Chemistry 2202

Dissociation and Ion Concentration

1. Write an equation to show what happens when each of the following dissolves in water.

a) Li₃PO_{4(s)}

- b) $MgF_{2(s)}$
- c) $HNO_{3(aq)}$
- d) CH₃OH_(I)
- e) (NH₄)₃PO_{4(s)}
- f) $C_6 H_{12} O_{11 (s)}$
- g) $Sr(OH)_{2(s)}$
- 2. Determine the concentration of aqueous sulfate ion in a 0.25 mol/L solution of $AI_2(SO_4)_{3(aq)}$.

3. What is the [OH⁻_(aq)] in 0.45 M strontium hydroxide?

4. Determine the concentration of aqueous magnesium **and** aqueous acetate ions in a 0.75 M solution of magnesium acetate.

5. The concentration of aqueous nitrate ion in a solution of $Al(NO_3)_3$ is determined to be 0.50 mol/L. What is the concentration of the aluminum nitrate solution?

6. What is the concentration of aqueous ammonium ion in a solution prepared by dissolving 2.50 g of $(NH_4)_3PO_{4(s)}$ in enough water to make 0.250 L of solution?

7. What is the mass of $(NH_4)_2CO_{3(s)}$ that must be dissolved in enough water to make a 500.0 mL solution in which the $[NH_4^+_{(aq)}]$ is 0.19 mol/L?