HOMEWORK ASSIGNMENT #8 ORGANIC CHEMISTRY I (25 pts)

**Due 9 November Wednesday 2016**

your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.1. Practical Reaction Thinking (5 pts)

Which condition will increase the rate of the reaction given: (If both, circle **Both. I**f neither circle **None)**

HBr + t-butanol  **Using polar protic solvent** Using non-protic solvent Both None

HBr + t-butanol Increasing NaBr concentration Increasing H2SO4 concentration Both None

HBr + 1-butanol Increasing HBr concentration Increasing H2SO4 concentration Both None

HBr + 2-butanol Increasing 2-butanol concentration Using polar, protic solvent Both None

HBr + 1-butanol Running neat Using a non-protic solvent Both None

 8.2 On the Road Again

Starting from alcohols and/or ketones/aldehyde compounds with <4 Carbons :



1. Suggest a route to : 5 pts

A=



A



1. Suggest a route to: B= 3 pts



B



1. Suggest a route to: C= 6 pts



C

**A** from first synthesis

**8.3. Name or draw these alkenes. Use IUPAC rules.(if E, Z forms present, indicate which) 6 pts**









**(E)-7-chloro-2-octene 6-chloro-1-cyclohexenol\* isobutylene**

 **Common**

 **2-methylpropene**



 **3-methyl-2,7-cyclooctadienol**

**(Z) 2,2,5-trimethyl-3--hexene**