

Time: - 3 Hours

Marks: - 100

Note: -

- 1) All questions are compulsory.
- 2) All questions carry equal marks.
- 3) Draw neat and labeled diagrams wherever necessary.

Q1) A) Fill in the blanks choosing the correct options given in the bracket and rewrite the sentence: (5 marks)

- a) An urn shaped graph of age structure indicates a _____ population. (stable, declining, fast growing)
- b) _____ is a nitrogen fixing bacteria found in the root nodules of leguminous plants. (*Escherichia*, *Rhizobium*, *Mycobacterium*)
- c) Interaction between two species, in which one is benefitted and the other is injured is called as _____. (Mutualism, Parasitism, Anti-biosis)
- d) The role and position a species has in its environment is called as its ecological _____. (niche, behaviour, trophic level).
- e) The _____ is the national heritage animal of India. (Tiger, Elephant, Lion)

B) Match the columns I and II and rewrite: (5 marks)

- | Column I | Column II |
|----------------------|-------------------------|
| a) Head louse | i) Pond |
| b) Pirotan Island | ii) Red data book |
| c) Lentic ecosystem | iii) Bandipur Sanctuary |
| d) Red-slender Loris | iv) Ectoparasite |
| e) IUCN | v) Gulf of Kutch |

C) State whether true or false. (5marks)

- a) The loss of individual in a population under actual environmental condition is called potential mortality.
- b) Animals that are at extremely high risk of extinction in the wild are termed as critically endangered species.
- c) Decomposers are also known as saprophytes.
- d) Climate change is an intrinsic factor for regulation of population growth.
- e) Jim Corbett national park is the oldest national park in India.

D) Answer the following in one sentence:

(5marks)

- a) What is Ramsar Convention?
- b) Define fecundity.
- c) Define commensalism.
- d) What are heterotrophs?
- e) Define ecosystem.

Q2) A) What are survivorship curves? Describe their types with examples. (10 Marks)

OR

Q2) A) Describe the population growth patterns. (10 Marks)

Q2) B) Write short note on any two (10 Marks)

- a. Sex ratio.
- b. Population distribution patterns.
- c. Natality.
- d. Measurement of population density

Q3) A) Explain the impact of temperature on biota. (10 Marks)

OR

Q3) A) What are ecological pyramids? Describe its different types (10 Marks)

Q3) B) Write note on any twos (10 Marks)

- a. Mutualism.
- b. Food webs.
- c. Abiotic components of lotic ecosystem.
- d. Sulphur cycle.

Q4) Answer any two from the following: (20 marks)

- a) What is ecotourism? Describe few eco-destinations in India.
- b) Write note on Kaziranga national park.
- c) Give an account of Sanjay Gandhi national park.
- d) Describe the management strategies and achievements of project Tiger in India.

Q5) Write short notes on (any Four) (20 marks)

- a) Life tables.
- b) Malabar Civet.
- c) Effects of biopiracy.
- d) Extrinsic mechanism for population growth regulation.
- e) Oxygen cycle.
- f) Stratification of ponds and lakes.