BRITISH COLUMBIA CHEMISTRY 12 (MCH--12) · UNIT C · 5 QUESTIONS

Solubility and Acid-Base Equilibria — Practice Test

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1 **The graph shows the mass of solid dissolved against time. Points are (0, 0), (2, 4), (4, 6), and (6, 6). The solution first becomes saturated at about**

- A 2 minutes
- B 6 minutes
- C 0 minutes
- D 4 minutes

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2 **For $CaF_2(s) \rightleftharpoons Ca^{2+}(aq) + 2F^-(aq)$, the K_{sp} expression is**

A $K_{sp} = [Ca^{2+}][F^-]$

B $K_{sp} = \frac{[Ca^{2+}]}{[F^-]^2}$

C $K_{sp} = [Ca^{2+}][F^-]^2$

D $K_{sp} = [Ca^{2+}][F^-]^3$

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3 **If the molar solubility of PbI_2 is s, then $[I^-]$ in a saturated solution is**



A 2s

B s

C s^2

D 4s

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4 **A larger K_{sp} for salts of the same type generally means**

- **A** lower solubility
- **B** greater solubility
- **C** a higher pH
- **D** a lower temperature

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5 **A solution with pH 2 compared to a solution with pH 5 has a hydronium ion concentration greater by a factor of**

- **A** 3
- **B** 1000
- **C** 10
- **D** 100

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ANSWER KEY

1. D
2. C
3. A
4. B
5. B

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