The test will be given in the lab, not in the classroom. You must take the test in the lab section in which you are registered unless I have previously given you permission to permanently switch sections. (No exceptions!) If you miss your test day you will not be permitted to take the test at a different time without a doctor's excuse.

1. The test will cover: Laboratory Glassware pp 27-36, Basic Laboratory Concepts pp.39-49, Experiment 1, Option A, Experiment 2 - Solubility, Experiment; 3 - Crystallization, Experiment 4 - Extraction, Experiment 5 - Thin-layer Chromatography

2. Know correct answers to all of the questions that were assigned for each experiment. Some of these will be verbatim on the test. Also be able to do the pre-lab calculations that were required for the solubility and extraction labs.

3. Be able to do mL to µL and mg to g conversions and vice-versa.

4. In the Techniques section you need to know sections 1.1, 1.4-1.8, 2.1, 2.2, 4.3, 4.5, 4.7, Tech. 5 - all, 6.2-6.8, 6.14, 7.1-7.10, 14.1, 14.2, 14.5-14.10.

5. Understand and be able to explain and use the heating curves that are posted in the lab on the glass above the Mel-temps and fig. 6.5 in the book.

6. Be able to write balanced chemical reactions and explain the solubility of organic acids and bases in NaOH and HCl and organic solvents - Expt. 2 and 4.

7. Be able to rank compounds in order of polarity and determine if compounds are soluble (or miscible) in particular solvents. Study the guidelines for polarity on p.51-52. Be able to distinguish between water-soluble salts (ionic) and polar, slightly polar, intermed polar, highly polar, and nonpolar covalent compounds.

8. Be able to find and interpret information in the Merck Index on solubilities, choosing the best solvent for crystallization, etc.

9. You will not be required to memorize names and structures of the organic compounds that you have used in these experiments except for the 3 fluorene compounds. Be able to recognize the structure of carotene and chlorophyll.

10. Know names, structures and polarities of fluorene compounds.

11. Know the chemical reaction in Part C. of expt. 5. Be able to explain and sketch the TLC results from monitoring this reaction (Tech. 14.10 and Fig. 14.9.)

12. Have a good understanding of polarity of solid and liquid phases in TLC column chromatography and what effect these have on Rf values for polar and nonpolar substances and order of elution from the column for column chromatography.

13. Know the names and structures of the various functional groups that were introduced in all expts.