**Organic Chemistry ACS Exam Prep**

**Logistics**
1. 70 questions, 120 minutes (1.7 min/question)
   a. You **DO** have time to redraw structures, draw out mechanisms, skip a problem and come back to it!
   b. Work quickly, but not in a frenzied, panicked mode!
2. Exam will begin promptly at 10 am, and stop at exactly 12 pm.
   a. Come early to get settled.
   b. Take a few **DEEEEEEP** breaths (relaxation techniques!).
3. Allowed materials:
   a. I will provide the following. **All of these items MUST be returned at the end of the exam.**
      i. Exam booklet – I will provide this!
      ii. Exam “data” sheet – contains a brief periodic table, and structures, names and abbreviations for some reagents (e.g. mCPBA). Note: We have seen most of these reagents, but not all!
      iii. Scantron form
      iv. Scratch paper – yes, you must use mine (I need to regulate everything!)
   b. You will/may provide the following.
      i. Pencils.
      ii. Non-programmable calculator (I’m not certain if you actually need this!).

What is not allowed? The NMR/IR chart! Oh no! What to do!

⇒ Know some key/unique chemical shifts: aromatic (7 – 8 ppm), esters (4 – 4.7 ppm), aldehydes (9 – 10 ppm).
⇒ Focus on splitting! In the “practice” problems I have seen, the answer can often be determined by splitting alone.
⇒ Know some key IR frequencies as well: –OH (alcohol vs. carboxylic acids), C–H’s (>3000 cm\(^{-1}\) means sp\(^2\), aromatic or sp, < 3000 cm\(^{-1}\) means sp\(^3\)), C=O (1700 – 1780 cm\(^{-1}\)) vs. C=C (1600 – 1680 cm\(^{-1}\)).

**Strategies**
1. Have one piece of scratch paper as an “answer sheet”.
   a. Number two columns, 1 – 35 and 36 – 70.
   b. Write down your letter answer by the number, then transfer to the scantron.
   c. Not sure of an answer? Write down the choices, put a question mark, and **MOVE ON**!
   d. Revisit the “?” at the end.
2. Take the time to redraw a molecule (wedge-dash, Newman proj., etc…) to help you “see” it.
3. Do not spend too much time on one problem – it will just get you flustered for the rest of the exam. If you don’t know it through a reasonable amount of thinking (or if we haven’t covered it), then skip it until the end!
4. Read the questions an **ALL** answers carefully. Then reread the question!
5. You have time to draw out some mechanisms, or many mechanisms! Remember, I’m not grading your arrows anymore! The only person who has to read your scratch paper is you!
6. Like any multiple choice exam, a little analysis will often eliminate 1 or 2 choices out of the 4.
7. You will see some things that we did not cover – skip them initially and return to them!

**Pep Talk**
You can miss ~6 problems and still be in the 99th percentile! You can miss 14 and still be in the 90th percentile! We have covered **A LOT** of material, and you should be very proud of the amount of material you have learned, the depth of material you have learning, and the reasoning and analysis skills that you have required. I am proud of you for that! With all that we have covered, Organic Chemistry continues to expand, so there is no way that we can cover it all. This is when your analysis skills will kick in. Trust the organic chemistry instincts that you have developed! **YOU CAN DO IT!!!**