AS–1383

B.Sc. (Part—I) Semester—II Examination

ENVIRONMENTAL SCIENCE

(Ecology and Environment)

Time : Three Hours] [Maximum Marks : 80

Note :— (1) All questions are compulsory.

(2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks with appropriate words :

(i) There are _____ number of biodiversity hotspots in India. ½

(ii) _____ are also called the primary consumers. ½

(iii) Predation is the example of _____ inter specific interrelationship. ½

(iv) The Population of individuals in each age group is called as _____ of that population. ½

(B) Choose the correct alternative and rewrite the following sentences :

(i) In terrestrial ecosystem, the tropic level that would contain the largest biomass : ½

(a) Producer (b) Primary consumer

(c) Secondary consumer (d) Decomposer

(ii) Hot spots are the regins of high : ½

(a) Rain (b) Endemism

(c) Diversity (d) Critical endangered population.

(iii) The shape of quadrat may not be : ½

(a) Square (b) Rectangle

(c) Oval (d) Circle

(iv) Death rate is denoted as : ½

(a) Mortality (b) Natality

(c) Grow rate (d) Age structure

(C) Answer in **ONE** sentence :

(i) Define food chain. 1

(ii) Define community ecology. 1

(iii) What are biodiversity hotspots ? 1

(iv) Define ecology. 1

2. Explain in short :—

(a) Effects of light on animals. 4

(b) Defination and types of biogeochemical cycle. 4

(c) Oxygen cycle. 4

OR

(d) Effect of wind on plants. 4

(e) Steepness of slope as a topographic factor. 4

(f) Sulphur cycle. 4

3. Explain in short :

(g) Population size and density. 4

(h) Age structure of a population. 4

(i) Explain mutualism with suitable examples. 4

OR

(j) Natality of a population. 4

(k) Biotic Potential. 4

(l) Explain predation in brief with example. 4

4. Explain in short :—

(m) Species diversity as a community character. 4

(n) Structure and dominance as a community character. 4

(o) Presence and constance as synthetic character. 4

OR

(p) Physiognomic method of study of community. 4

(q) Frequency as analytical character. 4

(r) Quadrant method of study of community. 4

5. What is energy flow in Ecosystem ? Describe in detail Y-shaped energy flow model with diagram. 12

OR

Describe in detail "pond" ecosystem as a fresh water ecosystem. 12

6. Explain the following —

(s) Digramatic representation of Hydrosere. 4

(t) Chlorophyll method of measurement of productivity. 4

(u) General process of succession. 4

OR

(v) Types of productivity. 4

(w) CO_2 method estimation or measurement of productivity. 4

(x) 'Describe xerosere in brief. 4

7. Define biodiversity. Focus on India as a mega diversity nation. 12

OR

Describe the role of climatic and soil bioindicators in the environment. 12