CHEMISTRY

BOOKS - A2Z CHEMISTRY (HINGLISH)

ENVIRONMENTAL CHEMISTRY

Section A Topicwise Questions

1. Which of the following statement is not true?

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

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

C. Clean water would have a BOD value of $5p \pm$.

D. oxdation by air H_2O_2 and O_3

Answer: B

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2. The uppermost region of the atmosphere is

A. Stratosphere

B. exosphere

C. troposhere

D. ionosphere

Answer: B

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3. what are the effect if a pregnent lady has the habit of smoking?

A. premature birth

B. deformed baby

C. PMT

D. all of these

Answer: D

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4. Atmosphere of big/metrapoltian cities are polluted most by :

A. automobile exhausts

B. pesticide residue

C. household waste

D. radioactive fall out

Answer: A

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5. The point of temperature inversion between troposphere and ionosphere is called

A. Stratopause

B. mesopause

C. ionopause

D. tropopause

Answer: D

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

A. eutropphication

B. atmosphere

C. ecosystem

D. halomorphism

Answer: C

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7. Consider the following equilibrium,

$HbO_2, + CO \Leftrightarrow \ + HbCO + O_2$

when $[HbCO] = 3\,\%$ to $4\,\%$ oxygen carrying capacity of blood is

A. increased

B. remain unchanged

C. decreased

D. can't be predicated

Answer: C

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8. Mesopause represents the point of temperature inversion between

A. troposphere and stratosphere

B. troposphere and mesosphere

C. stratosphere and mesosphere

D. mesosphere and thermosphere

Answer: D

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9. Burning of fossil fuels is the main source of which of the following pollutants?

A. Nitrogen oxide

B. Nitric oxide

C. Nitrous oxide

D. sulphur dioxide

Answer: D

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10. Which of the following is a primary pollutant?

A. PAN

B. CO

C. Aldehydes

D. H_2SO_4

Answer: B

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11. Oxides of nitrogen

A. are toxic to living tissues

B. cause respiratory diseases in children

C. reted the rate of photosynthesis

D.

Answer: D

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12. Choose the biodegradable pollutant out of the following:

A. DDT

B. Cow dung

C. Alkyl benzene sulphonate

D. Mercury

Answer: B

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13. SO_2 and NO_2 produce pollution by increasing:

A. Alkalinity

B. acidity

C. neutrality

D. buffer action

Answer: B

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14. The medium present in the environment which consumes some amount of certain pollutant is called a

A. sink

B. target

C. neutrality

D. buffer action

Answer: A

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15. Photochemical smog is formed in

A. summer during day time

B. summer during morning time

C. winter during morning time

D. winter during day time

Answer: A

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16. The non-viable particulate is

A. bactria

B. moulds

C. dust

D. fungi

Answer: C

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17. atmospheric gases are found to trap the sun's heat near the earth's surface and keep it warm. This effect is called

A. greenhouse effect

B. Joule's effect

C. thermal effect

D. None of these

Answer: A

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18. Pollution is

A. removal of top soil

B. release of toxic / undersirable material in enviroment

C. conservation of energy

D. all the above

Answer: B

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19. conisder the following diseases from which human beings are suffered.

(I) Asthma (II) Dyspepsia

(III) Bronchitis (IV) Emphysema

Diseases due to SO_2 are

A. I,III and IV

B. II, III and IV

C. I,II and III

D. Both I and IV

Answer: A

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20. Air pollutants that produce photochemical oxidants include:

A. CO_2, CO and SO_2

B. N_2O, NO and HNO_3

C. O_2, l_2 and HNO_3

D. O_3, Cl_2 and SO_2

Answer: B

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21. Harmful chemical present in tobacco is

A. atropine

B. nicotine

C. tannic acid

D. morphine

Answer: B

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22. Depletion of ozone layer causes

A. blood cancer

B. skin cancer

C. lung cancer

D. breast cancer

Answer: B

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23. Which of the following gases is not a greenhouse gas?

A. H_2O vapours

B. O_3

C. CH_4

D. CO

Answer: D

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24. Carbon monoxide is pollutant as it:

A. inactives nerves

B. inhibts glycolysis

C. combines with oxygen

D. combines with haemoglobin

Answer: D

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25. Ozone hole is maximum over

A. Europe

B. Africa

C. India

D. Antarctia

Answer: D

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26. Depletion of ozone layer over Antarctica takes place during

A. November, i.e., arter spring

B. Spring (in the months of september and october)

C. Winter

D. Summer

Answer: B

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27. Which of the following combines with haemoglobin in blood?

A. Carbon dioxide

B. Methyl cyanide

C. Carbonoxide monoxide

D. Methyl isocynaide

Answer: C

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28. Acid rains are produce by :

A. excess NO_2 and SO_2 from burning fossil fuels

B. excess production of NH_3 by industry and coal gas

C. excess release of carbon monoxide by incomplete combusiton

D. excess formation of CO_2 by combusion and animal respiration.

Answer: A

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29. Indentify 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 raction with chlorofluroakanes

D. Ozone absorbs the intense ultraviolet radiation of the sun.

Answer: B

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30. which city is not the part of Taj Trapezium?

A. Agra

B. Faridabad

C. Mathura

D. Firozabad

Answer: B

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31. DDT is

A. a fertilizer

B. biodegradable Pollutant

C. greenhouse gas

D. non-biodegradable pollutant

Answer: D

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32. Spraying of DDT produce pollution of the type:

A. air

B. air and wate

C. air and soil

D. air, water and soil

Answer: D

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33. Phosphate pollution is caused by

A. sewage and agriculture fertilizers

B. agriculture fertilizers only

C. phosphate rocks and sewage

D. weathering of phosphate rocks only

Answer: A

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34. Acid rains is specified when pH is

A. between 6 and 7

B. between 7 and 9

C. below 5.6

D. above 9

Answer: C

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35. Ozone layer of upper atmosphere is being destroyed by:

A. Cholorifluorocarbon

B. SO_2

C. Photochemical oxidant / O_2 and CO_2

D. smog

Answer: A

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36. Presistent pesticides such as DDT pass into food chain and increase in amount per unit weight of organism due to their accumulation in fat. This phenomenon is called

A. biomagnification

B. biodegradiation

C. biosynthsis

D. decomposition

Answer: A

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37. Lead is

A. air pollutant

B. noise pollutant

C. radioactive pollutant

D. water and soil pollutant

Answer: D

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38. The region containing water vapour is

A. Thermosphere

B. Stratosphere

C. Mesosphere

D. Troposphere

Answer: D

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39. CO in the atmosphere is due to

A. incomplete combustion of petorleum fuels

B. Oxidation of carbon (coke) in metallurigical extraction of metal

C. thermal power plants

D. all of the above

Answer: D

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40. In which of the following regions hydrogen and helium are found

A. Stratophere

B. Mesosphere

C. troposhere

D. Exosphere

Answer:

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41. The aromatic compounds present as particulates are

A. Benzene

B. Toluene

C. Nitrobenzene

D. Polycyclic aromatic hydrocarbons

Answer: B

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42. Oxides of sulphur (SO_2, SO_3) are due to

A. buring of sulphur containing fossil ore

B. roasting and smelting of sulphide ore

C. oxdation by air H_2O_2 and O_3

D. All of the above

Answer: D

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43. Which of the following statement is true about photochemical smog?

A. it is reducing in nature

B. it is formed in winter

C. It is a sulphurous smog.

D. Components of the smog, NO and O_3. Irritate the nose and throat and their high concentration couses headache, chest pain, dryness of the throat, cough and difficulty in breathing.

Answer: B::D

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44. Formation of London smog takes place in

A. Winter during day time

B. winter during morig time

C. Summer during day time

D. Summer during morning time

Answer: B

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45. SO_2 as pollutant in the air

A. Causes cough and breating difficulties

B. is corrosive to most metals

C. affects centain sensitive plants

D. All of the above are correct statement

Answer: D

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46. Which of the following causes lung cancer?

A. Paper

B. Asbestos

C. Silica

D. Textiles

Answer: D

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47. Besides CO_2 the other greenhouse gas is

A. CH_4

B. N_2

C. Ar

D. O_2

Answer: A

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48. Which of the following statement is false?

A. Photochemical smog causes irritation in eyes

B. Londons smog is oxidizing in nature

C. London smog is a mixture of smoke and fog

D. Photochemical smog results in the formation of PAN

Answer: B

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49. The viable particulate among the following is

A. Fumes

B. Smoke

C. Algae

D. Mist

Answer: C

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50. Which of the following is not a part of green chemistry?

A. Photichemisty

B. Sonochemistry

C. Nuclear chemistry

D. Biochemistry

Answer: C

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51. SO_2 as pollutant can be controlled by

(I) using solar energy , nuclear energy, hydroelectric energy.

(II) low sulphur fuels , natural gas.

(III) desulphonation of high-sulphur coal and oil before burning by FGD.

(IV) using water under high pressure.

A. Both I and II

B. Both I and III

C. I,II and IV

D. I,II and III

Answer: D

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52. Which of the following acts as a sink for CO?

A. Plants

B. Haemoglobin

C. Occeans

D. Microorganism present in the soil

Answer: D

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53. Ulraviolet radiation from sun causes a reaction that produces:

A. Fluorides

B. carbon monoxide

C. PAN formation

D. ozone

Answer: D

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54. Which forms the part of hazy fumes of photochemical smog?

A. SO_2

B. Aldehydes

C. PAN formation

D. Nitrogen dioxide

Answer: D

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55. Ozone depletion in stratosphere shall result in:

A. forest fires

B. increased incidence of skin burns and skin cancer

C. increase in biological oxygen demand

D. global warming

Answer: B

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56. The gas reponsible for ozone depletion:

A. CO

B. SO_2

C. CO_2

D. NO and freons

Answer: D

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57. Removal of SO_2 and SO_3 can be done by $CaCO_3$ using

A. non-regenerative process

B. regenerative process

C. both (a) and (b)

D. None of these

Answer: A

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58. The reaction caused by UV radiation from sun produces

A. carbon monoxide

B. Ozone

C. Sulphur dipxide

D. fluoride

Answer: B

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59. SO_2 can be removed by using the following $SO_2 + 2H_2S \rightarrow 2H_2O + 3S$

$S_2 + Na_2SO_3 + H_2O \rightarrow 2NaHSO_3$

This is called

A. synergistic process

B. non-regenerative process

C. desuphonation process

D. regenerative process

Answer: D

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60. Which of the following chemical, harmful to ozone , released by chlorofluorocarbon?

A. Sulphur dioxide

B. Chloirne

C. fluorine

D. Nitrogen dioxide

Answer: B

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61. Consider the following statements

I NO is formed from N_2 and O_2 when lighting occurs at high altitude.

II NO is formed when N_2 is oxidized by O_3

(III) NO is oxidized to NO_2 by O_2 or by O_3 in the stratosphere.

(IV) N_2O is formed by the reaction of N_2 with O_3 or with atomic oxygen in the upper atmosphere and also by microbiological process.

Select the correct statements

A. I,III and IV

B. I,II and IV

C. II,III and IV

D. I,II and III

Answer: A

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62. Ozone hole refers to

A. Increase in concetration of ozone

B. Hole in ozone layer

C. Reduction in thichness of ozone layer in stratosphere

D. Reduction in thichness of ozone layer in troposphere

Answer: C

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63. which of the following statements is true

A. London smog is oxidising in nature

B. Londons smog contains H_2SO_4 droplets

C. London smog is mixture of smoke, fog and SO_2

D. London smog cause bronchitis.

Answer: C

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64. Ozone layer of stratosphere required protection from indiscriminate use of

A. Balloons

B. Pesticides

C. Aerosols and high flying jets

D. Atomic explosions

Answer: C

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65. Which of the following process does not increase the amount of CO_2 in atmosphere?

A. Decay of animals

B. Breating

C. Photosynthesis

D. Buring of petrol

Answer: C

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66. Out of SO_2, CO, O_3, NO and peroxyacetylnitrate (PAN) primary and secondary pollutants are

A. Primary=SO_2, O_3, NO, Secondary= CO, PAN

B. Primary=SO_2, NO, Secondary= $, PAN, O_3, CO$

C. Primary=SO_2, CO, NO, Secondary= PAN, O_3

D. Primary=$PAN, O_3,$ Secondary=

SO_2, CO, NO

Answer: C

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67. Sewage mostly constitutes

A. Effluents

B. biodegradable Pollutant

C. Non-biodegradable Pollutants

D. Air pollutants

Answer: B

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68. Consider the following statement and select the correct option:

S_1: Dust is the non-viable particle.

S_2: Particulates acquire negative charge and are attracted by the positive electrode.

S_3: O_2 is a greenhouse gas.

S_4: Algae is a viabl particulate.

A. S_1 and S_2 only

B. S_1, S_2 and S_3 only

C. S_1, S_2 and S_4 only

D. S_2, S_3 and S_4 only

Answer: C

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69. Water pollution is caused by

A. Aeroplanes

B. Fly ash

C. Auto exhaust

D. pesticides

Answer: D

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70. The major source (s) of gaseous hydrocarbons as pollutants is / are

A. Anaerobic dacay of vefatable matter in nature

B. Emissions from municipal sewage plants

C. From refineries

D. All of the above

Answer: D

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71. Which cause death of fish in water bodies polluted by sewage?

A. Decreases in DO

B. Pathogens

C. Clogging of gills by silt

D. Foul smell

Answer: A

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72. Which of the following statement is tre about ozone layer?

A. It is harmful because ozone is dangerous to living organism.

B. It is benefixial because oxidation reaction can proceed faster in the presence of ozone.

C. It is beneficial because ozone cuts off the ultraviolet radiation of the sun.

D. It is harmful because ozone cuts out the important radiation of the sun which are vital for photosysnthesis.

Answer: C

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73. Sewage water is purified by

A. Aquatic plants

B. Fishes

C. Light

D. Microorganisms

Answer: D

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74. The lowest region of atmosphere in which the human beings along with other organisms live is called

A. Stratosphere

B. troposphere

C. trapezium

D. universe

Answer: B

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75. Water of often treated with chlorine to

A. Kill germs

B. Increases

C. Remove hardness

D. Remove suspended particles

Answer: A

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

A. CO and water vapour

B. CO

C. NO_2

D. SO_2

Answer: B

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77. select the correct statement

A. Above the troposphere, between 10 and 50 km above sea level lies stratosphere

B. Troposphere is a turbulent, dusty zone containing air, much water vapours and cloud formation

C. Stratosphere contains N_2 O_2 and O_3 and little water vapours

D. All of the above are correct statement

Answer: D

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78. Ozone is an important constituent of stratosphere because it

A. Destroys bacteria which are harmful to human life

B. Prevents the for4mation of smog over large cities

C. Absorbs ultraviolet radiation which is harmful to human life

D. removes poisonous gases of the atmosphere by reacting with them

Answer: C

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79. Which cause water pollution?

A. Pathogens

B. Automobile exhausts

C. $PCBs$

D. (a) and (c)

Answer: D

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80. Selecte the correct statement (s) about stratosphere.

A. Temperature increases slowly from 220 to $270K$

B. Supersonic aircrafts fly in the lower region of the stratosphere

C. both (a) and (b) are correct

D. None of these

Answer: C

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81. Surface water contains.

A. Suspended impurity

B. Only salt

C. salt+organic matter

D. organic matter

Answer: D

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82. Water pollution is less if BOD is

A. less than 5 ppm

B. less than 15ppm

C. less than 50 ppm

D. less than 100 ppm

Answer: A

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83. the substance which is not regarded as a pollutant?

A. NO_2

B. CO_2

C. O_3

D. Hydrocarbons

Answer: B

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84. The natural greenhouse effect is crucial in maintaining the proper temperature for life on Earth. Thus,

A. withour it, earth would be permanently covered with ice

B. increase in CO_2 content , increase global warming

C. both (a) and (b) are correct

D. None of these

Answer: C

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85. The greatest affinity for haemoglobin shown by which of the following ?

A. NO

B. CO

C. O_2

D. CO_2

Answer: A

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86. The substance having the largest concentration in acid rain?

A. H_2CO_3

B. HNO_3

C. HCl

D. H_2SO_4

Answer: D

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87. Most abundant water pollutant is:

A. detergents

B. pesticides

C. industrial waste

D. ammonia

Answer: A

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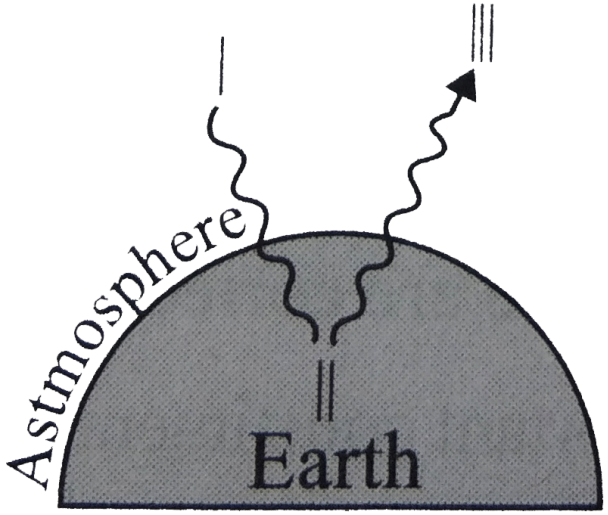
88. For the 'greenhouse effect' consider statements I to III



(I) Sunlight is recived by earth. Some incomintg radiations are reflected back into space by the atmosphere and some is aborbed such as certain UV light by stratosphere ozone.

(II) Earth's surface emits IR radiations.

(III) Emitted IR radiation are less intense than that emitted by earth's surface. CO_2 along with IR radiations warm the atmosphere.

Select the correct statement:

A. Both I and II

B. Both I and III

C. I,II and III

D. Boht II and III

Answer: C

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89. Drained sewage has biological oxygen demand (BOD):

A. More than that of water

B. less than that of water

C. equal to that of water

D. none of the above

Answer: A

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90. Which of the following is not involved in the formation of photochemical smog?

A. Hydrocarbon

B. NO

C. SO_2

D. O_3

Answer: C

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91. Eutrophication cause reduction in

A. dissolved hydrogen

B. dissolved oxygen

C. dissolved salts

D. all the above

Answer: B

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92. Which of the following statement is not true about classical smog?

A. It contains compounds of reducing nature

B. it is produced in cold and humic climate

C. its main components are produced by the action of sunlight on emissions of automobiles and factories

D. it contain smoke, fog and SO_2

Answer: C

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93. Which of the following will increase the BOD of water supply?

A. CO_2

B. O_3

C. H_2O

D. C_2H_5OH

Answer: A

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94. Which of the following statements about photochemical smog is incorrect?

A. it has high concentration of oxidizing agents

B. plantation of some plants like pinus helps in controlling photochemical smog

C. it can be controlled by controlling the releases of NO_2, hydrocarbons, ozone etc.

D. it has low concentration of oxidizing agents.

Answer: D

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95. Select the correct statement about ozone hole out of the following :

A. It is thinning of ozone layer of stratosphere at some place

B. It is a hole formed in troposphere from which ozone oozed out

C. It is a hole formed in stratosphere from which ozone oozed out

D. It means vanishing of ozone layer aroun

the earth completely

Answer: A

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96. Which of the following is an important part of photochemical smog?

A. SO_2

B. CO

C. CO_2

D. NO_2

Answer: D

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97. Measurement of rate of oxygen utillsation by a unit volume of water over a period of time is to measure.:

A. fermentation

B. biogas generation

C. biosynthetic pathway

D. biological oxygen demand

Answer: D

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98. Fishes die in water bodies polluted by swage due to :

A. Pathogens

B. clogging of gills by silt

C. reduction in oxygen

D. Foul smell

Answer: C

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99. Which of the following statement is false?

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

water pollution .

B. Surface water contains a lot of organic matter and mineral nutients.

C. Oil spill in sea water cause heavy damage fishery

D. oil slick in sea water increase dissolved oxygen

Answer: D

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100. Photochemical smog consists of excessive amount of X, in addition to aldehydes, ketones, peroxyacetylnitrite (RCO_3NO_2) and so forth (X) is

A. CH_4

B. CO

C. O_3

D. CO_2

Answer: C

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101. Which of the following statement is false?

A. The lower the contration of dissolved oxygen , the more polluted is the water sample

B. the torlerable limit of lead in drinking water is ppm

C. Water is considered pure if it has BOD less then ppm

D. none of the above

Answer: D

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102. Phosphate pollution is caused by

A. Weathering of phosphate rock only

B. agriculture fertilizers only

C. phosphate rocks and sewage

D. sewage and agricultural fertilizers

Answer: D

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103. Ozone destroying reaction is

$O_3 + O \rightarrow 2O_2$

This ozone destroying reaction can be due to

(I) NO , (II) $CFCs$, (III) N_2

Select the correct gases.

A. Only II

B. I,II and III

C. Both I and III

D. Both I and II

Answer: D

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104. Modes of controlling pollution in large cities includes:

A. cleanlines and less use of insecticides

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

C. use of liquefied carbon dioxide with a suitable detergen in places of tetrachloroethene for dry cleaning

D. all the above

Answer: D

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105. In the lower atmosphere, ozone is formed by the reaction between

A. O_2 and $CFCs$

B. NO_2 and O_2

C. O_2 and NO

D. all of these

Answer: B

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106. which of the following statement is correct?

A. Lower stratosphere consists of considerable amount of ozone.

B. Ozone layer protects humans living on earth from the harmful effect of ultravoilet radiation coming from sun.

C. Ozone is thermodynamically stable

D. smoke cloud play significant role in creating ozone over Antractica

Answer: B

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107. Due to increases in O_3 level there can be

A. impair vision

B. excessive accumulation fluid in lungs

C. irritation in eyes, nose and throat

D. all of these

Answer: D

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108. which of the following compound belong to the class of freons?

A. $\mathbb{C}l_4$

B. $COCl_2$

C. C_3O_2

D. CF_2Cl_2

Answer: D

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109. Cyanides $\left(CN^{-}\right)$ in industrial waste are quite poisonous to aquatic life. With Ni^{2+} a stable complex is formed which is not toxic as cyanide

$$Ni^{2+} \underset{\text{Poisonous}}{4CN} \rightarrow [Ni(CN_4)]^{2-}$$

The term is explained by

A. antagonism

B. synergism

C. eutrophication

D. None of these

Answer: A

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110. The extensive use of $CFCs$ as refrigents fluids and in aerosol is because of :

A. its high chemical stability

B. good absorber of UV radiation

C. its polar nature

D. high toxicity

Answer: A

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111. Out of the following select viable particulates:

A. smoke, mist , bacteria

B. Becteria, fungi, mist, dust

C. Mist, bacteria , algae, dust

D. Bacteria, fungi, moulds, alges

Answer: D

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112. In stratosphere, which of the following radical retards the formation of O_3?

A. $\dot{C}H_3$

B. $\dot{C}l$

C. $\dot{F}$

D. Cl_2

Answer: B

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113. Smoke, dust , mist and fumes are

A. non-viable in nature

B. air-borne particles

C. dangerous for human health

D. All of these

Answer: D

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114. Which of the following helps in creating ozone over Antarctica?

A. Radioactive clouds

B. Polar stratospheric clouds

C. Spring clouds

D. smoke clouds

Answer: B

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115. Which are natural sinks for $\dot{C}lO$ racdical in other parts of stratosphere?

A. SO_2 and NO_2

B. NO and NO_2

C. CH_4 and NO_2

D. CI_2 and F_2

Answer: C

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116. Paticulate bigger than x microns are likely to lodge in the nasal passage whereas particles of about y microns enter to the lungs easily x and y are

A. $x = 5, y = 0.10$

B. $x = 5, y = 1.00$

C. $x = 5, y = 0.30$

D. $x = 6, y = 0.20$

Answer: B

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117. Entrophication is a source of water pollution. It occurs when water:

A. is low in nutrients

B. is high in nutrients

C. has high temperature

D. has excess amount of organic matter

Answer: B

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118. Leaded petrol used to be the primary source of air-borne lead emission. This problem has been overcome by

A. Using TEL loaded petrol

B. using ethanol-mixed petrol

C. using unleaded petrol

D. using $MTBE$ loaded petrol

Answer: C

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119. Which of the following statement is false?

A. Absorption of the terrestrailly radiated heat by the carbon dioxide is the main cause of global warming.

B. The global warming will increases the rate of melting of polar ice caps increasing the sea level.

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

D. $CO_2, NO, CH_4, O_3, CCl_4$ and water vapour ae greenhouse gases.

Answer: C

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120. Which of the following statements (I)-(IV) are true about photochemical smog?

A. I,II and IV

B. II,III and IV

C. I,III and IV

D. I,II and III

Answer: D

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121. Photochemical smog can be reduced by :

A. using catalytic converted in the automobiles

B. plantation of certain plants like pins , juniperus , vits etc.

C. both (a) and (b)

D. None of these

Answer: C

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122. Select the correct statement(s).

A. PAN is formed in a chain reaction

B. PAN is a product of photochemical smog

C. NO_2 contributes to haze

D. All of the above are correct statement

Answer: D

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123. In stratosphere $CFCs$ gets broken down by the action of powerful UV radiation releasing:

A. $\dot{C}H_3$

B. $\dot{C}lO$

C. $\dot{C}l$

D. $\dot{C}FCl_2$

Answer: C

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124. Consider the following reactions provided by scientists working in Antrctica about ozone hole.

(I) $ClO^{\cdot} + NO_2 \rightarrow ClONO_2$

(II) $Cl^{\cdot} + CH_4 \rightarrow \dot{C}H_3 + HCl$

(III) $ClONO_2 + H_2O \rightarrow HOCl + HNO_3$

(IV) $ClONO_2 + HCl \rightarrow Cl_2 + HNO_3$

In summer season, there is less depletion of ozone layers due to reactions.

A. both I and III

B. both III and IV

C. Both I and II

D. Both II and IV

Answer: C

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125. Which of the following statements is false?

A. over Antarctica, the depletion of ozone layer is due to the formation of chlorine

nitrate.

B. both O_3 and NO_2 react with unburnt hydrocarbons in the polluted air give PAN

C. Classical smog consists of a mixture of smog, fog and sulpher dioxide.

D. Gaseous pollutants consistas of oxide of carbon, sulphur and nitrogen along with dust, fumes smoke, smog, etc.

Answer: D

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126. Which of the following does not contribute to water pollution?

A. Pathogens

B. Organic wastes

C. chemical pollutants

D. none

Answer: D

Watch Video Solution

127. In winter season, special type of clouds called polar stratospheric clouds are formed over Antarctica. As a result, less depletion of ozone layer takes place due to reactions

A. $CIONO_2 + H_2O \rightarrow HOCI + HNO_3$

B. $CIONO_2 + HCl \rightarrow Cl_2 + HNO_3$

C. both (a) and (b)

D. none of the above

Answer: C

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128. Which of the following reactions will deplete O_3 layer?

A. $HOCi \xrightarrow{hv} O\dot{H} + \dot{C}l$

B. $Cl_2 \xrightarrow{hv} \dot{C}l$

C. $CF_2Cl_2 \overset{hv}{\dot{C}} F_2C\dot{l} + \dot{C}l$

D. All of these

Answer: D

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129. Sewage containing organic waste should not be disposed in water bodies because it cause water pollution. Fishes in such a polluted water die because of

A. large number of mosquitoes

B. decreases in the amount of dissolved oxygen

C. increase in the amount of dissolved oxygen

D. clogging of gills by mud

Answer: B

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130. BOD is

A. The amount of oxygen required to convert the NO in to NO_2 in a certain

volume of a sample of water.

B. the amount of F^- ions required to convert, one mole of hydroxypatite into fluorapatite.

C. The amount of oxygen required by bacteria to break down the organic matter present in a certain volume of a sample of water.

D. The amount of oxygen required to break down the non-biodegradable waste.

Answer: C

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131. Which of the following is false?

A. Greenhouse gases are carbon dioxide, methane, water vapour nitrous oxide $CFCs$ and ozone.

B. CO is highly poisonous to living beings because of its ability to block the

delivery of oxygen to the organs and tissues.

C. The troposphere contains dinitrogen, dioxygen, ozone and little water.

D. The primary source of air borne lead emission is leaded petrol.

Answer: C

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132. Biochemical Oxygen Demand (BOD) is a measure of organic materials present in water. If BOD value is less than $5p \pm$ then water sample is to be

A. Highly polluted

B. Poor in dissolved is to be

C. rich in dissolved oxygen

D. not suitable for aquatice life

Answer: C

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133. Which of the following is false?

A. Photochemical smog has high concentration of reducing agents and is, therefore, called as reducing smog.

B. Non-viable particulates consists of smoke, dust mist , fumes etc.

C. Classical smog occurs in cool humid climate and it is mixture of smoke, fog

and sulphur dioxide.

D. Ozone reacts with unburnt hydrocarbons in polluted air to produce peroxyacetylnitrate (PAN).

Answer: A

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134. Which disinfectant cannot be used in drinking water?

A. Potassium permanganate

B. Bleaching power

C. Chlorine

D. Phenol

Answer: D

 Watch Video Solution

135. Consider the following statements about water pollutants.

(I) Disease causing pollutants are called

pathogens

(II) They are bacteria and other organisms that enter water from domestic sewage and animal excreta.

(III) Gastrointestinal diseases are caused by Streptococcus faecalis and Escherichia coli bacteria present in human excreta.

Correct option(s) is / are.

A. onlyIII

B. Both II and III

C. Both I and II

D. I, II and III

Answer: D

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136. In cold water DO(Dissolved Oxygen) can reach a concentration up to X ppm whereas oxygen in air is about $Yp \pm \ .X$ and Y are

A. $X = 10, Y = 20$

B. $X = 10, Y = 2.0 \times 10^5$

C. $X = 10, Y = 2.0 \times 10^4$

D. $X = 20, Y = 10$

Answer: B

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137. select the incorrect statement.

A. If DO of water is below 6 ppm, the growth of fish gets inhibited

B. O_2 reaches water through atmosphere or photosynthesis carried out by many aquatic green plants during day light

C. If BOD is below 5 ppm, it indicates polluted water

D. Aerobic bacteria organic waste and decrease DO`

Answer: C

Watch Video Solution

138. Soil pollution is due to

A. insecticides

B. Pesticides

C. herbicides

D. All of these

Answer: D

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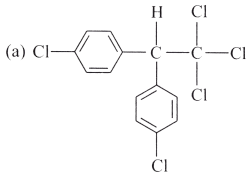
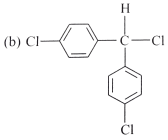
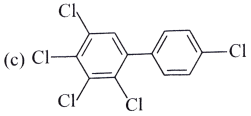
139. DDT is represented chemically as

A. 

B. 

C. 

D. None of these

Answer: A

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140. Very fine suspended and colloidal impurities are removed by a process called

A. softening

B. cosgulation

C. disinfection

D. plain sedimantation

Answer: B

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141. Zeolite process is used to remove

A. iron

B. hardness

C. zinc

D. Ph value

Answer: B

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142. The permissible available chlorine in treated water should be $0.25 mgL^{-1}$. Bleaching powder to be added into $1000L$ tank for the permissible chlorine should be

A. $0.45g$

B. $0.25g$

C. $45.0g$

D. $4.50g$

Answer: A

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143. Iron and manganese present in water are removed by

A. chlorination

B. aeration

C. filtration

D. lime soda treatment

Answer: B

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144. Aeration of water is done to remove

A. Suspended impurity

B. dissolved gases

C. dissolved salts

D. floating impurities

Answer: B

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145. Deficiency of $\left(F^{-}\right)$ in drinking water causes tooth decay. Its International Standard limit makes the enamal on tooth much harder by comverting hydroxyapatite into much harder

A. $Ca_3(PO_4)_2.\ CaF_2$

B. $Ca_3(PO_4)_2.3CaF_2$

C. $3Ca_3(PO_4)_2.\ CaF_2$

D. $3Ca_3(PO_4)_2.3CaF_2$

Answer: C

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146. Consider the following statement about different impurities in drinking water.

A. Only III is correct

B. All but I are correct

C. All but II are correct

D. I,II and III are correct

Answer: D

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147. In India, rules of Green Chemistry are governed by

A. IGT

B. RGT

C. NGT

D. SGT

Answer: C

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148. Which of the following practies will not come under green chemistry?

A. if possible making use of soap made of vegetable oils instead of using synthetic detergents

B. Using plastic cans for neatly strong substances

C. Using bicycle for traveling small distances instead of using petrol / diesel

based vehicles

D. Using H_2O_2 for bleaching purpose instead of using chlorine-based bleaching agents.

Answer: B

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149. Bussiness benefits of green chemistry include

A. reduced costs associated with waste treatment and disposal

B. innovating 'greener' products to customers

C. greater compliance with enviromental legislation

D. All of the above

Answer: D

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150. The world is synonymous with green chemistry and also means harmless, or gentle and not life-threatenting?

A. Benign

B. Sustainable

C. User friendly

D. Greenness

Answer: A

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151. Which of the following is the greenest solvent?

A. Formaldehyde

B. Benzene

C. water

D. Ethanol

Answer: C

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152. The term which refers to the breakup within a compound due to microbial activity is

A. decomposition

B. agro-degradation

C. photodegradation

D. microbial degradation

Answer: D

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153. Environmental benefits of green chemistry include

A. fewer law material and natural resources used

B. cleaner production technologies and reduced emissions

C. smaller quantities of hazardous waste to be treated and disposed of

D. All of the above

Answer: D

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154. Soybean is used to replace traditional inks in printer cartridages highlighting which of the green chemistry principles?

A. Use of renewable feedstocks

B. Atom economy

C. Reduce derivatives

D. Prevent waste

Answer: A

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155. Who was a co-founder of the worldwide green chemistrt movement and the first director of the greeen chemistry Insititute?

A. Paul Anastas

B. Albert einstein

C. John Warner

D. Joseph Bren

Answer: A

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156. An example of green chemistry is

A. recycled carpet

B. a product made on Earth's day

C. bioplastics or biodiesel

D. a sublimation reaction

Answer: C

Watch Video Solution

157. An example of chemical toxics is

A. removing water from industrial reactions

B. utilizing ammonial instead of vinegar

C. eleminating the formation of chlorinated organics paper

D. storing BPA (Bis-phenla A) in plastic bottles

Answer: C

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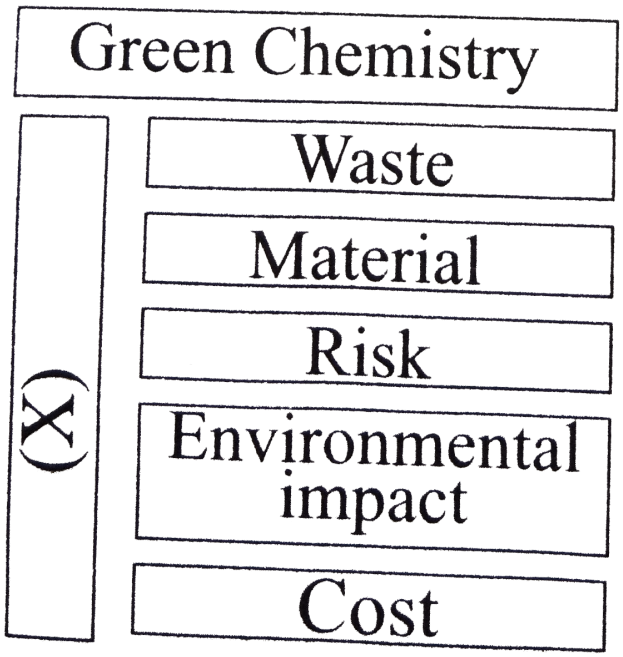
158. The word missing (X) on the left side of the given figure is



A. enhancing

B. reducing

C. facilitating

D. awareness

Answer: B

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159. Noble prize in green chemistry is not associated with

A. Richard R schrock

B. Yves Chauvin

C. Robert H Grubbs

D. R Williamson

Answer: D

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160. CH_3CHO can be prepared by

(I)

$$CH_3COCl + H_2 \xrightarrow{d/BaSO_4} CH_3CHO + HCl$$

(II)

$$CH_2 = CH_2 + O_2 \xrightarrow[Inwater]{Pd(II)/Cu(II)} CH_3CHO$$

which of the above is in accordance with NGT rules?

A. only II

B. Only I

C. Both (a) and (b)

D. None of these

Answer: A

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161. Green chemistry aims to

A. design chemical products and processes that maximize profits

B. utilize non-renewal energy

C. design chemical products and processes that work most efficently

D. design safer chemical products and processes that reduce or eleminate the

use and genaration of hazardous substance

Answer: D

View Text Solution

162. Green chemisis reduce risk by

A. inventing technologies that will clean up toxic sites

B. minimizing the use of all chemicals

C. reducing the hazard inherent in a chemical product or risk

D. developing recycled products

Answer: C

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163. Which of the following is a challenge for green chemists?

A. Knowing when to reduce and eliminate hazardous waste

B. Developing chemicals that are recyclable

C. Training of cleaning up chemical spills

D. Awareness of the benefits of the benefits of green chemistry

Answer: A

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164. Green chemistry means such reactions which

A. are related to depletion of ozone layer

B. reduce the use and production of hazardous chemicals

C. produce green colour in reactions

D. study the reaction in plants

Answer: B

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165. The 'green' chemical used in household cleaners to remove stains and also a favourite dressing on salads is

A. hydrochloric acid

B. citric acid

C. vineger

D. water

Answer: C

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166. Which of the following legislation gave birth to today's Green Chemistry initiatives?

A. 1990 Clean water act of 1972

B. Montreal protocol of 1989

C. Clean water Act of 1972

D. Superfund Act of 1980

Answer: A

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167. The statement which is not correct about control of particulate pollution is :

A. In electrostatic precipitator, the particulates are made to acquire positive charge which are then attreacted by the negative electrode and removed.

B. Gravity setting chamber removes larger particles from the air

C. Cyclone collector removes fine particles in the diameter range 5-20 microns.

D. Wet scrubbers are used to wash away all types of particulates .

Answer: A

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168. Addition of phosphate fertilizers to water bodies cause

A. enhanced growth of algae

B. increase in amount of dissolved oxygen in water

C. deposition of calcium phosphate

D. increase in fish population

Answer: A

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169. Which of the following statements about polar stratosphere clouds $(PSCs)$ is not correct?

A. $PSCs$ do not react with chlorine nitrate and HCl

B. Type I coluds 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 Antarctica

Answer: A

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170. Which one of the following gases is responsible for global warming as well as ozone layer depletion?

A. CO_2

B. O_2

C. $CFC(s)$

D. N_2

Answer: C

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171. In a country, following suggestions / processes are being strictly followed:

A. I,II and III

B. both I and II

C. Both I and III

D. Both II and III]

Answer: A

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172. Presistent pesticides such as DDT pass into food chain and increase in amount per unit weight of organism due to their

accumulation in fat. This phenomenon is called

A. biomagnification

B. biodegradation

C. biosynthesis

D. decomposition

Answer: A

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173. Which of the following is an excellent green solvent as well as greenhouse gas?

A. Methanol

B. $CFC(s)$

C. CO

D. CO_2

Answer: D

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174. Which of the following statement about sewage treatment is false?

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

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

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

following by coagulation

D. Secondary treatment involves aerobic digestion of the organic waste.

Answer: B

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175. Acid rain is harmful for

A. agriculture

B. aquatic ecosystem

C. building made of marble or metal

D. All of these

Answer: D

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176. Which of the following in not an example of green chemistry?

A. Reacting methylemine and phosgene to produce methyl isocyanate

B. Replacement of $CFCs$ by CO_2 as blowing agent in the manufacture of polystyrene foam sheets

C. Catalytic dehydrogenation of the diethanol amine without using cayanide and formaldehyde

D. Replacement of organotins by 'sea-nine as antifoulin compound in sea marines

Answer: A

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177. Global warming could

A. produce a cooling effect

B. increase evaporation of water

C. increase cloud formation

D. affect all of these

Answer: D

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178. A sample of air turns lime water milky and also turns acidified potassium dichromate green in aqueous solution has low pH. This is due to the presence of pollutants

A. CO_2

B. SO_2

C. Both (a) and (b)

D. None of these

Answer: B

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179. Ozone is an important constituent of stratosphere because it

A. Destroys bacteria which are harmful to human life

B. Prevents the for4mation of smog over large cities

C. Absorbs ultraviolet radiation which is harmful to human life

D. removes poisonous gases of the atmosphere by reacting with them

Answer: C

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180. Higer incidents of heart diseases in smokers is related to high content of

A. CO_2

B. CO

C. H_2O

D. CN^-

Answer: B

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

A. Sulphur dioxide

B. Carbon monoxide and water vapour

C. Carbon monoxide

D. Nitrogen dioxide

Answer: C

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182. $1000L$ of air a STP was dissolved in water and required 2.5×10^{-5} moles of $KMnO_4$ for complete reaction of SO_2 as pollutants. Thus , SO_2 content in air is

A. $1.4p \pm$

B. $14p \pm$

C. $2.8p \pm$

D. $6.25p \pm$

Answer: A

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

A. Sulphur dioxide

B. Carbon monoxide and water vapour

C. Carbon monoxide

D. Nitrogen dioxide

Answer: C

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184. Formation of ozone in the upper atmosphere from oxygen takes place by the action of

A. Nitrogen oxide

B. Ultraviolet rays

C. Cosmic rays

D. Free radicals

Answer: B

Watch Video Solution

185. CO as pollutant can be removed by

A. SO_2

B. I_2O_5

C. N_2O_5

D. All of these

Answer: B

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186. The chemical entities present in thermosphere of the atmosphere are

A. O^{+2}, O^+, NO^+

B. O_3

C. N_2, O_2, CO_2, H_2O

D. O_3, O_2^+, O_2

Answer: A

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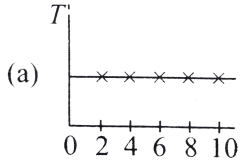
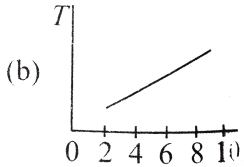
187. Variation of temperature (T) in the troposphere region with height (km) is

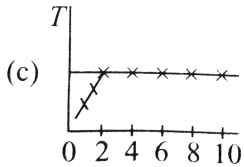
A.



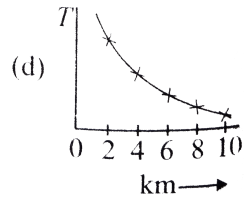
B.



C.



D.



Answer: D

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188. Synergism relates to the phenomenon due to

A. Single pollutant

B. atmospheric gases

C. water pollutants

D. Two or more pollutants having much more effect than the total of individual pollutants.

Answer: D

189. Stone-cancer (as stone-leprosy) of Taj Mahal effect is due to formation of

A. $CaCO_3$

B. $CaSO_4$

C. $Ca(OH)_2$

D. $Ca(HCO_3)_2$

Answer: B

190. Select the correct temrs .

A. Biodegradable pollutants: Which are degraded by natrual processes rapidly

B. Non-biodegradable pollutants: Which are slowly degraded and remain in the enviroment in a unchanged form for many decades .

C. both (a) and (b)

D. none of the above

Answer: C

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191. Out of PAN, H_2CO_3, H_2SO_4 and HNO_3 acid rain contains

A. PAN, H_2CO_3

B. H_2SO_4, HNO_3

C. PAN, HNO_3

D. PAN, H_2SO_3

Answer: B

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192. The statement which is not true

A. NO_2 does not play any role in photochemical smog

B. SO_3 is more harmful air pollutant than SO_2

C. SO_2 does not affect larynx (voice box)

D. NO is more toxic to living tissues then NO_2

Answer: B

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193. Consider the following observation.

(I) pH or rain water is 5.6

(II) Amount of CO_2 in the atmosphere is $0.03\ \%$

(III) Biochemical oxygen demand is 10 ppm

(IV) Eutrophication

A. Both I and III

B. Both I and IV

C. Both III and IV

D. I,III, and IV

Answer: C

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194. The false statement among the following :

A. The average resisdence time for NO is one month

B. Limestone acts as a sink for SO_x

C. SO_x can be removed from flue gases by passing through a solution of cirtrate ions

D. Ammonia acts as a sink for SO_x

Answer: A

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195. Which of the following statements are True (T) or False (F)? Mark them and select the answer from the codes given below.

(I) Ozone is not responsible for greenhouse effect.

(II) Ozone can oxidize SO_2 present in the atmosphere to SO_3

(III) Ozone hole is thinning of ozone layer present in stratosphere.

(IV) Ozone is produced in the upper

stratosphere by the action of UV rays on oxygen.

A. $I = F, II = T, III = T, IV = T$

B. $I = T, II = F, III = T, IV = F$

C. $I = F, II = F, III = T, IV = T$

D. $I = T, II = T, III = F, IV = F$

Answer: A

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196. Which of the following is not a consequence of greenhouse effect?

A. Climatic conditions will be changed.

B. Plants in warmer climates with adequate rainfall would grow faster.

C. The incidence of infectious diseases is likely to increase.

D. Malaria will be controlled as the mosquitos will not survive.

Answer: D

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197. $Cl_2$and SO_2 are pollutants as well as bleaching agents . Their bleaching action is due to

A. SO_2= Oxidation, Cl_2=Oxidation

B. SO_2= Reduction, Cl_2=Reduction

C. SO_2= Oxidation, Cl_2=Redution

D. SO_2= Reduction, Cl_2=Oxidation

Answer: D

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198. For the following equilibrium in which CO combines with haemoglobin of blood.

$HbO_2 + CO \Leftrightarrow HBCO + O_2, \Delta G < 0$

Effect of this equilibrium is

A. Oxygen-carrying capacity of haemoglobin is reduced

B. oxygen-carrying capacity of haemoglobin is reduced

C. Addition of H_2O makes ΔG more negative

D. temperature has no effect

Answer: A

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199. Minamata disease is due to pollution of

A. arsenic into the atmosphere

B. organic waste inot drinking water

C. oil spill in water

D. Industrial waste lead into fishing water

Answer: D

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200. Tropospheric pollution is mainly due to

A. gaseous air pollutants

B. particulate pollutants

C. both (a) and (b)

D. None of these

Answer: C

Watch Video Solution

201. Carcinogenic pollutants are

A. $PCBs$

B. Benzene

C. both (a) and (b)

D. None of these

Answer: C

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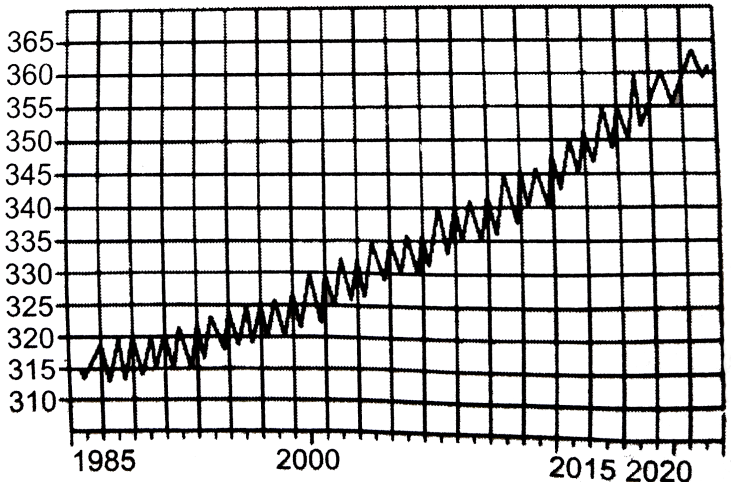
202. The figure shows increase in CO_2 content (ppm) from 1985 to 2015 in Delhi. The peaks come in about June and the valleys in January each year. Increase in CO_2 content from 1985

to 2015 is about.



A. 10 %

B. 15 %

C. 20 %

D. 30 %

Answer: A

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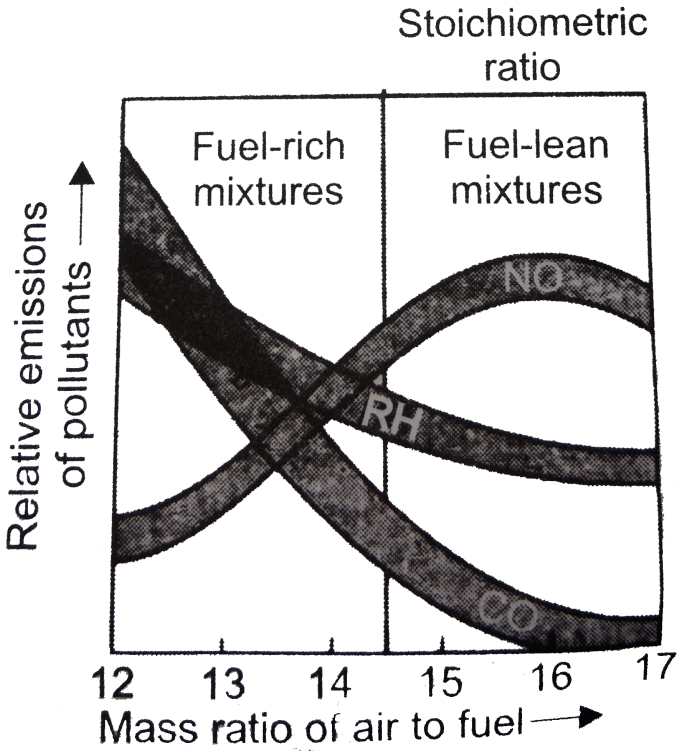
203. The figure showns how the emission of pollutants is related to the air / fuel ratio in an internal comustion engine using octance

C_8H_{18} . Select the correct statement(s).



A. Excess air leads to high $NO(g)$ levels

B. Unburnt and partially burnt hydrocarbons lead to high RH and CO level

C. Stoichiometric ratio of air to fuel (on a mass basis) is about $14.5:1$ if air contains $24\,\%\,O_2$

D. All of the above

Answer: D

View Text Solution

Section B Assertion Reasoning

1. Assertion: Photochemical smog is oxidising in nature.

Reason: Photochemical 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 the assertion.

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

explanation of the assertion.

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

2. Assertion: Excessive use of chlorinated synthetic pesticides causes soil and water pollution.

Reason: Such pesticides are non-biodegradable.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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3. 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 vacteria in water.

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

explanation of the assertion.

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: D

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4. Assertion: CO and NO have equal affinity for haemoglobin.

Reason: Both combine with haemoglobin.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: D

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

Reason: Water having $pH < 5.5$ is not suitable for drinking purposes.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: D

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6. Assertion: CO_2 present in the atmosphere absorbs heat radiated from heat radiated from earth in the form of IR radiations.

Reason: CO_2 is a pollutant.

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

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

explanation of the assertion.

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: C

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7. Assertion: The marble structure reacts with traces of H_2SO_4 present in acid rain.

Reason: Taj Mahal is being slowly damaged by acid rain.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: D

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8. Assertion: Carbon dioxide is one of the main constituent of greenhouse gases.

Reason: In pregent woman increased CO level induced premature birth, spontaneous abortion and deformed birth.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: B

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9. Assertion: CO is a toxic air pollutant because.

Reason: CO binds with haemoglobin of blood and reduces oxygen transport efficiency of blood.

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

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

explanation of the assertion.

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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10. Assertion: Acid rain is harmful for agriculture, trees and plants.

Reason: Acid rain dissolved and washes away

nutrient need for the growth of agriculture, trees and plants.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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11. Assertion: Bacteria, fungi, moulds and algae are viable particulates .

Reason: Smoke particulates consists of solid or mixture of solid and liquid particles formed during combustion of organic matter.

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12. Assertion: Photochemical smog results from the action of sunlight on unsturated hydrocarbons and nitrogen oxides liberated by automobiles and factories.

Reason: Classical smog is a mixture of smoke , fog and sulphur dioxide.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: B

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13. Assertion: In the stratosphere, ozone is produced by the action of UV radiations on dioxygen.

Reason: UV radiations split the molecules oxygen into free oxygen (O) atoms which combine with molecular oxygen to form ozone.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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14. Assertion: Green plants maintains an appropriate level of CO_2 in the atmosphere.

Reason: Green plants requires CO_2 for photosynthesis and they, in turn, releases oxygen.

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

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

explanation of the assertion.

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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Aipmt Neet Questions

1. The greenhouse effects is because of the

A. presence of gases, which in general are strong ifrared absorbers, in the atmosphere

B. Presence of CO_2 only in the atmosphere

C. presence of O_3 and CH_4 in the atmosphere

D. N_2O and chlorofluorocarbons in the atmosphere

Answer: A

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2. Which of the following is/are the hazardous pollutant(s) present in automobile exhaust gases ?

A. (ii) and (iii)

B. (i) and (ii)

C. (ii) and (iv)

D. (i) and (iii)

Answer: C

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3. Green chemistry means such reactions which

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: B

Watch Video Solution

4. Which of following statement is not true?

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

B. Concentration of DO below 6ppm 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: B

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5. Which one of the following statements regarding photochemical smog is not correct?

A. Photochemical smog is formed through photochemical reaction involving solar energy .

B. Photochemical smog does not cause irritation in eyes and throat

C. Carbon monodixe does not play any role in photochemical smog formation.

D. Photochemical smog is an oxidising agent in charcater.

Answer: B

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6. The gas leaked from a stronge tank of the Union Carbide plant in Bhopal gas tragedy was

A. Ammonia

B. Phosgene

C. Methylisocyanate

D. Methylamine

Answer: C

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7. Roasting of sulphides given the gas X as a by producet. This is a colortess gas with choking smell of burnt and causes great dumage to respiratory is acidic, act as a resulting agent and in acid never been isolated .The gas X is

A. SO_2

B. CO_2

C. SO_3

D. H_2S

Answer: A

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8. Which one of the following statement is not true?

A. Dissolved oxygen (DO) in cold water can reach a concentration up to $10p \pm$.

B. Clean water would have a BOD value of $5p \pm$.

C. Fluoride deficiency in drinking water is harmful. Soluble fluoride is often used to bring its concentration up to $1p \pm$.

D. When the pH of rain water is higher than 6.5, it is called acid rain.

Answer: D

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

A. Ozone

B. Acrolein

C. Peroxyacetyl nitrate

D. Chlorofluorocarbons

Answer: D

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10. Which of the following is a sink for CO?

A. Micro-organism present in the soil

B. Oceans

C. Plants

D. Haemoglobin

Answer: A

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Aiims Questions

1. The chemical entities present in thermosphere of the atmosphere are

A. O^{+2}, O^{+}, NO^{+}

B. O_3

C. N_2, O_2, CO_2, H_2O

D. O_3, O_2^{+}, O_2

Answer: A

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2. Ozone depletion over Antarctia is due to the

A. Formation of chlorine nitrate $(ClONO_2)$

B. formation of HCl

C. formation of $HOCl$ and Cl_2 which are converted back into reactive Cl atoms

D. none of the above

Answer: C

Watch Video Solution

3. Which of following statement 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: B

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4. Mesopause represents the point of temperature inversion between

A. troposphere and stratosphere

B. troposphere and measosphere

C. stratosphere and mesosphere

D. mesosphere and thermosphere

Answer: D

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5. The medium present in the environment which consumes some amount of certain pollutant is called a

A. sink

B. target

C. receptor

D. none to these

Answer: A

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6. 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 raction with chlorofluroakanes

D. Ozone absorbs the intense ultraviolet radiation of the sun.

Answer: B

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7. Phosphate pollution is caused by

A. sewage and agriculture fertilizers

B. agriculture fertilizers only

C. phosphate rocks and sewage

D. weathering of phosphate rocks only

Answer: A

Watch Video Solution

8. Presistent pesticides such as DDT pass into food chain and increase in amount per unit weight of organism due to their

accumulation in fat. This phenomenon is called

A. biomagnification

B. biodegradation

C. biosynthesis

D. decomposition

Answer: A

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9. Which of the following in not an example of green chemistry?

A. Reacting methylemine and phosgene to produce methyl isocyanate

B. Replacement of $CFCs$ by CO_2 as blowing agent in the manufacture of polystyrene foam sheets

C. Catalytic dehydrogenation of the diethanol amine without using cyanide

and formaldehyde

D. Replacement of organotins by 'sea-nine as antifoulin compound in sea marines.

Answer: A

 Watch Video Solution

10. Which of the following chemical, harmful to ozone , released by chlorofluorocarbon?

A. Sulphur dioxide

B. chlorine

C. fluorine

D. Nitrogen dioxide

Answer: B

Watch Video Solution

Assertion Reasoning Questions

1. Assertion: Greenhouse effect was observed in houses used to grow plants and these are

made of green glass.

Reason: Greebhouse name has been given because glass are of green glass.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

 Watch Video Solution

2. Assertion: The pH of aicd 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 the assertion.

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: B

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Section D Chapter End Test

1. When polluted air is scrubbed with H_2SO_4 solution,

A. CH_4 is oxidized to CO_2

B. H_2S is oxidized to sulphur

C. Oxides of nitrogen and sulphur are oxidised

D. NO is reduced to N_2

Answer: C

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2. Negative soil pollutant is

A. converting fertile land into barren land by dumping ash, sludge and garbage

B. reduction in soil productivity due to addition of pesticides and industrial wastes

C. reduction in soil productivity due to erosion and over use

D. none of the above

Answer: C

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3. Which of the following chemical, harmful to ozone , released by chlorofluorocarbon?

A. fluorine

B. chlorine

C. nitrogen peroxide

D. sulphur dioxide

Answer: B

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4. Which of the following statement about sewage treatment is false?

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

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

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

D. Secondary treatment involves aerobic digestion of the organic waste.

Answer: B

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5. Oxides of sulphur and nitrogen can be removed by scrubbing with

A. $Ca(OH)_2$

B. H_2SO_4

C. Both (a) and (b)

D. None of these

Answer: C

 Watch Video Solution

6. Which of the following in not an example of green chemistry?

A. Reacting methylemine and phosgene to produce methyl isocyanate

B. Replacement of $CFCs$ by CO_2 as blowing agent in the manufacture of polystyrene foam sheets

C. Catalytic dehydrogenation of the diethanol amine without using cyanide and formaldehyde

D. Replacement of organotins by 'sea-nine as antifoulin compound in sea marines.

Answer: A

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7. Which of the following is the coldest region of atmosphere

A. Thermosphere

B. Troposphere

C. Mesosphere

D. Stratosphere

Answer: C

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8. Most hazardous metal pollutant of automobile exhausts is :

A. mercury

B. cadmium

C. lead

D. copper

Answer: C

 Watch Video Solution

9. NO and H_2S both the pollutants of air. NO is H_2S remover while H_2S is NO remover. Under this effect,

A. NO is oxidized to NO_2 and H_2S is oxidized to H_2SO_4

B. NO is oxidized to NO_2 and H_2S is reduced to H_2SO_4

C. NO is oxidized to NH_3 and H_2S is oxidized to H_2SO_4

D. NO is reduced to N_2 and H_2S is oxidized to sulphur

Answer: D

Watch Video Solution

10. The region which is greatly affected by air pollution is

A. Troposphere

B. Stratosphere

C. Thermosphere

D. Mesosphere

Answer: A

Watch Video Solution

11. Classical smog occurs in places of :

A. excess CO_2

B. cool and humid

C. warm, dry and sunny

D. excess NH_3

Answer: B

Watch Video Solution

12. Which of the following is not a herbicide?

A. Sodium cholrate

B. Sodium arsenate

C. Phosphate

D. Triazines

Answer: C

Watch Video Solution

13. Which of the following is not involved in the formation of photochemical smog?

A. NO_2

B. SO_2

C. O_3

D. unsaturated hydrocarbons

Answer: B

Watch Video Solution

14. Which is not the constituent of photochemical smog?

A. $RCHO$

B. $RCOR$

C. CF_2Cl_2

D. PAN

Answer: C

Watch Video Solution

15. DDT is

A. greenhouse gas

B. biodegradable Pollutant

C. Non-biodegradable Pollutants

D. none of above

Answer: C

Watch Video Solution

16. Smog can be controlled by

A. Use of catalytic converts in automobiles

B. setting the air-fule ratio in engine in such a way to produce some CO and unburnt hydrocarbons

C. both (a) and (b)

D. None of these

Answer: C

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17. Domestic waste mostly constitute:

A. Non-biodegradable Pollutions

B. biodegradable Pollution

C. effluents

D. air pollututions

Answer: B

Watch Video Solution

18. The gas leaked from a stronge tank of the Union Carbide plant in Bhopal gas tragedy was

A. methylisocyanate

B. methylisocyanide

C. ammonia

D. carbonate

Answer: A

Watch Video Solution

19. Which is not correct statement for classical smog?

A. It occurs in cool humid climate

B. it is called oxidizing smog

C. it is called reducing smog

D. it is a mixture of smoke, fog and sulphur dioxide

Answer: B

Watch Video Solution

20. Which of the following is the primary precursor of photochemical smog?

A. Hydrocarbon

B. Ozone

C. PAN

D. Water vapour

Answer: A

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21. Disinfection of water removes

A. hardness

B. taste

C. colour

D. Bacteria

Answer: D

Watch Video Solution

22. A common disnfectant used in village wells is

A. Potassium permanganate

B. iodine and bromine

C. ozone gas

D. free chlorine

Answer: A

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23. When chlorine is added to water before it enters the distribution system is known as

A. Post-chlorination

B. Pre-chlorination

C. Plan-chlornation

D. break point chlorination

Answer: A

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24. The amount of chlorine avialable in water after disinfection is called

A. Free chlorine

B. Free availabe chlorine

C. residual chlorine

D. combined avialable chloirne

Answer: C

Watch Video Solution

25. If the organic content in water is high, the type of chlorination to be adopted is

A. double chlorination

B. breakdown chlorination

C. Superchlorination

D. post-chlorination

Answer: C

Watch Video Solution

26. Algae growth in water is controlled by

A. bleaching

B. aeration

C. filtration

D. chlorination

Answer: D

Watch Video Solution

27. Lime-soda process is used to remove (from water)

A. odour and taste

B. iron and maganese

C. permanent hardness

D. temporary hardness

Answer: D

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28. Assertion: CO_2 and water vapour present in the atmosphere absorb the re-emitted IR radiations from the earth's surface and warm the air.

Reason: For greenhouse effect, presence of green plants is essential.

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

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

explanation of the assertion.

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: C

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29. Assertion: The pH of a rain water is 5.6

Reason: H^+ ions are formed by the reaction of rain water with carbon dioxide present in the atmosphere.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: C

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30. Assertion: The deficiency of fluoride in drinking water cause disease such as tooth decay etc.

Reason: The F^- ions make the enamel on teeth much harder by converting hydroxyapatite, the enamal on the surface of the teeth, into much harder fluorapatite.

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

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

C. If assertion is true but reason is false.

D. If assertion is false but reason is true.

Answer: A

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