

## Chapter 6 Study Guide

### Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. In a solution, the substance that is being dissolved is the  
a. solute c. liquid  
b. solvent d. gas
- \_\_\_\_\_ 2. In soda pop (club soda), the solvent would be the  
a. sugar c. water (the soda)  
b. carbon dioxide (CO<sub>2</sub>) the gas d. flavoring
- \_\_\_\_\_ 3. A solution that contains all of the solute it can hold at a given temperature is  
a. dilute c. supersaturated  
b. unsaturated d. saturated
- \_\_\_\_\_ 4. A liquid mixture in which particles can be seen and easily separated by settling or filtration is a  
a. solution. c. solvent.  
b. suspension. d. colloid.
- \_\_\_\_\_ 5. The particles in a colloid are  
a. too small to scatter light.  
b. larger than particles in a suspension.  
c. the same as solute particles in a solution.  
d. undissolved particles that do not settle out.
- \_\_\_\_\_ 6. When 40 mL of alcohol form a solution with 30 mL of water, (The solution is mostly alcohol)  
a. alcohol is the solvent.  
b. water is the solvent.  
c. both alcohol and water are solvents.  
d. neither alcohol nor water is a solvent.
- \_\_\_\_\_ 7. Weak tea is an example of a  
a. dilute solution. c. saturated solution.  
b. concentrated solution. d. supersaturated solution.
- \_\_\_\_\_ 8. When you add so much solute that **no** more dissolves, you have a  
a. saturated solution. c. supersaturated solution.  
b. unsaturated solution. d. suspension.
- \_\_\_\_\_ 9. Which of the following solutions is the most concentrated?  
a. 15 g of table sugar in 60 g of water  $15/60 = .25$   
b. 20 g of table sugar in 80 g of water  $20/80 = .25$   
c. 25 g of table sugar in 75 g of water  $25/75 = .33$   
d. 30 g of table sugar in 100 g of water  $30/100 = .30$
- \_\_\_\_\_ 10. What does it mean if a compound has a solubility of 15 g in 100 g of water at 0°C?  
a. 100 g of the compound will dissolve in 15 g of water at 0°C.  
b. 15 g of the compound will dissolve in 100 g of water at 0°C.  
c. The compound will not dissolve until 15 g of it are present.  
d. The compound will dissolve only if the water temperature is 0°C.
- \_\_\_\_\_ 11. What is one way to increase the solubility of carbon dioxide-CO<sub>2</sub>, (**a gas**) in water?  
a. Chill the water. c. Increase the amount of sugar.  
b. Decrease the pressure. d. Heat the water.