

Organic Chemistry II (Exam 1)

Name: *Kear*

Signature:

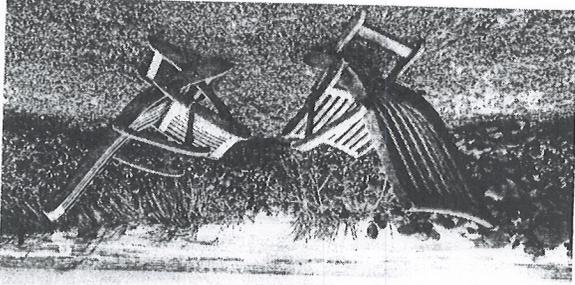
Recitation Instructor:

Instructions

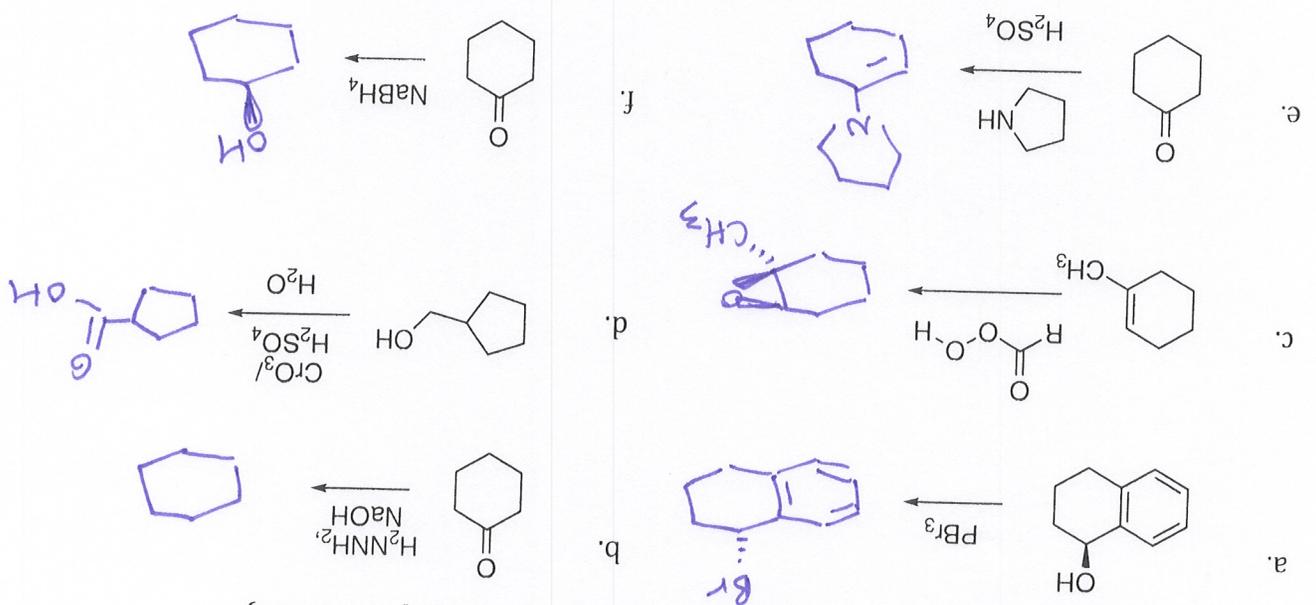
1. Keep the exam closed until you are instructed to begin.
2. The exam consists of 6 questions. The first thing you should do is make sure that no pages are missing. If a page is missing, notify a proctor immediately.
3. You will have 1 hour and 15 minutes.
4. Make sure to show all of your work, and this should fit into the space provided. If you need to use the back of the paper, you must make note of it in the space provided for credit.

Good Luck!

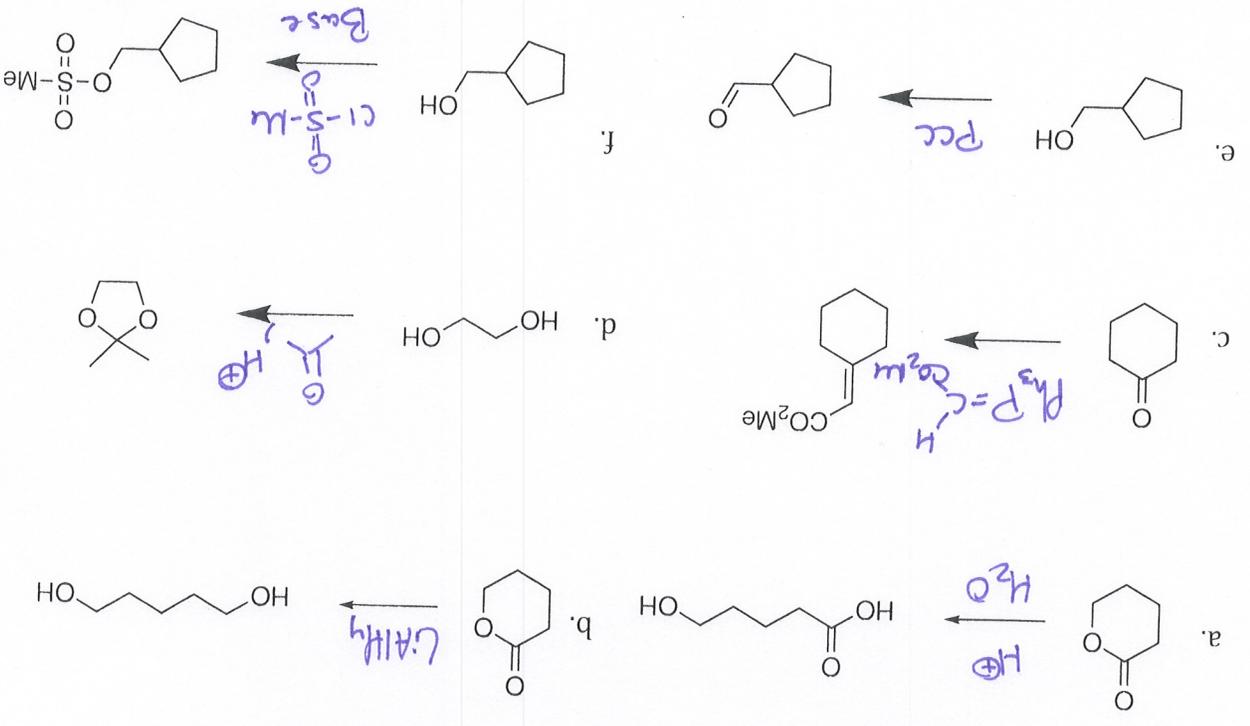
1. — (15 points)
2. — (15 points)
3. — (10 points)
4. — (10 points)
5. — (20 points)
6. — (30 points)



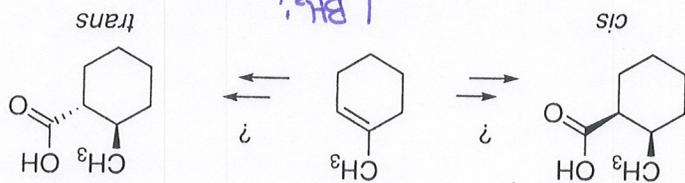
1. Show the products of 5 of the following 6 reactions. Circle the letter of those you want graded. If you don't, we will grade the first 5. (15 points, 3 points each)



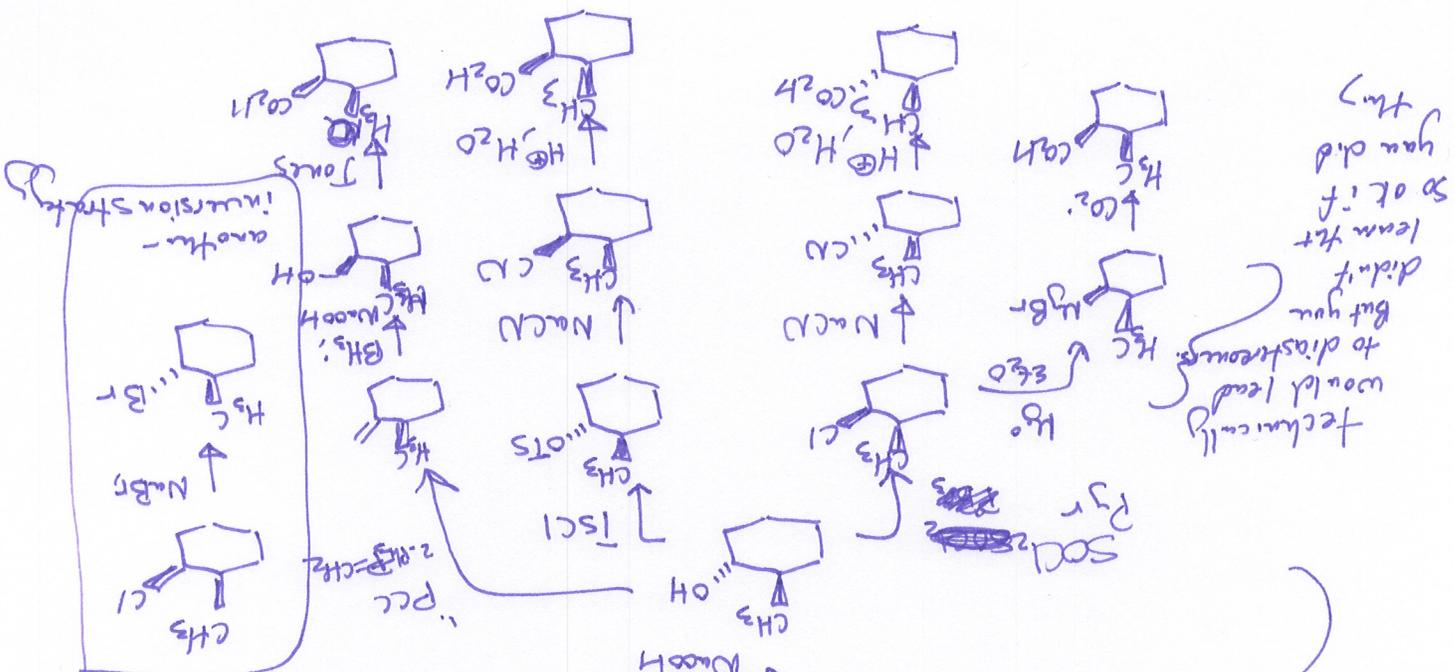
2. Show the reagents necessary for 5 of the following 6 reactions. Circle the letter of those you want graded. If you don't, we will grade the first 5. (15 points, 3 points each)



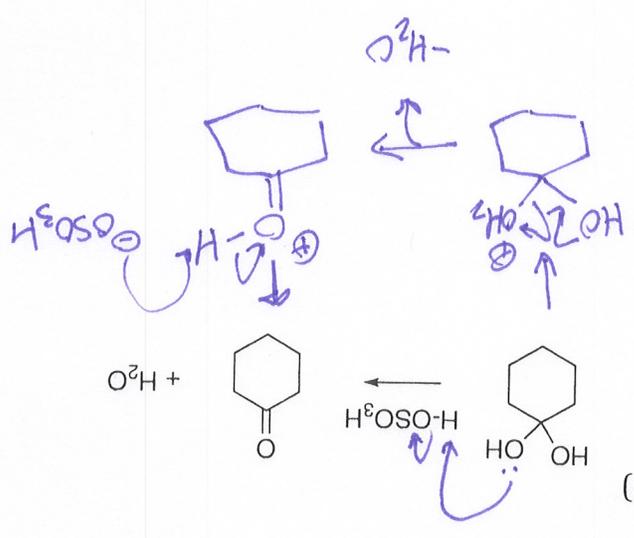
5. More Complex Synthesis. Try to generate carry out the following synthesis with complete *cis* stereocontrol. Then try to generate it with *trans* stereocontrol. (20 points).



Some Strategies



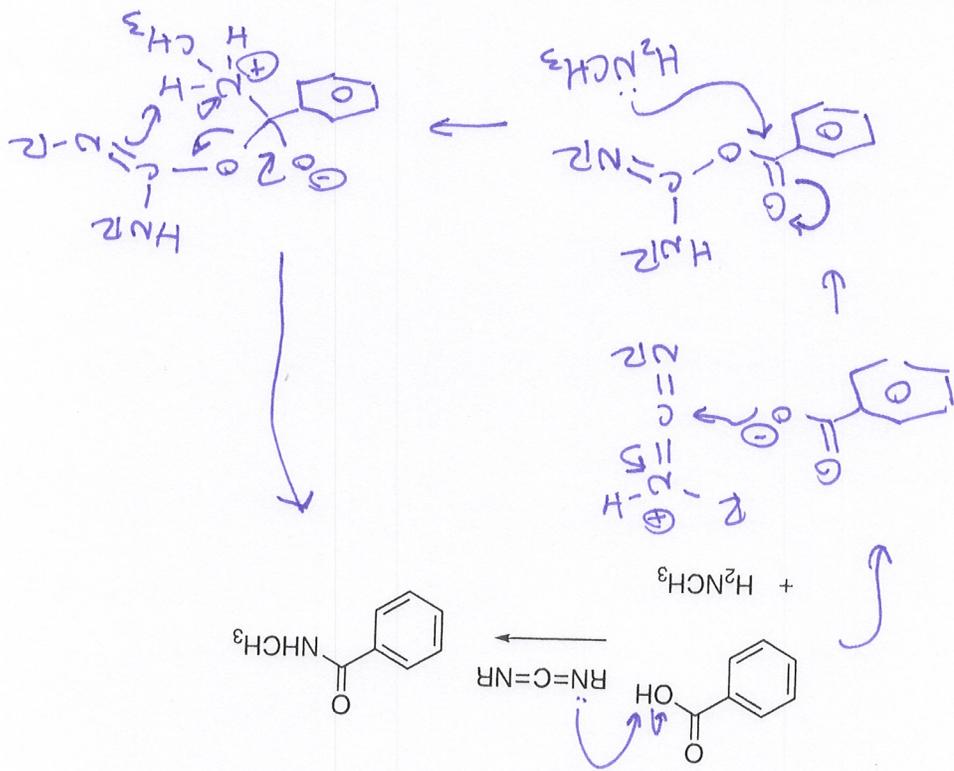
6. Show a mechanism for each of the following reactions. (30 points).



9a. Simple (10 points)

technically would lead to diastereomers. But you didn't learn yet so ok if you did this

6b. Moderate (10 points)



6c. Mechanism Challenge. Propose a mechanism of the following 'Aza-Wittig' reaction. Predict what the intermediate is after the first step. (10 points)

