CHEMISTRY

BOOKS - BRILLIANT PUBLICATION

ENVIRONMENTAL CHEMISTRY

Level I Homework

1. Which is a correctly matched pair

A. Mesosphere-hotest region in atmosphere

B. Thermosphere-coldest region in atmosphere

C. Exosphere-atomic & ionic O,H & He

D. Stratosphere-Ionosphere

Answer:

Watch Video Solution

2. The oxides of nitrogen acts as serious pollutants among the following are

1. N_2O 2. NO 3. NO_2

A. 1,2

B. 1,3

C. 2,3

D. 1,2,3

Answer:

Watch Video Solution

3. Which one is the biodegradable pollutant?

A. Lead compounds

B. Mercuric salt

C. Pesticides

D. Domestic waste

Answer:

Watch Video Solution

4. Photo Chemical smog occurs in work, bright and sunny climate. One of the following is not responsible of photochemical smog. Identify it

A. NO_2

B. SO_2

C. O_3

D. unsaturated hydrocarbon

Answer:

Watch Video Solution

5. The pollutants which come directly in the air from sources are called primary pollutants. Primary pollutants 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:

Watch Video Solution

6. The gaseous envelope around the earth is known as atmosphere. The lowest layer of this is extended up to 10 km from sea level. This layer is

A. Stratosphere

B. Troposphere

C. Monosphere

D. Hydrosphere

Answer:

Watch Video Solution

7. Identify layer wrong statement in the following

A. Ozone layer permit infrated radiation from the sun reach the earth

B. Acid rain is mostly because of oxides of nitrogen and sulphur

C. Chroroflуro carbons are responsible for ozone layer depilation

D. Green House effect responsible for Global warming

Answer:

Watch Video Solution

8. Ozone depletion is pollution of

A. Stratosphere

B. Ionosphere

C. Mesosphere

D. Troposphere

Answer:

Watch Video Solution

9. Excess of nitrate ions in drinking water causes.

A. Methemoglobinemia

B. Kidney Damage

C. Laxative effect

D. Flurosis

Answer:

Watch Video Solution

10. The pH of normal rain water is

A. 6.5

B. 7.5

C. 5.6

D. 3.5

Answer:

Watch Video Solution

11. Lithosphere refers to the

A. Layer of rock material on the earth's surface and the ocean floor

B. Layer of earth in which all forms of life exist

C. Upper most layer of atoms phere mergong in to space

D. All most layer of water such as ocean seas, rivers, lakes etc

Answer:

Watch Video Solution

12. Which is incorrectly matched

A.

Disease	Cause
Flurosis	Fluride in water

B.

Disease	Cause
Minamata	Mercury poisoning

C.

Disease	Cause
White diseases	Chemicals from petrolium industry

D.

Disease	Cause
Pneumoconiosis	Particulate pollutants from industry

Answer:

Watch Video Solution

13. Which one of is not correct? Green house effect

A. is due to high Conc.of CO_2 in atmosphere

B. is influenced by gases such as CH_4, O_3 & chlorofluro carbons

C. would result in the warming up of the earth

D. would result in lowering the level of oceans due to high evaporation

Answer:

Watch Video Solution

14. The principal gas evolved from sludge digestion tank is

A. CO

B. CO_2

C. N_2

D. CH_4

Answer:

Watch Video Solution

15. Persistent pesticides such a DDT pass into food chain and increase in amount per unit weight of organisms due to their accumulation in fat. This phenomenon is called

A. Biodegradation

B. Biomagnification

C. Biosynthesis

D. Decomposition

Answer:

Watch Video Solution

Level Ii

1. Match the following and choose the correct answer.

List I	List II
(i) Primary pollutant	(a) Oceans
(ii) secondary pollutant	(b) Vegetable garbage
(iii) Biodegradable pollutant	(c) DDT
(iv) Non biodegradable pollutant	(d) SO_2
(v) sink for CO_2 Primary pollutant	(e) PAN

A. i-d,ii-e,iii-b,iv-a,v-c

B. i-d,ii-e,iii-b,iv-c,v-a

C. i-d,ii-e,iii-c,iv-b,v-a

D. i-d,ii-b,iii-e,iv-a,v-c

Answer:

Watch Video Solution

2. Which of the following statements is wrong?

A. even low concentration of SO_2 causes respiratory diseases, irritations to eye resulting in tears and redness

B. high concentration of SO_2 leads to stiffness of flower buds

C. SO_2 in atmosphere oxidised into SO_3 and oxidation reaction is suppressed by O_3 and H_2O_2

D. SO_3 affects larynx

Answer:

Watch Video Solution

3. The major natural source of release of SO_2 pollutant into atmosphere is

A. volcanic eruption

B. Decay of vegetable garbages

C. Thunder and lightning

D. Oceans

Answer:

Watch Video Solution

4. The maximum perimissibel concentration of CO in the ambient air is 40ppm. Concentration of Co if 750 ppm or more lead to acute oxygen starvation, and the stage in called,

A. anoxia

B. asphyxiation

C. carboxylation

D. Both A and B

Answer:

Watch Video Solution

5. In anaerobic digestion organic matter is converted into

A. CO_2 and H_2O

B. CO_2 and CH_4

C. CH_4 and H_2O

D. H_2O and O_2

Answer:

Watch Video Solution

6. Which of the following is wrong about classical smog?

A. It occurs in cool, humid climate and is the result of build up of sulphur oxides and particulate matter from fuel combustion

B. It is formed due to the formation of sulphuric acid droplets which combine with particulates

C. It is also called sulphurous smog

D. It is formed in the evening hours of winter months

Answer:

Watch Video Solution

7. Which one of the following statement regarding photochemical smog is not correct?

A. Photochemical smog or los angeles smog occurs in warm dry and sunny climate results from the acting of sunlight on nitrogen oxides & hydrocarbons produced by automobiles and factories

B. Photochemical smog is characterised by brown hazy fumes due to NO_2

C. Photochemical smog does not causes irritation in eyes and throat

D. Photochemical smog is an reducing agent in character.

Answer:

Watch Video Solution

8. The primary precursors of photochemical smog are

A. SO_2 and NO_2

B. NO_2 & hydrocarbons

C. NO_2 & PAN

D. O_3 and PAN

Answer:

Watch Video Solution

9. Which is true about Taj Trapezium?

(i) It is action plan to save Taj Mahal from Acid Rain

(ii) All industries in the trapezium would be allowed to use natural gas or LPG instead of coal or oil.

iii. People in these area would also be advised to use LPG instead of coal, wood, kerosene oil etc for cooking

iv. Heavy vehicles in the near by area would be encouraged to use low sulphur content fuel.

A. All are true

B. Only i. and ii. Are true

C. only i. is true

D. All except iv. Are true.

Answer:

Watch Video Solution

10. Which of the following statements is false?

A. Absorption of the terrestrially radiated heat by the carbondioxide is the main cause of global warming

B. The global warming will increasing the rate of melting of polar ice caps increasing the sealevel

C. The global warming of earth surface is mainly due to deforestation

D. $CO_2, NO, CH_4, O_3, \mathrm{CCl}_4$ & H_2O vapour are green house gases.

Answer:

Watch Video Solution

11. Which of the following statement/s is /are wrong:

(i) Nitric oxide and chlorofluoro carbons are two main ozone depleting agents.

(ii) In the stratosphere CFCs undergo photochemical decomposition to produce chlorine free radical which destroy ozone layer.

(iii) Ozone hole has mainly been observed in the stratosphere over Antarctica.

(iv) Innon polar regions of the stratosphere, chlorine monoxide free radicals combine with NO_2 and chlorine free radicals combine with methane, as a result the chain reaction causing ozone depletion stops

v. Northern hemisphere is free from ozone depletion

A. (i)

B. all except (v)

C. (v)

D. (iv) and (v)

Answer:

Watch Video Solution

12. Disease caused by eating fish found in water contaminated with industrial waste having mercury is

A. Minamata disease

B. Brights disease

C. Hashimotos disease

D. Osterosclerosis

Answer:

Watch Video Solution

13. In winter season which acid is formed over polar stratospheric cloud?

A. $HOCl$

B. $HClO_2$

C. $HClO_3$

D. $HClO_4$

Answer:

Watch Video Solution

14. Consider the following statements about different impurities in drinking water

I. Lead can damage kidney, liver, reproductive system

II. Sulphide content above 500 ppm causes laxative effect.

III. Nitrate content above 50 ppm causes disease such as methemoglobinemia. Out of these

A. Only III correct

B. I & II are correct

C. II & III are correct

D. All the above

Answer:

Watch Video Solution

15. The process of 'eutrophication' is due to : increase in concentration of insecticide in water, increase in concentration of fluoride ion in water, The reduction in concentration of the dissolved oxygen in water due to phosphate pollution in water, attack of younger leaves of a plant by peroxyacetyl nitrate.

A. Increase in concentration of insecticide in water

B. Increase in concentration of fluoride ion in water

C. The reduction in concentration of the dissolved oxygen in water due to phosphate pollution in water.

D. Attack of a younger leaves of a plant by peroxyacylnitrate

Answer:

Watch Video Solution

16. The order of acid in acid rain

A. $H_2SO_4 > HNO_3 > HCl$

B. $HNO_3 > HCl > H_2SO_4$

C. $HCl > HNO_3 > H_2SO_4$

D. $HNO_3 > H_2SO_4 > HCl$

Answer:

Watch Video Solution

17. Fertile soil is likely to have a pH of

A. 3

B. 9

C. 6-7

D. 14

Answer:

Watch Video Solution

18. Match the following:

A	B
CFC's	Blue baby syndrome
Oxides of nitrogen	Kidney damage
Cadmium	Eutrophication
Nitrates	Ozone depletion
	Red haze in the traffic

A. $I \rightarrow D, II \rightarrow A, III \rightarrow B, IV \rightarrow C$

B. $I \rightarrow B, II \rightarrow A, III \rightarrow D, IV \rightarrow C$

C. $I \rightarrow D, II \rightarrow C, III \rightarrow A, IV \rightarrow B$

D. $I \rightarrow A, II \rightarrow D, III \rightarrow C, IV \rightarrow B$

Answer:

Watch Video Solution

19. Read the following passage and answer the questions given.

The production and improper disposal of waste are causes for a great deal of environmental pollution. Many toxic industrial wastes from manufacturing process require treatment and /or safe disposal.

When materials are recycled, apart from saving on the coast of raw material, waste disposal coast are reduced.

Some combustible materials like dried leaves etc can be burnt to get heat energy. Sewage treatment includes filtering, scudge settlement, degradation coagulation disinfection using chlorine etc.

Certain microorganisms can degrade waste in the absence of

oxygen-digestion.

Proper management of disposal of household and industrial waste can be done by

I. Recycling II. Incineration

III. Sewage treatment IV. Digestion : I and II only; I and III only; I,II and III; All the above

A. I and II only

B. I and III only

C. I,II and III

D. All the above

Answer:

Watch Video Solution

20. Read the following passage and answer the questions given.

The production and improper disposal of waste are causes for a great deal of environmental pollution. Many toxic industrial wastes from manufacturing process require treatment and /or safe disposal.

When materials are recycled, apart from saving on the coast of raw material, waste disposal coast are reduced.

Some combustible materials like dried leaves etc can be burnt to get heat energy. Sewage treatment includes filtering, scudge settlement, degradation coagulation disinfection using chlorine etc.

Certain microorganisms can degrade waste in the absence of oxygen-digestion.

Sewage water is purified by: light, Fishes, Microorganisms, Aquatic plants

A. light

B. Fishes

C. Microorganisms

D. Aquatic plants

Answer:

Watch Video Solution

21. Read the following passage and answer the questions given.

The production and improper disposal of waste are causes for a great deal of environmental pollution. Many toxic industrial wastes from manufacturing process require treatment and /or safe disposal.

When materials are recycled, apart from saving on the coast of raw material, waste disposal coast are reduced.

Some combustible materials like dried leaves etc can be burnt to get heat energy. Sewage treatment includes filtering, scudge settlement, degradation coagulation disinfection using chlorine etc.

Certain microorganisms can degrade waste in the absence of oxygen-digestion.

Which of the following statements about sewage treatment is false?

A. In primary treatment large sized particles are filtered and residual water is subjected to sedimentation

B. Secondary treatment involves aerobic digestion of organic waste

C. In tertiary treatment the waste water is treated with lime to remove phosphate

D. Coagulation can be carried out by passing ozone through waste water

Answer:

Watch Video Solution

22. Identify the incorrect statement from the following

A. Oxides of nitrogen in the atmosphere can cause the depletion of ozone layer

B. Ozone absorbs infrared radiation

C. Depletion of ozone layer is because of its chemical reaction with chlorofluorocarbon

D. Ozone absorbs uv radiation of the sun

Answer:

Watch Video Solution

23. Which of the following statements is not true?

A. pH of drinking water should be between 5.5 and 9.5

B. Concentration of DO below 6 ppm is good for the growth of fish

C. Clean water would have a BOD value of less than 5 ppm

D. Oxides of sulphur, nitrogen and carbon are the most widespread air pollutant

Answer:

Watch Video Solution

24. Green chemistry means such reactions which (1)Produce colour during reactions. (2)Reduce the use and production of hazardous chemicals. (3)Are related to the depletion of ozone layer (4)Study the reactions in plant

A. Produce colour during reactions

B. Reduce the use and production of hazardous chemicals

C. Are related to the depletion of ozone layer

D. Study the reaction in plants

Answer:

Watch Video Solution

25. Which of the following is not a common component of photochemical smog?

A. Ozone

B. Acrolein

C. Peroxyacetyl nitrate

D. Chlorofluorocabon

Answer:

Watch Video Solution

26. Which of the following statements about polar stratospheric clouds (PSCs) is not correct? PSCs do not react with chlorine nitrate and HCl, Type I clouds are formed at about

$77^\circ C$ and contain solid $HNO_3.3H_2O$, Type II clouds are formed at about $-85^\circ C$ and contain some ice, A tight whirlpool of wind called polar vortex is formed which surrounds Antartica

A. PSCs do not react with chlorine nitrate and HCl

B. Type I clouds are formed at about $77^\circ C$ and contain solid $HNO_3.3H_2O$

C. Type II clouds are formed at about $-85^\circ C$ and contain some ice

D. A tight whirlpool of wind called polar vortex is formed which surrounds Antartica

Answer:

Watch Video Solution

Level Ii Assertion Reason

1. Assertion: Photo chemical smog is oxidising agent in nature

Reason: Photo chemical smog contains NO_2 and O_3 which are formed during the sequence of reaction.

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 but Reason is not the correct explanation of Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer:

Watch Video Solution

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

Reason: 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 but Reason is not the correct explanation of Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer:

Watch Video Solution

3. Assertion : The process in which nutrient rich water bodies develop plant population is called eutrophication.

Reason:Eutrophication helps enhancement of plants & animals population by providing them oxygen. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion, If both Assertion and Reason are true but Reason is not the correct explanation of Assertion, If Assertion is true but the Reason is false, If both Assertion and Reason are false

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 but Reason is not the correct explanation of Assertion

C. If Assertion is true but the Reason is false

D. If both Assertion and Reason are false

Answer:

Watch Video Solution

Questions Level I

1. A fertile soil is likely to have a pH of:

A. 3

B. 9

C. $6 - 7$

D. 14

Answer: C

Watch Video Solution

2. Particulate matter with size less than one micron that remain suspended in air indefinitely and transported by wind currents are called:

A. fumes

B. mist

C. aerosols

D. soot

Answer: C

Watch Video Solution

3. Harmful chemical present in tobacco is:

A. nicotine

B. atropine

C. tannic acid

D. morphine

Answer: A

Watch Video Solution

4. Main source of lead pollution is from:

A. sewage

B. leaded gasoline

C. tobacco

D. insecticide

Answer: B

Watch Video Solution

5. Most poisonous pollutant in water is:

A. zinc

B. phosphate

C. arsenic

D. detergent

Answer: C

Watch Video Solution

6. Which of the following is not a major constituent of air pollutants?

A. Oxides of sulphur

B. Oxides of nitrogen

C. Carbon monoxide

D. Hydrogen sulphide

Answer: D

Watch Video Solution

7. Most efficient and suitable dust removal equipment for removal of fly ash from flue gas in a thermal power plant is:

A. gravity settling chamber

B. cyclone separator

C. electrostatic precipitator

D. bag filter

Answer: C

Watch Video Solution

8. Which of the following pollutants is not emitted during volcanic eruptions?

A. SO_2

B. H_2S

C. CO

D. hydrocarbons

Answer: D

Watch Video Solution

9. White lung cancer' is caused by:

A. asbestos

B. silica

C. textiles

D. paper

Answer: C

Watch Video Solution

10. Which of the following produces another air pollutant by reacting with oxides of nitrogen in presence of sunlight?

A. HCl

B. SO_2

C. O_3

D. HCN gas

Answer: C

Watch Video Solution

11. Pneumoconiosis is caused by inhalation of

A. CO

B. Particulate matter

C. SO_2

D. CFCs

Answer: B

Watch Video Solution

12. The pollutants released by jet aeoplanes in the atmosphere are called

A. Photochemical oxidants

B. Photochemical reductants

C. Aerosols

D. Physical pollutants

Answer: C

Watch Video Solution

13. Which of the following is responsible for depletion of the ozone layer in the upper strata of the atmosphere?

A. Freons

B. Polyhalogens

C. Ferrocene

D. Fullerenes

Answer: A

Watch Video Solution

14. Fluorosis' disease is caused due to the reaction of ..... with excess of fluoride in the body.

A. Ca

B. Mg

C. Fe

D. K

Answer: A

Watch Video Solution

15. Acid mine water principally contains sulphuric acid produced by oxidation of

A. Hydrogen sulphide

B. Iron pyrites

C. Sulphur rich coal

D. Metal sulphates

Answer: B

Watch Video Solution

16. Oxidizing agent usually used in determination of COD is

A. H_2O_2

B. $K_2Cr_2O_7$

C. $KMnO_4$

D. O_3

Answer: B

Watch Video Solution

17. The major products of the digestion of sewage sludge are

A. $CO_2 + H_2O$

B. $CO + H_2O$

C. $CO_2 + CH_4$

D. $CH_4 + H_2O$

Answer: C

Watch Video Solution

18. Which one of the following is not a common component of photochemical smog?

A. Ozone

B. Acrolein

C. Peroxyacetyl nitrate

D. Chloroflurocarbons

Answer: D

Watch Video Solution

19. All are primary pollutants except

A. SO_2

B. H_2SO_4

C. NO_2

D. Particulate matter

Answer: B

Watch Video Solution

20. The size of particulates of H_2SO_4 fog lies in the range

A. 5-100 nm

B. 100-500 nm

C. 500-1000 nm

D. 1000-10,000 nm

Answer: C

Watch Video Solution

21. Depletion of ozone layer causes

A. blood cancer

B. lung cancer

C. skin cancer

D. breast cancer

Answer: C

Watch Video Solution

22. London smog is found in

A. Summer during day time

B. Summer during morning time

C. Winter during morning time

D. Winter during day time

Answer: C

Watch Video Solution

23. The smog is essentially caused by the presence of

A. O_2 and O_3

B. O_2 and N_2

C. Oxides of sulphur and nitrogen

D. O_3 and N_2

Answer: C

Watch Video Solution

24. Among the following the one which is not a greenhouse gas is

A. N_2O

B. CO_2

C. CH_4

D. O_2

Answer: D

Watch Video Solution

25. The gas emitted by supersonic jet planes that slowly depletes the ozone layer is

A. CO

B. NO

C. SO_2

D. O_2

Answer: B

Watch Video Solution

26. Excess-nitrate in drinking water can cause

A. methemoglobinemia

B. kidney damage

C. liver damage

D. laxative effect

Answer: A

Watch Video Solution

27. The concentration of fluoride, lead, nitrate and iron in a water sample from an underground lake was found to be 1000 ppb, 40 ppb, 100 ppm and 0.2 ppm respectively. This water is unsuitable for drinking due to high concentration of

A. fluoride

B. lead

C. nitrate

D. iron

Answer: C

Watch Video Solution

28. Green chemistry deals with

A. study of plant physiology

B. study of extraction of natural products from plants

C. detailed study of reactions involved in the synthesis of chlorophyll

D. utilization of existing knowledge base for reduction the chemical hazards along with developmental activities

Answer: D

Watch Video Solution

29. Biochemical Oxygen Demand, (BOD) is a measure of organic material present in water. BOD value less than 5 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

Watch Video Solution

30. The pollutants which come directly in the air from sources are called primary pollutants. Primary pollutants 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

Watch Video Solution

31. Which of the following is the uppermost region of the atmosphere?

A. Stratosphere

B. Troposphere

C. Exosphere

D. Ionosphere

Answer: C

Watch Video Solution

32. Which of the following is present in maximum amount in acid rain?

A. HNO_2

B. H_2SO_4

C. HCl

D. H_2CO_3

Answer: B

Watch Video Solution

33. High concentration of fluoride is poisonous and harmful to bones and teeth at levels over

A. 1 ppm

B. 3 ppm

C. 5 ppm

D. 10 ppm

Answer: D

Watch Video Solution

34. The point of temperature inversion between troposphere and ozonosphere is called

A. stratopause

B. mesopause

C. tropopause

D. ionopause

Answer: C

Watch Video Solution

35. Co-existence of biotic and abiotic components of the environment along with climatic factors such as temperature, humidity, etc. is called

A. eutrophication

B. ecosystem

C. atmosphere

D. halomorphism

Answer: B

Watch Video Solution

36. The non-viable particulate is

A. bacteria

B. moulds

C. fungi

D. dust

Answer: D

Watch Video Solution

37. A 'body' which allows the short wavelength incoming solar radiations to enter in but does not allow long wavelength outgoing IR-radiation to escape out is called

A. global warming

B. greenhouse

C. ionosphere

D. stratosphere

Answer: B

Watch Video Solution

38. Addition of phosphate fertilizers into water leads to a)Increased growth of decomposers b)Reduced algal growth c)Increased algal growth d)Nutrient enrichment

A. increased growth of decomposers

B. reduced algal growth

C. increased algal growth

D. nutrient enrichment (eutrophication)

Answer: D

Watch Video Solution

39. Persistent pesticides such a DDT pass into food chain and increase in amount per unit weight of organisms due to their accumulation in fat. This phenomenon is called

A. biodegradation

B. biomagnification

C. biosynthesis

D. decomposition

Answer: B

Watch Video Solution

40. Higher concentration of nitrogen dioxide in atmospheric air causes

A. cancer

B. bronchitis

C. asphyxiation

D. corrosion

Answer: B

Watch Video Solution

41. Growth of fish is not as healthy in warm water as in cold water because

A. the amount of D.O.in warm water is higher than in cold water

B. warm water is not liked by fish

C. cold water contains more marine plants

D. the amount of D.O. in warm water is less than in cold water.

Answer: D

Watch Video Solution

42. Modes of controlling pollution in large cities include

A. less use of insecticides

B. proper disposal of organic wastes, sewage and industrial effluents

C. shifting of factories out of the residential area

D. all the above

Answer: D

Watch Video Solution

43. Which of the following statements is false?

A. The main reason for river water pollution is industrial and domestic sewage discharge

B. Surface water contains a lot of organic matter, mineral nutrients and radioactive materials

C. Oil spill in sea water causes heavy damage to fishery

D. Oil slick in water increases D.O.value

Answer: D

Watch Video Solution

44. The process of 'eutrophication' is due to : increase in concentration of insecticide in water, increase in concentration of fluoride ion in water, The reduction in concentration of the

dissolved oxygen in water due to phosphate pollution in water, attack of younger leaves of a plant by peroxyacetyl nitrate.

A. increase in concentration of insecticide in water

B. increase in concentration of fluoride ion in water

C. the reduction in concentration of the dissolved oxygen in water due to phosphate pollution in water

D. attack of younger leaves of a plant by peroxyacetyl nitrate

Answer: C

Watch Video Solution

45. Lead in water can cause

A. eye disease

B. arthritis

C. kidney damage

D. hair falling

Answer: C

Watch Video Solution

46. In the upper layer of the atmosphere, ozone is formed by the:

A. action of UV rays on oxygen

B. combination of oxygen molecules

C. action of electric discharge of oxygen molecules

D. effect of high pressures on oxygen

Answer: A

Watch Video Solution

47. Growing more trees help to:

A. reduce oxygen in the environment

B. increase carbon dioxide in the environment

C. reduce carbon dioxide only in the environment

D. reduce CO_2 and increase O_2 in the environment

Answer: D

Watch Video Solution

48. It is dangerous to leave the car engine running in a closed garage, because it may cause serious pollution due to poisoning by emission of

A. CO_2

B. CO

C. unburnt petrol

D. SO_2

Answer: B

Watch Video Solution

49. Two important sinks of CO_2 are

A. plants, vehicular exhaust

B. oceans, plants

C. oceans, soil

D. plants, limestone

Answer: B

Watch Video Solution

50. Black lung disease is caused by inhalation of

A. coal dust

B. silica dust

C. cotton fiber dust

D. asbestos dust

Answer: A

Watch Video Solution

Questions Level Ii

1. Presence of high concentration of ozone and smog in atmospheric air causes:

A. embrittlement and decreases of folding resistance of paper

B. cracking of rubber products

C. fading of dye on textiles

D. damage of electrical insulator on high tension power line

Answer: B

Watch Video Solution

2. Which statement among the following is not correct?

A. Primary pollutants are those which are emitted directly from the source

B. Secondary pollutants are those which are formed in the atomosphere by chemical interactions among primary pollutants and atmospheric constituents.

C. Acid rain is a primary pollutant.

D. Particulates refer to all atomospheric substances that are not gases.

Answer: C

 Watch Video Solution

3. Photochemical oxidant PAN is formed.

A. By action of oxides of nitrogen on hydrocarbons in presence of sunlight

B. By action of carbon dioxide on hydrocarbons in presence of sunlight

C. By action of hydrogen sulphide on hydrocarbons in presence of sunlight

D. By the action of SO_2 and hydrocarbons

Answer: A

Watch Video Solution

4. The practice of application of sewage sludge to the land is increasing because

A. Ocean dumping has become costlier and polluting

B. Dried sludge is compact and easy to handle

C. Sludge contains nitrogen and phosphorus which make it useful as fertilizer

D. None of these

Answer: C

Watch Video Solution

5. Which of the following is incorrect regarding green chemistry?

A. It involves forestation of wastelands.

B. It involves utilization of information regarding toxicity and hazardous nature of chemicals.

C. It involves development of new synthetic methods and analytical tools.

D. It follows the same tradition of scientific discovery and understanding that has characterized chemistry from its origins.

Answer: A

Watch Video Solution

6. Green chemistry has helped in development of process for manufacture of polystyrene foam sheet packaging material by

using..... as the blowing agent.

A. Steam

B. CO_2

C. CFCs

D. Methane

Answer: B

Watch Video Solution

7. Which one of the following statements is false?

A. Photochemical smog causes irritation in eyes

B. London smog is a mixture of smoke and fog

C. Photochemical smog results in the formation of PAN

D. London smog is oxidising in nature

Answer: D

Watch Video Solution

8. Freon is not recommended to be used in refrigerators because they:

A. increase temperature

B. deplete ozone

C. affect environment

D. affect human body

Answer: B

Watch Video Solution

9. Identify the wrong statement in the following:

A. Ozone layer does not permit infrared radiation from the sun to reach the earth

B. Acid rain is mostly because of oxides of nitrogen and sulphur

C. Chlorofluorocarbons are responsible for ozone layer depletion.

D. Greenhouse effect is responsible for global warning

Answer: A

 Watch Video Solution

10. 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 contains smoke, fog and sulphur dioxide

Answer: A

Watch Video Solution

11. Which of the following statements is wrong?

A. Ozone is not responsible for greenhouse effect

B. Ozone can oxidise nitrogen monoxide present in the atmosphere to nitrogen dioxide

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

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

Answer: A

Watch Video Solution

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

A. If possible, making use of soap made of vegetable 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 neatly strong substances

Answer: D

Watch Video Solution

13. Which of the following statements about sewage treatment is false?

A. In primary treatment, large sized particles are filtered through screens and residual water is subjected to sedimentation

B. Secondary treatment involves aerobic digestion of the organic waste

C. In tertiary treatment, the waste water is treated with lime to remove phosphate followed by coagulation

D. Coagulation can be carried out by passing ozone through waste water

Answer: D

Watch Video Solution

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

A. slightly higher than that when the thunderstorm is not there

B. uninfluenced by occurrence of thunderstorm

C. which depends upon the amount of dust in air

D. slightly lower than that of rain water without thunderstorm

Answer: D

Watch Video Solution

15. Which of the following statements is false?

A. Limestone acts as a sink for SO_x

B. SO_x can be removed from flue gases by passing through a solution of citrate ions

C. Ammonia acts as a sink for NO_x

D. The average residence time of NO_2 is one month

Answer: D

Watch Video Solution

16. Peeling of ozone umbrella, which protects us from UV rays is caused by

A. PAN

B. CO_2

C. CFCs

D. Coal burning

Answer: C

Watch Video Solution

17. Loam soil contains almost equal amounts of

A. sand

B. silt

C. clay

D. all the above

Answer: D

Watch Video Solution

18. Incomplete combustion of petrol or diesel in automobile engines can be best detected by testing the fuel gases for the presence of

A. carbon monoxide and water vapour

B. carbon monoxide

C. nitrogen dioxide

D. sulphur dioxide

Answer: B

Watch Video Solution

19. Which of the following causes damage to the building containing calcium carbonate and responsible for cough and choking in human?

A. Sulphur

B. Carbon

C. Nitrogen dioxide

D. Sulphur dioxide

Answer: D

Watch Video Solution

20. Persons working in cement plants and limestone quarries are more prone to disease like

A. cancer

B. asthma

C. silicosis

D. pneumoconiosis

Answer: C

Watch Video Solution

21. Main pollutants released from iron and steel industry is

A. CO, CO_2 and SO_2

B. NO, SO_2 and H_2S

C. CO_2, H_2S and NO_2

D. CO_2, NO_2 and SO_2

Answer: A

Watch Video Solution

22. Which is incorrectly matched?

View Text Solution

23. Man dies in the atmosphere of CO because it

A. dries up the blood

B. combines with O_2 present in the body

C. reduces the organic matter of tissues

D. combines with the haemoglobin of blood, thereby making the latter incapable of absorbing O_2

Answer: D

Watch Video Solution

24. Which pollutant causes burning sensation of throat and eyes and vomiting sensation?

A. Hydrogen sulphide

B. Sulphur

C. Hydrogen cyanide

D. Arsenic substances

Answer: A

Watch Video Solution

25. In which one of the following the biochemical oxygen demand (BOD) of sewage (S), distillery effluent (DE), paper mill effluent(PE) and sugar mill effluent (SE) have been arranged in ascending order.

A. SE $<$ S $<$ PE $<$ DE

B. SE $<$ PE $<$ S $<$ DE

C. PE $<$ S $<$ SE $<$ DE

D. S $<$ DE $<$ PE $<$ SE

Answer: C

Watch Video Solution

26. Which one is not a correct statement? To minimise pollution:

A. manures and biofertilizers should be used in place of chemical fertilizers

B. all nuclear tests must be stopped

C. green belts in cities should be developed

D. domestic garbage must be burnt

Answer: D

Watch Video Solution

27. If BOD of a river is high, it means that the river is

A. not polluted

B. very much polluted with inorganic chemicals

C. very much polluted with organic chemicals which are decomposed by micro-organisms

D. polluted with pesticides

Answer: C

Watch Video Solution

28. Photo-chemical oxidants such as PAN or PBN are formed:

A. by action of nitrogen oxides on hydrocarbons in presence of sunlight

B. by action of carbon dioxide on hydrocarbons in presence of sunlight

C. by action of hydrogen sulphide on hydrocarbons in presence of sunlight

D. none of the above

Answer: A

Watch Video Solution

29. Lung diseases are four times more in urban areas than rural areas. This is due to the presence of

A. SO_2

B. CO_2

C. N_2

D. Water-vapour

Answer: A

Watch Video Solution

30. Which one of is not correct? Green house effect

A. is due to high concentration of CO_2 in atmosphere

B. is influenced by gases such as CH_4, O_3 and chlorofluorocarbons

C. would result in the warming up of the earth

D. would result in lowering the level of oceans due to high evaporation

Answer: D

Watch Video Solution

31. SO_2 and NO_2 causes pollution by increasing

A. acidity

B. alkanity

C. buffer action

D. none of these

Answer: A

Watch Video Solution

32. Pollutant is a chemical substance or factor which disturbs:

A. our balanced environment

B. geochemical cycles

C. flora of any region

D. fauna of any region

Answer: A

Watch Video Solution

33. Particulates are added to the atmosphere by:

A. industrial processes

B. combustion of fuels

C. agriculture burning

D. All of these

Answer: D

Watch Video Solution

34. The following process does not occur in the trophosphere: photosynthesis, combustion, greenhouse effect, ozone depletion

A. photosynthesis

B. combustion

C. greenhouse effect

D. ozone depletion

Answer: D

Watch Video Solution

35. DDT and BHC are.....

A. allergens

B. carcinogens

C. asthmatic agents

D. none of these

Answer: B

Watch Video Solution

36. Carbonaceous particles having size less than 10^{-6} m are called: grit, aggregates, aerosols, smoke

A. grill

B. aggregates

C. aerosols

D. smoke

Answer: D

Watch Video Solution

37. Which of the following statements about the depletion of ozone layer is correct?

A. The problem of ozone depletion is less serious at poles because NO_2 solidifies and is not available for consuming ClO^* radicals.

B. The problem of ozone depletion is more serious at poles because ice crystals in the clouds over poles act as

catalyst for photochemical reactions involving the decomposition of ozone by Cl^* and ClO^* radicals.

C. Freons, chlorofluorocarbons, are inert chemically, they do not react with ozone in stratosphere.

D. Oxides of nitrogen also do not react with ozone in stratosphere.

Answer: B

Watch Video Solution

38. Which of the following reactions does not contribute to air pollution in the troposphere?

A. $C_4H_{10(g)} + 6O_{2(g)} \rightarrow CO_{(g)} + 2CO_{2(g)} + 5H_2O_{(l)}$

B. $N_{2(g)} + O_{2(g)} \xrightarrow{\text{Lighting}} 2NO$

$2NO_{(g)} + O_{2(g)} \rightarrow 2NO_{2(g)}$

C. $2HCHO \rightarrow CH_{4(g)} + CO_{2(g)}$

D. $Cl + O_{3(g)} \rightarrow ClO + O_{2(g)}$

Answer: D

Watch Video Solution

39. Select the incorrect statement. : Water is considered pure if it has BOD less than 5 ppm., In COD determination, the pollutants resistant to microbial oxidation are not oxidized by oxidizing agent like $K_2Cr_2O_7$, The lower the concentration of DO, the more polluted is the water sample, The tolerable limit of lead in drinking water is 50 ppb.

A. Water is considered pure if it has BOD less than 5 ppm.

B. In COD determination, the pollutants resistant to microbial oxidation are not oxidized by oxidizing agent like $K_2Cr_2O_7$

C. The lower the concentration of DO, the more polluted is the water sample

D. The tolerable limit of lead in drinking water is 50 ppb.

Answer: B

Watch Video Solution

40. Pick up the correct statement.

A. CO which is major pollutant resulting from the combustion of fuels in automobiles plays a major role in photochemical smog

B. Classical smog has an oxidizing character while the photochemical smog is reducing in character

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

D. During formation of smog the level of ozone in the atmosphere goes down

Answer: C

Watch Video Solution

41. How are flue gases from industries freed from oxides of nitrogen and sulphur?

A. passing them through water and O_2 respectively

B. electroreduction and electrooxidation respectively

C. scrubbing them with H_2SO_4 and citrate ions $\left(H_2\text{cit}^{-1}\right)$ respectively.

D. scrubbing them with citrate ions $\left(H_2\text{cit}^{-1}\right)$ and H_2SO_4 respectively

Answer: C

Watch Video Solution

42. Which statement among the following is correct

A. NO is more harmful than NO_2

B. SO_2 is more harmful than SO_3

C. Acid rain contains mainly HNO_3

D. Acid rain contains mainly H_2SO_4 and lesser concentrations of HNO_3 and HCl

Answer: D

Watch Video Solution

43. Which of the following is/are correct statements for Bhopal gas tragedy?

A. It took place on 2nd December, 1984

B. It was due to leakage of methyl isocyanate (MIC)

C. MIC is obtained by the reaction of methylamine with phosgene

D. All of these

Answer: D

Watch Video Solution

44. Which of the following does not contribute towards the formation of photochemical smog?

A. NO

B. SO_2

C. O_3

D. hydrocarbons

Answer: B

Watch Video Solution

45. The aromatic compounds present as particulates are

A. benzene

B. toluene

C. nitrobenzene

D. polycyclic aromatic hydrocarbons

Answer: D

Watch Video Solution

46. Photochemical smog formed in congested metropolitan cities mainly consists of:

A. hydrocarbons SO_2 and CO_2

B. hydrocarbons, ozone and SO_2

C. ozone, peroxyacetyl nitrate and NO_x

D. smoke, peroxyacetyl nitrate and SO_2

Answer: C

Watch Video Solution

47. Photochemical transformation of the automobile exhaust emission in UV wavelength of sunlight results into:

A. CH_4 and C_6H_6

B. O_3 and PAN

C. CO_2 and NO_2

D. CO and CO_2

Answer: B

Watch Video Solution

48. Photochemical smog is common pollutant in places having:

A. high temperature

B. low temperature

C. excessive ammonia in the air

D. excessive sulphur dioxide in the air

Answer: A

Watch Video Solution

Questions Level Ii Assertion Reason Type

1. Assertion : Earth's outer mineral cover refers to lithosphere.

Reason : Troposphere extends to about 10 km above earth's surface.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: B

Watch Video Solution

2. Assertion : One of the sources of CO is automobile exhaust. Reason : CO is produced as a result of incomplete combustion of fuels in automobile engines. : If both Assertion and Reason are correct and Reason is the correct explanation of Assertion., If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion., If Assertion is correct , but Reason is incorrect., If both Assertion and Reason are incorrect .

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: A

Watch Video Solution

3. Assertion : The major source of air borne lead is leaded gasoline.

Reason : Leaded gasoline in petrol contains lead nitrate and lead acetate salts. : If both Assertion and Reason are correct and Reason is the correct explanation of Assertion., If both Assertion and Reason are correct, but Reason is not the correct

explanation of Assertion., If Assertion is correct , but Reason is incorrect., If both Assertion and Reason are incorrect .

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: C

Watch Video Solution

4. Assertion: Photochemical smog is produced by nitrogen oxides. Reason:Vehicular pollution is a major source of

nitrogen oxides. (1)Both Assertion and Reason are true and Reason is the correct explanation of Assertion. (2)Both Assertion and Reason are true but Reason is not the correct explanation of Assertion. (3)Assertion is true but Reason is false. (4)Both Assertion and Reason are false.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: B

Watch Video Solution

5. Assertion : Water is polluted by dissolved oxygen.

Reason : Dissolved oxygen is responsible for accumulation of organic waste.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: D

Watch Video Solution

6. Assertion : Chlorofluorocarbons depletes ozone layer.

Reason : Chlorofluorocarbons produce chlorine free radical in presence of sunlight responsible for the decomposition of O_3 to O_2

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: A

Watch Video Solution

7. Assertion : Nitrogen and sulphur oxides are responsible for acid rains.

Reason : These oxides are produced due to combustion of fuels.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: A

 Watch Video Solution

8. Assertion: CO and NO both combine with haemoglobin.

Reason : Both have equal affinity for haemoglobin

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: C

Watch Video Solution

9. Assertion: The lower the concentration of D.O., the more polluted is the water sample.

Reason : Oxygen is consumed by microbes for the decomposition of organic matter present in water.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: A

 Watch Video Solution

10. Assertion, Water having pH $<$ 5.5 is not suitable for drinking purposes.

Reason : As the pH of water decreases, the solubility of metal ions increases.

A. If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

B. If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

C. If Assertion is correct , but Reason is incorrect.

D. If both Assertion and Reason are incorrect .

Answer: B

Watch Video Solution