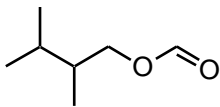


Honors Assignment for Chapter 17

1.



What is the IUPAC name for

- A) 2,3-Dimethylbutyl acetate
- B) 2,3-Dimethyl-4-oxoethanal
- C) 2,3-Dimethylbutyl methanoate
- D) 2,3-Dimethylbutyl methylate
- E) 2,3-Dimethylbutyl formylate

Ans:

2. In which of the following sequences are the compounds listed in order of decreasing acidity?

- A) $\text{CH}_3\text{COOH} > \text{H}_2\text{O} > \text{CH}_3\text{CH}_2\text{OH} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- B) $\text{CH}_3\text{CH}_2\text{OH} > \text{CH}_3\text{COOH} > \text{H}_2\text{O} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- C) $\text{CH}_3\text{COOH} > \text{CH}_3\text{CH}_2\text{OH} > \text{H}_2\text{O} > \text{NH}_3 > \text{HC}\equiv\text{CH}$
- D) $\text{H}_2\text{O} > \text{CH}_3\text{COOH} > \text{CH}_3\text{CH}_2\text{OH} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- E) $\text{CH}_3\text{CH}_2\text{OH} > \text{H}_2\text{O} > \text{CH}_3\text{COOH} > \text{HC}\equiv\text{CH} > \text{NH}_3$

Ans:

3. In which of the following sequences are the compounds listed in order of decreasing acidity?

- A) $\text{CH}_3\text{COOH} > \text{H}_2\text{O} > \text{PhOH} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- B) $\text{PhOH} > \text{CH}_3\text{COOH} > \text{H}_2\text{O} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- C) $\text{CH}_3\text{COOH} > \text{PhOH} > \text{H}_2\text{O} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- D) $\text{H}_2\text{O} > \text{CH}_3\text{COOH} > \text{PhOH} > \text{HC}\equiv\text{CH} > \text{NH}_3$
- E) $\text{PhOH} > \text{H}_2\text{O} > \text{CH}_3\text{COOH} > \text{HC}\equiv\text{CH} > \text{NH}_3$

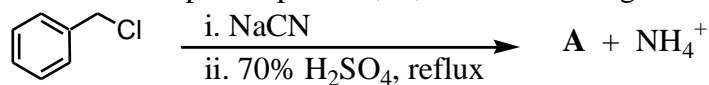
Ans:

4. In which of the following sequences are the compounds listed in order of decreasing acidity?

- A) $\text{PhCOOH} > \text{H}_2\text{O} > \text{PhOH} > \text{PhCH}_2\text{OH} > \text{PhH}$
- B) $\text{PhCOOH} > \text{PhOH} > \text{H}_2\text{O} > \text{PhCH}_2\text{OH} > \text{PhH}$
- C) $\text{PhH} > \text{H}_2\text{O} > \text{PhOH} > \text{PhCH}_2\text{OH} > \text{PhCOOH}$
- D) $\text{PhOH} > \text{H}_2\text{O} > \text{PhCOOH} > \text{PhCH}_2\text{OH} > \text{PhH}$
- E) $\text{PhCOOH} > \text{H}_2\text{O} > \text{PhOH} > \text{PhH} > \text{PhCH}_2\text{OH}$

Ans:

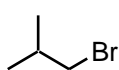
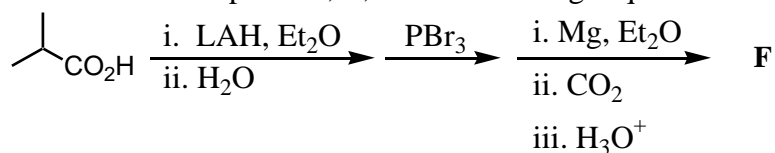
5. What is the expected product, A, of the following reaction sequence?



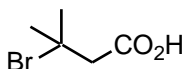
- A) $\text{HCO}_2\text{CH}_2\text{C}_6\text{H}_5$
 B) $\text{C}_6\text{H}_5\text{CH}_2\text{COOH}$
 C) $\text{C}_6\text{H}_5\text{CH}_2\text{OSO}_3\text{H}$
 D) $\text{C}_6\text{H}_5\text{CHClCOOH}$
 E) $\text{O}=\text{C}(\text{CH}_2\text{C}_6\text{H}_5)_2$

Ans:

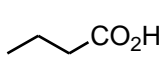
6. What would be the final product, F, of the following sequence of reactions?



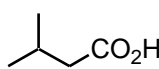
I



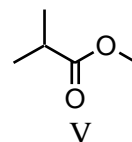
II



III



IV

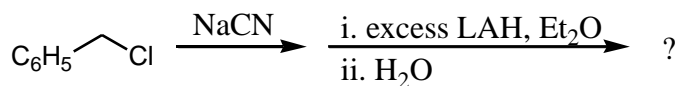


V

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

Ans:

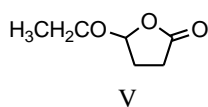
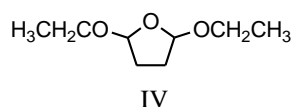
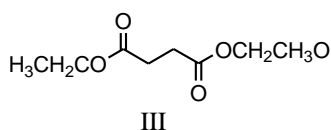
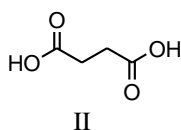
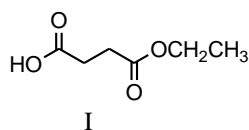
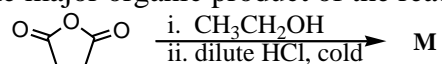
7. What would be the final organic product of the following reaction?



- A) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$
 B) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{NH}_2$
 C) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}(\text{CH}_3)\text{CN}$
 D) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}=\text{NH}$
 E) $\text{C}_6\text{H}_5\text{CH}_2\text{NH}_2$

Ans:

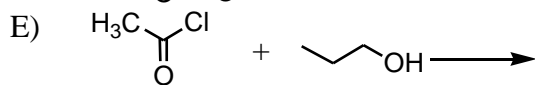
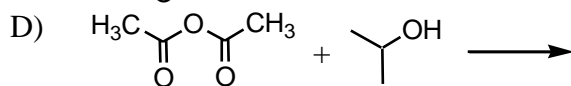
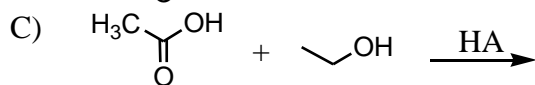
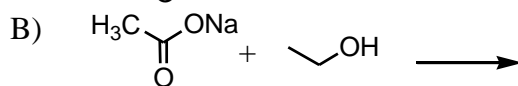
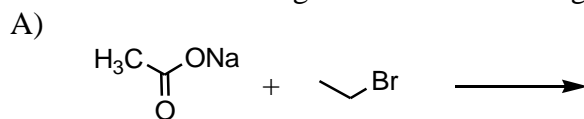
8. Predict the major organic product of the reaction sequence,



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

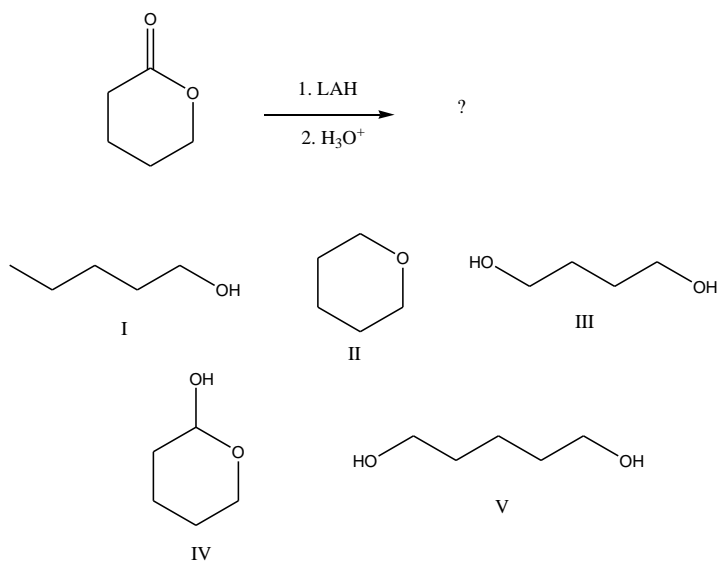
Ans:

9. Which of the following combinations of reagents would not produce an ester?



Ans:

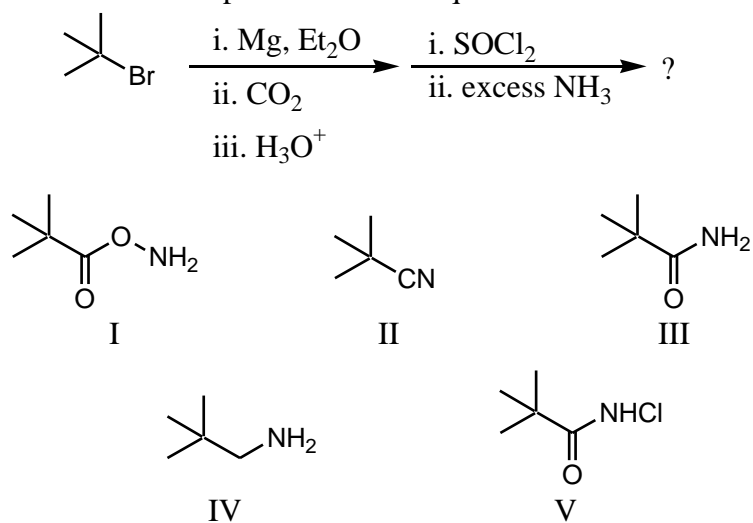
10. What would be the final organic product of the following reaction?



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

Ans:

11. What is the final product of this sequence of reactions?



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

Ans:

12 Propose a plan for the following synthesis:

