

Date Planned : __ / __ / __	Daily Tutorial Sheet - 9	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 2	Exact Duration : _____

106. Hybridisation of Boron in B_2H_6 molecule is :

- (A) sp^2 (B) sp^3 (C) sp^3d (D) sp

*107. Which of the following molecule have same structure and shape ?

- (A) IF_7 (B) $[AlF_6]^{3-}$ (C) BrF_5 (D) $XeOF_4$

108. Match List-1 and List-II and pick out correct matching codes from of given choices.

List 1		List 2	
(A)	ClF_3	1.	Square planar
(B)	PCl_5	2.	Tetrahedral
(C)	PF_5	3.	Trigonal bipyramidal
(D)	CCl_4	4.	Square pyramidal
(E)	XeF_4	5.	T-shaped

Codes:

- (A) A-5, B-4, C-3, D-2, E-4 (B) A-5, B-3, C-3, D-2, E-1
 (C) A-5, B-3, C-4, D-1, E-2 (D) A-4, B-3, C-5, D-2, E-1

109. Which carbon is more electronegative?

- (A) sp^3 hybridised carbon (B) sp -hybridised carbon
 (C) sp^2 hybridised carbon (D) Always same irrespective of its hybrid state

110. Water can form a maximum of :

- (A) four hydrogen bonds (B) two hydrogen bonds
 (C) one hydrogen bond (D) six hydrogen bonds

111. In which reaction, the hybridisation on the central atom changes from sp^2 to sp^3 :

- (A) $NH_3 + H^+ \longrightarrow NH_4^+$ (B) $BF_3 + F^- \longrightarrow BF_4^-$
 (C) $H_2O + H^+ \longrightarrow H_3O^+$ (D) $C_2H_2 + 2H_2 \longrightarrow C_2H_6$

*112. Which among the following involves (s) $p\pi - p\pi$ bonding ?

- (A) BF_3 (B) SO_2 (C) CO_2 (D) NF_3

*113. Which of the following are true ?

- (A) He_2 and $BiCl_5$ do not exist (B) There are two $p\pi - d\pi$ bonds in SO_3
 (C) SeF_4 and CH_4 are tetrahedral (D) I_3^- is linear molecule with sp^3d hybridisation

*114. In which of the following change in hybridisation is taking place ?

- (A) $BF_3 + NH_3 \rightarrow [H_3N \rightarrow BF_3]$ (B) $NH_3 + H^+ \rightarrow NH_4^+$
 (C) $SbF_5 + F^- \rightarrow [SbF_6]^-$ (D) $2HClO_2 \rightarrow HClO + HClO_3$

115. The structure and hybridisation of $Si(CH_3)_4$ is :

- (A) bent, sp (B) trigonal planar, sp^2
 (C) octahedral, sp^3d (D) tetrahedral, sp^3