

M.Sc. ENVIRONMENTAL SCIENCE
First Semester
ENVIRONMENTAL POLLUTION
(MEV - 103)

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 *five* of the following questions:

1. What is air pollution? Write the sources of different air pollutants. What are the harmful effects of air pollution? (2+4+4=10)
2. What are the causes and impacts of ozone layer depletion? (5+5=10)
3. Discuss environmental impacts of pesticide pollution. (10)
4. What are the sources and effects of water pollution? (5+5=10)
5. Mention different noise exposure levels. What are the factors responsible for effects of noise pollution? Suggest five noise control measures. (2+3+5=10)
6. What is the importance of soil? Which are the activities that disturb the top layers of soil? Suggest five measures for soil remediation. (2+3+5=10)
7. Write the provisions in Water (Prevention and Control of pollution) Act, 1974 and Air (Prevention and Control of pollution) Act, 1981? (5+5=10)
8. Write short notes on: (any *two*) (5+5=10)
 - a) Global warming
 - b) Radioactive pollution
 - c) Eco mark and ISO certification

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Duration: 20 minutes

Marks – 20

(PART A- Objective Type)

I. Choose the correct answer:

1×20=20

1. Which of the following process does not evolve carbon dioxide in the air?
(a) Burning
(b) Breathing
(c) Organic decay
(d) Photosynthesis
2. Use of leaded gasoline in internal combustion engines causes:
(a) no pollution
(b) more pollution
(c) less pollution
(d) more smoke emission
3. Which of the following is not a greenhouse gas?
(a) Carbon dioxide
(b) CFC's
(c) Carbon monoxide
(d) None of above
4. Which one of the following is not a secondary pollutant?
(a) Smog (b) PAN (c) CO (d) O₃
5. Desirable permissible limits for turbidity in drinking water is:
(a) 0 NTU (b) 5 NTU (c) 10 NTU (d) 20 NTU
6. Cr in soil can exist as:
(a) Cr (II) and Cr (III)
(b) Cr (III) and Cr (V)
(c) Cr (II) and Cr (V)
(d) Cr (III) and Cr (VI)
7. Which pollutant is highly toxic?
(a) CO (b) HC (c) Dust (d) NO_x

8. Suitable equipment for removal of pollutants of metallurgical industries:
- (a) Settling chamber
 - (b) Wet scrubber
 - (c) Baffle scrubber
 - (d) Electrostatic precipitator
9. Which is odourless gas?
- (a) CO
 - (b) SO₂
 - (c) Ozone
 - (d) None of above
10. Which of the following are significant in maintaining the heat budget of the earth?
- (a) Nitrogen and oxygen
 - (b) Ozone and helium
 - (c) Water vapour
 - (d) Water vapour and carbon dioxide
11. Tolerance limits for industrial effluents to be discharged into inland surface waters are:
- (a) BOD: 30 mg/L, Suspended solids: 50 mg/L.
 - (b) BOD: 30 mg/L, Suspended solids: 100 mg/L.
 - (c) BOD: 20 mg/L, Suspended solids: 30 mg/L.
 - (d) BOD: 100 mg/L, Suspended solids: 30 mg/L.
12. Amount (by weight) of water and solids in sewage:
- (a) 90%, 10%
 - (b) 99%, 01%
 - (c) 50%, 50%
 - (d) 100%, 0%
13. In waste water treatment, settleable inorganic solids are removed in:
- (a) Grit chamber
 - (b) Skimming tank
 - (c) Trickling filter
 - (d) Sludge digestion
14. Number of POPs under the Stockholm Convention:
- (a) 10
 - (b) 12
 - (c) 15
 - (d) None of above
15. Why is DDT banned?
- (a) Used against mosquito killing.
 - (b) Highly toxic to human.
 - (c) Kills good insects like butterflies.
 - (d) Long persistence in the environment.

16. Sequence of primary air pollutants in increasing order of concentration:

- (a) NO_x , HC, Particulates, CO, SO_x
- (b) CO, Particulates, SO_x , NO_x , HC
- (c) Particulates, NO_x , HC, CO, SO_x
- (d) NO_x , HC, SO_x , Particulates, CO

17. Acceptable noise levels in silent zone near hospitals and schools:

- (a) 40 dB
- (b) 50 dB
- (c) 65 dB
- (d) 80 dB

18. Which one is the most harmful pollutants for monuments?

- (a) CO
- (b) SO_x
- (c) Both CO and SO_x
- (d) None of above

19. Which one is biological indicator?

- (a) E-coli
- (b) Algae
- (c) Amphibians
- (d) All of above

20. Eutrophication means:

- (a) Enrichment of dissolved nutrients and depletion of DO.
- (b) Increase of nutrients and decrease of TDS.
- (c) Both (a) and (b).
- (d) None.
