



CHEMISTRY

BOOKS - UNITED BOOK HOUSE

MODEL QUESTION PAPER 1

Exercise

1. The relationship between energy E , of the radiation with a wavelength 8000 \AA and the energy of the radiation with a wavelength 16000 \AA is

A. $E_1 = 6E_2$

B. $E_1 = \frac{1}{2}E_2$

C. $E_1 = 4E_2$

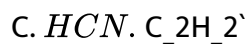
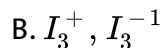
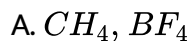
D. $E_1 = 2E_2$

Answer:



Watch Video Solution

2. Which pair does not contain species with similar shape?



D. Both A and B

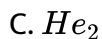
Answer:



Watch Video Solution

3. Which of the following is para magnetic and also has a bond order equal to 0.5?



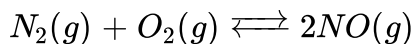


Answer:

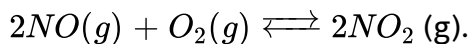


Watch Video Solution

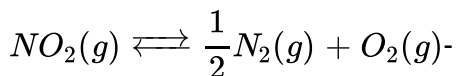
4. For the reaction



the equilibrium constant is K_1 . The equilibrium constant is K_2 for the reaction ,



What is K for the reaction,



A. $\frac{1}{2k_1k_2}$

B. $\frac{1}{4k_1k_2}$

C. $\left[\frac{1}{k_1k_2} \right]^{\frac{1}{2}}$

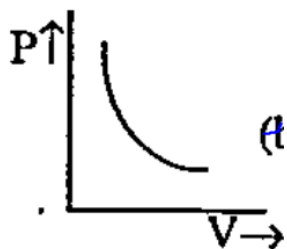
D. $\frac{1}{k_1 k_2}$

Answer:

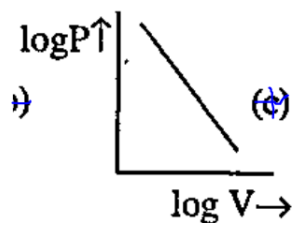
 Watch Video Solution

5. Which curve does not represent Boyle's law?

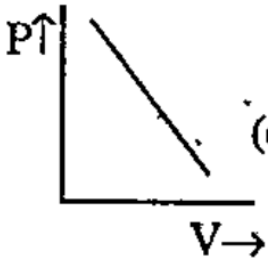
A.



B.



C.



D.



Answer:



[Watch Video Solution](#)

6. The difference between ΔH and ΔU at constant volume is equal to

A. R

B. $P\Delta V$

C. $V\Delta P$

D. $3/2R$

Answer:

 [Watch Video Solution](#)

7. What is entropy? What are the units of entropy?

A. $JK^{-1}mol^{-1}$

B. $Jg^{-1}mol^{-1}$

C. $Jmol^{-1}$

D. $K^{-1}mol$

Answer:

 [Watch Video Solution](#)

8. Which of the following compound has the lowest melting point?



B. $CaCl_2$

C. $CaBr_2$

D. CaI_2

Answer:

 [Watch Video Solution](#)

9. Which pair of the following chlorides do not impart colour to the flame?

A. $BeCl_2$ and $SrCl_2$

B. $BeCl_2$ and $MgCl_2$

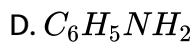
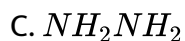
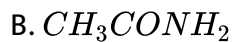
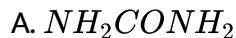
C. $CaCl_2$ and $BaCl_2$

D. $MgCl_2$ and $CaCl_2$

Answer:

 [Watch Video Solution](#)

10. For which of the following compounds will Lassaigne's test for nitrogen fail?



Answer:

 [Watch Video Solution](#)

11. The number of σ and π bonds present in 1-Buten-3-yne are

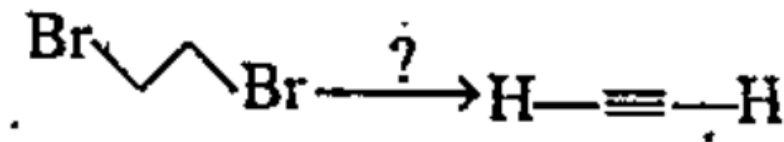


D. 6σ and 4π

Answer:

 Watch Video Solution

12. The reagents for the following conversion



- A. alcoholic KOH
- B. alcoholic KOH followed by $NaNH_2$
- C. aqueous KOH followed by $NaNH_2$
- D. Zn/CH_3OH

Answer:

 Watch Video Solution

13. In any sample of water it is always found that

- A. BOD > COD
- B. BOD < COD
- C. BOD=COD
- D. None of these

Answer:

 [Watch Video Solution](#)

14. From 400 mg of CO_2 , 10^{21} molecules are removed.. How many moles of CO_2 are left behind?

 [Watch Video Solution](#)

15. $2.49 \times 10^{-18} g$ of an element. A contains 2.0×10^4 atoms. What is, the atomic mass of the element A?

 [Watch Video Solution](#)

16. In which block element lanthanoid Contraction observe?

 [Watch Video Solution](#)

17. Name the element having highest electron affinity.

 [Watch Video Solution](#)

18. Which type of property internal energy is?

 [Watch Video Solution](#)

19. Baeyer's reagent is -

 [Watch Video Solution](#)

20. A compound composed of carbon, hydrogen and chlorine contains C = 10.04% and Cl = 89.12%. The vapour density of the compound is 59.75 . Determine its molecular formula.

 [Watch Video Solution](#)

21. State Pauli's exclusion principle. Give an example of an ion which obeys Bohr's theory.

 [Watch Video Solution](#)

22. Explain, why 3f orbital does not exist. How many electrons of Cl-atom, $n + 1 = 3$?

 [Watch Video Solution](#)

23. Suggest reasons why the B-F bond length in BF_3 (130 pm) and BF_4^- (143 pm) are different.

 [Watch Video Solution](#)

24. How will you convert a mixture of CO and CO_2 completely into CO ?

 [Watch Video Solution](#)

25. How will you convert a mixture of CO and CO_2 completely into CO ?

 [Watch Video Solution](#)

26. $(CH_3)_3C - Cl$, is unreactive, towards S_N^2 reaction. Why?

 [Watch Video Solution](#)

27. Write one effect of depletion of ozone layer and one measure for the prevention of ozone layer depletion.

 [Watch Video Solution](#)

28. Give the electronic configuration of $_{24}\text{Cr}^{3+}$. Find the number of unpaired electrons present in it. Is it paramagnetic or diamagnetic?

 [Watch Video Solution](#)

29. Why ionisation enthalpy of nitrogen is greater than that of oxygen atom?

 [Watch Video Solution](#)

30. Which one of the following elements has the least electron affinity? B, C, N, O.

 [Watch Video Solution](#)

31. Which one is more basic and why— MgO & Al_2O_3 ?

 [Watch Video Solution](#)

32. The general electronic configuration of d-block elements is

 [Watch Video Solution](#)

33. According to VSEPR theory explain the shape of ClF_3 .

 [Watch Video Solution](#)

34. " CCl_4 does not have any hydrolysis but SiCl_4 suffers hydrolysis—
Why?"

 [Watch Video Solution](#)

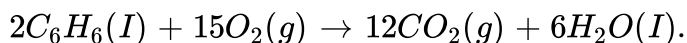
35. Explain the formation and difference between a sigma bond and a pi bond. Which has more bond strength?

 [Watch Video Solution](#)

36. At 273 K and 76 cm pressure, the volume of 0.64 g of any gas is 224 mL. At what temperature 1 g of that gas at 1 atm pressure will occupy a volume of 1 litre?

 [Watch Video Solution](#)

37. Calculate the difference between heat of reaction at constant pressure and at constant volume for the following reaction at 25°C.



 [Watch Video Solution](#)

38. Density is an intensive property. Explain.

 [Watch Video Solution](#)

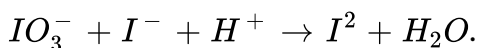
39. An 'ideal gas enclosed in a cylinder fitted with a piston of volume ZiL is compressed isothermally to $1/3rd$ of its initial volume, under the influence of 3 atm constant external pressure. Calculate q , w and ΔU .

 [Watch Video Solution](#)

40. What is the oxidation number of Fe in $Fe(CO)_5$?

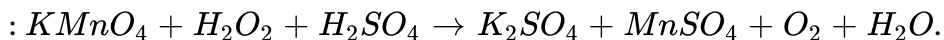
 [Watch Video Solution](#)

41. Balance the following chemical equation by ion electron method.



 [Watch Video Solution](#)

42. Balance the following chemical equation by oxidation number method



 [Watch Video Solution](#)

43. Mention the oxidation number of two nitrogen atom in NH_4NO_3 molecule.

 [Watch Video Solution](#)

44. State one method to remove permanent hardness of water.

 [Watch Video Solution](#)

45. In the laboratory preparation of H_2O_2 a paste of BaO_2 is used instead of anhydrous BaO_2 . Explain.

 [Watch Video Solution](#)



Watch Video Solution

46. Li_2CO_3 decomposes on heating to give CO_2 but Na_2CO_3 does not decompose. Explain why?



Watch Video Solution

47. What is the action of heat on plaster of paris?



Watch Video Solution

48. What is the hybrid state of $BeCl_2$ in solid and vapour state?



Watch Video Solution

49. Why are alkali metals not found in nature?



Watch Video Solution

50. Benzyl chloride is much reactive in S_N1 reaction, even though it is a primary substrate - why?

 [Watch Video Solution](#)

51. Draw the canonicals of CH_3COOH and CH_3COO^- . In which case resonance is more important? Answer with reason.

 [Watch Video Solution](#)

52. Which of the following compounds exhibit tautomerism?
 $C_6H_5COCH_3$, C_6H_5CHO , $C_6H_5COC_6H_5$, CH_3COCH_3 .

 [Watch Video Solution](#)

53. The dissociation equilibrium of AB_2 gas is : $2AB_2(g) \rightleftharpoons 2AB(g) + B_2(g)$. the degree of dissociation of AB_2 (g) is x and $x \ll 1$.

Establish the relation among the degree of dissociation (α), equilibrium constant (K_p) and total pressure (P).

 [Watch Video Solution](#)

54. Explain the effect of pressure on the position of equilibrium of the following reaction. $H_2(g) + I_2(g) \rightleftharpoons 2HI(g)$.

 [Watch Video Solution](#)

55. The solubility product of $BaSO_4$ is 1.1×10^{-10} at $25^\circ C$. Determine the solubility in 0.1 (M) $BaCl_2$ solution at that temperature

 [Watch Video Solution](#)

56. Aqueous solution of $FeCl_3$ is acidic. Explain.

 [Watch Video Solution](#)

57. Between two aqueous solutions of HA of strengths 0.1 (M) and 0.01(M) respectively, which one has higher degree of ionisation of HA?

 [Watch Video Solution](#)

58. Write down the formula of the monomer of silicone. How are silicone prepared? Write its two uses.

 [Watch Video Solution](#)

59. BF_3 behaves as a Lewis acid. Explain.

 [Watch Video Solution](#)

60. What is the role of Zn in ozonolysis reaction.

 [Watch Video Solution](#)

61. Distinguish by a chemical test : bute-1-yne and bute-2-yne.

 [Watch Video Solution](#)

62. Do the following conversions :Benzene \rightarrow Acetophenone

 [Watch Video Solution](#)

63. Do the following conversions :Benzene \rightarrow Benzaldehyde

 [Watch Video Solution](#)

64. Which one is disobeyed in Bohr theory—

A. Uncertainty principle

B. exclusion principle

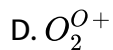
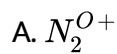
C. Aufbau principle

D. Hund rule

Answer:

 [Watch Video Solution](#)

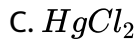
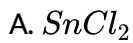
65. Which one isoelectronic with CO-



Answer:

 [Watch Video Solution](#)

66. Which one is not linear-



Answer:



[Watch Video Solution](#)

67. If the solubility of $\text{Ag}_2\text{C}_2\text{O}_4$ is water be 'S' its solubility product.

A. $4S^3$

B. $2S^5$

C. $2S^3$

D. $8S^3$

Answer:



[Watch Video Solution](#)

68. In which case temperature drops down—

- A. Isothermal compression
- B. Isothermal expansion
- C. Adiabatic compression
- D. Adiabatic expansion

Answer:



Watch Video Solution

69. For an gaseous reaction if $\Delta n = 0$ then which one is correct :

- A. $\Delta H + U > 0$
- B. $\Delta H > \Delta U$
- C. $\Delta H < \Delta U$

D. $\Delta H = \Delta U$

Answer:



[Watch Video Solution](#)

70. Which one is correct for equilibrium constant of a reversible reaction

—

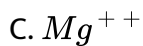
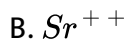
- A. It depends on initial concentration of reactant
- B. It is characteristic index of a reaction
- C. depends on the concentration of product at equilibrium
- D. Depends on the nature of reactant

Answer:



[Watch Video Solution](#)

71. Which one can't be identified by flame test:

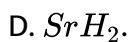
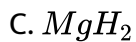
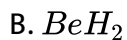
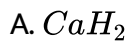


Answer:



[Watch Video Solution](#)

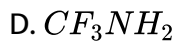
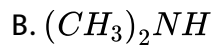
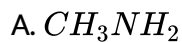
72. In which of the following molecules is hydrogen bridge bond present ?



Answer:

 [Watch Video Solution](#)

73. Which one is least basic:



Answer:

 [Watch Video Solution](#)

74. Hybridisation of Carbocationic Carbon atom—



B. SP^2

C. SP

D. HI

Answer:



[Watch Video Solution](#)

75. Which one does not show peroxide effect:

A. HF

B. HCl

C. HBr

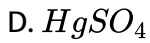
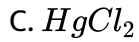
D. HI

Answer:



[Watch Video Solution](#)

76. The Mercury compound use in oxymercuration reaction—



Answer:



[Watch Video Solution](#)

77. Pyrosis is a disease of:

A. Heart

B. kidney

C. Lungs

D. skin.

Answer:

 [Watch Video Solution](#)

78. No of significant,figure in 0.080200 is?

 [Watch Video Solution](#)

79. The emperical formula of glucose is_____.

 [Watch Video Solution](#)

80. Give an example of nictogen element.

 [Watch Video Solution](#)

81. What is transitional element.



 [Watch Video Solution](#)

82. What is the change of entropy in irreversible adiabatic change?

 [Watch Video Solution](#)

83. What are the product of ozonolysis of o-xylene?

 [Watch Video Solution](#)

84. If 1 kg sugar Costs Rs. 32 find the cost of 1 mole sugar.

 [Watch Video Solution](#)

85. Show that normal density = $0.089 \times \text{Vapour density}$.

 [Watch Video Solution](#)

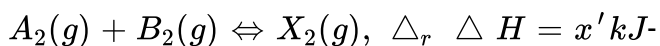
86. Calculate the energy of emr having wave'length 3000\AA .

 [Watch Video Solution](#)

87. If the positional uncertainty of an electron like particle be $5.6 \times 10^{-7} \text{cm}$. find its uncertainty in velocity.

 [Watch Video Solution](#)

88. Which one of the following conditions will favour maximum formation of product in the reaction



 [Watch Video Solution](#)

89. Give example of homogeneous & hetrogeneous equilibrium.

 [Watch Video Solution](#)

90. Is HCl cause hardness to water? What is the meaning 'Hardness is 300 ppm'?

 [Watch Video Solution](#)

91. What is smog? State one harmful effect of N_2O .

 [Watch Video Solution](#)

92. What are isodiaphers, Isotone & nuclear isomerism? Give example.

 [Watch Video Solution](#)

93. Which one has the highest paramagnetic property and which one has least paramagnetic property give reason Cu^{2+} , Fe^{2+} & Cr^{5+} .

 [Watch Video Solution](#)

94. Find the position of the element having atomic number 24. In which block the element comes? State whether its metal or non metal?

 [Watch Video Solution](#)

95. What do you mean by Stair step diagonal? State its significance.

 [Watch Video Solution](#)

96. If the dipole moment and bond length of HF be 2.0 D and $\odot C.2A^\circ$ then find its percent ionic character. Which one has higher boiling point NH_3 Or PH_3 ?

 [Watch Video Solution](#)

97. Explain why the viscosity and boiling point of H_2SO_4 is too high. Write the Characteristics of hydrogen bonding.

 [Watch Video Solution](#)

 Watch Video Solution

98. What do you mean by surface tension? What is PI? How it is related with Poise?

 Watch Video Solution

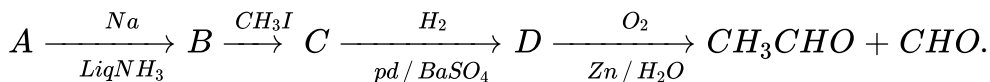
99. What do you mean by enthalpy? Show that $\Delta H = \Delta U + \Delta nRT$.

 Watch Video Solution

100. Define free energy. Comment for its change in a spontaneous reaction.

 Watch Video Solution

101. Identify ABCD: ABCD:



Name the alkene ozonolysis of which gives Glyoxal and formaldehyde.

 [Watch Video Solution](#)

102. If 4ml O_2 is obtained at 1.5atm pressure and $25^\circ C$ from 1 ml H_2O_2 solution. Then find the volume strength of H_2O_2 solution.

 [Watch Video Solution](#)

103. How would you differentiate Na_2CO_3 & $NaHCO_3$ which alkali metal form nitride directly?

 [Watch Video Solution](#)

104. State the conditions of SN^2 reaction? What is I-effect?

 [Watch Video Solution](#)

105. What type of equilibrium is this $3Fe(s) + (g)Fe_3O_4(S)4H_2(g)$

Discuss the effect of incorporation of inert gas at the homogeneous equilibrium at constant temperature and pressure.

 [Watch Video Solution](#)

106. Shall phenolphthalein be used in neutralisation of Na_2CO_3 by HCl ?

Why the solubility of $AgCN$ be increased by addition of KCN . What is the sum of pH & pOH of a solution.

 [Watch Video Solution](#)

107. Why CO Can't be dried using comes H_2SO_4 ? Give an example of a reaction in which the product formed is a liquid by the reaction for Mond process for the extraction of it.

 [Watch Video Solution](#)

108. State reason: Why the radius of Ga is less than that of Al.

 [Watch Video Solution](#)

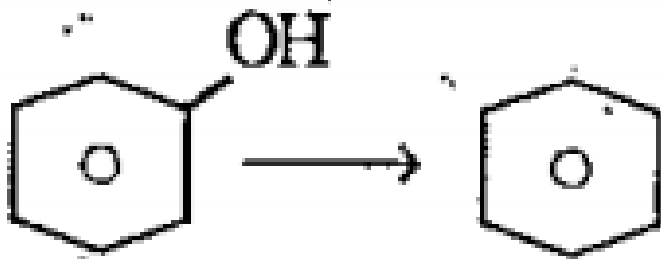
109. State reason: The melting point of Boron is top high. What is Corundum? State one use of it.

 [Watch Video Solution](#)

110. How would you differ Chemically between ethane and ethene. What will happen if Benzene is Ozonolysed? What is used in atnimarkownikopt reaction.

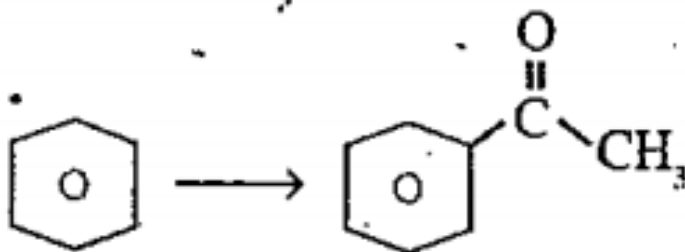
 [Watch Video Solution](#)

111. How would you Convert. State one demerits Fredel craft alkylolation reaction.:



[▶ Watch Video Solution](#)

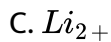
112. How would you Convert. State one demerits Fredel craft alkylation reaction.:



[▶ Watch Video Solution](#)

113. Which one among the following disobeys Bohr theory

A. H



Answer:

 [Watch Video Solution](#)

114. Type of bond expected between two atoms having electronegativities 1.0 & 3.8

A. Metallic

B. Covalent

C. Coordinate Covalency

D. electrolyte.

Answer:

 [Watch Video Solution](#)

115. Structure of NH_3 —

- A. Tetrahedral
- B. Pyramidal
- C. Linear
- D. Triangular

Answer:



[Watch Video Solution](#)

116. Value of R in $Cal/k. Mole-$

- A. 8.31
- B. 8.31×10^7
- C. 0.082
- D. 1.987. 5

Answer:

 [Watch Video Solution](#)

117. Relation between ΔH & ΔU

A. $\Delta H = \Delta U + \Delta nRT$

B. $\Delta H = \Delta U - P\Delta V$

C. $\Delta H = \Delta U - P\Delta V S$

D. $\Delta U = \Delta H + P\Delta V$

Answer:

 [Watch Video Solution](#)

118. Change of enthalpy in exothermic reaction

A. Positive

B. Negative

C. Zero

D. infinity.

Answer:

 [Watch Video Solution](#)

119. Velocity Constant for a reaction at 290.K is given by $3.2 \times 10^{-3} S^{-1}$.

What will be its value at 300 K—

A. 6.4×10^{-3}

B. 3.2×10^{-4}

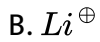
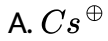
C. 9.6×10^{-3}

D. 1.28×10^{-2}

Answer:

 [Watch Video Solution](#)

120. Which one of the following cation has highest polarising Power

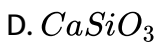
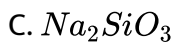
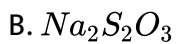
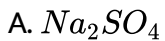


Answer:



[Watch Video Solution](#)

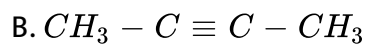
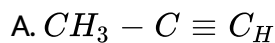
121. Water glass is



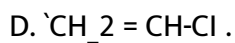
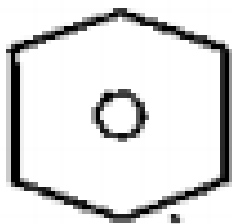
Answer:

 Watch Video Solution

122. Which one of the following shows acidic nature—



C.



Answer:

 Watch Video Solution

123. Largest C -C bond preetn in—

- A. propane
- B. ethene
- C. Acetylene
- D. Benzene.

Answer:



[Watch Video Solution](#)

124. The reaction between $AgNO_3$ and C_2H_2 is

- A. oxidation
- B. Reduction
- C. Acidbase
- D. Substitution.

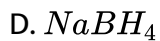
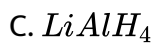
Answer:

 [Watch Video Solution](#)

125. Which one is found in Bayer's reagent—



B. Pd



Answer:

 [Watch Video Solution](#)

126. The lung disease caused by silica is—

A. Minamata

B. Etai - Etai

C. Silicosis

D. Black foot

Answer:

 [Watch Video Solution](#)

127. Calculate the mass of 2.24 liter CO_2 at N.T.P

 [Watch Video Solution](#)

128. No of Ca^{2+} ion present in 1 gm-ion Ca^{2+} is?

 [Watch Video Solution](#)

129. Give an example of actionid.

 [Watch Video Solution](#)

 [Watch Video Solution](#)

130. What is state function?

 [Watch Video Solution](#)

131. What type of function entropy is?

 [Watch Video Solution](#)

132. Give an example of Metamerism

 [Watch Video Solution](#)

133. State laws of reciprocal proportion.

 [Watch Video Solution](#)

134. Why law of reciprocal proportion is called equivalent ratio rule?

 [Watch Video Solution](#)

135. Explain with proper-example pauli exclusion principle.

 [Watch Video Solution](#)

136. State two postulates of Bohr atom model

 [Watch Video Solution](#)

137. Slate with equation effect of temperature on Boric Acid.

 [Watch Video Solution](#)

138. Why BF_6^{3-} does not exist, explain.

 [Watch Video Solution](#)

[Watch Video Solution](#)

139. Which one is weak acid and why?

ICH_2COOH , $BrCH_2COOH$, $ClCH_2COOH$.

[Watch Video Solution](#)

140. Which is most basic and why? CH_3NH_2 , $(CH_3)_2NH$, $(CH_3)_3N$

[Watch Video Solution](#)

141. What is particulate mater? Give two example'

[Watch Video Solution](#)

142. Write two defects.of Bohr atom model. Concept of which quantum number comes form Sommerfeld theory?

[Watch Video Solution](#)

143. Derive the equation for radius of n th shell from Bohr theory.

 [Watch Video Solution](#)

144. What is d-block element? Give two example

 [Watch Video Solution](#)

145. Why the S-block element does not respond to flame test? State two properties of element which are not peiodic.

 [Watch Video Solution](#)

146. State reason:- Bond angle of PF_3 is greater than NH_3

 [Watch Video Solution](#)

147. State reason:- CO_2 is linear but not SO_2

 [Watch Video Solution](#)

148. Write two differences between σ & π bond. What is antibonding molecular orbital?

 [Watch Video Solution](#)

149. State Daltons partial pressure laws and derive partial pressure and total pressure relation.

 [Watch Video Solution](#)

150. Calculate the partial pressure of SO_2 in a mixture with 60% CO_2 and total pressure being 4 atm.

 [Watch Video Solution](#)

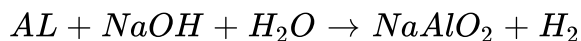
151. What, do you mean by enthalpy of a system? Write two characteristics of it.

 [Watch Video Solution](#)

152. Calculate, ΔU , W and Q when an ideal gas is compressed at 5 atm pressure from 25 litre to 5 litre at a constant temp of $27^\circ C$.

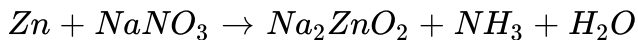
 [Watch Video Solution](#)

153. Balance the equation by oxidation no. method :-



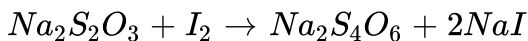
 [Watch Video Solution](#)

154. Balance by ion electron method :



 [Watch Video Solution](#)

155. Balance the equation by oxydation no. method :-



 [Watch Video Solution](#)

156. Write with balanced equation what happens when:- H_2O_2 is passed through acidified KMnO_4 soln

 [Watch Video Solution](#)

157. Write with balanced equation what happens when:- H_2O_2 is passed through acidified $\text{K}_2\text{Cr}_2\text{O}_7$ soln



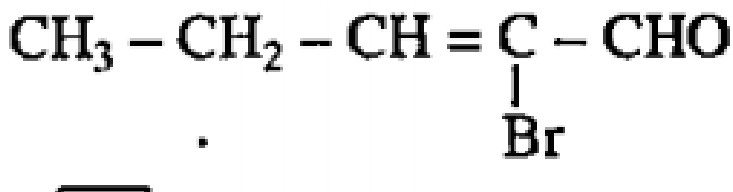
Watch Video Solution

158. Which one is more soluble in water and why $MgCO_3$ & $CaCO_3$. What is hydrolysis?



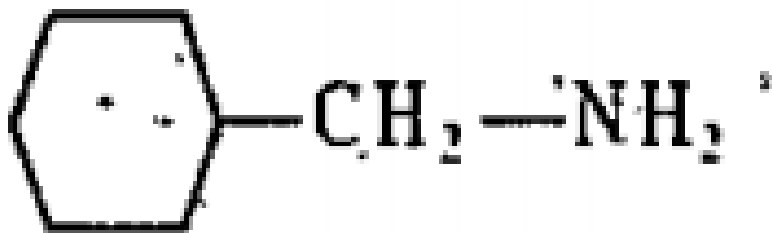
Watch Video Solution

159. Write the IUPAC name of the following compound:-



Watch Video Solution

160. Write the IUPAC name of the following compound:-



[Watch Video Solution](#)

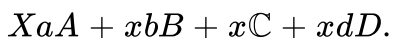
161. Write the IUPAC name of the following compound:-



[Watch Video Solution](#)

162. $aA + bB = cC + dD$ If the equilibrium Constant for the reaction be

K. get the equilibrium constant for the reaction



[Watch Video Solution](#)

163. Write Le Chatelier's principle. Applying this Discuss the effect of heat on the equilibrium of an exothermic reaction.

 [Watch Video Solution](#)

164. How would you prepare:- Boric Acid from Borax.

 [Watch Video Solution](#)

165. How would you prepare:- Borax from Colemanite

 [Watch Video Solution](#)

166. State one use of Boric acid

 [Watch Video Solution](#)

167. What happens when CO is passed through ammoniacal Silver nitrate solution

 [Watch Video Solution](#)

168. what happens when CO is passed through Cuprous Chloride solution.

 [Watch Video Solution](#)

169. State one use of CO

 [Watch Video Solution](#)

170. Write short note on:- Ozonolysis reaction.

 [Watch Video Solution](#)

171. Write short note on:-Wurtz reaction

 [Watch Video Solution](#)

172. How would you convert:-Acetylene \rightarrow 2 - Chloro propene

 [Watch Video Solution](#)

173. How would you convert:-Ethylene \rightarrow Glyoxal

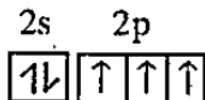
 [Watch Video Solution](#)

174. What is Lindler's Catalyst.

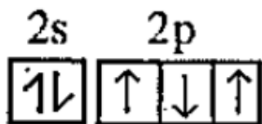
 [Watch Video Solution](#)

175. Hund's Rule obeyed in

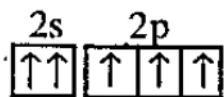
A.



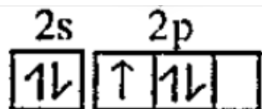
B.



C.



D.

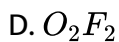
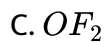
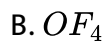
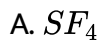


Answer:



Watch Video Solution

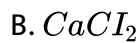
176. Which Compound does not exist theoretically



Answer:

 [Watch Video Solution](#)

177. Which one is least ionic



Answer:

 [Watch Video Solution](#)

178. 1-Centipoise equal to.

A. 10^{-2} poise

B. 10^{-1} poise

C. 10^{-3} poise

D. 10^{-6} poise

Answer:



Watch Video Solution

179. Heat of neutralization for strong acid and strong base —

A. 14.0KCal

B. 4.3KCal

C. 17.4KCal

D. 14.9KCal

Answer:

 [Watch Video Solution](#)

180. Internal energy is —

- A. Kinetic energy
- B. Potential energy
- C. Kinetic + potential energy
- D. Heat energy

Answer:

 [Watch Video Solution](#)

181. For the equilibrium $N_2(g) + O_2(g) = 2NO(g)$

A. No effect of pressure

B. No effect of volume

C. No effect of Catalyst

D. No effect of heat

Answer:



[Watch Video Solution](#)

182. Which one is the lightest —

A. Ca

B. Cu

C. Hg

D. Fe

Answer:



[Watch Video Solution](#)

183. Which one is alkaline earth element?

A. Na

B. Cs

C. Mg

D. Rb

Answer:



Watch Video Solution

184. Which one shows dynamic isomerism

A. Metamer

B. Positional

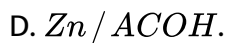
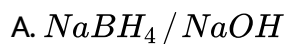
C. Tautomerism

D. Geometric isomerism

Answer:

 [Watch Video Solution](#)

185. The reagent used for demercuration process.



Answer:

 [Watch Video Solution](#)

186. Which one is not an aromatic

A. Pyridine

B. Thiophen

C. Anthracene

D. Cyclooctatetraene

Answer:



[Watch Video Solution](#)

187. Which Carbocation has highest stability —

A. 1°

B. 2°

C. 3°

D. Benzylic

Answer:



[Watch Video Solution](#)

188. Hallons damages —

- A. Soil
- B. Atmosphere
- C. water
- D. Agriculture

Answer:



[Watch Video Solution](#)

189. Equivalent weight of an element having atomic weight 30 and valency 3 is?



[Watch Video Solution](#)

190. In which block element lanthanoid Contraction observe?



Watch Video Solution

191. Name the element having highest electron affinity.



Watch Video Solution

192. Which type of property internal energy is ?



Watch Video Solution

193. Which one is the correct unit of entropy?



Watch Video Solution

194. Write the equation for the determination of Nitrogen in Lassaign test.



[Watch Video Solution](#)

195. If the atomic weight of the Metal M be m in M_2O_3 find its equivalent weight.



[Watch Video Solution](#)

196. Illustrate with example law of multiple proportion.



[Watch Video Solution](#)

197. Give the difference between orbit and orbital.



[Watch Video Solution](#)

198. Calculate the frequency of the light emitted when an electron jumps from $n=3$ to $n=1$ [$R = 1096789\text{cm}^{-1}$]

 [Watch Video Solution](#)

199. How would you synthesise Borax from colemanite.

 [Watch Video Solution](#)

200. Compare the acidic nature of the oxides of Group 13 elements.

 [Watch Video Solution](#)

201. Which one is less basic methylamine and aniline.

 [Watch Video Solution](#)

202. What is particulate matter give example.

 [Watch Video Solution](#)

203. If the wave length and energy of an electron be λ and E then show that $E = h^2 / 2m\lambda^2$

 [Watch Video Solution](#)

204. Write one differences between-particle and wave.

 [Watch Video Solution](#)

205. Derive de Broglies wave particle duality eqn. Which quantum number is independent form others?

 [Watch Video Solution](#)

206. Arrange with proper expiation in ascending order of Basisity of the following oxides. MgO , ZnO , CaO , Na_2O

 [Watch Video Solution](#)

207. Find the position of the element having atomic number 21 in the periodic table (modern) Indicate the block in which it comes?

 [Watch Video Solution](#)

208. What is σ and π bond? Which one is stronger among them?

 [Watch Video Solution](#)

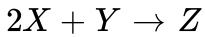
209. The bond length and dipole moment of the covalent compound AB is $1.2\overset{\circ}{\text{A}}$ and 1.24D. Find the covalent character of the compound.

 [Watch Video Solution](#)

210. Write the Vander Walls equation for n'mole of the real gas.

 [Watch Video Solution](#)

211. For the following reaction at 298K



$\Delta H = 300 \text{ kJ mol}^{-1}$ and $\Delta S = 0.2 \text{ kJ K}^{-1}\text{mol}^{-1}$ At what temperature will the reaction become spontaneous considering ΔH and ΔS to be constant over the temperature range?



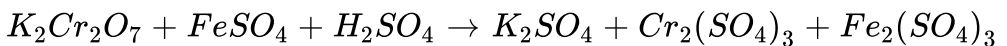
Watch Video Solution

212. What is state function? Give example what do you mean by internal energy?



Watch Video Solution

213. Balance the equation by oxidation number method.



Watch Video Solution

214. What is the oxidation state of Cr in CrO_5 ?

 [Watch Video Solution](#)

215. What is volume strength? Which one is more powerful 10 volume and 10% H_2O_2 solution.

 [Watch Video Solution](#)

216. Classify the hydrides into Covalent, Interstitial, electron deficient, electron rich ionic. FeH , CuH , B_2H_6 , CaH_2

 [Watch Video Solution](#)

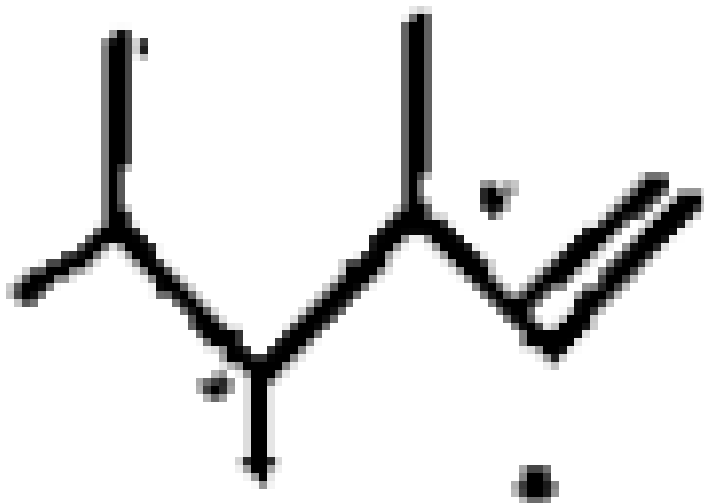
217. State two reasons for abnormal behaviour of Be.

 [Watch Video Solution](#)

218. Why BeF_2 is highly soluble in water.

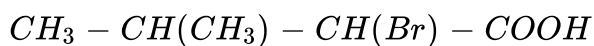
 Watch Video Solution

219. Given IUPAC name of the following Compound.



 Watch Video Solution

220. Given IUPAC name of the following Compound.





Watch Video Solution

221. How would you determine the presence of sulphur in organic compound.



Watch Video Solution

222. When NH_4SCN is added to the aqueous solution of $FeCl_3$ the solution turns red but with addition of NH_4Cl feeds the red Coluration. Explain. Shall it give same result if $CaCO_3$ is heated in a open and closed Container separately?



Watch Video Solution

223. State the nature of CO, Geo. SnO, & PbO. Which allotrope of carbon is used to make super conductor. Why Co can't be dried using Concentrated H_2SO_4 .



Watch Video Solution

224. What is per halosilanes? How would you prepare per halosilanes.

Write one use of silica gel?

 [Watch Video Solution](#)

225. Identify the Compound which on Ozonolysis gives Methanal and propanal. Write with example Markonikov's rule.

 [Watch Video Solution](#)

226. The possible m values for '2p' orbital are

A. +2, 0, - 2

B. - 2, 0, + 1

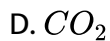
C. +1, 0, - 1

D. +1, 0, - 3

Answer:

 [Watch Video Solution](#)

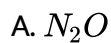
227. Which one has highest bond angle—



Answer:

 [Watch Video Solution](#)

228. In which Compound the Central atom is sp_2 hybridised—



B. CO

C. CO_2

D. SO_2 .

Answer:



[Watch Video Solution](#)

229. Spreadability increases for the liquid when—

A. Viscosity increases

B. Surface tension decreases

C. Surface tension increases

D. Viscosity decreases

Answer:



[Watch Video Solution](#)

230. For Adiabatic Expansion of an ideal gas—

- A. Temperature decreases
- B. $w = 0$
- C. $q = 0$
- D. $H = 0$.

Answer:



Watch Video Solution

231. Internal energy does not include

- A. Atomic energy
- B. Rotational energy
- C. Combustion energy
- D. Vibrational energy

Answer:

 [Watch Video Solution](#)

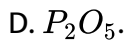
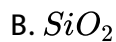
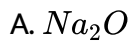
232. If the $t_{\frac{1}{2}}$ for any reaction be inversely proportion at to the initial Concentration of the reactant then the order of reaction is—

- A. Zero
- B. one
- C. Two
- D. or more.

Answer:

 [Watch Video Solution](#)

233. Which one does not react with NaOH

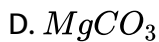
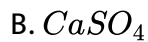
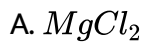


Answer:



[Watch Video Solution](#)

234. Gypsum is



Answer:



[Watch Video Solution](#)

235. The General name of $CH_3 - CH_2 - C(CH_3)_2 - CH_3$ is

- A. Neohexane
- B. Isopentane
- C. 2, 2 - dimethyl butane
- D. Isopentane.

Answer:



[Watch Video Solution](#)

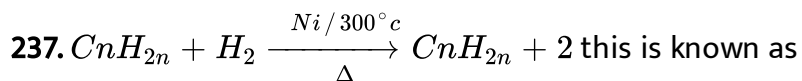
236. Whic one show geometric isomerism

- A. 2 -Butene
- B. 2- Butyne
- C. 2- Butanol

D. I - Butene.

Answer:

 [Watch Video Solution](#)



A. Sabettier & sandaren

B. Friedel Craft

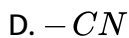
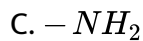
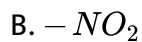
C. Kolbe

D. Wurtz-reaction.

Answer:

 [Watch Video Solution](#)

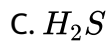
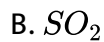
238. Which one is not meta - orienting



Answer:

 [Watch Video Solution](#)

239. Which gas evolves in maximum in Volcanic eruption



Answer:

 [Watch Video Solution](#)

240. 1 Amu =how much gm?

 [Watch Video Solution](#)

241. The reagent which consumed'whole in a reaction is called?

 [Watch Video Solution](#)

242. Name a 'd' block element which is not transitional.

 [Watch Video Solution](#)

243. In which block inner transition metal is.included?

 [Watch Video Solution](#)

244. What type of property entropy is?

 [Watch Video Solution](#)

245. Name one anti aromatic Compound.

 [Watch Video Solution](#)

246. Show that $E = A/v$ where E, A, V used are in usual meaning?

 [Watch Video Solution](#)

247. Establish the relation between vapour density and molecular weight of gas.

 [Watch Video Solution](#)

248. Prove that in 'n'th shell $2n^2$ number of electron, can be accommodated.

 [Watch Video Solution](#)

249. Give the difference between orbit and orbital.

 [Watch Video Solution](#)

250. Write with Condition & balanced equation the preparation of CO from oxalic acid.

 [Watch Video Solution](#)

251. Illustrate with example metamerism.

 [Watch Video Solution](#)

252. Illustrate with example tautomerism.

 [Watch Video Solution](#)

253. Write full form of TLV. How Taj Mahal is effected by atmosphere?

 [Watch Video Solution](#)

254. If the uncertainty of position of a particle of mass 1×10^{-4} gm be 1.56×10^{-3} cm then find the uncertainty of its velocity?

 [Watch Video Solution](#)

255. Write the electronic configuration of Cr_{3+} ion and find no of unpaired electron in it.

 [Watch Video Solution](#)

256. Define Ionisation potential. How it changes from left to right in 2nd period?

 [Watch Video Solution](#)

257. Define electron affinity. State its changes down a group.

 [Watch Video Solution](#)

258. Illustrate with example Szewski's maximum valency theory.

 [Watch Video Solution](#)

259. Give an example of compression of octate. Which one is more soluble in alcohol KI or KCl.

 [Watch Video Solution](#)

260. In which Condition real gas behaves ideally? Why real gas deviates from ideal behaviour.

 [Watch Video Solution](#)

261. What do you mean by surface tension? State dimension of surface tension. Why the viscosity of a liquid decreases with increase of temperature.

 [Watch Video Solution](#)

262. Write two differences between reversible and irreversible process. What is open system?

 [Watch Video Solution](#)

263. Calculate, ΔU , W and Q when an ideal gas is compressed at 5 atm pressure from 25 litre to 5 litre at a constant temp of $27^\circ C$.



[Watch Video Solution](#)

264. What is oxidation number? Explain that oxidation and reduction occurs simultaneously.



[Watch Video Solution](#)

265. Why Li can't be stored in Kerosene like Na? Give an example of super oxide.



[Watch Video Solution](#)

266. Calculate the hardness of water in ppm when 2.56 gm MgCO_3 dissolved in 1 litre water.



[Watch Video Solution](#)

267. Write the structural formula of the following organic Compound:-2,3-dimethyl-1,3-pentadiene.

 [Watch Video Solution](#)

268. Write the structural formula of the following organic Compound:-Butane-1,2,3-tricarbaldehyde.

 [Watch Video Solution](#)

269. Write the structural formula of the following organic Compound:-3-chloro-3,4-dimethylpentanal.

 [Watch Video Solution](#)

270. Explain why atomic radius of Ga is less than that of Al? $AlCl_3$ forms dimer but BCl_3 does not - Explain? What is corundum?



[Watch Video Solution](#)

271. Give an example of poly nuclear aromatic compound. Write one merit and one demerit of Wurtz-Fittig reaction. Can methane be synthesized using Kolbe electrolysis process?



[Watch Video Solution](#)

272. How would you convert: Ethene \rightarrow Acetylene.



[Watch Video Solution](#)

273. How would you convert: Acetylene \rightarrow Methane.



[Watch Video Solution](#)

274. What reagent is used for synthesis of alkane by Corey- house synthen's.

 [Watch Video Solution](#)

275. No of Subshell under principle quantum no 'n' :

A. n^2

B. $n-1$

C. $2n$

D. n

Answer:

 [Watch Video Solution](#)

276. Covalency is maximum when a bond is formed between—

- A. Atoms of same element
- B. Size of the atoms are almost equal
- C. Maximum differences of electro positivity
- D. Having same electronic Configuration.

Answer:

 [Watch Video Solution](#)

277. Reversible process is that process in Which

- A. Surroundings transformed into system
- B. System Spontaneously converts to surroundings
- C. There is no boundary between system and surroundings
- D. Always there exist equilibrium between system and surroundings.

Answer:

 [Watch Video Solution](#)

278. The value of compressibility factor of an ideal gas:

A. 1

B. -1

C. 2

D. 0.7

Answer:



Watch Video Solution

279. For the reaction $3A \rightarrow 2B$ the rate $D\frac{B}{d}A$ is equal to

A. $-\frac{2}{3} \frac{dA}{dt}$

B. $\frac{3}{2} \frac{dA}{dt}$

C. $-\frac{1}{3} \frac{dA}{dt}$

D. $3 \frac{dA}{dt}$

Answer:

 [Watch Video Solution](#)

280. Which pair shows diagonal property

- A. Al & Be
- B. Li & Na
- C. Na & Mg
- D. Al & Mg.

Answer:

 [Watch Video Solution](#)

281. Which among the following having highest ionic Conductivity

A. Li^{\oplus}

B. Na^{\oplus}

C. K^{\oplus}

D. Cs^{\oplus}

Answer:

 [Watch Video Solution](#)

282. Which pair shows geometrical isomerism—

A. d & l lactic acid

B. Maleic & fumaric acid

C. Active & meso tartaric acid

D. Acetone & 2-propanol.

Answer:

 [Watch Video Solution](#)

283. Which functional group has least priority-

A. - OH

B. -CHO

C. -O-

D. -COOH.

Answer:



[Watch Video Solution](#)

284. Correct order of halogenation reaction of hydrocarbon—

A. Chlorination > Bromination > Iodination

B. Bromination > Chlorination > Iodination

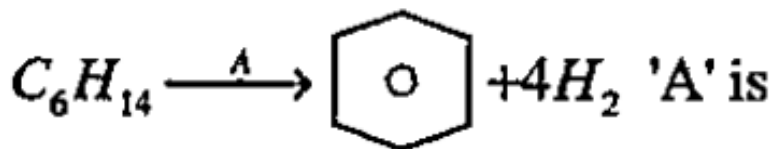
C. Chlorination > Iodination > Bromination

D. Bromination > Iodination > Chlorination.

Answer:

 [Watch Video Solution](#)

285. Find A in the figure:



A. $LiAlH_4$

B. $K_2Cr_2O_7/ConcH_2SO_4$

C. Na-ether

D. Cr_2O_3 / Al_2O_3

Answer:

 [Watch Video Solution](#)

286. Which one is non biodegradable

- A. Green vegetables
- B. Gamaxine
- C. Cow-dunk
- D. Dead-body.

Answer:



Watch Video Solution

287. How many significant figure in 0.013200?



Watch Video Solution

288. What is lanthanide?



Watch Video Solution

289. What is stair step diagonal?

 [Watch Video Solution](#)

290. What is thermodynamic equilibrium?

 [Watch Video Solution](#)

291. What is octane number?

 [Watch Video Solution](#)

292. Give an example of antiknock compound

 [Watch Video Solution](#)

293. Calculate the number of H & O atoms in 90 gm water at $4^{\circ}C$.



[Watch Video Solution](#)

294. State with example law of Reciprocal proportion.



[Watch Video Solution](#)

295. Calculate the wave length of photon having energy 2'ev.



[Watch Video Solution](#)

296. Find the first ionization energy of hydrogen atom given

$$E_1 = -13.38\text{ev}$$



[Watch Video Solution](#)

297. Why the 1st Ionisation potential of N_2 is higher than O_2 ?

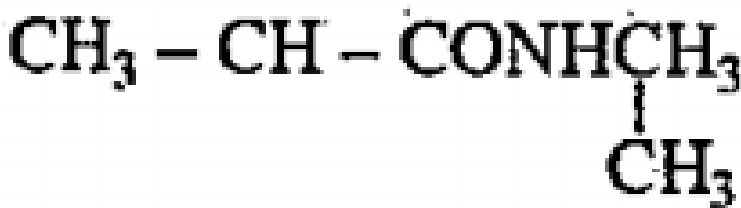


[Watch Video Solution](#)

298. Electron affinity of inert elements are positive. Why?

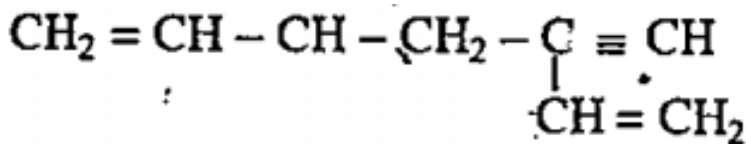
 [Watch Video Solution](#)

299. Give-IUPAC name of the following organic Compound



 [Watch Video Solution](#)

300. Give-IUPAC name of the following organic Compound



 [Watch Video Solution](#)

301. Write two Causes of air pollution on State one. remedy of it.

 [Watch Video Solution](#)

302. Write de Broglie equation for wave,particle duality.

 [Watch Video Solution](#)

303. Show that P orbital can accomodate at least 6 electrons.

 [Watch Video Solution](#)

304. What do you mean by lanthanoid Contraction?

 [Watch Video Solution](#)

305. Arrange mg, Al, Si and Na in the increasing order of their Ionisation potentials.

 [Watch Video Solution](#)

306. What is electronegativity? State with reason its change across a period.

 [Watch Video Solution](#)

307. Which one shows higher Covalent Character LiCl or LiI? and why?

 [Watch Video Solution](#)

308. What is hybridisation? Explain with example sp^2 hybridisation.

 [Watch Video Solution](#)

309. Write Graham's law of diffusion. Write the S.I. unit of viscosity?

 [Watch Video Solution](#)

310. What is Capillary action? Give molecular interpretation of surface tension

 [Watch Video Solution](#)

311. Calculate the final pressure when 2 moles of He at N.T.P. is compressed to 10 lit. Given $\gamma = 1.61$

 [Watch Video Solution](#)

312. Bond dissociation energy of C-C, C = C, H-H & C-H are 300, 550, 350, 400 KJ mol^{-1} . Calculate heat of hydrogenation of ethylene.

 [Watch Video Solution](#)

313. Find the oxidation number of * marked element in the following

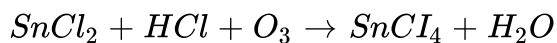
Compound:- $[Cr(NH_3)_6]Cl_3$

 [Watch Video Solution](#)

314. Calculate the oxidation no of * marked atom: *Fe (CO)₅

 [Watch Video Solution](#)

315. Balance the equation by oxidation no method:-



 [Watch Video Solution](#)

316. What is 'syn gas'? Why it is called syn gas?

 [Watch Video Solution](#)

317. Can H_2O_2 Solution be concentrated by heating?

 [Watch Video Solution](#)

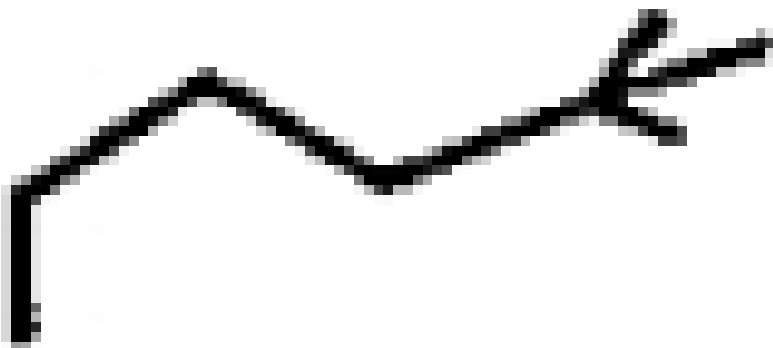
318. What is volume strength? Which one is more powerful 10 volume and 10% H_2O_2 solution.

 [Watch Video Solution](#)

319. Write the drawbacks of solveyprocess for synthesis of Na_2CO_3

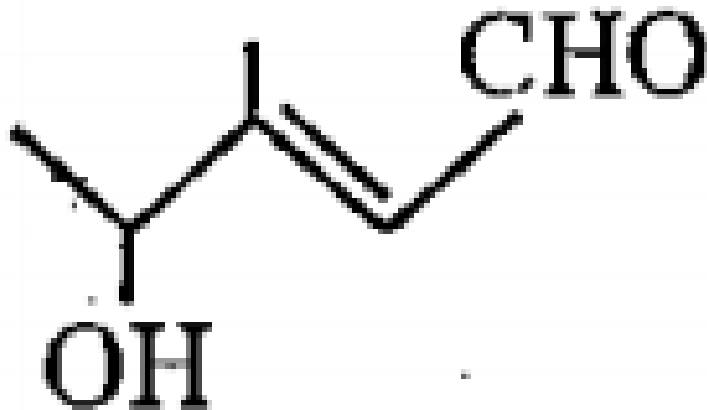
 [Watch Video Solution](#)

320. Write the IUPAC name of :-



[Watch Video Solution](#)

321. Write the IUPAC name of :-



[▶ Watch Video Solution](#)

322. What is stereogenic Center?

[▶ Watch Video Solution](#)

323. Express the equilibrium constant of the reaction in the forms of K_p and K_c - for the reaction, $N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$.

[▶ Watch Video Solution](#)

324. State two differences between physical & Chemical equilibrium state the effect of temperature for the equilibrium. $ICl_3 \rightarrow water$

 [Watch Video Solution](#)

325. Discuss the effect of heat on the equilibrium
 $N_2(g) + O_2(g) = 2NO(g) - 44KCal.$

 [Watch Video Solution](#)

326. Why Boron has high melting point? How would you synthesize diborane? What is Zirconium?

 [Watch Video Solution](#)

327. Explain why CCl_4 is not hydrolysed while $SiCl_4$ is hydrolysed

 [Watch Video Solution](#)

328. What happens when:- $HCOOH$ is treated with Conc. H_2SO_4

 [Watch Video Solution](#)

329. What is flint glass?

 [Watch Video Solution](#)

330. How would you Carry out the following Conversion: Isopropyl bromide \rightarrow 2,3- dimethyl butane

 [Watch Video Solution](#)

331. Do the following conversions:

Acetelene from Methane

 [Watch Video Solution](#)

332. What is Marsh gas.



Watch Video Solution

333. Hiesenberg uncertainty pinciplestate two parameters for an elctron which can't be measured simultaneously,

- A. Momentum & kinetic energy
- B. Position & potential energy
- C. Kinetic & potential energy
- D. Position on and momentum.

Answer:



Watch Video Solution

334. Which one is non polar

A. CO_2

B. BCl_3

C. NO_2

D. CCl_4

Answer:

 [Watch Video Solution](#)

335. Which one does not form Hydrogen bonding

A. Liq. NH_3

B. Phenol

C. H_2O

D. Liq. HCl

Answer:

 [Watch Video Solution](#)

336. Why the smell of body spray spreads

- A. Diffusion
- B. Surface tension
- C. Viscosity
- D. Density

Answer:



Watch Video Solution

337. $\Delta G = 0$ at equilibrium is satisfied under condition

- A. Constant temp. & pressure
- B. Constant temp & volume
- C. Constant pressure & volume

D. Constant pressure & Density.

Answer:

 [Watch Video Solution](#)

338. For endothermic reaction ΔH value is-

A. Positive

B. Negative

C. Zero

D. Constant.

Answer:

 [Watch Video Solution](#)

339. The efficiency of a catalyst depends on—

- A. Mass of particle
- B. Size of particle
- C. Magnetice nature of particle
- D. Structure of particle.

Answer:

 [Watch Video Solution](#)

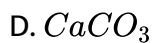
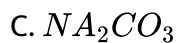
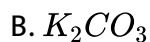
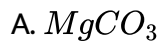
340. Which one has least melting point

- A. $CaCl_2$
- B. $CaBr_2$
- C. CaI_2
- D. CaF_2 .

Answer:

 [Watch Video Solution](#)

341. Which one undergoes thermal decomposition



Answer:



[Watch Video Solution](#)

342. 1-Chlorobutane on treatment with alcoholic KOH gives

A. But-1-ene

B. Butan -1-al

C. But - 2 - ene

D. Butan -2- ol.

Answer:



[Watch Video Solution](#)

343. Which one has highest boiling point—

A. n-hexane

B. n - pentane

C. 2, 2- dimethyl propane

D. 2- Methyl Butane.

Answer:



[Watch Video Solution](#)

344. Which one is not isomeric with diethylether

A. n - propylmethyl ether

B. 1 - butanol

C. 2 - Methyl -2-propanol

D. Butanone

Answer:

 [Watch Video Solution](#)

345. No. of isomer possible for C_6H_{14} —

A. 4

B. 6

C. 5

D. 7

Answer:

 [Watch Video Solution](#)

346. Which one causes Minamata

A. Cu

B. Fe

C. Hg

D. Pb.

Answer:

 [Watch Video Solution](#)

347. Write one defect of law of constant proportion:

 [Watch Video Solution](#)

348. Give on example of inner transition metal.

 [Watch Video Solution](#)

 [Watch Video Solution](#)

349. What is an open system?.

 [Watch Video Solution](#)

350. Write one' intensive property.

 [Watch Video Solution](#)

351. State one limitation of Wartz reaction.

 [Watch Video Solution](#)

352. What is 90's benzol?

 [Watch Video Solution](#)

353. Establish the relation between normal & vapour density of gas.

 [Watch Video Solution](#)

354. State two postulates of Bohr atom model

 [Watch Video Solution](#)

355. State with example aufbau principle.

 [Watch Video Solution](#)

356. Arrange the lewis acids as per increasing order

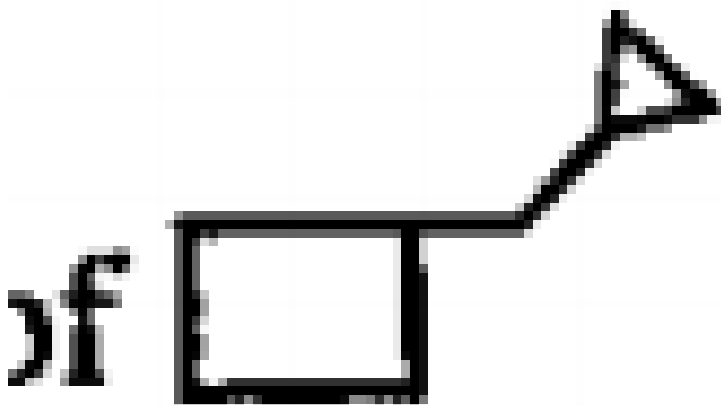
BCl_3 , BF_3 , BBr_3 , BI_3

 [Watch Video Solution](#)

357. Write the structural formula of 1,3 - dimethyl Cyclopentane.

[▶ Watch Video Solution](#)

358. Write IUPAC name of



[▶ Watch Video Solution](#)

359. What is Chemiluminescence? State one of its harmful effect.

[▶ Watch Video Solution](#)

360. Write two defects of Bohr Model. What is Quantum number?.

 [Watch Video Solution](#)

361. State the drawbacks of Rutherford Model. What is the nature of atomic spectra as per Bohr model.

 [Watch Video Solution](#)

362. Why all the 'd' - block elements are not transitional?— explain with proper example .

 [Watch Video Solution](#)

363. Write two Characteristics of S block element. Write general electronic configuration of 'd' block element.

 [Watch Video Solution](#)

364. What is dipole moment? if the dipole moment of CS_2 be Zero then predict its structure.

 [Watch Video Solution](#)

365. Why the boiling point of ethyl alcohol is higher than diethyl ether?

 [Watch Video Solution](#)

366. Classify the following intensive and extensive properties:-Internal Energy

 [Watch Video Solution](#)

367. Classify the following intensive and extensive properties:-heat Capacity

 [Watch Video Solution](#)

 [Watch Video Solution](#)

368. Classify the following intensive and extensive properties:-enthalpy

 [Watch Video Solution](#)

369. Classify the following intensive and extensive properties:-Entropy.

 [Watch Video Solution](#)

370. What is thermodynamic equilibrium?

 [Watch Video Solution](#)

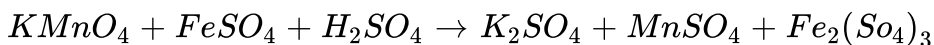
371. Calculate the work done when 56 gm N_2 gas (ideal) at $28^\circ C$ expands from 10 atm pressure to 2 atm pressure.

 [Watch Video Solution](#)

372. What is the oxidation number of * market element in $\text{Ca}(\text{O}^*\text{Cl})\text{Cl}$?

 [Watch Video Solution](#)

373. Balance the reaction by ion-electron method



 [Watch Video Solution](#)

374. Calculate the hardness of Water When 1gm FeCl_3 dissolved in 1 liter water.

 [Watch Video Solution](#)

375. What is the magnitude of Compressibility factor for real gas at very low pressure. Plot $\ln P$ vs $\ln V$ for an ideal gas. Write the unit of vanderwall's constant 'a'



[Watch Video Solution](#)

376. What is Boyle's temperature? Define Critical temperature and pressure



[Watch Video Solution](#)

377. What happens when lithium hydride is heated with Aluminium Chloride?



[Watch Video Solution](#)

378. Write unit of hardness?

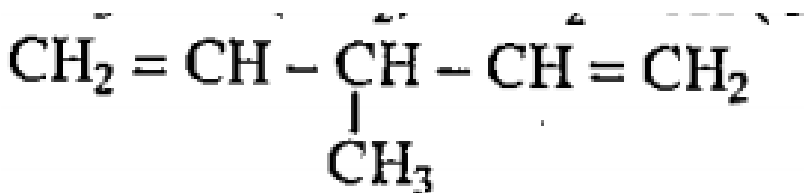


[Watch Video Solution](#)

379. Write the IUPAC name for the following Compounds :- $\text{CH}_3\text{-CH}(\text{NO}_2)\text{-CH}_2\text{-CH}(\text{CH}_3)\text{-COOH}$

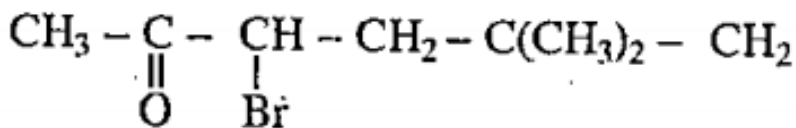
 [Watch Video Solution](#)

380. Write the IUPAC name for the following Compounds :-



 [Watch Video Solution](#)

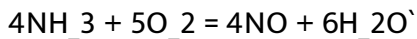
381. Write the IUPAC name for the following Compounds :-



 [Watch Video Solution](#)

382. Calculate K_c for the reaction at

500°C $\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) = 2\text{NH}_3(\text{g})$ $K_p = 1.44 \times 10^{-5}$ establish the relation



 [Watch Video Solution](#)

383. State La-Chatelier principle for equilibrium of a chemical reaction.

 [Watch Video Solution](#)

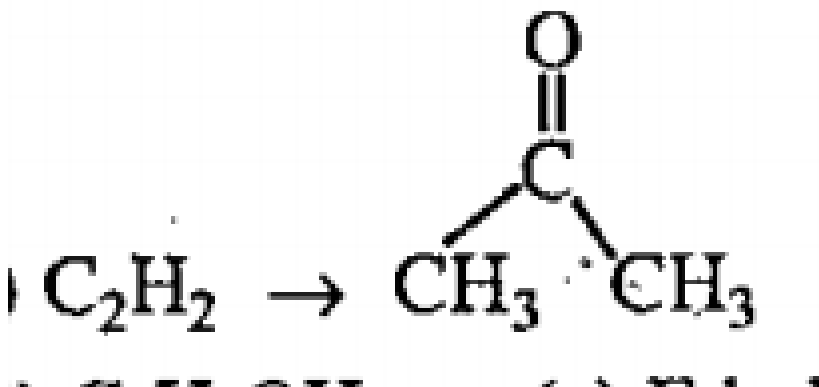
384. Explain why Cl_4 is not hydrolysed while SiCl_4 is hydrolysed

 [Watch Video Solution](#)

385. State with equation effect of temperature on Boric acid. Why CO can't be dried using concentrated H_2SO_4 . What is diborane?

 [Watch Video Solution](#)

386. How would you carryout the following Conversion :-



[▶ Watch Video Solution](#)

387. How would you Carryout the following Conversion :- $\text{C}_2\text{H}_5\text{OH} \rightarrow$
Ethylene`.

[▶ Watch Video Solution](#)

388. How would you Carryout the following Conversion :- $\text{C}_2\text{H}_5\text{OH} \rightarrow$
Diethylether.

[▶ Watch Video Solution](#)

389. Which one is correct for planck theory

A. $E = \frac{h\gamma}{C}$

B. $E = \frac{hc}{E = \frac{h\gamma}{C}}$

C. $E = \frac{hC}{\lambda}$

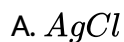
D. $E = \frac{H}{Yc}$

Answer:



Watch Video Solution

390. Which one is least Ionic



D. $CaCl_2$

Answer:

 [Watch Video Solution](#)

391. Which one is not hydrolysed

A. $SbCl_3$

B. PF_3

C. $AsCl_3$

D. NF_3

Answer:

 [Watch Video Solution](#)

392. The relationship between r.m.s velocity and density is

A. $C_{rms} \propto \frac{2}{d^2}$

B. $C_{rms} \propto \frac{1}{d}$

C. $C_{rms} \propto \frac{1}{\sqrt{d}}$

D. $C_{rms} \propto \sqrt{d}$

Answer:



[Watch Video Solution](#)

393. Which one is correct for isothermal expansion of an ideal gas

A. Enthalpy decreases

B. Enthalpy remain unchange

C. entropy changes

D. Entropy remain Constant

Answer:



[Watch Video Solution](#)

394. Which one is the correct unit of entropy?

A. Cal or iemol^{-1}

B. Cal or $\text{iedeg}^{-1}\text{mol}^{-1}$

C. Caldeg^{-1}

D. 7 mll

Answer:



Watch Video Solution

395. K_p/K_c for $\text{CO} + \frac{1}{2}\text{O}_2 = \text{CO}_2$

A. $1: \sqrt{RT}$

B. $1: \sqrt{RT}: 1$

C. $RT: 1$

D. 1 : 1

Answer:



Watch Video Solution

396. Asbestos the ore of:

A. Zn

B. Mg

C. Na

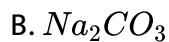
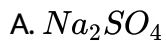
D. Ca

Answer:



Watch Video Solution

397. Baking salt is:



Answer:

 [Watch Video Solution](#)

398. Oresol and Benzyl Alcohol are isomer of type

A. Metamerism

B. fanchenal

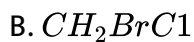
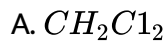
C. Positional

D. Chain.

Answer:

 [Watch Video Solution](#)

399. Which one is optically active



Answer:



Watch Video Solution

400. H_2SO_4 is used for nitration of Benzene for

A. as solvent

B. for generation of nitronium ion

C. for dehydrating agent

D. sulphenating agent.

Answer:

 [Watch Video Solution](#)

401. The main product formed when $CH_3CH_2CHBrCH_3$ is treated with alcoholic KOH.

A. Butene

B. 1- butyne

C. 2- butene

D. 1-butinotd.

Answer:

 [Watch Video Solution](#)

402. Which one damages ozonosphere

A. Chlorfluro methane

B. CO_2

C. NO_2

D. SO_2

Answer:

 [Watch Video Solution](#)

403. State Dulong-Petits rule.

 [Watch Video Solution](#)

404. Name the most electronegative element?

 [Watch Video Solution](#)

405. What do you mean by extensive property of system?

 [Watch Video Solution](#)

406. Write the definition of entropy.

 [Watch Video Solution](#)

407. State Huckells-rule for aromaticity.

 [Watch Video Solution](#)

408. How much quantity of water will be produced when electric spark is made in a mixture of 20 gm H_2 and 200 gm O_2 ? State the composition of products obtained.

 [Watch Video Solution](#)

409. Weight of 0.1 mole of X_2Y is 4.4 gm and 0.05 mole of XY_2 is 2.3 gm.

find the atomic weight 'x'.

 [Watch Video Solution](#)

410. Give the difference between orbit and orbital.

 [Watch Video Solution](#)

411. Dimond is non conductor of electricity but Graphatite is a conductor of electricity explain.

 [Watch Video Solution](#)

412. What happen when boran is strongly heated with Concentrated nitric acid. Give balanced Chemical reaction.

 [Watch Video Solution](#)

413. What is TEL? State one of its harmful effects.

 [Watch Video Solution](#)

414. Show from Hückel rule of aromaticity that cyclopropenyl cation is aromatic.

 [Watch Video Solution](#)

415. Explain that Fe^{3+} is more stable than Fe^{2+} . State Aufbau principle. What is the meaning of Aufbau?

 [Watch Video Solution](#)

416. How many orbitals are possible for $n = 3$, State the notations used for them? How many fold degenerate they are?

 [Watch Video Solution](#)

 [Watch Video Solution](#)

417. Why is the Electron affinity of Be and Mg endothermic in nature?

 [Watch Video Solution](#)

418. State three Characteristics of 'd' block element.

 [Watch Video Solution](#)

419. Write the Lewis dot structures for the following compounds: NaCN,
 N_2O , CO, $COCl_2$

 [Watch Video Solution](#)

420. Which one is more stronger and why between σ and π bond? State the process hybridisation in ethene.

 [Watch Video Solution](#)

[Watch Video Solution](#)

421. What do you mean by partial pressure of gas? State Dalton's partial pressure of gases refer the conditions

 [Watch Video Solution](#)

422. What do you mean by surfactant? Give example. What is the magnitude of surface tension at critical temperature?

 [Watch Video Solution](#)

423. Write two differences between reversible and irreversible process? Why enthalpy gets more importance than internal energy in the discussion of thermodynamics.

 [Watch Video Solution](#)

424. If the free energy change for a reaction at 25°C be 5.4 KJ Calculate the equilibrium constant for the reaction. State whether the vaporisation of water at 110°C in 1 atm pressure is a spontaneous or non spontaneous process.

 [Watch Video Solution](#)

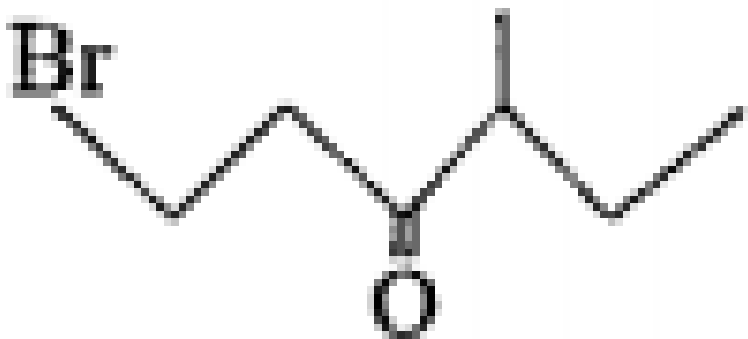
425. Why di1 H_2SO_4 is more convenient than syrapic H_3PO_4 for the preparation of H_2O_2 ? What is Marc's perhydrol.

 [Watch Video Solution](#)

426. How NH_3 is recovered in solvey process? State one use of sodium amalgum.

 [Watch Video Solution](#)

427. What do you mean by homolytic and heterolytic fission. Give the IUPAC name of



[▶ Watch Video Solution](#)

428. K_p/K_c for $CO + \frac{1}{2}O_2 = CO_2$

[▶ Watch Video Solution](#)

429. What happens when (Give balanced Chemical eqn) Boric Acid is heated with methanol and the Vapour produced is held to the flame of a Bunsen burner.

 Watch Video Solution

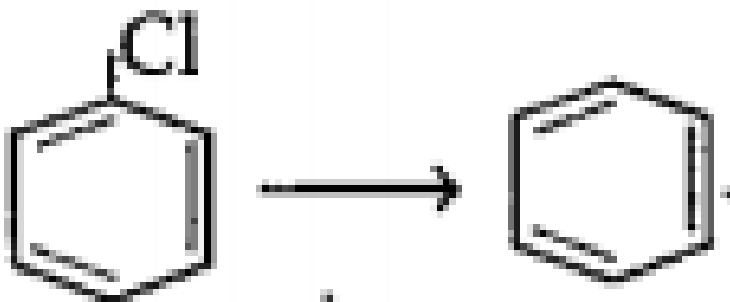
430. What happens when (Give balanced Chemical eqn) Boron trifluoride is treated with $LiAlH_4$? What is the formula of silicones.

 Watch Video Solution

431. What will happen if CO is treated with NaOH at high temp. Why BF_3 acts as Lewis acid? What is glass?

 Watch Video Solution

432. How would you convert



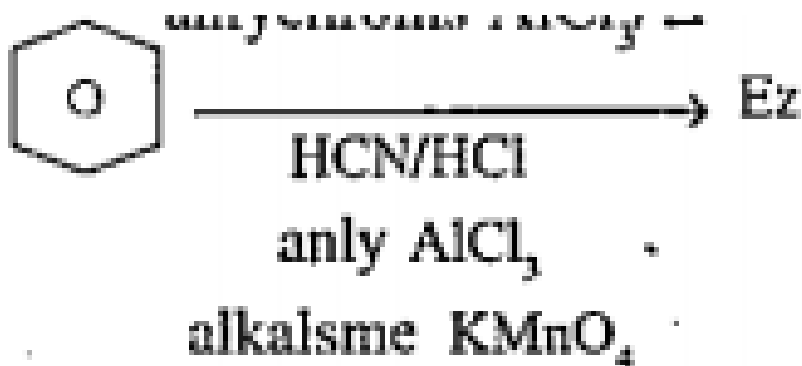
 Watch Video Solution

433. Identify C



 Watch Video Solution

434. Identify E



 Watch Video Solution

435. Aufbau principle violated in—

A. $2s^2 2Px^1 2Py^2$

B. $2s^2 2Px^2 2Pz^1$

C. $2s^2 2Px^1 2Py^1 2Pz^1$

D. $2s^1 2Px^1 2Py^1 2Pz^2$

Answer:

 [Watch Video Solution](#)

436. dsp^2 hybridisation has geometry

A. Trigonal

B. planar square

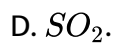
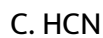
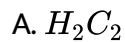
C. Tetrahedral

D. Octahedral

Answer:

 [Watch Video Solution](#)

437. Which one is not linear



Answer:



Watch Video Solution

438. Pressure of 44.8 litre of 2 moles of an ideal gas at 546 K is:

A. 3 atm

B. 1 atm

C. 4 atm

D. 2 atm

Answer:



Watch Video Solution

439. Which one is the correct unit of entropy?

A. $JK^{-1}mol^{-1}$

B. $Jmol^{-1}$

C. $J^{-1}k^{-1}mol^{-1}$

D. $J - kmol^{-1}$

Answer:



Watch Video Solution

440. Which relation for ΔH for the reaction $N_2 + 3H_2 = 2NH_3$ is correct

A. $\Delta H = \Delta U - 2RT$

B. $\Delta H = \Delta U + RT$

C. $\Delta H = \Delta U + RT$

D. $\Delta H = \Delta U + 2RT$

Answer:

 [Watch Video Solution](#)

441. $aA + bB = \text{Product}$ for the above reaction : $\frac{dA}{dT} : \frac{dB}{dT}$

A. 1 : 1

B. $\frac{b}{d}$

C. $\frac{a}{b}$

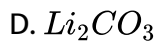
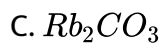
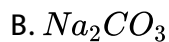
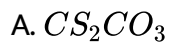
D. $\frac{b}{a}$

Answer:



[Watch Video Solution](#)

442. Which carbonates has the highest thermal stability



Answer:



[Watch Video Solution](#)

443. Which one has least Covalent Character-



B. $MgCl_2$

C. $CaCl_2$

D. $SrCl_2$

Answer:

 [Watch Video Solution](#)

444. Which one is used to identify nitrogen in Lassign test -

A. $AgNO_3$ soln

B. $FeSO_4$ soln

C. Sodium Nitroprunide soln

D. $BaCl_2$ Soln

Answer:

 [Watch Video Solution](#)

445. Whic one show geometric isomerism

- A. Acetone - oximes
- B. Benzo phenon'e oxime
- C. Isobujen
- D. acetopnone oxime

Answer:



Watch Video Solution

446. Which one is produced when quarternary ethyl ammonium hydroxide is strongly heated

- A. Ethane
- B. Ethene
- C. Ethyne
- D. Ethanol

Answer:

 [Watch Video Solution](#)

447. $CH_2 = CH_2 + PdCl_2 + H_2O \rightarrow A + Pd + HCl$ A is

A. CH_3CHO

B. CH_3COOH

C. CH_3CH_2OH

D. $HC \equiv CH$

Answer:

 [Watch Video Solution](#)

448. Hypothermia is a disease for

A. Cow

B. Man

C. Bird

D. Fish

Answer:

 [Watch Video Solution](#)

449. Which law of Chemical Combination does not obey Dalton's atomic theory?

 [Watch Video Solution](#)

450. Find the mass of Nitrogen atom equal to the number of Carbon atoms in CO_2

 [Watch Video Solution](#)

451. State modern periodic law.

 [Watch Video Solution](#)

452. State two non periodic properties of element.

 [Watch Video Solution](#)

453. Prove that $pV^\gamma = \text{constant}$ in adiabatic process .

 [Watch Video Solution](#)

454. What is the use of Kjeldahl process?

 [Watch Video Solution](#)

455. State equivalent ration law with example.



[Watch Video Solution](#)

456. Establish the relation between normal & Vapour density of real gas.



[Watch Video Solution](#)

457. Find the magnetic and azimuthal quantum number possible in $N = 3$.



[Watch Video Solution](#)

458. Show that 3d subshell can accommodate at most 10 electrons.



[Watch Video Solution](#)

459. Explain why Cl_4 is not hydrolysed while $SiCl_4$ is hydrolysed

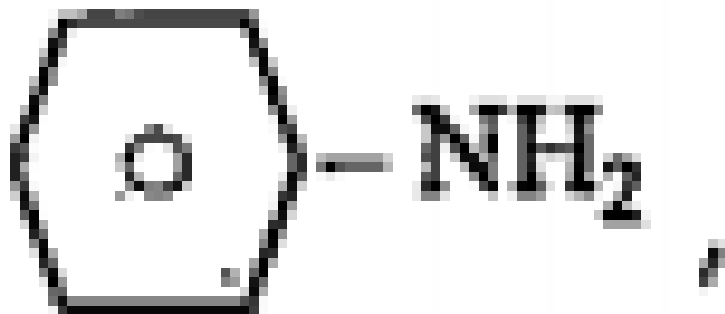


[Watch Video Solution](#)

460. Why $\text{Pb}(\text{CH}_3\text{COO})_2$ do not causes black Precipitation when mixed with charcoal and H_2S .

[Watch Video Solution](#)

461. Which one is more basic and why? $\text{C}_2\text{H}_5\text{NH}_2$ &



[Watch Video Solution](#)

462. What is biomagnification?

[Watch Video Solution](#)

463. Calculate the 2nd ionisation enthalpy of Li^{2+} given for hydrogen

$$E_n = -\frac{13.6}{n^2} \text{ e.v.}$$

 [Watch Video Solution](#)

464. If the value of Rydberg constant of hydrogen is 109737 cm^{-1} determine the longest and shortest wavelengths of the Balmer series.

 [Watch Video Solution](#)

465. Define Covalent and van der Waals radius. Comment which is higher?

 [Watch Video Solution](#)

466. When F does not give precipitation with AgNO_3 soln? Which one has higher lattice energy KF & KI.

 [Watch Video Solution](#)

467. Dipole moment and bond length of a molecule A - B type are 7.42 D and 2.04 Å respectively. Calculate % Ionic Character. What is H-bonding?

 [Watch Video Solution](#)

468. Find the ratio of molecular weight of two gases when rate of diffusion is 16 times more for the 2nd one. State Graham's law of diffusion.

 [Watch Video Solution](#)

469. Calculate the entropy change for 100 gm water at 100°C [latent heat of vaporisation is 40.4 KJmol^{-1}] what type of change is observed for entropy for end other reaction.

 [Watch Video Solution](#)

470. State two characteristics of spontaneous process. State 2nd law of Thermodynamics.

 [Watch Video Solution](#)

471. Balance the following reaction by ion-electron by ion-electron method- $HNO_3 + H_2S \rightarrow NO + S + H_2O$

 [Watch Video Solution](#)

472. Balance the following reaction by ion-electron by ion-electron method $H_2S + SO_2 \rightarrow S + H_2O$

 [Watch Video Solution](#)

473. Why HNO_3 Can't be use for the preparation of H_2O_2 by BaO_2 ?
What is Marshall acid?



Watch Video Solution

474. State similarities of Li & Mg in chemical property. What is magnetic moment.



Watch Video Solution

475. Which one is more acidic $(CH_3)_3C - COOH$ & $O_2N - CH_2 - COOH$ Give an example of +I effect.



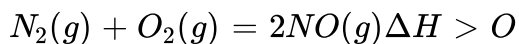
Watch Video Solution

476. Why CH_3COOH shows acidic nature? Give IUPAC name of CH_3CH_2CN .



Watch Video Solution

477. K_p for the reaction $PCl_5 \rightleftharpoons PCl_3 + Cl_2$ is 1.6 atm. Calculate the equilibrium pressure for 50% dissociation. Discuss the effect of temperature and pressure for the reaction.



 [Watch Video Solution](#)

478. Calculate the pH of 1 (M) Monobasic acid soln. in which degree of dissociation is 1.42% State with example the activities of alkaline buffer solution

 [Watch Video Solution](#)

479. What happens when mixture of CO_2 and NH_3 gas is passed through a slurry of powdered gypsum in water?

 [Watch Video Solution](#)

480. What happens when Borax is strongly heated. What is Oil dag?

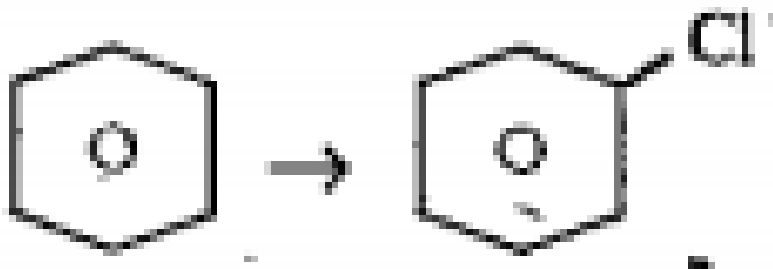
[▶ Watch Video Solution](#)

481. What happens Mixture of sand and Na_2CO_3 is strongly heated.

What is Oil dag?

[▶ Watch Video Solution](#)

482. How would you Convert



[▶ Watch Video Solution](#)

483. What is the percentage of Benzene in 90s benzol.

 [Watch Video Solution](#)

484. No. of unpaired electron in Ni^{2+} ion—

A. 0

B. 2

C. 8

D. 4

Answer:

 [Watch Video Solution](#)

485. Hybridisation of xe in xeF_2 :

A. Sp^3

B. Sp

C. Sp^3d^2

D. Sp^3d

Answer:



[Watch Video Solution](#)

486. Which one has least bond angle:

A. BeF_2

B. CH_4

C. NH_3

D. PH_3

Answer:



[Watch Video Solution](#)

487. Real gas behaves ideally at:

- A. High temp & low pressure
- B. Low temperature & high pressure
- C. high temperature & high pressure
- D. Low temperature and low pressure

Answer:

 [Watch Video Solution](#)

488. Heat of formation of $C_{12}H_{22}O_{11}(S)$, $CO_2(g)$ & $H_2O(l)$ are -530 , -94.3 & -68.3 KCal/mol respectively how much quantity of $C_{12}H_{22}O_{11}(S)$ can be burnt to get 2700 K Cal of heat:

- A. 684 gm
- B. 692.6 gm
- C. 832.74 gm
- D. 463.9 gm

Answer:



Watch Video Solution

489. Enthalpy Change for exothermic process—

- A. 0
- B. $-ve$
- C. $+ve$
- D. α

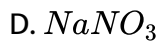
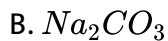
Answer:



Watch Video Solution

490. Solution of the compound having highest pH value:

- A. CH_3COOK

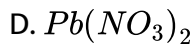
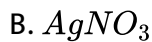
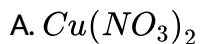


Answer:



[Watch Video Solution](#)

491. Which one does not yield NO_2 on thermal decomposition:

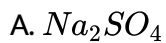


Answer:



[Watch Video Solution](#)

492. Initial input for solvay process—



B. Camalite

C. Brine solution

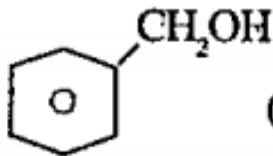
D. None of these.

Answer:

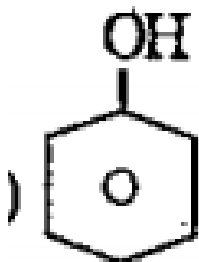
 Watch Video Solution

493. Which one has highest acidic nature:

A.

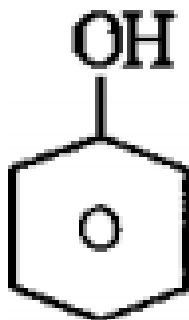


B.



C.

D.



Answer:



[Watch Video Solution](#)

494. Which one shows tautomerism:

A. 2-pentanone

B. phenol

C. lactic acid

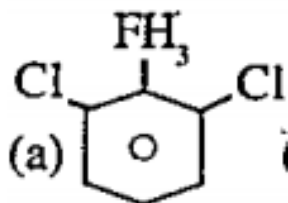
D. 2-butene

Answer:

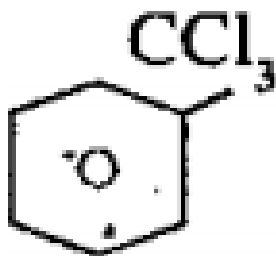
 Watch Video Solution

495. Major product obtained when Cl_2 is passed through boiling toluene:

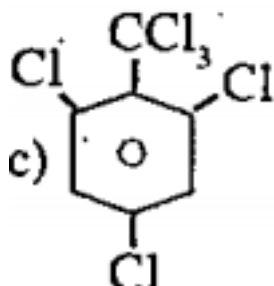
A.



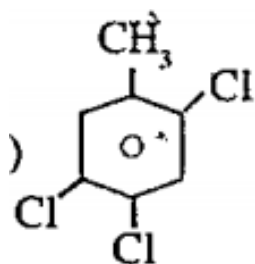
B.



C.



D.

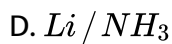
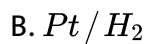
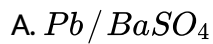


Answer:



Watch Video Solution

496. Reagent which converts 2-hexyne to 2-hexene :

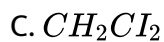


Answer:



Watch Video Solution

497. CFC- 11 is:



D. CCl_4

Answer:

 [Watch Video Solution](#)

498. 1 (N) H_2SO_4 solution contains how many moles H_2SO_4 :

 [Watch Video Solution](#)

499. Determine the empirical formula of benzene.

 [Watch Video Solution](#)

500. Write the name of highest electronegative element.

 [Watch Video Solution](#)

501. Name two element which shows diagonal relationship.

 [Watch Video Solution](#)

502. What type of property heat capacity is?

 [Watch Video Solution](#)

503. What is octane number?

 [Watch Video Solution](#)

504. State whether Daltons atomic theory can explain Gay Lussac's gas volume law explain.

 [Watch Video Solution](#)

505. Express 0.0004362 by significant notation. How many significant figure are there in the above number?

 [Watch Video Solution](#)

506. State two limitations of Rutherford's atom model.

 [Watch Video Solution](#)

507. What is isober? Write the magnitude' of Rydberg's Constant.

 [Watch Video Solution](#)

508. How would you prepare: Boric acid form Colemanite.

 [Watch Video Solution](#)

509. How would you prepare: Carbon monoxide from formic acid.

 [Watch Video Solution](#)

510. How would you establish the presence of special element in organic Compound: N_2 . (Write only the process name and concerned chemical reaction)

 [Watch Video Solution](#)

511. How would you establish the presence of special element in organic Compound: S. (Write only the process name and concerned chemical reaction)

 [Watch Video Solution](#)

512. What do you mean by BOD & COD?





[Watch Video Solution](#)

513. Calculate the de Broglie Wavelength of an electron having kinetic energy 3.6 MeV.



[Watch Video Solution](#)

514. Calculate the frequency of the highest wavelength of balmer series.



[Watch Video Solution](#)

515. What do you mean by electronegativity? Write its change across a period.



[Watch Video Solution](#)

516. Find the position of ${}_{17}\text{A}^{35}$ in periodic table indicate whether the element concerned is a metal or non metal.

 [Watch Video Solution](#)

517. Illustrate with example: Sp-hybridisation.

 [Watch Video Solution](#)

518. Find the hybridisation of the * marked element in the following compound. $\overset{*}{\text{P}}\text{Cl}_5$, $\overset{*}{\text{C}}\text{OCl}_2$, $\overset{*}{\text{S}}\text{O}_3^{2-}$ & $\overset{*}{\text{N}}\text{H}_4^{\oplus}$.

 [Watch Video Solution](#)

519. What is the dipole moment of Cl_4 ?

 [Watch Video Solution](#)

520. Write the Vanderwall's equation for real gas. Explain the term involved. Write the units for Vanderwall's constant 'a'.

 [Watch Video Solution](#)

521. What do you mean by surface tension? Write its dimension. Write the S.I. unit of it.

 [Watch Video Solution](#)

522. Calculate the entropy change of melting- of 5 gm ice. What type of function entropy is?

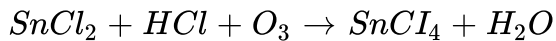
 [Watch Video Solution](#)

523. ΔH and ΔS for a reaction at $27^\circ C$ are $- 24kcalmol^{-1}$ & $24cal. mol^{-1} / K$ respetively predict about the spontainty of the process.

 [Watch Video Solution](#)

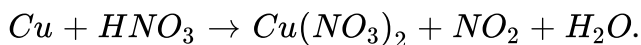
 Watch Video Solution

524. Balance the equation by oxidation no method:-



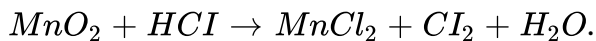
 Watch Video Solution

525. Balance by oxidation number method



 Watch Video Solution

526. Balance the following reaction by oxidation number method:



 Watch Video Solution

527. How would you prepare H_2O_2 by electrolysis method? Is MnO_2 a peroxide?

 [Watch Video Solution](#)

528. Why alkaline earth metal are respondant to flame test?

 [Watch Video Solution](#)

529. 2.4 gm of silver salt of a monobasic organic acid when heated 1.24 gm silver is obtained. Determine the molecular weight of the acid.

 [Watch Video Solution](#)

530. What type of equilibrium 'is this $3Fe(s) + (g)fFe_3O_4(S)4H_2(g)$
Discuss the effect of incorporation of inert gas at the homeogeneous equilibrium at constant temperature and pressure.



Watch Video Solution

531. Why black precipitate is formed when H_2S is passed through Pb^{2+} & Cu^{2+} soln in 0.3 (M) HCl solution. What is common ion effect? Give example.



Watch Video Solution

532. State the reason: PbI_4 does not exist but PbF_4 fairly stable.



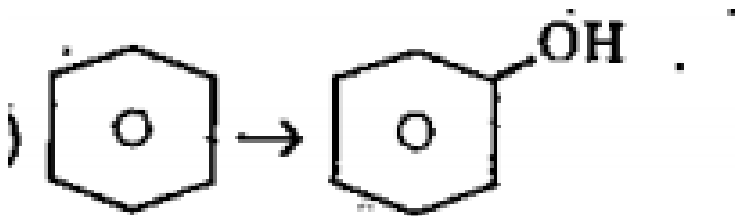
Watch Video Solution

533. Explain why CO_2 is gaseous while SiO_2 is a solid?



Watch Video Solution

534. How would you carry out the following Conversion:

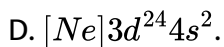
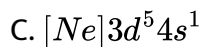
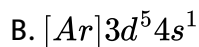
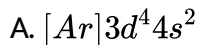


[▶ Watch Video Solution](#)

535. Name one heterocyclic aromatic compound.

[▶ Watch Video Solution](#)

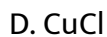
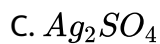
536. Correct ground state electronic configuraton of Cr is:



Answer:

 [Watch Video Solution](#)

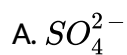
537. Which one is coloured :

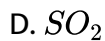
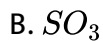


Answer:

 [Watch Video Solution](#)

538. Which one is tetrahedral:





Answer:

 [Watch Video Solution](#)

539. Which one is not applicable for reversible process:

A. It is slow

B. It occurs all at a sudden

C. Maintain thermodynamic equilibrium

D. Can be reversed to the initial stage properly

Answer:

 [Watch Video Solution](#)

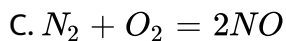
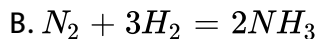
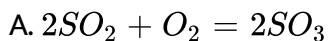
540. Spontaneous process is:

- A. Irreversible
- B. Free energy change negative
- C. entropy increases
- D. all applicable

Answer:

 [Watch Video Solution](#)

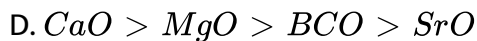
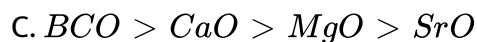
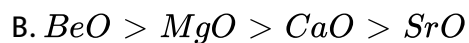
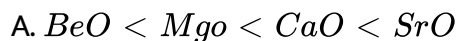
541. Which one of the following equilibrium is independent of pressure:



Answer:

 [Watch Video Solution](#)

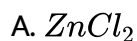
542. Correct order of basicity of the oxides:

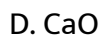
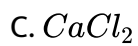
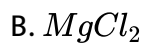


Answer:

 [Watch Video Solution](#)

543. Which one is a component of soret Cement:



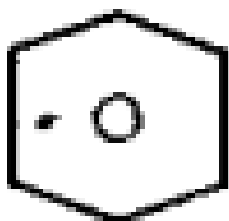


Answer:

 [Watch Video Solution](#)

544. Sulphonation is easier for:

A.



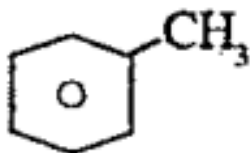
B.



C.



D.



Answer:

 [Watch Video Solution](#)

545. Chiral Carbon refers to:

- A. Isomer having mirror image relationship
- B. Having Centre of symmetry
- C. Having plane of Symmetry
- D. Having geometrc isomer

Answer:

 [Watch Video Solution](#)

546. NO of possible isomer for the compound C_7H_8O :

A. 2

B. 5

C. 3

D. 4

Answer:

 [Watch Video Solution](#)

547. Boiling point of branched alkaneas compare to normal alkane—

A. Higher

B. lower

C. equal

D. not related

Answer:



[Watch Video Solution](#)

548. Beagon contains Compounds which is—

A. Chlorinated

B. Fluorinated

C. Phosphate

D. Carbamate group

Answer:



[Watch Video Solution](#)

549. What is accuracy?

 [Watch Video Solution](#)

550. What do you mean by reliability?

 [Watch Video Solution](#)

551. In which block element lanthanoid Contraction observe?

 [Watch Video Solution](#)

552. Give an example of inert pair effect?

 [Watch Video Solution](#)

553. What is the change of free energy in irrevisible process?

 [Watch Video Solution](#)

554. What is light Oil?

 [Watch Video Solution](#)

555. 1.25 gm of a metal process 62.4 ml H_2 at NTP, Calculate the equivalent. weight of the metal.

 [Watch Video Solution](#)

556. Give the difference between orbit and orbital.

 [Watch Video Solution](#)

557. What happens when:CuO is heated with B_2O_3 in (Oxidation flame)

 [Watch Video Solution](#)

558. Fe_2O_3 is heated with B_2O_3 in (reducing flame)

 [Watch Video Solution](#)

559. Write the structural formula for the following compound: 1, 2, 3 - trimethyl Cyclopentane.

 [Watch Video Solution](#)

560. Write the structural formula for the following compound: 4 - Chloro - 2 - Pentanone.

 [Watch Video Solution](#)

561. What is stone Cancer.

 [Watch Video Solution](#)

562. Calculate the energy of 1 Millimole of photon having wavelength 405nm

 [Watch Video Solution](#)

563. Calculate the radius of the 3rd orbit in which electron has the velocity $1 \times 10^8 \text{ cm/sec}$.

 [Watch Video Solution](#)

564. Arrange the following oxides as per their increasing order of acidic nature. B_2O_3 , CO_2 , F_2O & N_2O_5 State modern periodic law.

 [Watch Video Solution](#)

565. Arrange the element as per increasing electronegativity O, Te, Se, S.
'Name a coinage metal.



Watch Video Solution

566. Why the boiling point of NH_3 is higher than that of PH_3 ? Give an example of intermolecular hydrogen bonding?



Watch Video Solution

567. Why the bond length of BF_3 is less than that of BF_4^- ? Find the hybridization of Cl in ClO_4^- .



Watch Video Solution

568. Calculate the r.m.s. velocities of CO_2 at $27^\circ C$. Show that $C_{rms} =$

$$\sqrt{2 \frac{E}{M}}$$



Watch Video Solution

569. Why the rain drops are spherical? Why the surface-tension of pb is higher than that of water.-

 [Watch Video Solution](#)

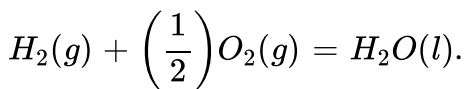
570. Calculate the enthalpy for the reaction at 27°C .



$\Delta H^{\circ}(\text{C} - \text{C}) = 350 \text{ kJ mol}^{-1}$, $\Delta H^{\circ}(\text{C} - \text{H}) = 410 \text{ kJ mol}^{-1}$, $\Delta H^{\circ}(\text{C} - \text{C}) = 600 \text{ kJ mol}^{-1}$, $-\Delta H^{\circ}(\text{C}-\text{Cl}) = 340 \text{ kJ mol}^{-1}$, $\Delta H^{\circ}(\text{H}-\text{Cl}) = 430 \text{ kJ mol}^{-1}$.

 [Watch Video Solution](#)

571. Calculate $\Delta H - \Delta U$ at 25°C for the reaction:



 [Watch Video Solution](#)

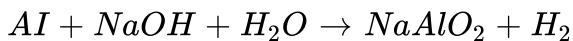
572. What is the oxidation number of Mn in K_2MnO_4 ?

 [Watch Video Solution](#)

573. Calculate the oxidation no of * marked atom: $*Fe(CO)_5$

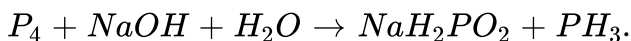
 [Watch Video Solution](#)

574. Balance the equation by oxidation no method :



 [Watch Video Solution](#)

575. Balance by oxidation number method



 [Watch Video Solution](#)

576. What do you mean by Interstitial and non stoichiometric hydrides?

Give example.

 [Watch Video Solution](#)

577. Why K_2CO_3 can't be prepared by solvey process? What is backing soda?

 [Watch Video Solution](#)

578. What is carbene? How many types of carbene present? Give example.

 [Watch Video Solution](#)

579. $2AB_2(g) = 2AB(g) + B_2(g)$ if the degree of dissociation and total pressure be x and P respectively them establish the equation for K_p .
Discuss the effect of temperature and pressure for the physical

equilibrium.



 [Watch Video Solution](#)

580. Calculate the pH 0.01 (m) CH_3COOH at 25°C .
(Given dissociation constant of $\text{CH}_3\text{COOH} = 1.75 \times 10^{-5}$)

 [Watch Video Solution](#)

581. Write the equation what happens when Borax is heated with ethanol and cone H_2SO_4 and the vapour comes out is held to the flame of Bunsen burner.

 [Watch Video Solution](#)

582. Write the equation what happens when Mixture of diborane and Ammonia is strongly heated.

 [Watch Video Solution](#)

583. State reason :Why born nitrides is called inorganic graphite..

 [Watch Video Solution](#)

584. State reason : BH_3 forms dimer.

 [Watch Video Solution](#)

585. Give example of 3-centre-2-electron bond.

 [Watch Video Solution](#)

586. How would you differ chemically:Ethene & Ethyne.

 [Watch Video Solution](#)

587. How would you differ chemically: 1 - Butene & 2 - butene.

 [Watch Video Solution](#)

588. Write short note on: Friedel Craft alkylation reaction.

 [Watch Video Solution](#)

589. Write short note on: Aromaticity.

 [Watch Video Solution](#)