

2017

ZOOLOGY

( Major )

Paper : 2·2

( Ecology, Wildlife Conservation  
and Management )

Full Marks : 60

Time : 3 hours

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

1. Choose the right answer of the following :  $1 \times 7 = 7$
- (a) The structural and functional unit of Ecology is
- (i) biome
  - (ii) ecosystem
  - (iii) biosphere
  - (iv) All of the above
- (b) The first 'Project Tiger' was established at Manas National Park in the year
- (i) 1970
  - (ii) 1972
  - (iii) 1973
  - (iv) 1975

- (c) Which of the following is not a function of an ecosystem?
- (i) Unidirectional flow of energy
  - (ii) Material cycling
  - (iii) Eating and being eaten
  - (iv) Algal bloom
- (d) UNESCO 'Man and Biosphere Program' was launched in the year
- (i) 1952
  - (ii) 1968
  - (iii) 1970
  - (iv) 1992
- (e) PAN is an example of
- (i) primary air pollutant
  - (ii) secondary air pollutant
  - (iii) primary water pollutant
  - (iv) secondary water pollutant
- (f) \_\_\_\_\_ is the mother of all biogeochemical cycles.
- (i) Sedimentary cycle
  - (ii) Gaseous cycle
  - (iii) Hydrological cycle
  - (iv) Nitrogen cycle

(g) What component does a food chain usually start with?

(i) Parasite

(ii) Predator

(iii) Producer

(iv) Consumer

2. Answer any *four* of the following : 2×4=8

(a) What is biomagnification?

(b) What do you understand by edge effect?

(c) State at least two differences between a Wildlife Sanctuary and a National Park.

(d) What is 'competitive exclusion principle'?

(e) "All environmental factors are environmental components but all components are not factors." Why?

3. Elucidate in brief any *three* of the following :

5×3=15

(a) Two negative population interactions as biotic factors

(b) Protective behaviour in wild animals

(c) Captive breeding as a tool of ex-situ conservation of wildlife

(d) Ecosystem energetics

(e) Ethology of golden langur

4. What is an ecological niche? Describe various types of niche with suitable examples. 2+8=10

*Or*

Define wildlife. Write in brief why wildlife should be conserved with special reference to its values. 2+8=10

5. What do you understand by carrying capacity? Explain the role of carrying capacity in the management of wildlife population in protected areas. 2+8=10

*Or*

What are biogeochemical cycles? Give an account of nitrogen cycle as an example of gaseous cycle. Why is it not a sedimentary cycle? 2+6+2=10

6. Define pollution. Discuss the causes of soil pollution and state how it can be prevented. 2+6+2=10

*Or*

Describe the process of energy flow through a grazing food chain. 10

\*\*\*