

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: 2×5=10
- Distinguish between detritus and grazing food chain.
 - Define fecundity with example.
 - What is 'edge effect'? How does it differ from 'ecotone'?
 - Distinguish between realized natality and potential natality.
 - Name one national park and one biosphere reserve located in West Bengal.
 - Define Schedule I animal with example.
 - Differentiate between static life table and cohort life table.
 - Differentiate between Beta and Gamma diversity.
2. Answer *any two* questions of the following: 5×2=10
- Elucidate the different phases of 'S' shaped population growth. What do you mean by carrying capacity? 4+1
 - Discuss the objectives of Project Tiger in India. Distinguish between 'r' and 'K' selected species. 2+3
 - What is survivorship curve? Explain different forms of survivorship curve. 1+4
 - Explain Liebig's law of minimum. Differentiate between food chain and food web. 3+2
3. Answer *any two* questions of the following: 10×2=20
- What is Biogeochemical cycle? Explain nitrogen cycle with schematic diagram. What is species richness? 2+6+2
 - 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
 - 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
 - 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