

M.Sc. ENVIRONMENTAL SCIENCE
First Semester
Environmental Biology
(MEV-01)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive)=50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer the following questions in brief (any five)

2×5 =10

- a) What is population age structure? Mention different types of population age structures.
- b) What is Leaf Area Index?
- c) Distinguish between primary and secondary productivity.
- d) Why thermosphere is called as ionosphere?
- e) What is carrying capacity?
- f) What is ammonification?
- g) What are the different periods found in Mesozoic era?

2. Answer the following questions (any five)

3×5 =15

- a) What are the factors that affect primary productivity?
- b) Distinguish between ecad and ecotype with suitable example.
- c) What are the effects of temperature on living organism?
- d) How biosphere can be considered as cybernetic system?
- e) Differentiate between Mutualism and Ammensalism.
- f) Write the structure and function of ecosystem.
- g) Distinguish between Darwinism and Lamarckism.

3. Describe the following questions (any *five*)

5×5=25

- a) Write an explanatory note on structure and composition of atmosphere.
- b) What is biological spectrum? Explain with Raunkaier's different life forms.
- c) What is Net Primary Productivity? Explain any two methods of estimation of primary productivity.
- d) What is ecological succession? Describe the process of ecological succession either in terrestrial or aquatic ecosystem.
- e) What is biogeochemical cycle? Describe the nitrogen cycle.
- f) Write a note on origin and evolution of angiosperms.

M.Sc. ENVIRONMENTAL SCIENCE
First Semester
Environmental Biology
(MEV-01)

(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes

Marks – 20

PART A- Objective Type

1. Choose the appropriate answer from the following options:

1 × 20 = 20

- i) The sequence of events that occur in primary succession is
- a) Nudation – Colonisation – Ecesis – Aggregation
 - b) Aggregation – Colonisation – Ecesis – Nudation
 - c) Ecesis – Nudation – Aggregation – Colonisation
 - d) Nudation – Ecesis – Colonisation – Aggregation
- ii) The study of individual organism's relationship with its environment is called
- a) ecology
 - b) synecology
 - c) monoecology
 - d) autecology
- iii) Highest level of biotic interaction is _____
- a) Mutualism
 - b) Predation
 - c) Parasitism
 - d) Amensalism
- iv) Typical allergic symptoms caused by airborne allergens are
- a) Coughing
 - b) Watering eye
 - c) Conunctivitis
 - d) all the above
- v) The unit of light measurement is
- a) foot
 - b) lux
 - c) candle
 - d) All the above
- vi) The term "Ecological Pyramid" was coined by
- a) Odum
 - b) Tranlay
 - c) Elton
 - d) Hackle
- vii) Which of the following ecosystem has highest primary productivity?
- a) Pine forest
 - b) Grassland
 - c) Tropical Rain forest
 - d) Temperate forest

