Chemistry: Solutions Quiz Review Sheet

1. **Know how to make a solution and describe the steps**.

Practice Problem: You need to make a 5.0 M solution of copper nitrate in 500 mL of water. Explain how you would make this solution in the lab. Include the math you need to do and the proper tools required at each step.

2. **Know how to make a dilution and describe the steps.**

Practice Problem: The solution made in question 1 is your stock solution. Now you need to dilute this stock solution to 1.0 M in 100 mL. Explain how you would make this solution in the lab. Include the math you need to do and the proper tools required at each step.

3. **Know how to use Table G and determine if solutions are saturated, unsaturated, or supersaturated.**

Practice Problem: Using Table G, are the following solutions saturated, unsaturated, or supersaturated?

a.) A solution with 70.0 g of potassium nitrate (per 100 g H2O) at 20 C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.) A solution with 90 g of KI (per 100 g H2O) at 10 C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) A solution with 2.0 g of sulfur dioxide (per 100 g H2O) at 25 C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. **Know how to determine if the substances are ionic, polar, or nonpolar**. (Note: it may be help to draw Lewis dot diagrams)

NaCl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Br2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H2O \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SiO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HBr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BaCl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. **Know what substances will form a solution or not.**

Practice problem: Circle two substances in question 4 that will form a solution when mixed together.