Chemistry 115 Name

Dr. Cary Willard

Quiz 9c (20 points) April 28, 2011

All work must be shown to receive credit. S = kHP, M=n/V

1. (4 points) Explain why ammonia, NH3, is soluble in water, but decane, C10H22, but is not. Why would the addition of soap (CH3CH2CH2CH2CH2CH2CH2CH2CO2Na) allow the decane to dissolve in water?
2. (4 points) What is meant by the term “miscible”?
3. (4 points) When you leave a bottle of carbonated soda out on the counter with the lid off the carbonation disappears. Explain based on the concepts in the solution chapter.
4. (4 points) The solubility of carbon dioxide in water at 6.3 atm is 0.35 M. Calculate the solubility of carbon dioxide in water at a pressure of 8.2 atm.
5. (4 points) A solution is made by dissolving 53.2 grams of aluminum chloride, AlCl3 in water to make 350.0 mL of solution. What is the molarity of the solution?

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1. (4 points) Explain why ammonia, NH3, is soluble in water, but decane, C10H22, but is not. Why would the addition of soap (CH3CH2CH2CH2CH2CH2CH2CH2CO2Na) allow the decane to dissolve in water?
2. (4 points) What is meant by the term “immiscible”?
3. (4 points) When you leave a bottle of carbonated soda out on the counter with the lid off the carbonation disappears. Explain based on the concepts in the solution chapter.
4. (4 points) The solubility of carbon dioxide in water at 4.6 atm is 0.28 M. Calculate the solubility of carbon dioxide in water at a pressure of 8.2 atm.
5. (4 points) A solution is made by dissolving 41.7 grams of aluminum chloride, AlCl3 in water to make 350.0 mL of solution. What is the molarity of the solution?