

Exam I

Certain material for exam I deviates from the textbook. Generally, you should read the text, work the chapter exercises multiple times, and practice with problems at the back of the chapter using answer guide.

Chapter 10 - study and practice using the book and solutions guide as recommended. The section on FT and 2D NMR techniques is generally more advanced than is expected.

Chapters 11, 13, and 14: First, study and practice using the lecture slides for weeks 2 and 3. This includes terminology, reactions, and results/spectra from spectroscopy. Generally, the IR and MS spectra that you will be asked to interpret come off of the slides. Be sure that you can convert among frequencies, wavelengths, wavenumbers, and energies, and that you understand the relationship to the specific transitions that occur in molecules. If you can do the textbook problems 25 to 29 at the back of chapter 10, you will understand some types of energetics problems that can be asked for UV, visible, and IR spectroscopy.

The exam focus for Chapters 16, 17, 18, and 19 will be on naming, properties, and chemistry of these compounds.

Consider the spectroscopy portions a review and enhancement from the first exam. Depending on your profession, you may be assessed on your proficiency with spectroscopy, so you may want to know this subject well. The likelihood of a spectroscopy question to appear on the second exam from this section is between 0% and 5% (i.e. averaging zero or one question on a 20-question exam).

Chapters 16, 17, 18, and 19 depend on chemistry introduced in previous chapters. Previous chemistry is likely to appear on exams as it is reintroduced in the book. For example, the chapter on ketones includes methods for their preparation, which in turn, involves material from chapters 8, 12, and 13.