

**2024/FYUG/ODD/SEM/
EESIDC-101T/086**

FYUG Odd Semester Exam., 2024

**ECOLOGY AND ENVIRONMENTAL SCIENCE
(1st Semester)**

Course No. : EESIDC-101T

**(Basic Concepts of Ecology and
Environmental Science)**

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 *four* from the following : $1 \times 4 = 4$

- (a) What is the multidisciplinary nature of environmental science?
- (b) Define the term 'ecology'.

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(Turn Over)



(2)

- (c) What is the primary aim of studying environmental science?
- (d) Name one approach used to study ecology.
- (e) Why is environmental awareness important in today's world?

2. Explain the scope of environmental science in addressing global environmental challenges. 2

OR

3. Discuss two aims of studying ecology and environmental science.

4. Discuss the multidisciplinary nature of environmental science and its importance in solving contemporary environmental issues. 8

OR

5. Explain the various objectives and aims of studying ecology and how this contributes to environmental sustainability.

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(Continued)

(3)

UNIT—II

6. Answer any four from the following : 1×4=4

- (a) Define an 'aquatic ecosystem'.
- (b) What is the difference between a food chain and a food web?
- (c) What is a biogeochemical cycle?
- (d) What is population?
- (e) Give two examples of terrestrial ecosystem.

7. Briefly describe the energy flow in an ecosystem. 2

OR

8. Explain the concept of species, population and community in an ecosystem context.

9. Examine biogeochemical cycles with a detailed explanation of their patterns and types and their role in ecosystem functioning. 8

OR

10. Discuss the concept of energy flow. Mention the various implications of this concept in our ecosystems.

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(4)

UNIT—III

11. Answer any *four* from the following : 1×4=4

- (a) What is stratosphere and why is it important?
- (b) How does the climate of North-East India differ from other regions?
- (c) What is the main difference between weather and climate?
- (d) Name the different layers of the atmosphere.
- (e) How does the ozone layer protect life on earth?

12. Explain the importance of the stratospheric ozone layer in protecting life on earth. 2

OR

- 13. Discuss the tropical monsoon climate and its significance in North-East India.
- 14. Analyse the composition and structure of earth's atmosphere, focussing on the function of different atmospheric layers. 8

OR

15. Discuss elaborately on the climate of North-East India.

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(Continued)

(5)

UNIT—IV

16. Answer any *four* from the following : 1×4=4

- (a) What is hydrologic cycle?
- (b) Define lotic ecosystem.
- (c) What is the significance of surface water in an ecosystem?
- (d) What is an estuarine ecosystem?
- (e) How does hydrosphere interact with other spheres of the earth?

17. Explain the difference between lotic ecosystem and lentic ecosystem. 2

OR

18. Discuss the role of the hydrosphere in maintaining earth's climate.

19. Explain the hydrologic cycle with suitable diagrammatic illustration. Discuss its significance in maintaining the balance of earth's ecosystem. 5+3=8

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(6)

OR

20. Discuss the role and importance of estuarine and marine ecosystems. 4+4=8

UNIT—V

21. Answer any four from the following : 1×4=4

- (a) What is soil humus?
- (b) What is soil profile?
- (c) Name two physical properties of soil.
- (d) What is the difference between surface water and groundwater?
- (e) What does Earth's mantle comprise of?

22. Briefly explain the formation and composition of earth's crust. 2

OR

23. Discuss the significance of soil water-holding capacity in agriculture.

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(Continued)

(7)

24. Discuss on the formation and composition of the Earth's core, mantle and crust, and their significance in geophysical process. 8

OR

25. Discuss the physical properties of soil, focussing on the role of soil profile, soil water-holding capacity and soil humus in agriculture and land management.

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