CHAPTER 7 PRACTICE QUESTIONS

Directions: Review what you just learned in this chapter and test your comprehension with these practice questions. Answers can be found directly after the questions.

Types of homogenous mixtures

1. Classify each of the following as a colloid, suspension, or solution.

a. Fog

b. Seawater

c. Dust in air

Solution Saturation

2. Explain the general relationship between solubility of solids in water and temperature.

3. A student adds 40.0 g $NaNO_3$ to 100 mL of H_2O and stirs it for a long time at 65°C until the solution is completely clear. The student then allows the solution to cool slowly to room temperature and the solution remains clear. The solution is shaken, and some $NaNO_3$ precipitates out. Which of the following describes the saturation level of the solution both before and after shaking at room temperature?

A) It is saturated, then unsaturated

B) It is supersaturated, then saturated

C) It is saturated, then supersaturated

D) It is supersaturated, then unsaturated

Molarity & Dilution

4. What is the concentration of 0.50 moles of ammonium sulfate in 100. mL of solution?

5. How many grams of $AgNO_3$ are present in .640 L of 2.00 M $AgNO_3$ solution?

6. 600. mL of a 3.0 M NaOH solution is mixed with 200. mL of a 4.0 M NaOH solution. What is the resulting concentration of NaOH?

7. How would you prepare 60.0 mL of 0.20 M silver nitrate from a stock solution of 4.00 M silver nitrate?

Solutions Stoichiometry

8. 25.00 mL of 0.500 M potassium chloride solution is mixed with 35.00 mL of 0.500 silver nitrate solution and silver chloride precipitate is formed.

a. Write the balanced net ionic equation for the precipitation reaction described above.

b. What is the limiting reactant?

c. What mass of silver chloride will be formed?