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M. Sc. (Final) Examination, 2020-21

[Third Semester]

(CBCS System)

ZOOLOGY

Principles of Ecology [ZOOL-301]

Paper : I

Time : Three Hours] [Maximum Marks : 70

Note : There are **three** Sections **A, B, & C** and candidate has to attempt question from all Sections.

SECTION – A

1. Answer **all** parts of the following : $4 \times 4 = 16$
- (a) Composition of lithosphere
 - (b) Ecotone and edge effect
 - (c) Population interaction
 - (d) r and k selected populations

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SECTION – B

Note : Answer **all** questions of the following :

$6 \times 4 = 24$

2. (a) Define environment. Discuss environment in terms of Vedic literature.

OR

- (b) Give an account of structure and composition of atmosphere.

3. (a) Define ecosystem. Describe the structure and function of a pond ecosystem.

OR

- (b) What are producers, consumers and decomposers ? Explain their role in ecosystem.

4. (a) Discuss the process of ecological succession.

OR

- (b) Give an account of Energy Flow in an Ecosystem.

- i. (a) What are ecological pyramids ? Explain their various types with suitable examples.

OR

- (b) What are ecological Indicators ? Discuss their role in environmental understanding and awareness.

SECTION - C

Note : Attempt any **two** questions of the following :

$$15 \times 2 = 30$$

6. Describe the evolution of sex and mating systems in animals.
 7. What are biogeochemical cycles ? Discuss phosphorus cycle with the help of a diagram.
 8. Give an account of conservation of wetlands in India.
 9. What is demography ? Give an account of natality and mortality in a population.
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