

(6 pages)

Reg. No. : .....

Code No. : 5445

Sub. Code : ZZOM 13

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

First Semester

Zoology – Core

ENVIRONMENTAL BIOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. The environmental protection act was promulgated in the year  
(a) 1974 (b) 1961  
(c) 1986 (d) 1972
2. If two species use the same resources then they are said to compete and their interaction is known as  
(a) Composition (b) Genera  
(c) Transformation (d) Competition

7. The energy flow in an ecosystem can be depicted in the form of a  
(a) Food pyramid  
(b) Energy pyramid  
(c) Biomass pyramid  
(d) Both (a) and (b)
8. Which is the renewable energy in the following  
(a) Petroleum (b) Natural gas  
(c) Solar energy (d) Coal
9. The first national park in India is  
(a) Satpura National Park  
(b) Panna National Park  
(c) Kaziranga National Park  
(d) Jim Corbett National Park
10. Tamilnadu pollution control board was established in the year  
(a) 1975 (b) 1980  
(c) 1982 (d) 1970

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3. Distribution of individuals within a population  
(a) Dispersal  
(b) Dispersion  
(c) Regulation of population  
(d) Population fluctuations
4. Symbiosis is an animal association, where  
(a) One partner is benefited  
(b) No partner is harmed  
(c) Both partners are harmed  
(d) Both partners are benefited
5. In Ecological succession the final stable community is known as,  
(a) Final community  
(b) Climax community  
(c) Ultimate community  
(d) Seral community
6. The species that are responsible for making characteristics of the community are called  
(a) Recessive species  
(b) Dominant species  
(c) Special species  
(d) High performer species

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Light is an important Ecological external factor of organisms – Discuss.  
Or  
(b) Describe the concept of character displacement.
12. (a) Trace the evolution of life history strategies.  
Or  
(b) Give an account on population growth curves.
13. (a) Explain the concept of climax.  
Or  
(b) Describe the types of stratifications in community.
14. (a) Write a brief account on physico-chemical aspects of marine ecosystem.  
Or  
(b) Briefly discuss about Biome system.

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[P.T.O.]

15. (a) Give an account on 'Project Tiger'.

Or

(b) Briefly discuss Biodiversity 'Hot Spot'.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write an account on the interaction of biotic and abiotic components.

Or

(b) Describe the ecological niche and habitat.

17. (a) Distinguish between intraspecific and interspecific competition.

Or

(b) Give an account on population regulation.

18. (a) What is ecological succession? Describe its types and general process.

Or

(b) Define community and describe its structure stratification and components.

19. (a) Describe the biogeographic zones in India and also zoogeographical realms.

Or

(b) Briefly explain the concept of energy flow in an ecosystem.

20. (a) Explain sources, effects and control measures of air pollution.

Or

(b) What is biodiversity? Explain the reason for the loss of biodiversity.