

M. Sc. (ZOOLOGY)

(MSCZOO)

Term-End Examination

June, 2026

MZO-007 : PRINCIPLES OF ECOLOGY

Time : 2 Hours

Maximum Marks : 50

Note : (i) Attempt any *five* questions.

(ii) All questions carry equal marks.

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1. (a) Distinguish among gross primary productivity, net primary productivity and net community production. 5
- (b) Describe the phosphorus cycle with suitable diagram. 5

2. (a) Discuss the major types of aquatic biomes, highlighting their classification.

5

- (b) Discuss the characteristics of population highlighting the concepts of dispersion and natality.

5

3. (a) Explain the concept of life history patterns with reference to trade-offs in growth, survival and reproduction. Differentiate between r - and k -selected species.

2+3

- (b) Define the concept of survivorship in populations. Explain the *three* main types of survivorship curves briefly.

2+3

4. (a) Discuss the different approaches of measuring species diversity with suitable examples. 5
- (b) Discuss with suitable examples how biodiversity acts as a life-sustaining service. 5
5. (a) Critically evaluate the significance of the Environment Protection Act (1986) and Biodiversity Act (2002) in biodiversity conservation. 3+2
- (b) Discuss the anthropogenic factors driving climate change. 5
6. (a) Describe the toxicity exerted by various toxicants giving suitable examples. 5
- (b) Critically analyse the use and risk associated with the application of pesticides and other chemicals. 5

7. Write short notes on the following : 5+5

(a) Components of the ecosystem

(b) Biodegradation and bioremediation of
chemicals

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