Environmental Chemistry – 2

Acid rains, Depletion of Ozone layer, Global Warming and Green Chemistry

1. Which is responsible for ozone depletions?

1) Hydrocarbons 2) CO_2 3) CO 4) CFC'S

2. In the atmosphere the presence of which can form brown ring with $FeSO_4$

1) NO 2) N_2 3) NO_2 4) N_2O

3. Deactivated filter in activated carbon method for de fluoridation can be activated by

1) Defluoran-1 and deflouran -2

2) Lime, bleaching powder, alive

3) 4% NaOH and $\therefore H_3PO_4$

4) 4% NaCl and 5% H_2SO_4 solution

4. Acid rain contains

1) NaOH 2) KOH

3) H_2SO_4 4) HNO_3, H_2SO_4, HCl

5. The possible hazards of air pollution of air due to

A) Acid rains

B) An increase in the CO_2 level in the atmosphere

C) Photochemical reaction taking place of stratosphere

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

6. Which of the following statement is false?

1) O_3 Layer destroyed by CFC's 2) O_3 participate in smog

3) A product of photochemical smog is CO_2 4) Smog reduces visibility

7. Peeling of ozone umbrella is due to

A) PAN B) Freon's C) CO_2 D) NO

The correct answer is

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

8. The excessive use of phosphates of water softeners leads to aquatic pollution called

1) Denitrification 2) Phosphorylation 3) Deoxygenation 4) Eutrophication

9. CFCs are effective scavengers for ozone due to

1) Photolytic reaction of O_2 producing Cl radicals

2) Photolytic decomposition of O_3 producing O_2

3) Photolytic reactions of oxides of nitrogen

4) Photolytic production of oxides of nitrogen

10. The green house effect is possible is the % of CO_2 is

1) 0.01% 2) 0.03% 3) 0.15% 4) 0.02%

11. It is preferred to bleach paper using

1) NaCl 2) SO_2 3) Cl_2 4) H_2O_2 + catalyst

12. Ozone in stratosphere can reduce the percentage of rays from sun to the extent of

1) 80.4% 2) 90.2% 3) 99.5% 4) 100%

13. The gases evolving from the eruption of valence mainly have

1) CO & CO_2 2) Hydrocarbons 3) $O_3 + NO_2$ 4) $SO_2 + SO_3$

14. When rain is accompanied by a thunder storm, the collected rain water will have a pH value

1) Uninfluenced by occurrence of thunder storm.

2) Which depends on the amount of dust is air.

3) Slightly lower than that of rain water without thunder storm.

4) Slightly higher than that when thunder storm is not there.

15. Ozone layer of stratosphere requires proteins from indiscriminate use of

1) Pesticides 2) Atomic explosions

3) Balloons 4) Aerosols and high flying jets

16. Identify the wrong statement in the following.

1) CFC's are responsible for ozone layer depletions.

2) Acid rain is mostly because oxides of nitrogen & Sulphur.

3) Green house effect is responsible for global warming.

4) Ozone layer does not permit IR radiation from sun reach earth.

17. Depletion of ozone layer over Antarctica takes place

1) In November

2) In Summer

3) In the month of October and September

4) In the month of October and November

18. In Antarctica ozone depletion is due to the formation of following compound

1) Acrolein 2) SO_2 & SO_3 3) Chlorine nitrate 4) PAN

19. Eutrophication of a lake means, it is

1) Low is nutrients 2) High is nutrients

3) Has excess amount of organic matter 4) Has a high temperature

20. Fish die in water bodies polluted by sewage due to

1) Pathogens 2) Reduction of oxygen

3) Foul smell 4) None of the above

21. Results of ozone hole is

1) Green house effect 2) Global warming

3) Acid raid 4) UV rays reach the earth

22. The term acid rain was coined by

1) Robert Boyle 2) Robert Augus 3) Alfred Noble 4) Lavoisier

23. Classical smog occurs in place of

1) Excess of SO_2 2) Low temperature

3) High temperature 4) Excess NH_3

24. 'Los Angeles 'smog is

1) Sulphurous smog 2) Photochemical smog

3) Industrial smog 4) All of these

25. Which of the following method is most effective to remove particulates?

1) Bag filter method 2) Cyclone collect or method

3) Gravity self chamber 4) Electro static precipitation

26. Green chemistry involves

1) Production of chemicals of our daily use from green house gases

2) Such chemicals processes in which green plants are used

3) Those reactions which are of biological origin

4) Use of non toxic reagents and solvents to produce environment friendly products

27.

List-I	List-II
A) Green house gas	**1) CO**
B) Silent killer gas	**2)** CO_2
C) Photo chemical smog	**3)** $CFCs$
D) Acid rains	**4)** O_3, NO_2
	5) N_2O_5, SO_3

The correct match is

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

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

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List-I	**List-II**
A) Freon's	1) Rise, in temperature of earth's surface
B) Ozone	2) Forms holes in ozone layer
C) Carbon dioxide	3) Protects life from UV radiation
D) Sulphur dioxide	4) Increase in fluoride ion concentration
	5) Acid rain

The correct match is

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

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

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List-I	**List-II**
A) Green house effect	1) Cause skin cancer cataract
B) Acid rain	2) Corrodes marble painted surfaces
C) Depletion of ozone layer	3) Melting of polar ice caps
D) Photo chemical smog	4) Cause irritation of eyes and mucous membrane
	5) Causes headache and decreased vision

The correct match is

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

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

Note: Each of the following contains Assertion and Reasoning. Each of these question also have four options and only one in 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 of A.

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

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

4) If A & R are in correct.

30. **Assertion (A):** The oxides of nitrogen and sulphur combine with rain water and come down as acid rain.

Reason (R): Acid rains cause depletion of ozone layer.

31. **Assertion (A):** Acid Rain water normally has a pH of ≤ 5.6.

Reason (R): This is due to the presence of H_2SO_4 and HNO_3 produced form oxides of sulphur and nitrogen.

32. **Assertion (A):** Acid rain reduces the fertility of the soil.

Reason (R): Acid rain has a corroding effect on marble buildings.

33. **Assertion (A):** Liquid CO_2 is used in dry cleaning.

Reason (R): CO_2 is harmless to ground water.

KEY

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

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1) CFC'S are responsible for ozone depletion.

7) Peeling of ozone umbrella is due to CO_2.

24) 'LOS angel's smog in photochemical smog.

33) Liquid CO_2 is harmless to ground water hence it is used in dry cleaning.