

B.Sc. Semester - 5 (CBCS) Examination
Oct/Nov - 2025 (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) Define the term: *Phenology*.
 - 2) State Liebig's Law of Minimum.
 - 3) Give the names of biotic factors.
 - 4) Which instrument is used to measure light intensity in the field?
- Que.1(B) Answer in brief (any one): (03)**
- 1) Explain Shelford's Law of Tolerance.
 - 2) Give the concept of Ecology in brief.
- Que.1(C) Answer in detail (any one): (07)**
- 1) Describe how light influences plant and animal life as an ecological factor.
 - 2) Discuss *Biological Clocks*.
- Que.2(A) Answer in very short: (04)**
- 1) Define: *Line transect*.
 - 2) Give the term for species found exclusively in an ecotone.
 - 3) What is species evenness?
 - 4) What is a plant community?
- Que.2(B) Answer in brief (any one): (03)**
- 1) Explain Raunkiaer's life forms.
 - 2) Discuss cover and basal area of a community.
- Que.2(C) Answer in detail (any one): (07)**
- 1) Explain the characteristics of a plant community.
 - 2) Discuss the significance of quadrat in ecological study.
- 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 the environment.
 - 2) What is the term for the entire sequence of developmental stages from pioneer to climax community in succession?
 - 3) Define the term *Nudation*.
 - 4) In hydrosere type of plant succession, which plant would be the pioneering community?
- Que.3(B) Answer in brief (any one): (03)**
- 1) Discuss population size and density.
 - 2) Explain the causes of succession.
- Que.3(C) Answer in detail (any one): (07)**
- 1) What is age distribution? Describe the types of age pyramids.
 - 2) Give an account of hydrosere succession in nature.

- Que.4(A) Answer in very short:** (04)
- 1) Why is the pyramid of biomass inverted in a pond ecosystem?
 - 2) What is the annual net primary productivity of the whole biosphere?
 - 3) Define the term *Consumers*.
 - 4) Energy flow in an ecosystem is bidirectional – True or False?
- Que.4(B) Answer in brief (any one):** (03)
- 1) Explain the primary productivity of an ecosystem.
 - 2) Discuss the pyramid of number in a forest ecosystem.
- Que.4(C) Answer in detail (any one):** (07)
- 1) Write notes on the Two-Channel Energy Flow Model.
 - 2) Discuss the biotic and abiotic components of any freshwater ecosystem.
- Que.5(A) Answer in very short:** (04)
- 1) What do you mean by ecosystem diversity?
 - 2) True or False: Keystone species are exceptionally important species that help in the survival of their ecosystem.
 - 3) Who coined the term *Biodiversity*?
 - 4) What does IUCN stand for?
- Answer in brief (any one):**
- Que.5(B)** (03)
- 1) Discuss the levels of biodiversity.
 - 2) Explain the key role of keystone species in an ecosystem.
- Que.5(C) Answer in detail (any one):** (07)
- 1) Explain: National Parks as a tool for biodiversity conservation.
 - 2) What is *Phytogeography*? Explain any four phytogeographical regions of India.
