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<p>CEM 352 –Quiz 3</p> <p>Spring 2025</p>	
NAME	

Score		

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READ THIS!

Bubble in your PID in the space above. Write your answer for each question in the space provided.

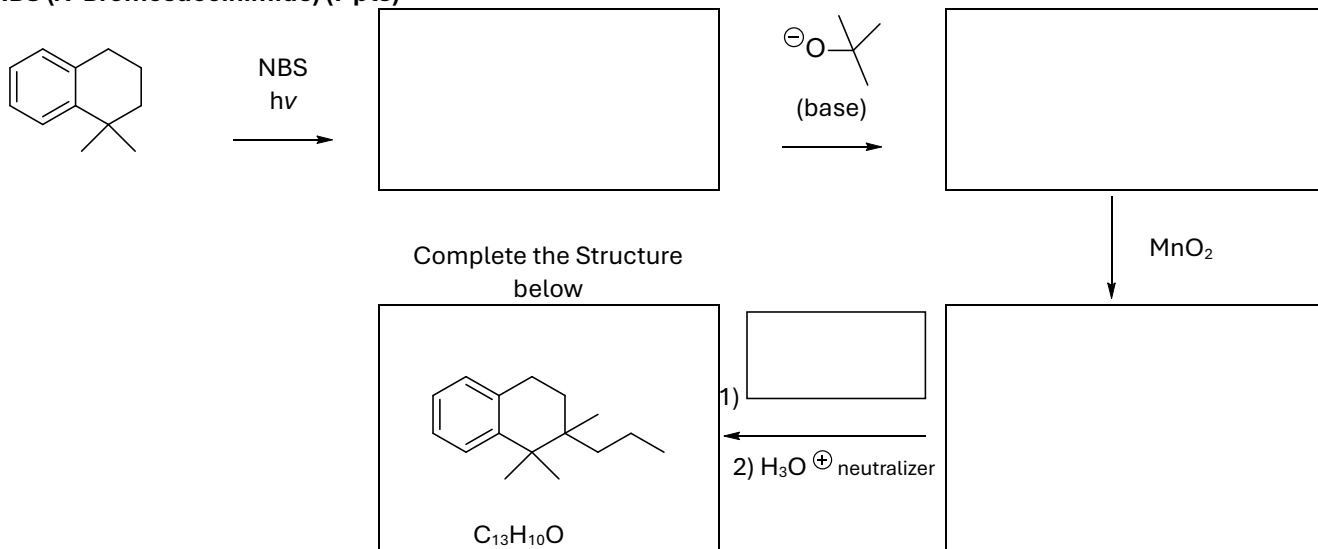
LEAVE THIS COVER SHEET ATTACHED TO THE Quiz!

- 1. _____/23
- 2. _____/13
- 3. _____/13
- 4. _____/04

TOTAL: _____ / 50

Show the reaction products or intermediates in the large rectangles and the necessary reactants in the smaller rectangles.

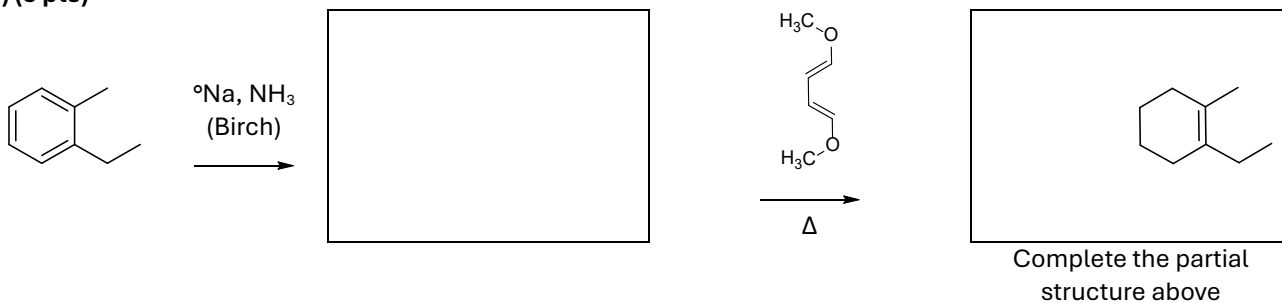
1) NBS (N-Bromosuccinimide) (7 pts)



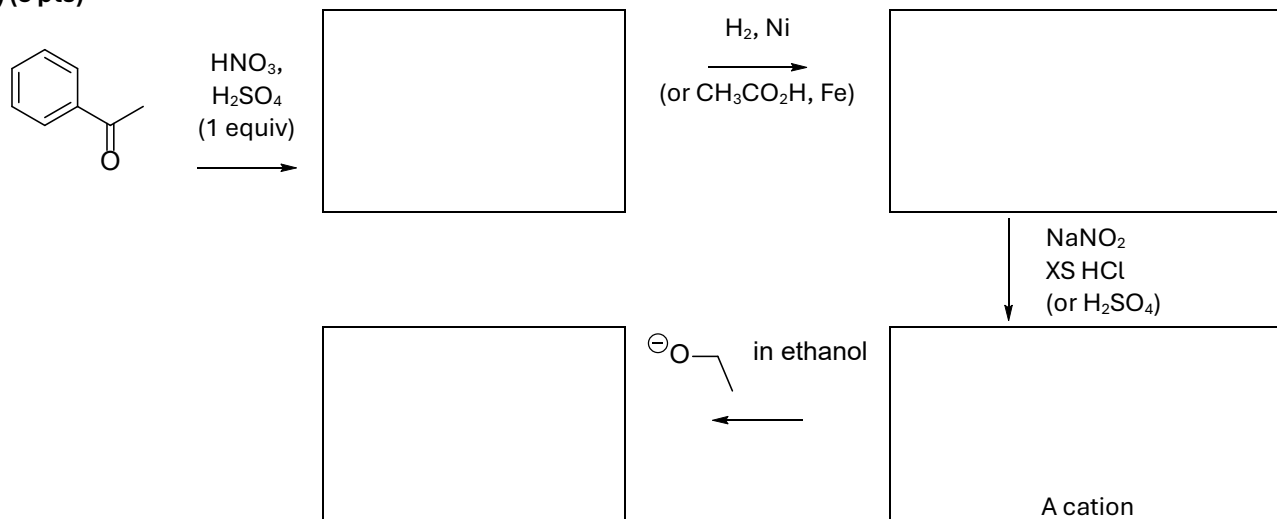
2) (3 pts)



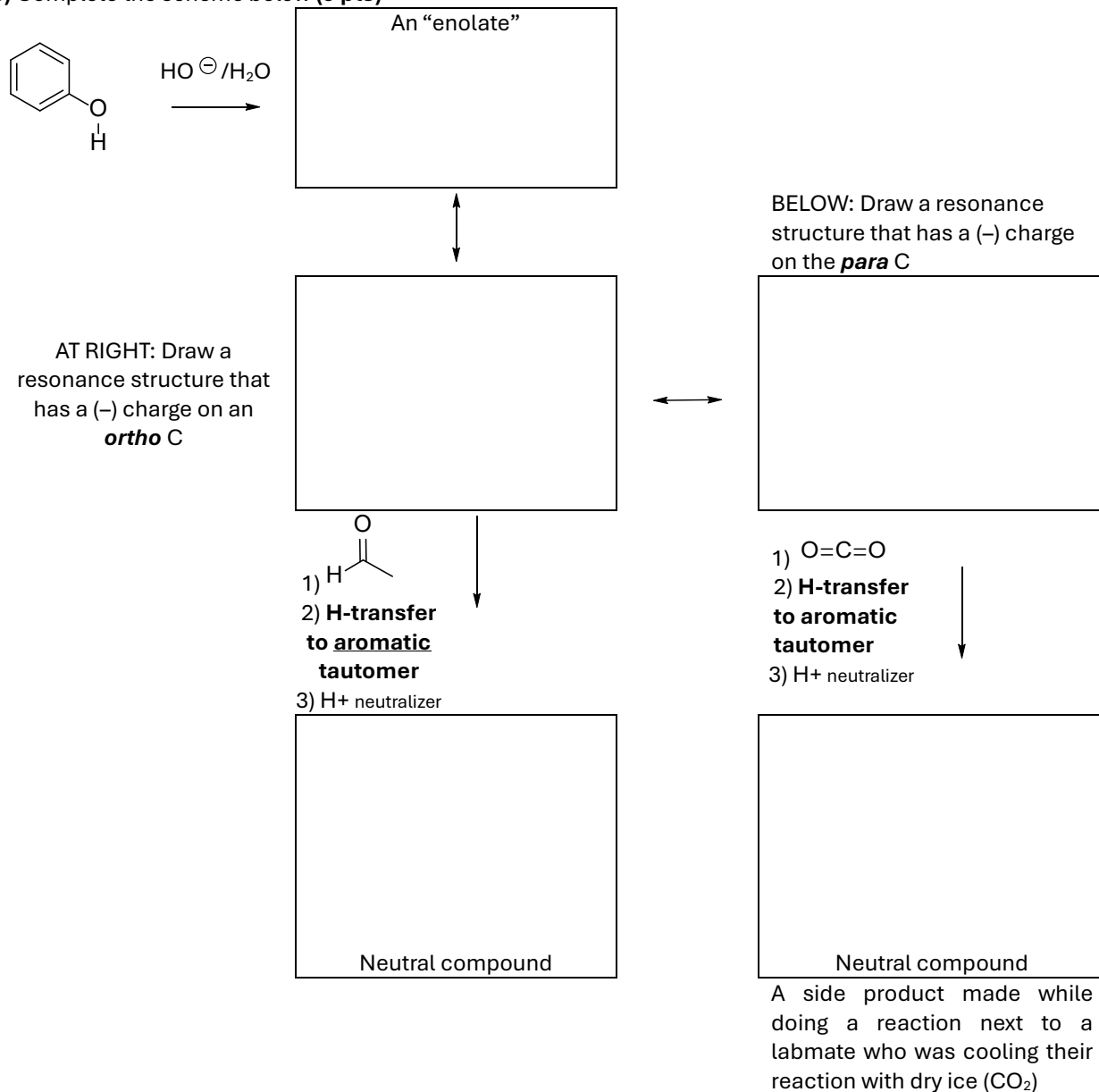
3) (5 pts)



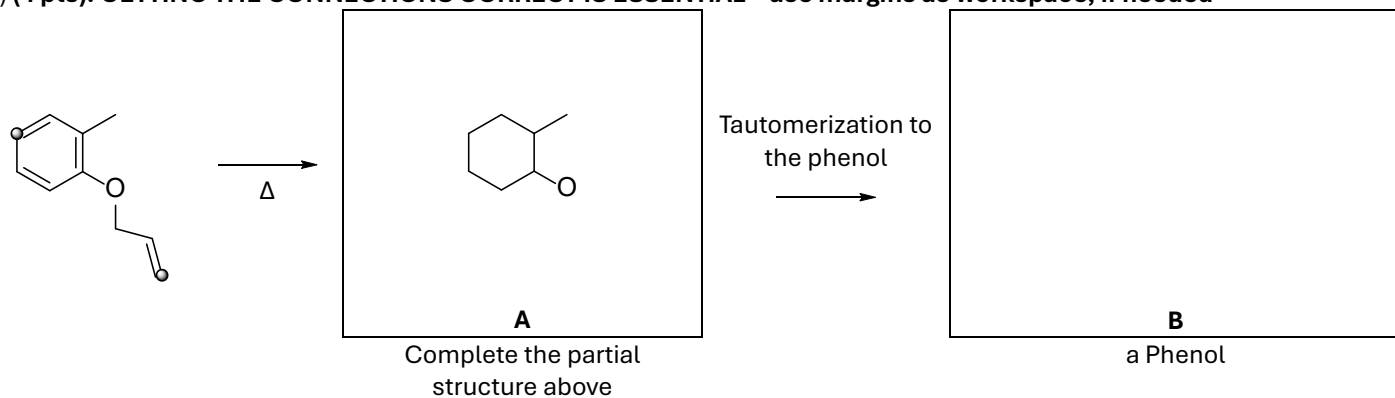
4) (8 pts)



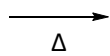
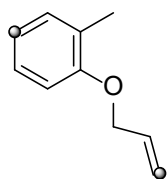
5) Complete the scheme below (9 pts)



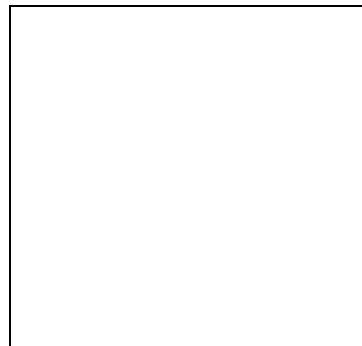
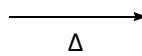
Show the following rearrangement products of the sequential Claisen-Cope reactions in the next two problems
 6) (4 pts). **GETTING THE CONNECTIONS CORRECT IS ESSENTIAL – use margins as workspace, if needed**



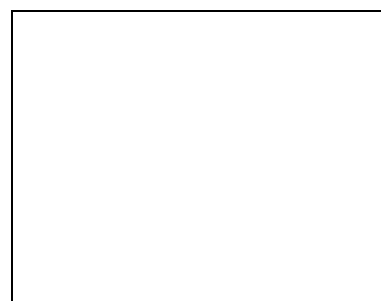
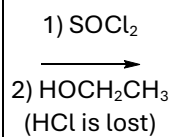
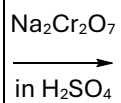
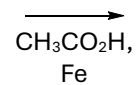
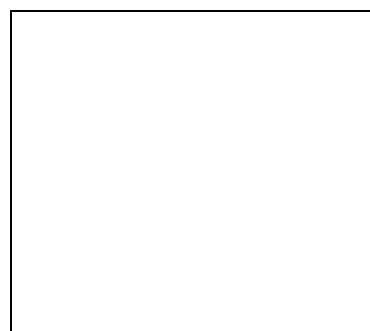
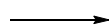
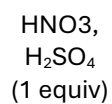
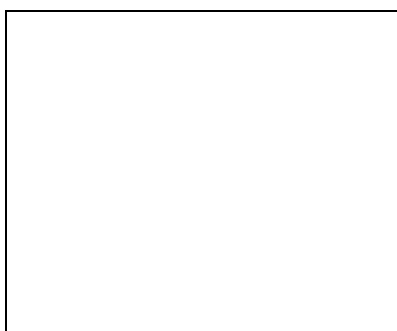
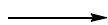
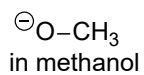
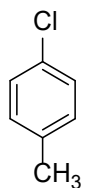
7) The phenol on the previous page undergoes a **Cope rearrangement** to yield a product where a new bond is formed between the dotted carbons (**3 pts**). **GETTING THE CONNECTIONS CORRECT IS ESSENTIAL**



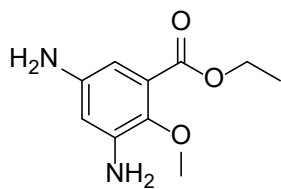
A \rightarrow B
(from previous page)



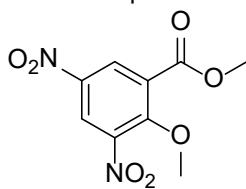
8) Complete the reaction scheme. (**10 pts**)



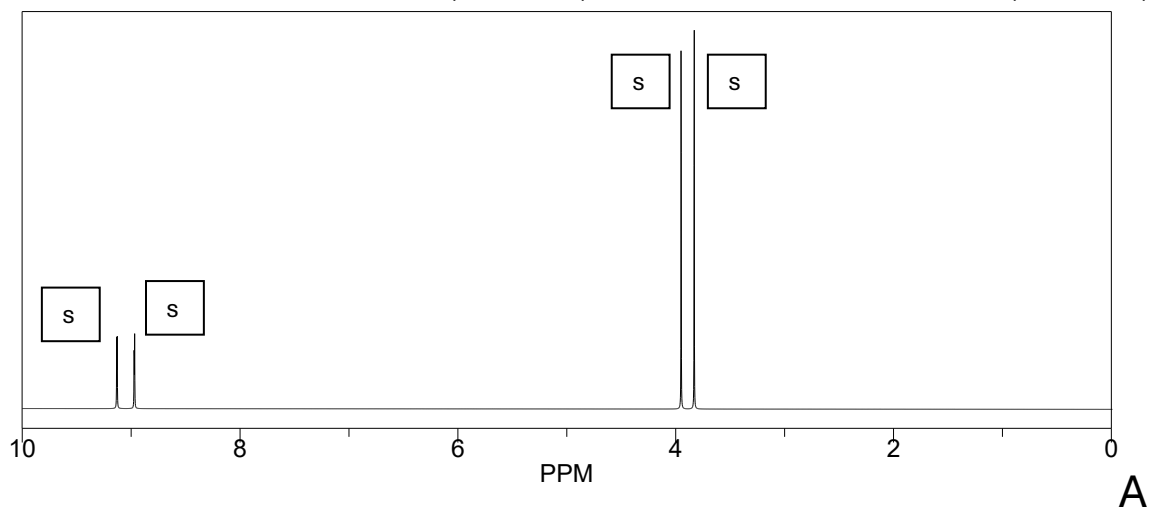
Place the letter of the 1H NMR Spectrum that matches the compounds below. (4 pts)



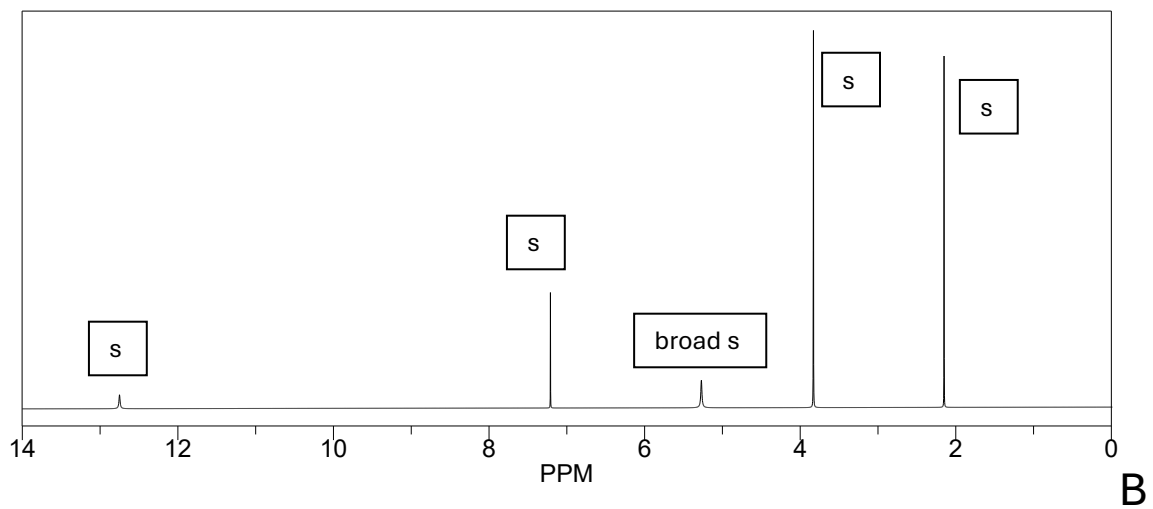
_____ (Letter here)



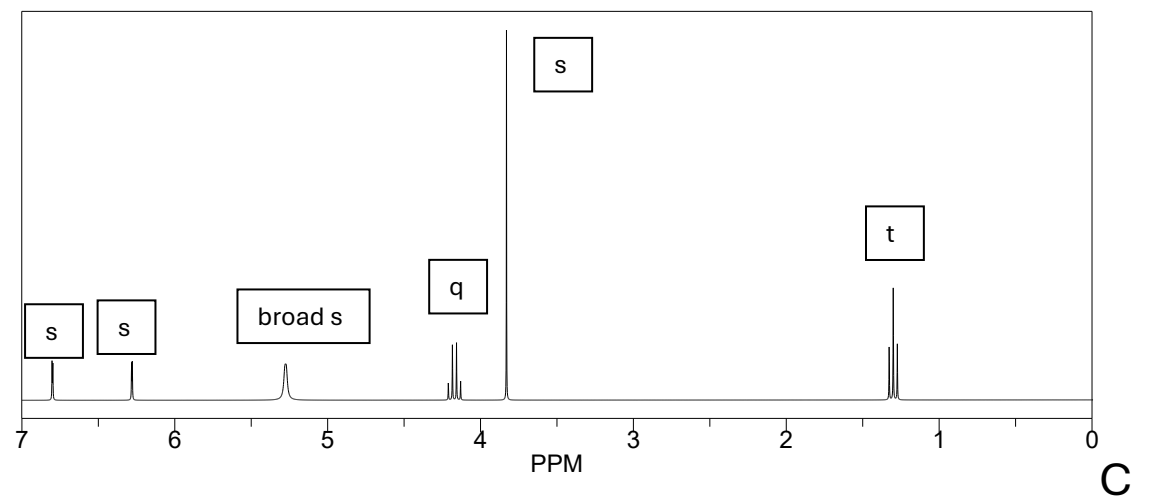
_____ (Letter here)



A



B



C