

THIRD HOUR EXAM - CHEMISTRY 3331

November 20, 2008

NAME: Answers

**Circle the Time of Your
Recitation**

PROBLEM 1. _____

Monday 8am

Monday noon

PROBLEM 2. _____

Monday 5pm

Tuesday 8 am

PROBLEM 3. _____

Wednesday 8 am

PROBLEM 4. _____

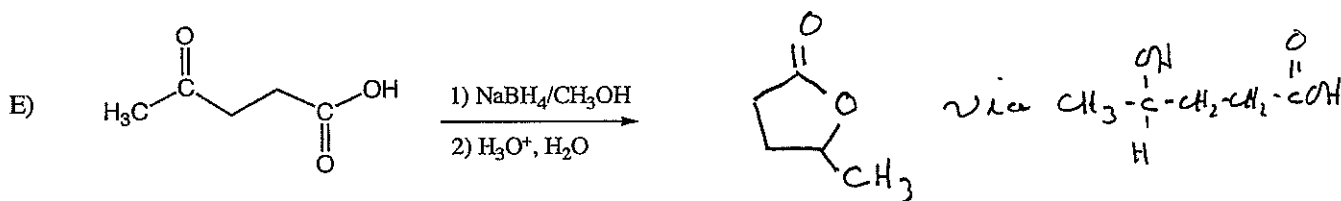
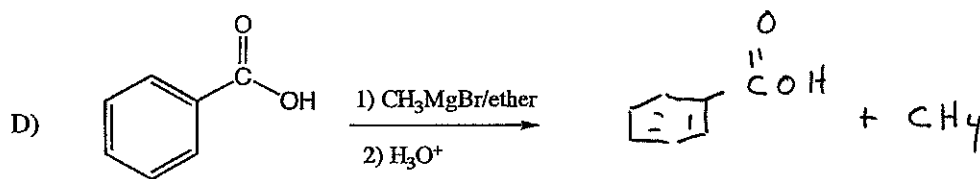
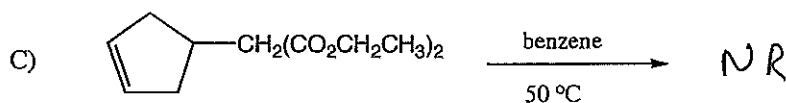
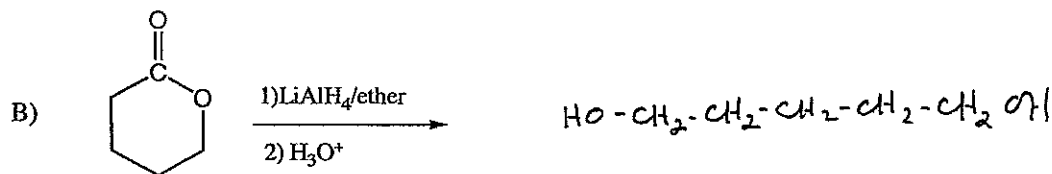
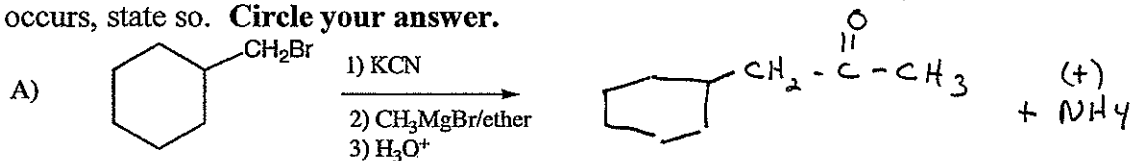
Wednesday 5pm

PROBLEM 5. _____

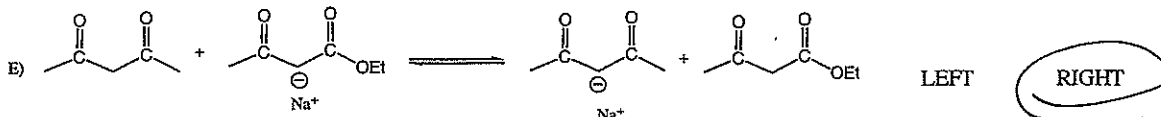
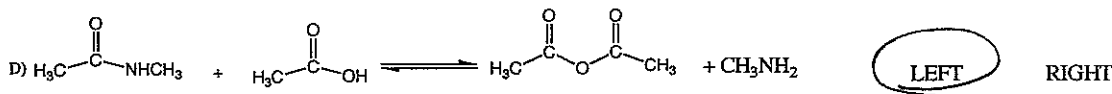
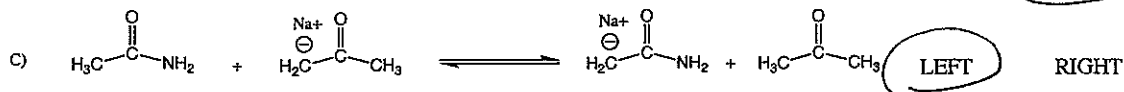
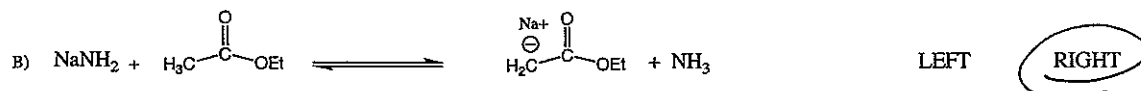
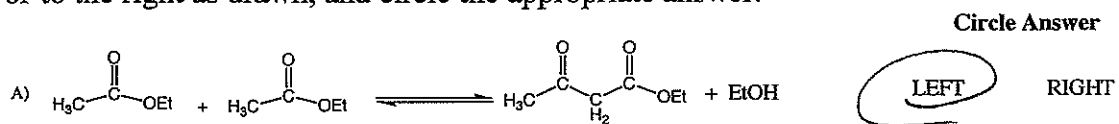
PROBLEM 6. _____

TOTAL: _____

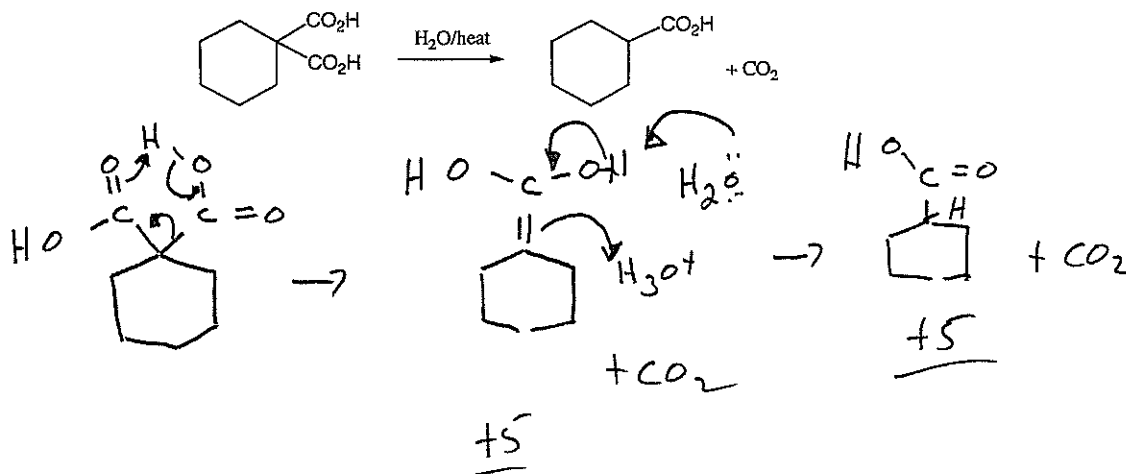
Problem 1. (25 points) Given the **final** product for the following reactions. If no reaction occurs, state so. **Circle your answer.**



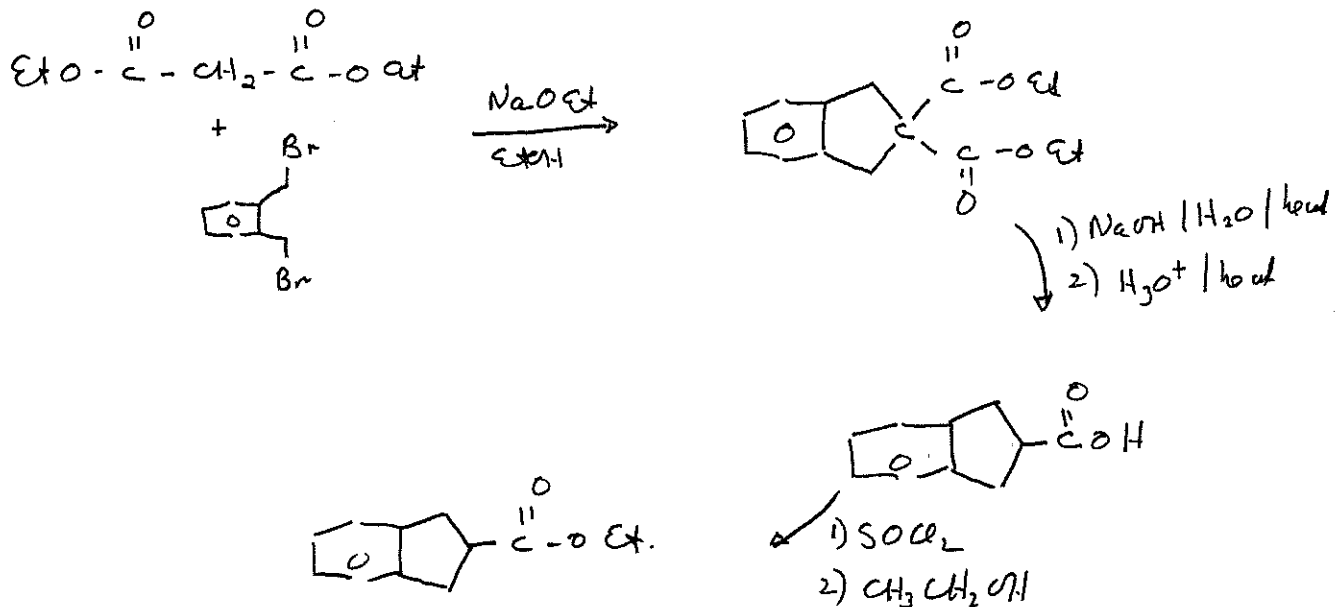
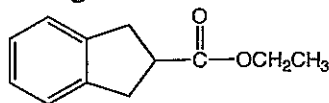
Problem 2. (15 points) For the following reactions, determine if the equilibrium lies to the left or to the right as drawn, and circle the appropriate answer.



Problem 3. (10 points) Give the mechanism for the following reaction. Show the "flow" of electrons with curved arrows.

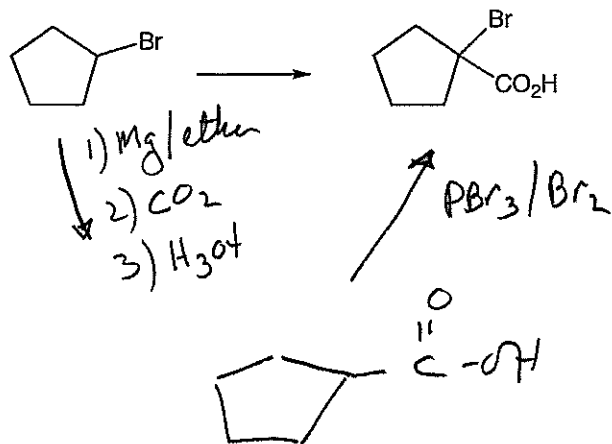


Problem 4. (15 points) Starting with diethyl malonate and any other organic compounds, how would you synthesize the following molecule?

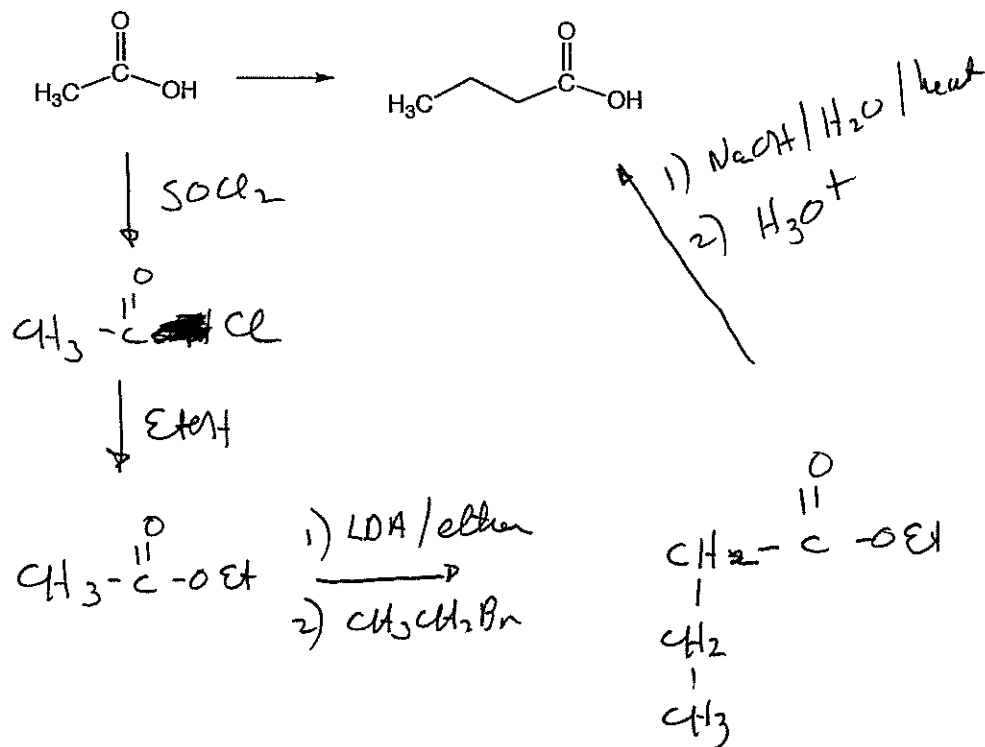


Problem 5. (20 points) How would you carry out the following transformations?

A)



B)



Problem 5. (15 points) How would you carry out the following transformation? Use the indicated diene and another organic compounds.

