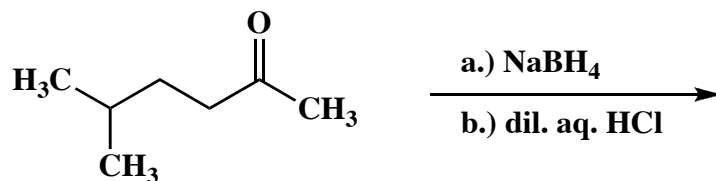


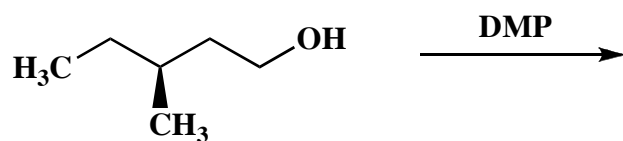
Problem Set 13

1. Draw the structure of the expected major organic product for each of the following four (4) questions. Specify stereochemistry clearly, if relevant.

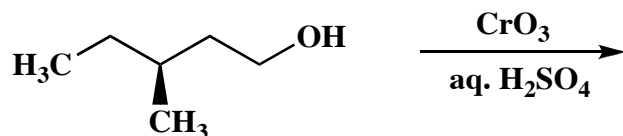
A



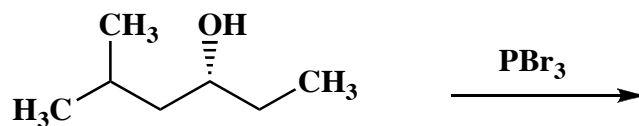
B.



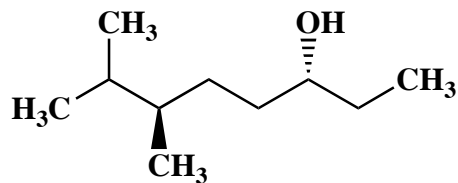
C.



D.

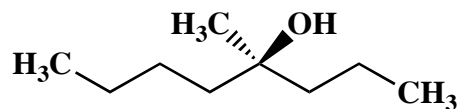


2. Use IUPAC nomenclature to write the systematic name of the following alcohol.

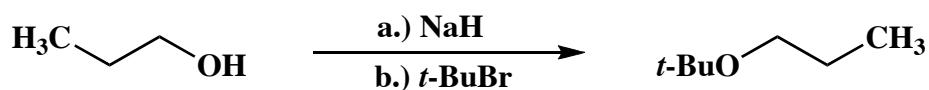


3. Answer the following questions precisely, succinctly, and with correct grammar.

A. Why is it impossible to oxidize the following alcohol with PCC?



B. Why will the following proposed reaction fail to give the desired ether? What products will be formed, instead? What mechanism occurs to make these products?



4. Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Show all intermediates, lone pairs, nonzero formal charges, countercharges, and reversibility or irreversibility. Finally, state why it is critical that dilute hydrochloric acid be added **after** all the methyllithium has reacted with the starting material.

