Study Guide - Unit 3: Mixtures and Solutions

Be able to:

Chapter 7

1. explain the difference between a mixture and a pure substance (different kinds of particles)

2. give examples of pure substances and examples of mixtures found around your home

3. tell the difference between heterogeneous and homogeneous mixtures using the particle theory of matter (attraction of particles)

4. identify some mixtures that are combinations of heterogeneous and homogeneous mixtures

p. 307 #3-7; 17-19

Chapter 8

5. describe dissolving using the particle theory of matter

6. identify the solute and the solvent in a given solution

7. describe the concentrations of solutions qualitatively, using the words concentrated, dilute, concentration, saturated, and unsaturated

8. know that concentrations of solutions can also be described quantitatively as the amount of solute per unit volume, including: g/L, and percentage by mass

9. describe the factors that affect the solubility and the rate of dissolving of a solid and a gas, including temperature and pressure

p. 307-308 #8-12; 23-26; 32; 36; 38

Chapter 9

10. describe how to used different methods to separate a variety of mixtures

11. identify common separation techniques used to separate the components of a variety of mixtures

12. explain how a distillation apparatus is used to separate a solution and describe where boiling, evaporation and condensation occurs in a distillation apparatus

13. know how fractional distillation uses different boiling points to separate the substances in petroleum

p. 307-308 #13-15; 27-29; 34

Terms:

particle theory of matter	solute	dilute	mechanical sorting
pure substance	solvent	concentration	filtration
mixture	solubility	saturated	evaporation
heterogeneous mixtures	soluble	unsaturated	distillation
homogeneous mixtures	insoluble	flotation	
dissolving	concentrated	magnetism	

Format:

The unit test will consist of 5 true or false questions, 20 multiple choice questions and three (3) constructed response questions. There will be two constructed response questions from each chapter, you answer one from each chapter.