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**63 (FY)SEM-3/MAJ/ZOOMAJ2024**

**2025**

**ZOOLOGY**

Paper : ZOOMAJ2024

**(Principles of Ecology and Animal Behaviour)**

Full Marks : 50

Pass Marks : 20

Time : Two hours

***The figures in the margin indicate full marks for the questions.***

1. Choose the correct answer :  $1 \times 5 = 5$
- (a) Which of the following is not a feature of 'r' selected species ?
- (i) Reproduce quickly
  - (ii) The low survival rate of progenies
  - (iii) Reproduce a large number of progenies
  - (iv) Paternal Care

- (b) In a natural ecosystem, which pyramid can never be inverted?
- Pyramid of number
  - Pyramid of energy
  - Pyramid of biomass
  - All can be inverted
- (c) In a food chain, secondary producers are—
- Omnivores
  - Herbivores
  - Carnivores
  - Decomposers
- (d) Which of the following involves trial and error learning?
- Habituation
  - Classical conditioning
  - Operant conditioning
  - Sensitization
- (e) Chemical signals between individuals of the same species are called—
- Endogenous

- Hormones
- Enzymes
- Pheromones

2. Answer the following questions : **(any five)**  
2×5=10

- What do you understand by life table?
- Distinguish between detritus food chain and grazing food chain.
- Differentiate between primary succession and secondary succession.
- What is waggle dance?
- Write *two* characteristics of population.
- What do you mean by climax community?
- What do you mean by conditional reflex?

3. Answer the following questions : **(any five)**  
5×5=25

- Explain J-shaped and S-shaped population growth curve with proper diagram.  
2½+2½=5

- (b) State and explain the characteristics of a community.
- (c) What is an ecological pyramid? Mention its types.
- (d) Write a short note on the types of survivorship curves.
- (e) What are the causes of ecological succession? What is ecological efficiency? 4+1=5
- (f) Differentiate between hormonal and neural controlled behaviour.
- (g) Write briefly on homing behaviour.
- (h) Write a short note on imprinting. 5

4. Answer the following questions: **(any one)**  
10×1=10

- (a) What are the types of learning? Explain the concept of conditional learning with the help of Skinner experiment.  
2+8=10
- (b) What is autecology and synecology? Describe the different levels of ecological organisation.  
2+8=10