Date Planned : __ / __ / __	Daily Tutorial Sheet-7	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

91. **Statement-1 :** $Al(OH)_3$ is amphoteric in nature.

Statemant-2 : $Al-O$ and $O-H$ bonds can be broken with equal case in $Al(OH)_3$. **(1998)**

(A) Statement-1 is True, Statement-2 is True; Statement-2 is a correct explanation for Statement-1

(B) Statement-1 is True, Statement-2 is True; Statement-2 is NOT a correct explanation for Statement-1

(C) Statement-1 is True, Statement-2 is False

(D) Statement-1 is False, Statement-2 is True

92. In compounds of type ECl_3, where E = B, P, As or Bi, the angles $Cl-E-Cl$ for different E are in the order : **(1999)**

(A) $B > P = As = Bi$ **(B)** $B > P > As > Bi$

(C) $B < P = As = Bi$ **(D)** $B < P < As < Bi$

93. On heating ammonium dichromate, the gas evolved is : **(1999)**

(A) oxygen **(B)** ammonia **(C)** nitrous oxide **(D)** nitrogen

94. One mole of calcium phosphide on reaction with excess water gives : **(1999)**

(A) one mole of phoshine **(B)** two moles of phosphoric acid

(C) two moles of phosphine **(D)** one mole of phosphorus pentoxide

95. Ammonia, on reaction with hypochlorite anion, can form : **(1999)**

(A) NO **(B)** NH_4Cl **(C)** N_2H_4 **(D)** HNO_2

96. In the contact process for industrial manufacture of sulphuric acid some amount of sulphuric acid is used as a starting material. Explain briefly. What is the catalyst used in the oxidation of SO_2? **(1999)**

97. In the following equation, $A + 2B + H_2O \longrightarrow C + 2D$ ($A = HNO_2$, $B = H_2SO_3$, $C = NH_2OH$). Identify D. Draw the structures of A, B, C and D. **(1999)**

98. Ammonia can be dried by : **(2000)**

(A) conc. H_2SO_4 **(B)** P_4O_{10} **(C)** CaO **(D)** anhydrous $CaCl_2$

99. The number of $P-O-P$ bonds in cyclic metaphosphoric acid is : **(2000)**

(A) zero **(B)** two **(C)** three **(D)** four

100. Give reason(s) why elemental nitrogen exists as a diatomic molecule whereas elemental phosphorus as a tetraatomic molecule. **(2000)**

101. Draw the molecular structures of XeF_2, XeF_4 and XeO_2F_2 indicating the location of lone pair(s) of electrons. **(2000)**

102. Give an example of oxidation of one halide by another halogen. Explain the feasibility of the reaction. **(2000)**

103. The number of $S-S$ bonds in sulphur trioxide trimer (S_3O_9) is : **(2001)**

(A) three **(B)** two **(C)** one **(D)** zero

104. Starting from $SiCl_4$, prepare the following in steps not exceeding the number given in parentheses (give reactions only) : **(2001)**

(i) Silicon (1)

(ii) Linear silicone containing methyl groups only (4)

(iii) Na_2SiO_3 (3)

105. **Statement-1 :** Between $SiCl_4$ and CCl_4, only $SiCl_4$ reacts with water.

Statemant-2 : $SiCl_4$ is ionic and CCl_4 is covalent. **(2001)**

(A) Statement-1 is True, Statement-2 is True; Statement-2 is a correct explanation for Statement-1

(B) Statement-1 is True, Statement-2 is True; Statement-2 is NOT a correct explanation for Statement-1

(C) Statement-1 is True, Statement-2 is False

(D) Statement-1 is False, Statement-2 is True