

**B.Sc. 1st Semester (Honours) Examination, 2022 (CBCS)****Subject : Zoology****Course : CC-II****(Ecology)****Time: 2 Hours****Full Marks: 40***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 of the following:** **$2 \times 5 = 10$** 

- (a) Distinguish between detritus and grazing food chain.
- (b) Define fecundity with example.
- (c) What is 'edge effect'? How does it differ from 'ecotone'?
- (d) Distinguish between realized natality and potential natality.
- (e) Name one national park and one biosphere reserve located in West Bengal.
- (f) Define Schedule I animal with example.
- (g) Differentiate between static life table and cohort life table.
- (h) Differentiate between Beta and Gamma diversity.

**2. Answer any two questions of the following:** **$5 \times 2 = 10$** 

- (a) Elucidate the different phases of 'S' shaped population growth. What do you mean by carrying capacity? **4+1**
- (b) Discuss the objectives of Project Tiger in India. Distinguish between 'r' and 'K' selected species. **2+3**
- (c) What is survivorship curve? Explain different forms of survivorship curve. **1+4**
- (d) Explain Liebig's law of minimum. Differentiate between food chain and food web. **3+2**

**3. Answer any two questions of the following:** **$10 \times 2 = 20$** 

- (a) What is Biogeochemical cycle? Explain nitrogen cycle with schematic diagram. What is species richness? **2+6+2**
- (b) Mention the important features of a Climax Community. Describe the facilitation and inhibition model of species replacement in ecological succession. Briefly describe the process of ecological succession. **2+3+5**
- (c) How is species diversity measured by Shannon diversity index? Give an example for your answer. How does interspecific competition influence the logistic population growth according to Lotka-Volterra model? **5+5**
- (d) Distinguish between *ex-situ* and *in-situ* conservation. Give an idea of different categories of threatened taxa as prescribed by the IUCN. What do you mean by endemism and pandemism. **4+4+2**