

B.Sc. Semester - 5 (CBCS) Examination
Oct/Nov - 2024 (NEW COURSE)
Ecology(Core)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer in very short: (04)
1. What is the significance of the minimum and maximum limits in the Tolerance Range?
 2. Fill in the blank: The tendency in nature to form wholes that are greater than the sum of through creative evolution is referred as.....
 3. What external cue primarily influences Plant Biological Clocks?
 4. Which instrument is used to measure light intensity in Field?
- Que.1(B) Answer in brief (any one): (03)
1. Discuss the precipitation as a Climatic Factor.
 2. Explain: Liebig's Law of Minimum.
- Que.1(C) Answer in detail (Any one): (07)
1. What is Negative Interaction? Discuss various types of negative interactions among Organisms.
 2. What is Biological Clock? Explain the phenological event with seasonal variations.
- Que.2(A) Answer in very short: (04)
1. Fill in the blank: A transition area between two different plant communities with high species diversity.....
 2. Give the term: The vertical layering of different plant species within a community.
 3. How are GPS and GIS used in Ecological Studies?
 4. What is Species Evenness?
- Que.2(B) Answer in brief (Any one): (03)
1. What is Quadrates Method? Write advantages and disadvantages of Quadrats.
 2. Discuss; Cover and Basal Area of Community.
- Que.2(C) Answer in detail (Any one): (07)
1. Discuss following characters of Community: (a) Composition (b) Structure
 2. Explain: The Raunkiaer (1934) life forms based on position of Perennating Buds.
- Que.3(A) Answer in very short: (04)
1. Fill in the blank: In an Ecosystem, the _____ niche includes all the ways an organism interacts with the biotic and abiotic components of its Environment.
 2. True or False: The size of a plant population is determined only by the number of individuals present in a specific area at a given time.
 3. Give the term: The spatial arrangement of individuals within a plant population.
 4. What is the term for a series of stages that lead from bare ground to a Mature Ecosystem?
- Que.3(B) Answer in brief (Any one): (03)
1. Discuss the role of Ecological Niches in shaping the biodiversity of an Ecosystem.
 2. Explain how natural disturbances such as wildfires contribute to Ecological Succession. Provide an example of a plant community that typically follows such disturbances.

- Que.3(C) Answer in detail (Any one): (07)
1. Give an account of Hydrosere Succession in nature.
 2. What is Age Distribution? Describe the types of Age Pyramid.
- Que.4(A) Answer in very short: (04)
1. Give the term: The Ecosystem that features low-lying, saline environments with salt-tolerant plants and often serves as a transition zone between land and ocean is called.
 2. In an Ecological Pyramid of Biomass, what does the width of each Tier Represent?
 3. Justify the statement: "Ecosystem productivity is highest in tropical rainforests due to their consistently warm temperatures and high rainfall, which support rapid plant growth and a high rate of photosynthesis."
 4. Why is the pyramid of biomass inverted in Pond Ecosystem?
- Que.4(B) Answer in brief (Any one): (03)
1. Draw a chart of types of Ecosystems with two examples.
 2. Discuss the Pyramid of Biomass in forest and Pond Ecosystems.
- Que.4(C) Answer in detail (Any one): (07)
1. Write notes on: Box and Pipe Model of energy flow in Ecosystem.
 2. What is Productivity? Describe types of Productivity.
- Que.5(A) Answer in very short: (04)
1. Fill in the blank: _____ is a measure of the relative abundance of different species in an Area.
 2. True or False: Ex situ conservation involves protecting species in their natural habitats.
 3. What do you mean by Ecosystem Diversity?
 4. Which phytogeographical region of India is characterized by Tropical Rainforests?
- Que.5(B) Answer in brief (Any one): (03)
1. Write notes on: Genetic Biodiversity
 2. Explain: Sanctuaries as Biodiversity Conservation
- Que.5(C) Answer in detail (Any one): (07)
1. What is Phytogeography? Explain any four phytogeographical regions of India.
 2. Explain: Keystone Species with few examples.
