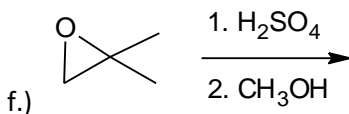
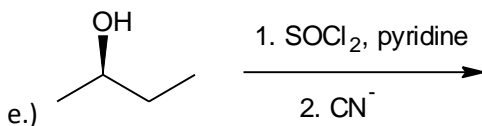
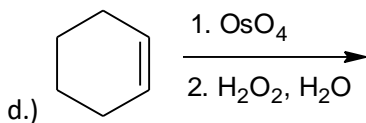
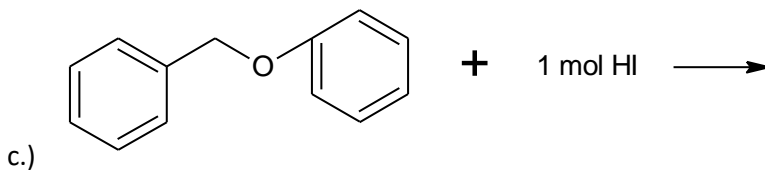
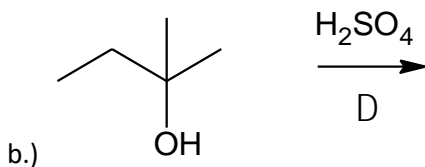
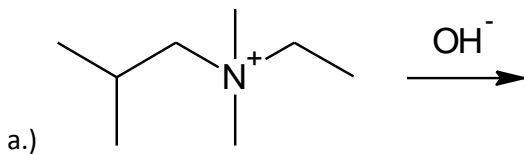


ChemV12B, Organic Chemistry II

1.) Determine the **major organic product(s)** from each of the following reactions. Include stereochemistry (wedges and dashes) where applicable. (60 pts, 10 pts ea)

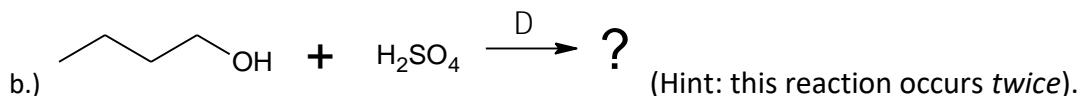
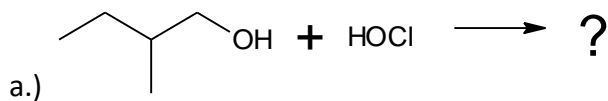


2.) Consider 1-butanethiol and 1-butanol. (12 pts, 6 pts ea)

a.) Which boils at a *higher* temperature? **Explain.**

b.) Which is the *weaker* acid? **Explain.**

3.) Show the complete arrow-pushing mechanisms for the following reactions. Include all formal charges, and bonds and electrons that are involved in the reaction. (40 pts, 20 pts ea)



4.) Consider (2R)-2-butanol. Give the structure of the **major organic product(s)** including stereochemistry (wedges or dashes) when it is reacted with: (20 pts, 10 pts ea)



5.) Which is more reactive: an ether or an epoxide? **Explain.** (10 pts)

6.) Design syntheses to convert the following reactants to the indicated products. Include all necessary reagents and reaction conditions. If the synthesis requires multiple steps, show each individually. (68 pts, 34 pts ea)

