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CHEMISTRY

BOOKS - MBD CHEMISTRY (ODIA ENGLISH)

p-BLOCK ELEMENTS

QUESTION BANK

1. Write the chemical formula of Glauber's salt.

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2. What happens when NH_4NO_3 is heated ?

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3. What is the oxidation number of nitogen in nitrous oxide.

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4. What happens when ammonium chloride is heated with quick lime?

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5. What is the shape of NH_3 molecule and it is due to what type of hybridisation ?

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6. Name the element that are included in the nitrogen family.

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7. What is the shape of ammonia molecule ?

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8. Which of the following factor will be usefuk in manufacture of ammonia by Haber's process ?

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9. Name two elements of group 15 of periodic table.

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10. What substance is used for dying ammonia gas ?

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11. What is anhydride of nitric acid?

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12. What is the bond angle in the molecules of ammonia ?

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13. Write the formula of nitric anhydride.

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14. What is the bond angle in NH_4^+ ion ?

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15. What is Oleum ? Write its formula.

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16. Write various oxidation states of sulphur.

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17. What is the bond angle in the molecule of sulphur dioxide?

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18. Why SO_2 gas cannot be collected over water?

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19. What is the bond angle in H_2O ?

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20. What is shape of O_3 molecule ?

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21. Ozone depletion in the stratosphere is mainly caused by :

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22. What do you mean by tailing of mercury ?

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23. What happens when H_2S reacts with $CuSO_4$ in acidic medium ?

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24. H_2SO_4 acid is known as "king of chemicals". Explain.

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25. Name the method of manufacturing H_2SO_4.

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26. Name two allotropic forms of sulphur.

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27. Arrange the basicity in increasing order of TeO_2, SO2 and SeO_2

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28. What happens when H_2S passed through $FeCl_3$ solution ?

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29. Write the valency shell electronic configuration of VIIA elements.

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30. Halogens do not occur free in nature. Explain.

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31. How physical state of halogen changes with increase in atomic number ?

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32. Write colours of all the halogen gases.

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33. Write the bond length of HCl.

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34. HCl is weaker than HI. Explain.

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35. Which gas is produced when NaCl is heated with conc. H_2SO_4 ?

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36. What happens when chlorine gas is passed through cold caustic soda ?

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37. Which of the halogen forms the weakest hydracids ?

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38. Which halogen is solid at the room temperature ?

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39. HI is an oxidising or reducing agent ?

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40. Fluorine is a strong oxidising agent because :

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41. Arrange the halogen family in their decreasing order of electronegativity.

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42. Write the equation for `Cl_2 which is bubbled through a solution of ferrous bromide.

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43. What happens when Cl_2 gas is passed into aqueous solution of KOH ?

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44. In halogen family which element forms strongest hydrogen bonds ?

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45. How will you prepare Cl_2 from NaCl ?

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46. Arrange the following in the order of property indicated for set.

HF, HCl, HBr, HI in the increasing acidic strength.

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47. Write two uses of potassium chlorate.

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48. Write two uses of xenon tetrafluoride.

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49. Why are halogen gases or volatile liquid or solid at room temp. ?

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50. Why do noble gases form compounds with flourine and oxygen only ?

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51. What is magnetic character of F_2 ?

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52. Give electronic configuration of chlorine atom.

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53. Which halogen shows only one oxidation number in its compounds ?

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54. Write two uses of flourine.

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55. HF is less volatile than HCl.(True/False)

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56. Write some uses of bromine.

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57. Melting point of NaCl is highest among NaF, NaCl, NaBr, NaI.(True/False)

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58. HBr is stronger acid than HI. .(True/False)

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59. Flourine is prepared by electrolysis. What is the liquid used and electrodes ?

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60. Electron affinity of flourine is less than that of chlorine Why ?

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61. How will you convert SO_2 into H_2S ?

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62. Glass apparatus is not used for isolation and storing of fluorine. (True/False)

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63. What are the sources of rare gases ?

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64. Which of the noble gases is radioactive ?

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65. Which noble gas has the highest ionisation energy ?

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66. What is the value of $\frac{C_P}{C_V}$ for noble gases ?

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67. Name the 1st compound of a noble gas reported by Bartlett.

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68. Which inert gas is not found in atmosphere ?

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69. Which inert gas is used for welding of aluminium and chromium ?

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70. Which gas is used in glow sign tube ?

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71. What is nature of hybridisation in XeF_4 ?

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72. Write the reaction between XeF_2 and KF ?

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73. What is the shape of XeF_4 molecule ?

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74. What is molecular geometry of XeO_3 ?

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75. Which is not called as noble gas gas ?

A. k

B. Ne

C. Ar

D. Xe

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76. What is average life and is percentage of argon in air ?

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77. Write the hybridisation of XeF_6 .

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78. What is shape of XeF_6 molecules ?

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79. The catalyst used in the manufacture of nitric acid by Ostwald process is:

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80. Anhydride of nitric acid is____and anhydride of phosphoric acid is_____.

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81. Nitric acid is prepared by heating___and____.

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82. HNH bond angle in NH_3 is_____.

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83. HMH bond angles in MH_3 molecules of group 15___down the group.

A. remain same

B. decrease

C. increase

D. First increase then decrease

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84. In general, two types of oxy-acids formed by elements of nitrogen family are___and ____.

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85. Nitrogen cannot form NCl_5 due to_____.

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86. Bismuth cannot form stable $BiCl_5$, due to_____.

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87. Pentoxides of all the elements of nitrogen family are _____ acidic than their trioxides.

A. Less

B. More

C. Equally acidic

D. Can't say

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88. In the synthesis of NH_3 by Haber's process, catalyst is ____and promoter is_____.

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89. __is used as catalyst by Ostwald process for manufacture of nitric acid.

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90. ____is used as cataylst in the manufacture of H_2SO_4 acid by contact process.

A. V_2O_5

B. Pt

C.

D.

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91. What happens when SO_2 gas is passed through H_2S dissolved in water ?

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92. $SO_2 + 2H_2S \rightarrow \_\ \_\_ + 2S$

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93. Oxygen and Ozone are____of each other.

A. Isomers

B. Allotropes

C. Isotopes

D. Isobars

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94. HI is most____in nature among halogen acids.

A. basic

B. acidic

C. volatile

D. oxidising

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95. ___halogen is solid at room temperature.

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96. $4NaOH(conc) + 2F_2 \rightarrow 4NaF + 2H_2O +$ _____

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97. In aquaregia___is responsible for dissolving gold and platinum.

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98. ___has highest oxidising power in halogen family.

A. F_2

B. Cl_2

C. Br_2

D. I_2

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99. ___has highest electron affinity in halogen family.

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100. $F_2 + H_2O + KClO_3 \rightarrow \_\ \_+ KClO_4$

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101. $Cl_2 + 2NaOH(cold\&dil) \rightarrow \_\ \_\_ + NaOCl + H_2O$

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102. $3Cl_2 + 6NaOH \rightarrow NaClO_3 + - - - - + H_2O$

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103. Ionisation potential of noble gases are___.

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104. Noble gases have____electron affinity

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105. Noble gases have____M.P. and B.P.

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106. Hybridisation of Xenon in Xenon tetrafluoride is ____.

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107. Hybridisation of Xenon in Xenon hexafluoride is ____.

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108. Shape of XeF_6 molecule is____.

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109. Zero group elements are inert due to_____.

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110. Zero group elements are monoatomic due to_____.

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111. ___inert gas is most abundant in air.

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112. Oxygen is -------.

A. Diamagnetic

B. Paramagnetic

C. Ferromagnetic

D. Nonmagnetic

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113. Oxygen molecule is having even number of electrons but is paramagnetic. Why?

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114. Tailing of mercury is due to formation of _____.

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115. O_2 is absorbed by lime water. Is it true or false?

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116. O_3 is absorbed by caustic soda.is it true or false ?

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117. All halogens are colourless.Is It Correct?

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118. F_2 is least reactive halogen.is it true or false?

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119. Iodine is more soluble in KI than in water,why?

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120. ClO_4^- is the strongest base.is it true or false?

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121. HI gives white precipitate with $AgNO_3$.is it true or false?

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122. Which of the noble gases is radioactive ?

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123. XeF_6 has what geometry.

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124. Hybridisation of Xe in XeF_4, is

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125. $XePtF_6$ (yellow solid) was prepared by J.Thomson. true/false

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126. XeF_4 has tetrahedral shape.is it true or false ?

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127. In the ring test for nitrate, which complex compound is formed?

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128. What happens when concentrated sulphuric acid is added to formic acid ? Give equation.

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129. What is aquaregia ? How is it formed ?

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130. What happens when ammonium chloride is heated with slaked lime?

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131. Why is ammonia not dried by concentrated sulphuric acid ?

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132. What is aquaregia ? How is it formed ?

Watch Video Solution

133. Why ammonia gas is not collected by the displacement of water?

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134. Which catalyst is used in the manufacture of ammonia by Haber's process ?

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135. Write two uses of ammonia.

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136. What happens when solid ammonium chloride is added to sodium aluminate solution and boiled ?

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137. Name three metals which are rendered passive to conc. HNO_3.

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138. What happens when NH_4NO_3 is heated (equation only) ?

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139. Why do the elements of nitrogen family show almost zero electron affinity ?

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140. Between N and O, which one has higher ionisation potential ?

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141. Give the trend of electronegativity of elements of Group-VA.

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142. Between NH_3 and PH_3 which one is more basic ?

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143. Between N_2O_3 and N_2O_5, which oxide is more acidic ?

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144. Among NH_3, PH_3, AsH_3, SbH_3, BiH_3, which one is the best reducing agent ?

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145. What happens when NH_4Cl is heated with $Ca(OH)_2$ (equation only) ?

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146. Describe the preparation of Ozone.

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147. Explain the structure of SO_2 molecule.

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148. Write some uses of sulphur dioxide.

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149. Explain that bleaching action of CL_2 is permanent, while that of SO_2 is temporary.

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150. Which oxide of sulphur can act as an oxidising as well as reducing agent?

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151. How bromine can be liberated from KBr Solution?

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152. What is most electropositive halogen?

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153. Explain what happens when HCl gas is passed through concentrated NaCl solution?

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154. Discuss about the order of electron affinity of halogen elements.

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155. What happens when H_2O_2 reacts with `Cl2?

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156. What happens when $KClO_3$ reacts with cone. H_2SO_4?

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157. What happens when NH_3 is treated with chlorine in small quantity?

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158. Noble gas atoms have very high ionization energles. Explain.

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159. What is the shape of XeF_2 molecule ?

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160. How XeF_2 is prepared?

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161. How XeF_4 is prepared ?

Watch Video Solution

162. Xenon forms fluoride easily. Explain.

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163. What happens when phosphine is passed through $AgNO_3$ Solution ? Give equation..

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164. What happens when ammonia reacts with chlorine?

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165. Write the equation for the preparation of phosphine.

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166. What happens when ammonia reacts with insufficient amount of chlorine. Give equation

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167. What is the action of concentrated nitric acid on copper? Give equation.

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168. What happens when ammonia reacts with Nessler.s reagent ? Give equations.

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169. State the reaction of conc. Nitric acid with sulphur. Give equation.

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170. What is the best substances for drying ammonia and why?

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171. How can you get acetamide from acetyl chloride?

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172. Write basicity of H_3PO_2, H_3PO_3 and H_3PO_4 .

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173. Why ammonia gas is not collected by the displacement of water?

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174. What is action of 2 % HNO_3 on magnesium metal ? Give equation

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175. Complete and balance the equation:

$P_4 + H_2O + NaOH \rightarrow$ _ _ _ _ + _ _ _ _

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176. Complete and balance the following equations:

$CuSO_4 + PH_3 \rightarrow \_\ \_\_ + 3H_2SO_4$

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177. Complete and balance the equation:

very dilute $HNO_3 + Fe \rightarrow$

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178. Complete and balance the equation:

Very dilute $HNO_3 + Cu \rightarrow$

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179. What happens when: H_2S gas is passed through $CuSO_4$ solution.

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180. What happens when H_2S gas is passed through ammoniacal solution of $MnCl_2$

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181. What happens when H_2S is passed through aqueous solution of $ZnCl_2$? Give equation.

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182. What happens when conc. H_2SO_4 is added to formic acid? Give equation.

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183. What happens when H_2S gas is passed through chlorine water ?

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184. What happens when SO_2 gas is passed through H_2S dissolved in water ?

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185. Explain the structure of ozone molecule.

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186. The nitrate which when heated gives off a gas or a mixture of gases which cannot relight a glowing splinter is:

A. Sodium nitrate

B. Ammonium nitrate

C. Lead nitrate

D. Potassium nitrate

Answer: B

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187. Lead nitrate on heating gives lead oxide, nitrogen dioxide and oxygen. The reaction is known as:

A. Combustion

B. Combination

C. Displacement

D. Decomposition

Answer: D

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188. Phosphorus is manufactured by heating___in a furnace.

A. Bone-ash, sodium chloride and coke

B. Bone-ash, silica and coke

C. Bone-ash, silica and lime

D. Bone-ash, coke and limestone

Answer: B

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189. A process for making ammonia at high temperature and pressure in the presence of a catalyst is known as:

A. Destructive distillation

B. Fractional crystallization

C. Gasification

D. Habers Process

Answer: D

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190. Yellow phosphorus is kept in:

A. Water

B. Ether

C. Alcohol

D. Kerosene

Answer: A

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191. Superphosphate of lime is used in:

A. Cement industry

B. Glass industry

C. Agriculture

D. Metallurgy

Answer: C

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192. NH_3 can be collected by the displacement of:

A. Mercury

B. Water

C. Brine

D. Conc. H_2SO_4

Answer: A

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193. Light blue colour of nitrous acid is due to dissolved:

A. O_2

B. N_2

C. N_2O

D. N_2O_3

Answer: D

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194. The dipole moment of NF_3 is less than NH_3 because:

A. F is more reactive than H

B. NH_3 forms associated molecules

C. The resultant of the bond polarity is less

D. The resultant of the individual polarities is opposed by the polarity of lone pair

Answer: D

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195. Which hydride does not exist ?

A. SbH_3

B. AsH_3

C. PH_5

D. N_2H_4

Answer: C

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196. Skin turns yellow in contact with conc. HNO_3, because:

A. Proteins are converted into xanthoproteins

B. Water is removed by the acid

C. Skin gets burnt

D. Nitrocellulose is formed

Answer: A

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197. What is the bond angle in the molecules of ammonia ?

A. $109^\circ 28.$

B. $104^\circ 31.$

C. 120°

D. $106^\circ 51$

Answer: D

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198. Nitrates of all metals are:

A. Unstable

B. Coloured

C. Insoluble in water

D. Soluble in water

Answer: D

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199. Man dies, when nitrous oxide is inhaled in large quantities because it:

A. Is poisonous

B. Causes laughing hysteria

C. Decomposes haemoglobin

D. Reacts with organic tissues

Answer: B

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200. Mg on heating to redness in an atmosphere of N_2 and then on treating with H_2O gives:

A. NH_3

B. H_2

C. N_2

D. O_2

Answer: A

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201. Which halide does not hydrolyse ?

A. $SbCl_3$

B. $AsCl_3$

C. PCl_3

D. NF_3

Answer: D

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202. Bones glow in the dark, because:

A. They contain a shining material

B. They contain red phosphorus

C. White phosphorus changes into red phosphorus

D. White phosphorus undergoes slow combustion with air.

Answer: D

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203. Bottle of PCl_5 is kept stoppered because it:

A. Explodes

B. Get oxidised

C. Is volatilized

D. Reacts with moisture

Answer: D

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204. In modern process phosphorus is manufactured by:

A. Heating a mixture of phosphorite mineral with sand and coke in electric furnace.

B. Heating calcium phosphate with coke

C. Heating bone ash with coke

D. Heating the phosphate mineral with sand

Answer: A

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205. The basicity of orthophosphoric acid is:

A. 2

B. 3

C. 4

D. 5

Answer: B

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206. Cane sugar reacts with concentrated HNO_3 to give:

A. CO_2 and H_2O

B. $Oxalic\ acid$

C. $Carbonic\ acid$

D. CO and H_2O

Answer: B

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207. Complex fertilizer is that supplies to the soil:

A. S, K and N

B. N,K and P

C. S,K and P

D. S and N

Answer: B

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208. Liquid ammonia bottles be opened after cooling them in ice for sometime. It is because liquid NH_3:

A. brings tears to the eyes

B. has a high vapour pressure

C. is a corrosive liquid

D. is a malid explosive

Answer: B

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209. The lightning bolts in atmosphere cause the formation of:

A. NO

B. O_2

C. CO_2

D. H_2O_2

Answer: A

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210. The most reactive allotropic form of phosphorus is:

A. Red phosphorus

B. Yellow phosphorus

C. Black phosphorus

D. Violet phosphorus

Answer: B

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211. Which hydride possesses the maximum complex forming nature ?

A. NH_3

B. PH_3

C. BiH_3

D. SbH_3

Answer: A

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212. The formula of zinc phosphite is:

A. $ZnHPO_3$

B. $Zn(PO_4)_3$

C. $Zn_2(PO_4)_3$

D. $Zn_3(PO_3)_2$

Answer: A

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213. NH_3 molecule can enter into complex formation through:

A. Ionic bond

B. Covalent bond

C. Co-ordinate bond

D. Electron deficient bond

Answer: C

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214. Calcium carbide when heated with nitrogen forms:

A. Ca_3N_2

B. $Ca(CN)_2$

C. $CaCN_2$

D. $Ca(CNO)_2$

Answer: C

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215. Which property of white phosphorus is common to red P ?

A. It is soluble in carbon disulphide

B. It shows chemiluminescence

C. It reacts with hot caustic soda solution to give phosphine

D. It burns when heated in air.

Answer: D

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216. Which hydride is most stable ?

A. AsH_3

B. SbH_3

C. PH_3

D. NH_3

Answer: D

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217. Which is a poison ?

A. Hg_2Cl_2

B. As_2O_3

C. $NaHCO_3$

D. $NaCl$

Answer: B

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218. NH_4Cl is used to clean metal surfaces because:

A. It dissociates into NH_3 and HCl on heating

B. NH_3 forms a soluble complex with the metal.

C. NH_4Cl forms a volatile chloride

D. None of the above

Answer: A

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219. In smoke screens calcium phosphide is used, because it:

A. catches fire easily

B. burns and gives soot

C. forms phosphine which gives smoke

D. none of these

Answer: C

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220. Ammonia on heating with carbon dioxide under pressure gives:

A. NH_4HCO_3

B. $(NH_4)_2CO_3$

C. NH_2COONH_4

D. $(NH_2)_2CO$

Answer: C

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221. Dilute HNO_3 reacts with limestone to yield:

A. $Ca(OH)_2.\ Ca(NO_3)_2$

B. $CaO.\ Ca(NO_3)_2$

C. $2CaO.\ Ca(NO_3)_2$

D. None of these

Answer: D

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222. CaN pellets are coated with calcium silicate because:

A. CaN is explosive

B. Can is hygroscopic

C. CaN is water-soluble

D. None

Answer: B

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223. Basic oxide is:

A. Bi_2O_3

B. As_2O_3

C. P_2O_3

D. N_2O_3

Answer: A

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224. Fluorapatite is a mineral of:

A. F_2

B. Br_2

C. P

D. As

Answer: C

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225. Which of the following is correct, with reference to protonic acids:

A. PH_3 is more basic than NH_3

B. PH_3 is less basic than NH_3

C. PH_3 is as basic as NH_3

D. PH_3 is amphoteric while NH_3 is basic

Answer: B

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226. The single electron in 2p-orbitals of nitrogen atom proves:

A. Hund's rule

B. Pauli's rule

C. Aufbau principle

D. None of the above

Answer: A

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227. Vortex rings in air are formed by:

A. PH_3

B. NH_3

C. SbH_3

D. AsH_3

Answer: A

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228. NaOH can absorb:

A. N_2O_5

B. NO

C. N_2O

D. All

Answer: A

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229. Which sulphide is insoluble in yellow ammonium sulphide ?

A. SnS

B. As_2S_3

C. Sb_2S_3

D. Bi_2S_3

Answer: D

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230. Which statement is not correct ?

A. White and red phosphorus react with chlorine at room temperature

B. White phosphorus is metastable, while red phosphorus is stable

C. White phosphorus is lighter than red phosphorus

D. White phosphorus is highly poisonous, while red phosphorus is not

Answer: A

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231. Hydrolysis of PI_3 yields:

A. Monobasic acid and a salt

B. Monobasic acid and dibasic acid

C. Dibasic acid and tribasic acid

D. Monobasic acid and tribasic acid

Answer: B

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232. In smoke screens calcium phosphide is used, because it:

A. Burns to form soot

B. Gives PH_3 which forms smoke

C. Immediately catches fire in air

D. Is a gas which brings tears in eyes

Answer: B

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233. The oxidation state of nitrogen in NH_4NO_3 is:

A. -3, +5

B. +3, -5

C. +5

D. +3

Answer: A

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234. The N-H bond in NH_3 is:

A. Covalent

B. Ionic

C. Dative

D. Hydrogen

Answer: A

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235. Oxidation of ammonia by CuO yields:

A. N_2

B. N_2O_5

C. NO

D. NO_2

Answer: A

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236. Which of the following statements is not true ?

A. NO_2 can be prepared by heating $Pb(NO_3)_2$

B. NO_2 is red-brown gas

C. NO_2 is paramagnetic

D. NO_2 readily dimerises to N_2O_4

Answer: C

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237. Which reaction can be used to prepare phosphoric acid ?

A. $P_2O_3 + H_2O \xrightarrow{20^\circ C}$

B. $P_2O_3 + H_2O \xrightarrow{80^\circ C}$

C. $P_2O_3 + H_2O \xrightarrow{25^\circ C}$

D. $P + HNO_3 \rightarrow$

Answer: D

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238. Metal among the following is:

A. As

B. Sb

C. P

D. Bi

Answer: D

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239. PCl_3 reacts with organic compounds containing____group.

A. $-SO_3$

B. $-OH$

C. $-NO_3$

D. $-NO$

Answer: B

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240. Ammonia water is a good cleaning agent because it:

A. is weakly basic

B. emulsifies grease

C. leaves no residue when wiped out

D. all are true

Answer: D

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241. Which is correct statement ?

A. Nitric oxide is isoelectronic with CO_2

B. Nitric oxide is diamagnetic

C. Nitric Oxide is an endothermic compound

D. Nitric oxide gas is used as general anaesthetic

Answer: C

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242. The number of $\pi -$ bonds present in NCl_3 is:

A. 1

B. 2

C. 3

D. None

Answer: D

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243. Which is used to remove N_2 from air:

A. P

B. Mg

C. $CaCl_2$

D. Conc. H_2SO_4

Answer: B

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244. In PCl_5 molecule, P is :

A. `sp^2 hybridisation

B. `sp^3 - hybridisation

C. sp^3d - hybridisation

D. sp^3d^2 - hybridisation

Answer: C

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245. Pure N_2 can be obtained by:.

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246. Liquor ammonia is:

A. Ammonium hydroxide

B. Liquefied ammonia gas

C. Concentrated solution of NH_3 in water

D. A solution of NH_3 in alcohol

Answer: C

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247. Which element reacts with chlorine to give pentachloride ?

A. P

B. As

C. Sb

D. All

Answer: D

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248. NCl_3 on hydrolysis yields:

A. N_2 and $NOCl$

B. NO and HCl

C. NH_3 and $HOCl$

D. N_2O and NH_3

Answer: C

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249. Which element does not form stable diatomic molecules ?

A. Iodine

B. Phosphorus

C. Nitrogen

D. Oxygen

Answer: B

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250. Which reagent can separate nitric oxide from nitrous oxide ?

A. Sodium nitroprusside solution

B. $FeSO_4$ solution

C. Nessler.s reagent

D. Ammonical silver nitrate solution

Answer: B

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251. Each of the following is true about white and red phosphorus except that they :

A. are both soluble in CS_2

B. can be oxidised by heating in air

C. consist of same kind of atoms

D. can be converted into one another

Answer: A

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252. The gas which is supporter of combustion is:

A. NH_3

B. N_2O

C. NO_2

D. N_2O_5

Answer: B

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253. The oxide which is solid at room temperature is:

A. N_2O

B. NO

C. N_2O_4

D. N_2O_5

Answer: D

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254. Bones glow in the dark. This is due to:

A. the presence of red phosphorus

B. conversion of white P into red P

C. slow combustion of white P in contact with air

D. conversion of red P into white P

Answer: C

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255. When ammonia is dissolved in water:

A. It loses a proton

B. It loses an electron

C. It gains a electron from water molecule

D. It gains a proton from water molecule

Answer: C

Watch Video Solution

256. A compound which leaves behind no residue on heating is :

A. $Cu(NO_3)_2$

B. KNO_3

C. NH_4NO_3

D. None of these

Answer: C

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257. Which one of the following formulae does not represent a salt derived from phosphorus acid, H_3PO_3 ?

A. NaH_2PO_3

B. Na_2HPO_3

C. Na_3PO_3

D. None of these

Answer: C

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258. The strongest oxidising agent is:

A. H_3PO_4

B. HNO_3

C. H_3PO_3

D. HNO_2

Answer: B

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259. The colourless gas liberated by passing excess of chlorine through NH_3 gas is:

A. NCl_3

B. HCl

C. N_2

D. H_2

Answer: B

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260. Good conductor of electricity is:

A. Yellow P

B. Red P

C. Violet P

D. Black P

Answer: D

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261. Sulphuric acid reacts with PCl_5 to yield.

A. Thionyl chloride

B. Sulphuryl chloride

C. Phosphoric acid

D. Sulphur monochloride

Answer: B

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262. Nitric acid is absorbed by:

A. KOH solution

B. $FeSO_4$ solution

C. Dilute H_2SO_4

D. Alkaline $pyrogallol$

Answer: A

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263. The gas used in the manufacture of icecream is:

A. CO_2

B. N_2O

C. NO

D. N_2O_3

Answer: A

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264. Phosphine is not collected in air because:

A. It is poisonous

B. It absorbs moisture

C. It catches fire spontaneously in air

D. It is combustible

Answer: C

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265. The total number of unpaired electrons present in phosphorus in ground state is:

A. 8

B. 3

C. 5

D. 9

Answer: B

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266. Phosphine is:

A. Basic

B. Acidic

C. Amphoteric

D. Neutral

Answer: A

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267. Ammonium chloride is removed from its mixture by:

A. Filtration

B. Distillation

C. Sublimation

D. A magnet

Answer: C

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268. Calculate the entropy change involved in the conversion of one mole of water at $373K$ to vapour at the same temperature.(Latent heat of vaporisation of water at this temperature , $\Delta H_vap = 2.257kJg^{-1}$)

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269. The arrangement of oxygen atoms around phosphorus atoms in P_4O_{10} is:

A. Pyramidal

B. Octahedral

C. Square planar

D. Tetrahedral

Answer: B

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270. Which is not an acid salt ?

A. NaH_2PO_2

B. NaH_2PO_4

C. $Na_3HP_2O_6$

D. $Na_4P_2O_7$

Answer: D

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271. Red phosphorus is chemically unreactive because:

A. It does not contain P-P bonds

B. It does not contain tetrahedral P_4 molecules

C. It does not catch fire in air even upto 4000° C

D. It has a polymeric structure

Answer: D

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272. When Zn reacts with very dilute nitric acid it produces:

A. NO

B. NH_4NO_3

C. NO_2

D. H_2

Answer: B

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273. The percentage of nitrogen in air remains almost constant due to:

A. The fixation of nitrogen

B. The activity of symbolic bacteria

C. The effect of lightning and bacteria

D. The nitrogen cyclic in nature

Answer: D

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274. Phosphine is generally prepared in the laboratory:

A. By heating phosphorus in a current of hydrogen

B. By heating white phosphorus with aqueous solution of caustic potash

C. By decomposition of P_2H_4 at 110° C

D. By heating red phosphorus with an aqueous solution of caustic soda

Answer: B

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275. Ammonium dichromate is used in some fireworks. The green coloured powder blown is:

A. CrO_3

B. Cr_2O_3

C. Cr

D. $CrO(O_2)$

Answer: B

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276. P_2O_5 when treated with cold water gives:

A. Orthophosphoric acid

B. Metaphosphoric acid

C. Pyrophosphoric acid

D. Hypophosphoric acid

Answer: B

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277. Which acid possesses oxidizing, reducing and complex forming properties:

A. HNO_3

B. H_2SO_4

C. HCl

D. HNO_2

Answer: D

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278. White phosphorus is:

A. Strong poison

B. Mild poison

C. Non-poisonous

D. None

Answer: B

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279. PCl_5 is prepared by the action of Cl_2 on:

A. P_2O_3

B. P_2O_5

C. H_3PO_3

D. PCl_3

Answer: D

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280. Phosphorus when exposed to air burns spontaneously because:

A. The reaction is endothermic

B. The reaction is exothermic

C. The activation energy is very low

D. Air contains some catalytic agent

Answer: C

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281. Phosphine is not obtained by the reaction:

A. White P is heated with NaOH

B. Red P is heated with NaOH

C. Ca_3P_2 reacts with dilute HCl

D. Phosphorus trioxide is boiled with water

Answer: B

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282. Orthophosphoric acid on heating at $600^\circ C$ gives:

A. Phosphine

B. Phosphorus pentoxide

C. Phosphorus acid

D. Metaphosphoric acid

Answer: D

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283. Mixture used on tips of matchsticks is:

A. S+K

B. Antimony sulphide

C. $K_2Cr_2O_7 + S + redP$

D. $K_2Cr_2O_7 + K + S$

Answer: C

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284. Which element is most metallic:

A. Phosphorus

B. Arsenic

C. Antimony

D. Bismuth

Answer: D

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285. Aqua-regia is a mixture of:

A. $3HCl + HNO_3$

B. $3HNO_3 + HCl$

C. $H_3PO_4 + H_2SO_4$

D. $HCl + CH_3COOH$

Answer: A

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286. Arsine is a:

A. Solid

B. Liquid

C. Supersaturated Liquid

D. Gas

Answer: D

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287. P_2O_5 is used extensively as a:

A. Dehydrating agent

B. Catalytic agent

C. Reducing agent

D. Preservative

Answer: A

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288. The non-existent compound is:

A. PH_4I

B. AsH_3

C. $SbCl_2$

D. As_2O_3

Answer: C

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289. In pyrophosphoric acid the number of hydroxy groups present are:

A. 4

B. 3

C. 5

D. 7

Answer: A

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290. Concentrated nitric acid on heating decomposes to give:

A. O_2 and N_2

B. NO

C. O_2

D. NO_2 and O_2

Answer: D

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291. Phosphoric acid on reaction with sufficient quantity of $NaOH$ gives:

A. Na_3PO_4

B. Na_2HPO_4

C. NaH_2PO_4

D. $NaHPO_3$

Answer: A

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292. Which one of the following cations does not form a complex with ammonia :

A. Ag^+

B. Cu^{2+}

C. Cd^{2+}

D. Pb^{2+}

Answer: D

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293. Which pentafluorides cannot be formed ?

A. PF_5

B. AsF_5

C. SbF_5

D. BiF_5

Answer: D

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294. Which possesses least stable covalent P-H bond ?

A. PH_3

B. P_2H_6

C. P_2H_5

D. PH_6^+

Answer: D

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295. Paramagnetic oxide is:

A. NO

B. N_2O_4

C. P_4O_6

D. N_2O_5

Answer: A

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296. The oxide of nitrogen which reacts with NaOH solution giving both sodium nitrite and sodium nitrate is:

A. NO_2

B. N_2O_5

C. N_2O_3

D. NO

Answer: A

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297. The oxidizing property of nitric acid is due to:

A. its concentration

B. the positive valency of N

C. its dilution

D. the unstability of its molecule and the presence of nitrogen in its highest state of oxidation

Answer: D

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298. Which chloride is explosive:

A. PCl_3

B. $AsCl_3$

C. NCl_3

D. $SbCl_3$

Answer: C

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299. N_2O_4 molecule is completely changed into $2NO_2$ molecules at:

A. -10° C

B. $140^\circ - 150^\circ C$

C. 420° C

D. -40° C

Answer: B

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300. The chemical formula for tartar emetic is:

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301. Which reacts rapidly with oxygen in the air at ordinary temperature :

A. White P

B. Red P

C. N_2

D. N_2O

Answer: A

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302. Phosphine is not evolved when:

A. White phosphorus is boiled with a strong solution of $Ba(OH)_2$

B. Phosphorus acid is heated

C. Calcium hypophosphite is heated

D. Metaphosphoric acid is heated

Answer: D

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303. The number of molecules of water needed to convert one molecule of P_2O_5 into orthophosphoric acid is:

A. 2

B. 3

C. 4

D. 5

Answer: B

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304. The non-metal whose oxide is a good dehydrating agent is:

A. S

B. Cl

C. N

D. P

Answer: D

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305. Orthophosphoric acid has the formula:

A. HPO_3

B. H_3PO_4

C. H_3PO_3

D. $H_4P_2O_6$

Answer: B

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306. Acidic nature of pentoxide in group 15 ____down the group.

A. Increases

B. Decreases

C. Remains same

D. None

Answer: B

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307. N, P, As, Sb and Bi are in group 15, So, Bi in its external most shell contains:

A. Three electrons

B. One electrons

C. Five electrons

D. Seven electrons

Answer: C

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308. P_4O_{10} has short and long P-O bonds. The number of short P-O bonds in this compound is:

A. 1

B. 2

C. 3

D. 4

Answer: D

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309. Which has the lowest boiling point:

A. NH_3

B. PH_3

C. SbH_3

D. BiH_3

Answer: B

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310. Nitrogen is a relatively inactive element because:

A. Its atom has stable electronic configuration

B. It has a low atomic radius

C. Its electronegativity is fairly high

D. Dissociation energy of its molecule is fairlyhigh

Answer: D

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311. Which statement is not correct for nitrogen ?

A. Its electronegativity is very high

B. d-orbitals are available for bonding

C. It is a typical non-metal

D. Its molecular size is small

Answer: B

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312. In P_4O_6 the number of oxygen atoms bonded to each P atom is:

A. 1.5

B. 2

C. 3

D. 4

Answer: C

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313. Red and yellow phosphorus are:

A. Allotropes

B. Isobars

C. Isomers

D. Isotopes

Answer: A

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314. Which ion cannot be precipitated from water:

A. Cl^-

B. NO_3^-

C. SO_4^-

D. All

Answer: B

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315. Select the correct statement:

A. Sodium metal is stored under kerosene

B. One of the oxides of carbon is a basic oxide

C. Metals can form only basic oxides

D. To prevent combination of white phosphorus

Answer: A

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316. White phosphorus is:

A. Square planar

B. Pyramidal

C. Tetrahedral

D. Trigonal planar

Answer: C

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317. The anhydride of orthophosphoric acid is:

A. P_4O_{10}

B. P_2O_5

C. P_4O_6

D. P_2O_3

Answer: A

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318. The fertilizer named Nitrolim is prepared by the use of:

A. $CaO + N_2$

B. $CaC + N_2$

C. $CaC_2 + N$

D. $CaC_2 + N_2$

Answer: D

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319. Among the phosphatic fertilizers, superphosphate of lime is a mixture of $Ca(H_2PO_4)_2$ and:

A. $CaSO_4 . 2H_2O$

B. $CaSO_4 . H_2O$

C. $CaSO_4 . \frac{1}{2}H_2O$

D. $CaSO_4$

Answer: A

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320. HNO_3 has the following properties:

A. Oxidizing and bleaching

B. Acidic and oxidizing

C. Basic and reducing

D. Reducing and bleaching

Answer: B

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321. The group 15 elements are commonly known as:

A. Halogens

B. Normal elements

C. Pnicogens

D. None

Answer: C

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322. Elements of group 15 are:

A. s-block elements

B. p-block elements

C. d-block elements

D. None

Answer: B

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323. Which oxide of N is neutral ?

A. N_2O_3

B. N_2O_5

C. N_2O_4

D. N_2O

Answer: D

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324. The outer electronic configuration of 15 group

A. ns^2np^1

B. ns^2np^2

C. ns^2np^3

D. ns^2np^4

Answer: C

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325. Which of the following occurs in free state ?

A. N

B. P

C. As

D. Sb

Answer: A

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326. Which element does not show allotropy?

A. N

B. P

C. Bi

D. As

Answer: C

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327. Which is a true acid anhydride?

A. CO

B. NO

C. Al_2O_2

D. N_2O_5

Answer: D

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328. An inorganic compound producing organic compound on heating is:

A. Sodamide

B. Ammonium cyanate

C. Sodalime

D. Potassium cyanide

Answer: B

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329. In the reduction of HNO_3 to N_2O the number of mole of electrons involved per mole of HNO_3 is:

A. 8

B. 4

C. 3

D. 6

Answer: B

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330. Phosphine on reaction with hydrobromic acid gives:

A. PBr_3

B. PH_4Br

C. PBr_5

D. P_2H_4

Answer: B

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331. The starting material in birkeland and Eyde process for the manufacture of HNO_3 is:

A. NH_3

B. NO_2

C. Air

D. Chile Saltre

Answer: C

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332. Which of the following liberates H_2, with nitric acid?

A. Zn

B. Cu

C. Mn

D. Hg

Answer: C

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333. Density of nitrogen gas prepared from air is slightly greater than that of nitrogen prepared by chemical reaction from a compound of nitrogen because aerial nitrogen contains

A. CO_2

B. Argon

C. Some N_2 molecules analogous to O_2

D. Greater amount of N_2 molecules derived from N_{15} isotope

Answer: B

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334. Which is not correct for N_2O ?

A. It is called laughing gas

B. It is nitrous oxide

C. It is not a linear molecule

D. It is least reactive of all the oxides of nitrogen

Answer: C

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335. N_2O is formed on reaction with dil, HNO_3 with:

A. Cu

B. Hg

C. Ag

D. Fe

Answer: D

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336. Which of the following equations is not correctly formulated?

A. $3Cu + 8HNO_3(dil) \rightarrow 3Cu(NO_3)_2 + 2NO + 4H_2O$

B. $3Zn + 8HNO_3(dil) \rightarrow 3Zn(NO_3)_2 + 2NO + 4H_2O$

C.

$$4Sn + 10HNO_3(dil) \rightarrow 4Sn(NO_3)_2 + NH_4NO_3 + 3H_2O$$

D. $As + 5HNO_3(conc) \rightarrow H_3AsO_4 + 5NO_2 + H_2O$

Answer: B

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337. Which halide of nitrogen is least basic?

A. NF_3

B. NCl_3

C. NI_3

D. NBr_3

Answer: A

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338. Laughing gas is prepared by heating:

A. NH_4Cl

B. $(NH_4)_2CO_4$

C. $NH_4Cl + NaNO_2$

D. NH_4NO_3

Answer: D

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339. The catalyst used in the manufacturer of HNO_3 by Ostwald.s process is:

A. Platinum black

B. Finely divided nickel

C. Vanadium pentoxide

D. Platinum gauze

Answer: D

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340. Most explosive compound is :

A. NCl_3

B. PCl_3

C. $AsCl_3$

D. All

Answer: A

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341. The molecular formula of phosphorus is:

A. P_1

B. P_4

C. P_2

D. P_5

Answer: B

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342. The chemical used for cooling in refrigenaration or in manufacture of ice is:

A. CS_2

B. NH_4OH

C. NH_4Cl

D. Liquid NH_3

Answer: D

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343. Most acidic oxide is:

A. As_2O_3

B. P_2O_3

C. Sb_2O_3

D. Bi_2O_3

Answer: B

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344. An important method of fixation of atmospheric N_2 is:

A. Fischer- Tropsch.s process

B. Haber.s process

C. Frasch.s process

D. Solvay.s process

Answer: B

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345. The essential element of nitrogen fixation is:

A. Zn

B. Cu

C. Mo

D. B

Answer: C

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346. Passing H_2S gas through nitric acid produces:

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347. Nitric acid is generally light yellow due to the presence of:

A. NH_3

B. NO

C. NO_2

D. N_2O_5

Answer: C

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348. Which does not give ammonia with water?

A. Mg_3N_2

B. AlN

C. $CaCN_2$

D. $Ca(CN)_2$

Answer: D

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349. In the statement of leukaemia _____ is used.

A. White phosphorus

B. Red phosphorus

C. Scarlet phosphorus

D. P^{32} isotope

Answer: D

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350. Metaphosphoric acid is:

A. H_3PO_2

B. HPO_3

C. H_3PO_3

D. H_3PO_4

Answer: B

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351. The best absorbent for ammonia is:

A. Water

B. H_2SO_4

C. NaO

D. NaOH

Answer: B

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352. A hydride of nitrogen having lowest oxidation number of N:

A. H_3N

B. N_3H

C. H_4N_2

D. H_2N_2

Answer: A

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353. Which is not an acid salt ?

A. NaH_2PO_2

B. NaH_2PO_3

C. NaH_2PO_4

D. None

Answer: A

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354. One mole of calcium phosphide on reaction with excess water gives:

A. One mole of phosphine

B. Two mole of phosphine acid

C. Two moles of phosphine

D. One mole of phosphorus pentoxide

Answer: C

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355. Sodium nitrate on heating with zinc dust and caustic soda gives

A. $NaNO_2$

B. NH_3

C. NO_2

D. N_2O

Answer: B

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356. Ammonia reacts with excess of chlorine to form:

A. N_2 and NH_4Cl

B. NCl_3 and HCl

C. NH_4Cl and NCl_3

D. N_2 and HCl

Answer: B

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357. Ammonia was first prepared by:

A. Lavoisier

B. Priestley

C. Scheele

D. Cavendish

Answer: B

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358. Nitric acid may be kept in a bottle of:

A. Ag

B. Sn

C. Pb

D. Al

Answer: D

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359. The hydroxide of which metal is soluble in excess of ammonia:

A. Cr

B. Cu

C. Fe

D. Al

Answer: B

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360. When SO_2 reacts with water, the compound formed is

A. H_2S

B. S

C. SO_3

D. H_2SO_3

Answer: D

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361. Non- combustible hydride is:

A. PH_3

B. AsH_3

C. SbH_3

D. NH_3

Answer: D

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362. The catalyst used in Haber's process of NH_3 is:

A. Pt

B. V_2O_5

C. Fe

D. Mo

Answer: C

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363. The gas which is absorbed by ferrous sulphate solution giving blackish brown colour is:

A. NH_3

B. N_2

C. CO

D. NO

Answer: D

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364. When silver chloride dissolves in ammmonia, it forms:

A. $Ag(NH_3)Cl$

B. $Ag(NH_3)_2Cl$

C. $Ag(NH_3)_3Cl$

D. $Ag(NH_3)_4Cl$

Answer: B

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365. White smoke is formed when ammonia gas meets with:

A. $Water$

B. HCl

C. H_2SO_4

D. HNO_3

Answer: B

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366. The deep blue colour produced on adding excess of ammonia to copper sulphate solution is due to the presence

of:

A. Cu^{2+}

B. $Cu(NH_3)_2^{2+}$

C. $Cu(NH_3)_4^{2+}$

D. $Cu(NH_3)_6^{+2}$

Answer: C

Watch Video Solution

367. The Nessler.s reagent contains:

A. Hg_2^{2+}

B. Hg^{2+}

C. Hgl_2^-

D. Hgl_4^2

Answer: D

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368. In the compound of type ECl_3 where E=B, P As, or Bi, the angle Cl-E-Cl for different E are in order:

A. $B > P = As = Bi$

B. $B > P > As > Bi$

C. $B < P = As = Bi$

D. $B > P > As > Bi$

Answer: B

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369. Which is cyclic phosphate?

A. $H_5P_{33}O_{10}$

B. $H_6P_4O_{13}$

C. $H_5P_5O_{15}$

D. $H_7P_5O_{16}$

Answer: C

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370. An example of tetrabasic acid is:

A. Orthophosphorus acid

B. Orthophosphoric acid

C. Metaphosphoric acid

D. Pyrophosphoric Acid

Answer: D

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371. Phosphide ion has the electronic structure similar to that of:

A. Nitride ion

B. Chloride ion

C. Fluroide ion

D. Sodium ion

Answer: B

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372. Thomas slag is:

A. $Ca_3(PO_4)_2$

B. CaCHNH_2

C. CaSiO_3

D. FeSiO_3

Answer: A

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373. Calcium cyanamide reacts with steam to form ammonia and.....

A. $CaCO_3$

B. $Ca(OH)_2$

C. CaO

D. $CaHCO_3$

Answer: A

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374. When conc. H_2SO_4, in added to dry KNO_3, brown fumes are evolved. These fumes are

A. SO_2

B. SO_3

C. N_2O

D. NO_2

Answer: D

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375. Oxidation of metals by HNO_3 does not depend on:

A. Nature of metal

B. Conc of HNO_3

C. Temperature

D. Catalyst

Answer: D

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376. Colloidal sulphur is obtained by the action of HNO_3 on:

A. H_2S

B. HgS

C. CaS

D. CaS_2O_3

Answer: A

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377. When conc. H_2SO_4 is distilled with P_4O_{10} the product formed is:

A. SO_2

B. S_2O_4

C. SO_3

D. S_2O_3

Answer: C

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378. Phosphorus in +1 oxidation state is found in:

A. H_3PO_3

B. H_3PO_4

C. H_3PO_2

D. $H_4P_2O_7$

Answer: C

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379. Which of the following gives M^{3+} ion most readily:

A. P

B. N

C. Sn

D. Bi

Answer: D

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380. Oxide of nitrogen used as catalyst in lead chamber process for the manufacture of H_2SO_4 is:

A. NO

B. N_2O

C. N_2O_3

D. N_2O_5

Answer: A

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381. Mixed anhydride of nitrous and nitric acid is:

A. NO

B. NO_2

C. N_2O_5

D. N_2O

Answer: B

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382. Which forms strong $P\pi$ - $P\pi$ bonds:

A. N

B. As

C. P

D. Bi

Answer: A

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383. Which statement is false.

A. NH_3 is a Lewis base

B. NH_3 molecule is triangular planar

C. NH_3 does not act as reducing agent

D. NH_3 (liquid) is used as a solvent

Answer: B

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384. When heated to 800^0C, N_2O gives.

A. $NO + O_2$

B. $NO_2 + O_2$

C. $N_2 + O_2$

D. None

Answer: C

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385. Metallic nitrides on hydrolysis with water give:

A. N_2

B. NH_3

C. NO

D. N_2O

Answer: B

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386. In the atmosphere N_2 is present as element with O_2 because

A. N_2 is more reactive

B. N_2 is inert

C. N_2 does not react with O_2

D. N_2 and O_2 requires high temperature to overcome the activation energy barrier and react

Answer: B

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387. Nitrous acid reacts with H_2SO_4 to give:

A. $NO_2 + SO_2$

B. $NO + SO_2$

C. $NO + SO_3$

D. None of the above

Answer: A

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388. Claude process is used in the manufacture of:

A. N_2

B. NH_3

C. N_2O

D. NO_2

Answer: A

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389. Aqua fortis is :

A. HNO_3

B. HNO_2

C. H_2NO_2

D. $H_2N_2O_2$

Answer: A

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390. Molecule with a three electron bond is:

A. Cl_2

B. NO

C. H_2O

D. Cl_2O

Answer: B

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391. Nitric oxide is prepared by the action of cold dil. HNO_3 on:

A. Fe

B. Cu

C. Sn

D. Zn

Answer: B

Watch Video Solution

392. Nitric oxide is:

A. Acidic towards litmus

B. Basic towards litmus

C. Neutral towards litmus

D. Amphoteric

Answer: C

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393. In H_3PO_3

A. Each hydrogen atom is attached to oxygen

B. Two hydrogen atoms are attached to oxygen atoms

C. One atom of h is attached to oxygen

D. None

Answer: B

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394. The correct electronic configuration of nitrogen is :

A. $1s^2 2s^2 2p_x^\circ 2p_x^\circ 2p_x^\circ$

B. $1s^2 2s^2 2p_x^1 2p_y^1 2p_z^1$

C. $1s^2 2s^2 2p_x^2 2p_y^2 2p_z^2$

D. $1s^2 2s^2 2p_x^\circ 2p_y^\circ 2p_z^\circ$

Answer: B

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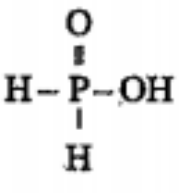
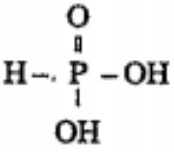
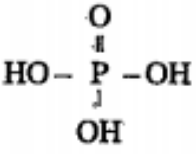
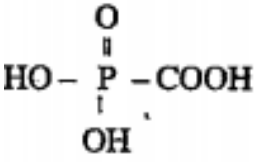
395. The general formula of hypophosphorus acid is:

A.



B. 

C. 

D. 

Answer: A

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396. HNO_3 oxidises

A. H_2O_2

B. H_2S

C. SO_2

D. All

Answer: D

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397. In nitrogen family the H-M-H bond angle in the hydrides MH_3 gradually becomes closer to 90^0on going from N to Sb. This shows that gradually:

A. The basic strength of the hydrides increases

B. Almost pure p-orbitals are used for M-H bonding

C. The bond energies of M-H bond increases

D. The bond pairs of electrons become farther apart from the central atom

Answer: D

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398. The acid which forms two series of salts:

A. H_3PO_4

B. H_3PO_3

C. H_3BO_3

D. H_3PO_2

Answer: B

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399. Some of the reasons of reacting NH_3 with hydrogen chloride are given below. The incorrect is

A. The nitrogen atom of NH_3 gains electrons

B. NH_3 can give a pair of electrons

C. A proton in HCl can accept an electron pair from NH_3

D. The Cl^- ion formed has a stable configuration

Answer: A

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400. Which possesses minimum activation energy?

A. Black P

B. White P

C. Red P

D. None of these

Answer: B

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401. In Birkland and Eyde process, the temperature of electric arc is about?

A. 1500^C

B. 4000^C

C. 3000^C

D. P_4O_{10}

Answer: C

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402. PH_4I + NaOH forms

A. PH_3

B. NH_3

C. P_4O_6

D. P_4O_{10}

Answer: A

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403. Monoatomic element in VA group is:

A. Bismuth

B. Phosphorus

C. Antimony

D. None of these

Answer: A

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404. The number of electrons present in the valency shell of P in PCl_3 is:

A. 12

B. 10

C. 8

D. 18

Answer: C

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405. Which form of P shows chemiluminescence?

A. White P

B. Black P

C. Red P

D. None

Answer: A

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406. Which form of phosphorus is most stable?

A. Red P

B. White P

C. Black P

D. All are stable

Answer: A

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407. Hyponitrous acid is:

A. HNO_2

B. HNO_4

C. $H_2N_2O_2$

D. CaN_2

Answer: C

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408. Least malleable and ductile metal is:

A. Au

B. Ag

C. Ni

D. Bi

Answer: D

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409. $HPO_3 + H_2O \xrightarrow{Heat}$? The product is:

A. $H_4P_2O_7$

B. H_3PO_3

C. H_3PO_4

D. P_2O_5

Answer: C

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410. The strongest acidic oxide is :

A. SO_2

B. SO_3

C. P_2O_5

D. Sb_2O_3

Answer: B

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411. PCl_5 does not react with:

A. CH_3COOH

B. $C_2H_5NH_2$

C. C_6H_5OH

D. H_2SO_4

Answer: B

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412. Which of the following is a metal ?

A. N

B. Bi

C. As

D. P

Answer: C

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413. Oxide of nitrogen which is soluble in alcohol is:

A. NO_2

B. N_2O

C. N_2O_3

D. NO

Answer: B

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414. NH_3 is an example of:

A. Molecular hydride

B. Polymeric hydride

C. Metallic hydride

D. Inerstitial hydride

Answer: A

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415. The metallic form of phosphorous is:

A. White P

B. Red P

C. β-Black P

D. α-Black P

Answer: D

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416. Nitrogen is an essential constituent of all:.

A. Proteins

B. Fats

C. Proteins and Fats

D. None of these

Answer: A

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417. By warming a paste of bleaching powder with a solution of ammonia we get:

A. H_2

B. N_2

C. N_2O_3

D. N_2O_4

Answer: B

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418. Reactivity of NO is due to:

A. Its low molecular weight

B. Its gaseous state

C. Odd electron

D. None of the following

Answer: C

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419. The catalyst used in the preparation of red from yellow P is :

A. I_2

B. Ni

C. Zno

D. Fe

Answer: A

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420. Elements of group 15 showing allotropic forms are:

A. N, Sb, Bi

B. N, P, As, Sb

C. As, Sb. Bi

D. P, As, Bi

Answer: B

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421. Nitrolim, a nitrgenous fertilizer is:

A. Ca_3H_2

B. $Ca(CN)_2$

C. $CaCN_2$

D. $CaCN_2 + C$

Answer: D

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422. Smelling salt is:

A. $(NH_4)_2SO_4$

B. $(NH_4)_3PO_4$

C. NH_4Cl

D. $(NH_4)_2CO_3$

Answer: C

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423. PCl_5 exists but NCl_3 does not because:

A. Nitrogen has no vacant .d. orbitals

B. NCl_5 is unstable

C. N_2 is inert

D. None of these

Answer: A

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424. Calcium superphosphate is:

A. $Ca(H_2PO_4)_2$

B. $Ca_3(PO_4)_2$

C. $CaHPO_4 + 2CaSO_4$

D. $Ca(H_2PO_4)_2 + 2(CaSO_4.2H_2O)$

Answer: D

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425. The prinicipal constituent of superphosphate of lime is

A. $Ca_3(PO_4)_2$

B. $CaHPO_4$

C. $Ca(H_2PO_4)_2$

D. CaO

Answer: C

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426. The vapour density of NH_4Cl is almost half the expected value because it :

A. is salt of a strong acid

B. Sublimes on heating

C. dissociates completely

D. none of these

Answer: C

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427. Ammonium and phosphate resemble each other in:

A. Solubility in water

B. forming salt with acid

C. stability

D. reducing character

Answer: B

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428. Labourer.s working with phosphorus suffer from a diseses in which bones decay. It is known as:

A. Arthritis

B. Phossy jaw

C. Rickets

D. Cancer

Answer: B

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429. The largest bond angle is in:

A. NH_3

B. PH_3

C. AsH_3

D. SbH_3

Answer: A

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430. Which one is most important in fertilizer production?

A. NH_3

B. H_3PO_4

C. $(NH_4)_2SO_4$

D. $CO(NH_2)_2$

Answer: A

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431. A glass tube containing molten antimony breaks upon solidification of antimony due to:

A. Expansion

B. Exothermic reaction

C. Endothermic reaction

D. None of the above

Answer: A

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432. Nitrogenforms_____oxides.

A. 3

B. 4

C. 5

D. 6

Answer: C

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433. In the manufacture of safety matched, we use:

A. Red phosphorus

B. White Phosphorus

C. Sulphur

D. White phosphorus and Sulphur

Answer: A

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434. Nitrous oxide may easily be distinguished from nitric oxide by:

A. adding water and shaking

B. introducing a glowing splint

C. mixing with some air

D. adding some hydrogen

Answer: C

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435. N_2 combines with metal to form:

A. Nitritie

B. Nitrate

C. Nitride

D. Nitrosyl chloride

Answer: C

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436. Nitrogen molecule is chemically less active because it has a_____between two nitrogen atoms:

A. Single bond

B. Double bond

C. Triple bond

D. Co-ordinate bond

Answer: C

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437. Fixation of nitrogen means:

A. Reaction of nitrogen with oxygen

B. Conversion of free atmospheric nitrogen into nitrogen compounds

C. Decomposition of nitrogenous compounds to yield free nitrogen

D. The action of denitrifying bacteria on nitrogen compounds

Answer: B

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438. Sequence of acidic character is

A. $SO_2 > CO_2 > CO > N_2O_5$

B. $SO_2 > N_2O_5 > CO > CO_2$

C. $N_2O_5 > SO_2 > CO > CO_2$

D. $N_2O_5 > SO_2 > CO_2 > CO$

Answer: D

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439. The anhydride of nitrous acid is:

A. N_2O_3

B. NO

C. N_2O

D. N_2O_4

Answer: A

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440. Ammonia is:

A. Polar solvent

B. Non-polar

C. Paramagnetic

D. None

Answer: A

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441. The oxidation states of phosphorus vary from:

A. -1 to +3

B. -3 to +3

C. -3 to +5

D. -5 to +1

Answer: C

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442. A certain element forms a solid oxide which when dissolved in water forms an acidic solution. The element is:

A. Neon

B. Sodium

C. Phosphorus

D. Sulphur

Answer: C

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443. Conc. HNO_3 , oxidises phosphorus to

A. H_3PO_4

B. P_2O_3

C. H_3PO_3

D. $H_4P_2O_7$

Answer: A

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444. Ammonia is generally manufactured for fertilizers by the reaction:

A. $2NH_4Cl + Ca(OH)_2 \rightarrow CaCl_2 + 2H_2O + 2NH_3$

B. By passing an electric discharge in a mixture of N_2 and H_2

C. By reducing the byproduct nitric acid

D. By passing a mixture of N_2 and H_2 under high pressure and moderate temperature over a catalyst

Answer: D

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445. On heating copper nitrate strongly_____is finally obtained.

A. Copper

B. Copper oxide

C. Copper nitrite

D. Copper nitride

Answer: B

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446. Conc. HNO_3 is heated with P_2O_5 to form:

A. N_2O

B. NO

C. NO_2

D. N_2O_5

Answer: D

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447. NH_3 gas is dried over:

A. Anhydrous $CaCl_2$

B. P_2O_5

C. Quick lime

D. Conc. H_2SO_4

Answer: C

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448. Phosphorus pentoxide cannot be used to dry:

A. Nitrogen

B. Ammonia

C. Hydrogen sulphide

D. Sulphur dioxide

Answer: B

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449. The hydrolysis of PCl_3 produces:

A. $H_3PO_3 + HClO$

B. $H_3PO_3 + HCl$

C. $H_3PO_4 + HCl$

D. $PH_3 + HClO$

Answer: B

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450. H_3PO_2 has the name and basicity respectively:

A. Phosphorus acid and two

B. Hypophosphoric acid and two

C. Hypophosphoric acid and one

D. Hypophosphoric acid and two

Answer: C

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451. The metal which forms amide on passing NH_3 on it at 300° C is:

A. Magnesium

B. Lead

C. Aluminium

D. Sodium

Answer: D

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452. Which among the following gives nitrogen on heating:

A. $NaNO_3$

B. $AgNO_3$

C. $Ba(NO_3)_2$

D. NH_4NO_2

Answer: D

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453. Phosphine is produced by adding water to:

A. CaC_2

B. HPO_3

C. Ca_3P_2

D. P_4O_{10}

Answer: C

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454. Nitrogen gas is absorbed by:

A. Aluminium carbide

B. Calcium carbide

C. Ferrous sulphate

D. Calcium hydroxide

Answer: B

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455. NO_2 cannot be obtained by heating:

A. KNO_3

B. $Pb(NO_3)_2$

C. $Cu(NO_3)_2$

D. $AgNO_3$

Answer: A

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456. Fertilizer having the highest nitrogen percentage is:

A. Calcium cyanamide

B. Urea

C. Ammonium nitrate

D. Ammonium sulphate

Answer: B

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457. Which compound does not give NH_3 on heating ?

A. $(NH_4)_2SO_4$

B. $(NH_4)_2CO_3$

C. NH_4NO_2

D. NH_4Cl

Answer: C

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458. Nitrogen can be purified from the impurities of oxides of nitrogen and ammonia by passing through:

A. Conc. HCl

B. Alkaline solution of pyrogallol

C. A solution of $K_2Cr_2O_7$ acidified with H_2SO_4

D. A solution of KOH

Answer: D

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459. NH_3 has a much higher boiling point than PH_3 because:

A. NH_3 has a higher molecular weight

B. NH_3 undergoes umbrella inversion

C. NH_3 forms hydrogen bond

D. NH_3 contains ionic bonds whereas PH_3 contains covalent bonds.

Answer: C

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460. Which of the following is not a drying and dehydrating agent ?

A. Silica gel

B. P_2O_5

C. Conc.H_2SO_4

D. Hydrated $CaCl_2$

Answer: D

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461. NO and NO_2 are:

A. even electron molecules

B. Odd electron molecules

C. Diamagnetic

D. Paramagnetic

Answer: B

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462. Superphosphate of lime is obtained from the reaction of:

A. Calcium carbonate with phosphoric acid

B. Calcium phosphate with hydrochloric acid

C. Calcium phosphate with sulphuric acid

D. Bones with gypsum

Answer: C

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463. H_3PO_3 is:

A. A tribasic acid

B. A dibasic acid

C. Neutral

D. Basic

Answer: B

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464. When HNO_3 reacts with metals, nitrogen dioxide is usually evolved if the acid is:

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465. On heating ammonium dichromate, the gas evolved is:

A. Oxygen

B. Ammonia

C. Nitrogen

D. Nitric oxide

Answer: D

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466. Bacteria convert molecular nitrogen into:

A. NO_3

B. Amino acids

C. NO_2

D. NH_3

Answer: C

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467. The non-metallic element whose molecules contain maximum number of its atom is:

A. O

B. Si

C. As

D. P

Answer: D

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468. An acidic hydride of nitrogen is:

A. NH_3

B. N_2H_4

C. N_2H_2

D. N_3H

Answer: D

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469. To make nitrogen dioxide free from oxygen it is passed through U-tube:

A. Containing $FeSO_4$ solution

B. Containing $NaOH$ solution

C. Kept in freezing mixture

D. Kept in boiling water

Answer: C

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470. Which acid is not formed by the action of water on phosphorous pentoxide ?

A. H_3PO_7

B. $H_4P_2O_7$

C. H_3PO_4

D. H_3PO_3

Answer: D

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471. Nitrogen (I) oxide is produced by:

A. Thermal decomposition of ammonium nitrate

B. Disproportionation of N_2O_4

C. Thermal decomposition of ammonium nitrite

D. None of the above

Answer: A

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472. The reagent used for testing ammonia is:

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473. Correct statement about white phosphorus is:

A. It ignites at 240° C

B. It is violet-red solid

C. It is not poisonous

D. It ignites at 30° C

Answer: D

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474. Which of the following oxides will be the least acidic ?

A. P_4O_6

B. P_4O_{10}

C. As_4O_6

D. As_4O_{10}

Answer: C

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475. Which cation gives a clear coloured solution with excess of aqueous ammonia ?

A. Cu^{2+}

B. Fe^{3+}

C. Al^{3+}

D. Mg^{2+}

Answer: A

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476. HNO_3 is manufactured by:

A. Birkeland and Eyde.s process

B. Haber.s process

C. Contact.s process

D. Fischer-Tropsch.s process

Answer: A

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477. The metal ion which forms a soluble complex in presence of excess of NH_4OH is

A. Cu^{2+}

B. Pb^{2+}

C. Fe^{3+}

D. Al^{3+}

Answer: A

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478. Liquid ammonia is used in refrigerators because:

A. it has a high dipole moment

B. it has high heat of evaporation

C. of its basicity

D. of its stability

Answer: B

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479. Known trihalide of N is:

A. NF_3

B. NCl_3

C. NBr_3

D. NI_3

Answer: A

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480. Which would not give a precipitate with dilute $AgNO_3$ solution ?

A. HNO_3

B. NaCl

C. Na_2CO_3

D. HCl

Answer: A

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481. Glacial phosphoric acid is:

A. H_3PO_4

B. HPO_3

C. $H_4P_2O_7$

D. H_3PO_2

Answer: B

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482. Which coagulates white of an egg ?

A. Orthophosphoric acid

B. Metaphosphoric acid

C. Hypophosphoric acid

D. Pyrophosphoric Acid

Answer: B

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483. Fuming nitric acid is:

A. Conc. $HNO_3 + NO_2$

B. Conc. $HNO_3 + NO_3$

C. Conc. $HNO_3 + N_2O_3$

D. Conc. $HNO_3 + NO$

Answer: A

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484. Substance used in Holme's signal is:

A. NH_3

B. PH_3

C. PH_5

D. P_2O_5

Answer: D

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485. Phosphine reacts with copper sulphate solution to form:

A. Copper

B. Copper phosphide

C. Copper phosphate

D. Copper phosphite

Answer: B

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486. Which of the following does not form complex:

A. N

B. P

C. As

D. Sb

Answer: A

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487. Which is not poisonous ?

A. NH_3

B. PH_3

C. AsH_3

D. SbH_3

Answer: A

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488. Pure phosphine is not combustible while impure phosphine is combustible, this combustibility is due to presence of:

A. P_2H_4

B. N_2

C. PH_5

D. P_2O_5

Answer: A

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489. Natuaral reservoir of phosphorus is :

A. P molecule

B. P_2 molecule

C. P_3 molecule

D. P_4 molecule

Answer: D

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490. Which species has the largest dipole moment:

A. NH_3

B. PH_3

C. AsH_3

D. SbH_3

Answer: A

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491. Atomicity of phosphorus is:

A. 1

B. 2

C. 3

D. 4

Answer: D

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492. Schweitzer reagent is:

A. $\left[Cu(NH_3)_4(H_2O)_2\right](OH)_2$

B. $\left[Ag(NH_3)_2\right]Cl$

C. $Cu(NH_3)_2Cl$

D. $K_4Fe(CN_6)$

Answer: A

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493. Structure of ammonia is:

A. Trigonal

B. Tetrahedral

C. Pyramidal

D. Trigonal pyramidal

Answer: C

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494. The largest bond angle exists in:

A. H_2Se

B. H_2Te

C. H_2O

D. H_2S

Answer: B

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495. The percentage of nitrogen in urea is about :

A. 70

B. 63

C. 47

D. 28

Answer: C

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496. A white precipitate is obtained on hydrolysis of:

A. PCl_5

B. NCl_3

C. $BiCl_3$

D. $AsCl_3$

Answer: C

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497. Wrong statement about HNO_3 is:

A. The proteins are converted into xanthoproteins

B. HNO_3 acts as a dehydrating agent

C. It exists in two canonical forms

D. HNO_3 acts as an oxidising agent

Answer: B

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498. White phosphorus reacts with caustic soda to give PH_3 and NaH_2PO_2. This reaction is an example of:

A. Oxidation

B. Reduction

C. Neutralisation

D. Oxidation and reduction

Answer: D

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499. The bonds present in N_2O_5 are :

A. Only ionic

B. Only covalent

C. Covalent and coordinate

D. Covalent and ionic

Answer: C

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500. The gas obtained when urea reacts with nitrous acid is:

A. N_2

B. NO

C. N_2O

D. NO_2

Answer: A

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501. PH_3 produces smoky rings when it comes in contact with air this is because:

A. It is inflammable

B. It combines with water vapours

C. It combines with nitrogen

D. It contains impurity of P_2H_4

Answer: D

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502. When phosphine is bubbled through solution of silver nitrate____is precipitated.

A. Silver

B. Silver phosphide

C. Silver oxide

D. None of these

Answer: B

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503. The brown yellow colour often shown by nitric acid can be removed by:

A. Bubbling air through the warm acid

B. Boiling the acid

C. Passing ammonia through acid

D. Adding a little Mg powder

Answer: A

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504. Phosphate + conc. $HNO_3 + (NH_4)_2MoO_4$solution $\rightarrow$

Yellow precipitate

The composition of yellow precipitate is:

A. $(NH_4)_3PO_4.\ MoO_3$

B. $(NH_4)_3PO_4.\ 12MoO_3$

C. $(NH_4)_2PO_4.\ 12MoO_3$

D. $NH_4PO_4.\ MoO_3$

Answer: B

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505. Orthophosphoric acid is ionised in _____ steps:

A. 1

B. 2

C. 3

D. 4

Answer: C

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506. Concentrated nitric acid reacts with iodine to give:

A. HI

B. HOI

C. $HOIO_2$

D. $HOIO_3$

Answer: C

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507. Rain water sometimes contains NH_4NO_3 because lighting in the sky causes the air to react with produce oxides of nitrogen and

A. H_2

B. NH_3

C. CO_2

D. Noble gas

Answer: B

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508. Which of the following gives M^{3+} ion most readily:

A. P

B. N

C. Sn

D. As

Answer: B

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509. Anomalous behaviour of nitrogen is due to:

A. Small size and high electronegativity

B. Non-availability of d-orbitals in valency shell

C. Eaase of multiple bond formation

D. All are correct

Answer: D

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510. Graham's salt is:

A. Sodium alumino silicate

B. Sodium hexameta phosphate

C. Ferrous ammonium sulphate

D. Potassium chromium sulphate

Answer: B

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511. Calcium phosphide is :

A. Ca_3P

B. Ca_2P_2

C. Ca_2P_3

D. CaP_2

Answer: B

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512. Pearl white is:

A. BiOCl

B. SbOCl

C. NOCl

D. AsOCl

Answer: A

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513. Ammonium salt are oxidised in the soil to nirites by:

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514. Which is soluble in CS_2?

A. White P

B. Red P

C. Sand

D. Graphite

Answer: A

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515. Nitric acid oxidises sulphur to:

A. SO_2

B. SO_3

C. H_2SO_3

D. H_2SO_4

Answer: D

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516. Nitrosyl chloride is:

A. $NOCl$

B. $NOCl_2$

C. NO_2Cl_2

D. N_2OCl_2

Answer: A

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517. Antimony dissolves in aqua-regia to give?

A. $SbCl_3$

B. Sb_2O_5

C. $SbCl_5$

D. $Sb(NO_3)_3$

Answer: C

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518. The basic character of hydrides of the VB group elements decreases in the order:

A. $SbH_3 > PH_3 > AsH_3 > NH_3$

B. $NH_3 > SbH_3 > PH_3 > AsH_3$

C. $NH_3 > PH_3 > AsH_3 > SbH_3$

D. $SbH_3 > AsH_3 > PH_3 > NH_3$

Answer: C

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519. White phosphorus may be separated from red phosphorus by:

A. Sublimation

B. Distillation

C. Dissolving in CS_2

D. None of these

Answer: C

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520. A cold, green flame can be made by passing CO_2 over warm:

A. Bonze

B. White P

C. Grey Sn

D. Green candles

Answer: B

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521. Phosphorus compound used as drying agent and desicating agent is:

A. PCl_3

B. PCl_5

C. P_4O_{10}

D. P_4O_6

Answer: C

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522. The gas not having oxidising and bleaching property is

A. Chlorine

B. Ozone

C. Sulphur dioxide

D. Nitrous oxide

Answer: D

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523. The strongest acid is:

A. H_3PO_2

B. H_3PO_3

C. $H_4P_2O_7$

D. H_3PO_4

Answer: C

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524. The acid used in soft drinks is:

A. H_3PO_4

B. H_3PO_3

C. HPO_3

D. H_3PO_2

Answer: A

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525. Nitre cake is:

A. $NaHSO_4$

B. $NaNO_3$

C. $NaNO_2$

D. Na_2SO_4

Answer: A

Watch Video Solution

526. Amphoteric oxide is:

A. Sb_4O_6

B. N_2O_5

C. Bi_2O_3

D. Na_2O

Answer: A

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527. The P-P-P bond angle in white phosphorus is:

A. 120°

B. 90°

C. 60°

D. $109^\circ 28'$

Answer: C

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528. Which acid has P-P linkage?

A. Hypophosphoric acid

B. Pyrophosphoric acid

C. Metaphosphoric acid

D. Orthophosphoric acid

Answer: A

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529. Nitric acid is used in the manufacture of:

A. TNT

B. Picric acid

C. NH_4NO_3

D. All

Answer: D

Watch Video Solution

530. PCl_5 is kept in well stoppered bottle because:

A. It is highly volatile

B. It reacts with oxygen

C. It reacts readily with moisture

D. It is explosive

Answer: C

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531. There is very little difference in acid strength in the acids H_3PO_4, H_3PO_2 because

A. Phosphorus in these acids exists in different oxidation states

B. The hydrogen in these acids exists are not all bound to the phosphorus and have same number of unprotonated oxygen

C. Phosphorus is highly electronegative element

D. Phosphorus oxides are less basic

Answer: B

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532. Phosphoric acid is syrupy liquid due to

A. Strong covalent bond

B. van der Waals forces

C. Hydrogen bonding

D. None of these

Answer: C

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533. The correct order to decreasing acidic strength of oxyacids of group 15 is:

A. $HNO_3 > H_3SbO_4 > H_3AsO_4 > H_3SbO_4 > HNO_3$

B. $H_3PO_4 > H_3AsO_4 > H_3SbO_4 > HNO_3$

C. $HNO_3 > H_3PO_4 > H_3AsO_4 > H_3SbO_4$

D. $HNO_3 > H_3AsO_4 > H_3PO_4 > H_3SbO_4$

Answer: C

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534. The smell of nitrogen dioxide is:

A. Pleasant

B. Pungent

C. Not known

D. All are wrong

Answer: B

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535. which of the following elements is good conductor of electricity?

A. As

B. Sb

C. Bi

D. All

Answer: C

Watch Video Solution

536. Non- polar molecule is:

A. BCl_3

B. H_2O

C. NCl_3

D. PCl_3

Answer: A

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537. Ammonium compound not used as a fertilizer is

A. $(NH_4)_2SO_4$

B. $(NH_4)_2CO_3$

C. NH_4NO_3

D. $CAN(Calciumammoniumnitrate)$

Answer: B

Watch Video Solution

538. Blasting of TNT is done by mixing it with:

A. NH_4Cl

B. NH_4NO_3

C. NH_4NO_2

D. $(NH_4)_2SO_4$

Answer: B

Watch Video Solution

539. Sal volatile is:

A. NH_4Cl

B. $(NH_4)_2SO_4$

C. $(NH_4)_2SO_3$

D. $(NH_4)_2CO_3$

Answer: C

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540. Which set of elements has the strong tendency to form anions?

A. N, O, F

B. P, S, Cl

C. As, Se, Br

D. Sb, Te, I

Answer: A

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541. Phosphate mineral of phosphorus is:

A. $Fe_3(PO_4)_2H_2O$

B. $Ca_3(PO_4)_2$

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

D. $3Ca_3(PO_4)_2.\ CaCl_2$

Answer: B

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542. Red P is used in making

A. Air freshners

B. Red plastics

C. Red dyes for plastics

D. Safety match-striking surface

Answer: D

Watch Video Solution

543. Antimony burns in chlorine to form

A. $SbCl_3$

B. $SbCl_2$

C. $SbOCl_2$

D. $SbCl_5$

Answer: A

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544. In Haber's process for NH_3 the temperature and pressure are respectively

A. STP

B. $200 - 250^0C$, 450 atm

C. 450^0C and 200-250 atm

D. 100^0C and 25-50 atm

Answer: C

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545. The bonds present in pernitric acid are:

A. Ionic bonds

B. Covalent bonds

C. Semipolar bonds or dative bonds

D. Co-ordinate and covalent bonds

Answer: D

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546. Nitrogen was discovered by:

A. Cavendish

B. Lavoisier

C. Scheele

D. Daniel Rutherdord

Answer: D

Watch Video Solution

547. Which sulphide is used in the manufacture of "strike anywhere" matches?

A. P_2S_5

B. P_2S_3

C. P_4S_3

D. None

Answer: C

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548. If 20% nitrogen is present in a compound, its minimum molecular weight can be:

A. 144

B. 70

C. 100

D. 140

Answer: B

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549. Solid PCl_5 , exists as

A. PCl_5

B. PCl_4^+

C. PCl_6^-

D. PCl_4^+ and PCl_6^-

Answer: D

Watch Video Solution

550. Nitric acid whether dilluted or concentrated :

A. Reacts with Al to give H_2

B. Reacts with Al to give NO_2

C. Reacts with Al to give NH_4NO_3

D. Hardly affects Al

Answer: D

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551. Which is not the property of nitrogen

A. Nitrogen bonding

B. Catenation

C. Allotropy

D. Low b.pt.

Answer: C

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552. I_2 on rubbing with liquor NH_3 forms with explosion:

A. NH_4I

B. N_2

C. $NH_4I + N_2 + I_2$

D. NI_3NH_3

Answer: C

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553. The lone pair present on N family hydrides more easily participates in bond formation in:

A. AsH_3

B. PH_3

C. NH_3

D. SbH_3

Answer: C

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554. Red P is prepared from white P by heating in vacuum

A. 256° C

B. 500° C

C. 50° C

D. 100° C

Answer: A

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555. Nitrogen does not combine directly with:

A. Ca

B. Al

C. Ag

D. Mg

Answer: C

Watch Video Solution

556. Arsenic acid is:

A. H_3AsO_3

B. H_3AsO_4

C. H_2AsO_4

D. $HAsO_4$

Answer: B

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557. Conc. HNO_3 reacts with iron to:

A. Render iron passive

B. Give ferrous nitrate and nitric oxide

C. Give ferric nitrate and ammonium nitrate

D. Give ferric nitrate and nitrogen dioxide

Answer: A

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558. On heating a salt with NaOH, smell of NH_3 is obtained, The salt contains:

A. NH_4^+

B. NO_3^-

C. NO_2^-

D. CH_3COO^-

Answer: A

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559. The number of P-O-P bonds in cyclic metaphosphoric acid is:

A. Zero

B. Two

C. Three

D. Four

Answer: C

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560. Most abundant element in earth crust is

A. O

B. Se

C. S

D. Te

Answer: A

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561. SO_2 oxidises

A. Mg

B. $K_2Cr_2O_7$

C. $KMnO_4$

D. All

Answer: A

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562. Bleaching action of SO_2 is due to :

A. Oxidation

B. Reduction

C. Hydrolysis

D. Its acidic nature

Answer: B

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563. SO_2 reduces:

A. Mg

B. H_2S

C. $KMnO_4$

D. All

Answer: C

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564. Sulphur molecule is

A. S_2

B. S_4

C. S_6

D. S_8

Answer: D

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565. The bond angle in H_2S is:

A. $109^\circ 28$

B. $104^\circ 51.$

C. 120°

D. 92.5°

Answer: D

Watch Video Solution

566. Which sulphides are not precipitated in acid or alkaline medium.

A. K

B. Ca

C. Al

D. All

Answer: D

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567. Concentrated sulphuric acid does not act as:

A. Efflorescent

B. Hygroscopic

C. Oxidising agent

D. Sulphonating agent

Answer: A

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568. Ozone is manufactured by

A. Siemens ozonizer

B. Brodie.s ozonizer

C. Siemens and Halske.s ozoiner

D. All

Answer: C

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569. Which characteristic is not correct about H_2SO_4

A. Reducing agent

B. Oxidising agent

C. Sulphonating agent

D. Highly viscous

Answer: A

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570. Which one can be used to test for H_2S gas ?

A. A smell of rotten egg

B. A violet colouration with sodium nitroprusside

C. Turning lead acetate paper black

D. All of the above

Answer: D

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571. H_2SO_4 is added while preparing a standard solution of Mohr's salt to prevent :

A. Hydration

B. Reduction

C. Hydrolysis

D. Complex formation

Answer: C

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572. In which process sulphur is not used:

A. Protection of grape wines

B. Manufacture of H_2SO_4

C. Manufacture of black shoe polish

D. Vulcanisation of rubber

Answer: C

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573. King of chemicals is:

A. HNO_3

B. H_2SO_4

C. HCl

D. None

Answer: B

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574. Low volatile nature of H_2SO_4 is due to:

A. Hydrogen bonding

B. van der Waals forces

C. Strong bonds

D. None of these

Answer: A

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575. Oil of vitriol is:

A. H_2SO_4

B. H_2SO_3

C. $H_2S_2O_7$

D. $H_2S_2O_8$

Answer: A

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576. Which gas turns lead acetate paper black:

A. SO_2

B. O_2

C. H_2S

D. O_3

Answer: C

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577. In the preparation of O_2 from $KClO_3$, MnO_2 acts as:

A. Activator

B. Catalyst

C. Oxidising agent

D. Dehydrating agent

Answer: B

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578. Acetic acid is added while preparing a standard solution of $CuSO_4.5H_2O$ to prevent :

A. Hydration

B. Reduction

C. Hydrolysis

D. Complex formation

Answer: C

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579. SO_2 can be used as:

A. Bleaching agent

B. Disinfectant

C. Antichlor

D. All

Answer: D

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580. Acidified $KMnO_4$ is decolourised by:

A. O_3

B. Br_2

C. HBr

D. HCl

Answer: C

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581. The most stable allotropic form of sulphur is:

A. Rhombic sulphur

B. Monoclinic sulphur

C. Plastic sulphur

D. Flowers of sulphur

Answer: A

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582. O_3 is made from O_2 :

A. By oxidation at high temperature

B. By oxidation using a catalyst

C. By conversion at high pressure

D. By silent electric discharge

Answer: D

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583. Which reaction represents the oxidizing behaviour of H_2SO_4 ?

A. $2PCl_5 + H_2SO_4 \rightarrow 2POCl_3 + 2HCl + SO_2Cl_2$

B. $2NaOH + H_2SO_4 \rightarrow Na_2SO_4 + 2H_2O$

C. $NaCl + H_2SO_4 \rightarrow NaHSO_4 + HCl$

D. $2HI + H_2SO_4 \rightarrow I_2 + SO_2 + 2H_2O$

Answer: D

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

A. Combination of oxygen molecules

B. Action of electric discharge on oxygen molecules

C. Action of ultraviolet rays on oxygen

D. None of these

Answer: C

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585. When PCl_5 reacts with sulphuric acid sulphuryl chloride (SO_2Cl_2) is formed as the final product. This shows that sulphuric acid:

A. Is a diabasic acid

B. Has great affinity for water

C. Has two hydroxyl groups in its structure

D. Is a derivative of sulphur dioxide

Answer: C

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586. When SO_2 is passed through acidified solution of H_2S :

A. H_2SO_3 is formed

B. H_2SO_4 is formed

C. Sulphur sol is formed

D. H_2SO_5 is formed

Answer: C

Watch Video Solution

587. Dry bleaching is done by:

A. Cl_2

B. SO_2

C. O_3

D. H_2O_2

Answer: C

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588. Conc. H_2SO_4 displaces HCl from chloride because:

A. Conc. H_2SO_4 is stronger than HCl

B. HCl is a gas whereas H_2SO_4 is a liquid

C. Sulphates are more soluble in water than chlorides

D. Sulphates are less soluble in water than chlorides

Answer: A

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589. The reaction, $2SO_2 + O_2 + 2H_2O \rightarrow 2H_2SO_4$ is an example of:

A. Synthesis of H_2SO_4

B. Analysis of H_2SO_4

C. Displacement reaction

D. Double decomposition

Answer: A

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590. Which is the most basic of the following oxides:

A. Na_2O

B. BaO

C. Al_2O_3

D. As_2O_3

Answer: A

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591. Paramagnetic molecule is:

A. Oxygen

B. Nitrogen

C. Hydrogen

D. Chlorine

Answer: A

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592. Acidified iodates are reduced to.....by SO_2

A. Iodites

B. Iodide

C. Iodine

D. None

Answer: C

Watch Video Solution

593. Sulphurous anhydride is:

A. SO_2

B. SO_3

C. HSO_3^-

D. SO_3^{2-}

Answer: A

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594. By passing SO_2 in solution of $K_2Cr_2O_7$. It turns green due to the formation of:

A. K_2CrO_4

B. Chromium sulphate

C. Chromic sulphate

D. None of these

Answer: C

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595. In the reaction $K + SO_2 \rightarrow$ ..... the products are:

A. $KO_2 + S$

B. $K_2SO_3 + K_2S_2O_3$

C. K_2SO_4

D. None

Answer: B

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596. Concentrated H_2SO_4 is not used to prepare HBr from KBr because it:

A. Oxidizes HBr

B. Reduces HBr

C. Causes disproportionation of HBr

D. Reacts too slowly with HBr

Answer: A

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597. Sodium thiosulphate is formed when:

A. NaOH is neutralized by H_2SO_3

B. Na_2S is boiled with S

C. Na_2SO_3 is boiled with S

D. Na_2SO_3 is boiled with Na_2S

Answer: C

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598. The oxide that is not reduce by hydrogen in the hot is:

A. Ag_2O

B. Fe_2O_3

C. CuO

D. K_2O

Answer: D

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599. There is an ozone layer at a height of about 29 kilometres above the surface of the earth. Which of the following statements is true:

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

B. It is beneficial because oxidation reactions can proceed faster in the presence of ozone.

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

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

Answer: C

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600. Which is not true for ozone ?

A. It oxidizes lead sulphide

B. It oxidizes potassium iodide

C. It oxidizes mercury

D. It cannot act as bleaching agent

Answer: D

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601. Oxygen differs from sulphur in:

A. Allotropy

B. Formation of ions

C. Number of electrons in the outermost orbit

D. Nature of hydrides

Answer: D

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602. The number of atoms present in one molecule of sulphur is:

A. 2

B. 4

C. 6

D. 8

Answer: D

Watch Video Solution

603. Which oxide reacts with both HCl and NaOH ?

A. CO_2

B. CaO

C. ZnO

D. N_2O_5

Answer: C

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604. Generally H_2O exists as a liquid while H_2S as a gas because

A. H_2O shows hydrogen bonding

B. Molecular weight of H_2S is larger

C. Bond angle in H_2O is larger

D. Size of O atom, is smaller than S atom

Answer: A

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605. The sulphur molecule (S_8) possesses:

A. Cubical structure

B. Spherical structure

C. Tetrahedral structure

D. W shaped ring structure

Answer: D

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606. Oxide of nitrogen used as catalyst in lead chamber process for the manufacture of sulphuric acid is:

A. NO

B. N_2O

C. N_2O_3

D. N_2O_5

Answer: A

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607. Chromium dissolves in dil. H_2SO_4 to form $Cr(H_2O)_6^{2+}$.

The colour of the ion is:

A. Blue

B. Green

C. Yellow

D. Orange

Answer: A

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608. Which is a saline oxide ?

A. Na_2O_2

B. BaO_2

C. Na_2O

D. Fe_2O_3

Answer: C

Watch Video Solution

609. Sodium chromite is:

A. Na_2CrO_4

B. $Na_2Cr_2O_4$

C. $Na_2Cr_2O_7$

D. $Cr(SO_4)_3$

Answer: B

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610. The geometry of H_2S and its dipole moment are :

A. Angular and non zero

B. Angular and zero

C. Linear and zero

D. Linear and non-zero

Answer: A

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611. The allotrope of sulphur stable below 90° C is:

A. ortho Rhombic sulphur

B. Monoclinic sulphur

C. Plastic sulphur

D. Flowers of sulphur

Answer: A

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612. Oxygen is more electronegative than sulphur, yet H_2S is acidic while H_2O is neutral. This is because:

A. Water is a highly associated compound

B. H-S bond is weaker than H-O bond

C. H_2S is a gas while H_2O is a liquid

D. The molecular weight of H_2S is more than that of H_2O

Answer: B

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613. Ozone readily dissolves in

A. Water

B. Turpentine oil

C. Carbon disulphide

D. Ammonia

Answer: B

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614. Oxygen is prepared commercially from:

A. Sodium and water

B. Electrolysis of water

C. $KClO_3$ and MnO_2

D. HNO_3

Answer: B

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615. In Kipp's apparatus, H_2S is prepared continuously

A. by $FeS + HCl$

B. by $FeS + concH_2SO_4$

C. By $FeS + dilH_2SO_4$

D. By $Fe + dilH_2SO_4$

Answer: C

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616. Which oxide is of different type than others?

A. MnO_2

B. PbO_2

C. TiO_2

D. Na_2O_2

Answer: D

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617. Which of the following does not react with Agcl

A. $Na_2S_2O_3$

B. NH_4OH

C. $NaNO_3$

D. Na_2CO_3

Answer: C

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618. H_2S does not produce metallic sulphide with:

A. $CdCl_2$

B. $ZnCl_2$

C. $COCl_2$

D. $CuCl_2$

Answer: C

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619. Which is more suitable for strong concentrated H_2SO_4:

A. Copper vessel

B. Aluminium Vessel

C. Earthen vessel

D. Glass vessel

Answer: D

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620. All the elements of the oxygen family are:

A. Non- metal

B. Metalloids

C. Radioactive

D. Polymorphic

Answer: D

Watch Video Solution

621. Ozone oxidises moist sulphur to:

A. SO_2

B. SO_3

C. H_2SO_4

D. None

Answer: C

Watch Video Solution

622. Best absorbent for SO_2 is:

A. H_2SO_4

B. $KOH(aq)$

C. Water

D. $Cacl_2anhyd$

Answer: B

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623. On heating ozone its volume

A. Decreases to half

B. Becomes double

C. Increases to 3/2 times

D. Remains unchanged

Answer: C

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624. Ozone acts as:

A. An oxidising agent

B. A reducing agent

C. Bleaching agent

D. All

Answer: D

Watch Video Solution

625. The catalyst used in the manufacture of sulphuric acid by contact process is:

A. Platinished asbosios

B. Fe_2O_3

C. V_2O_5

D. All

Answer: D

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626. The compound which gives carbon with con H_2SO_4

A. Sugar

B. Wood

C. Starch

D. All

Answer: D

Watch Video Solution

627. Sulphuric acid as used

A. In lead storage batteries

B. As a dehydrating agent

C. In making fertilizers

D. All

Answer: D

Watch Video Solution

628. Which statement is correct?

A. H_2S is a dibasic acid

B. H_2S act as a bleaching agent

C. H_2S has rotten egg smell

D. All

Answer: D

Watch Video Solution

629. Which statement is correct?

A. SO_2 dissolves in water and forms sulphurous acid

B. SO_2 acts as a bleaching agent

C. SO_2 has pungent odour

D. All

Answer: D

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630. Anomalous behaviour of oxygen is due to:

A. Highly electronegativity

B. Small atomic size

C. Non availability of d-orbitals

D. All

Answer: D

Watch Video Solution

631. The O-O bond length in ozone is:

A. 1.27 $\overset{\circ}{A}$

B. 1.21 $\overset{\circ}{A}$

C. 1.34 $\overset{\circ}{A}$

D. 1.48 $\overset{\circ}{A}$

Answer: A

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632. Reaction of solid $KMnO_4$ with conc H_2SO_4 produces an explosive substance

A. MnO_2

B. Mn_3O_4

C. Mn_2O_7

D. MnO

Answer: C

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633. Which is stronger acis:

A. H_2SeO_4

B. H_2SO_4

C. H_2TeO_4

D. H_2O

Answer: B

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634. When KBr is treated with conc H_2SO_4 reddish brown gas is evolved. The gas is:

A. Br_2

B. Br_2 + HBr

C. NO_2

D. H_2O_2`

Answer: A

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635. The second most electronegative elements in periodic table is:

A. F

B. O

C. Cl

D. N

Answer: B

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636. The commercial name for peroxydisulphuric acid is:

A. Sulphuric acid

B. Marshall's acid

C. Sulphuric acid crystals

D. Sulphurous acid

Answer: B

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637. Oxygen is divalent, whereas sulphur exhibits valency of 2,4 and 6 due to:

A. S is bigger atom

B. Ionisation potential of sulphur is more

C. S being less electronegative than O

D. Presence of d-orbitals in S

Answer: D

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638. One gas bleaches the colour of the flowers by reduction while the other by oxidation. The gases are:

A. CO and CO_2

B. H_2S and Br_2

C. SO_2 and Cl_2

D. NH_3 and SO_3

Answer: C

Watch Video Solution

639. Reaction of solid $KMnO_4$ with conc H_2SO_4 produces maganese heptoxide (Mn_2O_7) in:

A. Solution state

B. Solid state

C. Fine powder

D. None

Answer: A

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640. A certain compound when burnt gave three oxided. The first turned lime water milky, the second turned cobalt chloride paper pink and the thired formed an aqueous solution of pH_3 nearly. The elements present in the compound are:

A. C,S,O

B. C,H,Na

C. C,H,S

D. C,H,Ca

Answer: C

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641. Which substances chars when warmed with conc H_2SO_4 ?

A. Protein

B. Fat

C. Hydocarbon

D. Carbohydrate

Answer: D

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642. Rhombic and monoclinic sulphur are:

A. Isobars

B. Isomers

C. Isotopes

D. Allotropes

Answer: D

Watch Video Solution

643. Large deposite of sulphur in nature are found in the form of:

A. Flowers of sulphur

B. H_2SO_4

C. H_2SO_3

D. Free sulphur

Answer: D

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644. Number of hydroxyl groups present in pyrosulphuric acid is:

A. 3

B. 4

C. 2

D. 1

Answer: D

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645. Sulphuric acid on heating with sulphur powders gives:

A. H_2SO_3

B. SO_3

C. SO_2 and SO_3

D. SO_2

Answer: D

Watch Video Solution

646. on heating sodium as well as sulphur can be melted molten sodium and molten sulphur are used as:

A. Medium for extracting metals

B. Catalyst

C. Metal refiners

D. Electrodes in batteries

Answer: D

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647. Ozonisation of water is carried out to remove

A. Bacterial impurities

B. Bad taste

C. Excess of chlorine present

D. Calcium and magnesium salt present in it

Answer: A

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648. Platinized asbestos used as a catalyst in the manufacture of H_2SO_4 is an example of:

A. Heterogeneous catalysis

B. Autocatalysis

C. Homogeneous catalysis

D. Induced catalysis

Answer: A

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649. Which is not used in vulcanisation of rubber?

A. SF_6

B. SF_4

C. SF_2

D. F_2Cl_2

Answer: D

Watch Video Solution

650. When H_2SO_4 is added to charcoal

A. There is no reaction

B. Water gas is formed

C. SO_2 and CO_2 are evolved

D. CO and SO_2 are evolved

Answer: C

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651. Oxygen differs from sulphur in:

A. Exist in diatomic state

B. Have atoms of same size

C. Form covalent hydrides

D. Form covalent compounds with metals

Answer: C

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652. The strongest oxidising agent is:

A. HNO_3

B. H_2SO_4

C. H_2SO_3

D. $H_2S_2O_3$

Answer: A

Watch Video Solution

653. When fluroide is heated with conc H_2SO_4 and MnO_2 the gas evolved is:

A. HF

B. MnF_2

C. F_2

D. None

Answer: D

Watch Video Solution

654. In order to demonastrate the dehydrating action of H_2SO_4 it is poured on:

A. $NaHCO_3$ solution

B. C_2H_5OH solution

C. Washing soda

D. Sucrose

Answer: D

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655. Number of valency electrons used in the lewis structure SO_4^{-2} are:

A. 22

B. 20

C. 18

D. None

Answer: D

Watch Video Solution

656. Which is insoluble in water ?

A. TeO_2

B. SO_2

C. PoO_2

D. SeO_2

Answer: C

Watch Video Solution

657. What is the bond angle in SO_2 molecule ?

A. 120°

B. 90°

C. 180°

D. $109^\circ 28.$

Answer: A

Watch Video Solution

658. What happens to the colour of litmus paper when a drop of H_2SO_4 is added to it?

A. It turns red to blue

B. It turns blue to red

C. It gets destroyed

D. It is unaffected

Answer: B

Watch Video Solution

659. In which of the following reactions does SO_2 act as an oxidising agent?

A. Acidified $KMnO_4$

B. Acidified $K_2Cr_2O_7$

C. Acidified C_2H_5OH

D. H_2S

Answer: D

Watch Video Solution

660. Which compound has an incorrect formula:

A. Thionyl chloride-$SOCl_2$

B. Sulphuryl chloride-SO_2Cl_2

C. Oleum-$H_2S_2O_6$

D. Phosphorus oxychloride- $POCl_3$

Answer: C

Watch Video Solution

661. The gases absorbed by alkaline pyragallol and oil of cinnamon respectively are:

A. O_3, CH_4

B. O_2, O_3

C. SO, CH_4

D. N_2O, O_3

Answer: B

Watch Video Solution

662. Which is an amphoteric oxide?

A. MgO

B. BaO

C. Al_2O_3

D. P_2O_5

Answer: C

Watch Video Solution

663. The bond angle O-S-O and hybridisation of sulphur in SO_2 are:

A. 119.5°, sp^3

B. 119.5°, sp^2

C. $109^\circ 28.$, sp^3

D. None

Answer: B

Watch Video Solution

664. Which oxide is neutral ?

A. N_2O

B. NO_2

C. P_2O_5

D. Bi_2O_3

Answer: A

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665. A gas which cannot be collected over water is

A. N_2

B. O_2

C. SO_2

D. PH_3

Answer: C

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666. H_2S is far more volatile than water because:

A. Sulphur atom is more electronegative than oxygen atom

B. Oxygen atom is more electronegative than sulphur atom

C. H_2O has bond angle of nearly 105°

D. Hydrogen is loosely bonded with sulphur

Answer: B

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667. H_2SO_4 reacts with sugar and act as:

A. A dehydrating agent

B. An oxidizing agent

C. A sulphonating agent

D. None

Answer: A

Watch Video Solution

668. When sugar is treated witn concentrated sulphuric acid, the sugar is charred. In this process sugar is:

A. Oxidized

B. Dehydrated

C. Reduced

D. Sulphonated

Answer: B

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669. The tendency for bonding to itself in chains (Catenation) is more in:.

A. N

B. P

C. S

D. C

Answer: C

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670. In the manufacture of H_2SO_4 the nitrated acid forms the Gay-Lussac.s tower is chemically"

A. $H_2SO_4.NO_2$

B. $H_2SO_4.NO$

C. $H_2SO_4.2NO$

D. $HSO_4.NO$

Answer: D

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671. Which gives off oxygen on moderate heating:

A. Cupric oxide

B. Mercuric oxide

C. Zinc oxide

D. Aluminium oxide

Answer: B

Watch Video Solution

672. SO_3 on reacting with conc. HCL gives:

A. Chlorosulphuric acid

B. $Cl_2 + H_2SO_3$

C. $Cl_2 + H_2SO_4$

D. None

Answer: A

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673. H_2S on passing through $KMnO_4$ solution gives:

A. K_2SO_3

B. S

C. K_2MnO_4

D. MnO_2

Answer: B

Watch Video Solution

674. The hybridisation and bond angle in SO_3 are:

A. sp^2, 120°

B. sp^3, $109^\circ 28.$

C. sp^2, $109^\circ 28.$

D. None

Answer: A

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675. Which is an ozonide:

A. KO_3

B. NH_4O_3

C. Cr_2O_3

D. BOTH (A) AND (B)

Answer: D

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676. Ozone belongs to ..... group of the periodic table:

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677. SO_2 can act as strong oxidising agent in:

A. Acidic medium

B. Basic medium

C. Neutral medium

D. None

Answer: C

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678. The reaction between copper and hot conc H_2SO_4 gives:

A. SO_3

B. SO_2

C. $Cu(OH)_2$

D. H_2

Answer: B

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679. H_2SO_4 doesnot acts as dehydrating agent in its reaction with:

A. $Ba(OH)_2$

B. Zn

C. KOH

D. $H_2C_2O_4$

Answer: D

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680. In SeF_6 selenium is:

A. spd-hybridised

B. d^2sp^3hybridised

C. sp^3d^2-hybridised

D. dsp^3-hybridised

Answer: C

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681. SO_3 can be obtained by heating:

A. S + H_2SO_4

B. $CaSO_4 + C$

C. $FeSO_4$

D. $H_2SO_4 + PCl_5$

Answer: C

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682. Oxygen will react with each of the following elements readily, except

A. P

B. Na

C. S

D. Cl

Answer: D

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683. Sulphur is soluble in:

A. Water

B. Dilute HCl

C. Ether

D. CS_2

Answer: D

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684. Ozone reacts with moist iodine giving:

A. HIO_3

B. I_4O_9

C. IO_5

D. I_2O_5

Answer: A

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685. Orthophosphoric acid has the formula:

A. $H_2S_2O_6$

B. H_2SO_5

C. $H_2S_2O_8$

D. $H_2S_2O_5$

Answer: A

Watch Video Solution

686. Peroxy linkage is present in:

A. Caro.s acid

B. Pyrophosphoric acid

C. Sulphurous acid

D. Dithonic acid

Answer: A

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687. H_2S is a:

A. Weak dibasic acid

B. Weak monobasic acid

C. Strong dibasic acid

D. Strong monobasic acid

Answer: A

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688. The only element in VIB group of group 16 elements, which is definitely a metal is"

A. Tellurium

B. Selenium

C. Sulphur

D. Polonium

Answer: D

Watch Video Solution

689. Metal reacts with sulphur to give:

A. Sulphide

B. Sulphite

C. Sulphate

D. Thiosulphate

Answer: A

Watch Video Solution

690. For chrome plating the electrolytic bath contains

A. $HClO_4$ and conc. H_2SO_4

B. $Chromic\ acid$ and conc. H_2SO_4

C. $K_2Cr_2O_7$

D. Chromic sulphate

Answer: B

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691. Potassium chlorate on heating with conc H_2SO_4 gives:

A. Chlorine dioxide

B. $HClO_4$

C. $KHSO_4$

D. All

Answer: D

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692. Which shows reducing properties

A. SO_3

B. H_2SO_4

C. H_2S

D. All

Answer: C

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693. Oxygen is manufactured by fractional distillation of:

A. H_2O

B. H_2O_2

C. Na_2O_2

D. Liquid air

Answer: D

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694. An element forms a gaseous oxide which on dissolving in water gives an acid solution. The element is:

A. S

B. Na

C. P

D. H

Answer: A

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695. SO_2 reacts with Cl_2 to yield:

A. Thionyl chloride

B. Carbonyl chloride

C. Sulphuryl chloride

D. Sulphur monochloride

Answer: C

Watch Video Solution

696. Which does not give oxygen on heating?

A. $K_2Cr_2O_7$

B. $Zn(ClO_3)_2$

C. $KClO_3$

D. $(NH_4)_2Cr_2O_7$

Answer: D

Watch Video Solution

697. H_2S exhibits:

A. Oxidising properties

B. Reducing properties

C. Basic properties

D. None

Answer: B

Watch Video Solution

698. H_2SO_4 and H_2SO_3 can be distinguished by the addition of:

A. Litmus solution

B. $FeCl_3$ solution

C. $NaHSO_4$ solution

D. Magnesium powder

Answer: B

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699. Compound of sulphur used in electrical transformer is:

A. SO_2

B. H_2S

C. SO_3

D. SF_6

Answer: D

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700. A colourless gas on passing through bromine water decolourises it. The gas is

A. HCl

B. HBr

C. CO_2

D. SO_2

Answer: D

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701. In the preparation of H_2SO_4

A. SO_2 is dissolved in dilute H_2SO_4

B. SO_2 is dissolved in water

C. SO_3 is dissolved in conc. H_2SO_4

D. SO_3 is dissolved in dilute H_2SO_4

Answer: C

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702. When a mixture of SO_2 and O_2 is passed over..... the reaction rate increases:

A. Fe + MO

B. $ZnO + Cr_2O_3$

C. V_2O_5

D. Zymase

Answer: C

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703. Mixture of O_2 and N_2O is used as:

A. Fuel

B. Anaesthetic

C. In welding

D. Oxidising agent

Answer: B

Watch Video Solution

704. Normality of pure sulphuric acid is:

A. 4 N

B. 12 N

C. 24 N

D. 36 N

Answer: D

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705. Oxygen exhibits positive oxidation state with:

A. F

B. Br

C. Cl

D. I

Answer: A

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706. Sulphur forms the chlorides S_2Cl_2 and SCl_2. The equivalent mass of sulphur in SCl_2 in 16. Therefore the equivalent mass of sulphur in S_2Cl_2 is:

A. 32

B. 16

C. 64

D. 8

Answer: A

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707. If Na_2SO_3 is left open in air, we get:

A. Na_2S

B. Na_2SO_4

C. Na_2HSO_4

D. Na_2HSO_3

Answer: B

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708. The ratio of the gases obtained on dehydration of $HCOOH$ and $H_2C_2O_4$ by conc. H_2SO_4 is:

A. 1:2

B. 2:1

C. 1:3

D. 3:1

Answer: A

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709. Six volumes of oxygen, on complete ozonisation, form.....volumes of ozone.

A. 2

B. 4

C. 6

D. 3

Answer: B

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710. Oxygen molecule is:

A. Paramagnetic

B. Diamagnetic

C. Ferromagnetic

D. Ferrimagnetic

Answer: A

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711. Ozone is:

A. An isobar of oxygen

B. An isotope of oxygen

C. A polymer of oxygen

D. An allotrope of oxygen

Answer: D

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712. Which metal loses its meniscus after reaction with ozone ?

A. Ag

B. Hg

C. Pb

D. Cu

Answer: B

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713. Which statement is false for ozone ?

A. It is obtained by silent electric discharge on oxygen

B. It is an endothermic compound

C. It can be obtained by the action of ultraviloet rays of oxygen

D. It cannot be regarded as an allotrope of oxygen

Answer: D

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714. Ozone reacts with dry iodine to give:

A. IO_2

B. I_2O_3

C. I_2O_4

D. I_4O_9

Answer: D

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715. Which does not liberate O_2 on heating ?

A. MgO

B. $NaNO_3$

C. Pb_3O_4

D. $KClO_3$

Answer: A

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716. Which burns to form an oxide which is gas at room temperature ?

A. Hydrogen

B. Phosphorus

C. Sodium

D. Sulphur

Answer: D

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717. Ozone turns benzidine paper:

A. Violet

B. Brown

C. Blue

D. Red

Answer: C

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718. Oleum is a mixture of:

A. $H_2SO_4 + SO_2$

B. $H_2S_2O_8 + SO_2$

C. $H_2SO_4 + SO_3$

D. $H_2S_2O_3 + SO_3$

Answer: C

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719. Which is a true acid anhydride?

A. CO

B. NO

C. ClO_2

D. N_2O_5

Answer: D

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720. When SO_2 gas is passed through an acidified solution of $K_2Cr_2O_7$:

A. The solution becomes blue

B. The solution becomes colourless

C. SO_2 is reduced

D. Green $Cr_2(SO_4)_3$ is formed

Answer: D

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721. The least stable oxide at room temperature:

A. CuO

B. Ag_2O

C. ZnO

D. Sb_2O_3

Answer: B

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722. Which metal forms an amphoteric oxide ?

A. Cr

B. Fe

C. Cu

D. Zn

Answer: D

Watch Video Solution

723. Which one is more acidic ?

A. Al_2O_3

B. Na_2O

C. MgO

D. CaO

Answer: A

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724. Oxygen gas can be prepared from solid $KMnO_4$ by:

A. Dissolving the solid in dil.HCl

B. Dissolving the solid in dil.H_2SO_4

C. Treating the solid with H_2 gas

D. Strongly heating the solid

Answer: D

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725. Starch paper moistened with KI solution turns blue in ozone because of:

A. Iodine liberation

B. Oxygen liberation

C. Alkali formation

D. Ozone reacts with litmus paper

Answer: A

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726. Which member of 16 group has the highest catenation ability ?

A. Oxygen

B. Sulphur

C. Selenium

D. Tellurium

Answer: B

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727. Which element forms the oxide of highest valency ?

A. V

B. Cr

C. Mn

D. Fe

Answer: C

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728. The acid used in lead storage battery is:

A. Nitric acid

B. Sulphuric acid

C. Hydrochloric acid

D. Phosphoric acid

Answer: B

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729. Which would quickly absorb oxygen ?

A. Alkaline solution of pyrogallic acid

B. Concentrated sulphuric acid

C. Lime water

D. Alkaline solution of copper sulphate

Answer: A

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730. O_2 is denser than air and therefore it is collected in:

A. Spirit

B. H_2O

C. Mercury

D. Kerosene oil

Answer: B

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731. $FeCl_3$ solution on reaction with SO_2 changes to:

A. $FeCl_2$

B. $Fe_2(SO_4)_3$

C. $Fe_2(SO_3)_3$

D. $FeSO_4$

Answer: A

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732. In the contact process of H_2SO_4, SO_3 dissolves in sulphuric acid to give:

A. Permonosulphuric acid

B. Thiosulphuric acid

C. Pyrosulphuric acid

D. Perdisulphuric acid

Answer: C

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733. Which statement is correct?

A. Ozone is a resonance hybrid of oxygen

B. Ozone is an allotropic modification of oxygen

C. Ozone is an isomer of oxygen

D. Ozone has no relationship with oxygen

Answer: B

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734. A considerable part of the harmful ultraviolet radiation of the sun does not reach the surface of the earth. This is because high above the earth.s atmosphere there is a layer of:

A. Carbon dioxide

B. Hydrogen

C. Ozone

D. Amonia

Answer: C

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735. The blue coloured gas is:

A. F_2

B. O_3

C. NO

D. Cl_2

Answer: B

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736. Poison for platinum, a catalyst in contact process of H_2SO_4 is:

A. S

B. P

C. As

D. C

Answer: C

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737. The crystals of ferrous sulphate on heating give:

A. $FeO + SO_2 + H_2O$

B. $Fe_2O_3 + SO_2 + SO_3$

C. $Fe_2O_3 + SO_3 + H_2SO_4 + H_2O$

D. $FeO + SO_3 + H_2SO_4 + H_2O$

Answer: C

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738. The percentage of ozone in ozonized oxygen is about:

A. $10\ \%$

B. $40\ \%$

C. $80\ \%$

D. $100\ \%$

Answer: A

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739. Sulphate ion has___geometry.

A. Trigonal

B. Square planar

C. Tetrahedral

D. None

Answer: C

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740. Ozone molecule has____geometry.

A. Linear

B. Triangular

C. Tetrahedral

D. Bent

Answer: B

Watch Video Solution

741. The chamber acid contains___ $\%$ H_2SO_4 :

A. $10.20\ \%$

B. $35.45\ \%$

C. $67.80\ \%$

D. $82.90\ \%$

Answer: C

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742. In sulphate ion the oxidation state of sulphur is +6 and the hybridization state of sulphur is:

A. sp^2

B. sp^3

C. d^2sp^3

D. sp^3d^2

Answer: B

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743. Oxygen is gas but sulphur is solid because:

A. Oxygen is composed of discrete molecules while sulphur is polymeric

B. Molecular weight of sulphur is much higher than that of oxygen

C. Oxygen is a stronger oxidising agent than sulphur

D. Boiling point of sulphur is much higher than that of oxygen

Answer: A

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744. What happens when H_2S passed through $FeCl_3$ solution ?

A. $FeCl_2$

B. $Fe_2(SO_4)_3$

C. FeS

D. $FeSO_4$

Answer: A

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745. Oleum or fuming H_2SO_4 is:

A. A mixture of conc.H_2SO_4 and oil

B. Sulphuric acid which gives fumes of sulphur dioxide

C. Sulphuric acid saturated with Sulphur trioxide, i.e., $H_2S_2O_7$

D. A mixture of sulphuric acid and nitric acid

Answer: C

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746. In the reaction $H_2S + O_3 \rightarrow$ ..... the products are:

A. H_2O, S, O_2

B. $H_2SO_4 + O_2$

C. $H_2O + S$

D. $SO_2 + H_2O$

Answer: A

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747. SF_4 has____geometry.

A. Octahedral

B. Trigonal pyramid

C. Square planar

D. Tetrahedral

Answer: B

Watch Video Solution

748. Which has the lowest boiling point:

A. H_2O

B. H_2S

C. H_2Se

D. H_2Te

Answer: B

Watch Video Solution

749. In the reaction $CaS + H_2S \rightarrow$ ..... the products are:

A. $CaS_2 + H_2$

B. $CaS_3 + H_2$

C. $CaS_5 + H_2$

D. $Ca + S$

Answer: C

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750. Hybridization of .S. in SF_6 is:

A. sp^3d^3

B. sp^3d^2

C. d^2sp^3

D. sp^3d

Answer: B

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751. A salt X gives white precipitates with lead acetate solution, insoluble in hot water and nitric acid. The salt X most probably contains:

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752. Elements O,S,Se and Te are usually known as:

A. Metals

B. Rare earth metals

C. Coinage metals

D. Chalcogens

Answer: D

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753. The group 16 elements are characterised by the electronic configuration:

A. ns^2np^4

B. ns^2np^2

C. ns^1np^3

D. ns^2np^5

Answer: A

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754. Oxygen was discovered by:

A. Priestley

B. Boyle

C. Scheele

D. Cavendish

Answer: A

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755. ____liberates oxygen from water.

A. P

B. Na

C. F_2

D. I_2

Answer: C

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756. The diatomic molecule is of:

A. O

B. S

C. Te

D. Se

Answer: A

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757. Which element shows polymorphism ?

A. O

B. S

C. Se

D. All

Answer: D

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758. Which of the following is least acidic ?

A. P_4O_6

B. P_4O_{10}

C. As_4O_6

D. As_4O_{10}

Answer: C

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759. When oxygen is passed through a solution of Na_2SO_3 we get:

A. Na_2SO_4

B. Na_2S

C. $NaHSO_4$

D. NaH

Answer: A

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760. Chemical formula of yellow ammonium sulphide is:

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761. Formation of ozonide is:

A. Addition reaction

B. Substitution reaction

C. Decomposition

D. None

Answer: A

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762. The maximum number of unpaired electrons exists in:

A. O_2

B. O_2^-

C. O_2^{2-}

D. O_2^{2+}

Answer: A

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763. Oxygen is paramagnetic. The unpaired electrons are present in:

A. Antibonding orbitals

B. Bonding orbitals

C. p-orbitals

D. f-orbitals

Answer: A

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764. Liquid oxygen is:

A. Colourless

B. Pale yellow

C. Pale blue

D. Dark blue

Answer: C

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765. SO_2 is dried by:

A. CuO

B. HNO_3

C. P_2O_5

D. Anhyd. $CaCl_2$

Answer: C

Watch Video Solution

766. When SO_2 gas is passed through cupric chloride solution:

A. The solution becomes colourless

B. A white precipitate is formed

C. No change takes place

D. Solution becomes colourless and a white precipitate is formed

Answer: D

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767. Which loses weight on exposure to the atmosphere ?

A. Conc. H_2SO_4

B. NaOH

C. Anhyd.$AlCl_3$

D. Saturated aqueous solution of CO_2

Answer: D

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768. When water is added in conc. H_2SO_4 the reaction is exothermic because :

A. H_2SO_4 is viscous

B. Hydrates of H_2SO_4 are formed

C. H_2SO_4 is corrosive

D. None

Answer: B

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769. Which does not react with $KMnO_4$ solution ?

A. O_3

B. H_2O_2

C. H_2S

D. H_2SO_4

Answer: A

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770. The element which evolves two gases on reacting with conc.H_2SO_4 is:

A. Si

B. C

C. S

D. P

Answer: B

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771. H_2SO_4 has very corrosive action on skin because:

A. It reacts with proteins

B. It acts as oxidising agent

C. It acts as dehydrating agent

D. It acts as dehydrating agent and absorption of water is highly exothermic

Answer: D

Watch Video Solution

772. When concentrated H_2SO_4 is added to dry KNO_3, brown fumes evolve. These fumes are of:

A. SO_2

B. SO_3

C. NO_2

D. NO

Answer: C

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773. Sulphur on oxidation with hot sulphuric acid gives:

A. SO_3

B. SO_2

C. H_2SO_4

D. None

Answer: B

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774. Oxygen can be obtained from bleaching powder by:

A. Adding dilute acid

B. Passing carbon dioxide

C. Heating with a cobalt salt

D. Adding alkalies

Answer: C

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775. There is no S-S bond in:

A. $S_2O_4^{2-}$

B. $S_4O_6^{2-}$

C. $S_2O_3^{2-}$

D. $S_2O_7^{2-}$

Answer: D

Watch Video Solution

776. There is O-O bond in:

A. $S_2O_8^{2-}$

B. $S_4O_6^{2-}$

C. SO_3^{2-}

D. $S_2O_7^{2-}$

Answer: A

Watch Video Solution

777. Anhydride of sulphuric acid is:

A. SO_2

B. SO_3

C. $H_2S_2O_3$

D. H_2SO_3

Answer: B

Watch Video Solution

778. Which on heating will give mixture of SO_2 and SO_3

A. $ZnSO_4$

B. $CuSO_4$

C. $Fe_2(SO_4)_3$

D. $FeSO_4$

Answer: D

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779. When Na_2S is added to sodium nitroprusside solution:

A. Beautiful viloet colour is produced

B. A complex $\left[Fe(CN)_5NOS\right]^{4-}$ is formed

C. The complex $Na_4\left[Fe(CN)_5NOS\right]$ is formed

D. All

Answer: D

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780. Which statement is wrong?

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781. Which compound has bond angle nearly 90° :

A. NH_3

B. H_2S

C. H_2O

D. CH_4

Answer: B

Watch Video Solution

782. When a lead storage battery is discharged:

A. SO_2 is evolved

B. Lead sulphate is consumed

C. Lead is formed

D. H_2SO_4 is consumed

Answer: D

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783. The reaction in the Kipp.s apparatus stops on closing the outlet, because:

A. The acid becomes weak

B. Gas starts coming out from top

C. A protective film is formed on iron sulphide

D. The contact between sulphide and the acid is broken by the presence of gas collected in the free surface of the

middle chamber

Answer: D

Watch Video Solution

784. In the reaction,

$2Ag + H_2SO_4 \rightarrow Ag_2SO_4 + 2H_2O + SO_2$, H_2SO_4 is:

A. Reducing agent

B. Oxidant

C. Catalyst

D. Dehydrating agent

Answer: B

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785. Reagent used to distinguish H_2O_2 and O_3 is:

A. PbS

B. Starch and iodine

C. $KMnO_4$

D. Bleaching powder

Answer: C

Watch Video Solution

786. In presence of moisture, SO_2 can:

A. Lose electron

B. Gain electron

C. Act as oxidant

D. Act as reductant

Answer: A

Watch Video Solution

787. A salt of sulphurous acid is called:

A. Sulphate

B. Sulphurate

C. Sulphite

D. Sulphide

Answer: C

Watch Video Solution

788. HI cannot be prepared by heating KI with conc. H_2SO_4 because:

A. H_2SO_4 is stronger acid than HI

B. HI is stronger acid than H_2SO_4

C. H_2SO_4 is an oxidising agent

D. HI is more volatile than H_2SO_4

Answer: C

Watch Video Solution

789. Which does not react with H_2SO_4 to form H_2:

A. Al

B. Ag

C. Zn

D. Mg

Answer: B

Watch Video Solution

790. Vegetable colouring matter in presence of moisture is bleached by SO_2 due to:

A. Oxidation

B. Reduction

C. Sulphonation

D. Unsaturation

Answer: B

Watch Video Solution

791. The compound used for preservation of milk is:

A. O_3

B. H_2O_2

C. Formalin

D. Few drops of dil.H_2SO_4

Answer: B

Watch Video Solution

792. Mercury meniscus is regained by addition of:

A. H_2O

B. H_2O_2

C. Alcohol

D. $\mathbb{C}l_4$

Answer: B

Watch Video Solution

793. In the reaction,

$$2KI + H_2O + O_3 \rightarrow 2KOH + O_2 + A$$

A. KIO_3

B. I_2O_5

C. HIO_3

D. I_2

Answer: D

Watch Video Solution

794. Which gas is used to improve the atmosphere of crowded places:

A. H_2

B. O_2

C. O_3

D. N_2O

Answer: C

Watch Video Solution

795. Liquid oxygen:

A. Is an important constituent of rocket fuels

B. Is used for artificial respiration with CO_2

C. Mixed with finely divided carbon explosive

D. All

Answer: D

Watch Video Solution

796. Which metal sticks to a glass plate after treatment with ozone ?

A. Silver

B. Mercury

C. Copper

D. Lead

Answer: B

Watch Video Solution

797. Which is used for washing ears ?

A. H_2O

B. O_3

C. H_2O_2

D. Chlorine water

Answer: C

Watch Video Solution

798. The product A in the following equation,

$2KMnO_4 \rightarrow A + MnO_2 + O_2$ is:

A. $K_2Mn_2O_7$

B. K_2MnO_4

C. K_2O

D. K_2O_2

Answer: B

Watch Video Solution

799. A black sulphide when treated with ozone becomes white.

The white compound is:

A. $ZnSO_4$

B. $CaSO_4$

C. $BaSO_4$

D. $PbSO_4$

Answer: D

Watch Video Solution

800. A depolarizer used is dry batteries is

A. KOH

B. NH_2OH

C. MnO_2

D. Na_3PO_4

Answer: C

Watch Video Solution

801. Solution of SO_2 in water is known as:

A. Hydrosulphuric acid

B. Sulphurous acid

C. Thiosulphuric acid

D. Thiosulphurous acid

Answer: B

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802. In contact process impurities of arsenic are removed by:

A. $Al(OH)_3$

B. $Fe(OH)_3$

C. $Cr(OH)_3$

D. Fe_2O_3

Answer: B

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803. SO_2 reduces cupric ion to cuprous ion in presence of:

A. KOH

B. H_2O

C. $KCNS$

D. H_2SO_4

Answer: C

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804. Which one has the highest bond energy ?

A. O-O

B. S-S

C. Se-Se

D. Te-Te

Answer: B

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805. A radioactive element is:

A. Sulphur

B. Polonium

C. Tellurium

D. Selenium

Answer: B

Watch Video Solution

806. When H_2S is passed through nitric acid solution, the product formed is:

A. Milk of sulphur

B. Colloidal sulphur

C. γ-sulphur

D. β-suphur

Answer: B

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807. Caro.s acid is:

A. $H_2S_2O_3$

B. $H_2S_2O_8$

C. H_2SO_3

D. H_2SO_5

Answer: D

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808. Marshall.s acid is,

A. $H_2S_2O_5$

B. $H_2S_2O_8$

C. H_2SO_3

D. H_2SO_5

Answer: B

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809. A solution of SO_2 in water reacts with H_2S precipitating sulphur. Here SO_2 acts as:

A. An oxidising agent

B. A reducing agent

C. An acid

D. A catalyst

Answer: A

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810. Ozone is formed by the interaction of water with:

A. Chloride

B. Chlorine

C. Fluorine

D. Fluoride

Answer: C

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811. Fuming sulphuric acid is commercially known as:

A. Oleum

B. Sulphurous acid

C. Marshall's acid

D. Caro's acid

Answer: A

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812. Generally oxygen is converted into its ion by:

A. Losing electrons

B. Increasing oxidation number

C. Decreasing oxidation number

D. Gaining electrons

Answer: D

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813. Metalloid among the following is:

A. O

B. S

C. Te

D. Po

Answer: C

Watch Video Solution

814. The weakest acid is:

A. H_2Se

B. H_2Te

C. H_2O

D. H_2S

Answer: C

Watch Video Solution

815. The compound of sulphur that can be used as refrigerant is:

A. S_2Cl_2

B. SO_2

C. SO_3

D. H_2SO_4

Answer: B

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816. $98\ \%\ H_2SO_4$ is:

A. Pyrosulphuric acid

B. Oleum

C. Azeotropic mixture

D. None of the above

Answer: C

Watch Video Solution

817. Bond angle is minimum for

A. H_2O

B. H_2S

C. H_2Se

D. H_2Te

Answer: D

Watch Video Solution

818. In which reaction there is no change in valency and the oxidation state ?

A. $SO_2 + H_2S \rightarrow 2H_2O + 3S$

B. $2Na + O \rightarrow Na_2O$

C. $Na_2O_2 + H_2SO_4 \rightarrow Na_2SO_4 + H_2O_2$

D. $4KClO_3 \rightarrow 3KClO_4 + KCl$

Answer: C

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819. Hypo is used in photography to:

A. Reduce AgBr grains to metallic Ag

B. Convert metallic Ag to silver salt

C. Remove undecomposed AgBr as soluble complex

D. Remove reduced Ag

Answer: D

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820. Strongest reducing agent is:

A. H_2O

B. H_2S

C. H_2Se

D. H_2Te

Answer: C

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821. Which hydride is most acidic ?

A. H_2O

B. H_2S

C. H_2Te

D. H_2Se

Answer: B

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822. Formula of rhombic sulphur is

A. S_2

B. S

C. S_4

D. S_8

Answer: D

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823. It is possible to obtain oxygen from air by fractional distillation because:

A. Oxygen is in different group of periodic table from nitrogen

B. Oxygen is more active than nitrogen

C. Oxygen has higher boiling point than nitrogen

D. Oxygen has lower density than nitrogen

Answer: C

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824. The elemnets S, Se, Te can have two positive oxidation states ? Which one of the following is correct:

A. +4 and +6

B. +2 and +4

C. +4 and +8

D. +2 and +6

Answer: A

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825. On exposure to light electrical conductivity of selenium

A. Increases

B. Decreases

C. Remains same

D. First decreases then increases

Answer: A

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826. Hydrogen sulphide reacts with lead acetate forming a black compound which reacts with H_2O_2 to form another compound. The colour of the compound is:

A. Black

B. Yellow

C. White

D. Pink

Answer: C

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827. H_2S cannot be dried by passing over conc. H_2SO_4 because:

A. The acid oxidises it

B. The acid combines with H_2S to form a salt

C. Both form complex

D. It dissolves in the acid

Answer: A

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828. H_2SO_4 has very corrosive action on skin because:

A. It reacts with proteins

B. It acts as oxidising agent

C. It acts as dehydrating agent and absorption of water is highly exothermic

D. None of the above

Answer: C

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829. Different allotropic forms of sulphur differ in:

A. Crystalline structure

B. Molecular weight

C. Chemical properties

D. Chemical structure

Answer: A

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830. Oxide of a non-metal possesses the following characteristics:

It is both a proton donor and proton acceptor

It is poor conductor of electricity

It reacts readily with basic and acidic oxides

It oxidises Fe at boiling point. The oxide is:

A. H_2O

B. CO_2

C. H_2O_2

D. NO

Answer: A

Watch Video Solution

831. Oxalic acid when heated with conc.H_2SO_4 gives:

A. H_2O and CO_2

B. CO, CO_2 and H_2O

C. CO_2 and H_2S

D. Oxalic sulphate

Answer: B

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832. Which of the following isotopes is present in largest amount :

A. O^{16}

B. O^{17}

C. O^{18}

D. All in equal amounts

Answer: A

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833. Ozone turns tetramethyl base paper:

A. Green

B. Violet

C. Red

D. Black

Answer: B

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834. Number of isotopes of oxygen are:

A. One

B. Three

C. Two

D. Zero

Answer: B

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835. Ordinary oxygen contains:

A. Only O^{16} isotope

B. Only O^{17} isotope

C. A mixture of O^{16}, O^{17} and O^{18} isotope

D. Only O^{18} isotope

Answer: C

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836. Concentrated H_2SO_4 has great affinity for:

A. H_2S

B. H_2O

C. CO_2

D. O_2

Answer: B

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837. Ozone reacts with

A. C_2H_4

B. C_2H_2

C. C_6H_6

D. All

Answer: D

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838. SO_2 is:

A. Acidic

B. Basic

C. Amphoteric

D. Neutral

Answer: A

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839. Bond angle in O_3 molecule is :

A. $108.\ 29^0$

B. 108.28^0

C. 116.90^0

D. 120^0

Answer: C

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840. Which gives carbon with conc.H_2SO_4 ?

A. Formic acid

B. Ethyl alcohol

C. Oxalic acid

D. Starch

Answer: D

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841. Approximately what percentage of air by volume gets used in a process of combustion:

A. $20\ \%$

B. $10\ \%$

C. $35\ \%$

D. $55\ \%$

Answer: A

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842. Sulphurous acid can be used as:

A. Oxidising agent

B. Reducing agent

C. Bleaching agent

D. All of these

Answer: D

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843. The number of S-S bonds in sulphur trioxide trimer (S_3O_9) is:

A. Three

B. Two

C. One

D. Zero

Answer: D

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844. Sulphur combine with which of the following halogens to form a compound ?

A. Cl_2

B. Br_2

C. I_3

D. F_2

Answer: C

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845. table salt is:

A. HF

B. KHF_2

C. NaCl

D. $KClO_3$

Answer: B

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846. Which has maximum pH in aqueous solution:

A. NaClO

B. $NaClO_2$

C. $NaClO_3$

D. $NaClO_4$

Answer: A

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847. The halogen which is solid at room temperature:

A. F

B. Cl

C. Br

D. I

Answer: D

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848. The strongest reducing agent among the following is :

A. Ozone

B. Oxygen

C. Fluorine

D. Chlorine

Answer: C

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849. Javelle water is:

A. Aqueous solution of NaOCl

B. Used as bleaching agent

C. BOTH (A) AND (B)

D. None

Answer: C

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850. Bromine reacts with NaOH to produce:

A. NaBr only in cold solution

B. NaBrO only in cold solution

C. NaBr only in hot solution

D. NaBr and $NaBrO_3$ in hot solution

Answer: D

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851. The colour of iodine solution is discharged by shaking it with aqueous solution of:

A. H_2O_2

B. Sodium sulphide

C. Sodium thiosulphate

D. Sodium sulphate

Answer: C

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852. A solution of chlorine in water contains:

A. HOCl only

B. HCl only

C. HCl and HOCl

D. HCl and HOCl and chlorine

Answer: D

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853. Out of the elements with atomic numbers given below which one would be a halogen:

A. 25

B. 35

C. 45

D. 55

Answer: B

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854. Chlorine gas is liberated by the action of:

A. Sulphuric acid on sodium chloride

B. Hydrochloric acid on potassium sulphate

C. Hydrochloric acid on $KMnO_4$

D. Nitric acid on KCl

Answer: C

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855. Chlorine reacts with cold, dil. Sodium hydroxide under various conditions to give:

A. Sodium chloride and sodium hypochlorite

B. Sodium chlorate

C. Sodium chlorite

D. All

Answer: A

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856. At ordinary temperature and pressure, amonh halogens, chlorine is a gas, bromine is a liquid and iodine is solid. This is because:

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857. The product formed during the reaction between $KMnO_4$ and conc. HCl is:

A. A red liquid

B. A greenish-yellow gas

C. MnO_2

D. $HClO_4$

Answer: B

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858. Fluorine does not show positive oxidation states because:

A. It is most electronegative element

B. It forms only anions in ionic compounds

C. It cannot form multiple bonds

D. It shows non-bonded electron pair repulsion due to small size

Answer: A

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859. Bleaching powder has the molecular formula:

A. $CaClO_3$

B. CaClO

C. $CaOCl_2$

D. $Ca(Ocl)_2$

Answer: C

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860. Which statement is correct:

A. Bromine is more reactive than chlorine

B. Iodine is more reactive than bromine

C. Chlorine is insoluble in water

D. Iodine is a solid

Answer: D

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861. Bromine is obtained on a commercial scale from:

A. Caliche

B. Carnallite

C. Common salt

D. Cryolite

Answer: B

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862. Chlorine gas can be dried by passing over:

A. Quicklime

B. Soda lime

C. Caustic potash sticks

D. Concentrated sulphuric acid

Answer: D

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863. Which hologen can be purified by sublimation:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: D

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864. When chlorine is passes through concentrated solution KOH, the compound formed is:

A. $KClO_5$

B. $KClO_3$

C. $KClO_2$

D. $KClO_4$

Answer: B

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865. Bromine gas turns starch iodine paper

A. Brown

B. Red

C. Blue

D. colourless

Answer: C

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866. Which is incorrect for bleaching powder:

A. Highly insoluble in water

B. Light yellow coloured powder

C. Oxidising agent

D. Reacts with dilute acid to release chlorine

Answer: A

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867. Which of the following is a pseudohalogen :

A. ICl

B. ICl_2^-

C. $(CN)_2$

D. N_3^-

Answer: C

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868. The bleaching action of bleaching powder is due to the formation of:

A. OCl^-

B. O_2

C. Cl_2

D. Cl^-

Answer: A

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869. Iodine deficiency in diet causes:

A. Beri-beri

B. Goiter

C. Rickets

D. Night blindness

Answer: B

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870. The oxidation of thiosulphate ion by iodine gives:

A. SO_3^{2-}

B. SO_4^{2-}

C. $S_2O_8^{2-}$

D. $S_4O_6^{2-}$

Answer: D

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871. The solubility of iodine in water is greately increased by:

A. Adding an acid

B. Boiling the solution

C. Cooling the solution

D. Adding potassium iodide

Answer: D

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872. Iodine is formed when potassium iodide reacts with a solution of:

A. $ZnSO_4$

B. $CuSO_4$

C. $FeSO_4$

D. $(NH_4)_2SO_4$

Answer: B

Watch Video Solution

873. When iodine reacts with NaF, NaBr and NaCl:

A. It gives mixture of F_2, Cl_2 and Br_2

B. It gives chlorine

C. It gives bromine

D. None of the above

Answer: D

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874. Which compound most readily forms hydrogen bonds between its molecules in the liquid state:

A. HCl

B. HBr

C. HI

D. HF

Answer: D

Watch Video Solution

875. Bad conductor of electricity is:

A. H_2F_2

B. HCl

C. HBr

D. HI

Answer: A

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876. Fluorine is usually obtained from:

A. Fluorspar

B. Fluorapatite

C. Cryolite

D. Tetrafluoromethane

Answer: A

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877. Potassium manganate (K_2MnO_4) is formed when:

A. Chlorine is passed into aqueous $KMnO_4$ solution

B. Manganese dioxide is fused with potassium hydroxide in air

C. Potassium permanganate reacts with conc. Sulphuric acid

D. None

Answer: B

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878. Which is the true covalent oxide of iodine:

A. I_2O_4

B. I_2O_5

C. I_2O_8

D. I_4O_9

Answer: B

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879. Which statement is not true for astatine:

A. It is less electronegative than iodine

B. It exhibits only-1 oxidation state

C. Intermolecular forces between the astatine molecules will be larger than between the iodine molecules.

D. It is composed of diatomic molecules.

Answer: B

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880. Which one is the strongest acid:

A. $ClO_3(OH)$

B. $ClO_2(OH)$

C. $SO(OH)_2$

D. $SO_2(OH)_2$

Answer: A

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881. Fluorine is a very strong oxidising agent:

A. It has several isotopes

B. It is very small and has seven electrons in its valency shell

C. It is the first member of the halogen series

D. Its valency is one.

Answer: B

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882. A quick supply of chlorine gas may be made by reacting crystals of $KMnO_4$ with a concentrated solution of:

A. Potassium chlorate

B. Sodium chloride

C. Bleaching powder

D. Hydrochloric acid

Answer: D

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883. The correct statement is:

A. SO_2 is the anhydride of sulphurous acid

B. H_2S is the anhydride of hydrosulphuric acid

C. NO_2 is the anhydride of HNO_3

D. HCl is the anhydride of HCl

Answer: A

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884. A radioactive element resembling iodine in properties is:

A. Astatine

B. Lead

C. Radium

D. Thorium

Answer: A

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885. Which is not an oxyacid of chlorine:

A. $HClO$

B. $HClO_2$

C. $HClO_3$

D. $HClO_5$

Answer: D

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886. In the known interhalogen compounds the maximum number of halogen atoms is:

A. 4

B. 5

C. 7

D. 8

Answer: D

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887. Cl_2 gas is evolved as byproduct in the manufacture of all the following elements except:

A. Mg

B. Na

C. Al

D. K

Answer: C

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888. The weakest acid among the following is:

A. HClO

B. HBr

C. $HClO_3$

D. HCl

Answer: D

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889. The hydrogen fluoride is liquid unlike the other hydrogen halides, because:

A. Fluorine is smaller atom

B. HF is weakest acid

C. HF molecules are associated due to hydrogen bonding.

D. F_2 is highly reactive

Answer: C

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890. Bromine is prepared in the laboratory by heating a mixture of:

A. $MgBr + H_2SO_4$

B. $MgBr_2 + Cl_2$

C. $KBr + MnO_2 + H_2SO_4$

D. KBr + HCl

Answer: C

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891. Iodine and hypo react to produce:

A. Na_2S

B. Na_2SO_3

C. Na_2SO_4

D. $Na_2S_4O_6$

Answer: D

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892. Dilute hydrochloric acid solution cannot be concentrated by boiling beyond:

A. $11\ \%$

B. $22\ \%$

C. $33\ \%$

D. $44\ \%$

Answer: B

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893. An interhalogen compound is:

A. IF_5

B. I_3^-

C. CN^-

D. $(CN)_2$

Answer: A

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894. $KMnO_4$ is prepared by:

A. Passing Cl_2 through K_2MnO_4 solution

B. Passing O_2 through K_2MnO_4 solution

C. Reaction of KOH with $KMnO_4$

D. Fusing KOH with MnO_2

Answer: A

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895. The number of p-electrons in bromine atom is:

A. 17

B. 7

C. 15

D. 12

Answer: A

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896. Fluorine gas is stored in:

A. Copper vessels

B. Steel vessels

C. BOTH (A) AND (B)

D. None

Answer: C

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897. A 500 g tooth paste sample has 0.2 g fluoride concentration. What is the concentration of F^- in ppm:

A. 250

B. 200

C. 400

D. 1000

Answer: C

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898. Increasing order of acid strengths of hydrogen halides is:

A. $HF < HCl < HBr < HI$

B. $HCl < HI < HBr < HF$

C. $HCl < HBr < HI < HF$

D. None

Answer: A

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899. The decreasing order of b.pt. or m.pt of halogens is:

A. $I_2 > Br_2 > Cl_2 > F_2$

B. $F_2 > Cl_2 > I_2 > Br_2$

C. $Cl_2 > Br_2 > I_2 > F_2$

D. $F_2 > I_2 > Cl_2 > Br_2$

Answer: A

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900. Increasing order of strength of oxyacids of chlorine is:

A. $HClO < HClO_2 < HClO_3 < HClO_4$

B. $HClO_4 < HClO_2 < HClO < HClO_3$

C. $HClO < HClO_2 < HClO_3 < HClO_4$

D. None

Answer: C

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901. The increasing order of reactivity of halogens is:

A. $I_2 < Br_2 < Cl_2 < F_2$

B. $Cl_2 < F_2 < Br_2 < I_2$

C. $Cl_2 < Br_2 < I_2 < F_2$

D. $I_2 < Cl_2 < Br_2 < F_2$

Answer: A

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902. Decreasing order of reducing power hydrogen halides is:

A. $HI > HBr > HCl > HF$

B. $HF > HI > HBr > HCl$

C. $HI > HF > HBr > HCl$

D. None

Answer: A

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903. Which one is most basic in character:

A. F^-

B. Cl^-

C. Br^-

D. I^-

Answer: A

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904. When chlorine water is exposed to sunlight, O_2 is liberated, Hence:

A. Hydrogen has little affinity to O_2

B. Hydrogen has more affinity to O_2

C. Hydrogen has more affinity to Chlorine

D. It is reducing agent

Answer: C

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905. Bromine water is decolourised by:

A. Hexyne

B. C_2H_4

C. C_2H_2

D. All

Answer: D

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906. Atom that requires high energy of excitation

A. F

B. Cl

C. Br

D. I

Answer: A

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907. Phosgene is the name of:

A. A phosphorus compound

B. A phosphonium compound

C. Carbonyl chloride

D. Phosphorus halide

Answer: C

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908. The number of electrons in a halogen in its outermost orbit in comparison with corresponding noble gas is:

A. One electron less

B. One electron more

C. Two electron less

D. Two electron more

Answer: A

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909. Most stable oxide of chlorine is:

A. Cl_2O

B. ClO_2

C. ClO_3

D. Cl_2O_7

Answer: D

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910. Which is an essential trace element involved in physiology of thyroid glands:

A. Fe

B. Ca

C. Na

D. I_2

Answer: D

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911. Interhalogen compounds are more reactive than the individual halogen because:

A. Two halogens are present in place of one

B. They are more ionic

C. Their bond energy is less than bond energy of the halogen molecule

D. They carry more energy

Answer: C

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912. The compound that gives chlorine like smell is:

A. $CHCl_3$

B. $CaOCl_2$

C. Chloretone

D. None

Answer: B

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913. Which of the following pairs is not correctly matched:

A. A halogen which is liquid at room temperature - bromine

B. The most electronegative element - fluorine

C. The most reactive halogen - fluorine

D. The strongest oxidising agent - iodine

Answer: D

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914. The element present in combined state in Laminaria stenophylla is:

A. Bromine

B. Iodine

C. Fluorine

D. Chlorine

Answer: B

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915. Chlorine water on cooling deposits greenish-yellow crystals of:

A. $Cl_2 . 2H_2O$

B. $Cl_2.\ H_2O$

C. $Cl_2.\ 3H_2O$

D. $Cl_2.\ 8H_2O$

Answer: D

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916. In the oxyacids of chlorine Cl-O bond contains:

A. $d\pi - d\pi$ bonding

B. $p\pi - d\pi$ bonding

C. $p\pi - p\pi$ bonding

D. None

Answer: B

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917. When H_2S reacts with halogens, halogens:

A. are oxidised

B. are reduced

C. form sulphur halides

D. none

Answer: B

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918. Tear gas is

A. $COCl_2$

B. $CaOCl_2$

C. NH_3

D. $\mathbb{C}l_3.\ NO_2$

Answer: D

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919. The electronic configurations of four elements are given below. Which element does not belong to the same family as others:

A. $[Xe]4f^{10}, 5d^{10}, 6s^2$

B. $[Kr]4d^{10}, 5s^2$

C. $[Ne]3s^2 3p^5$

D. $[Ar]3d^{10}, 4s^2$

Answer: C

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920. Bleaching action of chlorine is due to:

A. Reduction

B. Oxidation

C. Chlorination

D. Hydrogenation

Answer: D

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921. The compound used as refrigerant is:

A. $\mathbb{C}l_4$

B. $COCl_2$

C. CF_4

D. CF_2Cl_2

Answer: B

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922. Which of the following is not a hydride:

A. HCl

B. CaH_2

C. CsH

D. LiH

Answer: A

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923. The chloric acid and chlorates are:

A. Good oxidising agents

B. Bleaching agents

C. Undergoes disproportionation on heating

D. All

Answer: D

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924. Which shows sp^3-hybridisation:

A. ClO_2^-

B. ClO_3^-

C. ClO_4^-

D. All

Answer: B

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925. ClO_3^- ion is:

A. Angular

B. Pyramidal

C. Tetrahedral

D. None

Answer: B

Watch Video Solution

926. ClO_2^- ion is:

A. Angular

B. Pyramidal

C. Tetrahedral

D. None

Answer: A

Watch Video Solution

927. ClO_4^- ion is:

A. Tetrahedral

B. Angular

C. Pyramidal

D. None

Answer: A

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928. Anhydrone is:

A. $HClO_4$

B. $HClO_3$

C. Anhydrous magnesium perchlorate

D. Anhydrous calcium perchlorate

Answer: C

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929. Formula of calcium chlorite is:

A. $CaClO_2$

B. $Ca(ClO_2)_2$

C. $Ca(ClO_3)_2$

D. $Ca(ClO_4)_2$

Answer: B

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930. Cl_2O_6 is an anhydride of:

A. $HClO_3$

B. $HClO_2$

C. $HClO_4$

D. Mixed anhydride of $HClO_3$ and $HClO_4$

Answer: D

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931. Cl_2O is an anhydride of:

A. $HClO_4$

B. HOCl

C. Cl_2O_3

D. $HClO_2$

Answer: B

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932. Chlorous acid and its salts (chlorites) are:

A. Good oxidising agents

B. Good reducing agents

C. Good bleaching agents

D. Good oxidising and bleaching agents

Answer: D

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933. Paramagnetic oxide of chlorine is:

A. ClO_3

B. Cl_2O_6

C. Cl_2O

D. None

Answer: A

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934. Diamagnetic oxide of chlorine is:

A. ClO_3

B. Cl_2O_6

C. ClO_2

D. None

Answer: B

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935. When a colourless gas is passed through bromine water, decolourization takes place. The gas is:

A. HCl

B. HBr

C. H_2S

D. SO_2

Answer: D

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936. In the isolation of fluorine a number of difficulties were encountered which statement is correct

A. Fluorine reacts with moist glass vessels

B. Fluorine has great affinity for hydrogen

C. Electrolysis of aqueous HF gives ozonised oxygen

D. The potential required for the discharge of the fluoride ions is the lowest

Answer: D

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937. Which oxyacid of chlorine is the least oxidising in nature:

A. $HOCl$

B. $HClO_2$

C. $HClO_3$

D. $HClO_4$

Answer: D

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938. Which of the following anions is linear:

A. I_3^-

B. ICl_2^-

C. BOTH (A) AND (B)

D. None

Answer: C

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939. In the periodic table in going down in fluorine group:

A. Ionic radius increases

B. Electronegativity increases

C. Ionization potential increases

D. Reactivity increases

Answer: A

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940. When an aqueous solution of hypochlorite is heated:

A. Chlorine is evolved

B. Chlorite is formed

C. Chlorate is formed

D. Chlorine peroxide is formed

Answer: C

Watch Video Solution

941. By the action of concentrated hydrochloric acid on potassium chlorate we get this mixture of gases:

A. $CO_2 + Cl_2$

B. $O_2 + ClO_2$

C. $Cl_2 + ClO_2$

D. $O_2 + Cl_2 + ClO_2$

Answer: C

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942. Which halogen acid is a liquid:

A. HF

B. HCl

C. HBr

D. HI

Answer: A

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943. Chlorine is mixed with drinking water so that:

A. Bacteria are killed

B. Dirt is removed

C. Water is cleaned

D. Suspension is removed

Answer: A

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944. Mark the halogen which shows electropositive character:

A. F

B. Cl

C. Br

D. I

Answer: D

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945. Fluorine does not show positive oxidation due to the absence of:

A. p-orbitals

B. d-orbitals

C. s-orbitals

D. None

Answer: B

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946. The outer shell configuration of a halide ion is

A. ns^2

B. ns^2np^6

C. ns^2np^5

D. ns^2np^4

Answer: B

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947. Freons are:

A. $\mathbb{C}l_2F_2$

B. $CFCl_3$

C. $\mathbb{C}lF_3$

D. All

Answer: D

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948. Spirit of salt is:

A. HBr

B. HCl

C. H_2SO_4

D. HI

Answer: B

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949. The bond angle in Cl_2O molecule is:

A. 180°

B. 105°

C. 90°

D. 111°

Answer: B

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950. The type of hybrid orbitals used by chlorine atom in ClO_2^- -

A. sp^3

B. sp^2

C. sp

D. None

Answer: A

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951. Paramagnetic species is:

A. Cl_2O

B. ClO_2

C. Cl_2O_7

D. Cl_2O_6

Answer: B

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952. Caliche is:

A. Crude saltpetre

B. Impure nitre

C. Impure carnallite

D. Ashes of sea weeds

Answer: A

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953. Minimum bond length will be in:

A. H_2S

B. HF

C. H_2O

D. ICl

Answer: B

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954. Tincture of iodine is

A. I_2 , KI and rectified spirit

B. I_2 and rectified spirit

C. KI and rectified spirit

D. I_2 and water

Answer: B

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955. The bond in a molecule of HCl is formed due to the overlapping of:

A. s-and p-orbitals

B. s-and sp-orbitals

C. p-and p-orbitals

D. None of these

Answer: A

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956. Swimming pools are disinfected by bubbling through water in controlled quantity of:

A. Br_2

B. Cl_2

C. O_2 enriched air

D. N_2

Answer: B

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957. A gas reacts with CaO but not with $NaHCO_3$. The gas is

A. CO_2

B. Cl_2

C. N_2

D. O_2

Answer: B

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958. Colour of bromine in CS_2 is:

A. Green

B. Orange

C. Yellow

D. Red

Answer: A

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959. Treatment of CS_2 with axcess of Cl_2 gives:

A. CCl_4

B. CH_3Cl

C. Carbon black

D. C_2H_5Cl

Answer: A

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960. Halogen used in the preparation of insecticides is:

A. I_2

B. Cl_2

C. Br_2

D. F_2

Answer: B

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961. In the reaction between sodium and chlorine to form NaCl which of the following is reduced:

A. Na

B. Na^+

C. Cl

D. Cl^-

Answer: C

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962. Largest size stands for:

A. Cl^-

B. Br^-

C. Br^+

D. Br

Answer: B

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963. The bond Br-Cl is:

A. Polar

B. Non-polar

C. True covalent

D. Co-ordinate

Answer: A

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964. Which of the following is oxidant:

A. HCl

B. HOCl

C. HI

D. HBr

Answer: B

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965. Which possesses highest percentage of ionic character:

A. HCl

B. HBr

C. HF

D. HI

Answer: C

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966. Which of the following oxyacids of chlorine is formed on shaking chlorine water with freshly precipitated yellow oxide of mercury:

A. $HClO_3$

B. $HClO_2$

C. HClO

D. $HClO_4$

Answer: C

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967. The equation $2KClO_3 \rightarrow 3O_2$ indicates all of the following, except:

A. New compounds are formed

B. The reaction is exothermic

C. The law of conservation of mass is obeyed

D. The amount of $KClO_3$ decomposes

Answer: B

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968. An interhalogen compound is:

A. ICl

B. IBr

C. ClF

D. All

Answer: D

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969. In which of the following is bleaching powder not used:

A. For bleaching paper pulp

B. For water sterilisation

C. For making chloroform

D. For sugar decolourisation

Answer: D

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970. Oxidation number of iodine in IF_3 is:

A. -5

B. +3

C. -1

D. +1

Answer: B

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971. Pure HF does not attack:

A. Glass

B. Fe

C. SiO_2

D. Polythene

Answer: D

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972. Cl_2O is an anhydride of:

A. Chlorous acid $(HClO_2)$

B. Chloric acid $(HClO_3)$

C. Mixed anhydride of $HClO_2$ and $HClO_3$

D. None

Answer: C

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973. Size of ionic species follows the order:

A. $I^- < I^+ < I$

B. $I^- < I < I^+$

C. $I^+ < I < I^-$

D. $I^+ < I^- < I$

Answer: C

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974. The nitrate which when heated gives off a gas or a mixture of gases which cannot relight a glowing splinter is:

A. Sodium nitrate

B. Ammonium nitrate

C. Lead nitrate

D. Copper nitrate

Answer: B

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975. Which forms acid salt:

A. Hf

B. HCl

C. HBr

D. HI

Answer: A

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976. Which of the following oxyacides of chlorine possesses least oxidising nature

A. HOCl

B. $HClO_2$

C. $HClO_3$

D. $HClO_4$

Answer: D

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977. Ammonia reacts with excess of chlorine to form:

A. NCl_3

B. $NOCl_2$

C. N_2

D. NH_4Cl

Answer: A

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978. Bleaching powder slowly loses its activity when it stands in air. This is due to:

A. Reaction with moisture to liberate O_2

B. Reaction with CO_2 to evolve Cl_2

C. Loss of $CaCl_2$

D. Formation of $Ca(OH)_2$

Answer: B

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979. In ordinary Cl_2 gas Cl^{35} andCl^{37} are in the ratio:

A. 1:3

B. 3:1

C. 1:1

D. 1:2

Answer: B

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980. Super halogen is:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: A

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981. Late discovery of F_2 is due to its:

A. High reactivity

B. High ionization potential

C. High electronegativity

D. High electron affinity

Answer: A

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982. Which of the following halogens has basic properties :

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer: D

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983. Formula of phosphorus triiodide is:

A. PI_3

B. $I_2(PO_4)_3$

C. IPO_4

D. I_2PO_4

Answer: C

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984. The formula of iodine acetate is:

A. $I(CH_3COO)$

B. $I(CH_3COO)_3$

C. $I_2(CH_3COO)$

D. $(CH_3COO)_2I$

Answer: B

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985. Halogen molecules are:

A. Monoatomic and form X_2^{2-} ions

B. Diatomic and form X^- ions

C. Diatomic and form X_2^{2-} ions

D. Monoatomic and form X^- ions

Answer: B

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986. As the atomic number of the halogens increases, the halogens:

A. Lose the outermost electrons less readily

B. Become lighter in colour

C. Become less dense

D. Gain electrons less readily

Answer: D

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987. Bromine is liberated when an aqueous solution of KBr is treated with:

A. Cl_2

B. I_2

C. SO_2

D. Dilute H_2SO_4

Answer: A

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988. Chlorine was discovered by:

A. Priestley

B. Davy

C. Sheele

D. Cavendish

Answer: C

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989. Which is bad conductor of electricity:

A. H_2F_2

B. HCl

C. HBr

D. HI

Answer: A

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990. HClO is:

A. An oxide

B. A chloride

C. A hydride

D. An acid

Answer: D

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991. The halogen that is most readily reduced is:

A. Chlorine

B. Bromine

C. Iodine

D. Fluorine

Answer: D

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992. Which of the following acids does not attack Cu and Ag:

A. Dilute HNO_3

B. Dilute HCl

C. Conc.H_2SO_4

D. Aqua-regia

Answer: B

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993. Halogen acid used in the preparation of aquaregia is:

A. HF

B. HBr

C. HCl

D. HI

Answer: C

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994. The element having nine protons and 10 neutrons is:

A. N

B. Cl

C. Br

D. F

Answer: D

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995. Highest ionisation potential in a period stands for:

A. Alkali metals

B. Halogens

C. Transition metals

D. Noble gases

Answer: D

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996. Discuss about the order of electron affinity of halogen elements.

A. $I > Cl > F > Br$

B. $Cl > F > Br > I$

C. $F > Cl > I > Br$

D. $F > I > Cl > Br$

Answer: B

Watch Video Solution

997. Fluorine is highly reactive because of:

A. Highest electronegativity

B. Low bond dissociation energy

C. BOTH (A) AND (B)

D. None

Answer: C

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998. The halide which does not give a precipitate with $AgNO_3$ is:

A. F^-

B. Cl^-

C. Br^-

D. I^-

Answer: A

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999. Highest oxidation number of iodine is in the compound:

A. KIO_4

B. IF_5

C. KI_2

D. KI

Answer: A

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1000. Which of the following spices is not a pseudo halide.

A. CNO^-

B. $RCOO^-$

C. OCN^-

D. NNN^-

Answer: B

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1001. Fluorine can be freed from HF by passing the mixture through:

A. H_2O

B. An alkaline solution

C. Conc.H_2SO_4

D. NaF

Answer: A

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1002. Fluorine absorbs....portion of light and appears yellow:

A. Yellow

B. Green

C. Violet

D. Red

Answer: C

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1003. Which of the following radicals can bring about the highest oxidation state of a transition metal?

A. F^-

B. Cl^-

C. Br^-

D. I^-

Answer: A

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1004. Halogens are placed in the VIIA group or gp 17 because

A. They are non-metals

B. They are very reactive

C. They are electronegative

D. They have 7 electrons in outernmost orbit

Answer: D

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1005. Bleaching powder on standing forms mixture of:

A. $CaO + Cl_2$

B. $HOCl + Cl_2$

C. $CaCl_2 + Ca(ClO_3)_2$

D. $CaO + CaCl_2$

Answer: C

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1006. In which is chlorine not used:

A. As germicide

B. As oxidant

C. As cutting tool

D. As disinfectant

Answer: C

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1007. F_2 combines with all non-metals directly except:

A. N_2

B. P

C. Xe

D. Kr

Answer: A

Watch Video Solution

1008. Which halogen does form oxyacid:

A. Br_2

B. Cl_2

C. F_2

D. I_2

Answer: C

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1009. Fluoride ion differs from fluorine atom in the number of:

A. Protons

B. Electrons

C. Neutrons

D. Protons and neutrons

Answer: B

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1010. The X-X bond dissociation energy is minimum in:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: D

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1011. Oxidising action increases from left to right in the following order

A. $Cl_2 < Br_2 < I_2 < F_2$

B. $Cl_2 < I_2 < Br_2 < F_2$

C. $I_2 < F_2 < Cl_2 < Br_2$

D. $I_2 < Br_2 < Cl_2 < F_2$

Answer: D

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1012. Which halogen can replace iodine from KI:

A. F_2

B. Cl_2

C. Br_2

D. All

Answer: D

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1013. Which of the following statements is correct:

A. All halogen form oxyacids

B. Only chlorine and bromine form oxyacids

C. All halogens except fluorine foem oxyacids

D. Only iodine forms oxyacid

Answer: A

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1014. Which halogen does not react with water:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: D

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1015. The halogen having smallest covalent radius is:

A. I

B. Cl

C. Br

D. F

Answer: D

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1016. When fluoride is heated with conc H_2SO_4 and MnO_2 the gas evolved is:

A. HF

B. F_2

C. SF

D. None

Answer: A

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1017. F_2 on treatment with methane gives:

A. CH_2F_2

B. CH_3F

C. CHF_3

D. All of these

Answer: D

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1018. Which of the following has no action with starch solution:

A. F_2 and Cl_2

B. Br_2

C. I_2

D. None

Answer: A

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1019. Cl_2 is used in the manufacture of:

A. Chloroform

B. CCl_4

C. Westron

D. All

Answer: D

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1020. Which acts as a powerful oxidising agent ?

A. H_2S

B. COOH-COOH

C. $FeSO_4$

D. Cl_2

Answer: D

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1021. Which indicates the common laboratory method for the preparation of chlorine:

A. $4HCl + O_2 \rightarrow 2H_2O + 2Cl_2$

B. $2NaCl + 2H_2O \rightarrow 2NaOH + H_2 + Cl_2$

C. $MnO_2 + 4HCl \rightarrow MnCl_2 + Cl + 2H_2O$

D. $2Mg_2OCl_2 + O_2 \rightarrow 4MgO + 2Cl_2$

Answer: C

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1022. CO reacts with chlorine in presence of sunlight to give :

A. $COCl_2$

B. CO_2Cl_2

C. HOCl

D. $H_2Cl_2O_2$

Answer: A

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1023. Which non-metal does not combine directly with Cl_2, Br_2 and I_2

A. Carbon

B. Nitrogen

C. Oxygen

D. All

Answer: D

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1024. Cl_2 is used in the extraction of:

A. Pt

B. Au

C. BOTH (A) AND (B)

D. None

Answer: C

Watch Video Solution

1025. When KBr is treated with conc.H_2SO_4 a reddish-brown gas is evolved. The gas coming out is:

A. Br_2

B. $Br_2 + HBr$

C. H_2O_2

D. NO_2

Answer: A

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1026. F_2 is largely used in:

A. Making freon

B. Making teflon

C. Rocket fuels

D. All

Answer: D

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1027. On boiling an aqueous solution of $KClO_3$ with iodine the product formed is:

A. KIO_3

B. $KClO_4$

C. KIO_4

D. KCl

Answer: A

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1028. The following acids have been arranged in the order of decreasing acid strength.Identify the correct order:

(I) ClOH (II) BrOH (III) IOH

A. $I > II > III$

B. $II > I > III$

C. $III > II > I$

D. $I > III > II$

Answer: A

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1029. The only halous acid known is of:

A. I_2

B. Cl_2

C. Br_2

D. all`

Answer: B

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1030. Berthelot's salt is:

A. $KClO_3$

B. KIO_3

C. $KBrO_3$

D. None

Answer: A

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1031. Which halogen shows only one oxidation state ?

A. F

B. Cl

C. Br

D. I

Answer: A

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1032. Highest bond energy exists for:

A. F_2

B. Cl_2

C. I_2

D. Br_2

Answer: B

Watch Video Solution

1033. Most electropositive halogen is:

A. F

B. Cl

C. Br

D. I

Answer: D

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1034. Solid Cl_2O_6 exists as:

A. $ClO_2^+ . ClO_4^-$

B. Covalent species

C. $(ClO_3)_2$

D. None

Answer: A

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1035. HBr and HI reduce sulphuric acid, HCl can reduce $KMnO_4$ and HF reduces:

A. H_2SO_4

B. $KMnO_4$

C. $K_2Cr_2O_7$

D. None

Answer: D

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1036. Give example of oxide of chlorine in which oxidation state of Cl is +6 .:

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1037. Bleaching powder is mixed calcium salt of:

A. HCl and HClO

B. $HClO_2$ and HCl

C. HClO and $HClO_2$

D. HCl and $HClO_3$

Answer: A

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1038. The anhydride of hypochlorous acid is:

A. ClO_3

B. `Cl2O

C. Cl_2O_5

D. ClO_3

Answer: B

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1039. Which of the following halogen oxides is ionic:

A. I_4O_9

B. I_2O_5

C. BrO_2

D. ClO_3

Answer: A

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1040. Which of the following halogen acids has the lowest melting point:

A. HF

B. HCl

C. HBr

D. HI

Answer: B

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1041. Which is least soluble in water:

A. AgCl

B. AgBr

C. AgI

D. AgF

Answer: D

Watch Video Solution

1042. Which is least soluble in water:

A. HF

B. HCl

C. HBr

D. HI

Answer: A

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1043. HF is a weak acid but HCl is a strong acid because:

A. HF is less ionic than HCl

B. HF attacks glass but HCl does not

C. Bond energy of HF is higher than HCl

D. Electron affinity of fluorine is lower than chlorine

Answer: C

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1044. A greenish-yellow coloured gas is liberated on heating a mixture of two substances which are:

A. KBr + HCl

B. KI + HCl

C. $MnO_2 + HCl$

D. $NaCl + H_2SO_4$

Answer: C

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1045. The pale yellow coloured gas is:

A. Cl_2

B. F_2

C. Br_2

D. I_2

Answer: B

Watch Video Solution

1046. Which reacts with chlorine to form phosgene:

A. SO_2

B. CO_2

C. NO

D. CO

Answer: D

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1047. When Cl_2 is added to an aqueous solution of potassium halide in presence of chloroform a violet colour is obtained. On adding more of Cl_2 water, the violet colour disappears and a colourless solution is obtained. This test confirms the presence of the following in aqueous solution:

A. Iodide

B. Bromide

C. Chloride

D. Iodine and Bromide

Answer: A

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1048. Which forms acid salt with base:

A. HCl

B. HBr

C. HI

D. HF

Answer: D

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1049. The strongest oxidising agent is:

A. $HClO$

B. $HClO_2$

C. $HClO_3$

D. $HClO_4$

Answer: A

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1050. In which of the following interhalogen compounds the central atom is sp^3d hybridised:

A. ClF_3

B. BrF_3

C. BOTH (A) AND (B)

D. None

Answer: C

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1051. The catalyst used in Deacon's process is:

A. Al_2O_3

B. $CuCl_2$

C. $AlCl_3$

D. MnO_2

Answer: B

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1052. Which shows oxidising properties:

A. Lime water

B. Baryta water

C. Distilled water

D. Chlorine water

Answer: D

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1053. When excess of KI is added to copper sulphate solution is formed;

A. Cuprous iodide is formed

B. I_2 is liberated

C. Potassium sulphate is formed

D. All

Answer: D

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1054. Which halogen does not show bleaching property:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: D

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1055. The high oxidising power of F_2 is due to:

A. High electron affinity

B. High heat of dissociation and low heat of hydration

C. High heat of hydration and low heat of dissociation

D. High electronegativity

Answer: C

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1056. A substance X when heated with sulphuric acid liberates a gas which turns starch paper blue.

A. NaCl

B. NaBr

C. NaI

D. $NaNO_3$

Answer: C

Watch Video Solution

1057. Which one is least soluble in water:

A. BaF_2

B. CaF_2

C. SrF_2

D. MgF_2

Answer: A

Watch Video Solution

1058. Iodine solution stained on clothes can be removed by:

A. NaCl

B. NaBr

C. $Na_2S_2O_3$

D. KI

Answer: C

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1059. The chemical name of bleaching powder is:

A. Calcium chloro hypochlorite

B. Calcium hypochlorite

C. Calcium chlorate

D. Calcium prechlorate

Answer: A

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1060. One atom of.....combines with one atom of bromine:

A. Ar

B. Rb

C. Mg

D. HCl

Answer: B

Watch Video Solution

1061. Which bond has the greatest polarity:

A. H-Cl

B. H-Br

C. H-I

D. H-F

Answer: D

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1062. Bleaching properties of bleaching powder are due to its:

A. Oxidising properties

B. Reducing properties

C. Basic properties

D. Disinfecting properties

Answer: A

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1063. Bleaching powder is a mixture of:

A. Calcium hypochorite and calcium chloride

B. Calcium chlorate and calcium chloride

C. Calcium chlorate and basic calcium chloride

D. Calcium chlorate and calcium hydroxide

Answer: C

Watch Video Solution

1064. The percentage of available chlorine in a commercial sample of bleaching powder is:

A. $12\ \%$

B. $35\ \%$

C. $58\ \%$

D. $85\ \%$

Answer: B

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1065. Which halogen has the highest heat of hydration:

A. I_2

B. Br_2

C. Cl_2

D. F_2

Answer: D

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1066. One can draw the map of a building on a glass plate by:

A. HI

B. HF

C. HBr

D. HCl

Answer: B

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1067. The colour of I_2 is violet because it:

A. Absorbs violet light

B. Does not absorb light

C. Absorbs yellow and green light

D. None

Answer: C

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1068. The boiling points of halogens increase with increase in molecular weight, it is because:

A. As the size increases molecules undergo association leading to higher stability

B. Bond strength increases due to increase in electronegativity

C. Van der Waals. forces increase with increase in number of electrons per mole

D. None

Answer: C

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1069. The tetrahedral nature of the three bonds in a chlorate ion $\left(ClO_3^-\right)$ is due to:

A. The presence of a lone pair of electrons

B. sp^3-hybridisation

C. sp^2-hybridisation

D. Trigonal bipyramidal shape of ion

Answer: B

Watch Video Solution

1070. Available chlorine is liberated from bleaching powder when it :

A. Is heated

B. Reacts with water

C. Reacts with acid

D. Reacts with alkali

Answer: C

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1071. Hydrogen bromide is dried by passing the gas through:

A. Quicklime

B. Anhydrous $CaCl_2$

C. KOH pellets

D. Conc.H_2SO_4

Answer: B

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1072. HCl is covalent in:

A. Aqueous solution

B. Ethereal solution

C. Gaseous state

D. None

Answer: C

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1073. Weldon mud is:

A. MnO_2

B. $Mn(OH)_2$

C. $2CaO.\ MnO_2$

D. Mn_2O_3

Answer: C

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1074. Which of the following has highest affinity for hydrogen:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: A

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1075. Good quality bleaching powder contains available chlorine about:

A. $10 - 20\,\%$

B. $5 - 10\,\%$

C. $35 - 38\,\%$

D. $20 - 25\,\%$

Answer: C

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1076. Bromine occurs as a bromide in a mineral called:

A. Nitre

B. Tincal

C. Common salt

D. Carnalite

Answer: D

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1077. Bleaching powder is not used:

A. As a disinfectant

B. As a reducing agent

C. For bleaching purposes

D. For manufacturing chloroform

Answer: B

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1078. Which of the following is not oxidised by MnO_2 :

A. F^-

B. Cl^-

C. Br^-

D. I^-

Answer: A

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1079. Which of the following is the anhydride of perchloric acid:

A. Cl_2O

B. ClO_2

C. Cl_2O_6

D. Cl_2O_7

Answer: D

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1080. The silver halide, which is least soluble in NH_4OH is:

A. AgF

B. AgCl

C. AgBr

D. AgI

Answer: D

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1081. Bleaching powder is an example:

A. An acidic salt

B. A complex salt

C. A double salt

D. A mixed salt

Answer: D

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1082. Iodine displaces chlorine from which one of the compounds:

A. KCl

B. $CaCl_2$

C. $\mathbb{C}l_4$

D. $KClO_3$

Answer: B

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1083. Among the fluorides given which will further react with F_2 :

A. NaF

B. CaF_2

C. SF_6

D. IF_5

Answer: D

Watch Video Solution

1084. Iodine may be liberated from sodium iodate by:

A. H_2SO_4

B. $NaHSO_3$

C. $KMnO_4$

D. HCl

Answer: B

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1085. Least stable oxide of chlorine is:

A. Cl_2O

B. ClO_2

C. Cl_2O_6

D. Cl_2O_7

Answer: A

Watch Video Solution

1086. Iodine is placed between two liquids C_6H_6 and water:

A. It dissolves more in C_6H_6

B. It dissolves more in water

C. It dissolves equally in both

D. Does not dissolve in both

Answer: A

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1087. Fluorine is a stronger oxidising agent than chlorine in aqueous solution. This is attributed to many factors except:

A. Heat of dissociation

B. Electron affinity

C. Ionisation potential

D. Heat of hydration

Answer: C

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1088. Which pair gives Cl_2 at room temperature:

A. Conc. HCl + $KMnO_4$

B. NaCl + $Conc.\ H_2SO_4$

C. NaCl + MnO_2

D. NaCl + Conc.HNO_3

Answer: A

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1089. The compound insoluble in water is:

A. CaF_2

B. $CaCl_2$

C. $CaBr_2$

D. CaI_2

Answer: A

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1090. Which is soluble in water :

A. AgCl

B. AgBr

C. AgI

D. AgF

Answer: D

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1091. Iodine imparts brown colour to:

A. Water

B. Benzene

C. Alcohol

D. Chloroform

Answer: C

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1092. The greater reactivity of fluorine is due to

A. Low energy of the F-F bound

B. small size

C. High heat of hydration

D. All

Answer: D

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1093. Which are solid

A. XeF_2

B. XeF_4

C. XeF_6

D. All

Answer: D

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1094. Which are hydrolysed by water

A. XeF_2

B. XeF_4

C. XeF_6

D. All

Answer: D

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1095. $K_2[Hgl_4]$detects the ion group

A. NH_2

B. NO

C. NH_4^+

D. Cl^-

Answer: C

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1096. Which of the following halogens can replace other from their salt solutions

A. I_2

B. Br_2

C. F_2

D. Cl_2

Answer: C

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1097. The element that oxidises water to oxygen with evolution of heat is

A. Fluorine

B. Chlorine

C. Iodine

D. Bromine

Answer: A

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1098. Mixture of sand and iodine can be separated by which process?

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1099. In the halogen group chlorine is a gas bromine is a liquid and iodine exists as solid crystals Then the next halogen astatine (AT) would be

A. Solid at room temperture

B. having higher electronegativity

C. Solid with higher IP

D. Least atomic size

Answer: A

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1100. Highest bond dissociation energy stands for

A. HI

B. HBr

C. HCl

D. HF

Answer: D

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1101. Iodine gives blue colour with

A. Cl_2

B. F_2

C. Starch

D. Litmus

Answer: C

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1102. Uranium isotopes are usually serparated by using compounds of the halogen

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: A

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1103. Which of the following bonds will be most polar

A. N-Cl

B. O-F

C. N-F

D. N-N

Answer: C

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1104. Among halogens maximum oxides are formed by

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer: B

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1105. SO_2 reacts with chlorine to form

A. Sulphur monochloride

B. Sulphur dichloride

C. Sulphuryl chloride

D. Sulphur trichloride

Answer: C

Watch Video Solution

1106. Which acid can combine with its own salt again

A. HF

B. HBr

C. HCl

D. HI

Answer: A

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1107. Halogens are

A. Diatomic

B. monoatomic

C. Polyatomic

D. Triatomic

Answer: A

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1108. Hydrogen halide which does not have reducing property at all

A. HF

B. HBr

C. HCl

D. HI

Answer: A

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1109. The non-metal other than graphite having metallic lustre is

A. I_2

B. Si

C. Cl_2

D. Br_2

Answer: A

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1110. In the manufacture of bromine from sea water the mother liquor containing bromides is treated with

A. CO_2

B. Cl_2

C. SO_2

D. I_2

Answer: B

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1111. The ion that cannot undergo disproportionation is

A. ClO_4^-

B. ClO_3^-

C. ClO_2^-

D. ClO^-

Answer: A

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1112. When dry chlorine is passed over silver chlorate at $90^{\circ}C$ the product is

A. Cl_2O

B. ClO_2

C. ClO_3

D. ClO_4

Answer: B

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1113. During bleaching of chlorine an antichlor is used to

A. Enhance bleaching action

B. Eliminate last traces of bleaching agent

C. Remove greases from the fibre

D. Liberate oxygen

Answer: B

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1114. If Cl_2 gas is passed into aqueoussolution of KI containing some CCl_4 and the mixture is shaken then

A. Upper layer becomes violet

B. Lower layer becomes violet

C. Homogenous violet layer is formed

D. None of these

Answer: B

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1115. Which statement is incorrect

A. Chlorine can bleach a wet piece of cloth

B. Iodine stain can be remove by hypo solution

C. Bromine can be prepared from carnallite

D. Bromine is liberated when iodine is passed through an acidified KBr solution

Answer: D

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1116. The substance which solid at room temperature forms ionic compounds and reacts with hydrogen forming a hydride the aqueous solution of which is acidic could be

A. Al

B. Na

C. Br_2

D. I_2

Answer: D

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1117. In the isolation of fluorine a number of difficulties were encountered which statement is correct

A. the potential required for the discharge of the fluoride ions is the lowest

B. Fluorine reacts with most glass vessels

C. Electrolysis of aqueous HF gives ozonised oxygen

D. All

Answer: D

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1118. HI reacts with HNO_3 to form

A. O_2

B. N_2O

C. HIO_3

D. $NO_2 + I_2$

Answer: D

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1119. Which reaction is possible

A. $I_2 + 2NaBr \rightarrow Br_2 + 2NaI$

B. $I_2 + 2NaCl \rightarrow Cl_2 + 2NaI$

C. $Br_2 + 2NaCl \rightarrow Cl_2 + 2NaBr$

D. $Cl_2 + 2NaBr \rightarrow Br_2 + 2NaCl$

Answer: D

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1120. HF present as impurity in gaseous F_2 can be removed by passing over

A. P_2O_5

B. NaF

C. H_2SO_4

D. CaCl

Answer: B

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1121. HCl cannot form H_2Cl_2 whille HF can form H_2F_2 the reason is

A. Fluorine is more reactive

B. HF is more reactive

C. Fluorine atom is small and can form hydrogen bonds

D. None

Answer: C

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1122. Halogens are

A. Inert

B. Very reactive

C. Slightly reactive

D. None

Answer: B

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1123. The van der waals forces in halogen decrease in the order

A. $F_2 > Cl_2 > Br_2 > I_2$

B. $I_2 > Br_2 > Cl_2 > F_2$

C. $Br_2 > Cl_2 > F_2 > I_2$

D. $Cl_2 > Br_2 > I_2 > F_2$

Answer: B

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1124. Bromine is obtained commercially from sea water by adding

A. Cl_2

B. C_2H_4

C. Crystals of NaBr

D. $AgNO_3$ solution

Answer: A

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1125. Fluorine reacts with water giving

A. HF and O_2

B. HF and OF_2

C. HF and O_3

D. HF, O_2 and O_3

Answer: D

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1126. Which oxide of chlorine is most powerful oxidising agent

A. Cl_2O

B. ClO_2

C. Cl_2O_6

D. Cl_2O_7

Answer: A

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1127. Which forms maximum compounds with xenon

A. F

B. Cl

C. Br

D. I

Answer: A

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1128. The strongest hydrogen bond is in

A. H_2O

B. H_2S

C. NH_3

D. HF

Answer: D

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1129. Which of the following is the most volatile compound ?

A. HCl

B. HI

C. HF

D. HBr

Answer: A

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1130. Bond length is maximum in

A. HI

B. HBr

C. HCl

D. HF

Answer: A

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1131. A positive chromyl chloride test is given by a salt containing

A. Br^-

B. Cl^-

C. SO_3^{2-}

D. I^-

Answer: B

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1132. The interatomic distances in H_2 and Cl_2 molecules are 74 and 198 pm respectively the bond length of HCl is

A. 272pm

B. 136pm

C. 124pm

D. 248pm

Answer: B

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1133. Among the C-X bond (where, X = Cl, Br, I) the correct bond energy is

A. $C-Cl>C-BrR>C-I$

B. $C-I>C-Cl>C-Br$

C. $C-Br>C-Cl>C-I$

D. $C-I>C-Br>C-Cl$

Answer: A

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1134. The halide that cannot act as lewis acid is

A. BF_3

B. $SnCl_4$

C. $C - Cl_4$

D. SF_4

Answer: C

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1135. Bromine can be liberated from potassium bromide solution by

A. Iodine solution

B. Chlorine solution

C. Sodium solution

D. Potassium solution

Answer: B

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1136. Which of the following was previously known as muriatic acid

A. Cl_2

B. Br_2

C. HCl

D. H_2SO_4

Answer: D

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1137. Halogens are

A. Gases under ordinary conditions

B. Electronegative in nature

C. Fuming liquids

D. The gases found in amosphere

Answer: B

Watch Video Solution

1138. Bromargyrite is a mineral of

A. Pb

B. Sn

C. I_2

D. $AgBr$

Answer: D

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1139. In a given sample of bleaching power the percentage of available chlorine is 49 the volume of chlorine obtained if 10g of the sample is treated with HCl at NTP is

A. 1.5 litre

B. 3.0 litre

C. 15.0 litre

D. 150 litre

Answer: A

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1140. When bleaching powder is treated with carbon dioxide

A. Chlorine is evolved

B. Calcium chloride is formed

C. No reaction occurs

D. It absorbs the gas

Answer: A

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1141. The outermost elecronic configuration of most electronegative element is :

A. ns^2np^3

B. ns^2np^4

C. ns^2np^5

D. ns^2np^6

Answer: C

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1142. Gaseous HCl is a poor conductor of electricity while its aqueous solution is a good conductor this is because

A. H_2O is a good conductor of electricity

B. A gas cannot conduct electricity but a liquid can

C. HCl gas does not obey Ohm.s law whereas the solution does

D. HCl ionises in aqueous solution

Answer: D

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1143. Among the following the pseudohalide is

A. CN

B. ICl

C. I_3

D. IF_5

Answer: A

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1144. Interhalogen compounds are

A. Ionic compounds

B. Co-ordinated compounds

C. Moleculor compounds

D. Covalent compounds

Answer: D

View Text Solution

1145. Which halogen gives a brown colour with starch

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer: C

Watch Video Solution

1146. HIO_3 on heating gives

A. I_2

B. O_2

C. I_2O_5

D. HI

Answer: C

Watch Video Solution

1147. Pured Cl_2 is prepared on heating

A. NaCl

B. $PtCl_4$

C. $CuCl_2$

D. All

Answer: B

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1148. The ionisation potential of X^- ion is equal to

A. The Electron effinity of X atom

B. The electronegativity of X atom

C. The ionization potential of X atom

D. None

Answer: A

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1149. I_2 can exist in the oxidation states

A. -1, +1, +3, +5

B. -1, +1, +3

C. +3, +5, +7

D. -1, +1, +3, +5, +7

Answer: D

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1150. Euchlorine is a mixture of

A. Cl_2 and SO_2

B. Cl_2 and ClO_2

C. Cl_2 and CO

D. None

Answer: B

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1151. F_2 is isolated by

A. Electrolysis of HF

B. Electrolysis of KHF_2

C. Electrolysis of Na_3AIF_6

D. Electrolysis of NaF/HF

Answer: B

Watch Video Solution

1152. Sea weeds are important source of

A. Iron

B. Chlorine

C. Iodine

D. Bromine

Answer: C

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1153. Phhotographic plates are coated withh a film of

A. Silver chloride

B. Silver bromide

C. Silver iodide

D. Silver oxide

Answer: B

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1154. When KCl is heated with conc H_2SO_4 and solid $K_2Cr_2O_7$ we get

A. Chromic chloride

B. Chromous chloride

C. Chromyl chloride (CrO_2Cl_2)

D. Chromic Sulphate

Answer: C

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1155. Antichlor is a compound

A. Which absorbs chlorine

B. Which removes Cl_2 from a material

C. Which liberates Cl_2 from bleaching powder

D. which acts as a catalyst in the manufacture of Cl_2

Answer: B

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1156. Which on heating with conc H_2SO_4 gives violet vapours

A. iodide

B. Nitrate

C. Sulphate

D. Bromide

Answer: A

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1157. Cl_2 on passing through $Na_2S_2O_3$ solution gives

A. Na_2S

B. Na_2SO_4

C. $NaHSO_4$

D. NaHS

Answer: B

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1158. The electrolysis is brine solution to manufacture chlorine is carried out in the

A. Dennis cell

B. Gray cell

C. Nelson cell

D. Solvay cell

Answer: C

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1159. Chlorine bleaches only in the

A. Absence of acid

B. Presence of alkali

C. Absence of moisture

D. Presence of moisture

Answer: D

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1160. Bleaching powder is obtained by the interaction of Cl_2 with a

A. Dilute solution of $Ca(OH)_2$

B. Concentrated solution of $Ca(OH)_2$

C. Dry CaO

D. dry slaked lime

Answer: D

View Text Solution

1161. Which can oxidise Br^- to Br_2

A. I^{-2}

B. Cl_2

C. KI

D. HI

Answer: B

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1162. Most of the elementary gases are obtained by chemical reaction of their compounds for example chlorine is obtained by allowing $KMnO_4$ to react with hydrochloric acid. Fluorine however can be obtained only by the electrolysis of a fluoride this is because

A. Fluorine is a highly reactive gas

B. Fluorine is the strongest chemical oxidising agent

C. Fluorine is highly poisonous

D. It is easy to electrolyse a fluoride

Answer: B

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1163. Which element is extracted commercially by the electrolysis of an aqueous solution of one its compounds

A. Sodium

B. Aluminium

C. Chlorine

D. Bromine

Answer: C

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1164. Hydrofluoric acid is not preserved in glass bottles because

A. It reacts with the visible part of light

B. It reacts with the sodium oxide of the glass composition

C. It reacts with the aaluminium oxide of the glass composition

D. It reacts with the silicon dioxide of glass

Answer: D

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1165. In case of halogen family which trend occurs as the atomic number increases

A. Ionization radius decrease

B. Ionization potential decrease

C. Covalent character in MX_2 decrease (where M=metal and X = hologen)

D. None

Answer: B

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1166. Which reaction cannot be ussed for the preparation of the halogen acid

A. $2KBr + H_2SO_4(conc.) \rightarrow K_2SO_4 + 2HBr$

B. $NaCl + H_2SO_4(conc.) \rightarrow NaHSO_4 + HCl$

C. $NaHSO_4 + NaCl \rightarrow Na_2SO_4 + HCl$

D. $CaF_2 + H_2SO_4(conc.) \rightarrow CaSO_4 + 2HF$

Answer: A

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1167. The formula of hyphochlorous acid is HClO the formula for calcium hypochlorite is

A. $Ca(ClO)_2$

B. CaClO

C. $CaClO_2$

D. None

Answer: A

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1168. Which reaction yields the greatest quantity of chlorine from a given quantity of hydrochloric acid

A. warming conc. HCl with MnO_2

B. Warming conc. HCl with PbO_2

C. Warming conc. HCl with $KMnO_4$

D. Treating bleaching powder with HCl

Answer: D

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1169. Pure HBr gas may be obtained by heating sodium bromide with syrupy phospheric acid and not with concentrated sulphuric acid because concentrated sulphuric acid is:

A. More volatile

B. Less stable

C. A weaker acid

D. an oxidising agent

Answer: D

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1170. Two pungent smelling gases bleach a certain sbstances. The gases may be:

A. Cl_2 and SO_2

B. Cl_2 and NH_3

C. NH_3 and PH_3

D. O_2 and CO_2

Answer: A

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1171. Which chemical contains chlorine

A. Fischer salt

B. Epsom salt

C. Fermy.s salt

D. Spirit of salt

Answer: D

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1172. I_2 readily dissolve in KI solution giving

A. I^-

B. KI_2

C. KI_2^-

D. KI_3

Answer: D

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1173. Halogen used as an antiseptic is:

A. Fluroine

B. Chlorine

C. Bromine

D. Iodine

Answer: D

Watch Video Solution

1174. Which of the following are pseudohalides:

A. ONC

B. OCN^-

C. SCN^-

D. All

Answer: D

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1175. Which one is the anhydride of $HClO_4$

A. Cl_2O

B. ClO_2

C. Cl_2O_6

D. Cl_2O_7

Answer: D

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1176. Which is chemically most active non-metal

A. Fluroine

B. Nitrogen

C. Oxygen

D. Sulphur

Answer: A

Watch Video Solution

1177. Boiling of dil. HCl acid does not increases its concentration beyond 22.2 per cent because hydrochloric acid.

A. Is very volatile

B. Is extremely soluble in water

C. Forms a constant boiling mixture

D. Forms a saturated solution at this concentration

Answer: C

Watch Video Solution

1178. Mark the wrong statement. Halogens are all coloured

A. This is due to absorbption of visible light by their molecules resulting in the excitation of outer electrons to higher enrgy levels.

B. The small F_2 molecules absorbs high energy violet radiations and appear light yellow in colour

C. The small F_2 molecule absorb low energy yellow and green radiations and appear violet in colour

D. The excitation energy required by the small fluroine atoms is smaller than required by the large iodine atom

Answer: D

Watch Video Solution

1179. Which has the highest heat of vaporisation

A. HF

B. HCl

C. HBr

D. HI

Answer: A

Watch Video Solution

1180. Deacon.s process is used for the manufacture of:

A. Bleaching powder

B. Sulphuric acid

C. Nitric acid

D. Chlorine

Answer: D

Watch Video Solution

1181. Which one will liberate Br_2 from KBr.

A. Cl_2

B. HI

C. I_2

D. SO_2

Answer: A

Watch Video Solution

1182. The greater reactivity of fluroine is due to:

A. Lower energy of F-F bond

B. F_2 is a gas at ordinary temperature

C. It has highest electron effinity

D. High energy of F-F bond

Answer: A

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1183. Which halide has the largest boiling point

A. HI

B. HBr

C. HCl

D. HF

Answer: D

Watch Video Solution

1184. Chlorine bromine and iodine are placed in the same group (17) of the periodic table because

A. They are non-metals

B. they are electronegative

C. They have seven electrons in the outermost shells of the atoms

D. They are generally univalent

Answer: C

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1185. ..... is the compound which can remove both oxygen and nitrogen of the air when it as passed over it at 1000°C:

A. CaC_2

B. $CaCl_2$

C. $CaCN_2$

D. $Ca(CN_2)$

Answer: A

Watch Video Solution

1186. XeF_6 on complete hydrolysis gives:

A. Xe

B. XeO_2

C. XeO_3

D. $XeOF_2$

Answer: C

Watch Video Solution

1187. Which fluroide of xenon is impossible:

A. XeF_2

B. XeF_3

C. XeF_4

D. XeF_6

Answer: B

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1188. The commonest gas in the atmosphere is:

A. Helium

B. Nitrogen

C. Ammonia

D. Hydrogen

Answer: B

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1189. Precentage of argon in air is about:

A. 10 Percent

B. 0.1 Percent

C. Much less than 0.1 Per cent

D. 1 percent

Answer: D

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1190. Noble gases are prepared by the:

A. Condensation of gases of the air

B. Fractionation of liquid oxygen

C. Removal of nitrogen and oxygen from air

D. Fractionation of liqud air

Answer: D

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1191. Inert gases such a helium behave like ideal gases over a wide range of temperature. However, they condense into the solid state at very low temperature It indicates that at very low temperature. It indicates that at very temperature there is a:

A. Weak attractive force between the atoms

B. Weak repulsive force between the atoms

C. strong attractive force between the atoms

D. Strong repulsive force betwwn the atoms

Answer: C

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1192. The atomic weight of noble gases is obtained by using the relationship

A. Atomic weight=equivalent weightXvalency

B. Atomic weight=equivalent weight/valency

C. Atomic weight=valency/equivalent weight

D. $2 \times VD$= molecular weight =atomic weight

Answer: D

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1193. The mixture of noble gases is separated by:

A. Ramsay-Rayleigh.s first method

B. Ramsay-Rayleigh.s second method

C. Fischer and Ringe.s method

D. Dewar's coconut charcoal adsorption method

Answer: D

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1194. The solubility of noble gases in water shows the order:

A. $He > Ar > Kr > Ne > Xe$

B. $He > Ne > Ar > Kr > Xe$

C. $Xe > Kr > Ar > Ne > He$

D. None

Answer: C

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1195. compounds formed when the noble gases get entrapped in the cavities of crystal lattices of certain organic compounds are known as:

A. Interstitial Compounds

B. Clathrates

C. Hydrates

D. Picrates

Answer: B

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1196. Which compound is prepared by the following reaction:

$Xe(g) + 2F_2(g) \xrightarrow[7atm]{873K}$

A. XeF_2

B. XeF_6

C. XeF_4

D. $XeOF_2$

Answer: C

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1197. The last member o inert gas family is

A. Krypton

B. Radon

C. Xenon

D. Argon

Answer: B

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1198. A clathrate is defined as:

A. Cage Compound

B. Liquid crystal

C. Mixture

D. Solid solution

Answer: A

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1199. Which noble gas has the least tendency to form compounds:

A. He

B. Ne

C. Kr

D. Xe

Answer: A

Watch Video Solution

1200. Which noble gas was first of all detected in solar chromosphere:

A. Helium

B. Neon

C. Argon

D. Krypton

Answer: A

Watch Video Solution

1201. Which Noble gas is not found in atmosphere

A. Rn

B. Kr

C. Ne

D. Ar

Answer: A

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1202. Noble gases do not react with other elements because:

A. They are monoatomic

B. They are not found in abundance

C. The size of their atoms are very small

D. They have completely paired up and stable electron shells.

Answer: D

Watch Video Solution

1203. Who observed helium first on the earth :

A. Lother Mayer

B. Ramsay

C. Scheele

D. Rutherford

Answer: B

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1204. The noble gas which behaves abnormally in liquid state is

A. Xe

B. Ne

C. He

D. Ar

Answer: C

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1205. Hybridisation of Xe atom in XeF_6 is:

A. sp^3

B. sp^3d

C. sp^3d^2

D. sp^3d^3

Answer: D

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1206. The inert gas used as substituent for nitrogen in oxygen used by deep sea divers for breathing is:

A. Xe

B. Kr

C. Ne

D. He

Answer: D

Watch Video Solution

1207. The ease of liquefaction of noble gases decrease in the order :

A. $He > Ne > Ar > Kr > Xe$

B. $Xe > Kr > Ar > Ne > He$

C. $Kr > Xe > He > Ar > Ne$

D. $Ar > Kr > Xe > He > Ne$

Answer: B

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1208. The two electrons in helium atom:

A. Occupy different shells

B. Have different spins

C. Have the same spins

D. Occupy different subshells of the same shell

Answer: B

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1209. Which is called stranger gas:

A. Kr

B. Xe

C. He

D. Ne

Answer: B

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1210. Helium gives a characterstics spectrum with:

A. Orange and red lines

B. Orange lines

C. Yellow lines

D. Green lines

Answer: C

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1211. Geometry of $XeOF_4$ molecule is:

A. Square Planar

B. Square pyramidal

C. Tringular bipyramid

D. Distorted octahedron

Answer: B

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1212. Noble gases do not occur in:

A. Nature

B. Ores

C. Atmosphere

D. Sea water

Answer: D

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1213. XeF_4 exists as ..... Under ordinary atmospheric conditions:

A. Solid

B. Liquid crystal

C. Gas

D. None

Answer: A

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1214. In order to prevent the hot metal flament from getting burnt, when the electric current is switched on, the bulb is filled with:

A. CH_4

B. An inert gas

C. CO_2

D. Cl_2

Answer: B

Watch Video Solution

1215. The last energy level of radon contains

A. 10 electrons

B. 8 electrons

C. 2 electrons

D. 15 electrons

Answer: B

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1216. Which statement is correct:

A. noble gases are not found in nature

B. Some compound of noble gas elements are known

C. Atmospheric air is free from noble gases

D. None

Answer: B

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1217. The oxidation state of Xe in XeF_2 is:

A. +2

B. +4

C. Zero

D. +3

Answer: A

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1218. Number of the lone pairs associated with xenon in xenon hexafluroide are:

A. 1

B. 2

C. 3

D. 4

Answer: A

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1219. The elements with atomic number 10, 18, 36, 54 are known as:

A. Halogens

B. Inert gases

C. Rare earths

D. Alkali metals

Answer: B

Watch Video Solution

1220. The word neon signifies:

A. New

B. Old

C. Strange

D. None

Answer: A

Watch Video Solution

1221. The oxidation state of Xe in XeF_4 is:

A. +2

B. +4

C. Zero

D. +5

Answer: B

Watch Video Solution

1222. Most stable configuration exists for:

A. Alkali metals

B. Noble gases

C. Halogens

D. Alkaline earth metals

Answer: B

Watch Video Solution

1223. Noble gases are:

A. Colourless

B. Ordouless

C. Tasteless and non-inflammable

D. All

Answer: D

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1224. The idea which prompted bartlett to prepare first ever compound of noble gas was:

A. High bond energy of Xe-F

B. Low bond energy of F-F in F_2

C. Ionisation engies of O_2 and xenon were almost similar

D. None of thses

Answer: C

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1225. Nuclear fusion produces:

A. Argon

B. Deuterium

C. Helium

D. Krypton

Answer: C

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1226. Ramsay was awarded Noble prize for the discovery of rare gases in:

A. 1900

B. 1902

C. 1904

D. 1910

Answer: C

Watch Video Solution

1227. Neon is extensively used in:

A. Cold storage units

B. Organic compounds

C. Medicines

D. Coloured electric discharge lamps

Answer: D

Watch Video Solution

1228. The discovery of isotopes began with the experiments with:

A. Xe

B. Kr

C. Ar

D. Ne

Answer: D

Watch Video Solution

1229. Which statement about noble gases is not correct:

A. Xe forms XeF_6

B. Ar is used in electric bulbs

C. Kr is obtained during radioactive disintegration

D. He has the lowest b.pt. among all the noble gases

Answer: C

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1230. In solid argon, the atoms are held together by:

A. Ionic bonds

B. Hydrogen bonds

C. Van der Waals. forces

D. Hydrophobic forces

Answer: C

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1231. The Van der Waals forces are the greatest in:

A. Neon

B. Argon

C. Krypton

D. Xenon

Answer: D

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1232. Electronegativity of an inert gas is :

A. High

B. Low

C. Negative

D. Zero

Answer: D

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1233. B.pt. and m.pt of inert gases are:

A. Low

B. High

C. Very High

D. Very low

Answer: D

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1234. Which has the same electronic configuration as of inert gas:

A. Ag^{3+}

B. Cu^{2+}

C. Pb^{4+}

D. Ti^{4+}

Answer: D

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1235. Which configuration represents a noble gas:

A. $1s^2, 2s^2, 2p^6, 3s^2$

B. $1s^2, 2s^2, 2p^6, 3s^5$

C. $1s^2, 2s^2, 2p^6, 3s^2, 3p^6$

D. $1S^2, 2S^2, 2p^6, 3S^2, 3p^6, 3d^{10}, 4s^2$

Answer: C

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1236. Among the following which has lowest b.pt

A. Ar

B. He

C. Ne

D. Xe

Answer: B

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1237. The poissons ratio for inert gases is :

A. 1.40

B. 1.66

C. 1.34

D. None

Answer: B

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1238. Elements of the zero group possess the configuration :

A. ns^2np^1

B. ns^2np^5

C. ns^2np^6

D. $ns^2np^6nd^2$

Answer: C

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1239. The fluoride which does not exist is:

A. CF_4

B. SF_6

C. HeF_4

D. XeF_4

Answer: C

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1240. Which shows the least chemical reactivity:

A. Ammonia

B. Methane

C. Argon

D. Hydrogen Sulphide

Answer: C

Watch Video Solution

1241. XeF_6 on complete hydrolysis gives:

A. XeO_3

B. XeO

C. XeO_2

D. Xe

Answer: A

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1242. The non-existent compound is:

A. XeF_5

B. BrF_5

C. SbF_5

D. PF_5

Answer: A

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1243. The zero group members are collectively known as:

A. Inert Gases

B. Rare gases

C. Noble gases

D. Either of these

Answer: D

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1244. Density of nitrogen gas prepared from air is slightly greater than that of nitrogen prepared by chemical reaction

from a compound of nitrogen because aerial nitrogen contains

A. Argon

B. Carbon dioxide

C. Some N_3 molecules derived from N-15 isotope

D. Greater amount N_2 molecules derived from N-15 isotope

Answer: A

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1245. Which gas is filled in electric bulbs/tubes:

A. O_2

B. N_2

C. Ar

D. He

Answer: C

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1246. In colour discharge tubes, which is used:

A. Ne

B. Argon

C. Kr

D. He

Answer: B

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1247. Highest ionisation potential in a period stands for:

A. Alkaline earth metals

B. Alkali metals

C. Halogens

D. Noble gases

Answer: D

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1248. The noble gases are unreactive because they:

A. Have the same number of electrons

B. Have an atomic of one

C. Are gases with low densities

D. Have stable electronic configuration or closed valency shell

Answer: D

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1249. The gas used for inflating the tyres of aeroplanes is:

A. H_2

B. He

C. N_2

D. Ar

Answer: B

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1250. Major credit for the discovery of noble gases is given to:

A. Cavendish

B. Ramsay

C. Rayleigh

D. None

Answer: B

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1251. Hellium was discovered by:

A. Frankland and Lockyer

B. Rayleigh

C. Ramsay

D. None

Answer: A

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1252. Argon was discovered by:

A. Cavendish

B. Lavoisier

C. Rayleigh

D. Thomson

Answer: C

Watch Video Solution

1253. The most abundant inert gas in air is:

A. He

B. Ne

C. Ar

D. Kr

Answer: C

Watch Video Solution

1254. The principal source of helium is:

A. Air

B. Monazite sand

C. Radium

D. All

Answer: B

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1255. A radioactive element X decays to give two inert gases in air is:

A. $238_{92}U$

B. $226_{88}RA$

C. $90^{T}H$

D. $89^{A}c$

Answer: B

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1256. The lightest, non-inflammable gas is:

A. H_2

B. He

C. N_2

D. Ar

Answer: B

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1257. The gaseous mixture used by divers for respiration is:

A. $N_2 + O_2$ mixture

B. $He + O_2$ mixture

C. $Ar + O_2$ mixture

D. Neon + O_2 mixture

Answer: B

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1258. Xenon tetrafluoride is:

A. Tetrahedral

B. Square planar

C. Pyramidal

D. Octahedral

Answer: B

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1259. Xenon difluoride is

A. Linear

B. Angular

C. Trigonal

D. Pyramidal

Answer: A

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1260. The rare gases are

A. Monoatomic

B. Diatomic

C. Triatomic

D. Polyatomic

Answer: A

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1261. The gas having lowest boiling point is:

A. Hydrogen

B. Helium

C. Nitrogen

D. Argon

Answer: B

Watch Video Solution

1262. The element having highest ionisation potential is:

A. H

B. N

C. O

D. He

Answer: D

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1263. Noble gases can be separated by :

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1264. Coconut charcoal at-100^0C absorbs in a mixture of:

A. He and Kr

B. Ar, Kr, and Xe

C. Kr and Xe

D. He and Ne

Answer: B

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1265. Coconut charcoal at-180^0C is used to separate a mixture of:

A. Ar and Kr

B. Ne and Ar

C. He and Kr

D. He and Ne

Answer: B

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1266. Which of the following noble gases is the least polarisable ?

A. He

B. Ne

C. Kr

D. Rn

Answer: A

Watch Video Solution

1267. Which is monoatomic:

A. Oxygen

B. Fluorine

C. Neon

D. Nitrogen

Answer: C

Watch Video Solution

1268. Which of the following does not react with fluroine.

A. Kr

B. Ar

C. Xe

D. All

Answer: B

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1269. In the clathrates of xenon with water, the nature of bonding between xenon and water molecules is:

A. Covalent

B. Hydrogen bonding

C. Co-ordinate

D. Dipole-induced dipole

Answer: D

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1270. Which species is not known

A. XeF_6

B. XeF_4

C. XeO_3

D. KrF_6

Answer: D

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1271. Xenon directly combines with :

A. Oxygen

B. Rubidium

C. Fluroine

D. Chlorine

Answer: C

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1272. Xenon best reacts with :

A. The most electropositive element

B. The most electronegative element

C. The hydrogen halides

D. Non-metals

Answer: B

Watch Video Solution

1273. Radon was discovered by :

A. Dorn

B. Ramsay

C. Rayleigh

D. None

Answer: A

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1274. Asthma patients used a mixture of..... For respiration:

A. O_2 and He

B. O_2 and xe

C. O_2 and Ar

D. O_2 and Ne

Answer: B

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1275. Ionisation potential of noble gases are___.

A. Maximum in a period

B. Minimum in a period

C. Either minimum or maximum

D. Constant

Answer: A

Watch Video Solution

1276. if two litres of air is passes repeatedly over heated copper and heated Mg till no further reduction in volume finally obtained will be approximately:

A. 200 mL

B. 20mL

C. Zero

D. 10 mL

Answer: B

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1277. Which statement is false?

A. Radon is obtained from the decay of radium

B. Helium is an inert gas

C. The most abundant rare gas found in the atomsphere is He

D. Xe is the most reactive among the noble gases

Answer: C

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1278. The forces of cohesion in liquid helium are:

A. Covalent

B. Ionic

C. Vander Waals.

D. Metallic

Answer: C

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1279. Which characterstics of zero group elements is common

A. Each of them has the same atomic number

B. Each of them has the same atomic mass

C. The outermost orbit of each is saturated in electrons

D. Each of them has the same number of electrons

Answer: C

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1280. The word argon means

A. Noble

B. Now

C. Strange

D. Lazy

Answer: D

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1281. Electron affinity for a noble gas is approximately equal to:

A. That of halogens

B. Zero

C. That of oxygen family

D. That of nitrogen famiy

Answer: B

Watch Video Solution

1282. First stable compound of inert gas was prepared by:

A. Rayleigh and Ramsay

B. Bartlett

C. Gfrankland and Lockyer

D. Cavendish

Answer: B

Watch Video Solution

1283. The inert gas obtained from monazite sand is:

A. He

B. Ne

C. Ar

D. Kr

Answer: A

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1284. The solubility of noble gas in water increases with the increase in:

A. Ionization potential of noble gas

B. Thermal Conductivity of noble gas

C. Atomic volume of noble gas

D. Electron affinity of noble gas

Answer: C

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1285. Which statement is not correct

A. Xe is the most reactive among the rare gases

B. Ar is an inert gas

C. Radon is obtained from decay of radium

D. The most abundant noble gas in the atomsphere is He

Answer: D

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1286. In solid state xenon atoms are held together by :

A. Hydrogen bonds

B. Vander Waal forces

C. Ionic bonds

D. Covalents bonds

Answer: B

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1287. The most polarisable boble gas is:

A. Kr

B. Ne

C. Xe

D. Ar

Answer: C

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1288. The symbol Rn represents

A. Radium

B. Radon

C. Rhenium

D. Rhodium

Answer: B

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1289. The m.pt. and b.pt. is lowest for

A. He

B. Ne

C. Xe

D. Ar

Answer: A

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1290. The inert gases present in the atmosphere are:

A. He and Ne

B. He, Ne, and Ar

C. He, Ne, Ar, and Kr

D. All the inert gases are present

Answer: D

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1291. The first noble gas compound obtained was

A. XeF_2

B. XeF_4

C. $XePtF_6$

D. $XeOF_4$

Answer: C

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1292. Welding of magnesium can be done in an atmosphere of:

A. O_2

B. He

C. N_2

D. All

Answer: B

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1293. The noble gas used in the preparation of first noble gas compound was:

A. Xe

B. He

C. Cr

D. Rn

Answer: A

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1294. Which noble gas does not form clathrates:

A. Xe

B. Kr

C. He

D. Ar

Answer: C

Watch Video Solution

1295. The sources of most of the noble gases is:

A. Decay of radioactive minerals

B. The atmospheric air

C. The mnatural gases coming out of the earth

D. The decay of rocks

Answer: B

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1296. Radon is a noble gas. It is radioactivity is used in the treatment of:

A. Typhold

B. Cancer

C. Cough and cold

D. Thyroid

Answer: B

Watch Video Solution

1297. How many lone pairs are associated with xenon in xenon difluoride :

A. 1

B. 2

C. 3

D. 4

Answer: C

Watch Video Solution

1298. In kroll and ICI process in the production of titanium, the inert gas used is:

A. Ne

B. Ar

C. Kr

D. Xe

Answer: B

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1299. in XeO_3 Xe is:

A. sp^3 hybridised

B. sp^2 hybridised

C. sp- hybridised

D. sp^3d- hybridised

Answer: B

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1300. The noble gas used in thermometer is:

A. He

B. O_2 and He

C. Xe

D. Ne

Answer: A

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1301. Which of the following liquids can climb up the wall of the glass vessel in which it is placed ?

A. Alcohol

B. Liquid He

C. Liquid N_2

D. Water

Answer: B

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1302. The spectrum of helium is similar to:

A. H

B. Na

C. Li^+

D. He^+

Answer: B

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1303. The compound that attacks pyrex glass is

A. XeF_2

B. XeF_4

C. XeF_6

D. None

Answer: C

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1304. The most important sources of He is:

A. Sun

B. Radon

C. Natural gas

D. Minerals

Answer: D

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1305. The helium nucleus contains

A. 4 Protons

B. 4 neutrons

C. 2 neutrons and 2 protons

D. 3 protons and 2 electrons

Answer: C

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1306. The atom larger in size as compared to oxygen is:

A. N

B. F

C. Ne

D. All

Answer: A

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1307. Which compound is prepared by the following

A. XeF_4

B. XeF_2

C. XeF_6

D. None of these

Answer: B

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1308. Helium is used in gas ballons instead of hydrogen because :

A. It is lighter than H_2

B. It is non-combustible

C. It is more abundant than H_2

D. Its leakage can be detected easily

Answer: B

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1309. A helium atom on loosing an electron becomes:

A. alpha -particle

B. Hydrogen atom

C. Positively charged helium ion

D. Negatively charged helium ion

Answer: C

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1310. Which is called lazy gas

A. Kr

B. Ar

C. He

D. Ne

Answer: B

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1311. Which noble gas is not easily to liquefy

A. Ne

B. He

C. Xe

D. Ar

Answer: B

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1312. Which noble gas havin the lowest atomic number

A. Ne

B. He

C. Kr

D. Xe

Answer: B

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1313. The mineral clevelte on heating gives:

A. He

B. Xe

C. Ar

D. Ra

Answer: A

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1314. Which of the following has zero valency

A. Be

B. Sc

C. Li

D. Ar

Answer: D

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1315. Nitrogen gas is absorbed by:

A. Finely divided Pd and pt

B. Colloidal Pd

C. Coconut charcoal

D. All

Answer: D

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1316. Noble gases possess:

A. Highly ionisation potential

B. Xzero electron affinity

C. High electrical conductance

D. All

Answer: D

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