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AC-234142

**M.Sc. (Semester-I)
Examination, Dec.-Jan. (2025-26)**

ZOOLOGY

(Principles of Ecology)

Time Allowed : Three Hours

Maximum Marks : 70

Note : This question paper is divided into **four** sections. Attempt questions of **all four** sections as per direction. Distribution of marks is given in each section.

SECTION-A

(Objective Type Questions)

Note : Attempt **any ten** questions. Each question carries **1** mark.

[10×1=10]

1. (i) The "World Earth Day" is celebrated on_____.
- (ii) IUCN stands for_____.

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(1)

[P.T.O.]



- (iii) Synecology is the study of _____.
- (iv) _____ is the father of Ecology.
- (v) The main nitrogen reservoir in the biosphere is _____.
- (vi) _____ is the graphical representation of trophic levels in an ecosystem.
- (vii) Law of conservation of energy states that energy is:
- (a) Created
 - (b) Not created
 - (c) Neither created nor destroyed
 - (d) Not created but destroyed
- (viii) A population is a group of:
- (a) Species in a community
 - (b) Communities in an ecosystem
 - (c) Individuals in a species
 - (d) Individuals in a family

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(2)

- (ix) The ecosystem having longest energy transfer time is:
- (a) Tropical rain forest
 - (b) Open ocean
 - (c) Temperate deciduous forest
 - (d) Desert
- (x) Which is not true in a process of succession from pioneering stage to climax stage?
- (a) Biomass increases
 - (b) Food chain to food web
 - (c) Wide niche
 - (d) Dependency on detritus chain increases
- (xi) Recently "Cheetah" is reintroduced in India at which National Park?
- (a) Kanha National Park
 - (b) Kuno National Park
 - (c) Pench National Park
 - (d) Bandhavgarh National Park

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(3)

[P.T.O.]



(xii) Which one is the bioindicator of air pollution?

- (a) Lichen
- (b) Algae
- (c) Butterflies
- (d) All of the above

SECTION-B

(Very Short Answer Type Questions)

Note: Attempt any five questions. Each question carries 2 marks.(Word limit : 25-30 words) : [5×2=10]

- 2.
- (i) Population density
 - (ii) Limiting factor
 - (iii) Commensalism
 - (iv) Renewable source of energy
 - (v) Atmospheric ozone
 - (vi) Environmental stressors
 - (vii) Biotransformation

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SECTION-C

(Short Answer Type Questions)

Note: Attempt any five questions. Each question carries 4 marks.(Word limit : 250 words) [5×4=20]

- 3.
- (i) Molecular ecology
 - (ii) Sustainable development
 - (iii) Biomarker of environmental health
 - (iv) Factors for population growth
 - (v) Global climatic pattern
 - (vi) Accumulation of toxicants
 - (vii) Natural resource management

SECTION-D

(Essay Type Questions)

Note: Attempt any three questions. Each question carries 10 marks.(Word limit : 500 words) [3×10=30]

4. (i) Describe energy flow in ecosystem.

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[P.T.O.]



- (ii) Describe biogeochemical cycle, its type and importance in ecosystem.
- (iii) Describe biodiversity assessment, conservation and management.
- (iv) Describe environmental stresses and their management.

—x—