Date Planned : __ / __ / __	Daily Tutorial Sheet - 10	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 2	Exact Duration :_____

116. In which of the following there is maximum $p\pi - p\pi$ bonding ?

(A) NF_3 **(B)** NI_3 **(C)** BI_3 **(D)** BF_3

117. The d-orbital involved in the hybridization of central atom in $XeOF_2$ molecule is :

(A) d_{z^2} **(B)** $d_{x^2-y^2}$ and d_{z^2} **(C)** d_{xy} **(D)** d_{yz}

118. In which of the following ionisation processes, the bond order has increased and the magnetic behavior has changed?

(A) $C_2 \longrightarrow C_2^+$ **(B)** $NO \longrightarrow NO^+$ **(C)** $O_2 \longrightarrow O_2^+$ **(D)** $N_2 \longrightarrow N_2^+$

119. Which one of the following statements is correct ?

(A) Molecular hydrogen is paramagnetic **(B)** Molecular nitrogen is paramagnetic

(C) Molecular oxygen is paramagnetic **(D)** Molecular oxygen is diamagnetic

120. In the conversion of N_2 into N_2^+ the electron will be lost from which of the following molecular orbital ?

(A) σ^*2p_z **(B)** $\sigma 2p_z$ **(C)** $\pi 2p_x$ **(D)** π^*2p_x

121. Which is the correct statement ?

(A) H_2^+ ion is more stable than H_2 molecule

(B) The bond dissociation energy for H_2^+ ion is + ve

(C) The bond order of H_2^+ ion is 0.5 and hence H_2^+ ion does not exist

(D) The electron density along a line joining the two centres of the hydrogen nuclei in H_2^+ will always be greater than at the corresponding points along a similar line for H_2

***122.** Which of the following have fractional bond order and is(are) paramagnetic ?

(A) C_2^+ **(B)** O_2^- **(C)** NO **(D)** CO

123. The sequence that correctly describes the relative bond strength pertaining to oxygen molecule and its cation or anion is:

(A) $O_2^{2-} > O_2^- > O_2 > O_2^+$ **(B)** $O_2 > O_2^+ > O_2^- > O_2^{2-}$

(C) $O_2^+ > O_2 > O_2^{2-} > O_2^-$ **(D)** $O_2^+ > O_2 > O_2^- > O_2^{2-}$

124. The correct order of bond order value among the following is:

I. NO^- **II.** NO^+ **III.** NO **IV.** N_2 **V.** NO^{2-}

The correct choice is :

(A) I < IV < III < II < V **(B)** IV = II < I < V < III

(C) V < I < III < IV = II **(D)** II < III < IV < I < V

125. Which of the following will participate in intermolecular H-bonding?

(A) CH_2Cl_2 **(B)** $H_3C-\overset{\overset{O}{\|}}{C}-CH_3$ **(C)** H_3PO_4 **(D)** PH_3