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 : 1×7=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

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