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**1 SEM TDC ZOOH (CBCS) C 2**

**2 0 2 4**

( November )

**ZOOLOGY**

( Core )

Paper : C-2

( **Principle of Ecology** )

Full Marks : 53

Pass Marks : 21

Time : 3 hours

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

1. Fill in the blanks (any five) : 1×5=5

(a) The term 'biodiversity' was coined by  
\_\_\_\_\_.

(b) A group of population of different  
species living together in an area  
interacting with each other is called  
\_\_\_\_\_.

(c) The first biosphere reserve established  
in India is \_\_\_\_\_.

( 2 )

- (d) An \_\_\_\_\_ is a transition area between two biological communities, where two communities meet and integrate.
- (e) In the carbon cycle, the human body returns carbon to the atmosphere through \_\_\_\_\_ respiration.
- (f) In grassland ecosystem, pyramid of energy is \_\_\_\_\_.
2. Write short notes on any *four* of the following :  $5 \times 4 = 20$
- (a) Carbon cycle
- (b) Biosphere
- (c) Grassland ecosystem
- (d) Biotic components of a pond ecosystem
- (e) Shelford's law of tolerance
- (f) Lotka-Volterra equation for competition
3. Define ecosystem. Write a brief account of the structure and function of a typical ecosystem.  $2+3+2=7$

Or

Define food web. Explain linear and Y-shaped food chain system.  $1+3+3=7$

( 3 )

4. Write the differences between—
- (a) in-situ and ex-situ conservations;
- (b) grazing and detritus food chains.  $3+3=6$
5. What is biodiversity? Discuss the man-elephant conflicts that occur in N-E India.  $2+5=7$
6. Write notes on any *two* of the following :  $4 \times 2 = 8$
- (a) ICUN red lists
- (b) Invasive alien species
- (c) Hotspots of Indian biodiversity

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