cursorial adaptation in animal? Name one animal that exhibits cursorial adaptation.

(Turn Over)

(2)

2. Answer any one from the following :

- (a) Discuss Shelford's Law of Tolerance and its subsidiary principles with suitable illustrations. Add a note on the importance of limiting factor in ecology.
- (b) Write notes on the following :
 - (i) Volunt adaptation
 - (ii) Aquatic adaptation

UNIT—II

3. Answer any two from the following :

- (a) Write a brief note on food web.
- (b) What do you mean by NPP and GPP?
- (c) Enlist the biotic components of an ecosystem.

4. Answer any one from the following :

- (a) What do you mean by productivity? Write an essay on the productivity of an ecosystem with suitable illustration.

(3)

Write notes on the following :

- (i) Ecological pyramids
- (ii) Carbon cycle

UNIT—III

Answer any two from the following :

- (a) What do you mean by carrying capacity?
- (b) What is parasitism? Give example.
- (c) How does crude density differ from ecological density?

Answer any one from the following :

- (a) Discuss Gause's principle. Give an account of population interactions among organisms with suitable example.
- (b) What is age pyramid and what are its types? Discuss logistic growth pattern of a population.

UNIT—IV

7. Answer any two from the following :

- (a) Define ecological succession.

(Turn Over)

(4)

- (b) Define pioneer and climax community.
- (c) What do you mean by seral community?

8. Answer any one from the following :

- (a) What is meant by stratification? Discuss vertical stratification of communities in freshwater and marine ecosystem.
- (b) Who proposed the monocl意思 theory? Discuss the theories pertaining to climax community with suitable illustration.

2+4+4=10

1+9=10

UNIT—V

9. Answer any two from the following :

2×2=4

- (a) Enlist the causes of depletion of wild-life.
- (b) Give the scientific names of two endangered mammals of NE India.
- (c) What is Project Rhino? In which year was this project launched?

5J/740

continued

26J—1040/740

(5)

10

Answer any one from the following :

- (a) Discuss the strategies of wildlife conservation and management in India. Add a note on application of GIS and remote sensing in wildlife biology.

7+3=10

(b) Write notes on the following :
(i) National Parks of Assam
(ii) Project Tiger

5×2=10

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