

### Preview Sheet for Test 3

Organic Compounds, Intermolecular Forces, and Equilibrium  
Chapters 11 (Hybridization Only), 15, 12, and 17;  
Lectures from 10/25 through 11/19; Problem Sets 7, 8, and 9

The test will be on Wednesday, November 24. You may start as early as 8:00 a.m. All test-taking must end by 9:30 a.m. (to make room for Prof. Inada's Biochemistry class).

#### Studying Strategies:

- Do extra problems at the ends of the chapters. If you do not have access to the solution for a given problem, please come talk with me or a student tutor to check your work.
- Focus on your lecture notes and homework first, then look at the textbook. (See the course web page for class overheads and homework keys.)
- Focus on the following topics and skills. (Note: This list is not meant to be comprehensive—it is simply telling you the most important topics that may be covered on the test.)
  - Drawing Lewis structure and assigning hybridizations to any atom in a molecule
  - What Rob taught you on PS 7: Drawing skeletal structures (including structural isomers), naming structures, identifying centers of unsaturation, recognizing optical activity
  - You are not responsible for surfactants or polymers
  - Using hybridization to explain the structure and properties of organic molecules
  - Explaining macroscopic properties in terms of intermolecular forces
  - Calculating equilibrium concentrations and equilibrium constants
  - Applying Le Chatelier's principle (including the use of Q)
  - If a topic was not covered in homework or in lecture, you are not responsible for it!
  - Remember the change I made to the course schedule—we did not cover Chapter 23 on transition metal complexes

Test Format: About one page of multiple-choice questions, about two pages of short answer questions, and one page of mathematical questions.

Note: You will be allowed to fill one side of a 8.5" x 11" piece of paper with whatever information you want, and use it during the exam! Note that this personal "cheat sheet" will be in lieu of a sheet of formulas at the back of the exam booklet. All I will give you on the back page of the test is a periodic table and relevant physical constants.