

M.Sc. DEGREE I SEMESTER EXAMINATION IN
ENVIRONMENTAL TECHNOLOGY
APRIL 2001

ENVIRONMENTAL BIOLOGY

Time: 3 Hours

Maximum Marks: 50

I. Answer any six questions.

(6 x 2 = 12)

1. What is meant by decomposers?
2. Define heterotrophy.
3. What is ammonification?
4. Define the first law of thermodynamics.
5. What is an ecological pyramid?
6. Define sigmoid growth curve.
7. What is gene pool?
8. What are green house gases?

II. Answer any six questions.

(6 x 3 = 18)

1. How do autotrophs fix the energy?
2. Describe briefly the energy flow in the soil component of forest ecosystem.
3. Give a short account of biological significance of nitrogen cycle.

(Turn over)

4. Describe the modern concept of density dependent population pattern.
5. Explain briefly the present status of natality and mortality in Indian human population.
6. Briefly elucidate the views of Dennis chitty on herbivore-vegetation hypothesis.
7. Give a short account of the biota of estuaries.
8. Briefly mention the effects of radioactive elements in terrestrial ecosystem.

(Answer any two questions)
(All questions carry equal marks)

(2 x 5 = 10)

- III. Describe in brief the role of arthropods in enhancing the soil fertility and humification process.
- IV. Write a short essay on the ectocrine theory of succession.
- V. Explain the factors that play in the integration of population.

(Answer any one question)

(1 x 10 = 10)

- VI. Explain the modern concept of the species and nature of speciation.
- VII. Describe in detail the principles and concepts of limiting factors in ecosystem.
- VIII. What are the present views regarding the fixation of non-adaptive characters in a population?