



DPP-13-COMMON-ION EFFECT

Chapter: Ionic Equilibrium

“Stop saying ‘I’ll do it tomorrow.’ One day, there won’t be a tomorrow left.”

Q1. Solubility of AgBr will be minimum in :-

- (1) Pure water
- (2) 0.1 M CaBr_2
- (3) 0.1 M NaBr
- (4) 0.1 M AgNO_3

Q2. In which of the following, the solubility of AgCl will be maximum :-

- (1) 0.1 M AgNO_3
- (2) Water
- (3) 0.1 M NaCl
- (4) 0.1 M KCl

Q3. The correct order of increasing solubility of AgCl in

(A) Water (B) 0.1 M NaCl (C) 0.1 M BaCl_2 (D) 0.1 M NH_3 is

- (1) $A < B < C < D$
- (2) $B < C < A < D$
- (3) $C < B < D < A$
- (4) $C < B < A < D$

Q4. At 30°C , In which of the one litre solution, the solubility of Ag_2CO_3 (solubility product = 8×10^{-12}) will be maximum :-

- (1) 0.05 M Na_2CO_3
- (2) Pure water
- (3) 0.05 M AgNO_3
- (4) 0.05 M NH_3

Q5. If K_{sp} of CaF_2 in pure water is 1.70×10^{-10} , then find the solubility of CaF_2 in 0.10M NaF solution :-

- (1) 1.70×10^{-10}
- (2) 1.70×10^{-9}
- (3) 1.70×10^{-8}
- (4) 0.10 M

Q6. The solubility of AgCl(s) with solubility product 1.6×10^{-10} in 0.1 M NaCl solution would be :-

- (1) 1.6×10^{-11} M
- (2) zero
- (3) 1.26×10^{-5} M
- (4) 1.6×10^{-9} M

Q7. If the maximum concentration of PbCl_2 in water is 0.01 M at 298 K, Its maximum concentration in 0.1 M NaCl will be :-

- (1) 4×10^{-3} M
- (2) 4×10^{-4} M
- (3) 4×10^{-2} M
- (4) 4×10^{-4} M

Q8. Solubility of XB_2 is X mol/lit in water find out solubility of XB_2 in 10^{-3} M YB. Consider YB is completely soluble salt :-

- (1) $4X^3 \times 10^{-6}$
- (2) $4X^3 \times 10^{-6}$
- (3) 10^{-3}
- (4) X^3

Q9. Calculate the ratio of solubility of AgCl in 0.1 M AgNO_3 and in pure water.

Given : K_{sp} of AgCl = 1.8×10^{-10} .

- (1) 1.34×10^{-5} M
- (2) 1.34×10^{-4} M
- (3) 2×10^{-8} M
- (4) 3×10^{-6} M

Q10. K_{sp} of $\text{Mg}(\text{OH})_2$ is 4.0×10^{-12} . The number of moles of Mg^{2+} ions in one litre of its saturated solution in 0.1 M NaOH is :-

- (1) 4.0×10^{-10}
- (2) 1.0×10^{-4}
- (3) 2.0×10^{-6}
- (4) 8.0×10^{-6}

Q11. 200 ml of 0.005 M AgNO_3 reacts with 300 mL of 0.01 M KCl. If K_{sp} of AgCl is 1.8×10^{-10} . Then maximum conc. of Ag^+ in mixture is :-

- (1) 2×10^{-8}
- (2) 4.5×10^{-8}
- (3) 4.8×10^{-5}
- (4) 1.34×10^{-5}