

M.Sc. CHEMISTRY
Third Semester
ENVIRONMENTAL POLLUTION AND MANAGEMENT (MDC)
(MSC – 306 A)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any *four* from *Question no. 2 to 8*
Question no. 1 is compulsory.

1. (a) What is global warming? [2×5=10]
(b) What is soil pollution?
(c) Explain about E-wastes with some suitable examples.
(d) Mention the segments of environment.
(e) What do you mean by toxic chemicals?
2. (a) Define acid rain. What are the causes of acid rain? [5+5=10]
(b) Explain how does acid rain affects the environment?
3. (a) What is photochemical smog? How does it effect on human health? [5+5=10]
(b) Define eutrophication. Explain about drinking water contamination and water borne diseases.
4. (a) How do you define wastes? [5+2+3=10]
(b) What is Disposal?
(c) How they have been classified?
5. (a) What do you mean by land pollution? Give an account of the origin of soil pollution. [5+5=10]
(b) Discuss about the various adverse effects on environment due to soil pollution.

6. (a) (i) What are the key steps required to minimize wastes? [3+2=5]
(ii) What is pesticides and why they are used?
- (b) Describe different aspects of detergent pollution of water body. [5]
7. (a) What are natural cycles of the environment? How do they sustain life in the biosphere? [5]
(b) Illustrate briefly how carbon cycle is maintained. [5]
8. What are hydrocarbons? What are the sources from which hydrocarbons enter in biosphere? What are the harmful effects caused by it in the biosphere? [2+3+5=10]

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Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Choose the correct answer:

1×13=13

1. Percentage of fresh water available for terrestrial life out of total Earth's water is about
(a) 4.0 (b) 1.0 (c) 6.0 (d) 12.0
2. Identify the natural toxic chemical from the following:
(a) Caffeine (b) Bleaching powder
(c) Battery acid (d) Drain cleaner
3. The metal which is highly toxic
(a) Iron (b) mercury (c) copper (d) silver
4. Which component of detergents is not bio degradable?
(a) ABS (b) LAS
(c) Polyphosphate builders (d) Nitrilo triacetic acid
5. Deforestation causes:
(a) Soil erosion (b) Pollution
(c) No floods (d) None of these
6. Fifth of June is celebrated as:-
(a) World environment day (b) Darwin's birthday
(c) World health and hygiene day (d) World population day
7. Problem of solid waste disposal can be reduced through-
(a) Recycling (b) Lesser pollution
(c) More timber (d) Population control
8. Which of the following gives indication about land pollution?
(a) Change in colour of the soil (b) Change in fertility of the soil
(c) Erosion of the soil (d) All of these
9. Fertilizers are used for-
(a) Producing more crops (b) To increase the fertility of the soil
(c) To kill pests (d) None of these
10. Which one of the following is an example of waste management?
(a) By recycling (b) By dumping of waste material
(c) Throwing of plastic bag (d) All of these

11. Which one of the following waste can produce an adverse effect to the environment in greater extent?

- (a) Biodegradable waste
- (b) Non biodegradable waste
- (c) Both (a) and (b)
- (d) None of these

12. The full form of PAN is-

- (a) Peroxyacetyl nitrates
- (b) Peroxyacetyl nitrites
- (c) Peroxyacetyl nitrogen
- (d) None of these

13. The VOC stands for-

- (a) Volatile organic chemicals
- (b) Volatile organic compound
- (c) Vapour organic chemical
- (d) None of these

II. Fill in the blanks:

1×2=2

1. Ozone causes.....problems on human health.
2. Burning petrol and oil in vehicle engines gives off.....as gases.

III. Tick true or false:

1×5=5

1. Acid rain is basically rain that has a higher than normal acid level (low pH). (True/False)
2. Acid rain can travel long distance. (True/False)
3. About 1/3rd of solar flux received by the Earth is used up to drive Hydrological cycle. (True/False)
4. Photosynthesis is part of both oxygen cycle and carbon cycle. (True/False)
5. All living matter will contain C, H, O and N. (True/False)
