Chemistry 115 Name

Dr. Cary Willard

Quiz 10A (20 points) May 5, 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 immiscible?

Two liquids are immiscible if they are not soluble in one another and separate into two distinct layers.

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

The solubility of a gas decreases and the temperature increases.

1. (4 points) Calculate the percent sodium borate in a solution containing 48.4 grams of sodium borate dissolved in 500.0 gram of water.

$$\% Na\_{2}BO\_{3}=\left(\frac{g Na\_{2}BO\_{3}}{g solution}\right)×100\%=\left(\frac{48.4 g}{48.4 g+500.0 g}\right)×100\%= $$

1. (4 points) What is the molarity of a solution prepared by dissolving 32.6 grams of lithium bromide in enough water to make 2.00 L of solution.

$$\left[LiBr\right]=\frac{mol LiBr}{L soln}=\frac{\left(32.6 g LiBr×\frac{1 mol LiBr}{86.84 g LiBr}\right)}{2.00 L}=\frac{0.375 mol LiBr}{2.00 L}=$$

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Quiz 10B (20 points) May 5, 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 immiscible?

Two liquids are immiscible if they are not soluble in one another and separate into two distinct layers.

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

The solubility of a gas decreases and the temperature increases.

1. (4 points) Calculate the percent sodium borate in a solution containing 86.4 grams of sodium borate dissolved in 700.0 gram of water.

$$\% Na\_{2}BO\_{3}=\left(\frac{g Na\_{2}BO\_{3}}{g solution}\right)×100\%=\left(\frac{86.4 g}{86.4 g+700.0 g}\right)×100\%= $$

1. (4 points) What is the molarity of a solution prepared by dissolving 24.7 grams of lithium bromide in enough water to make 2.00 L of solution.

$$\left[LiBr\right]=\frac{mol LiBr}{L soln}=\frac{\left(24.7 g LiBr×\frac{1 mol LiBr}{86.84 g LiBr}\right)}{2.00 L}=\frac{0.284 mol LiBr}{2.00 L}=$$