**AP Chemistry – Unit 3 Study Guide**

**Atomic Structure and Periodicity**

**TOPICS COVERED:**

-Wave nature of light (c = λ*v*, E = *hv*)

-Emission Spectra of atoms (including energy changes associated with the Bohr model)

-Mass Spectroscopy

-Photoelectron spectroscopy

-Periodic trends (must be able to analyze the trend as well as remember it!)

-Effective nuclear charge -Atomic radii

-Ionization energies -Metallic character

-Electronegativity -Reactivity

-Nonmetal/Metal oxide formation (and acid/base formation)

**SECTIONS TO STUDY**, with the number of questions that will be on each: (all from chapters 6 and 7)

CHAPTER 6: CHAPTER 7:

6.1: 2 questions 7.1: 1 question

6.2: 2 questions 7.2: 2 questions

6.3: 1 question 7.3: 2 questions

6.8: 3 questions 7.4: 3 questions

6.9: 1 question 7.5: 1 question

7.6: 3 questions

Photoelectron Spectroscopy (from packet): 2-3 questions 7.7: 3 questions

7.8: 1 question

**RESOURCES TO STUDY:**

1) Textbook 2) Handouts/Notes 3) PES Packet 4) AP Chem website

PES Simulation: <http://www.chem.arizona.edu/chemt/Flash/photoelectron.html>,