

ENVIRONMENTAL CHEMISTRY

I. Environmental Pollution and Environmental Segments:

1. Environment consist of

- A) Atmosphere B) Hydrosphere C) Biosphere
1) A & B 2) B&C 3) C & A 4) A, B, C

2. Which is containment?

- 1) SO_2 2) $COCl_2$ 3) Pb 4) Methyl iso cynate

3. The pollutant is

- 1) Leakage of MIC 2) Oil spills from ships
3) Carbonmonaxide 4) Leakage of CO_2

4. Good quality of water will have

- A) high DO B) high BOD C) high COD
1) A 2) B & C 3) C & A 4) A, B, C

5. Four samples of water A,B,C and D have DO values 2mg/lit, 4mg/lit, 6mg/lit and 8mg/lit respectively. The more polluted sample of water is

- 1) A 2) B 3) C 4) D

6. TLV is the maximum limit of

- A) Pollutant in the atmosphere
B) Toxic substance that do not cause damage to the industrial workers
C) Pollutants that should be present in mines

- 1) A 2) B 3) A & C 4) A,B,C

7. The BOD value of municipal sewage is

- 1) 1ppm 2) 5ppm 3) 5-10ppm 4) 100-400ppm

8. The value of dissolved oxygen in polluted water is

- 1) > 4ppm 2) < 4ppm 3) equal to 4ppm 4) equal to 6ppm

17. **Photochemical oxidants such as PAN & PBN are formed**

A) By the action of nitrogen oxides on hydrocarbons in the presence of sunlight

B) By the action of CO_2 on hydrocarbons in the presence of sunlight

C) By the action of H_2S on hydrocarbon in the presence of sunlight

1) A only

2) B only

3) B & C

4) A & C

18. **In Atmosphere ozone layer is present**

1) Stratosphere

2) Troposphere

3) Mesosphere

4) Thermosphere

19. **Pick up the correct statement**

1) CO which is major pollutant reactivity from the combustion of fuels in automobiles plays a major role in photochemical smog

2) Classical smog has an oxidizing character while the photochemical smog is reducing in character

3) Photochemical smog occurs in the day time whereas the classical smog occurs in the early morning hours.

4) During the formation of smog the level of ozone in the atmosphere goes down

20. **Primary pollutants are**

A) PAN

B) CO

C) NO_2

D) Hydrocarbon

1) A only

2) B & C

3) B, C, D

4) A, B, C

21. **Which of the following type of pollution is not caused by DDT?**

1) Air pollution

2) Water pollution

3) Soil pollution

4) Radioactive pollution

22. **For a healthy aquatic life, amount of DO in water must be equal to (in ppm)**

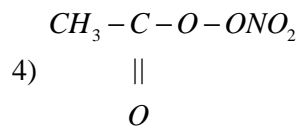
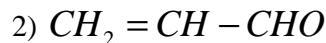
1) 5

2) 4

3) 3

4) 2

23. PAN stands for



24. A secondary pollutant is

1) CO

2) CO_2

3) PAN

4) Aerosol

Note: Each of the following contains Assertion and Reason. Each of these questions also has four options and only one is correct. You have to select one of the code (1), (2), (3), and (4) given below

1) If A & R are correct, and R is the correct explanation

2) If A & R are correct, and R is not the correct explanation

3) If A is correct, but R is not correct

4) If A & R are in correct

25. **Assertion (A):** The medium which is affected by the pollutant is receptor

Reason (R): The medium which reacts with pollutants is sinking

26. **Assertion (A):** Flourosis results if \overline{F} ion concentration exceeds 3ppm in drinking water

Reason (R): Nalgonda Technique is the cheap method for removing \overline{F} ions from drinking water

27. **Assertion (A):** Smaller particles (Size <5microns) causes fibrosis of the lung lining.

Reason (R): They are more likely to penetrate into the lungs

28. **Assertion (A):** Ionosphere contains gases in the ionized form which form the basis for wireless communication

Reason (R): These ions reflect back the radio waves to the earth.

29. **Assertion (A):** CO combines with heamoglobin

Reason (R): It has affinity for heamoglobin

30. **Assertion (A):** Photochemical smog is produced by nitrogen oxides

Reason (R) : Vehical pollution is a major source of nitrogen oxides.

Matching type Questions;

31. Match the following

List-I

List-II

- | | |
|--------|---|
| A) TLV | 1) Oxygen required to oxidize organic substance present in polluted water |
| B) COD | 2) Oxygen used by micro organisms present in water for 5 days |
| C) DO | 3) Oxygen present in water in dissolved state |
| D) BOD | 4) Permissible level of pollutant that can be present in a mine |

The correct match is

- | | |
|-----------------------|-----------------------|
| 1) A-4, B-2, C-1, D-3 | 2) A-4, B-2, C-3, D-1 |
| 3) A-4, B-1, C-3, D-2 | 4) A-4, B-3, C-2, D-1 |

32. Match the following

List-I

List-II

- | | |
|-----------------|-------------|
| A) Mesosphere | 1) 0-11 Km |
| B) Troposphere | 2) 11-20 Km |
| C) Stratosphere | 3) 50-55Km |
| D) Thermosphere | 4) 85-500Km |

The correct match is

- | | |
|-----------------------|-----------------------|
| 1) A-4, B-3, C-2, D-1 | 2) A-3, B-2, C-2, D-4 |
| 3) A-4, B-3, C-1, D-2 | 4) A-4, B-2, C-3, D-1 |

33. Match the following

List-I(Pollutant)

- A) Micro organism
- B) Plant nutrient
- C) Sediments
- D) Mineral Acids

List-II (Source)

- 1) Chemical fertilizes
- 2) Abandoned Coal mines
- 3) Domestic Sewage
- 4) Erosion of Soil by strip mining
- 5) Detergents

The correct match is

- 1) A-2, B-5, C-3, D-1
- 2) A-3, B-1, C-4, D-2
- 3) A-4, B-2, C-5, D-1
- 4) A-1, B-3, C-2, D-4

KEY

1. 4	2. 4	3. 3	4. 1	5. 1	6. 2	7. 4	8. 2	9. 4	10. 3
11. 2	12. 4	13. 4	14. 2	15. 3	16. 3	17. 1	18. 1	19. 4	20. 3
21. 3	22. 1	23. 4	24. 3	25. 2	26. 2	27. 1	28. 1	29. 1	30. 3
31. 3	32. 2	33. 2							

HINTS

- 4) Greater the Do value greater the quality of water
- 5) Lesser the Do value greater this pollution
- 14) Greater the COB value greater the pollution
- 24) Secondary pollutant is termed from primary pollution
- 32) Troposphere - 0-11
- Stratosphere - 11-50
- Neosphere - 50-85
- Thermosphere - 85-500