

## Unit 10: Chemical Equilibrium and Acid-Base Chemistry

### CHEMICAL EQUILIBRIUM TOPICS AND ASSIGNMENTS

- Reversible reactions and dynamic equilibrium, writing equilibrium expressions and problems involving a system *at* equilibrium

*Assignment 1:* Read Study Guide p.1-2  
p.3-4 Problems 1-3

**graded** *Assignment 2:* p.9 problems G1 – G5

- Problems involving a system reacting from initial concentrations to equilibrium concentrations

*Assignment 3:* p.4-6 problems 4-8

- Applying LeChatelier's principle to determine how a system at equilibrium will respond when subjected to changes in concentration, temperature, pressure or the addition of a catalyst and to determine how the  $K_{eq}$  will change when the temperature is changed

*Assignment 4:* Read p.7  
p.7-8 problems 9-15

**graded** *Assignment 5:* p.10 problems G1 – G5

### ACID-BASE CHEMISTRY TOPICS AND ASSIGNMENTS

- Properties of acids and bases, Arrhenius definitions of acids and bases, acid-base neutralization reactions and titration calculations

*Assignment 6:* Read p.11-12  
p.12 problems 1-2

- Strong acids and bases, dissociation of water and the pH scale

*Assignment 7:* Read p.13-14  
p.15-16 problems 3-10

**graded** *Assignment 8:* p.21 problems G1 - G5

- Weak acids

*Assignment 9:* Read p.17-18  
p.18-20 Problems 11-14

### Labs

10-1: Determination of an Equilibrium Constant (p.23)

10-2: LeChatelier's Principle (p.29)

10-3: Antacids and the pH Balance in Your Stomach (p.35)

**Unit 10 Practice Test ( p.39)**

**Answers to Unit 8 Homework Assignments (p.43-46)**

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