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(CBCS)

(6th Semester)

ZOOLOGY

TWELFTH (B) PAPER

(Animal Ecology and Wildlife)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. What is a competition between the individuals of two separate species for sharing the same resources in the same area?

(a) Apparent competition ()

(b) Interspecific competition ()

(c) Interference competition ()

(d) Intraspecific competition ()

2. Which of the following subsequent pyramids can either be upright or inverted?

(a) Pyramid of number () (b) Pyramid of energy ()

(c) Ecological succession () (d) Age structure ()

3. Which are the abiotic components of an ecosystem?

(a) Protists, bacteria, CO₂ ()

(b) Water, rocks, fungi ()

(c) Calcium, oxygen, plants ()

(d) Soil, carbon, nitrogen ()

4. Which of the following biochemical cycles is without an atmospheric component?
- (a) Nitrogen cycle () (b) Oxygen cycle ()
(c) Phosphorus cycle () (d) Carbon cycle ()
5. According to Shelford's law of tolerance, the organisms with wide environmental factor tolerance limit show
- (a) narrow distribution with low population size ()
(b) wide distribution with high population size ()
(c) narrow distribution with high population size ()
(d) wide distribution with low population size ()
6. A group of individuals from different species living in the same habitat and exhibiting functional interactions is called
- (a) biotic community () (b) population ()
(c) ecosystem () (d) ecological niche ()
7. Age-specific mortality rate counts
- (a) all births ()
(b) all deaths ()
(c) only births in specific age group ()
(d) only deaths in specific age group ()
8. Human activities affect species diversity by
- (a) decline in population growth in humans ()
(b) conserving the forests ()
(c) over-exploitation of humans ()
(d) decrease in the pollution caused by industries ()
9. The important message conveyed by the 'Chipko Movement' is
- (a) to involve the community in wildlife conservation effort ()
(b) to involve the community in forest conservation effort ()
(c) to ignore the community in forest conservation efforts ()
(d) to cut down forest trees for developmental activities ()

10. The World Wildlife Day will be celebrated under the theme
- (a) Recovering Key Species for Ecosystem Restoration ()
 - (b) Forests and Livelihoods : Sustaining People and Planet ()
 - (c) Partnerships for Wildlife Conservation ()
 - (d) Sustaining all Life on Earth ()

(SECTION : B—SHORT ANSWER)

(Marks : 15)

Write short notes on the following :

3×5=15

UNIT—I

1. Ecosystem

OR

2. Food webs

UNIT—II

3. Sulfur cycle

OR

4. Hydrological cycle

UNIT—III

5. Limiting Factors

OR

6. Greenhouse effect

UNIT—IV

7. Population density

OR

8. Mortality

UNIT—V

9. Anthropogenic activities

OR

10. Wildlife conservation

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following questions :

10×5=50

UNIT—I

1. Define ecology. How does energy flow in the ecosystem?

2+8=10

OR

2. Write short notes on :

5+5=10

(a) Food chain

(b) Intraspecific interaction

UNIT—II

3. Write a detailed note on cycling of nitrogen in the ecosystem.

10

OR

4. Describe the detailed steps involved in carbon cycles.

10

UNIT—III

5. What is law of limiting factors? Explain the Liebig-Blackman law of limiting factors.

2+8=10

OR

6. Write short notes on :

5+5=10

(a) Global warming

(b) Ecological succession

UNIT—IV

7. What is species diversity? Write a detailed note on factors affecting species diversity. 2+8=10

OR

8. Write short notes on : 5+5=10
(a) J-shaped curve
(b) Species richness

UNIT—V

9. What are natural resources? Give an account of different natural resources and the means of their conservation. 2+8=10

OR

10. Define wildlife. Describe various measures taken for the wildlife management in India. 2+8=10
