B.Sc. 1st Semester (Honours) Examination, 2019 (CBCS)

Subject : Zoology

Paper : CC-II

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.

Group-A

1. Answer *any five* questions from the following: 2×5=10

(a) What do you mean by homeorhesis?

(b) What is the importance of "life table" study?

(c) What factor is included to change an exponential growth curve to a logistic growth curve?

(d) Do you consider "Zoological garden" as conservation? If yes, what type?

(e) What is "pyramid of biomass" in context of an ecosystem?

(f) Distinguish between entropy and enthalpy.

(g) What is ecotone?

(h) Can an organism occupy two different "trophic levels"? Justify.

Group-B

Answer *any two* questions from the following: 5×2=10

2. What is "seral" community? Differentiate between primary and secondary succession. 2+3=5

3. State geometric and logistic growth with suitable diagrams. 2½+2½=5

4. Which ecological pyramid can never be inverted? Why? 1+4=5

5. Mention one density dependent and one density independent factor regulating an ecosystem. Add a note on how they regulate. (1+1)+(1½+1½)=5

Group-C

Answer *any two* questions from the following: 10×2=20

6. What is "niche"? how does it differ from "habitat"? How is Gause's principle related to niche of a population? Exemplify. 2+2+3+3=10

7. Write short notes on *any two*: 5+5=10

(a) Tiger conservation strategies

(b) Dispersal and dispersion in community

(c) Linear and Y-shaped food chains in ecosystem

(d) 'r' and 'k' strategies in population

8. Describe vertical stratification in a forest ecosystem. What is "monoclimax" theory in context of succession? How is molecular nitrogen modified so that plants can utilize it? 3+3+4=10

9. What are the two parameters considered during construction of survivorship curves? Mention and justify about the type of survivorship curve you expect to see in a local population of dogs and a local population of human. 2+(1+3)×2=10
