

**2024/FYUG/ODD/SEM/
EESDSM-101T/084**

FYUG Odd Semester Exam., 2024

ECOLOGY AND ENVIRONMENTAL SCIENCE

(1st Semester)

Course No. : EESDSM-101T

(Fundamentals 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) How is habitat different from an ecosystem?
- (b) Define ecozone with examples.
- (c) By whom and when the word 'ecology' was coined?
2. Explain the role of resistance and resilience in the successful functioning of an ecosystem. 10

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(Turn Over)



(2)

OR

3. Elaborate on any two major terrestrial biomes. 10

UNIT—II

4. Answer any *two* from the following : 2×2=4

- (a) Write a brief note on *K*-selected species with examples.
(b) What is metapopulation? Give one factor responsible for the formation of a metapopulation.
(c) What is the difference between mortality and natality?

5. Describe different types of population growth. 10

OR

6. State four differences between *R*- and *K*-selection species. Provide one example each from *R*- and *K*-selection species. 10

UNIT—III

7. Answer any *two* from the following : 2×2=4

- (a) What is ecological succession? Give an example of primary succession.
(b) Define mutualism with examples.
(c) Write two characteristics of ecotone.

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(Continued)

(3)

8. What is a keystone species? State the role of keystone species in conservation of ecosystem. 10

OR

9. What are different types of ecological succession? Explain with proper examples. 10

UNIT—IV

10. Answer any *two* from the following : 2×2=4

- (a) What is the difference between estuarine and marine ecosystem?
(b) Differentiate between food chain and food web.
(c) State the abiotic components of ecosystem with appropriate example.

11. Write notes on the following : 5+5=10

- (a) Grassland ecosystem
(b) Forest ecosystem

OR

12. Describe in detail about the biotic components of an ecosystem. 10

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(4)

UNIT—V

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

(a) What do you mean by gaseous cycle?
Give examples.

(b) What does nitrogen fixation mean in a nitrogen cycle?

(c) Write two processes of transferring liquid state of water to gaseous state in hydrological cycle.

14. Explain carbon cycle with suitable diagrammatic illustration. 10

OR

15. Write notes on the following : $5 + 5 = 10$

(a) Phosphorus cycle

(b) Sulphur cycle
