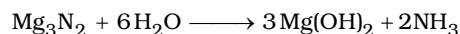
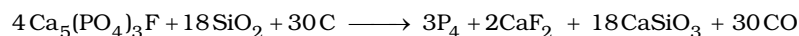


Date Planned : __ / __ / __	Daily Tutorial Sheet - 5	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 1	Exact Duration : _____

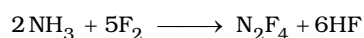
61. One mole of magnesium nitride on reaction with an excess of water gives: ▶



- (A) one mole of NH_3 (B) two moles of NH_3
 (C) one mole of HNO_3 (D) two moles of HNO_3
62. 10 g of CaCO_3 contains:
 (A) 10 moles of CaCO_3 (B) 0.1 g atom of Ca
 (C) 6×10^{23} atoms of Ca (D) 0.1 of equivalent of Ca
63. Two glucose solutions are mixed. One has volume of 480 mL and concentration of 1.50 M and the second has a volume of 520 mL and concentration 1.20 M. The molarity of final solution is:
 (A) 1.20 M (B) 1.50 M (C) 1.344 M (D) 2.70 M
64. How many moles of P_4 can be produced by reaction of 0.10 moles $\text{Ca}_5(\text{PO}_4)_3\text{F}$, 0.36 moles SiO_2 and 0.90 moles C according to the following reaction ?



- (A) 0.060 (B) 0.030 (C) 0.045 (D) 0.075
65. The molecular mass of an oxide of an element is 44. The equivalent weight of element is 14. The atomic weight of the element is: ▶
 (A) 14 (B) 28 (C) 42 (D) 56
66. The mass of N_2F_4 produced by the reaction of 2.0 g of NH_3 and 8.0 g of F_2 is 3.56 g. What is the percentage yield? ▶



- (A) 79.0 (B) 71.2 (C) 84.6 (D) None of these
67. An element A (atomic weight = 12) and B (atomic weight = 35.5) combines to form a compound X. If 4 mol of B combines with 1 mol of A to give 1 mol of X. The weight of 1 mol of X would be :
 (A) 47.5 g (B) 74.0 g (C) 154.0 g (D) 148.8 g
68. If 1 L of O_2 at 15°C and 750 mm pressure contains N molecules, the number of molecules in 2 litres of SO_2 under the same conditions of temperature and pressure will be :
 (A) $\text{N}/2$ (B) N (C) 2N (D) 4 N
69. How many moles of ferric alum $(\text{NH}_4)_2\text{SO}_4 \cdot \text{Fe}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$ can be made from the sample of Fe containing 0.0056 g of it? ▶
 (A) 10^{-4} mol (B) 0.5×10^{-4} mol
 (C) 0.33×10^{-4} mol (D) 2×10^{-4} mol
70. In an experiment, 6.67 g of AlCl_3 was produced and 0.54g Al remained unreacted. How many g atoms of Al and Cl_2 were taken originally? ▶
 (A) 0.070, 0.075 (B) 0.07, 0.05 (C) 0.02, 0.15 (D) 0.02, 0.15

71. 27 g of Al will react completely with g of O_2 .
(A) 8 g **(B)** 10 g **(C)** 24 g **(D)** 49 g
72. 1 g of the carbonate of a metal was dissolved in 25 mL of 1N HCl. The resulting liquid required 5 mL of 1N NaOH for neutralization. The equivalent weight of the metal carbonate is: 
(A) 50 **(B)** 30 **(C)** 20 **(D)** None of these
73. The equivalent weight of H_3PO_4 in the reaction is: $Ca(OH)_2 + H_3PO_4 \longrightarrow CaHPO_4 + 2H_2O$ 
(A) 49 **(B)** 98 **(C)** 32.66 **(D)** 147
74. A gaseous mixture contains O_2 and N_2 in the ratio of 1 : 4 by weight. The ratio of their number of molecules is: 
(A) 7 : 4 **(B)** 7 : 8 **(C)** 7 : 32 **(D)** 3 : 16
75. What weight of a metal of equivalent weight 12 will give 0.475 g of its chloride? 
(A) 0.12 g **(B)** 0.24 g **(C)** 0.36 g **(D)** 0.48 g