

B.Sc. Semester - 5 (CBCS) Examination
Oct/Nov - 2021 (NEW COURSE)
Ecology (Core)

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

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

Q – 1 (A) Answer in short: (04)

- (1) Define phenology.
- (2) The average seed output can be obtained by _____ equation?
- (3) State the Liebig's law of minimum.
- (4) Define - Ecotype

Q - 1 (B) Answer any one in brief: (03)

- (1) Explain Shelford's law of tolerance.
- (2) Discuss the basic concept of ecology shortly.

Q - 1 (C) Answer any one in detail: (07)

- (1) Describe climatic factors with respect to ecology.
- (2) Describe biotic factors with respect to ecology

Q - 2 (A) Answer in short: (04)

- (1) Define "Dominance" as an important character of a plant community.
- (2) Fidelity class - 5 is: Occur only in one particular community and not in others (Exclusive) - True or False?
- (3) Physiognomic method for study of communities was given by _____ and gives his method name _____.
- (4) Define Biological spectrum.

Q - 2 (B) Answer any one in brief: (03)

- (1) Describe quantitative analytical characters used in community structure.
- (2) Describe qualitative analytical characters used in community structure.

Q - 2 (C) Answer any one in detail: (07)

- (1) What is sampling unit? Describe "Quadrat" method in detail.
- (2) Discuss following characters of community
 - (a) Composition
 - (b) Structure

Q - 3 (A) Answer in short: (04)

- (1) Define plant succession.
- (2) What is difference between "Allogenic" succession and "Autogenic" succession?
- (3) Give only the name of sequential steps for plant succession process.
- (4) In Hydrosere type of plant succession which plant would be the pioneering community?

Q - 3 (B) Answer any one in brief: (03)

- (1) Explain ecological Niche shortly.
- (2) Discuss Population Size and Density

Q - 3 (C) Answer any one in detail: (07)

- (1) Discuss "Age structure" as an important character of population.
- (2) Discuss role of "Natality" and "Mortality" in ecosystem.

Q - 4 (A) Answer in short: (04)

- (1) Ecological Pyramid was first described by _____?
- (2) The first trophic level in any kind of food chain always a green plant because?
- (3) Energy flow in ecosystem is bidirectional - True or False?
- (4) Energy transfers or transformations are never 100% efficient. This is due to _____?

- Q - 4 (B) Answer any one in brief:** (03)
- (1) Explain primary productivity of ecosystem.
 - (2) Describe shortly "Y" shaped energy flow method in ecosystem.
- Q - 4 (C) Answer any one in detail:** (07)
- (1) Discuss types of ecological Pyramids.
 - (2) Describe structure of ecosystem.
- Q - 5 (A) Answer in short:** (04)
- (1) Which forest is known as the "Lungs" of the planet Earth?
 - (2) IUCN stands for?
 - (3) Define critically endangered species.
 - (4) State the causes for Biodiversity loss.
- Q - 5 (B) Answer any one in brief:** (03)
- (1) Discuss level of Biodiversity.
 - (2) What is Ex-situ conservation? Give its examples and discuss any one of it.
- Q - 5 (C) Answer any one in detail:** (07)
- (1) Describe Phytogeographic Regions" of India
 - (2) Discuss Keystone species.
