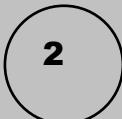


**Common ion effect, Isohydric
solutions, Solubility product, Ionic
product of water and Salt hydrolysis**

41. Solubility product is
- The ionic product of an electrolyte in its saturated solution
 - The product of the solubilities of the ions of the electrolyte
 - The product of solubilities of the salts
 - The product of the concentration of the ions
42. Ionic product of water increases, if
- Pressure is reduced
 - H^+ is added
 - OH^- is added
 - Temperature increases
43. Which one is a mixed salt
- $NaHSO_4$
 - $NaKSO_4$
 - $K_4Fe(CN)_6$
 - $Mg(OH)Cl$
44. If K_{sp} for $HgSO_4$ is 6.4×10^{-5} , then solubility of the salt is
- 8×10^{-3}
 - 8×10^{-6}
 - 6.4×10^{-5}
 - 6.4×10^{-3}
45. The solubility of $BaSO_4$ in water is $2.33 \times 10^{-3} \text{ gm/litre}$. Its solubility product will be (molecular weight of $BaSO_4 = 233$)
- 1×10^{-5}
 - 1×10^{-10}
 - 1×10^{-15}
 - 1×10^{-20}
46. The solubility of $AgCl$ in $0.2M NaCl$ solution (K_{sp} for $AgCl = 1.20 \times 10^{-10}$) is
- $0.2M$
 - $1.2 \times 10^{-10} M$
 - $0.2 \times 10^{-10} M$
 - $0.2 \times 10^{-10} M$
47. The solubility of AgI in NaI solution is less than that in pure water because
- AgI forms complex with NaI
 - Of common ion effect
 - Solubility product of AgI is less than that of NaI
 - The temperature of the solution decreases
48. The solubility product of $BaSO_4$ is 1.5×10^{-9} . The precipitation in a $0.01 M Ba^{2+}$ solution will start, on adding H_2SO_4 of concentration
- $10^{-9} M$
 - $10^{-8} M$
 - $10^{-7} M$
 - $10^{-6} M$
49. At $20^\circ C$, the Ag^+ ion concentration in a saturated solution of Ag_2CrO_4 is $1.5 \times 10^{-4} \text{ mole/litre}$. At $20^\circ C$, the solubility product of Ag_2CrO_4 would be
- 3.3750×10^{-12}
 - 1.6875×10^{-10}





sparingly soluble binary electrolyte,
then

- (a) $S = K_{sp}$ (b) $S = K_{sp}^2$
(c) $S = \sqrt{K_{sp}}$ (d) $S = \frac{1}{2}K_{sp}$

59. Any precipitate is formed when
- (a) Solution becomes saturated
 - (b) The value of ionic product is less than the value of solubility product
 - (c) The value of ionic product is equal than the value of solubility product
 - (d) The value of ionic product is greater than the value of solubility product
60. The solubility product of $AgCl$ is 4.0×10^{-10} at $298K$. The solubility of $AgCl$ in $0.04\text{m} CaCl_2$ will be
- (a) $2.0 \times 10^{-5}\text{m}$
 - (b) $1.0 \times 10^{-4}\text{m}$
 - (c) $5.0 \times 10^{-9}\text{m}$
 - (d) $2.2 \times 10^{-4}\text{m}$
- 61.

