

**Carboxylic Acids and Derivatives II, Problem Set #6**

Due in lecture on 3/28/2003

No late homeworks accepted

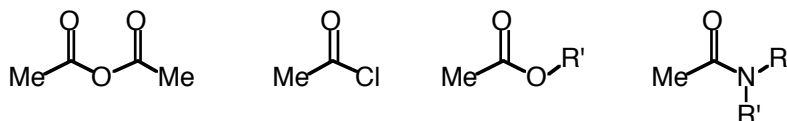
Only the additional problems need to be turned in.

❖ Read Chapter 21

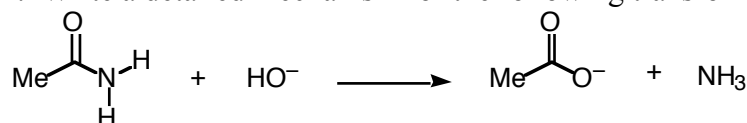
**Exercises:**

❖ Additional Problems:

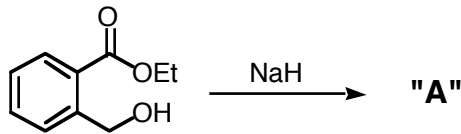
1. Rank the problems below in order of decreasing reactivity towards nucleophiles. Explain briefly.



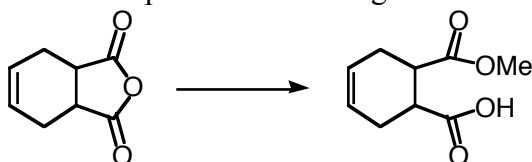
2. Write a detailed mechanism for the following transformation.



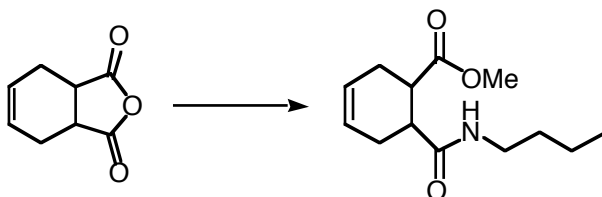
3. What is "A" below? Write a mechanism for its formation.



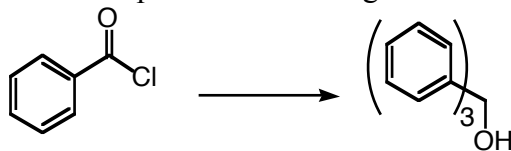
4. Fill in the reagents needed to accomplish the following transformation.



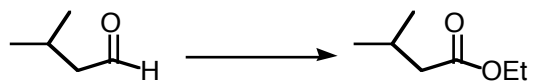
5. Fill in the reagents needed to accomplish the following transformation. (more than one step is required)



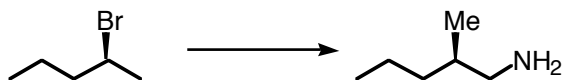
6. Fill in the reagents needed to accomplish the following transformation.



7. Fill in the reagents needed to accomplish the following transformation. (more than one step is required)



8. Fill in the reagents needed to accomplish the following transformation. (more than one step is required)



9. Fill in the reagents needed to accomplish the following transformation. (more than one step is required. WARNING: it's harder than it looks)

