

2020
ZOOLOGY
[HONOURS]
Paper : VI

Full Marks : 50

Time : 2 Hours

*The figures in the right-hand margin indicate 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) Define 'ecotype' and 'ecocline'.
- b) What is umbrella species?
- c) Distinguish between 'potential' and 'realized' natality.
- d) Name the causative agents of 'Knock-knee Disease' and 'Itai-Itai disease'.
- e) What do you mean by Biomonitoring?
- f) What is biotic potential?

g) Write about the differences between fundamental niche and realized niche.

h) What do you mean by Biodiversity Hot Spots? Give example.

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

a) What is resource partitioning? Explain how resource partitioning influence competition.

 $2 + 3 = 5$

b) Differentiate between r-selected and k-selected species. Comment on r and k strategies.

 $3 + 2 = 5$

c) Briefly explain about the causes of ozone layer depletion. What are the major effects of this depletion?

 $3 + 2 = 5$ 3. Answer any **three** questions of the following: $10 \times 3 = 30$

a) i) State the differences between 'S'-shaped and 'J'-shaped growth curves.

ii) Define net reproductive rate.

iii) Give an account of the nature of energy flow through an ecosystem with the help of suitable models.

 $3 + 1 + 6 = 10$

b) i) Illustrate the phenomenon of bio-magnification.

ii) What do you mean by Ramsar site? Name any two such sites in India.

iii) Why are wetlands important?

$$3+2+(\frac{1}{2}+\frac{1}{2})+4=10$$

c) i) Explain survivorship curves plotted on the basis of survivors and age with examples of each type.

ii) Draw a Y-shaped energy flow model and illustrate its components to show of energy and its significance. 5+5=10

d) What is Red data book? State the criteria for inclusion in Scheduled-I. What is the utility of such type of listing? Define endangered and critically endangered animals. Determine the category of following animals according to IUCN Red list:

Gharial, Pygmy hog, Great Indian Bustard, Leatherback turtle, Wild ass, Wild dog.

$$1\frac{1}{2}+1\frac{1}{2}+1+1\frac{1}{2}+1\frac{1}{2}+3=10$$

e) What is ecological pyramid? When an ecological pyramid will be inverted? Write

short note on Project Tiger of India. What is Allen's rule? 1+2+5+10
