

2024

( 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. Ecological pyramid is always upright in

- (a) pyramid of biomass ( ) (b) pyramid of energy ( )  
(c) pyramid of number ( ) (d) None of the above ( )

2. The term 'ecology' was coined by

- (a) Taylor ( ) (b) Charles Elton ( )  
(c) Ernst Haeckel ( ) (d) Odum ( )

3. The main source of all the fixed carbons both in the living organism and fossil deposit is

- (a) CO ( ) (b) CO<sub>2</sub> ( )  
(c) CH<sub>4</sub> ( ) (d) COOH ( )

4. Which of the following cycles leads to the formation of a weak sulphuric acid?

- (a) Carbon cycle ( ) (b) Nitrogen cycle ( )  
(c) Sulphur cycle ( ) (d) Phosphorus cycle ( )

5. The species which have much greater influence on a community are  
 (a) link species ( ) (b) keystone species ( )  
 (c) endangered species ( ) (d) cryptic species ( )
6. The final stage of succession in a community is  
 (a) nudation ( ) (b) invasion ( )  
 (c) reaction ( ) (d) climax ( )
7. The number of population per unit area is  
 (a) mortality ( ) (b) natality ( )  
 (c) density ( ) (d) fecundity ( )
8. The number of different species in a given community is called  
 (a) species diversity ( ) (b) species evenness ( )  
 (c) species abundance ( ) (d) species radiation ( )
9. Periyar National Park in Kerala is preserving the  
 (a) wild elephant ( )  
 (b) one-horned rhinoceros ( )  
 (c) Asiatic lion ( )  
 (d) Royal Bengal tiger ( )
10. In India, Project Tiger was initiated in  
 (a) 1970 ( ) (b) 1971 ( )  
 (c) 1972 ( ) (d) 1973 ( )

**( SECTION : B—SHORT ANSWERS )**

( Marks : 15 )

Write short notes on the following :

3×5=15

UNIT—I

1. Interspecific interaction

**OR**

2. Ecology

UNIT—II

3. Denitrification

OR

4. Symbiotic nitrogen fixation

UNIT—III

5. Secondary succession

OR

6. Liebig's law of the minimum

UNIT—IV

7. Natality

OR

8. Species richness

UNIT—V

9. Non-renewable resources

OR

10. Keystone species

( SECTION : C—DESCRIPTIVE )

( Marks : 50 )

Answer the following questions :

10×5=50

UNIT—I

1. What is ecological pyramid? Explain the different types of ecological pyramid with suitable example.

2+8=10

OR

2. Write short notes on :

5+5=10

(a) Detritus food chain

(b) Food web

## UNIT—II

3. Explain the process involved in hydrological cycle with diagram. 10

**OR**

4. Describe the detailed process of phosphorus cycle with suitable diagram. 10

## UNIT—III

5. What is greenhouse effect? Write the causes and effect of greenhouse effect. 10

**OR**

6. Write short notes on : 5+5=10  
(a) Shelford's law of tolerance  
(b) Biotic community concept

## UNIT—IV

7. Write short notes on : 5+5=10  
(a) Sorensen's indices  
(b) Shannon-Wiener indices

**OR**

8. Write short notes on : 5+5=10  
(a) Species diversity  
(b) S-shaped population growth curve

## UNIT—V

9. Discuss the international programmes associated with wildlife management and conservation. 10

**OR**

10. Discuss the role of anthropogenic activity towards the environment. 10

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