

**B.Sc. 1st Semester (Honours) Examination, 2019-20****ZOOLOGY****Course ID : 12612****Course Code : SH/ZOO/102/C-2**

Course Title : Perspectives in Ecology

**Time: 1 Hour 15 Minutes****Full Marks : 25***The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer *any five* questions: 1×5=5
- What do you mean by ecological pyramid?
  - What is edge effect?
  - What is vital index?
  - What is the significance of species richness of an ecosystem?
  - Define biotic potential.
  - Define 'Taxidermy'.
  - Define Net Primary Productivity (NPP).
  - Define Ecotone.
2. Answer *any two* questions: 5×2=10
- What are the basic principles of energy flow through an ecosystem? What is the significance of Y-shaped model of energy flow? What is 'Eltonian Pyramid'? 2+2+1=5
  - Compare food chain and food web. How do modular organisms differ from the unitary organisms? Give one example of each type. 2+(2+1)=5
  - What do you mean by biogeochemistry? Define residence time of nutrients in biogeochemical cycles. Draw a schematic diagram to show nitrogen cycle in biosphere. 1+1+3=5
  - Describe Lotka-Volterra equations for interspecific competition between two species. Define Gause's principle of competitive exclusion. 3+2=5
3. Answer *any one* questions: 10×1=10
- What do you mean by Pioneer Community? Describe the general process of ecological succession in a Lake ecosystem. What do you mean by epilimnion and hypolimnion. 1+7+2=10
  - Differentiate between *ex-situ* and *in-situ* conservation with examples. Name one National Park and one Wild-life Sanctuary in West Bengal. What are the full forms of IUCN and CITES. Write short note on Biosphere reserve. Name one Biosphere reserve in West Bengal. 2+2+2+3+1=10