

S3444Q - ORGANIC CHEMISTRY II - SU 2004 (7/6-8/12)

Professor Irving J. Borowitz gborowitz@optonline.net

Columbia University, Box 3122 Havemeyer Hall, 212-854-1665- Lectures 10:45-12:20 M-R, F 6/16

Lecture Room -309 Havemeyer Office 343 Hav Office Hours - 12:30-1:00 pm M-R

Recitation 9:15-10:15 am Room 309 H Recitator: Christian Sjulsen ;Office Hr:10:15-10:45 am

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TEXT: T. W. G. Solomons and C. Fryle, "*Organic Chemistry*," 8th Edition, J. Wiley, New York 2004;
T. W. G. Solomons, C. Fryle, R. Johnson "*Study Guide to Organic Chemistry*," 8th Edition, J. Wiley, 2004 This book contains answers to all homework problems, extra problems, and self-tests.

MODELS: A set of Molecular Models, S. Darling, is highly recommended and is available for purchase (bundled in Text) in the bookstore. The Chem Dept. Office of Undergraduate Instruction is **318 Hav**.

NOTES: Do all problems in the body of the text. The following extra problems in the Book/Study Guide are suggested for practice and reinforcement. Do others as time allows, first with the help of the study guide, and then without help. Do the practice tests. A * denotes a difficult problem.

COMPUTER SOFTWARE: . TWG Solomons "*Organic View*" **CD-ROM** inc. **IR Tutor** is in text. "*Chem TV*", *PC Spartan*, *IR Tutor* and other Organic Topics, Mechanisms, and Spectroscopy software is available in **211 Hav**.

. PROBLEM SCHEDULE SECOND SUMMER SESSION 2004

Ch.15 Reactions of Aromatic Compounds: 26, 27, 29-31, 35, 43*, 47.

IR: Ch. 2: 29, 38; **Ch. 14:** 26, 27, 29, 33; **Ch. 16:** 44, 46; **Ch. 18:** 36a-e; **Ch. 21:** 23.

NMR Ch. 9: 29, 33-36.

Ch.16 Aldehydes and Ketones I. Nucleophilic Additions to the Carbonyl Group: 24-26, 28-30, 34, 42, 47, 49

Ch.17 Aldehydes and Ketones II. Aldol Condensations: 28, 30a-f, 32*, 35a-c, 37.

Ch.18 Carboxylic Acids and Their Derivatives. Nucleophilic Substitution at the Acyl Carbon: 24-26, 28, 30, 32a-c, 37, 38, 42, 45, 52*.

Special Topic B (p. 869) Step-Growth Polymers: B1a,c.

Ch.19 Synthesis and Reactions of α -Dicarbonyl Compounds: 25-27, 30a,b, 31, 38 43; lgp 1.

Ch.20 Amines: 21, 23, 25, 27, 30a,b,g,h, 32, 46*.

Ch.21 Phenols and Aryl Halides. Nucleophilic Aromatic Substitution: 13-15, 17, 21, 22.

Second Review Problem Set: (p. 1035): 1-4, 9, 11, 17*.

Ch.22 Carbohydrates: 20, 22, 28, 30, 36.

Ch.23 Lipids: 12, 13, 16, 22, * 24.

Ch.24 Amino Acids and Proteins: 18, 20-22, 24,

GRADING POLICY: [(Best 2 of 3 Exams) + (Final Exam)]/3 = Final Average

NOTES: No make-up exams will be given. Incremental points from the class average will also be considered in final grade determination. Requests for regrades should involve substantial errors or mistakes in addition. These requests should be made **not later than 1 week after the tests are returned** on a "REGRADE" form obtained in 343 H along with the exam in question. The entire exam will be regraded. Because of the intense nature of this course, no exceptions can be made to these procedures.

Sample exams are on the Columbia web pages: www.columbia.edu/itc/chemistry/chem-s3444.

