Chemical Equilibrium-3

1) A monobasic weak acid solution of molarity 0.005 has P^H value 5. The percentage ionization of acid in the solution is [PMT2011]

1)2 2) 0.2 3) 0.5 4) 0.25

Ans: 2

2) Which of the following is least likely to behave as Lewis base? [AIPMT2011]

1) OH^- 2) H_2O 3) NH_3 4) BF_3

Ans: 4

3) A buffer solution contains 0.3M ammonium hydroxide and 0.2M NH_4^+ ion. The P^H of solution is [K_b of NH_4OH is 1.8×10^{-5}) [AIPMT2011]

1) 8.73 2) 9.08 3) 9.43 4) 11.72

Ans: 3

4) P^H of a buffer solution decreases by 0.02 units when 0.12g of acetic acid is added to 250 ml of a buffer solution of acetic acid and potassium acetate at 27^0C. The buffer capacity of the solution is? (E-2009)

1) 0.1 2) 10 3) 1 4) 0.4

Ans: 4

5) 20 ml of 0.1 M acetic acid is mixed with 50ml of potassium acetate. K_a of acetic acid $=1.8 \times 10^{-5}$ at 27^0C. The concentration of potassium acetate if P^H of the mixture is 4.8

1) 0.1M 2) 0.04M 3) 0.4M 4) 0.02M **(E-2009)**

Ans: 2