CHEMISTRY

BOOKS - USHA CHEMISTRY (ODIA ENGLISH)

P-BLOCK ELEMENTS(GR-15,GR16,GR17,GR18)

Exercise

1. The first noble gas compound was prepared by

A. Lockyer

B. Ramsay

C. Bartlet

D. Cavendish

Answer:

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2. Which noble gas is called as stranger gas?

A. Ne

B. Ar

C. Kr

D. Xe

Answer:

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3. Which among the following sentences is correct about noble gases?

A. All noble gases have oclet in their valency shell

B. Kr is used in radiotherapy

C. The lifting power of ‘He’ is less than ‘H_2`

D. None of these

Answer:

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4. The hybridization involved in $XeFe_2$ structure is-

A. sp

B. dsp^3

C. sp^3d^2

D. sp^3d

Answer:

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5. XeF_6 on complete hydrolysis gives-

A. Xe

B. $XeOF_2$

C. XeO_3

D. XeO_2

Answer:

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6. Which of the following halogen acids is a liquid at room temperature?

A. HF

B. HCl

C. HBr

D. HI

Answer:

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7. 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:

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8. Ozone can act as_____

A. Disinfectant

B. Oxidant

C. Reductant

D. All are correct

Answer:

9. Which of the following hydrides of oxygen family shows the lowest boiling point?

A. H_2O

B. H_2S

C. H_2Se

D. H_2Te

Answer:

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10. Number of atoms in one molecule of sulphur is

A. 3

B. 4

C. 6

D. 8

Answer:

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11. Sulphuric acid anhydride is

A. SO_2

B. H_2S

C. H_2SO_4

D. SO_3

Answer:

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12. When SO_2 is passed through a solution of H_2S in water

A. H_2SO_5 is produced

B. H_2SO_3 is produced

C. Sulphur colloid is produced

D. None of these

Answer:

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13. Unlike other halogens, fluorine does not show higher oxidation states, because

A. It is highly electronegative

B. It has no vacant d-orbitals in the valency shell

C. Its atomic size is very small

D. Its ionisation energy is very high

Answer:

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14. Which of the following is not true for interhalogen compounds?

A. These are more reactive than halogens.

B. These are covalent in nature

C. They have low boiling point and are highly volatile

D. They are quite unstable but none of them are explosive

Answer:

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15. Which of the following is known as king of chemicals?

A. NHO_3

B. NaOH

C. H_2SO_4

D. NH_4OH

Answer:

Watch Video Solution

16. Which of the following is formed when hot NaOH reacts with chlorine?

A. NaClO

B. $NaClO_2$

C. $NaClO_3$

D. $NaClO_4$

Answer:

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17. Chlorine is produced by the

A. Electrolysis of aqueous NaCl

B. Action of cone H_2SO_4 on NaCl in presence of MnO_2

C. Action of HCl and MnO_2

D. All of these

Answer:

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18. When SO_2 is passed through acidified $KMnO_4$ solution

A. $KMnO_4$ is reduced

B. SO_2 is reduced

C. $KMnO_4$ solution changes to green

D. $KMnO_4$ is oxidized

Answer:

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19. Which of the following shows maximum catenation property?

A. Oxygen

B. Chlorine

C. Sulphur

D. Fluorine

Answer:

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20. In deep sea diving, the divers use a mixture of-

A. O_2 and Ar

B. O_2 and He

C. O_2 and N_2

D. O_2 and H_2

Answer:

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21. Which compound is formed in the following reaction? $Xe + F_2 \xrightarrow[Ni-vessel]{673K,\ atm}$ (1:5 volume ratio)

A. XeF_2

B. XeF_4

C. XeF_6

D. $XeOF_2$

Answer:

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22. The composition of oleum is

A. $H_2SO_4.SO_2$

B. $H_2S_2O_7$

C. $H_2S_2O_8$

D. H_2SO_5

Answer:

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23. Bleaching action of SO_2 is due to its

A. Acidic property

B. Reducing property

C. Basic property

D. Oxidising property

Answer:

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24. The correct of increasing oxidasing power is-

A. $F_2 > Cl_2 Br_2 > I_2$

B. $F_2 < Cl_2 < Br_2 > I_2$

C. $Cl_2 > Br_2 < F_2 > I_2$

D. $I_2 < Br_2 < Cl_2 < F_2$

Answer:

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25. The first noble gas compound prepared by Bartlet is

A. XeO_3

B. $Xe[ptF_6]$

C. XeF_4

D. $XeOF_4$

Answer:

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26. Ozone readily dissolves in

A. H_2O

B. NH_3

C. CS_2

D. Turpentine oil

Answer:

Watch Video Solution

27. Which of the following metals sticks to glass tube on treatment with Ozone?

A. Silver

B. Gold

C. Mercury

D. Nickel

Answer:

Watch Video Solution

28. The bleaching action of Cl_2 is due to its

A. Oxidising property

B. Reducing property

C. Dehydrating property

D. Acidic property

Answer:

Watch Video Solution

29. Number of atoms in one molecule of sulphur is

A. 2

B. 16

C. 8

D. 32

Answer:

Watch Video Solution

30. Which of the following is used in cryogenics.

A. He

B. Ne

C. Ar

D. Rn

Answer:

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31. The false statement about sulphuric acid is

A. It acts as an oxidant

B. It acts as a dehydrating agent

C. It forms two series of salts

D. It absorbs SO_2 to form oleum

Answer:

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

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer:

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33. The element which never acts as reducing agent in a chemical reaction is _____

A. Lithium

B. Carbon

C. Oxygen

D. Fluorine

Answer:

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34. Chlorine gas is dried over_____

A. CaO

B. NaOH

C. KOH

D. Conc. H_2SO_4

Answer:

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35. Which of the following is most volatile?

A. HI

B. HBr

C. HCl

D. HF

Answer:

Watch Video Solution

36. Which of the following is the strongest reducing agent?

A. HF

B. H_2S

C. HBr

D. HI

Answer:

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37. Bond angle is minimum for

A. H_2O

B. HNO_3

C. H_2Te

D. H_2Se

Answer:

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38. The acid used in lead storage battery is

A. HCl

B. $HClO_3$

C. H_2SO_4

D. H_3PO_4

Answer:

Watch Video Solution

39. Which of the following is the strongest acid?

A. $HClO_4$

B. In making fertilize

C. $HClO_2$

D. HClO

Answer:

Watch Video Solution

40. Sulphuric acid as used

A. In lead storage batteries

B. Gr-17

C. As a dehydrating agent

D. In all of these

Answer:

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41. Aerogen is the name given to the elements of-

A. Gr-16

B. Chalcogen

C. Gr-18

D. None of these

Answer:

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42. The collective name given to the elements of Gr-16 is-

A. Halogen

B. chalcogens

C. Pnicogen

D. Aerogen

Answer:

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43. Oxygen and ozone are

A. Isomers

B. allotropes

C. Isotopes

D. Isosters

Answer:

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

A. Mercurous oxide

B. Molybdenum

C. Mercuric hydroxide

D. Mercurous chloride

Answer:

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45. Which catalyst is used in contact process for manufacture of H_2SO_4 ?

A. Nickel

B. Reductant

C. V_2O_5

D. Finely divided iron

Answer:

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46. In the reaction `HCOOH + (H_2SO_4) gives H_2O + CO sulphuric acid acts as_____

A. Oxidant

B. HNO_3

C. Dehydrating agent

D. None of these

Answer:

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47. The acid used for etching of glass is

A. H_2SO_4

B. $PbS + 4O_3 \rightarrow PbSO_4 + 4O_2$

C. HF

D. HCl

Answer:

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48. In which case Ozone acts as reductant?

A. $KNO_2 + O_3 \rightarrow KnO_3 + O_2$

B. $H_2O + O_3 + SO_2 \rightarrow H_2SO_4$

C. $Ag_2O + O_3 \rightarrow 2Ag + 2O_2$

D.

$$3SnCl_2 + O_3 + 6Hcl \rightarrow 3SnCl_4 + 3H_2O$$

Answer:

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49. In the reaction $H_2S + O_3 \rightarrow$ ..... The products are-

A. H_2, S, O_2

B. Br_2

C. H_2O, S

D. SO_2, H_2O

Answer:

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50. Which of the following reacts with liquid NH_3 to form a mild explosive?

A. Cl_2

B. 120°

C. I_2

D. None of these

Answer:

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51. The bond angle in O_3 molecule is

A. 180°

B. Ne

C. 119.5°

D. 116.5°

Answer:

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52. Which of the noble gases is not present in the atmosphere?

A. He

B. S – S

C. Ar

D. Rn

Answer:

Watch Video Solution

53. Which of the following has the highest bond energy?

A. O – O

B. S – S

C. Se- Se

D. Te – Te

Answer:

Watch Video Solution

54. Which of the compounds give carbon with sulphuric acid?

A. Oxalic acid

B. CuS

C. Sugar

D. `Na

Answer:

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55. Identify the catalyst used in Decan process.

A. Cu

B. Increase in bp – bp repulsion

C. $CuCl_2$

D. Na_2CO_3

Answer:

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56. The bond angle for the hydrides of Gr-15 elements decreases from $NH_3(107^\circ)$ to $SbH_3(91^\circ)$. This is due to

A. Decreases in electronegatvity of the central atoms

B. 6

C. Decrease in Ip – Ip repulsion

D. $Cu(CN)_2$

Answer:

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57. The number of p - o – p bonds in phosphorous pentoxide `(P_4O_10) are

A. 5

B. 6

C. 4

D. None of these

Answer:

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58. Which of the following is not a method of preparation of ammonia?

A. Heating of ammonium nitrite

B. $\left[Cu(NH_3)_4\right]SO_4$

C. Heating of magnesium nitrite with water

D. 10

Answer:

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59. When ammonia is passed through copper sulphate solution a deep blue solution is formed due to formation of

A. $Cu(OH)_2$

B. $\left[Cu(NH_3)_4\right]SO_4$

C. $(NH_4)SO_4$

D. Heating of ammonium sulphide

Answer:

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60. P_4 molecule has tetrahedral structure. The $\angle P-P-P$ bond angle is_____

A. $109^\circ 28$

B. 120°

C. 60°

D. 90°

Answer:

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61. Identify the catalyst used in Ostawald's process.

A. V_2O_5

B. Mixture of conc. HCl and conc. HNO_3 in the volume 3:1

C. Pt

D. 120°

Answer:

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62. Aqua regia is

A. Mixture dil. HCl and dil. HNO_3 in the volume ratio 1:1

B. Mixture of conc. HNO_3 and conc. HCl in the volume ration 1:3

C. Mixture of conc. HNO_3 and conc. HCl in the volume ration 3:1

D. Ni

Answer:

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63. Why halogens are highly reactive?

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64. What happens when SO_2 is passed through chlorine water ?

Watch Video Solution

65. What is the 1st noble gas element discovered in earth?

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66. Why does SO_2 act as bleaching agent only in presence of moisture?

Watch Video Solution

67. OF_2 is called as oxygen difluoride and not fluorine oxide. Why?

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68. Which noble gas has less than 8 electrons in its valency shell?

Watch Video Solution

69. The inert gas used in beacon lights is_____

Watch Video Solution

70. Randon was discovered by_____

Watch Video Solution

71. Which noble gas compound is highly explosive?

Watch Video Solution

72. Arrange as indicated - H_2O, H_2S, H_2Se, H_2Te (increasing bond angle)

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73. In SO_2 an oxidizing agent or reducing agent or both?

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74. Which oxide of oxygen family is amphoteric in nature?

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75. What is the highest oxidation state of oxygen family ?

Watch Video Solution

76. What is oil of vitriol ?

Watch Video Solution

77. Write two oxoacid of sulphur.

Watch Video Solution

78. The first noble gas compound was prepared by

Watch Video Solution

79. _____ noble gas can't be absorbed by coconut charcoal .

Watch Video Solution

80. Radon is formed by disintegration of _____.

Watch Video Solution

81. Which of the halogens forms hydrogen bond ?

Watch Video Solution

82. Which halogen is solid at the room temperature ?

Watch Video Solution

83. Write two uses of Ozone.

Watch Video Solution

84. Which of the following is used in cryogenics.

Watch Video Solution

85. Draw the resonating structure of O_3 molecule.

Watch Video Solution

86. For dilution of H_2SO_4, H_2O should not be added to conc. H_2SO_4. Give the reason .

Watch Video Solution

87. Oxygen was discovered by _____.

Watch Video Solution

88. Arrange the halogen hydrides in increasing order of their thermal stability.

Watch Video Solution

89. The hydride of which halogen exists in the dimeric form ?

Watch Video Solution

90. Arrange the halogens in increasing oder of Vander Waal's force present in them.

Watch Video Solution

91. The $\frac{C_p}{C_v}$ value of the noble gases _____ .

Watch Video Solution

92. Which noble gas is used in radiotherapy ?

Watch Video Solution

93. Among the halogens which has highest bond dissociation energy ?

Watch Video Solution

94. Why is Helium monoatomic ?

Watch Video Solution

95. Between HI and HCl which is stronger acid?

Watch Video Solution

96. Why can't Cl_2 bleach dry flowers ?

Watch Video Solution

97. Which noble gas is most soluble in water ?

Watch Video Solution

98. Which noble gas is called as stranger gas?

Watch Video Solution

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

Watch Video Solution

100. The most abundant noble gas present in the atmosphere is _____.

Watch Video Solution

101. The main source of Helium in earth is ____.

Watch Video Solution

102. Why can't SO_2 be collected over water?

Watch Video Solution

103. How is the presence of SO_2 detected?

Watch Video Solution

104. Arrange the oxoacids of chlorine In Increasing order of their acidic strength.

Watch Video Solution

105. Between O_2 and O_3 which is paramagnetic ?

Watch Video Solution

106. Oxygen gas can be absorbed by _____.

Watch Video Solution

107. Which group elements are called as chalcogens.

Watch Video Solution

108. What is the reason for the syrupy nature of conc. H_2SO_4 ?

Watch Video Solution

109. Write the allotropic forms of sulphur.

Watch Video Solution

110. Which allotropic form of sulphur is more stable at room temperature ?

Watch Video Solution

111. Write the allotropic forms of oxygen .

Watch Video Solution

112. Ozone is prepared by passing silent electric discharge through

Watch Video Solution

113. What does H_2SO_4 behave when it reacts with formic acid?

Watch Video Solution

114. The bleaching action of Cl_2 is due to its _____ property .

Watch Video Solution

115. The maximum covalency of chlorine is _____.

Watch Video Solution

116. Why is a compound of oxygen and florine is called as oxygen difluoride ?

Watch Video Solution

117. Name the substance used for drying of SO_2 gas.

Watch Video Solution

118. Name the hydride of Gr-VI elements which is liquid at room temperature ?

119. Between HBr and HI which is more easily oxidised?

120. What happens when MnO_2 is heated with hydrochloric acid ?

Watch Video Solution

121. Why is OF_6 not known?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

124. Arrange the halogens in increasing order of their electron affinity.

Watch Video Solution

125. Name two chalcogens .

Watch Video Solution

126. Name the element of Gr. 16 which has highest cate nation property ?

Watch Video Solution

127. What is Marshall's acid ?

Watch Video Solution

128. Which halogen will produce O_2 and O_3 on passing through water ?

Watch Video Solution

129. Draw the molecular structure of oleum.

Watch Video Solution

130. Write the anomalous properties of fluorine.

Watch Video Solution

131. Which halogen can not form +ve ion ?

Watch Video Solution

132. Which gas is responsible for absorbing U.V. radiations emitted by sun ?

Watch Video Solution

133. Write all the members of oxygen family.

Watch Video Solution

134. Which among the oxygen family is radioactive?

Watch Video Solution

135. Which halogen exists in liquid state at room temperature ?

Watch Video Solution

136. HI is an oxidising or reducing agent ?

Watch Video Solution

137. Which halogen is radioactive?

Watch Video Solution

138. Which noble gas is called as Lazy gas?

Watch Video Solution

139. Which element directly combines with xenon forming compounds?

Watch Video Solution

140. Between F_2 and Cl_2 which is more reactive?

Watch Video Solution

141. Write one oxyacid of chlorine.

Watch Video Solution

142. In the reaction

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

acts as _____...

Watch Video Solution

143. Arrange the halogen acids in increasing order of their acidic strength.

Watch Video Solution

144. Which halogen will produce O_2 and O_3 on passing through water ?

Watch Video Solution

145. What is called fourth state of matter ?

Watch Video Solution

146. Arrange the noble gases in increasing order of the case liquification.

Watch Video Solution

147. Name two scientists associated with discovery of noble gasses.

Watch Video Solution

148. What is the bond angle in SO_2 molecule ?

Watch Video Solution

149. Why do the Gr-18 elements not form compounds under ordinary conditions ?

Watch Video Solution

150. Why has it been difficult to study chemistry of radon ?

Watch Video Solution

151. Acidified $K_2Cr_2O_7$ solution changes to when SO_2 gas is passed through it.

Watch Video Solution

152. What is the shape of ozone molecule ?

Watch Video Solution

153. Name two poisonous gases which can be prepared from Cl_2.

Watch Video Solution

154. H_2O is a liquid while hydrogen sulphide is a gas at room temperature. Give reasons.

Watch Video Solution

155. Write all the members of halogen family.

Watch Video Solution

156. Which noble gas is used along with O_2 for respiration by sea divers ?

Watch Video Solution

157. Which noble gas is called as Hidden gas ?

Watch Video Solution

158. Presence of Helium in earth was Ist proved by _____.

Watch Video Solution

159. What is composition of Oleum ?

Watch Video Solution

160. What is the role of MnO_2 in the preparation of Cl_2 from HCI?

Watch Video Solution

161. Explain why the ionisation energy of nitrogen is more than that of oxygen.

Watch Video Solution

162. Write the equation for the reaction between CI_2 and dil. NaOH solution.

Watch Video Solution

163. Name the process employed for manufacture of NH_3 from N_2 and H_2 .

Watch Video Solution

164. Magnesium nitride on bolling with water forms _____.

Watch Video Solution

165. Why is phosphoric acid syrupy in nature ?

Watch Video Solution

166. Write the product formed when ammonia reacts with excess of chlorine.

Watch Video Solution

167. Why is Iron passive with conc. NHO_3 ?

Watch Video Solution

168. What is the compound formed during brown ring test for nitrate.

Watch Video Solution

169. Which oxide of nitrogen is paramagnetic ?

Watch Video Solution

170. Write the structural formula of N_2O_5.

Watch Video Solution

171. Write the allotropic form of phosphorus.

Watch Video Solution

172. Which gas is produced when white phosphorus is boiled with NaOH solution ?

Watch Video Solution

173. What is the role of MnO_2 In the preparation of O_2 from $KClO_3$?

Watch Video Solution

174. What is the covalency of $'N'$ in N_2O_5 ?

Watch Video Solution

175. Why NCl_5 is not formed?

Watch Video Solution

176. Is PCl_5 ionic or covalent in solid state?

Watch Video Solution

177. Between NH_3 and PH_3 which has higher bond angle?

Watch Video Solution

178. Why is red phosphorous is less than reactive white phosphorous ?

Watch Video Solution

179. Explain why nitrogen is inert as compared to phosphorus.

Watch Video Solution

180. Balance the following equation : $Cu + HNO_3 \rightarrow Cu(No_3)_2 + H_2O + NO$

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181. Between NH_3 and PH_3 which is stronger reducing agent?

Watch Video Solution

182. Complete the equation : $Ca_3P_2 + H_2O \rightarrow$

Watch Video Solution

183. Write the increasing order of thermal stability of hydrides of Gr-16 elements.

Watch Video Solution

184. Why Cl_2 has both oxidising and bleaching property?

Watch Video Solution

185. Explain, why NH_3 is a complexing agent ?

Watch Video Solution

186. What is anhydride of nitric acid?

Watch Video Solution

187. What are the interhalogen compounds? Give examples.

Watch Video Solution

188. Why is OF_6 not known?

Watch Video Solution

189. What happens when hydrogen lodide solution is added to lead acetate solution ?

Watch Video Solution

190. Acidified $K_2Cr_2O_7$ solution changes to when SO_2 gas is passed through it.

Watch Video Solution

191. What happens when hydrochloric acid is added to silver nitrate solution ?

Watch Video Solution

192. Why does only xenon from stable compounds among the noble gases?

Watch Video Solution

193. What was the first noble gas compound and who prepared it?

Watch Video Solution

194. Write four characteristic properties of noble gases.

Watch Video Solution

195. Why is neon used in beacon light ?

Watch Video Solution

196. Which noble gas is used along with O_2 for respiration by sea divers ?

Watch Video Solution

197. What happens when Nal is heated with conc. H_2SO_4 ?

Watch Video Solution

198. Oxygen exists as O_2 while sulphur exists as S_8,although they belong to same family. Explain.

Watch Video Solution

199. What happens when Cl_2 gas is passed through dry slaked lime?

Watch Video Solution

200. Why HF cannot be stored in glass bottle ?

Watch Video Solution

201. Give one example of each in which SO_2 acts as reductant and oxidant respectively.

Watch Video Solution

202. Why is oxygen a gas sulphur a solid at while room temperature ?

Watch Video Solution

203. Explain why CIF_3 exists where as FCI_3 does not.

Watch Video Solution

204. What happens when Cl_2 gas is passed through a solution of NaI?

Watch Video Solution

205. What is aqua regia? What is its use ?

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206. For dilution of H_2SO_4, H_2O should not be added to conc. H_2SO_4. Give the reason .

Watch Video Solution

207. Explain why bond angle in H_2S is lower than in H_2O ?

Watch Video Solution

208. A mixture of three gases A, B, C is passed first through acidified $K_2Cr_2O_7$ solution when A is absorbed turning the $K_2Cr_2O_7$ solution green. B gas is absorbed in lime water turning it milky and $'C'$ gas is absorbed in terpentine oil. Identify A,B,C .

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209. Why do noble gases have comparatively large atomic size in a particular period ?

Watch Video Solution

210. Why are halogens coloured ?

Watch Video Solution

211. Arrange H_2O, H_2S, H_2Se, H_2Te in order of increasing thermal stability.

Watch Video Solution

212. How does ozone react with silver metal ?

Watch Video Solution

213. What happens when PbS is treated with ozone ?

Watch Video Solution

214. The Halogen which has the highest electron affinity :

Watch Video Solution

215. Which of the halogens (excluding astatine) has highest electronegativity ?

Watch Video Solution

216. Which of the halogens (excluding astatine) is strongest oxidant ?

Watch Video Solution

217. Which of the halogens (excluding astatine)has lowest ionisation energy ?

Watch Video Solution

218. How is H_2S prepared in the laboratory ?

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219. How can you prepare HCl gas in the laboratory?

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220. Explain why F_2 does not form oxyacids.

Watch Video Solution

221. Explain why halogens are strong oxidising agents.

Watch Video Solution

222. Explain why HBr and HI can't be prepared by heating NaBr and Nal with conc. H_2SO_4?

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223. How does sulphuric acid react with sodium bromide ?

Watch Video Solution

224. What is charring of sugar ?

Watch Video Solution

225. HF is less volatile than HCl. Explain.

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226. Do as directed : F_2, Cl_2, Br_2, I_2

(increasing bond dissociation energy)

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227. Do as directed : H_2O, H_2S, H_2Se, H_2Te

(Increasing acidic strength)

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228. HF can form the salt KHF_2 while HCl does not form $KHCl_2$. Explain.

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229. Give the principle of manufacture of H_2SO_4 by contact process.

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230. What is the action of O_3 on acidified $FeSO_4$ solution ?

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231. How does xenon react with O_2F_2 at $-118^\circ C$?

Watch Video Solution

232. Why does xenon form compounds only with fluorine and oxygen ?

Watch Video Solution

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

Watch Video Solution

234. Why is H_2SO_4 called as king of the chemicals?

Watch Video Solution

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

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236. What happens when copper turnings are heated with conc. H_2SO_4 ?

Watch Video Solution

237. Explain why SO_2 is more powerful reducing agent in alkaline medium than in acid medium.

Watch Video Solution

238. In contact process SO_3 is not directly dissolved in water, explain why ?

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239. How does hydrofluoric acid react with sand ?

Watch Video Solution

240. What happens when Zinc metal is treated with dilute H_2SO_4 ?

Watch Video Solution

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

Watch Video Solution

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

Watch Video Solution

243. What happens when SO_2gas is passed through lime water first slowly and then in excess ?

Watch Video Solution

244. How does Ozone react with KI solution ?

Watch Video Solution

245. Write the shapes and type of hybridisation of the following molecules : $XeF_2, XeF_4, XeF_6, XeO_4$

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246. How does ozone react with $SnCl_2$

Watch Video Solution

247. How does Ozone react with KI solution ?

Watch Video Solution

248. What is the action of ozone on hydrogen peroxide ?

Watch Video Solution

249. What happens when XeF_6 is heated with water ?

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250. Write all the noble gases. Why don't they enter into chemical combination ?

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251. Give two reactions of fluorine, one with metal and other with nonmetal.

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252. How can you prepare xenon hexafluoride ?

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253. How does ozone react with moist iodine?

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254. What does H_2SO_4 behave when it reacts with formic acid?

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255. Explain why a blue litmus dipped into a solution of hypochlorous acid first turns red and then gets decolourised.

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256. What is etching of glass ?

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257. What is the action of hydrochloric acid on potassium permanganate ?

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258. What happens when ammonia is heated with cupric oxide ?

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259. What happens when ammonium hydroxide is added to sulphate solution first slowly and then in excess.

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260. Write the structural formula of H_3PO_3 and H_3PO_4 .

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261. Why NO_2 dimerise to N_2O_4 ?

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262. What are the favourable conditions for synthesis of NH_3 by Haber's process ?

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263. Why is PCI_5, more covalent than PCI_3 ?

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264. Explain why the reducing power for the hydrides of Gr-15 increases down the group

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265. Why does Nitrogen exist as N_2 white phosphorus as P_4 ?

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266. Why does ozone act as a powerful oxidant?

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267. List the important sources of sulphur.

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268. Name two poisonous gases which can be prepared from Cl_2.

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269. Write the anomalous properties of fluorine.

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270. Mention some important uses of sulphuric acid.

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271. Explain, that in SO_2 the two S-O bonds are equal in length.

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272. Why does NH_3 form hydrogen bond but PH_3 does not ?

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273. How copper metal gives different products with nitric acid ?

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274. Write three difference in properties of white phosphorus and red phosphorus

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275. Give example of compounds showing +3, +5 oxidation states for phosphorous

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276. What happens when NaCl is treated with sulphuric acid in presence of MnO_2 ?

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277. What happens when Cl_2 gas is passed through hot concentrated solution of NaOH ?

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278. Explain, why NH_3 is a complexing agent ?

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279. Bond angle in phosphonium ion is higher than phosphine. Explain.

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280. Why does PCI_3, fumes in moist air ?

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281. Explain, why all the bonds In PCI_5 are not identical.

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282. Write basicity of H_3PO_2, H_3PO_3 and H_3PO_4 .

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283. When iron reacts with HCI, ferrous chloride is formed not ferric chloride, why ,?

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284. How can you prepare CI_2 from HCl and HCI from Cl_2 ?

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285. Arrange as indicated - HF,HCL,HBr,HI (increasing volatility order)

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286. Arrange as indicated - NH_3, PH_3, AsH_3, SbH_3 (increasing basic strength)

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287. Arrange the halogen acids in increasing order of their acidic strength.

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288. Arrange as indicated - H_2O, H_2S, H_2Se, H_2Te (increasing bond angle)

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289. On the basis of VSEPR theory explain the shape of BrF_3 molecule .

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290. Describe the geometry of XeF_6.

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291. Between F_2 and Cl_2 which has more oxidising power and why?

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292. Write three anomalous behaviour of Nitrogen.

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293. Write three properties of oxygen by which it differs from its family members.

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294. How do you account for the following : Sulphur is paramagnetic in vapour state.

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295. How do you account for the following : Enthalpy of dissociation of Cl_2 is higher than F_2 .

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296. On heating a compound A gives compound $'B'$ which is a constituent of air. This gas when heated with hydrogen in presence of iron catalyst gives gas $'C'$ which is basic in nature. Gas C on oxidation in moist condition gives compound $'D'$ which is

constituent of acid rain. Identify A, B, C,D and give necessary equation.

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297. Fluorine has less -ve value of electron gain enthalpy than chlorine. Explain.

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298. Why are the Gr-18 elements called as inert gases ?

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299. Write two uses of Helium.

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300. Give the preparation of XeF_2 and XeF_4.

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301. Discuss the trends in properties of hydrides of Gr-16 family (any three) ?

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302. How is SO_2 prepared in the laboratory?

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303. Describe the laboratory method of preparation of sulphur dioxide. How does it

react with acidified $KMnO_4$ solution and chlorine water ?

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304. How does SO_2 react with Mg metal

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305. How does SO_2 react with acidified $K_2Cr_2O_7$

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306. Write all the members of halogen family.

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307. What happens when Sulphur dioxide is passed through $FeCl_3$ solution ?

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308. What happens when O_3 is passed through acidified $SnCl_2$ solution ?

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309. What happens when SO_2 is passed thorugh aqueous solution of H_2S?

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310. What happens when SO_2 is passed through chlorine water ?

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311. Describe the Siemen's method of preparation of Ozone. How does it react with PbS.

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312. Describe the Siemen's method of preparation of Ozone. How does it react with Moist lodine.

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313. What happens when Nal is heated with conc. H_2SO_4 ?

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314. What happens when H_2S gas is passed through conc. solution of ammonia ?

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315. Why is H_2SO_4 a syrupy liquid ?

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316. Write three anomalous behaviour of Nitrogen.

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317. Give the reaction of nitrogen with calcium carbide.

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318. Write the allotropic form of phosphorus.

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319. During laboratory method of preparation of ammonia, the drying agent used is

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320. How does nitric acid react with zinc ?

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321. Explain the tendency of NH_3 to form complex.

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