



THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

CHEMICAL BONDING

I. Choose the Best Answer

1. Which of the following molecules has both covalent and ionic bond

(a) CH_3Cl (b) NH_4Cl (c) HCl (d) BeCl_2

2. Identify correct statement regarding NH_3 and BF_3

(a) Both are Lewis acid (b) Both are iso structural
(c) Both are Lewis base (d) Have different values of dipole moment

3. Identify the molecule having sideways overlapping of atomic orbitals

(a) CH_4 (b) CO_2 (c) NH_3 (d) H_2O

4. Which of the following chemical species is most stable?

(a) O_2 (b) O_2^+ (c) O_2^- (d) O_2^{2-}

5. The shape of XeF_4 molecule according to VSEPR theory is

(a) Square planar (b) Square pyramid (c) Tetrahedral (d) Pyramidal

II. Fill in the Blanks

1. The energy required to completely separate one mole of solid ionic compound into gaseous constituent ions is called _____.

2. Among alkali metal ions _____ ion has highest polarizing power.

3. Isoelectronic molecules and ions have identical _____.

4. A triple covalent bond consists of _____ sigma and _____ pi bonds.