

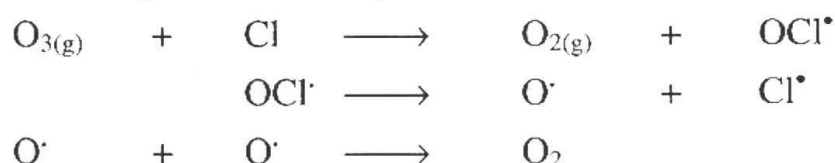
**Q.45 Why ozone is depleting in atmosphere?****Ans. Cause of Depletion of Ozone Layer:**

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  $\text{CFCl}_3$  and generates chlorine free radicals as;



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



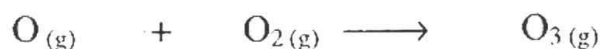
A single chlorine free radical released by the decomposition of CFCs is capable of destroying upto many lacs of ozone molecules. The region in which ozone layer depletes is called ozone hole.

**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 CO<sub>2</sub>
- (c) increasing concentration of O<sub>3</sub>
- (d) increasing concentration of SO<sub>2</sub>

**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) SO<sub>3</sub> gas                              (b) CO<sub>2</sub> gas
- (c) SO<sub>2</sub> gas                              (d) NO<sub>2</sub> 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) CO<sub>2</sub> and H<sub>2</sub>O
- (b) N<sub>2</sub> and O<sub>2</sub>
- (c) CO<sub>2</sub> and N<sub>2</sub>
- (d) O<sub>2</sub> and CO<sub>2</sub>

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

- (a) CO<sub>2</sub> gas                              (b) SO<sub>2</sub> gas
- (c) NO<sub>x</sub> gases                              (d) O<sub>3</sub> gases

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

- (a) CO<sub>2</sub>                                      (b) CO
- (c) N<sub>2</sub>                                        (d) O<sub>3</sub>

**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) O<sub>3</sub>  
(c) NO<sub>2</sub> (d) SO<sub>2</sub>

**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) 17<sup>0</sup>C-58<sup>0</sup>C (b) 58<sup>0</sup>C-2<sup>0</sup>C  
(c) 2<sup>0</sup>C-93<sup>0</sup>C (d) -93<sup>0</sup>C

**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 O<sub>2</sub> in mid stratosphere is an**

- (a) Exothermic reaction
- (b) Endothermic reaction
- (c) heat absorbing process
- (d) None of these

**35. The percentage of SO<sub>2</sub> released by the combustion of coal and petroleum product**

- (a) 40% (b) 60%
- (c) 70% (d) 80%

**36. Which is not a character of SO<sub>2</sub>**

- (a) It is a colourless gas
- (b) It has irritating smell
- (c) It causes suffocation
- (d) It does not form sulphuric acid

**37. Which gas is produced by the electrical lightening of air**

- (a) NO (b) SO<sub>2</sub>
- (c) SO<sub>3</sub> (d) CO<sub>2</sub>

**38. Which of the following can be used as a fuel?**

- (a) Methanol (b) Ethanol
- (c) bio-diesel (d) all of them

**39. The pH of water containing CO<sub>2</sub> is**

- (a) 4-6 (b) 5.6-6
- (c) 6-7 (d) 7-8

**40. The pH of acid rain is**

- (a) 2 (b) 3
- (c) 4 (d) 5

**41. High concentration of which metal clogs the fish gills.**

- (a) Zinc (b) Aluminium
- (c) Sodium (d) copper

**42. Ozone is an allotropic form of**

- (a) Carbon (b) oxygen
- (c) Sulphur (d) Phosphorous

**43. Ultraviolet radiations can cause**

- (a) Hepatitis (b) Asthma
- (c) Skin cancer
- (d) Night Blindness

**44. Which gas is involved in ozone depletion?**

- (a) nitrogen (b) CFC's
- (c) chlorine (d) all of them

**45. The region in which ozone layer depletes is called**

- (a) Ozone hole (b) black hole
- (c) both of them (d) None of them

**46. Ozone depletion was first noticed in**

- (a) 1970 s (b) 1980 s
- (c) 1990 s (d) 1960 s

**47. Which is not an air pollutant?**

- (a) CO<sub>2</sub> (b) SO<sub>2</sub>
- (c) CO (d) NH<sub>3</sub>

**48. The gas used by plants to perform photosynthesis.**

- (a) O<sub>2</sub> (b) CO<sub>2</sub>
- (c) N<sub>2</sub> (d) CO

**49. The gas used by animals to perform respiration**

- (a) O<sub>2</sub> (b) N<sub>2</sub>
- (c) SO<sub>2</sub> (d) Cl<sub>2</sub>

**50. Which is not a poisonous gas?**

- (a) Ozone (b) Chlorine
- (c) Carbon dioxide (d) all of them

**51. Which gas acts as a glass wall of a green house?**

- (a) Oxygen (b) Carbon dioxides
- (c) Sulphur dioxide (d) hydrogen

**52. By the increase in the concentration of CO<sub>2</sub> in air,**

- (a) decrease in heat energy
- (b) 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)  $\text{CO}_2$  (b)  $\text{O}_2$   
(c)  $\text{N}_2$  (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  $\text{CO}_2$  (b)  $\text{N}_2$  to NO  
(c)  $\text{CO}_2$  to CO (d)  $\text{N}_2$  to  $\text{NO}_2$

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

- (a) CO (b)  $\text{O}_2$   
(c)  $\text{CO}_2$  (d)  $\text{NO}_2$

**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)  $\text{CO}_2$  (b) CO  
(c)  $\text{SO}_3$  (d) HF

**69. 99% of atmosphere consists of**

- (a)  $\text{N}_2$  and  $\text{H}_2$   
(b)  $\text{N}_2$  and  $\text{O}_2$

(c)  $\text{N}_2$  and  $\text{CO}_2$

(d)  $\text{O}_2$  and  $\text{CO}_2$

**70. Which gas is emitted due to volcanic eruption?**

(a)  $\text{CO}_2$

(b)  $\text{SO}_2$

(c)  $\text{NO}_2$

(d)  $\text{H}_2$

**71. Fossil fuel means**

(a) Coal

(b) Petroleum

(c) Natural gas

(d) All of them

**72. Forest fires and burning of wood emit**

(a)  $\text{CO}_2$

(b)  $\text{NO}_2$

(c)  $\text{SO}_2$

(d)  $\text{Cl}_2$

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

(a)  $650^{\circ}\text{C}$ - $1000^{\circ}\text{C}$  (b)  $650^{\circ}\text{C}$  to  $1100^{\circ}\text{C}$

(c)  $1000^{\circ}\text{C}$ - $2000^{\circ}\text{C}$  (d)  $5000^{\circ}\text{C}$  to  $1000^{\circ}\text{C}$

**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)  $\text{HCl}$

(d)  $\text{H}_2\text{SO}_4$

**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						