



K25U 0190

Reg. No. : .....

Name : .....

**Sixth Semester B.Sc. Degree (C.B.C.S.S. – OBE – Regular/Supplementary/  
Improvement) Examination, April 2025  
(2019 to 2022 Admissions)  
CORE COURSE IN ZOOLOGY  
6B11 ZLG : Environmental Science**

Time : 3 Hours

Max. Marks : 40

- I. Essay questions. **Each** question carries 8 marks. Answer **any two**.
- 1) Explain the energy flow in an ecosystem and its significance.
  - 2) Elaborate on the threats to biodiversity and their consequences.
  - 3) Describe the zoogeographical realms with their faunal characteristics.
  - 4) Describe the characteristics of the ecological population. (2×8=16)
- II. Short essay questions. **Each** question carries 4 marks. Answer **any two**.
- 5) Describe the process of ecological succession.
  - 6) Explain the role of biodiversity hotspots in conservation.
  - 7) Write a note on *in-situ* and *ex-situ* conservation strategies. (2×4=8)
- III. Short answer questions. **Each** question carries 2 marks. Answer **any six**.
- 8) Define biotic potential.
  - 9) What is the significance of ecological pyramids ?
  - 10) Explain the term "recycling index."
  - 11) What is Liebig's law of minimum ?
  - 12) Differentiate between lentic and lotic ecosystems.
  - 13) What are endemic species ? Mention one species endemic to the Western Ghats.
  - 14) Mention the effects of greenhouse gases on the environment.
  - 15) What is an ecological indicator ? (6×2=12)

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IV. Multiple choice questions. **Each** question carries 0.5 marks. Answer **all**.

- 16) Which abiotic factor is essential for photosynthesis in producers ?
  - a) Temperature
  - b) Water
  - c) Visible light
  - d) Air
- 17) What is the first law of thermodynamics also known as ?
  - a) Law of energy conservation
  - b) Law of entropy
  - c) Law of energy flow
  - d) Law of biotic potential
- 18) Which nutrient cycle is an example of a sedimentary cycle ?
  - a) Carbon cycle
  - b) Nitrogen cycle
  - c) Phosphorus cycle
  - d) Oxygen cycle
- 19) The combined concept of limiting factors was proposed by
  - a) Raymond Lindeman
  - b) Charles Elton
  - c) Liebig and Shelford
  - d) Frederick Frost Blackman
- 20) The J-shaped population growth curve represents
  - a) Logistic growth
  - b) Exponential growth
  - c) Declining population
  - d) Stable population
- 21) The edge effect is associated with
  - a) Stratification
  - b) Ecotone
  - c) Succession
  - d) Migration
- 22) Mutualism is a type of interaction where
  - a) Both species benefit
  - b) One species benefits, the other is harmed
  - c) Both species are harmed
  - d) One species benefits, the other is unaffected
- 23) Which biome is characterized by permafrost ?
  - a) Desert
  - b) Grassland
  - c) Tundra
  - d) Forest

(8×0.5=4)