

Roll No. : .....

Total No. of Questions : 16 ]

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# **SEM-1025**

**M.Sc. (Ist Semester) Examination, 2022**

**ENVIRONMENTAL SCIENCE**

Paper - FS-ENV-CC-101

**(Environment and Ecology)**

*Time : 3 Hours ]*

*[ Maximum Marks : 40*

The question paper contains three Sections.

**Section-A**

**(Marks : 1 × 10 = 10)**

*Note :-* The candidate is required to answer all the *ten* questions carries 1 mark each. The answer should not exceed **50** words.

**Section-B**

**(Marks : 3 × 5 = 15)**

*Note :-* The candidate is required to answer *five* questions by selecting at least *one* question from each Unit. Each question carries **3** marks. Answer should not exceed **200** words.

**Section-C**

**(Marks : 5 × 3 = 15)**

*Note :-* The candidate is required to answer *three* questions by selecting *one* question from each Unit. Each question carries **5** marks. The answer should not exceed **500** words.

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### Section–A

1. Attempt all questions.
  - (i) What is Estuary ?
  - (ii) Define Ecotone.
  - (iii) What is ecological pyramid ?
  - (iv) What is edaphic factor ?
  - (v) Write radiation hazards.
  - (vi) What is the law of tolerance ?
  - (vii) How does nutrient cycling affect ecosystem ?
  - (viii) Who gave concept of population ?
  - (ix) Give an example of aquatic ecosystem.
  - (x) Write name of any *two* biogeochemical cycle.

### Section–B

#### Unit–I

2. Write the importance of ecological amplitude.
3. How does the lithosphere help biosphere ?
4. How does wind affect climate change ? Explain.

#### Unit–II

5. Why is the energy flow in ecosystem required ?
6. Explain the requirement of food web in ecosystem.
7. Describe the various types of ecosystems.

#### Unit–III

8. Write difference between energy flow and chemical cycling.
9. Explain the role of microbes in nitrogen fixation.
10. What is sulphur cycle ?

## **Section–C**

### **Unit–I**

11. Explain in detail about the characteristics of edaphic factors.
12. Explain the climatic factors affecting precipitation.

### **Unit–II**

13. Write short notes on the following :
  - (i) Grassland ecosystem
  - (ii) Forest ecosystem
14. Write a note on ecological importance of ecotone formation.

### **Unit–III**

15. Explain in detail the oxygen cycle and its fluxes.
16. Describe in detail about the cycling of phosphorus and its impact on ecosystem.