

Date Planned : __ / __ / __	Daily Tutorial Sheet-6	Expected Duration : 30 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

76. In the following reaction : ▶
- $$\text{B(OH)}_3 + \text{H}_2\text{O} \longrightarrow [\text{B(OH)}_4]^- + \text{H}^+$$
- (A) B(OH)_3 is a Lewis acid (B) B(OH)_3 is amphoteric
(C) B(OH)_3 is a Lewis base (D) None is correct
77. In the following statements, select the correct statement(s) : ▶
- (A) $\text{N(CH}_3)_3$ has pyramidal structure (B) $\text{N(SiH}_3)_3$ shows planar arrangement
(C) Both are correct (D) None is correct
78. The dipole moments of the given molecules are such that : ▶
- (A) $\text{BF}_3 > \text{NF}_3 > \text{NH}_3$ (B) $\text{NF}_3 > \text{BF}_3 > \text{NH}_3$
(C) $\text{NH}_3 > \text{NF}_3 > \text{BF}_3$ (D) $\text{NH}_3 > \text{BF}_3 > \text{NF}_3$
79. Boron carbide is used : ▶
- (A) In nuclear reactor to absorb neutrons (B) As an abrasive
(C) Both are correct (D) None is correct
80. Aqueous solution of borax reacts with two moles of acid. This is because of : ▶
- (A) formation of 2 mol of B(OH)_3 only
(B) formation of 2 mol of $[\text{B(OH)}_4]^-$ only
(C) formation of 1 mol each of B(OH)_3 and $[\text{B(OH)}_4]^-$
(D) formation of 2 mol of $[\text{B(OH)}_4]^-$
81. While testing BO_3^{3-} , there is green-edged flame on heating the salt with conc. H_2SO_4 and CH_3OH . Green colour is of : ▶
- (A) $(\text{CH}_3)_3\text{B}$ (B) $(\text{CH}_3\text{O})_3\text{B}$ (C) B_2O_3 (D) H_3BO_3
82. The gaseous product(s) expected at room temperature by reaction of sodium borohydride and boron trifluoride under anhydrous condition is (are) : ▶
- (A) H_2 (B) B_2H_3 and H_2 (C) B_2H_6 (D) BH_2F and H_2
83. Choose the correct sequence for the geometry of the given molecules ▶
Inorganic graphite, Borazole, $\text{B}_3\text{O}_6^{3-}$ (NP : Non planar, P : Planar)
- (A) NP, NP, NP (B) P, P, NP (C) NP, NP, P (D) NP, P, P
84. Borax is used as a cleansing agent because on dissolving in water, it gives : ▶
- (A) Alkaline solution (B) Acidic solution
(C) Bleaching solution (D) Basic solution
85. From B_2H_6 , all the following can be prepared except : ▶
- (A) B_2O_3 (B) H_3BO_3 (C) $\text{B}_2(\text{CH}_3)_6$ (D) NaBH_4