

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.

**Q.P.code:51573**

**D) Answer the following in one sentence:**

**(5marks)**

- What is Ramsar Convention?
- Define fecundity.
- Define commensalism.
- What are heterotrophs?
- 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)**

- Sex ratio.
- Population distribution patterns.
- Natality.
- 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 two**

**(10 Marks)**

- Mutualism.
- Food webs.
- Abiotic components of lotic ecosystem.
- Sulphur cycle.

**Q4) Answer any two from the following:**

**(20 marks)**

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

**Q5) Write short notes on (any Four)**

**(20 marks)**

- Life tables.
- Malabar Civet.
- Effects of biopiracy.
- Extrinsic mechanism for population growth regulation.
- Oxygen cycle.
- Stratification of ponds and lakes.