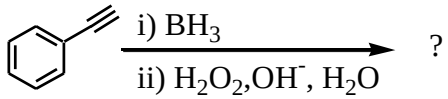
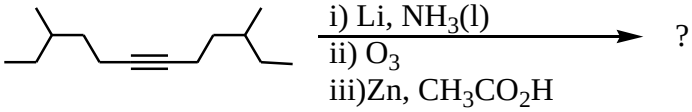
Honor-7 (Chapter 16)

1. Select the structure of the major product in the following reaction.



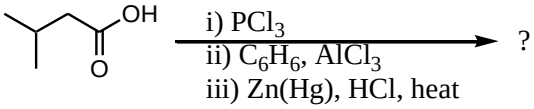
A) Ethylbenzene
B) 1-Phenylethanol
C) Acetophenone
D) 2-Phenylethanal
E) Vinylbenzene
Ans:

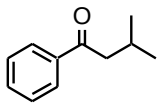
2. Select the structure of the major product in the following reaction.



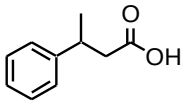
A) 3-Methylhexanal
B) 4-Methyl-1-hexanol
C) 4-Methylhexanal
D) 4,10-Dimethyldodecane-6,7-dione
E) 4,10-Dimethyldodecane-6,7-diol
Ans:

3. What would be the product of the following reaction sequence?

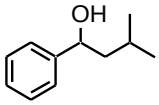




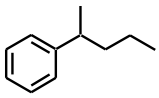
I



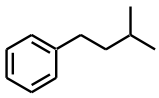
II



III



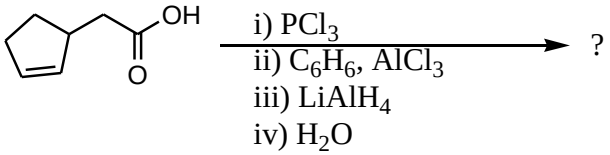
IV

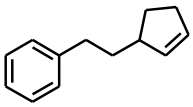


V

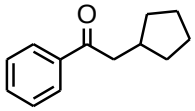
A) I
B) II
C) III
D) IV
E) V
Ans:

4. What would be the product of the following reaction sequence?





I



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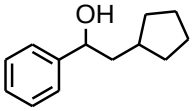
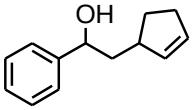
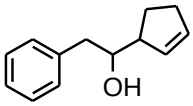


III



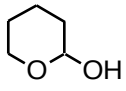
IV



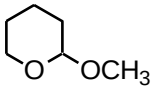
V

A) I
B) II
C) III
D) IV
E) V
Ans:

5. Which compound is a hemiacetal?

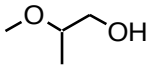


I



II

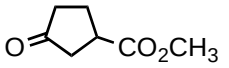
III



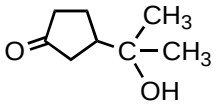
IV

A) I
B) II
C) III
D) IV
E) All of the above
Ans:

6. Which sequence of reactions would be utilized to convert



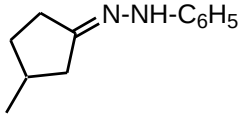
into



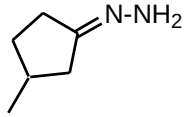
?

A) $2CH_3MgBr$, then NH_4^+
B) $HOCH_2CH_2OH$, H_3O^+; $LiAlH_4$, ether; $2CH_3MgBr$, then NH_4^+
C) $HOCH_2CH_2OH$, H_3O^+; $2CH_3MgBr$, then NH_4^+
D) $HOCH_2CH_2OH$, H_3O^+; H_2, Pt; CH_3OH, NH_4^+
E) None of the above
Ans:

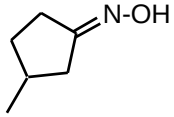
7. Which of the following is formed when 3-methylcyclopentanone reacts with hydroxylamine?



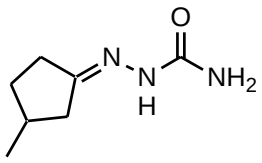
I



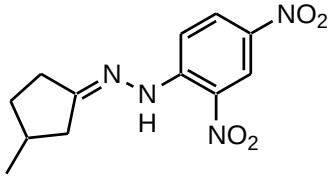
II



III



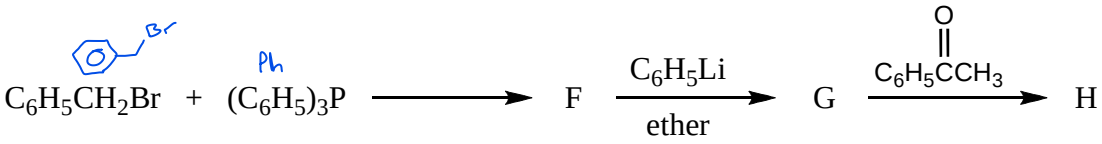
IV



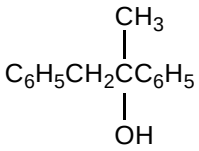
V

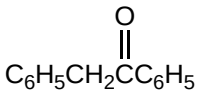
A) I
B) II
C) III
D) IV
E) V
Ans:

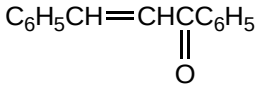
8. The product, H, of the following reaction sequence,



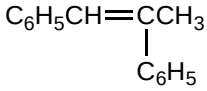
would be:

A) 

B) 

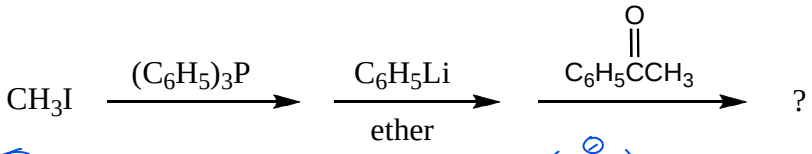
C) 

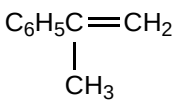
D) $C_6H_5CH_2CH{=}CHC_6H_5$

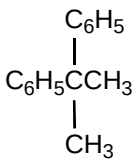
E) 

Ans:

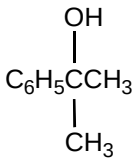
9. What would be the final product?

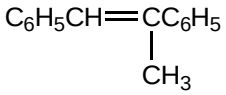


A) 

B) 

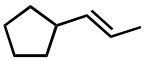
C) $C_6H_5CH{=}CHCH_3$

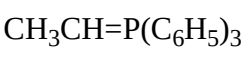
D) 

E) 

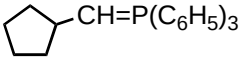
Ans:

10. Which Wittig reagent would be used to synthesize

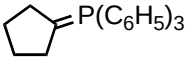
 ?



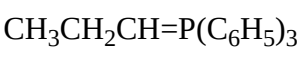
I



II



III

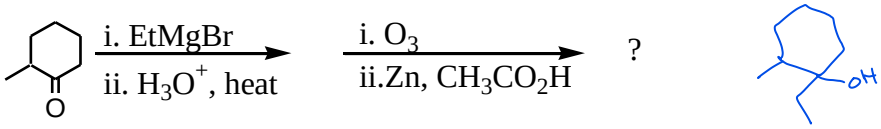


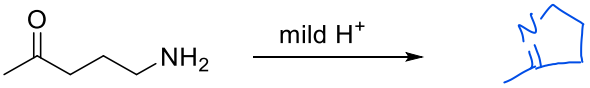
IV

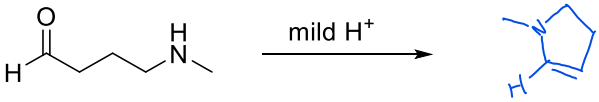
A) I
B) II
C) III
D) IV
E) Either I or II could be used.

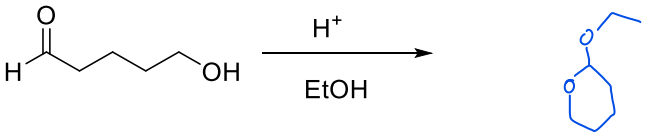
Ans:

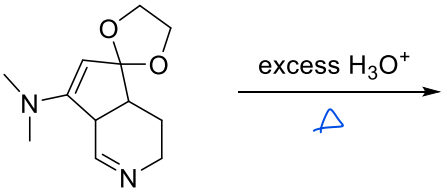
11. Identify the major products in the following reactions:











12. Propose an efficient synthesis for each of the following transformations: