**I.P.S.Sr.Sec.School**

**Max Time : 1 hr** **Class : 11th Chemistry Max Marks : 30**

**Monthly Test**

1. At 700 K, the equilibrium constant Kp for the reaction : 2 SO3 (g) 2 SO2 (g) + O2 (g) is 1.8 x 10 – 3 kPa. What is the numerical value of KC in moles per litre for this reaction at the same temperature ? [ 2 ]
2. What is KC for the following equilibrium when the equilibrium concentration of each substance : [ 2 ]

[SO2] = 0.6 M , [O2] = 0.82 M and [SO3] = 1.90 M ? 2 SO2 (g) + O2 (g) 2 SO3 (g)

1. At 773 K, the equilibrium constant Kc for the reaction : N­2 (g) + 3 H2 (g) 2 NH3 (g) is 6.02 x 10 – 2 L2/mol2. Calculate the value of KP at the same temperature [ 3 ]
2. Write the expression for the equilibrium constant, KC for each of the following reactions :
3. 2 NOCl (g) 2 NO (g) + Cl2 (g) [ 3 ]
4. 2 Cu (NO3)2 (s) 2 CuO (s) + 4 NO2 (g) + O2 (g)
5. CH3COOC2H5 (aq) + H2O (l) CH3COOH (aq) + C2H5OH (aq)
6. Balance the following equations by Basic medium [ 2 x 2 = 4 ]
7. Cr (s) + (aq) Cr(OH)3 (s) + (aq)
8. Zn (s) + (aq) Zn2+ (aq) + (aq)
9. Balance the following equations by acidic medium [ 4 x 2 = 8 ]
10. Sn (s) + (aq) + H + (aq) Sn2+ (aq) + (aq) + H2O (l).
11. (aq) + C2H4O (g) → Cr3+ (aq) + C2H4O2 (aq).
12. Cu (aq) + (aq) Cu2+ (aq) + NO2 (g).
13. (aq) + Fe2+ (aq) → Mn2+ (aq) + Fe3+ (aq)
14. Find the oxidation number of the following : [ 1 x 8 = 8]

(a) C2H6 (b) (NH4)2SO4

(c) KClO4 (d) PbSO4

(e) SiH4 (f) KMnO4

(g) Cr (h) H4P2