

MEV
First Semester
Environmental Biology

(MEV-01)

Duration: 3Hrs.

Full Marks: 70

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer in brief (Any Five)

2 × 5 = 10

- a) What is biogeochemical cycle?
- b) Define ecological succession.
- c) Mention the factors affecting population density and give diagram.
- d) Write the interdisciplinary nature of environmental sciences.
- e) What is GPP & NPP?
- f) How biosphere can be considered as cybernetic system?
- g) Give the diagrammatic representation of phosphorous cycle.

2. Answer with brief description (Any Five)

3 × 5 = 15

- a) Ecological pyramid and its types.
- b) Different types of population interactions.
- c) Explain the concept of plate tectonics in brief and name the major plates.
- d) Give three definitions of ecology.
- e) Name the major age groups in a population. Draw different age structures of different types of population.
- f) Write the structure and function of ecosystem.
- g) Distinguish between Darwinism and Lamarckism.

3. Answer the following questions (Any Five)

5×5=25

- a) Explain the concept of biosphere.
- b) Illustrate the nitrogen cycle with diagram and highlight the role of micro-organisms.
- c) Describe the process of ecological succession with diagrammatic representation.
- d) What are the different methods of estimation of productivity? Explain it.
- e) Explain the theories of origin and evolution of life.
- f) Explain the carbon cycle with proper diagram.
- g) Describe the theories of origin and evolution of flowering plants.

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PART A: Objective

Duration: 20 minutes

Marks – 20

1. Answer the following :

1×20 = 20

- i) Who proposed the categories of age groups in population?
a) Bodenheimer, 1958 b) Lynden, 1959
c) Odum, 1969 d) none of above
- ii) $NPP = \text{_____} - R$
- iii) _____ is the ultimate stage of succession.
a) Nudation b) Colonization
c) Climax d) Esecis
- iv) The Jurassic period is under which era
a) Cenozoic b) Mesozoic
c) Paleozoic d) Archeozoic
- v) The pyramid of energy in terrestrial ecosystem is
a) upright b) inverted
c) both a & b d) always upright
- vi) Transitional zone between two different ecosystems is
a) ecotone b) biome
c) ecozone d) none of above
- vii) The air density is least
a) Troposphere b) Stratosphere
c) Mesosphere d) Exosphere
- viii) Interaction between two species where one is benefited
but the other is neither benefited nor harmed
a) Commensalism b) Amensalism
c) Cannibalism d) Neutralism
- ix) Interaction between two species where one is harmed
but the other is neither benefited nor harmed
a) Commensalism b) Amensalism
c) Cannibalism d) Neutralism

