

Roll No.

Total No. of Pages : 2

Total No. of Questions : 09

B.Tech. (AE) (Sem.-5)
ENVIRONMENTAL SCIENCE

Subject Code : CE-216

Paper ID : [A0718]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

- 1. SECTION-A is COMPULSORY.**
- 2. Attempt any FOUR questions from SECTION-B.**
- 3. Attempt any TWO questions from SECTION-C.**

SECTION-A

(10 × 2 = 20 Marks)

1. (a) Name 2 types of producers.
(b) Distinguish between primary and secondary air pollutants with examples.
(c) What does the following abbreviations stand for :
CFC, BOD, PAN, MPN
(d) Give formulae for determining the population density of a place.
(e) What is the difference between Gross Primary Productivity and Net Primary Productivity?
(f) Name four major environmental laws in India.
(g) What is hazardous waste? What is the best method to dispose off biomedical waste ?
(h) What is biosphere and its subdivisions?
(i) What are threatened species? Name three types in order of the danger of extinction they face.
(j) Give two adverse environmental impacts of modern agriculture.

SECTION-B**(4 × 5 = 20 Marks)**

2. What is ozone depletion? Explain the reactions leading to the formation and destruction of ozone in the stratosphere. Explain the possible impacts of ozone depletion.
3. What are 'hot spots' of biodiversity? What are the causes for the extinction of species? Describe the in-situ and ex-situ conservation of biodiversity.
4. What is 'population explosion'? Discuss the various reasons for human population explosion in a developing country like India.
5. What is noise pollution and its major causes? Describe the adverse affects of noise pollution on human health and how it can be controlled?
6. Define 'energy' and differentiate between conventional and non-conventional energy resources. Discuss the merits and demerits of nuclear energy.

SECTION-C**(2 × 10 = 20 Marks)**

7. (a) What are various economic and ecological services rendered by forests? Discuss major causes and consequences of deforestation. (6)
- (b) What is "sustainable water management". Discuss various water conservation methods and strategies which can be used in agriculture and municipal sectors. (4)
8. (a) What is an ecosystem? Along with a suitable diagram, explain the flow of energy and cycling of nutrients through various components of an ecosystem. How does the flow of energy follow two laws of thermodynamics? (6)
- (b) What are biogeochemical cycles? Along with a well labelled diagram discuss the pathway of water in the hydrologic cycle (water cycle) from oceans to land and back again. (4)
9. (a) What is solid waste? Along with a suitable diagram, explain the process of sanitary landfills for the disposal of municipal solid waste giving merits and demerits associated with it. (6)
- (b) What are point and non-point sources of water pollution? Give the list of various pollutants/contaminants which affect the utility value of water. (4)