CH 221 Chapter Four Study Guide

- Be able to distinguish between valence and core electrons for any given element.
- Know the key differences between covalent and ionic bonding. Be able to predict from a formula whether a compound is ionic or covalent.
- Be able to draw Lewis electron dot structures for a given compound.
- Understand the significance of the octet rule in assigning Lewis electron dot structures.
- Realize that certain elements (boron, etc.) do not always obey the octet rule.
- Understand the significance of resonance structures.
- Be able to recognize polar bonds in molecules using the concept of electronegativity.
- Be able to calculate the formal charge for a given atom in a molecule.
- Know the difference between formal charge and oxidation number.
- Be able to predict the most likely resonance structure using formal charges.
- Know how to apply VSEPR theory to predict the geometry on a molecule.
- Be able to predict if a molecule is polar or non-polar.
- Be able to solve and understand the assigned problems in problem set #4.