

# **CHEMISTRY**

# **BOOKS - VK JAISWAL ENGLISH**

## **ENVIRONMENTAL CHEMISTRY**

Level 1

**1.** The term biosphere used for the zone of earth where life exists is

A. On the lithosphere

- B. In the hydrosphere
- C. In the lithosphere and hydrosphere
- D. In the lithosphere, hydrosphere and atomsphere

#### **Answer: D**



- **2.** Biosphere is :
  - A. In which individual interact to each other
  - B. By which life originated

- C. The name of a bird
- D. Organic compound by which life diminishes

#### **Answer: A**



- 3. Which is not a renewable source?
  - A. Forest
  - B. Coal
  - C. Water
  - D. Forest organism

### **Answer: B**



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- **4.** Noosphere is synomyms of :
  - A. Environment
  - B. Atmosphere
  - C. Hydrosphere
  - D. Biosphere

### **Answer: A**



| <b>5.</b> All living organisms on the earth constitute : |
|--|
|--|

- A. Biome
- B. Biosphere
- C. Community
- D. Biocoenosis

**Answer: B** 



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6. Biosphere refers to

- A. Plants of the world
- B. Special plants
- C. Area occupied by living beings
- D. Plants of a particular area

#### **Answer: C**



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**7.** What is the correct sequence of atmosphere layers starting from earth?

- A. Stratosphere, troposphere, mesosphere, thermosphere
- B. Troposphere, stratosphere, mesosphere, thermosphere
- C. Mesosphere, troposphere, stratosphere, thermosphere
- D. Thermosphere, mesosphere, stratosphere, troposphere

### **Answer: B**



| A. Community                           |
|--|
| B. Biome                               |
| C. Association                         |
| D. Biosphere                           |
| Answer: D                              |
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|  |
| <b>9.</b> A biosphere is composed of : |

**8.** All living organisms on the earth constitute :

- A. Living organisms
- B. Living organisms+lithosphere
- C. Living organisms+lithosphere+atmoosphere
- D. Living
  - organisms+lithosphere+atmosphere+hydrosphere

### Answer: D



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**10.** Pollution can be controlled by

A. Sewage treatment

- B. Chacking atomic blasts
- C. Manufacturing electrically operated vehicles
- D. All the above

#### **Answer: D**



- **11.** If water pollution continues at its present rate, it will eventually
  - A. Stop water cycle
  - B. Prevent precipitation

- C. Make oxygen molecules unavailable to water plants
- D. Make nitrogen molecules unavailable to water plants

#### **Answer: C**



**12.** Recent reports of acid rains industrial cities are due to the effect of atmospheric pollution by

- A. Excessive release of  $NO_2 \; {
  m and} \; SO_2$  by burning of fossil fuels
- B. Excessive release of  $CO_2$  by burning of fuel like wood and charcoal, cutting of forests and increased animal population.
- C. Excessive release of  $NH_{3}$  by industrial plants and coal gas
- D. Excessive release of CO in atmosphere by incomplete combustion of cock, charcoal and other carbonaceous fuels in pancity of oxygen.

#### Answer: A

**13.** Pollution is change in physical, chemical or biological characters of our land and water that may be:

A. Desirable and harmful to human

B. Desirable and useful to human

C. Undesirable and harmful to human

D. Undesirable and useful to human

Answer: C



| <b>14.</b> Which is the greatest air p | pollutant these days? |
|--|-----------------------|
|--|-----------------------|

- A. Factories
- B. Moto vehicles
- C. Domestic appliances
- D. Animals

**Answer: B** 



**15.** Removal of the soil by the action of wind and water is known as

- A. Erosion
- B. Fossilization
- C. Leaching
- D. Calcification

**Answer: A** 



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16. Acid rain occur due to atmosphere pollution of:

| B. $NH_3$  |
|--|
| $C.CO_2$   |
| D. $N_2O$  |
|  |
| Answer: A  |
| Watch Video Solution   |
|  |
|  |
| <b>17.</b> An increase in $CO_2$ concentration in atmosphere |
| will result in:  |
| A. Adverse effects of natural vegatation                     |

A.  $SO_2$ 

- B. Global warming
- C. Temperature decrease in global atmosphere
- D. Genetic disorders in plants and animals

#### **Answer: B**



- **18.** Planting more and more trees helps to:
  - A. Reduce  $CO_2$  in the air
  - B. increase  $CO_2$  in the air
  - C. reduce  $O_2$  in the air

D. reduce  $CO_2$  and increase  $O_2$  in the air

**Answer: D** 



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**19.** The basic component of smog is:

A. PAN

B. PBN

 $\mathsf{C.}\,NO_2$ 

D. All of these

**Answer: C** 

**20.** Which of the following protects life on earth from harmful effects of UV radiations from sun?

- A.  $N_2$
- B.  $CO_2$
- $\mathsf{C}.\,O_2$
- $D.O_3$

**Answer: D** 



| <b>21.</b> The ozone | layer form | s naturally by: |
|----------------------|------------|-----------------|
|----------------------|------------|-----------------|

- A. CFC with oxygen
- B. UV radiation with oxygen
- C. IR radiation with oxygen
- D. oxygen and water vapour

## **Answer: B**



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**22.** Fishes die in water bodies polluted by sewage due to :

| A. pathogens                                    |
|---|
| B. reduction of oxygen                          |
| C. foul smell                                   |
| D. none of these                                |
|   |
| Answer: B                                       |
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|   |
|   |
| 23. Main pollutant from automobile exhaust is : |
| A. CO   |
|   |
| B. $CO_2$                                       |

- $\mathsf{C}.NO$
- D. hydrocarbons

#### **Answer: A**



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# 24. Ultraviolet radiation is absorbed by

- A. exosphere
- B. ionosphere
- C. mesosphere
- D. stratosphere

#### **Answer: D**



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# 25. The global warming has resulted in

A. flood

B. cyclone

C. decrease in forest productivity

D. All of these

#### **Answer: D**



#### 26. BHC and DDT act as:

- A. carcinogens
- B. allergens
- C. asthmatic agents
- D. All of these

### **Answer: A**



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27. Which of the following statements is wrong?

A. Polar stratosphere clouds (PSCs) are clouds formed over Antarctica

B. Acid rain dissolves heavy metals such as Cu ,Pb,

Hg and Al from soils, rocks and sediments.

C.  $H_2SO_4$  is major contributor to acid rain,  $HNO_3$  ranks second and HCl third in this respect

D. Fishes grow as well in warm as in cold water

#### **Answer: D**



**28.** Ozone depletion in the stratosphere is primarily due to

- A.  $SO_2$
- B.  $NO_2$
- $\mathsf{C}.\,NO$
- D. chlorofluorocarbons

**Answer: D** 



**29.** Persons working in cement plants and lime stone quarries are more prone to disease like:

- A. asthma
- B. cancer
- C. silicosis
- D. pneumoconiosis

#### **Answer: C**



**30.** The term biosphere used for the zone of earth where life exists is

- A. On the lithosphere
- B. In the hydrosphere
- C. In the lithosphere and hydrosphere
- D. In the lithosphere, hydrosphere and atomsphere

#### **Answer: D**



| _ | _ | _ | •  |   |   |   |            |    | •  |   |
|---|---|---|----|---|---|---|------------|----|----|---|
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| • |   | ט | IU | 3 | μ |   | CI         | C  | 13 | • |

- A. In which individual interact to each other
- B. By which life originated
- C. The name of a bird
- D. Organic compound by which life diminishes

### **Answer: A**



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**32.** Which is not a renewable source?

| A. Forest                             |
|---------------------------------------|
| B. Coal                               |
| C. Water                              |
| D. Forest organism                    |
| Answer: B                             |
|                                       |
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| 33. Noosphere is synomyms of :        |
|                                       |
| <b>33.</b> Noosphere is synomyms of : |

- C. Hydrosphere
- D. Biosphere

## **Answer: A**



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**34.** All living organisms on or around the Earth constitute:

- A. Biome
- B. Biosphere
- C. Community

D. Biocoenosis

#### **Answer: B**



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# **35.** Biosphere refers to

- A. Plants of the world
- B. Special plants
- C. Area occupied by living beings
- D. Plants of a particular area

#### **Answer: C**

**36.** What is the correct sequence of atmosphere layers starting from earth?

- A. Stratosphere, troposphere, mesosphere, thermosphere
- B. Troposphere, stratosphere, mesosphere, thermosphere
- C. Mesosphere, troposphere, stratosphere, thermosphere

D. Thermosphere, mesosphere, stratosphere,

troposphere

### **Answer: B**



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# **37.** On earth all living organisms constitute:

- A. Community
- B. Biome
- C. Association
- D. Biosphere

#### **Answer: D**



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# **38.** A biosphere is composed of

- A. Living organisms
- B. Living organisms+lithosphere
- C. Living organisms+lithosphere+hydrosphere
- D. Living organisms+lithosphere+atmosphere

hydrosphere

**Answer: D** 

## 39. Pollution can be controlled by

- A. Sewage treatment
- B. Chacking atomic blasts
- C. Manufacturing electrically operated vehicles
- D. All the above

**Answer: D** 



**40.** If water pollution continues at its present rate, it will eventually

A. Stop water cycle

B. Prevent precipitation

C. Make oxygen molecules unavailable to water plants

D. Make nitrogen molecules unavailable to water plants

**Answer: C** 



**41.** Recent reports of acid rains industrial cities are due to the effect of atmospheric pollution by

A. Excessive release of  $NO_2 \ {
m and} \ SO_2$  by burning of fossil fuels

- B. Excessive release of  $CO_2$  by burning of fuel like wood and charcoal, cutting of forests and increased animal population.
- C. Excessive release of  $NH_{\rm 3}$  by industrial plants and coal gas
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other carbonaceous fuels in pancity of oxygen.

### **Answer: A**



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**42.** Pollution is change in physical, chemical or biological characters of our land and water that may be:

- A. Desirable and harmful to human
- B. Desirable and useful to human
- C. Undesirable and harmful to human

D. Undesirable and useful to human

### **Answer: C**



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43. Which is the greatest air pollutant these days?

A. Factories

B. Moto vehicles

C. Domestic appliances

D. Animals

**Answer: B** 

**44.** Removal of the soil by the action of wind and water is known as

A. Erosion

B. Fossilization

C. Leaching

D. Calcification

**Answer: A** 



**45.** Acid rain occur due to atmosphere pollution of:

A.  $SO_2$ 

B.  $NH_3$ 

 $\mathsf{C}.\,CO_2$ 

D.  $N_2O$ 

#### **Answer: A**



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**46.** An increase in  $CO_2$  concentration in atmosphere will result in:

- A. Adverse effects of natural vegatation
- B. Global warming
- C. Temperature decrease in global atmosphere
- D. Genetic disorders in plants and animals

#### **Answer: B**



- **47.** Planting more and more trees helps to:
  - A. Reduce  $CO_2$  in the air
  - B. increase  $CO_2$  in the air

C. reduce  $O_2$  in the air

D. reduce  $CO_2$  and increase  $O_2$  in the air

**Answer: D** 



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**48.** The basic component of smog is:

A. PAN

B. PBN

 $\mathsf{C}.\,NO_2$ 

D. All of these

#### **Answer: C**



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**49.** Which of the following protects life on earth from harmful effects of UV radiations from sun?

A.  $N_2$ 

B.  $CO_2$ 

 $\mathsf{C}.\,O_2$ 

D.  $O_3$ 

**Answer: D** 

50. The ozone layer forms naturally by the interaction of:

A. the interaction of CFC with oxygen

B. the interaction of UV radiation with oxygen

C. the interaction of IR radiation with oxygen

D. the interaction of oxygen and water vapour

**Answer: B** 



| <b>51.</b> Fishes | die i | n water | bodies | polluted | by | sewage |
|-------------------|-------|---------|--------|----------|----|--------|
| due to :          |       |         |        |          |    |        |
| A. path           | ogen  | S       |        |          |    |        |

B. reduction of oxygen

C. foul smell

D. none of these

### **Answer: B**



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52. Main pollutant from automobile exhaust is:

- A. *CO*
- $\mathsf{B.}\, CO_2$
- $\mathsf{C}.\,NO$
- D. hydrocarbons

### **Answer: B**



- 53. Ultraviolet radiation is absorbed by
  - A. exosphere
  - B. ionosphere

- C. mesosphere
- D. stratosphere

#### **Answer: D**



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# **54.** Global warming may result in :

- A. flood
- B. cyclone
- C. decrease in forest productivity
- D. All of these

### **Answer: D**



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## 55. BHC and DDT act as:

A. carcinogens

B. allergens

C. asthmatic agents

D. All of these

### **Answer: A**



**56.** Which of the following statements is wrong?

A. Polar stratosphere clouds (PSCs) are clouds formed over Antarctica

B. Acid rain dissolves heavy metals such as Cu ,Pb,

Hg and Al from soils, rocks and sediments.

C.  $H_2SO_4$  is major contributor to acid rain,  $HNO_3$  ranks second and HCl third in this respect

D. Fishes grow as well in warm as in cold water

#### **Answer: D**



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**57.** Ozone depletion in the stratosphere is primarily due to

A.  $SO_2$ 

B.  $NO_2$ 

 $\mathsf{C}.\,NO$ 

D. chlorofluorocarbons

**Answer: D** 

**58.** Persons working in cement plants and lime stone quarries are more prone to disease like:

- A. asthma
- B. cancer
- C. silicosis
- D. pneumoconiosis

**Answer: C** 



**1.** Which of the following gases is not green house gas?

A. *CO* 

 $B.O_3$ 

 $\mathsf{C}.\,CH_4$ 

D.  $H_2O$  vapour

**Answer: A** 



**2.** Photochemical smog occurs in warm, dry and sunny climate. One of the following is not amongst the components of photochemical smog, identify it .

A.  $NO_2$ 

B.  $O_3$ 

 $\mathsf{C}.\,SO_2$ 

D. Unsaturated hydrocarbon

### **Answer: C**



- **3.** Which of the following statements is not true about classical smog?
  - A. Its main components are produced by the action of sunlight on emissions of automobiles and factories
  - B. Produced in cold and humid climate
  - C. It contains compounds of reducing nature
  - D. It contain's smoke for and sulphur dioxide

#### **Answer: A**



**4.** Biochemical Oxygen Demand, (BOD) is a measure of organic material present in water. BOD value less than  $5\mathrm{ppm}$  indicates a water sample to be

A. rich in dissolved oxygen

B. poor in dissolved oxygen

C. highly polluted

D. not suitable for aquatic life

#### **Answer: A**



5. Which of the following statements is wrong?

A. Ozone is produced in upper stratosphere by the action of UV rays on oxygen

B. Ozon can oxidize sulphur dioxide present in the atmosphere to sulphur trioxide

C. Ozone hole is thining of ozone layer present in stratosphere

D. none of these

**Answer: D** 



**6.** Sewage containing organic waste should not be disposed in water bodies because it causes major water pollution. Fishes in such a polluted water die because of

A. Large number of mosquitos

B. Increase in the amount of dissolved oxygen in water

C. decrease in the amount of dissolved oxygen

D. Clogging of gills by mud

Answer: C

**7.** Which of the following statements about photochemical smog is wrong?

A. It has high concentration of oxidising agents

B. It has low concentration of oxidising agent

C. It can be controlled by controlling the release of  $NO_2$  hydrograrbons, ozone etc

D. Planation of some plants like pinus helps in controlling photochemical smog

Answer: B

8. The gaseous envelope around the earth is known as atmosphere. The lowest layer of this is extended upto 10 km from sea level, this layer is

A. Stratosphere

B. Troposphere

C. Mesosphere

D. Hydrosphere

**Answer: B** 



**9.** Dinitrogen and dioxygen are main constituents of air but these do not react with each other to form oxides of nitrogen because

A. the reaction is endothermic and requires very high temperature

B. the reaction can be intiated only in presence of a catalyst

C. oxides of nitrogen are unstable

D.  $N_2$  and  $O_2$  are unreactive

### Answer: A

10. The pollutants which come directly in the air from sources are called primary pollutes. Primary polluants are sometimes converted into secondary pollutants. Which of the following belongs to secondary air pollutants?

A. *CO* 

B. Hydrocarbon

C. Peroxyacetyl nitrate

D. *NO* 

#### **Answer: C**



- **11.** Which of the following statement is correct?
  - A. Ozone hole is hole formed in stratosphere from which ozone oozes out.
  - B. Ozone holes is a hole formed in the troposphere at some places
  - C. Ozone hole is thining ozone layer of stratosphere at some places

D. Ozone hole means vanishing of ozone layer around the earth completely

**Answer: C** 



**Watch Video Solution** 

**12.** Which of the following practices will not come under green chemistry?

A. It possible making use of soap made of vegatable oils instead of using synthetic detergents

B. Using  $H_2O_2$  for bleaching purpose instead of using chlorine based bleaching agents

C. Using bicycle for travelling small distances instead of using petrol/diesel based vehicles

D. Using plastic cans for nearly storing substances

## **Answer: D**



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**13.** Which of the following acts as rocket propellants?

A. Liq.
$$H_2$$
+Liq. $O_2$ 

B. Liq.
$$N_2$$
+Liq. $O_2$ 

C. Liq.
$$H_2$$
+Liq. $N_2$ 

D. Liq.
$$O_2$$
+Liq. Argon

### **Answer: A**



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**14.** When rain is accompanied by a thunderstorm, the collected rain water will have pH?

A. slightly lower than that of rain water without thunderstorm

B. slightly higher than that of rain water without thunderstorm

C. uninfluenced by occurrence of thunderstorm

D. which depends on amount of dust in air

# Answer: A



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**15.** The smog is essentially caused by the presence of:

| A.       | $O_2$          | and | $N_2$        |
|----------|----------------|-----|--------------|
| <i>,</i> | $\mathbf{C}_3$ | and | <b>4 1 2</b> |

 $B.O_2$  and  $N_2$ 

C. Oxides of sulphur and  $N_{
m 2}$ 

 $D. O_2$  and  $O_3$ 

## **Answer: C**



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16. Ozone in stratosphere is depleted by:

A.  $CF_2Cl_2$ 

B.  $C_7 F_{16}$ 

 $\mathsf{C.}\ C_6H_6Cl_6$ 

D.  $C_6F_6$ 

### **Answer: A**



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**17.** Which of the following is responsible for depletion of the ozone layer in the upper strata of the atmosphere:-

A. Polyhalogens

B. Ferrocene

- C. Fullerenes
- D. Freons

**Answer: D** 



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- **18.** Identify the wrong statements in the following:
  - A. Chlorofluorocarbons are responsible for ozone

layer depletion

B. Green house effect is responsible for global

warming

- C. Ozone layer does not permit infrated from the sun to reach the earth.
- D. Acid rain is mostly because of oxides of nitrogen and sulphur

#### **Answer: C**



- **19.** Identify the wrong statements in the following:
  - A. Oxides of nitrogen in the atmosphere can cause the depletion of ozone layer

- B. Ozone absorbs the intense ultraviolet radiation of the sun
- C. Depletion of ozone layer is because of its chemical reactions with chlorofluoro alkanes
- D. Ozone absorbs infra red radiations

#### **Answer: D**



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20. What is DDT among the following:

A. Green house gas

- B. A fertilizer
- C. Biodegradable pollutant
- D. Non-biodegradable pollutant

#### **Answer: D**



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**21.** The gas leaked from a storage tank of the Union

Carbide plant in Bhopal gas tragedy was

- A. Phosgene
- B. Methyl isocyanate

- C. Methyl amine
- D. Ammonia

# **Answer: B**



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**22.** Which of the following gases is not green house gas?

- A. *CO*
- B.  $O_3$
- C.  $CH_4$

D.  $H_2O$  vapour

#### **Answer: A**



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23. Photochemical smog occurs in warm, dry and sunny climate, One of the following is not amongst the components of photochemical smog, identify it.

A.  $NO_2$ 

B.  $O_3$ 

 $\mathsf{C}.\,SO_2$ 

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**28.** Which of the following statement about photochemical smog is wrong?

A. It has high concentration of oxidising agents

- B. It has low concentration of oxidising agent
- C. It can be controlled by controlling the release of  $NO_2$  hydrograrbons, ozone etc
- D. Planation of some plants like pinus helps in controlling photochemical smog

#### **Answer: B**



**29.** The gaseous envelope around the earth is known as atmosphere. The lowest layer of this is extended upto  $10 \ \rm km$  from sea level , this layer is

- A. Stratosphere
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# **Answer: B**



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A. the reaction is endothermic and requires very

high temperature

B. the reaction can be intiated only in presence of a catalyst

C. oxides of nitrogen are unstable

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**31.** The pollutants which come directly in the air from sources are called primary pollutes. Primary

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- A. *CO*
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- C. Peroxyacetyl nitrate
- D. *NO*

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**Watch Video Solution** 

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**Watch Video Solution** 

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| A. Polyhalogens  |
| B. Ferrocene   |
| C. Fullerenes  |
| D. Freons  |
|  |
| Answer: D  |
| Watch Video Solution                                       |
|  |
| <b>39.</b> Identify the wrong statements in the following: |

- A. Chlorofluorocarbons are responsible for ozone layer depletion
- B. Green house effect is responsible for global warming
- C. Ozone layer does not permit infrared from the sun to reach the earth.
- D. Acid rain is mostly because of oxides of nitrogen and sulphur

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A. Green house gas

B. A fertilizer

C. Biodegradable pollutant

D. Non-biodegradable pollutant

#### **Answer: D**



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**42.** The gas leaked from a storage tank of the Union

Carbide plant in Bhopal gas tragedy was

- A. Phosgene
- B. Methyl isocyanate
- C. Methyl amine
- D. Ammonia

# **Answer: B**

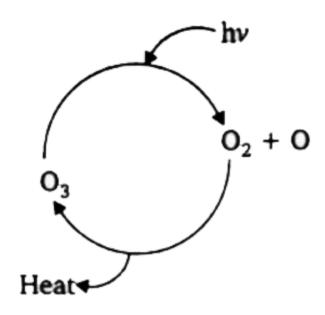


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Level 3

**1.** When heathly earth's stratosphere contains a low concentration of ozone $(O_3)$  that absorbs

potentially harmful ultraviolet (UV) radiations by the cycle shown below:



Chloroflouro carbon refrigerants, such as freon  $12(CF_2Cl_2)$ , are stable in lower atmosphere but in the stratosphere, they absorb high energy UV radiation to generate chlorine radicals.

$$CF_2Cl_2 \stackrel{hv}{\longrightarrow} CF_2Cl + Cl$$

The presence of small number of chlorine radicals

appears to lower ozone concentrations dramatically.

The following reactions are all known to be exothermic (except the one requiring light) and to have high rate constant.

$$A\!:\!Cl-O-O-Cl \stackrel{hv}{\longrightarrow} O_2 + 2Cl \stackrel{\cdot}{}$$

$$B:Cl_O^{\cdot}+O o O_2+Cl^{\cdot}$$

$$C:Cl^{\cdot}+O_3 \rightarrow Cl-O^{\cdot}+O_2$$

$$D\!:\!2Cl-O^{\cdot}
ightarrow Cl-O-O-Cl$$

Q. Ozone has the ability to absorb

A. UV radiations

B. electromagnetic radiations

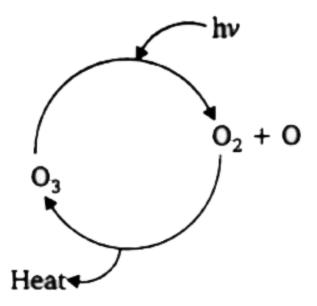
C. CFC

D. green house gases

#### **Answer: A**



**2.** When heathly earth's stratosphere contains a low concentration of  $ozone(O_3)$  that absorbs potentially harmful ultraviolet (UV) radiations by the cycle shown below:



Chloroflouro carbon refrigerants, such as freon  $12(CF_2Cl_2)$ , are stable in lower atmosphere but in the stratosphere, they absorb high energy UV radiation to generate chlorine radicals.

$$CF_2Cl_2 \stackrel{hv}{\longrightarrow} CF_2Cl + Cl$$

appears to lower ozone concentrations dramatically.

The following reactions are all known to be exothermic (except the one requiring light) and to have high rate constant.

The presence of small number of chlorine radicals

$$A\!:\!Cl-O-O-Cl \stackrel{hv}{\longrightarrow} O_2 + 2Cl$$

$$B\!:\!Cl_O^\cdot + O o O_2 + Cl^\cdot$$

$$C$$
:  $Cl^{\cdot} + O_3 \rightarrow Cl - O^{\cdot} + O_2$ 

$$D\!:\!2Cl-O^+ o Cl-O-O-Cl$$

Q. Inceased UV radiations due to hole in ozone layer:

A. will cause increase in cases of skin diseases

B. will cause more ice to melt

C. will cause summer to be more warmer

D. will cause more rain

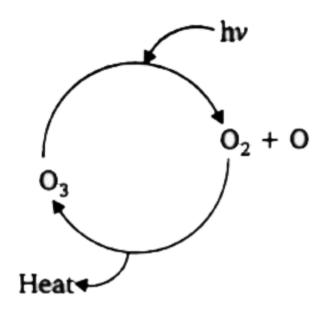
# **Answer: A**



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3. When heathly earth's stratosphere contains a low concentration of ozone $(O_3)$  that absorbs

potentially harmful ultraviolet (UV) radiations by the cycle shown below:



Chloroflouro carbon refrigerants, such as freon  $12(CF_2Cl_2)$ , are stable in lower atmosphere but in the stratosphere, they absorb high energy UV radiation to generate chlorine radicals.

$$CF_2Cl_2 \stackrel{hv}{\longrightarrow} CF_2Cl + Cl$$

The presence of small number of chlorine radicals

appears to lower ozone concentrations dramatically.

The following reactions are all known to be exothermic (except the one requiring light) and to have high rate constant.

$$A\!:\!Cl-O-Cl \stackrel{hv}{\longrightarrow} O_2 + 2Cl$$

$$B: Cl_O^{\cdot} + O \rightarrow O_2 + Cl^{\cdot}$$

$$C:Cl^{\cdot}+O_3 \rightarrow Cl-O^{\cdot}+O_2$$

$$D\!:\!2Cl-O^+ o Cl-O-O-Cl$$

Q. Ozone has the ability to absorb

A. UV radiations

B. electromagnetic radiations

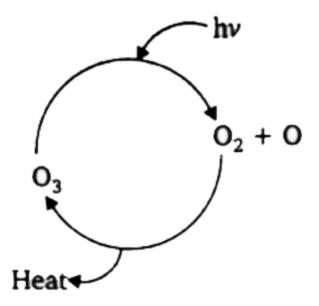
C. CFC

D. green house gases

# **Answer: A**



**4.** When heathly earth's stratosphere contains a low concentration of  $ozone(O_3)$  that absorbs potentially harmful ultraviolet (UV) radiations by the cycle shown below:



Chloroflouro carbon refrigerants, such as freon  $12(CF_2Cl_2)$ , are stable in lower atmosphere but in the stratosphere, they absorb high energy UV radiation to generate chlorine radicals.

$$CF_2Cl_2 \stackrel{hv}{\longrightarrow} CF_2Cl + Cl$$

appears to lower ozone concentrations dramatically.

The following reactions are all known to be exothermic (except the one requiring light) and to have high rate constant.

The presence of small number of chlorine radicals

$$A\!:\!Cl-O-Cl \stackrel{hv}{\longrightarrow} O_2 + 2Cl$$

$$B \colon Cl_O^+ + O o O_2 + Cl^-$$

$$C$$
:  $Cl^{\cdot} + O_3 \rightarrow Cl - O^{\cdot} + O_2$ 

$$D$$
:  $2Cl - O^{\cdot} \rightarrow Cl - O - O - Cl$ 

Q. Ozone has the ability to absorb

A. will cause increase in cases of skin diseases

B. will cause more ice to melt

C. will cause summer to be more warmer

D. will cause more rain

**Answer: A** 



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One Or More Answer Is Are Correct

**1.** Which of the following conditions shows the polluted environment?

A. pH of rain water is 5.6

B. amount of carbondioxide in the atmosphere is

0.03%

C. biochemical oxygen demand 10ppm.

D. eutrophication

# **Answer: C::D**



2. Phosphate containing fertilisers cause water pollution. Addition of such compounds in water bodies causes....

A. enhanced growth of algae

B. decrease in amount of dissolved oxygen in water

C. deposition of calcium phosphate

D. increase in fish population

**Answer: A::B** 



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| <b>3.</b> Tl | ne acids | present | in | acid | rain | are | · |
|--------------|----------|---------|----|------|------|-----|---|
|--------------|----------|---------|----|------|------|-----|---|

- A. Peroxyacetylnitrate
- B.  $H_2CO_3$
- $\mathsf{C}.\,HNO_3$
- D.  $H_2SO_4$

# Answer: B::C::D



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4. The consequences of global warming may be

- A. increase in average temperature of the earth
  - B. melting of Himalayan Glaciers
  - C. increased biochemical oxygen demand
  - D. eutrophication

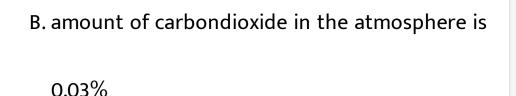
# **Answer: A::B**



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**5.** Which of the following conditions shows the polluted environment?

A. pH of rain water is 5.6



- C. biochemical oxygen demand 10ppm.
- D. eutrophication

# **Answer: C::D**



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**6.** Phosphate containing fertilisers cause water pollution. Addition of such compounds in water bodies causes....

| A. enhanced growth of algae                  |
|--|
| B. decrease in amount of dissolved oxygen in |
| water  |
| C. deposition of calcium phosphate           |
| D. increase in fish population               |
| Answer: A::B                                 |
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|  |
| <b>7.</b> The acids present in acid rain are |

A. Peroxyacetylnitrate

- B.  $H_2CO_3$
- $\mathsf{C}.\,HNO_3$
- D.  $H_2SO_4$

# Answer: B::C::D



- 8. The consequences of global warming may be
  - A. increase in average temperature of the earth
  - B. melting of Himalayan Glaciers
  - C. increased biochemical oxygen demand

D. eutrophication

**Answer: A::B** 



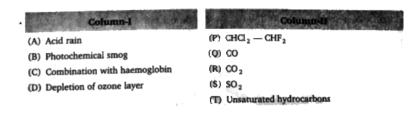
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# **Match The Column**

1. Column-I and Column-II contains four entries each.

Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one

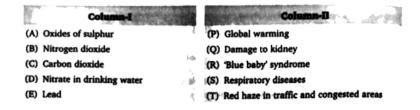
#### entries of Column-II



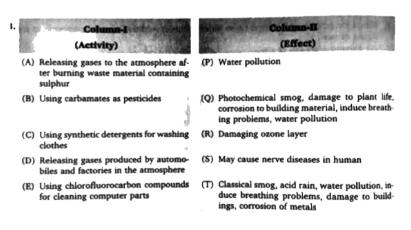


2. Column-I and Column-II contains four entries each.

Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one entries of Column-II

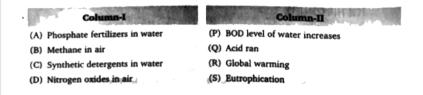


**3.** Column-I and Column-II contains four entries each. Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one entries of Column-II





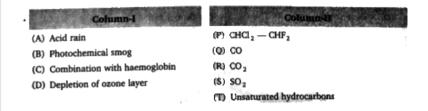
**4.** Column-I and Column-II contains four entries each. Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one entries of Column-II





**5.** Column-I and Column-II contains four entries each. Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may

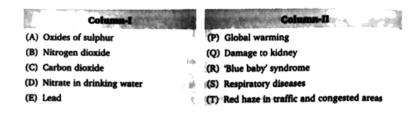
have the matching with one or more than one entries of Column-II





**6.** Column-I and Column-II contains four entries each. Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one

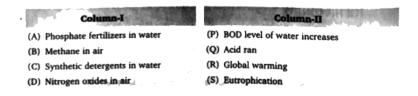
#### entries of Column-II





7. Column-I and Column-II contains four entries each.

Entries of Column-I are to be matched with some entries of Column-II. Each entry of Column-I may have the matching with one or more than one entries of Column-II.



# **Assertion Reason Type Questions**

**1.** Assertion (A) Green house effect was observed in houses used to grow plants and these are made of green glass.

Reason (R) Green house name has been given because glass houses are made of green glass.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

#### **Answer: C**



2. Assertion (A): The pH of acid rain is less than 5.6.

Reason (R): Carbon dioxide present in the

atmosphere dissolves in rain water and forms carbonic acid.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

# **Answer: B**



**3.** Assertion (A) Photochemical smog is oxidising in nature.

Reason (R) Phochemical smog contains  $NO_2$  and  $O_3$  , which are formed during the sequence of reactions.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

**Answer: A** 



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**4.** Assertion (A): Carbon dioxide is one of the important greenhouse gases.

Reson (R): It is largely produced by respiratory function of animals and plants.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

#### **Answer: B**



**5.** Assertion (A) : Ozone is destroyed by solar radiation in upper streatosphere.

Reason (R): Thinning of the ozone layer allows

excessive UV radiations to reach the surface of earth.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

# **Answer: D**



- **6.** Assertion (A): Excessive use of chlorinated synthetic pesticides causes soil and water pollution.

  Reason (R): Such pesticides are non-biodegradable.
  - A. If both assertion and reason are true and the reason is the correct explanation of assertion
  - B. If both assertion and reason are true and the reason is not the correct explanation of assertion
  - C. If assertion is true but the reason is false
  - D. If assertion is false but reason is true

# **Answer: A**



**7.** Assertion: If BOD level of water in a reservoir is less than 5 ppm it is highly pollution.

Reason: High biological oxygen demand means low activity of bacteria in water.

- A. If both assertion and reason are true and the reason is the correct explanation of assertion
- B. If both assertion and reason are true and the reason is not the correct explanation of

assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

#### **Answer: C**



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**8.** Assertion (A) Green house effect was observed in houses used to grow plants and these are made of green glass.

Reason (R) Green house name has been given because glass houses are made of green glass.

- A. If both assertion and reason are true and the reason is the correct explanation of assertion
- B. If both assertion and reason are true and the reason is not the correct explanation of assertion
- C. If assertion is true but the reason is false
- D. If assertion is false but reason is true

### **Answer: C**



- 9. Assertion (A): The pH of acid rain is less than 5.6.
- Reason (R): Carbon dioxide present in the atmosphere dissolves in rain water and forms carbonic acid.
  - A. If both assertion and reason are true and the reason is the correct explanation of assertion
  - B. If both assertion and reason are true and the reason is not the correct explanation of assertion
  - C. If assertion is true but the reason is false
  - D. If assertion is false but reason is true

# **Answer: B**



**10.** Assertion (A) Photochemical smog is oxidising in nature.

Reason (R) Phochemical smog contains  $NO_2$  and  $O_3$  , which are formed during the sequence of reactions.

- A. If both assertion and reason are true and the reason is the correct explanation of assertion
- B. If both assertion and reason are true and the reason is not the correct explanation of

assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

#### **Answer: A**



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**11.** Assertion (A): Carbon dioxide is one of the important greenhouse gases.

Reson (R): It is largely produced by respiratory function of animals and plants.

- A. If both assertion and reason are true and the reason is the correct explanation of assertion
- B. If both assertion and reason are true and the reason is not the correct explanation of assertion
- C. If assertion is true but the reason is false
- D. If assertion is false but reason is true

# **Answer: B**



**12.** Assertion (A): Ozone is destroyed by solar radiation in upper streatosphere.

Reason (R): Thinning of the ozone layer allows excessive UV radiations to reach the surface of earth.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

**Answer: D** 



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**13.** Assertion (A): Excessive use of chlorinated synthetic pesticides causes soil and water pollution.

Reason (R): Such pesticides are non-biodegradable.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

#### **Answer: A**



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**14.** Assertion: If BOD level of water in a reservoir is less than 5 ppm it is highly pollution.

Reason: High biological oxygen demand means low activity of bacteria in water.

A. If both assertion and reason are true and the reason is the correct explanation of assertion

B. If both assertion and reason are true and the reason is not the correct explanation of assertion

C. If assertion is true but the reason is false

D. If assertion is false but reason is true

# **Answer: C**



