Organic Chemistry II CHM 3150
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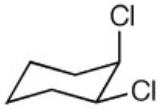
Final Exam Review (Ch. 1-22) – Practice Problems

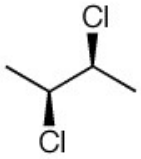
For clicker question voting, go to:
https://pollev.com/lauriestarke263

Is the following molecule chiral? Does it have an enantiomer?

1

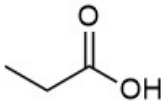


Is the following molecule optically active? Does it have an enantiomer?

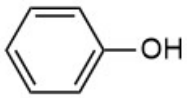


1b

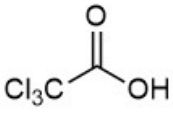
Arrange the following compounds from least acidic to most acidic.



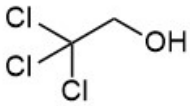
I



II



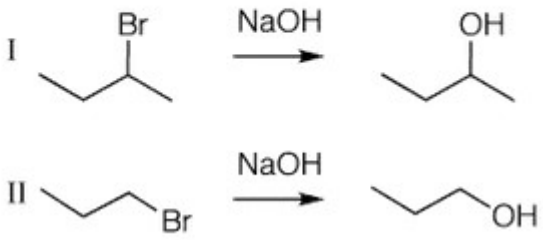
III



IV

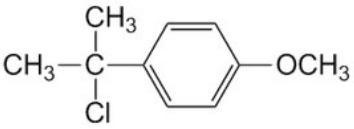
Which of the following is the FASTER reaction? Explain briefly.

2

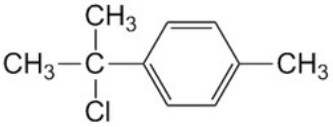


Of the following compounds, which has the fastest S_N1 reaction rate with H_2O in acetone?

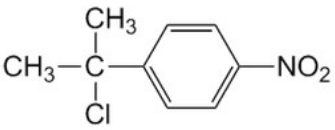
A)



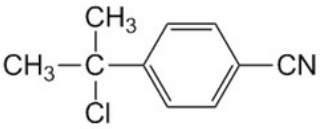
B)



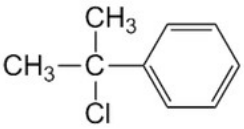
C)



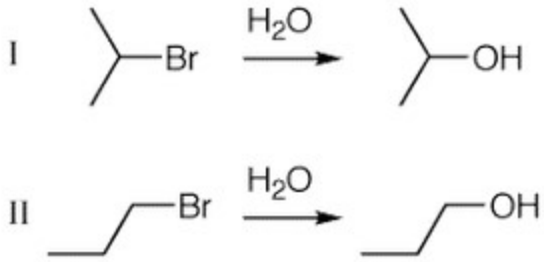
D)



E)

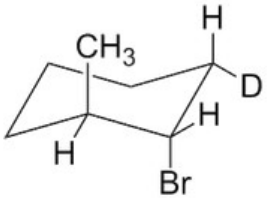


3



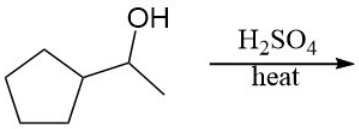
*2(GRE)

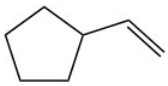
4

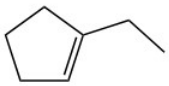


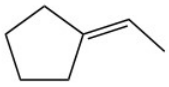
What is the major product of an E2 reaction of the compound shown above?

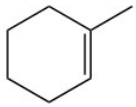
Which of the following is the LEAST likely to be isolated as a product in the reaction shown?



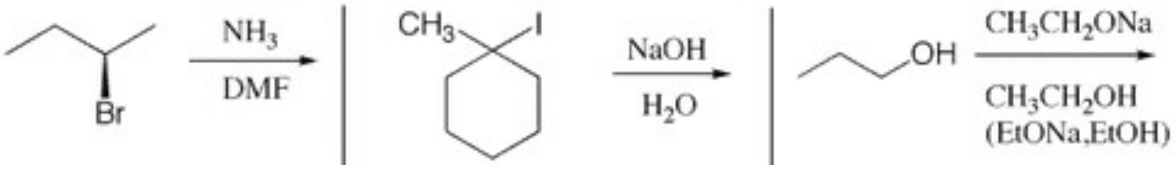
A) 

C) 

B) 

D) 

5 Predict the major products for the following reactions.



Predict the major product(s) and describe the stereochemistry of the product(s) as:

(taken from Stereochemistry practice problems)

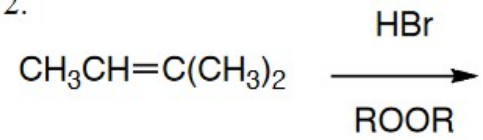
A) a single enantiomer

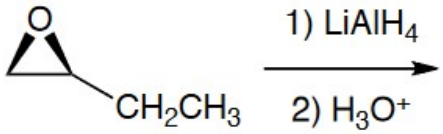
B) a racemate

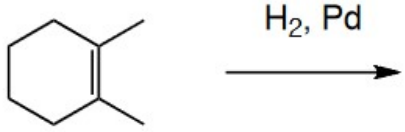
C) a meso compound

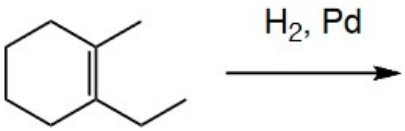
D) an achiral product, but not meso

E) a mixture of diastereomers

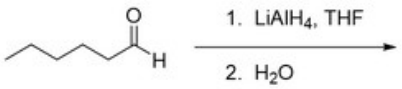
2. 

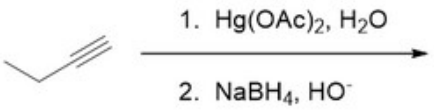
3. 

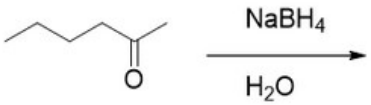
4. 

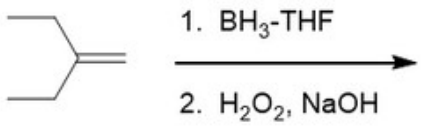
5. 

6 Which of the following reactions gives an alcohol product that is formed as a racemic mixture?



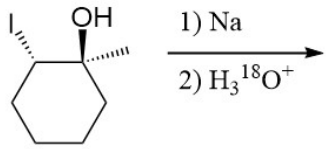






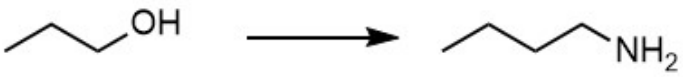
Predict the major product

7

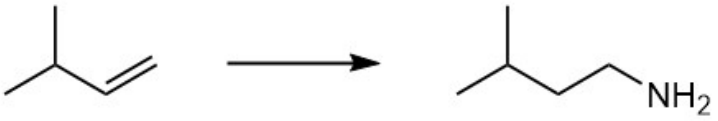


Which reagents would be best to achieve the following synthesis?

8



9



10