CHEM 242 STUDY GUIDE for EXAM #2

Exam Date: Thursday, Feb 25

Exam Contents; The exam will be over chapter 9, 10 and 11.

You can bring and use the Sn2 vs Sn1 vs E2 vs E1 summation sheets on the website for this exam.

Most pertinent types of questions to study:

In class #3, sample problems from chap 9 and 10 and practice exam #2 (see web site) are worth studying. Also problems assigned for the text may also be helpful.

Chap 9 &10-- Sn2, Sn1, E2 and E1 reactions.
- Know the definitions of Sn2, Sn1, E2 and E1.
- Be able to depict the reaction coordinate diagrams of each reaction
- Be able to draw the mechanism, products and the stereochemical results of the Sn2, Sn1, E2 and E1 mechanism
- If given a reaction be able to predict if it will favor the Sn2, Sn1, E2 or the E1 mechanism
- Know how the incorporation of conjugated carbocations effect the mechanism/outcome of the Sn1/E1 reaction;
- Know about the biological leaving groups in section 9.9.
- You do NOT need to know about any ‘rearrangements’ of carbocations or the ‘intimate ion pair’ in Sn1 or E1 reactions.

For chap 11

- Know how alcohols undergo substitution reactions (sec 11.1)-when are they Sn2 when are they Sn1
- Know the mechanism for the thionyl chloride reaction with an alcohol (sec 11.2)
- Know how alcohols dehydrate (sec 11.4) and understand how it is the reverse of the hydration of a double bond reaction.