Chemistry 115 Name

Dr. Cary Willard

Quiz 10A (20 points) May 4, 2009

1. (4 points) Name and distinguish between the two components of a solution.

Solvent – The component of the solution that is present in greater quantity.

Solute – The component of the solution that is present in lesser quantity

1. (4 points)What is meant when we say that two components of a solution are miscible?

Two liquids that are miscible are soluble in each other in all proportions.

1. (4 points) What is the effect of pressure on the solubility of a gas?

Gases are more soluble at high pressure.

1. (4 points) Calculate the percent sodium borate in a solution containing 3.64 grams of sodium borate dissolved in 500.0 gram of water.

$$\% Na\_{2}BO\_{3}=\left(\frac{g Na\_{2}BO\_{3}}{g solution}\right)×100\%=\left(\frac{3.64 g}{3.64 g+500.0 g}\right)×100\%= $$

1. (4 points) What is the molarity of a solution prepared by dissolving 21.7 grams of lithium bromide in enough water to make 2.00 L of solution.

$$\left[LiBr\right]=\frac{mol LiBr}{L soln}=\frac{\left(21.7 g LiBr×\frac{1 mol LiBr}{86.84 g LiBr}\right)}{2.00 L}=\frac{0.250 mol LiBr}{2.00 L}=$$

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Quiz 10B (20 points) May 4, 2009

1. (4 points) Name and distinguish between the two components of a solution.

Solvent – The component of the solution that is present in greater quantity.

Solute – The component of the solution that is present in lesser quantity

1. (4 points)What is meant when we say that two components of a solution are miscible?

Two liquids that are miscible are soluble in each other in all proportions.

1. (4 points) What is the effect of pressure on the solubility of a gas?

Gases are more soluble at high pressure.

1. (4 points) Calculate the percent sodium borate in a solution containing 5.64 grams of sodium borate dissolved in 700.0 gram of water.

$$\% Na\_{2}BO\_{3}=\left(\frac{g Na\_{2}BO\_{3}}{g solution}\right)×100\%=\left(\frac{5.64 g}{5.64 g+700.0 g}\right)×100\%= $$

+2 for 5.64/700

1. (4 points) What is the molarity of a solution prepared by dissolving 18.7 grams of lithium bromide in enough water to make 2.00 L of solution.

$$\left[LiBr\right]=\frac{mol LiBr}{L soln}=\frac{\left(18.7 g LiBr×\frac{1 mol LiBr}{86.84 g LiBr}\right)}{2.00 L}=\frac{0.215 mol LiBr}{2.00 L}=$$