

ENVIRONMENTAL SCIENCE

Time : 3 hours

Full Marks : 70

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **NINE** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question No. 1 is compulsory.

1. Answer any seven as directed : $2 \times 7 = 14$

- (a) Minamata disease was caused by the pollution of —.

(Fill in the blank)

- (b) Give the characteristics of thermosphere (altitude, temperature and ions).

- (c) Cadmium pollution in Japan led to — diseases.

(Fill in the blank)

- (d) What is Love Canal episode?

- (e) Name the three gases in atmosphere which cause acid rain.

- (f) What are the causes of Bhopal disaster?

- (g) A 20 ml of sample of effluent water required 8.3 ml of 0.002 $MK_2Cr_2O_7$ in acidic medium for oxidation. COD of sample —.

(Fill in the blank)

- (h) Why is radioactive wastes disposed off in salt mines?

- (i) What is endemism?

- (j) What is lapse rate?

2. (a) What are the sources of water pollution? 4

- (b) Describe different methods to control and remedial measures to curb water pollution. 5

- (c) Discuss the process of aerobic and anaerobic oxidation of sewage. 5

3. (a) What are the various sources of noise? 4

- (b) How noise and noise level are measured? 5

- (c) Describe the approaches and methods of noise control. 5

4. (a) What is ecosystem? Discuss the role of producer, consumers and decomposers in a pond ecosystem. 3+5

- (b) What do you understand by a balanced ecosystem and imbalanced ecosystem? 6

5. (a) What is photochemical smog? 4
(b) Write the mechanism of formation of photochemical smog. 5
(c) How photochemical smog adversely affect the human health? 5

6. (a) Describe the major pollutant emission from thermal power plants, cement and iron industries. Discuss their effect and control. 3+3+4

(b) What is El Nino effect? 4

7. (a) What is biodiversity? Discuss the importance of biodiversity. 8

(b) Giving suitable example, differentiate between food chain and food web in an ecosystem. 6

8. (a) What is soil erosion? Discuss different types of soil erosion. 4

(b) Write conservation method to prevent soil erosion. 5

(c) What are the roles of urban waste in soil pollution? 5

9. Write short notes on the following : $3\frac{1}{2} \times 4 = 14$

(a) Ecological pyramid

(b) Greenhouse effect

(c) Human acoustics

(d) Desertification

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