CHEMISTRY 341 PROBLEMS, USING MCMURRY 7

Chapter Topic	McM Chap	McMurry 7 Problems In the Chapter	Carey Chap	Carey 8 Problems
Test 1				
Intro and Review	**1**	2, 5, 9-11, 13, 14a,b, 15-17, 18, 22, 24, 28, 31, 33, 34, 35, 49, 50, 52, 54	**1**	1, 3-8, 10, 12-19, 22, 24-26, 29, 30, 31a, 33, 37, 41, 42, 44, 46, 47, 48, 50-52, 54-57, 60, 65, 69-71, 75-78
Polarity and Acidity	**2**	2, 5, 8-11, 13, 17, 19, 32-34, 36, 37, 40, 41, 45, 47, 53-56	**1**	See list of problems above from Carey's Chapter 1.
Alkanes	**3**	1 (not responsible for sulfide in 1a), 2, 4, 6, 8-12, 15, 16a-c, 17 21-24, 26-29, 34, 38, 40, 42a,b, 44	**2,3**	Ch 2: 3-5, 8, 10, 11a,b, 18, 19, 21, 22a,b, 23, 24a,b, 25, 26, 29, 30a,b, 43, 44 Ch 3: 1-4, 7, 8, 11, 12, 17, 19-24, 27, 28, 32a-e
Cycloalkanes	**4**	1, 2, 4-6, 9, 12-14, 18 (draw, don't need to calculate), 22, 23, 25, 27-33, 35, 42, 53, 56	**2,3**	
Test 2				
Chemical Reactions.	**5**	2, 8, 9, 17, 18, 19, 29, 30, 31, 33, 35, 37	**4**	16, 18 (prop. only), 19, 20, 22,
Stereo chemistry	**9**	2, 3, 7-10, 13, 15, 16, 20, 35, 37, 42-48, 50-53	**7**	1, 2, 3c,d, 4, 5, 9, 10, 13, 15, 22, 23, 24, 26, 27, 32-34, 38a,c-f,h-k
Alkyl Halides	**10**	1, 3, 4 (major), 5, 17a-d, 30	**4, 5, 8**	Ch 8: 1-3, 5, 7, 9-11, 15b, 16, 18, 20, 22a-g, 23, 24, 25a-f, 30, 31, 32a,b,d-h, 33a, 34, 40, 47, 49-51 Ch 5 (E2/E1): 22-24, 36, 37a,b,e, 40c,d,g,h,i,j
Alkyl Halides: SN2, SN1, E2, E1 Reactions	**11**	1, 2, 4, 5, 6, (OTs is best leaving group of all), 8, 11, 13, 15, 16, 20, 25a,c,d, 26, 25-27, 28a-c, 30a-e, 31a-e, 36, 37, 38, 41		
Test 3				
Alkenes	**6**	1, 2, 4-6, 7, 9-11, 13, 14-15, 16, 23, 24, 26, 29-30, 38-42, 45	**5**	1, 2, 4, 11-17, 19, 22-24, 28a-h, 30, 33a-d (rank), 34a,b, 36, 37, 40
Alkene Addition Reactions	**7**	1-3, 5 (NBS = Br_2), 6-10, 13-17, 24(skip e), 25c-e, 26, 27(omit c), 28, 29, 30, 31, 32, 33, 41, 42, 43a-d	**6**	1-5, 8, 9, 15, 19, 21, 26a-h, 27, 28, 32, 34, 36a-f,I,k, 37b-d, 42, 58-61, 63, 65-69 Ch 15: 5
Test 4				
Conjugated Systems	**14**	2, 3, 5-9, 22, 24, 26 (major), 32, 33 (ignore stereo of phenyl group), 34, 36 (predict major), 37, 39	**10**	1, 2, 4, 7, 8, 9, 10, 13, 14, 16, 17, 18, 19, 25a, 28a-f, 29, 30, 32, 33, 35, 36a-c, 37, 41, 42, 47, 48, 49, 50
Aromatics	**15**	1, 2a,c,d, 3, 8, 9, 12, 18b-d,f, 19c-e, 37a	**11**	1, 2, 3a,c, 13, 15, 18, 21, 24, 25, 26, 33f,I, 34, 36a, 39a-d, h, i, 43a, b, e, f, 44, 45, 46, 47, 50, 51, 59, 60, 61, 63
Aromatic Reactions	**16**	1, 6, 9, 10, 13, 15, 23, 24b, 29, 30a,c-f, 31a,b, 32, 33a,c,d, 34b-d, 35 (just rank), 37, 46, 48-50, 51a,d, 52b,d, 53a, 54a	**12**	2, 3, 4, 6, 10, 12, 15, 17, 18, 19, 21, 22, 23, 24, 34a-k, 35a-f, 36a,c,d,f, 37, 38, 39a-l,n, 44, 45a-d,g,I,l,m, 46a,c-e, 47a,b,d, 50, 52 Ch 11: 10, 11

		Chemistry 341, Jasperse, Summer 2011 (38 class days)		Reading
	Date	Topic		Assignment
	June 13	NO CLASS		
1.	June 14	Intro. Octet Rule, Lewis Structure, Hybridization, Bonding		1.1-11
2.	June 15	Formal Charge, Resonance, Hybridization + Shape; Drawing 3-D Shapes		1.12-2.6
3.	June 16	Acid-Base, Bond Rotation, Isomerism, Polarity, Intermolecular Forces, Solubility		2.7-2.13
4.	June 17	Classification of Organic Compounds. The Functional Groups.		3.1
5.	June 20	Formulas, Nomenclature, Conformations of Alkanes		3.2-7
6.	June 21	Conformations and Stability of Acyclic Alkanes and Cycloalkanes		4.1-4
7.	June 22	Conformations and Stability of Cyclohexanes, Catchup		4.5-9
8.	June 23	Alkane Chlorination. Factors to Think About in a Chemical Reaction.		5.1-8, 10.3-4
9.	June 24	Transition States, Multistep Reactions, Halogenation of Higher Alkanes.		5.9-11, 10.3-4
10.	June 27	Reactive Intermediates (Radicals, Cations, Anions)		5.9-11, 10.3-4
11.	June 28	Chirality, R/S Classification of Chiral Carbons.		9.1-5
12.	**June 29**	**Test 1. Chapters 1-3.**		
13.	June 30	Miscellaneous Stereochemistry		9.1-5
14.	July 1	Diastereomers; More than One Chiral Carbon		9.6-14
	July 4	NO CLASS		
15.	July 5	Nomenclature, Structure, Properties, Reactivity of Alkyl Halides.		10.1-4
16.	July 6	The Sn2 Substitution Reaction.		11.1-3
17.	July 7	The Sn1 Substitution Reaction.		11.4-6
18.	July 8	The E1 and E2 Elimination Reactions. Substitution vs. Elimination?		11.7-12
19.	July 11	Catchup, Practice		Catchup
20.	**July 12**	Alkenes: Structure, Nomenclature, Isomers.		6.1-5
21.	July 13	Alkene Stability; Synthesis.		6.6, 7.1
22.	July 14	Synthesis of Alkenes; Classifying/Recognizing Reaction Mechanisms; Alkenes		7.1, 17.6
23.	July 15	**Test 2. Chapters 4, 7, 8, 5**		**Test**
24.	July 18	Addition of H-Cl, H-Br, and H-OH to Alkenes.		6.7-11, 7.2
25.	July 19	Oxymercuration/Dermercuration; Hydroboration/Oxidation; Hydrogenation		7.4, 7.5, 7.7
26.	July 20	Addition of Halogens, Formation of Halohydrins; Epoxidation		7.2-3
27.	July 21	Oxidation Reactions of Alkenes		7.8-9
28.	July 22	Catchup; Practice Problems		Catchup
		Skip 7.6, 10, 11		
29.	July 25	Intro; Conjugation, Molecular Orbitals, Dienes, Allylic Cations, Diene Additions		14.1-2
30.	July 26	More allylic cations/radicals/conjugation and Applications; Diels-Alder Reaction		14.3-4
31.	**July 27**	Diels-Alder Reaction, Aromaticity		14.4-5
32.	July 28	Aromaticity; Huckel's Rule, Complex Aromaticity, Application, Nomenclature		15.1-8
33.	July 29	**Test 3. Chapters 5, 6**		**Test**
		Skip: 14.6-10		
34.	Aug 1	Electrophilic Aromatic Substitution: Intro, Mechanisms		16.1-5
35.	Aug 2	Reactions in Detail: Halogenation, Nitration, Sulfonation, Alkylation, Acylation		16.1-5
36.	Aug 3	Catchup; Addition to Disubstituted Benzenes; Synthetic Applications		16.6,9-11
37.	Aug 4	Synthetic Applications; Practice		Practice
38.	**Aug 5**	**Test 4. Chapters 10, 11, 12**		**Test**

Tentative Letter Grades:
A: 90%
B: 77%
C: 65%
D: 53%