CHAPTER 7 NOTES
Pg. 225 – 253

Section 7-1 (Pg. 225)

What particle of the atom is crucial in understanding how atoms bond together?

Define a chemical bond and state the two types of chemical bonds.

What happens in an ionic bond?

What pairs of elements commonly form ionic bonds?

Describe some properties of ionic compounds.

Explain the octet rule and the exceptions to the rule.

What are valence electrons?

What do the dots represent in a Lewis dot diagram?

Why do we draw Lewis dot diagrams?

Distinguish between monatomic cations, monatomic anions, and polyatomic ions.

Why do nonmetals form anions more readily than do metals?

What are binary compounds?

What is the process of naming binary compounds?

Why do we write empirical formulas?

What do the subscripts in a chemical formula represent?

Describe the crisscross method for writing formulas.

Describe the crisscross method for writing formulas for binary ionic compounds. What extra step must be added for polyatomic ions?

(See sample problems for writing chemical formulas p. 234)

Section 7-2 (Pg. 236)

What is a covalent bond? Include examples of common substances that are covalently bonded.

Explain the difference between a molecule and a molecular substance.

Explain the difference between a molecular formula and a structural formula.

Distinguish between a single covalent, double covalent, and triple covalent bonds.

What are the exceptions to the Octet Rule for covalent bonds?

Describe some of the properties of Covalent Bonds.

Compare and contrast some of the properties of polar and nonpolar covalent bonds.

What do electronegativities indicate about a polar or nonpolar bond?

Section 7-3 (Pg. 244)

How do chemists name a compound?

Describe how to name an ionic compound.
(See sample problem 2 / pg. 245)

Distinguish between hydrates and anhydrous substances and how they are named.

Describe how a molecular compound is named.
(See practice problem 3 / pg. 247)

What is an acid and how are they named?