Date Planned : __ / __ / __	Daily Tutorial Sheet - 8	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 2	Exact Duration :_____

96. The hybridization of the centre atom will change when :

(A) NH_3 combines with H^+ **(B)** AlH_3 combines with H^-

(C) NH_3 forms NH_2^- **(D)** SiF_4 forms $SiCl_4$

97. In the linear I_3^- (tri-iodide ion), the central iodine atom contains :

(A) no unshared pair of electrons **(B)** four unshared pairs of electrons

(C) three unshared pair of electrons **(D)** two unpaired electrons

98. In the sp^3d hybridisation of the central atom having two lone pairs, the lone pairs are placed along the equator and not along the axis while in the sp^3d hybridisation of the central atom with three lone pairs, the lone pairs are again placed along the equator and not along the two axis because :

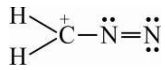
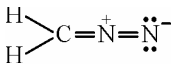
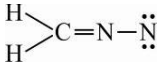
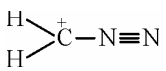
(A) In order to minimize lone pair-lone pair repulsion in both the cases

(B) In order to minimize lone pair-bond pair repulsion in both the cases

(C) In order to minimize bond pair-bond pair repulsion in the former and lone pair-lone pair repulsion in the latter

(D) In order to minimize bond pair-bond pair repulsion in the former and lone-pair-lone pair repulsion in the latter

99. Which of the two do you think is more important contributor to the resonance hybrid ?

(A)  **(B)**  **(C)**  **(D)** 

100. Select the incorrect statement.

(A) Double bond is shorter than a single bond

(B) σ – bond is weaker than a π – bond

(C) Double bond is stronger than a single bond

(D) Covalent bond is stronger than a hydrogen bond

101. Which of these molecules have non-bonding electron pairs on the central atom?

I. SF_4 **II.** ICl_3 **III.** SO_2

The correct option is :

(A) II only **(B)** I and II only **(C)** I and III only **(D)** I, II and III

102. Which species has the same shape as the NO_3^- ion?

(A) SO_3 **(B)** SO_3^{2-} **(C)** ClF_3 **(D)** ClO_3^-

103. The hybridisation scheme for the central atom includes a d-orbital contribution in:

(A) I_3^- **(B)** PCl_3 **(C)** NO_3^- **(D)** H_2Se

104. AsF_5 molecule is trigonal bipyramidal. The hybrid orbitals used by As atoms for bonding are:

(A) $d_{x^2-y^2}, d_{z^2}, s, p_x, p_y$ **(B)** d_{xy}, s, p_x, p_y, p_z

(C) $s, p_x, p_y, p_z, d_{z^2}$ **(D)** $d_{x^2-y^2}, s, p_x, p_y, p_z$

105. In a P_4 molecule, the P – P – P bond angle is :

(A) 120° **(B)** 109° **(C)** 60° **(D)** between 60° and 90°