

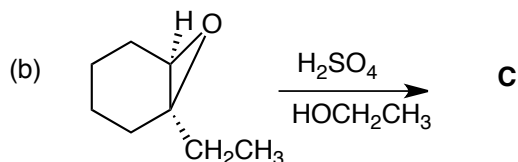
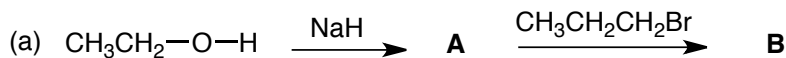
Name

L.I.U.

Chem. 122, Sect 009,

Quiz 2, 50 pts, Spring, 2012

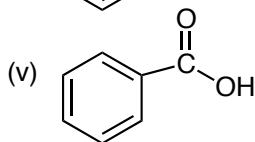
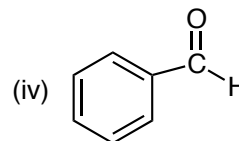
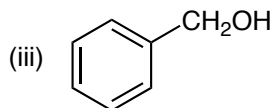
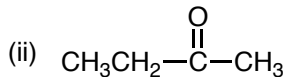
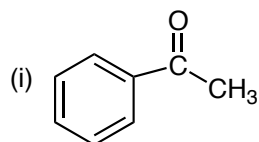
1. Give the product(s) of the following reactions, showing all intermediates and the full reaction mechanism in each case. (20 pts)



2. Looking at molecules **D** and **E** shown below, predict the one which would have the greatest hydration constant in acidic ($\text{H}_3\text{O}^+/\text{H}_2\text{O}$) conditions and show the reaction for the molecule that you choose, giving the complete reaction mechanism. (10 pts)



3. Which of the following molecules would give (a) a positive test with KI/I_2 ? (b) a positive test with Ag^+ ? (c) a positive test with a semi-carbazone? (There may be more than one correct answer in each case.) (12 pts)



4. In the preparation of *p*-nitroaniline from aniline ($\text{C}_6\text{H}_5\text{NH}_2$), (a) show the reactions that occur in step 1 and step 2. You do not need to show the mechanisms. (b) One student missed the first lab period for this experiment (her cat was very depressed and she had to stay home). To save time, the student decided to do the nitration step directly on aniline. What two products would she have made? (8 pts)