

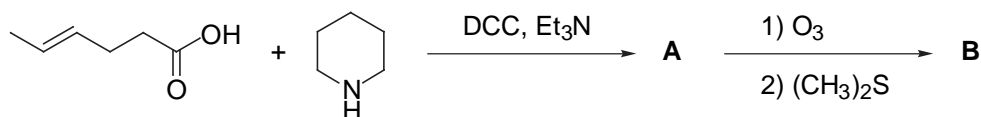
Chem 331
Exam 3
December 6, 2002
Prof. Fox
50 minutes

The exam is open book,
Open notes. Models are permitted
Show your work in detail

WRITE YOUR NAME ON EVERY PAGE

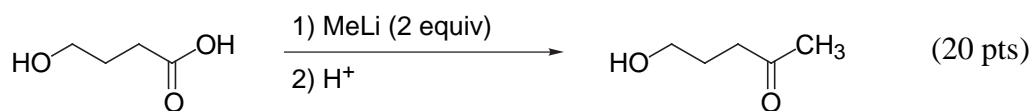
NAME _____

1. Draw the structures of **A** and **B**. You do not need to provide mechanisms (25 pts)

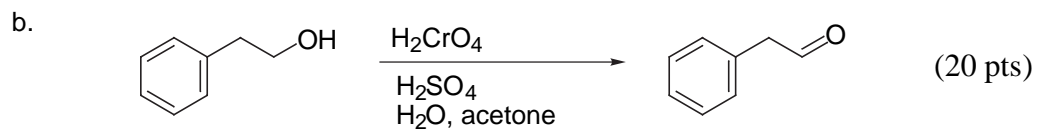


2. The reactions below would not proceed as shown. Explain why (be concise), and indicate which product would be formed instead.

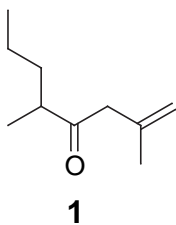
a.



2 (continued). The reactions below would not proceed as shown. Explain why (be concise), and indicate which product would be formed instead.

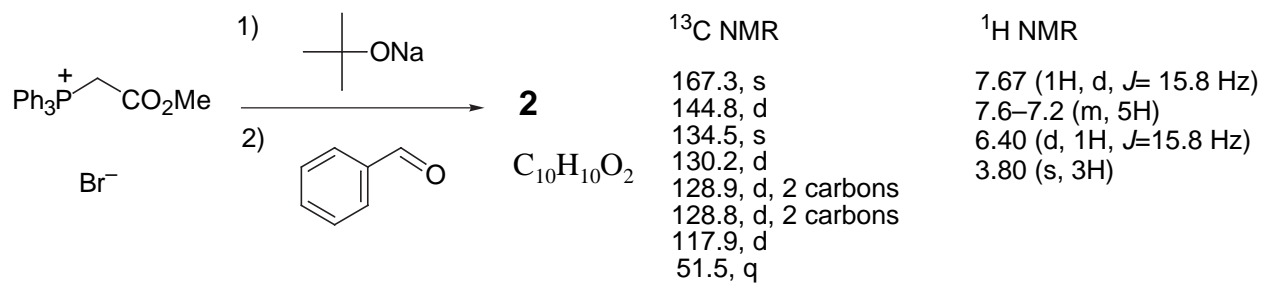


3. Propose a synthesis for **1** starting with any materials that contain 3 carbons or less. You may also use *reagents* that contain more than 3 carbons (e.g. BuLi, Ph₃P, LDA, MCPBA, DIBAL, DCC, pyridine, TsCl, NaOtBu, Et₃N). However, *Grignard and Wittig reagents must be prepared*.



(40 pts)

4. Propose the structure of **2** (10 points). Explain how the spectroscopic data helped you make your *stereochemical* assignment. (25 points).



(35 total pts)

5. Propose a detailed mechanism for the rearrangement below (35 pts)

