



Brain International School

Vikas Puri, New Delhi

ASSIGNMENT NO. 5

SUBJECT: CHEMISTRY

CLASS-XI

NOV,25

Ch-6. Equilibrium

1. What is solubility products? Find its relation for K_{sp} and solubility(s) for $AlCl_3$.
2. K_{sp} for $CaCl_2$ is 3.6×10^{-8} find its solubility.
3. How much $AgNO_3$ will dissolve in 200ml solution if its K_{sp} is 2.4×10^{-6} .
4. What is common ion effect, explain with example?
5. K_{sp} for MnS is 3.4×10^{-12} .if Conc. Of MnS is $2.6 \times 10^{-2} \text{ ML}^{-1}$ than than find ppt.will form or not.
6. What are conjugate acids and bases according to Lewis theory?
7. Find conjugates acid and bases of HSO_4^- and HCO_3^-
8. H_2O is amphoteric in nature explain with example.
9. Find PH of 10^{-8} M HCl solution.
10. What are buffer solutions? Write its types with example.
11. Explain $AlCl_3$ and PCl_5 are Lewis acids.
12. How can you say $P^H + P^{OH} = 14$
13. Find P^H of 0.002M $NaOH$ and 0.004M H_2SO_4 .
14. K_w for water is $10^{-12.6}$, find P^H of water also find nature of water at this K_w .
15. Find relation between K_a and 'C' for weak acids.

MCQ type questions:

1. Q1.The strong conjugate base is :
(a) NO_3^- (b) Cl^- (c) SO_3^{2-} (d) CH_3COO^-
2. Q2.The K_a for CH_3COOH is 1.7×10^{-5} and concentration of H^+ ions is 3.4×10^{-4} .The concentration of CH_3COOH is
3. (a) 3.4×10^{-4} (b) 3.4×10^{-3} (c) 6.8×10^{-4} (d) 1.7×10^{-3}
4. The solubility product of M_2S is 3.5×10^{-6} . The solubility of salt is.
(a) 1.7×10^{-6} (b) 3.4×10^{-16} (c) 1.7×10^{-16} (d) 6.8×10^{-12}
5. Which of the following is buffer solution?
(a) $CH_3COOH + CH_3COONa$ (b) CH_3COOH and CH_3COONH_4
(c) CH_3COOH and NH_4Cl (d) $NaOH$ and HCl

