**1st Test Review for chapter 13 – “Solutions”**

1. What is the molarity of a solution containing 5.035 grams of FeCl3 in water to make 500.0 mL of solution?

2a. The solubility of lithium chloride is 86.2 g per 100 mL water at 20°C. What does this mean?

2b. If you increase the temp from 20 to 30°C, how will that affect the solubility of the LiCl?

3. Which gases are more soluble in water, polar or non-polar gases? List some of each.

4. What is Henry’s Law?

5. A sugar solution is prepared by dissolving 25.0 g of sugar into 100.0 g of water. What is the % sugar by mass?

6. What are colligative properties of solutions? List some.

7. How do boiling point and freezing point compare for solutions and a pure solvent?

8. What makes something a solution? Give examples. How is a colloid different?

9. If 31.65 g of NaCl is dissolved in 220.0 mL of water, what will be the bp of the solution? Assume the NaCl completely dissolves in the water; that the density of water = 0.994 g/mL; and that Kb for water = 0.510 °C kg/molal