Exam #3 Objectives

CHEM 1100 General Chemistry II

Text Reading
Chapter 15:   sections 1-5

Homework Assignment
McGraw-Hill LearnSmart and Connect online assignments.

Concepts
1. For a given chemical equation, write the equilibrium equation.
2. Demonstrate the ability to manipulate chemical equations and show the effect on the equilibrium equation and the equilibrium constant, K.
3. Discuss the significance of the magnitude of the equilibrium constant.
4. Relate the reaction quotient, Q, to the equilibrium constant, K.
5. Demonstrate the ability to write equilibrium equations for heterogeneous equilibria.
6. Predict how each of the following affects a chemical system at equilibrium using Le Châtelier's principle-
    a. addition or removal of a reactant or a product.
    b. changing the volume or the pressure.
    c. changing the temperature.
7. Calculate K from equilibrium concentrations or pressures, equilibrium concentrations or pressures from K, and equilibrium values from K when given initial concentrations or pressures.
8. Demonstrate the ability to use the successive approximation technique. This is not covered in our textbook and will be discussed in lecture and in a podcast.
9. Demonstrate the ability to relate kinetics and equilibrium.
10. Demonstrate a working vocabulary of the following terms:

chemical equilibria	K	reaction quotient
equilibrium constant	K_c	reaction reversibility
equilibrium equation	K_p	successive approximations
heterogeneous equilibria	Le Châtelier's principle	
homogeneous equilibria	Q	