

CHEM UN2045 – TPS 4

Circle the Date: Apr 2nd 2024 / Apr 4th 2024

*Instructions: You have 10 min to work on the questions individually. This will be followed by another 10 minutes where you may discuss with a partner the questions, change answers if needed, and submit one copy of your copies together. You may only use pen or pencil, and paper. **Clarity in your 3-D drawings is required – ambiguous or unclear drawings will be given no credit.** It is strongly suggested that you work your answers out on scratch paper and then transfer them to the test packet.*

Names (please print):

Honor pledge: We have neither given nor received aid on this examination.

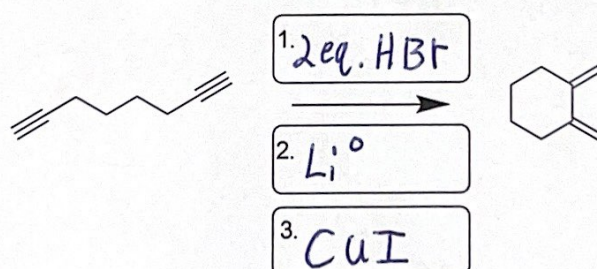
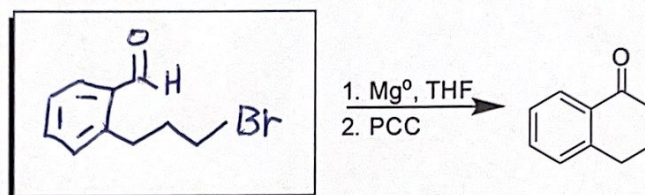
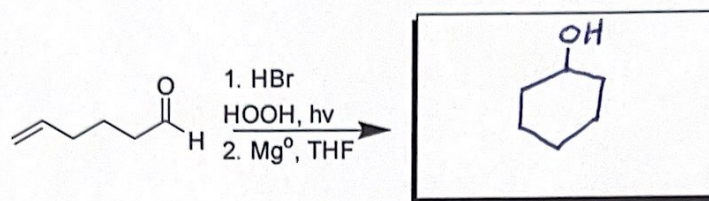
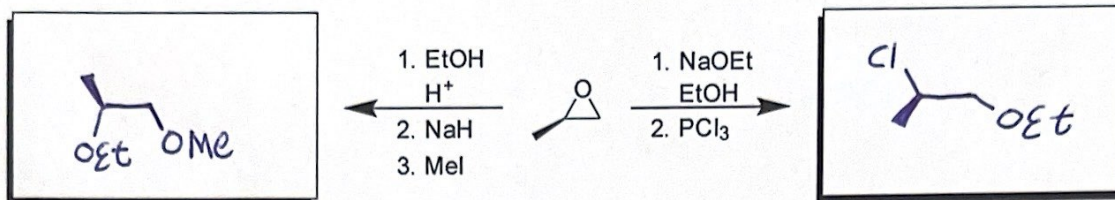
Signatures: _____

1. (14 pts): _____

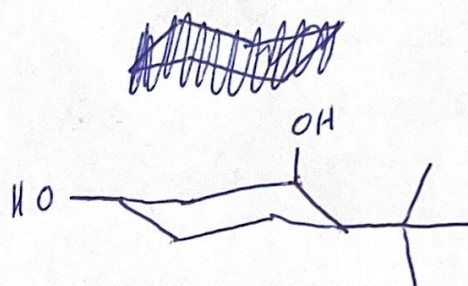
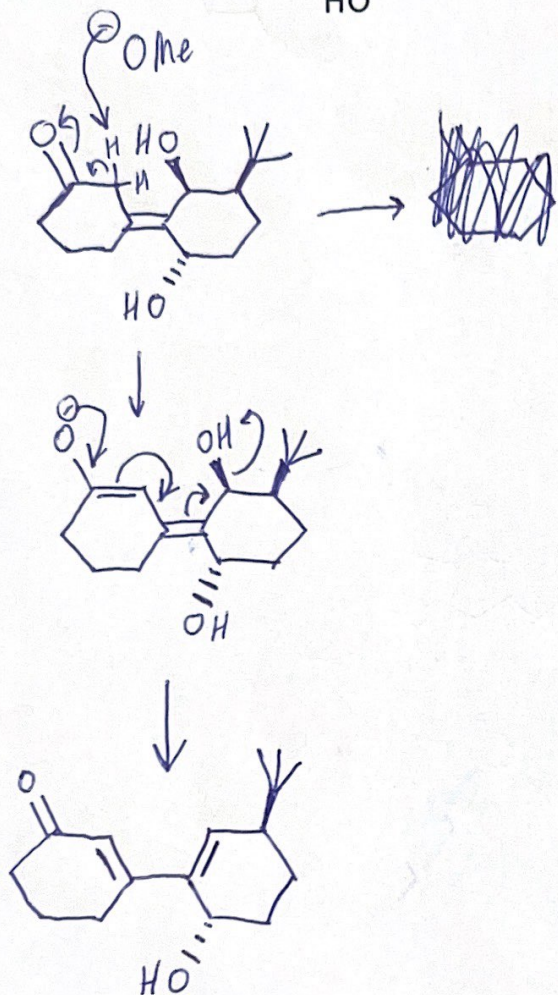
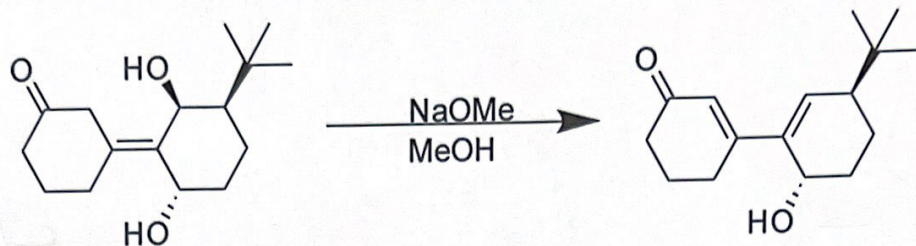
2. (11 pts): _____

TOTAL (25 pts): _____

(1) Fill in the products, reactant, or reagents of the following reactions as indicated by the boxes. Be sure to indicate **stereochemistry** as necessary! (14 pts)



(2) Draw an arrow pushing mechanism for the reaction below. **Explain** in a few (one or two) sentences why one hydroxide is eliminated and not the other. (11 pts)



Due to the bulkiness of t-bu, it is forced equatorial. This forces one "OH" to be axial and the other equatorial. The one that gets eliminated is the axial one due to it being anti/periplanar w/ the anionic O⁻ system.