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1 SEM TDC ZOOH (CBCS) C 2

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(Nov/Dec)

ZOOLOGY

(Core)

Paper : C-2

(Principle of Ecology)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer : 1×5=5

(a) The transfer of food and energy in an ecosystem through a series of organisms is called

- (i) food and energy transfer
- (ii) food chain
- (iii) food web
- (iv) None of the above

- (b) Forest and wildlife are
- (i) renewable resources
 - (ii) non-renewable resources
 - (iii) inexhaustible natural resources
 - (iv) None of the above
- (c) The term 'ecosystem' was first coined by
- (i) Linnaeus
 - (ii) Bentham and Hooker
 - (iii) A. G. Tansley
 - (iv) None of them
- (d) The flow of energy in an ecosystem is
- (i) unidirectional
 - (ii) multidirectional
 - (iii) bidirectional
 - (iv) None of the above
- (e) The main components of an ecosystem are
- (i) the sun and plants
 - (ii) the sun and animals
 - (iii) plants and animals
 - (iv) biotic and abiotic factors

(3)

2. Write short notes on any two of the following : $4 \times 2 = 8$

- (a) Life tables
- (b) r and k strategies
- (c) Survivorship curves

3. Discuss the role of temperature and light in ecosystem. $3 + 3 = 6$

4. Define species diversity. Write briefly about the different forms of species diversity. $2 + 4 = 6$

Or

Discuss briefly about ecotone and edge effect. $3 + 3 = 6$

5. What is biogeochemical cycle? Describe nitrogen cycle. $3 + 5 = 8$

Or

Define ecosystem. Write about the different types of ecosystem with reference to forest ecosystem. $2 + 2 + 4 = 8$

(4)

6. Write short notes on (any two) : $5 \times 2 = 10$

(a) Ecological pyramid

(b) Energy flow in ecosystem

(c) Human modified ecosystem

7. Define population. Explain the Lotka-Volterra equation for competition.

$2 + 8 = 10$
