

Q.45 Why ozone is depleting in atmosphere?

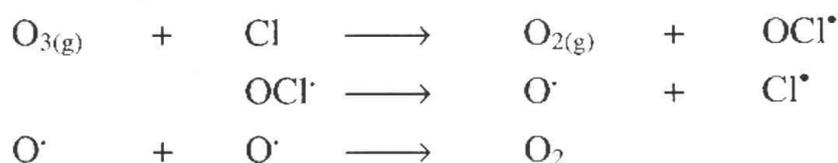
Ans. Cause of Depletion of Ozone Layer:

The ozone layer is being depleted through various chemical reactions, such as:

- (a) The ozone molecule absorbs solar radiations and dissociates readily, i.e., self-dissociation of ozone takes place.
- (b) However, chlorofluorocarbons (CFCs) (under as refrigerants in air conditioners and refrigerators) are major cause of depletion of ozone layer. These compounds leak in one way or other escape and diffuse to stratosphere. These ultraviolet radiations break the C-Cl bond in CFCl_3 and generates chlorine free radicals as;



These free radicals are very reactive. They react with ozone to form oxygen as



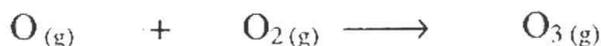
A single chlorine free radical released by the decomposition of CFCs is capable of destroying upto many lacs of ozone molecules. The region in which ozone layer depletes is called ozone hole.

Q.46 What do you mean by ozone hole?

Ans. The region in which ozone layer depletes is called ozone hole. A single chlorine free radical released by the decomposition of CFCs is capable of destroying upto many lacs of ozone molecules.

Q.47 Where the ozone layer is found?

Ans. Ozone layer lies in stratosphere region and formed by the associates of an oxygen atom with an oxygen molecule in the mid of stratosphere.



Multiple Choice Questions

1. About 99% atmosphere's mass lies within:

- (a) 30 kilometre
- (b) 35 kilometre
- (c) 15 kilometre
- (d) 11 kilometre

2. Depending upon temperature variation, atmosphere is divided into how many regions?

- (a) one
- (b) two
- (c) three
- (d) four

3. Just above the Earth's surface is

- (a) mesosphere (b) stratosphere
(c) thermosphere (d) troposphere

4. A group of gases that maintains temperature of atmosphere is

- (a) carbon dioxide and water vapours
(b) nitrogen and carbon dioxide
(c) thermosphere
(d) troposphere

5. The Earth's atmosphere is getting hotter because of

- (a) increasing concentration of CO
(b) increasing concentration of CO₂
(c) increasing concentration of O₃
(d) increasing concentration of SO₂

6. Which one of the followings is not a greenhouse Effect?

- (a) increasing atmosphere temperature
(b) increasing food chains
(c) increasing flood risks
(d) increasing sea-level

7. Normally rain water is weakly acidic because of

- (a) SO₃ gas (b) CO₂ gas
(c) SO₂ gas (d) NO₂ gas

8. Buildings are being damaged by acid rain because it attacks

- (a) calcium sulphate
(b) calcium nitrate
(c) calcium carbonate
(d) calcium oxalate

9. Acid rain affects the aquatic life by clogging fish gills because of:

- (a) lead metal
(b) chromium metal
(c) mercury metal
(d) aluminium metal

10. Ozone is beneficial for us as it

- (a) absorbs infrared radiation
(b) absorbs ultraviolet radiations
(c) absorbs chlorofluorocarbons
(d) absorbs air pollutant

11. Which one of the following is not an air pollutants?

- (a) nitrogen
(b) carbon monoxide
(c) nitrogen dioxide
(d) ozone

12. Iron and steel structure are damaged by

- (a) carbon monoxide
(b) sulphur dioxide
(c) methane
(d) carbon dioxide

13. Infrared radiations emitted by the Earth are absorbed by

- (a) CO₂ and H₂O
(b) N₂ and O₂
(c) CO₂ and N₂
(d) O₂ and CO₂

14. Global warming causes rising of the sea level. The cause of global warming is

- (a) CO₂ gas (b) SO₂ gas
(c) NO_x gases (d) O₃ gases

15. Which gas protects the Earth's surface from ultraviolet radiations?

- (a) CO₂ (b) CO
(c) N₂ (d) O₃

16. Effects of ozone depletion are following except the one

- (a) increases infectious diseases
(b) increases crops production
(c) can cause skin cancer
(d) can cause climatic changes

17. Which one of these pollutants are not found in car exhaust fumes?

- (a) CO (b) O₃
(c) NO₂ (d) SO₂

18. The process by which atmospheric nitrogen is turned into nitrates in the soil is called

- (a) nitration (b) fixing
(c) oxidation (d) reduction

19. Global warming is because of

- (a) absorption of infrared radiation emitted by earth surface
(b) absorption of infrared radiations coming from sun.
(c) absorption of ultraviolet coming from the sun.
(d) emission of ultraviolet radiation from the earth's surface.

20. Carbon monoxide is harmful to us because

- (a) it paralyses the lungs
(b) it damages lungs tissues
(c) it reduces oxygen carrying ability of haemoglobin
(d) it makes the blood coagulate.

21. Earth has natural systems

- (a) One (b) two
(c) Three (d) Four

22. Atmosphere has regions

- (a) One (b) two
(c) Three (d) four

23. The envelope of different gases around the earth is called

- (a) Atmosphere (b) biosphere
(c) Lithosphere (d) hydrosphere

24. The percentage by volume of nitrogen in dry gas is

- (a) 78.09% (b) 20.94%
(c) 0.93% (d) 0.03%

25. the percentage of sunlight absorbed by atmospheric gases is

- (a) 2% (b) 10%
(c) 18% (d) 25%

26. Atmospheric region found between 50-85 km from the earth is

- (a) Thermosphere (b) Stratosphere
(c) Mesosphere (d) Thermosphere

27. Mesosphere has a temperature range

- (a) 17⁰C-58⁰C (b) 58⁰C-2⁰C
(c) 2⁰C-93⁰C (d) -93⁰C

28. Which gas is the major constituent of troposphere?

- (a) Nitrogen (b) Oxygen
(c) Hydrogen (d) both a and b

29. Which gas is responsible in warming the atmosphere?

- (a) Nitrogen (b) hydrogen
(c) Helium (d) Fluorine

30. At which region all weather occurs?

- (a) Troposphere (b) Stratosphere
(c) Mesosphere (d) thermosphere

31. Almost all air crafts fly in which region?

- (a) Troposphere (b) stratosphere
(c) Mesosphere (d) thermosphere

32. Major portion of ozone layer is found in

- (a) troposphere (b) Stratosphere
(c) Mesosphere (d) thermosphere

33. The region of ozone decomposition in stratosphere is

- (a) 20km (b) 30 km
(c) 40 km (d) 50 km

- 34. The recombination of O and O₂ in mid stratosphere is an**
- Exothermic reaction
 - Endothermic reaction
 - heat absorbing process
 - None of these
- 35. The percentage of SO₂ released by the combustion of coal and petroleum product**
- 40%
 - 60%
 - 70%
 - 80%
- 36. Which is not a character of SO₂**
- It is a colourless gas
 - It has irritating smell
 - It causes suffocation
 - It do not form sulphuric acid
- 37. Which gas is produce by the electrical lightening of air**
- NO
 - SO₂
 - SO₃
 - CO₂
- 38. Which of the following can be used as a fuel?**
- Methanol
 - Ethanol
 - bio-diesel
 - all of them
- 39. The pH of water containing CO₂ is**
- 4-6
 - 5.6-6
 - 6-7
 - 7-8
- 40. The PH of acid rain is**
- 2
 - 3
 - 4
 - 5
- 41. High concentration of which metal clogs the fish gills.**
- Zinc
 - Aluminium
 - Sodium
 - copper
- 42. Ozone is an allotropic form of**
- Carbon
 - oxygen
 - Sulphur
 - Phosphorous
- 43. Ultraviolet radiations can causes**
- Hepatitis
 - Asthma
 - Skin cancer
 - Night Blindness
- 44. Which gas is in involved in ozone depletion?**
- nitrogen
 - CFC's
 - chlorine
 - all of them
- 45. The region in which ozone layer depletes is called**
- Ozone hole
 - black hole
 - both of them
 - None of them
- 46. Ozone depletion was first noticed is**
- 1970 s
 - 1980 s
 - 1990 s
 - 1960 s
- 47. Which is not an air pollutant?**
- CO₂
 - SO₂
 - CO
 - NH₃
- 48. The gas used by plants to perform photosynthesis.**
- O₂
 - CO₂
 - N₂
 - CO
- 49. The gas used by animals to perform respiration**
- O₂
 - N₂
 - SO₂
 - Cl₂
- 50. Which is not a poisonous gas?**
- Ozone
 - Chlorine
 - Carbon dioxide
 - all of them
- 51. Which gas acts as a glass wall of a green house?**
- Oxygen
 - Carbon dioxides
 - Sulphur dioxide
 - hydrogen
- 52. By the increase in the concentration of CO₂ in air,**
- decrease in heat energy
 - increase in heat energy

- (c) heat energy remains same
(d) None of them

53. The green house effect is proportional to the amount of which gas in air?

- (a) CO₂ (b) O₂
(c) N₂ (d) All of them

54. Which is the major effect of global warming?

- (a) Increase in temperature
(b) Rise in sea level
(c) Melting of glaciers
(d) All of them

55. Higher concentration of CO causes

- (a) fatigue (b) headache
(c) Both of them (d) None of them

56. Catalytic converters convert

- (a) CO to CO₂ (b) N₂ to NO
(c) CO₂ to CO (d) N₂ to NO₂

57. Which gas is also known as life gas for plants

- (a) CO (b) O₂
(c) CO₂ (d) NO₂

58. In the bacterial decay, the compounds of which element are emitted

- (a) Sulphur (b) Carbon
(c) Nitrogen (d) All of them

59. Ozone layer is not found in

- (a) Upper Stratosphere
(b) Mid Stratosphere
(c) Lower Stratosphere
(d) All of them

60. A pollutant is a waste material that pollutes

- (a) Air (b) Water
(c) Soil (d) All of them

61. Which factor determines the severity of a pollutant?

- (a) Chemical nature (b) concentration
(c) Persistence (d) All of them

62. Which pollutant is responsible for changing weather?

- (a) Air pollutant (b) Water pollutant
(c) Soil pollutant (d) all of them

63. Ozone has a smell

- (a) bitter (b) Rotten egg
(c) Sweat (d) None of them

64. Which of the following is a poisonous gas

- (a) oxygen (b) Ozone
(c) Nitrogen (d) Carbon dioxide

65. The waste products driven out because of the combustion of fossil fuels

- (a) Primary pollutant
(b) Secondary pollutant
(c) Tertiary Pollutant
(d) None of them

66. The smell of photocopies machine is due to the presence of

- (a) Chlorine gas (b) neon gas
(c) helium gas (d) ozone gas

67. PAN strands for

- (a) Poly aniline nitrate
(b) peroxy acetyl nitrate
(c) poly acetyl nitrite
(d) Peroxy acetyl nitrite

68. Which of the following is a secondary pollutant

- (a) CO₂ (b) CO
(c) SO₃ (d) HF

69. 99% of atmosphere consists of

- (a) N₂ and H₂
(b) N₂ and O₂

(c) N₂ and CO₂

(d) O₂ and CO₂

70. Which gas is emitted due to volcanic eruption?

(a) CO₂

(b) SO₂

(c) NO₂

(d) H₂

71. Fossil fuel means

(a) Coal

(b) Petroleum

(c) Natural gas

(d) All of them

72. Forest fires and burning of wood emit

(a) CO₂

(b) NO₂

(c) SO₂

(d) Cl₂

73. The range of temperature in burning solid waste burning in incinerators is

(a) 650⁰-1000⁰C (b) 650⁰C to 1100⁰C

(c) 1000⁰-2000⁰C (d) 5000C to 1000⁰C

74. Incinerator reduces solid waste into

(a) Ash

(b) flue gas

(c) heat

(d) all of them

75. Which is not a part of flue gas?

(a) Furans

(b) Dioxins

(c) HCl

(d) H₂SO₄

76. Thermosphere lies beyond

(a) Stratosphere

(b) Troposphere

(c) Mesosphere

(d) Biosphere

77. The solid particle deposit on the filter paper during filtration is called

(a) Precipitates

(b) Residue

(c) Crystals

(d) All of them

Answer Key

1	a	2	d	3	d	4	a	5	b
6	b	7	b	8	c	9	d	10	b
11	d	12	b	13	d	14	a	15	d
16	b	17	b	18	a	19	c	20	c
21	d	22	d	23	a	24	a	25	c
26	c	27	c	28	d	29	a	30	a
31	a	32	b	33	c	34	a	35	d
36	d	37	a	38	d	39	b	40	c
41	b	42	b	43	c	44	b	45	a
46	b	47	a	48	b	49	a	50	c
51	b	52	b	53	a	54	d	55	c
56	a	57	c	58	a	59	c	60	d
61	d	62	a	63	a	64	b	65	a
66	d	67	b	68	d	69	b	70	a
71	d	72	a	73	b	74	d	75	d
76	c	77	b						