



1-6-2024

**School of Biological Sciences
Doon University
Dehradun, Uttarakhand
Question Paper: End-Semester Examination
Academic Session: Jan 2024 – Jun 2024**

B.Sc. Biological Sciences (Second Semester)

Course: Ecology

Course Code: BSC153

Total Marks: 50

Maximum Time: 2:00 Hrs

PART I Give answers to any six questions:

(Marks: $2 \times 6 = 12$)

1. What is Carrying capacity of an environment?
2. What is Biome? What are the major types of biomes?
3. Differentiate between population and community in an ecosystem.
4. What are Gross primary productivity (GPP) and Net primary productivity (NPP) of an ecosystem?
5. Define Photosynthetically Active Radiation (PAR).
6. What is the concept of Liebig's law of minimum?
7. What are maximum natality and ecological natality of a population?

PART II Give answers to any five questions:

(Marks: $4 \times 5 = 20$)

8. What is environmental stress? Explain the different types of environmental stresses with examples.
9. Explain Lotka-Volterra equations for predator-prey model.
10. What is Ecological pyramid? Explain different types of ecological pyramids with diagram.
11. Explain Gause's principle of Competitive exclusion with examples.
12. Explain the role of Resource partitioning in an ecosystem with example.
13. Explain Exponential growth and Logistic growth of population with diagram.

PART III Give answers to three two questions:

(Marks: $6 \times 3 = 18$)

14. Emphasize the classification and process of ecological succession with suitable example.
15. Elaborate food chain and food web in an ecosystem with diagram.
16. Explain the structural and functional aspects of forest ecosystem.
17. Explain carbon cycle in an ecosystem with appropriate diagram.

1-6-00