

Problems	Points	Credit
1. Functional Group Nomenclature (1 large structure)	30	
2. Types of Isomers, Degrees of Unsaturation	25	
3. Cyclohexane Conformations, 2 substituents, Newman Projections, Relative Energies	30	
4. Newman Projections, Conformational Energies, K_{eq} Calculation	25	
5. Stereochemical Analysis	30	
6. 2D Resonance Structures, 3D Structure, Hybridization, Angles, Shapes	30	
7. Dipole Moments and Inductive versus Resonance Effects	18	
8. Quantitative Acid/Base Equation, Identify Conjugate Acid and Base and Calculate $K_{equilibrium}$, Supply Curved Arrows.	15	
9. Acid / Base Chemistry, Explanation, Curved Arrows, Formal Charge, Qualitative Equilibrium (7)	35	
10. S_N/E 3D Mechanisms, with all of the details, Templates Provided	43	
11. Various Reactions, predict the products (20 reactions)	30	
12. Fill in all mechanistic details, curved arrows, lone pairs, formal charge,	20	
13. S_N/E Mechanism, Carbocation Reactions	15	
14. Free Radical Substitution Problem – Predict Possible Products, How Much, Stereochemistry and Provide a Mechanism For Major Product	30	
Total	376	

Premidterm material = 188
Postmidterm material = 188

This is a long exam. It has been designed so that no one question will make or break you. The best strategy is to work steadily, starting with those problems you understand best. Make sure you show all of your work. Draw in any lone pairs of electrons, formal charge and curved arrows to show electron movement where appropriate. Do your best to show me what you know in the time available.

The final exam has more points than will count for the 100% grade. There are 376 total points, but I think the high grade last quarter was around 250 points and I think I made 100% = around 220-230 points. I won't know the exact number until I look at all of the grades in the course. A very rough estimate is 200-230 points will equal 100%. Notice the points came out 50/50 old stuff and new stuff.

Study session is on Tuesday, 6-8 pm in the library, room 1802 (across from the large lecture room). You are allowed one 8x11 inch cheat sheet, anything you want on front and back.