Organic Chemistry c3444y

3rd Hour Exam

Monday, April 8, 2002
Prof. Leighton

Name:_____ **ID#**_____

Signature:_____

- Write your name on every page.
- The exam is 5 pages long (*not* including this one). Please make sure you have all of the pages.
- Write complete ***but succinct*** answers. **Good Luck!**

Question 1 (20 pts): _____

Question 2 (25 pts): _____

Question 3 (20 pts): _____

Question 4 (20 pts): _____

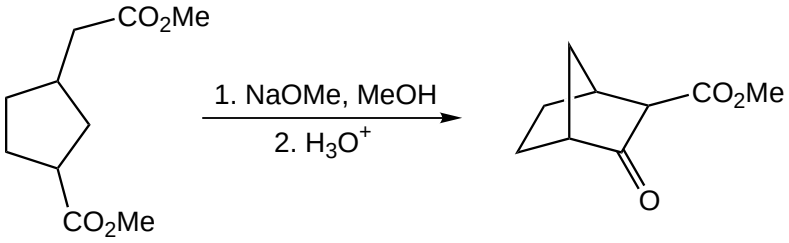
Question 5 (15 pts): _____

Total (100 pts):_____

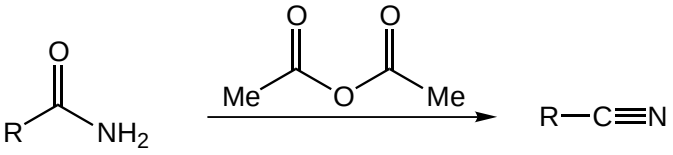
Name: _____

1. Provide detailed mechanisms for the following transformations:

a. (10 pts)



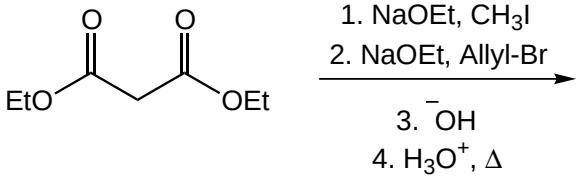
b. (10 pts)



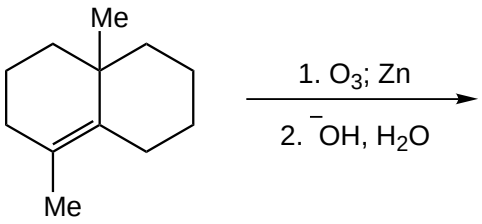
Name:_____

2. Predict the major product of the following reactions:

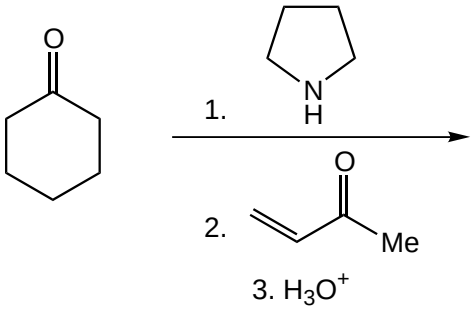
a. (9 pts)



b. (8 pts)

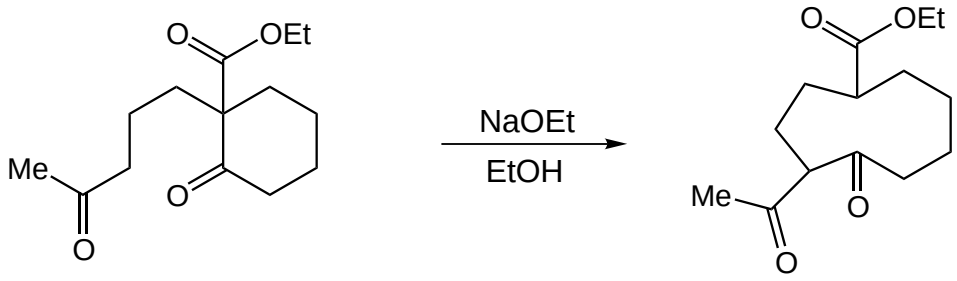


c. (8 pts)

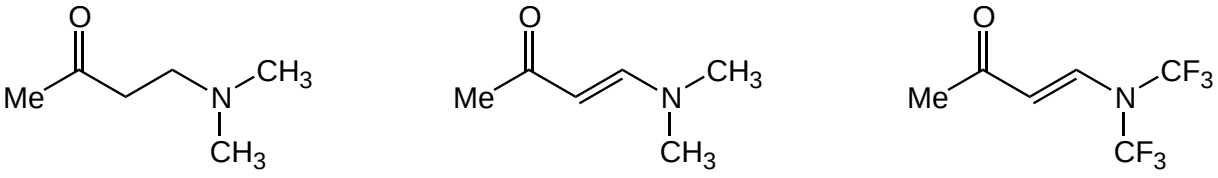


Name: _____

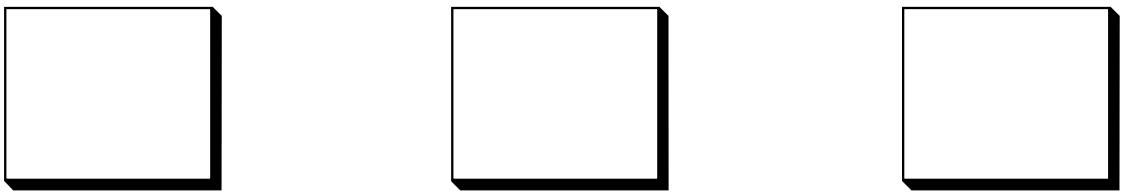
3. a. (10 pts) Provide a mechanism for the following reaction. (*As always, do not be intimidated by an unfamiliar reaction. Just focus on what bonds are being made, and what bonds are being broken.*)



b. (10 pts) Rank the three compounds shown below from lowest frequency to highest frequency for the C=O stretch in the IR spectra. PLEASE CLEARLY WRITE ONE LETTER IN EACH BOX.



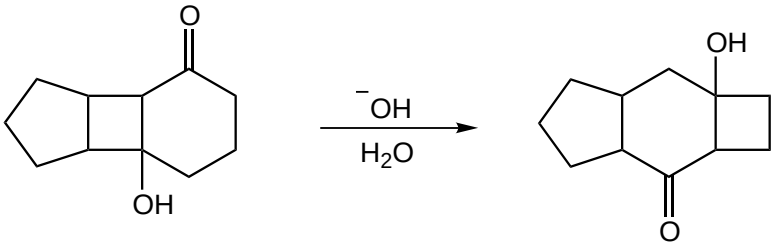
A **B** **C**



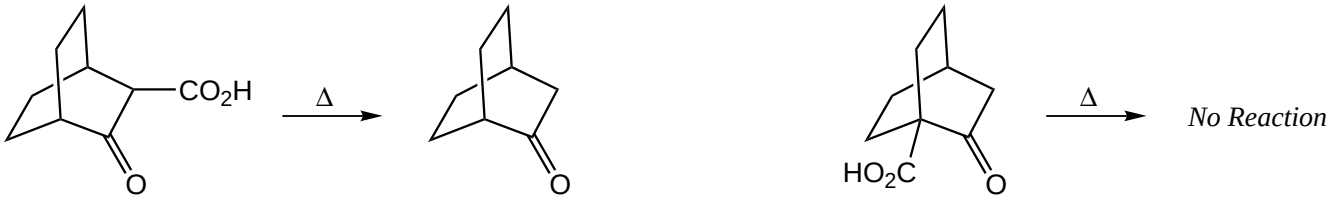
Lowest Frequency → *Highest Frequency*

Name: _____

4. a. (10 pts) Provide a mechanism for the following transformation.



b. (10 pts) Provide a detailed mechanistic explanation for the following reactions:



Name: _____

5. (15 pts) Predict the product AND provide a detailed mechanism for its formation.