Exam #3 Objectives

CHEM 1090 General Chemistry I

Text Reading

Chapter 3: sections 1-7

Homework Assignment

McGraw-Hill LearnSmart and Connect online assignments.

Online Tutorial(s)

Chemical Equations

Concepts

1. Write and balance chemical equations.
2. Using Avogadro's number, convert between the number of particles and moles.
3. Calculate molar masses for chemical formulas using the proper number of significant figures.
4. Using dimensional analysis and molar mass, convert between mass and moles.
5. Given a chemical formula, calculate the percentage composition.
6. Given either the percent composition or the elemental analysis of a compound, determine the empirical formula and, if asked, determine the corresponding molecular formula.
7. Perform stoichiometry calculations using balanced chemical equations.
8. When given specific starting amounts of reactants, determine the limiting reactant.
9. Perform calculations involving actual, theoretical, and percentage yields.
10. Demonstrate a working vocabulary of the following terms:

actual yield	empirical weight	molecular weight
chemical equation	limiting reactant	percentage composition
chemical formula	molar mass	percentage yield
coefficient	molarity	stoichiometry
empirical formula	mole	theoretical yield