

St. name:

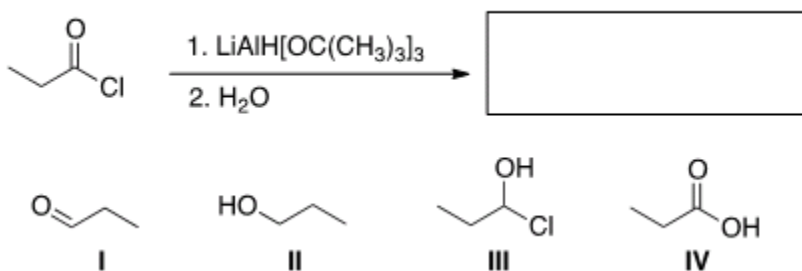
Instructor: **G. Barghouti**

St. No.:

1. What is the name of the general reaction type that ketones undergo?

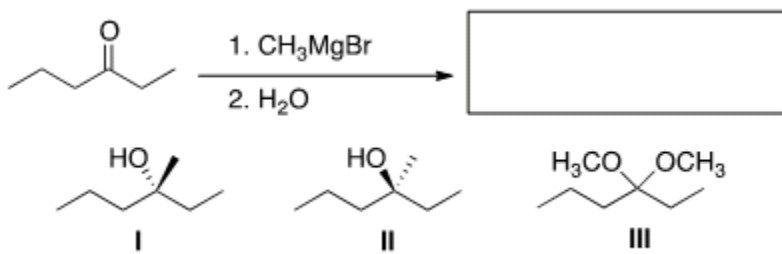
- A) Electrophilic addition B) Nucleophilic acyl substitution
C) Nucleophilic addition D) Electrophilic Substitution

2. What is the major organic product of the following reaction?



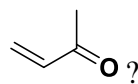
- A) **I** B) II C) III D) IV

3. What is the major organic product of the following reaction?



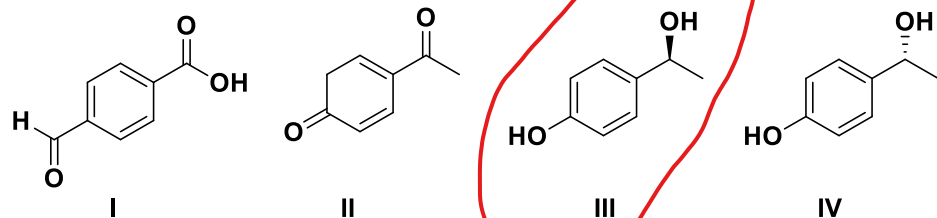
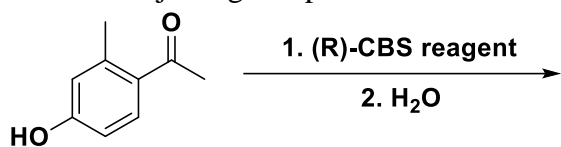
- A) Only I B) Only II C) Only III **D) Only I and II**

4. Which reagent can be used to reduce the C=C double bond in



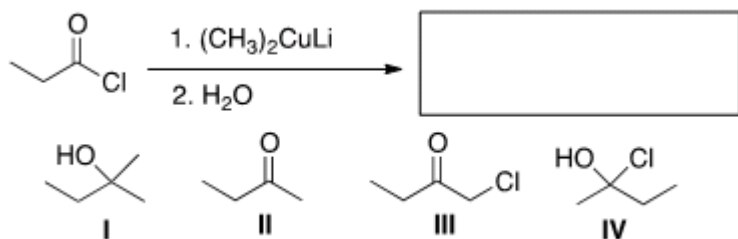
- A) NaBH₄/CH₃OH B) **H₂/Pd-C** C) LiAlH₄/H₂O D) DIBAL-H/H₂O

5. What is the major organic product of the following reaction?



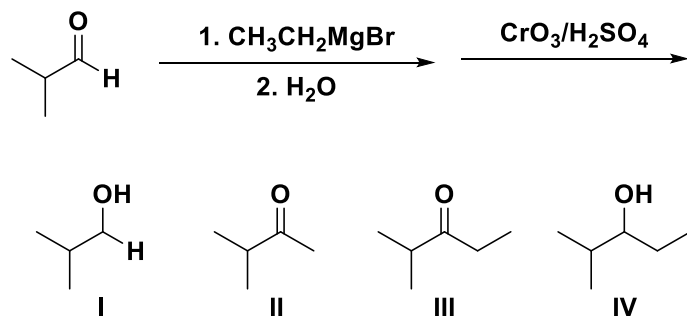
- A) I
 B) II
 C) III
 D) IV

6. What is the major organic product of the following reaction?



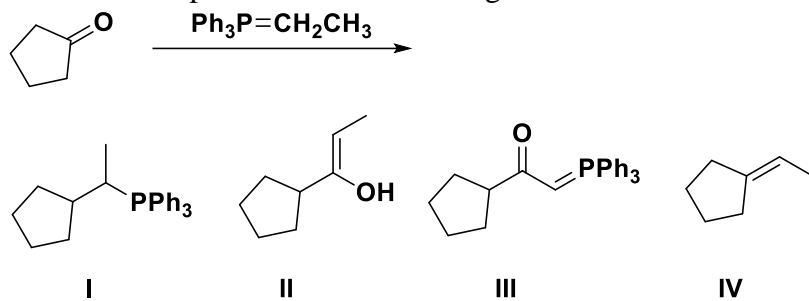
- A) I B) II C) III D) IV

7. What is the major organic product obtained from the following sequence of reactions?



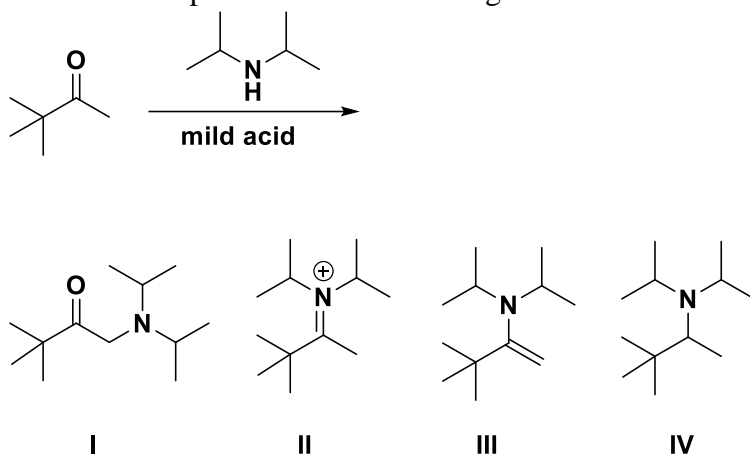
Answer: III

8. What is the product of the following reaction?



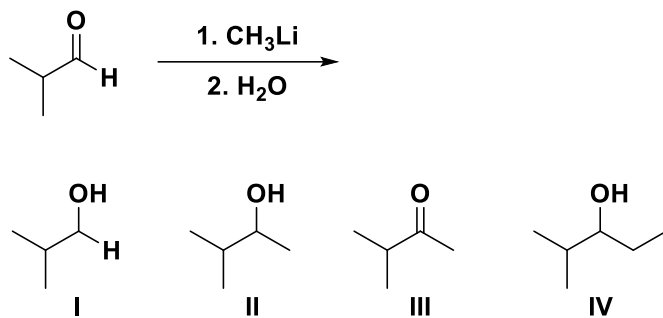
A) I B) II C) III **D) IV**

9. What is the product of the following reaction?



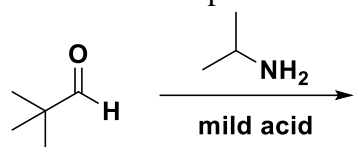
A) I B) II **C) III** D) IV

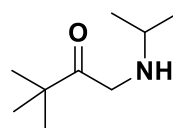
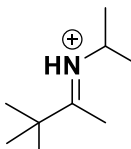
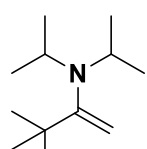
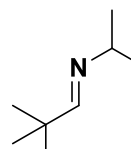
10. What is the major organic product obtained from the following sequence of reactions?



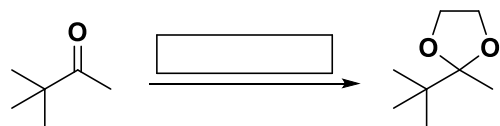
Answer: II

11. What is the product of the following reaction?



- I 
 II 
 III 
 IV 
- A) I B) II C) III **D) IV**

12. What reagent(s) and reaction conditions(s) is (are) needed to carry out the following reaction?



- A) Heat the reaction with $\text{HOCH}_2\text{CH}_2\text{OH}$
 B) Add an acid catalyst with $\text{HOCH}_2\text{CH}_2\text{OH}$.
 C) Add an acid catalyst with $\text{CH}_3\text{CH}_2\text{OH}$.
D) Add $\text{HOCH}_2\text{CH}_2\text{OH}$ an acid catalyst and heat the reaction.

13. Complete the following reaction and provide a step-by-step mechanism using curved arrows

