Bauck's CHEMISTRY Ch. 14 Test Review

This is an optional assignment due the day of the test.

Materials: loose leaf paper, pen and/or pencil (You will be given a periodic table.)
Test date: _____
Test value: 200 points
Format: (multiple choice), (short answers), chemical equation to construct and balance, three-step stoich, Hess' Law, Gibbs' Free Energy, long specific heat calorimetry, short specific heat problem, thermochemical equation D.A.

1) **ΔG** – What is this? What does it mean when its sign is positive? What does it mean when its sign is negative?
2) **ΔH** – What is this? What does it mean when its sign is positive? What does it mean when its sign is negative?
3) **ΔS** – What is this? What does it mean when its sign is positive? What does it mean when its sign is negative?
4) **Calorimeter** – How does it work?
5) **Energy** – What is it? Give four examples of types of energy.
6) **Endothermic** vs. **exothermic** – Compare and contrast.
7) **Enthalpy** – What is it?
8) **Entropy** – What is it?
9) **Exergonic vs**. **endergonic** – Compare and contrast.
10) State the **First Law of Thermodynamics**.
11) **Gibbs' Free Energy** – What is it?
12) State the **Second Law of Thermodynamics**.
13) **Specific heat** – What is it? Define the symbols in the equation **$q = mc\Delta T$**
14) **Spontaneous** vs. **nonspontaneous** reactions – Compare and contrast.
15) **Thermochemistry** – What is it?
16) State the **Third Law of Thermodynamics**.
17) **MATH PROBLEMS** – give an example of each of the following:
    a. Simple specific heat (notes sec. III)
    b. Advanced calorimetry (notes sec. IV)
    c. Thermochemical equation D.A. (notes sec. VI)
    d. Heat and change of State (notes sec. VII)
    e. Hess' Law (notes sec. VIII)
    f. Gibbs' Free Energy (notes sec. X)

*** There will be at least one question pertaining to material in past chapter(s) or unit(s). ***