

B.Sc. Semester - 5 (Remedial) (CBCS) Examination
March/April-2023(Old 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 details: (Attempt any one) (07)

- 1) Describe biotic and abiotic components of pond ecosystem.
- 2) What is an ecosystem? Discuss single channel energy flow model.

Q-1(B) Answer in brief: (Attempt any one) (04)

- 1) What are consumers? Discuss types of consumers.
- 2) Distinguish between: GPP and NPP

Q-1(C) Answer in very short: (Any three) (03)

- 1) What is standing state?
- 2) What percentage of energy transferred to successive trophic level?
- 3) Name the subtypes of limnic ecosystem.
- 4) **Give the term:** Organism have ability to break down dead bodies in to smaller particles
- 5) **True or false:** $GPP = R$ (Respiratory loss), there is no storage of energy.

Q-2(A) Answer in details: (Attempt any one) (07)

- 1) Describe the sampling unit methods of studying plant communities.
- 2) What are life forms? Discuss the Raunkiaers life form.

Q-2(B) Answer in brief: (Attempt any one) (04)

- 1) What is fidelity? Discuss its classes
- 2) Write notes on: Abundance and density

Q-2(C) Answer in very short: (Any three) (03)

- 1) **Give the term:** Distribution of crowns of different plant species in well definite layers or story's.
- 2) Name the transition zone between two communities.
- 3) Give the formula for the calculation of basal area of species.
- 4) Which frequency range is belongs to class-A in Raunkiaer frequency class?
- 5) In which type of life form, the perennating buds remain under water?

Q-3(A) Answer in details: (Attempt any one) (07)

- 1) Discuss the pyramid of numbers in different ecosystem.
- 2) Give an account of the hydrosere.

Q-3(B) Answer in brief: (Attempt any one) (04)

- 1) Explain: Population dispersal and population dispersion.
- 2) Discuss the causes of plant succession.

Q-3(C) Answer in very short: (Any three) (03)

- 1) What is Emigration?
- 2) **Define:** Natality
- 3) In which succession lichens are pioneer vegetation?
- 4) Name types of succession based on nutritional status of dominant community.
- 5) **Give the term:** The establishment of a species in the bare area immediately after invasion

Q-4(A) Answer in details: (Attempt any one) (07)

- 1) Discuss: Shelford's law of tolerance
- 2) Explain: Biological clock

Q-4(B) Answer in brief: (Attempt any one) (04)

- 1) Write a short note on : Liebig's law of minimum
- 2) Describe the Ecological amplitude

Q-4(C) Answer in very short :(Any three) (03)

- 1) What is limiting factors?
- 2) **Fill up the blank:** The study of individual species of all stages of life cycle in relation to environment is called.....
- 3) What do you mean by the term stenothermal?
- 4) What is species?
- 5) **Give the term:** A form of plant modified by its habitat, the modifications is induced by environment.

Q-5(A) Answer in details: (ANY ONE) (07)

- 1) Describe: Structure of GPS
- 2) Write short account of Indian laws enacted from time to time for environmental law in India.

Q-5(B) Answer in brief: (any one) (04)

- 1) Explain various level of formal education for environment in India.
- 2) Discuss the problems in effective implementation of environmental law in India.

Q-5(C) Answer in very short: (Any three) (03)

- 1) **Fill in the blank:** Educating the people on environment and its impact is called.....
- 2) Name the act to protect and improve the environment on all matters connected with it.
- 3) Name the two types of environment education.
- 4) Name the Centre of excellence of environment science and management in Gujarat.
- 5) What is GPS?
