

2021

ZOOLOGY — HONOURS

Third Paper

(Unit - II)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer **question no. 1** and **any two** questions from **Group-A** and **any two** questions from **Group-B**.

1. Answer **any five** questions : 2×5
- (a) What do you mean by Eltonian pyramid?
 - (b) Define biotic potential.
 - (c) Distinguish between dispersal and dispersion.
 - (d) What is Ramsar site? Name one Ramsar site of West Bengal.
 - (e) Write down the full forms of CITES and IUCN.
 - (f) Differentiate 'ex-situ' conservation from 'in-situ' conservation.
 - (g) What are the characteristics of a pioneer species?
 - (h) Name two biodiversity hotspots of India.

Group - A

2. (a) A record of survey in 2018 revealed that a *Tylotriton* sp. population was composed of 800 individuals. 35 individuals were born and 10 individuals were died during that year. Calculate the population growth rate. 4+3+3
- (b) Mention the causes of *El Nino*.
- (c) State the ecosystem services provided by wetland. 4+3+3
3. (a) What is carrying capacity? How is it used to frame the logistic model to introduce a mechanism of density dependent population regulation? (2+4)+3+1
- (b) Illustrate the Y-shaped model of energy flow with diagram.
- (c) Define 'life table'. (2+4)+3+1
4. (a) Mention the basis of inhibition and tolerance model of Connell and Slatyer in ecological succession.
- (b) Narrate the features of detritivorous food chain.

Please Turn Over

(c) Distinguish between 'ecotone' and 'edge effect'.

(d) What do you mean by ecological efficiency?

(2+2)+2+2+2

5. (a) Make a comparison between r-selected and k-selected species.

(b) Explain xerosere and hydrosere.

(c) What is intraspecific competition? Give suitable example.

4+(2+2)+2

Group - B

6. (a) Distinguish between National Park and Biosphere Reserve.

(b) What are social forestry and agroforestry?

(c) Explain the terms— core zone, buffer zone and wildlife corridor.

2+2+(2×3)

7. (a) Enlist the causes behind 'Man–Elephant Conflict'.

(b) What is environmental auditing? Mention the steps involved in EIA.

(c) What is EIS?

3+(2+3)+2

8. (a) Mention the role of NGO's in wildlife conservation in India.

(b) State the interrelationship between α –, β – and γ – diversity.

(c) Enlist the causes of wildlife depletion in India.

3+3+4

9. Write brief notes on (*any two*) :

5×2

(a) Red Data Book

(b) 'Keystone species' and 'Flagship species'

(c) Arabari Model for conservation of Sal forest

(d) Project Tiger.
