

3. Write on :—

- (g) Natality and mortality. 4  
 (h) Biotic potential and life table. 4  
 (i) Parasitism. 4

OR

- (j) Age structure and growth curve. 4  
 (k) Mutualism. 4  
 (l) Predation. 4

4. Define community ecology. Describe species diversity, dominance growth form and structure of community.

OR

What are the methods of community study ? Describe with diagram and significance quadrat method. 12

5. Write on :—

- (m) Structure of ecosystem. 4  
 (n) Food chain in grassland ecosystem. 4

AR - 517

Second Semester B. Sc. (Part - I) Examination

**ENVIRONMENTAL SCIENCE**

(Ecology and Environment)

P. Pages : 6

Time : Three Hours ]

[ Max. Marks : 80

- Note :** (1) All questions are compulsory.  
 (2) Draw diagrams wherever required.

1. (A) Fill in the blanks.

- (i) The network of different food chains considered as \_\_\_\_\_.  $\frac{1}{2}$   
 (ii) Lichens are the examples of \_\_\_\_\_ interspecific interrelationship.  $\frac{1}{2}$   
 (iii) The succession taking place over any rocky area called as \_\_\_\_\_.  $\frac{1}{2}$   
 (iv) \_\_\_\_\_ is celebrated as international day of biodiversity.  $\frac{1}{2}$

(B) Choose correct alternatives.

- (i) Which of the following pyramid can never be inverted in a natural ecosystem.  
 (a) Pyramid of biomass  
 (b) Pyramid of Energy

- (c) Both
- (d) None  $\frac{1}{2}$
- (ii) In an ecosystem the main source of energy is
- (a) Heat released during transpiration.
- (b) Solar energy
- (c) Energy stored in plants.
- (d) None  $\frac{1}{2}$
- (iii) Which of the following is the qualitative character used in community study.
- (a) Frequency
- (b) Abundance
- (c) Density
- (d) Life form  $\frac{1}{2}$
- (iv) Hot spots are the regions of high
- (a) Diversity
- (b) Endemism
- (c) Rainfall
- (d) Critically endangered population  $\frac{1}{2}$

(C) Answer in **One** sentences.

- (i) What are three levels of biodiversity ? 1
- (ii) Give the role of decomposers in ecosystem. 1
- (iii) Give the examples of bioindicators in soil pollution. 1
- (iv) What is primary succession ? 1

2. Write on :—

- (a) Temperature as a climatic factor. 4
- (b) Diagrammatic representation of Nitrogen cycle. 4
- (c) Account on sulfur cycle. 4'

**OR**

- (d) Light as a climatic factor. 4
- (e) Diagrammatic representation of carbon cycle. 4
- (f) Account on oxygen cycle. 4

- (o) Components of marine ecosystem. 4

**OR**

- (p) Food chain in forest ecosystem. 4

- (q) Diagrammatic representation of y-shape energy flow model. 4

- (r) Components of cropland ecosystem. 4

6. What is productivity of ecosystem ? Give its types. Describe different methods of productivity measurement.

**OR**

- Focus on ecological succession. Give causes. Describe with diagram hydrosere. 12

7. Write on :—

- (s) Types of biodiversity. 4

- (t) Western ghat as a hot spot. 4

- (u) Indicators of soil pollution. 4

**OR**

- |                                     |   |
|-------------------------------------|---|
| (v) Causes of biodiversity loss.    | 4 |
| (w) Eastern himalaya as a hot spot. | 4 |
| (x) Indicators of water pollution.  | 4 |

