

Time: 3 Hours

- Instructions:
1. It is compulsory to answer all the questions (2 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.
 4. Give the appropriate flow chart/figure wherever required.

PART -A

- Q1 (a) Define vulnerable, endangered and endemic species. (2)
 (b) What are different types of Biomass Energy? Explain. (2)
 (c) What are the ecological and commercial uses of forests? (2)
 (d) What do you mean by sustainable development? Explain its components. (2)
 (e) What are the biotic and abiotic components of an ecosystem? Draw a flow chart. (2)
 (f) Discuss any five methods for the control of air pollution in industries? (2)
 (g) Explain various threats responsible for loss of biodiversity. (2)
 (h) Discuss various methods for the control of soil erosion in agricultural fields. (2)
 (i) What are Ecological pyramids? Explain why some of these pyramids are upright while others are inverted in different ecosystems. (2)
 (j) Describe the terms i) Life Expectancy ii) Zero Population Growth iii) Demographic Transition iv) Population Exponential Growth. (2)

PART -B

- Q2 (a) What are different components of Environment? Explain about multidisciplinary nature of Environmental Studies. (5)
 (b) Why there is a need for public awareness about Environmental issues? Discuss Indian scenario. (5)
- Q3 (a) Discuss about consumptive use value, social value, ethical value and ecosystem service value of biodiversity, giving examples. (5)
 (b) Differentiate between in-situ and ex-situ method of conserving biodiversity. Explain different approaches of these two conservation methods. (5)
- Q4 (a) Give a brief account of non-renewable energy resources. Discuss different types and their feasibility. (5)
 (b) How can you as an individual conserve different natural resources and prevent environmental pollution? (5)
- Q5 (a) Describe about different methods for primary and secondary treatment of sewage in a sewage treatment plant with the help of suitable diagrams. (5)
 (b) Explain about thermal pollution. How does it occur? What are various methods for its control in industries? (5)
- Q6 (a) What is meant by acid rain? How does it form? What are the harmful effects associated with it? (5)
 (b) What is greenhouse effect? What are different greenhouse gases and how they contribute to global warming? What are the effects of global warming? (5)
- Q7 (a) Write a short note on Ecological Succession illustrating its various steps. (5)
 (b) Explain Single and double channel energy flow models in an ecosystem with the help of suitable diagrams. (5)