

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

**AP Chemistry Chapter 14 Essentials Part 2**

COLLIGATIVE PROPERTIES OF SOLUTIONS 14.9 to 14.18

1. What are the 4 important colligative properties of solutions?
2. What is Raoult's Law?
3. How is fractional distillation different than simple distillation? What are the benefits of each?
4. What is the formula  $\Delta T_b = K_b m$  used for? What are the variables in this equation?
5. What is the formula  $\Delta T_f = K_f m$  used for? What are the variables in this equation?
6. Why do we spread soluble salts like NaCl or CaCl<sub>2</sub> on icy roads in the winter?
7. What is the van't Hoff factor used for? What factor(s) influence the value of "i"?
8. What is osmosis?

9. Explain how the process of osmosis works- see Fig 14-16.
  
10. What is the formula for determining osmotic pressure?
  
11. Why were sports drinks like Gatorade developed?
  
12. How are colloids different from suspensions?
  
13. How are the substances milk, face crème and mayonnaise similar?
  
14. What is the Tyndall Effect and what is it used for?
  
15. Describe the difference between hydrophilic and hydrophobic colloids.
  
16. Explain how soap and other detergents work.
  
17. Why are the use of detergents containing phosphates discouraged?