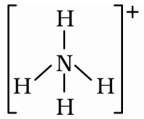
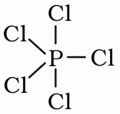
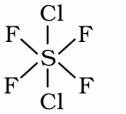
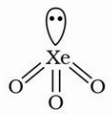
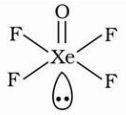
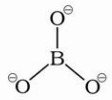
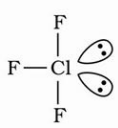
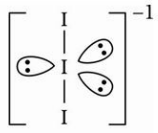
Daily Tutorial Sheet-7	Level - 2

86.(A)   

$NH_4^+ - sp^3$ $PCl_5 - sp^3d$ $SF_6 - sp^3d^2$

87.(C)   

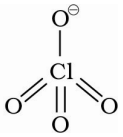
sp^3 hybridised Trigonal pyramidal | sp^3d^2 hybridised Square pyramidal | sp^2 hybridised Planar triangular

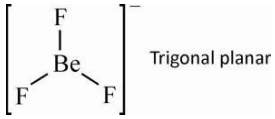
sp^3d hybridised T-shape | sp^3d hybridised Linear shape

88.(D) $PCl_5 \rightarrow sp^3d$; $IF_7 \rightarrow sp^3d^3$; $H_3O^+ \rightarrow sp^3$

$ClO_2^- \rightarrow sp^3$; $NH_4^+ \rightarrow sp^3$

89.(C) $ClO_4^- \longrightarrow$ 

90.(AD) $CH_3^+ \longrightarrow$ uses sp^2 in bonding

$BeF_3^- \longrightarrow sp^2$  Trigonal planar

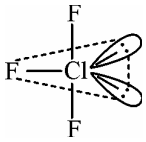
91.(D) For hybridization number ≥ 6, we have

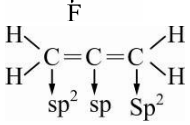
$PCl_5 \longrightarrow$ only 5 $SO_3 \longrightarrow 3$

$CO_3^{2-} \longrightarrow 3$ $XeF_6 \longrightarrow 7$ $\therefore$ XeF_6, Xe forms seven hybrid orbitals (sp^3d^3)

92.(D) $XeOF_4 \rightarrow$ Hybridisation = $6 \rightarrow sp^3d^2$. : 5b.p + 1ℓ.p $\rightarrow$ Hence, square pyramidal.

93.(C) Lone pairs are always present at equatorial position to minimize both ℓp – bp repulsions.



94.(B) 

95.(A) In case of sp hybridization, one s-orbital and one p-orbital hybridise.