

## **Test 3 Review sheet**

Ch 115 Fall 2007

### **THERMOCHEMISTRY**

KE and PE/ Work and heat/ First law of thermodynamics/ Internal Energy/ Relating internal energy to heat and work/ Endo and exothermic processes/ state functions/ Enthalpy/ Enthalpies of reaction/ Calorimetry/ Heat capacity and specific heat/ Constant pressure calorimeter/ Bomb Calorimeter/ Hess's Law/ Enthalpies of Formation/ Enthalpies of formation to enthalpies of reaction.

### **ELECTRONIC STRUCTURE OF ATOM**

Wave nature of light/ Quantized energy of photons/ Hot objects and quantization of energy/ Photoelectric effect and photons/ Line spectra and Bohr model/ Line spectra/ Bohr's model/ energy states of the hydrogen atoms/ Limitation of the Bohr model/ Wave behavior of Bohr model/ the uncertainty principal/ Quantum mechanics and atomic orbitals/ Orbitals and quantum numbers, representation of orbitals/ s,p,d and f orbitals/ Electron configuration/ Hund's rule/ condensed electronic configurations/ Transition metals/ Lanthanides and actinides/ Electronic configuration and the periodic table/ Anomalous electronic configuration. Namely Cr, Mo, Cu and Ag, **electronic configuration of ions** ( it is just eh same thing as the configuration of an atom only you account for the additional electrons in the anions and do not have the missing electrons in cations, you should have done it in the homework).

**If I have taught it in the class and have missed to add it here it can be on the test. This is only a guideline to help you review. You are responsible for everything that has been taught in the class or is a part of the homework assignment.**

The exam will have 20 to 25 multiple choice questions and 3 to 5 long answer questions. It will have the same structure as the first test , not the second test.