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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. Charles Elton (1947) defined ecology as

- (a) scientific study of natural history ()
- (b) study of the structure and function of ecosystem ()
- (c) the total relation of the animal to both its organisms ()
- (d) the study of the aquatic ecosystem ()

2. What is the graphical representation of the relationship (producers forming the base and top carnivores forming the tip) between the individuals present in various trophic levels of food chain called?

- (a) Ecological succession ()
- (b) Ecological pyramid ()
- (c) Ecological problems ()
- (d) Ecological services ()

3. Atmospheric state is absent in

- (a) carbon cycle ()
- (b) nitrogen cycle ()
- (c) sulphur cycle ()
- (d) phosphorus cycle ()

4. The amino group (-NH) is liberated from organic molecules to form ammonia is called
 (a) nitrification () (b) deamination ()
 (c) denitrification () (d) combustion ()
5. How many types of ecological succession are there?
 (a) One () (b) Two ()
 (c) Three () (d) Six ()
6. Law of Tolerance was formulated by V. E. Shelford in
 (a) 1910 () (b) 1911 ()
 (c) 1912 () (d) 1913 ()
7. The transitional series of communities which develop in a given area is
 (a) climax () (b) sere ()
 (c) community () (d) ecesis ()
8. Number of species and its abundance in an area is
 (a) species diversity () (b) density ()
 (c) community () (d) species richness ()
9. The Forest (Conservation) Act was amended in
 (a) 1998 () (b) 1952 ()
 (c) 1988 () (d) 1958 ()
10. In which year the Wildlife Protection Act was implemented in India?
 (a) 1970 () (b) 1971 ()
 (c) 1972 () (d) 1973 ()

(SECTION : B—SHORT NOTE)

(Marks : 15)

Write short notes on the following :

3×5=15

UNIT—I

1. Food web

OR

2. Ecological climax

UNIT—II

3. Nitrogen cycle

OR

4. Phosphorus cycle

UNIT—III

5. Global warming

OR

6. Limiting factors

UNIT—IV

7. J-shaped curve

OR

8. Natality

UNIT—V

9. IUCN Red List

OR

10. Vulnerable species

(SECTION : C—DESCRIPTIVE)

(Marks : 50)

Answer the following questions :

10×5=50

UNIT—I

1. Define intraspecific and interspecific interactions. What are the types of ecosystems?

2+8=10

OR

2. What are ecological pyramids? Describe the different types of ecological pyramids.

10

UNIT—II

3. Write short notes on the following : 5+5=10
(a) Carbon cycle
(b) Sulphur cycle

OR

4. Describe the detailed steps involved in hydrological cycle. 10

UNIT—III

5. Write short notes on the following : 5+5=10
(a) Ecological succession
(b) Biotic community

OR

6. Write short notes on the following : 5+5=10
(a) Shelford's Law of Tolerance
(b) Greenhouse Effect

UNIT—IV

7. What are population growth curves? Describe in detail the S-shaped curve. 2+8=10

OR

8. Differentiate between mortality and natality. What are Sorensen's and Shannon-Wiener indices? 5+5=10

UNIT—V

9. What are endangered species? Write in detail on how to conserve natural resources in your locality. 2+8=10

OR

10. What is anthropogenic activity? Describe the various measures taken for wildlife management in India. 2+8=10
