

PART-2
ZOOLOGY HONOURS

Paper 3

(Write the units in separate sheets, make one pdf)

Unit I
FM-25

1 Answer the following questions (any 5) $5 \times 2 = 10$

- a. What is dendrogam?
- b. What is allopatric speciation?
- c. What is echolocation?
- d. What is altruism?
- e. What is cladistics?
- f. What is discontinuous distribution?
- g. What is Fixed action pattern?
- h. What are ring species?

GROUP A

Answer the following questions (any 1)

2. What is Biological species concept? What is the difference between sympatric and parapatric speciation? (2+3)
3. Elaborate primary and secondary types. What are the applications of these types? (3+2)

GROUP B

Answer the following questions (any 1)

4. What is natural selection? Elaborate with examples stabilizing, directional and disruptive selection. (2+3)
5. What is genetic drift? Elaborate founder effect and population bottleneck. (1+2+2)
6. Elaborate avian and mammalian distribution in Ethiopian and Neo-tropical realm. (5)
7. 100 persons from a small town in Kolkata were tested for their MN blood types. The genotypic data are: MM 41; MN 38 and NN 21. Calculate gene frequency of M and N. (5)

GROUP C

Answer the following questions (any 1)

8. Write a short note on bee dance. What is instinctive and learning behavior? (3+2)
9. What is reciprocal altruism? Explain with example. (2+3)

UNIT – II
F.M – 25

Answer Q.1 and any 3 from the rest

1. Answer any five questions 2 x 5
 - a. What is Ramsar site ? Name two such sites found in India .
 - b. What are the characteristics of pioneer species ?

- c. Give full form of IUCN and CITES .
- d. Distinguish between dispersion and dispersal .
- e. Define – Multidimensional niche .
- f. Define – Hot spot site . Give example .
- g. Define – wetlands .
- h. What is guild community ?
- 2. How carrying capacity is it used to frame the logistic model to introduce a mechanism of density dependent population regulation ? What do you mean by Protected area network? 3+2
- 3. Explain that 'No two species can coexist if they occupy the same niche ' . Distinguish between National park and Sanctuary. 3+2
- 4. What is the basis of inhibition and tolerance model of Connell and Slatyer in ecological succession ? What is the ecological equivalent species? What is environmental auditing? 2+1+2
- 5. What is Lincoln index ? What do you mean by the terms – Core, Buffer, Transitional zone? 2+3
- 6. Draw and describe the Y shaped model of energy flow. What do you mean by EIS ? 3+2
- 7. Comment on the survivorship curve of human. Define - Biotic potential. What do you mean by agroforestry ? 2+1+2