α or β will be here

Chem 115 – Section 1
Examination #2
April 8, 2008

There are two parts to this exam that are paper-clipped together.

Part I: Multiple-Choice. Mark your answers on the bubble sheet that you turn in. You can take the multiple-choice questions (on colored paper) with you when you leave the room at the end of the exam. The multiple choice answers will be posted on the course website after the exam, so you can look up how you did on those. Make sure to indicate on your copy what you answered on the bubble sheet so you can compare your answers to the answer key on the website.

Part II: Problems. Solve the problems directly on the exam (on white paper) that you will turn in with your bubble sheet. If you need additional space to show your work in solving any problems, use the back side of the page, and clearly indicate that you have done that so that the graders will know to look for it. No work on scratch paper will be collected or graded.

Make sure you put your name and ID number on <u>both</u> the bubble sheet and the problems section of the exam when you turn them in. Also, you <u>must</u> indicate on the bubble sheet which exam you took.

- If you are taking the α version of the exam (see upper left corner), write a "1" in the Special Code section on the bubble sheet.
- If you are taking the β version of the exam (see upper left corner), write a "2" in the Special Code section on the bubble sheet.

If you do not write a "1" or "2" in the Special Code, there is a 50% chance your test will be associated with the wrong answer key and your grade will not be accurate.

The multiple choice part (colored paper) consists of …pages, including this cover page and the periodic table. The problems part (white paper) consists of … pages. Be sure your copy of the exam is complete before beginning your work. If your test packet is defective, ask for another one.

A copy of the Periodic Table is attached to the end of the multiple choice section of the exam. You may remove it and use the back side as scratch paper. No work on scratch paper will be graded or collected.

The following information may be useful:

<u>Constants of nature</u>

$N_A = 6.022 \times 10^{23}$ units = 1 mole of units

$C_{water} = 4.184 \frac{J}{mol \cdot {}^{o}C}$

$c = 2.998 \times 10^{8}$ m/s

$h = 6.626 \times 10^{-34}$ J·s

<u>Conversions</u>

1 mL = 1 cm^3

<u>Equations</u>

$q = mC\Delta T$

$c = \lambda \nu$

$$\Delta H^{o}_{rxn} = \sum_{p=products} n_p \left(\Delta H^{o}_{f}[p]\right) - \sum_{r=reactants} n_r \left(\Delta H^{o}_{f}[r]\right)$$