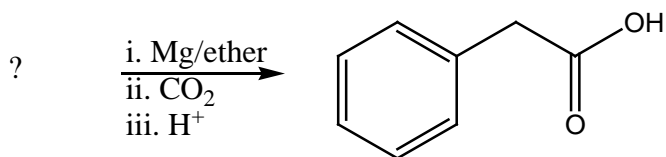
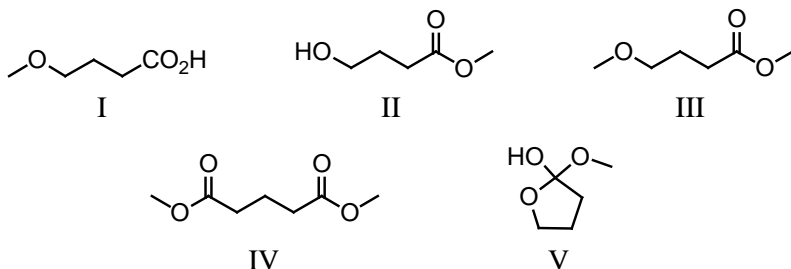
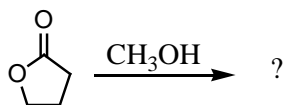


Homework/Problem Set
Chapter 17 (Carboxylic Acids and Their Derivatives)

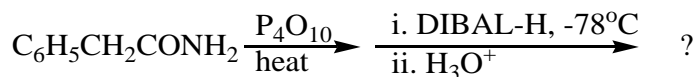
1. What is the reactant of the following reaction sequence?



- A) $\text{HCO}_2\text{CH}_2\text{C}_6\text{H}_5$
B) $\text{C}_6\text{H}_5\text{CH}_2\text{COOH}$
C) $\text{C}_6\text{H}_5\text{CH}_2\text{Cl}$
D) $\text{C}_6\text{H}_5\text{CHClCOOH}$
E) $\text{O}=\text{C}(\text{CH}_2\text{C}_6\text{H}_5)_2$
2. What is the product of this reaction?



3. What would be the final product?



- A) $\text{C}_6\text{H}_5\text{CH}_2\text{CO}_2\text{CH}_3$
B) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{NHCH}_3$
C) $\text{C}_6\text{H}_5\text{CH}_2\text{COCH}_3$
D) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}(\text{CH}_3)\text{CN}$
E) $\text{C}_6\text{H}_5\text{CH}_2\text{CHO}$
4. Show how pentanoic acid can be prepared from
- 1-pentanol
 - 1-bromobutane (two ways)
 - 5-decene
 - Pentanal
5. Give stereochemical formulas for the compounds **A-D** in the following transformations.

