



Course Name: CHEM 3013: Organic Chemistry Professor/Teacher: Dr. Bolliger

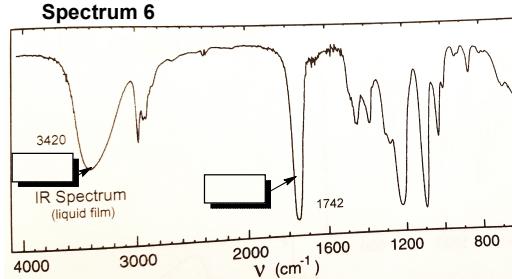
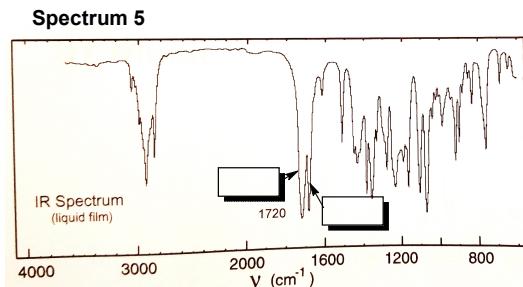
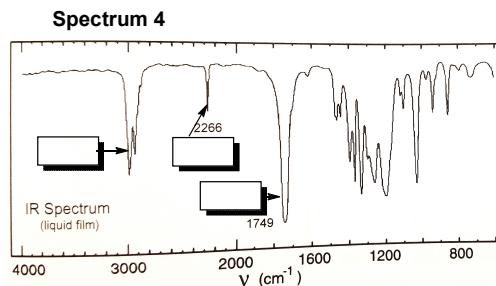
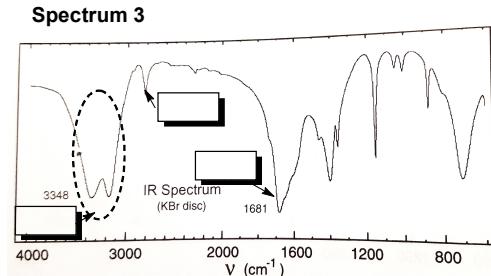
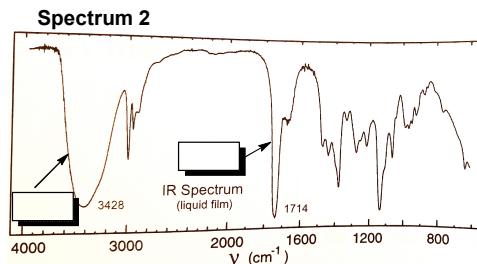
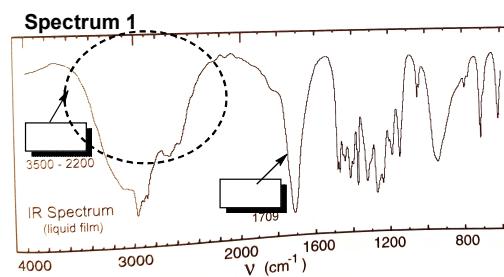
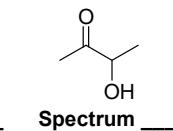
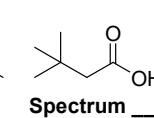
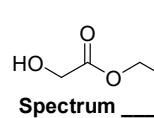
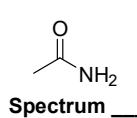
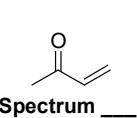
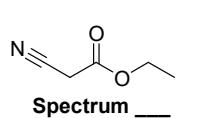
Title of Homework: Homework 6

Name: _____ English Name: _____

SWJTU ID: _____ OSU ID: _____ Date: Tuesday, 15 June 2021

Question 1 (4 points)

Assign the correct spectra to the following molecules and label the indicated IR frequencies with the appropriate bonds.

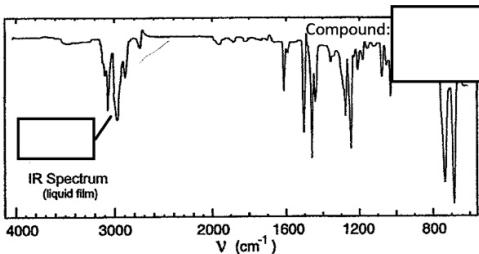
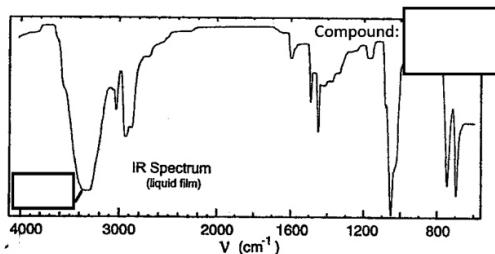
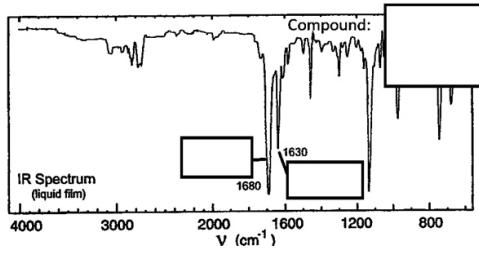
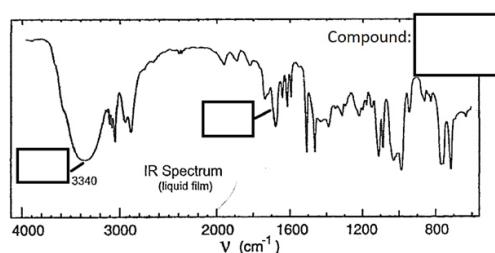
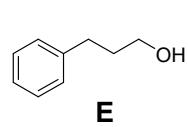
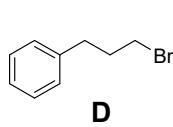
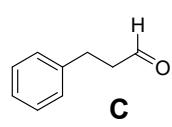
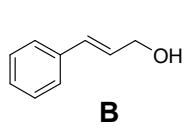
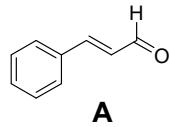




Question 2 (2 points)

a) Assign the compounds A, B, C, D, or E to one of the four IR spectra below and circle the compound for which no spectrum is shown.

Label all the indicated IR absorptions with the bonds they correspond to (e.g. C-H).

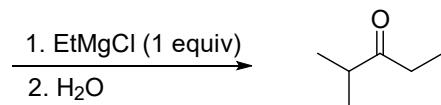




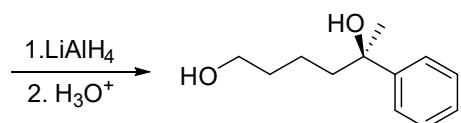
Question 3 (2 points)

What are the starting materials used in this reaction? Pay attention to stereochemistry and regioselectivity.

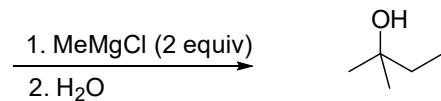
a)



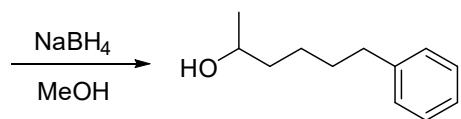
b)



c)

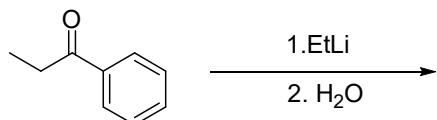


d)



Question 4 (2 points)

Draw a detailed mechanism for the following reaction.

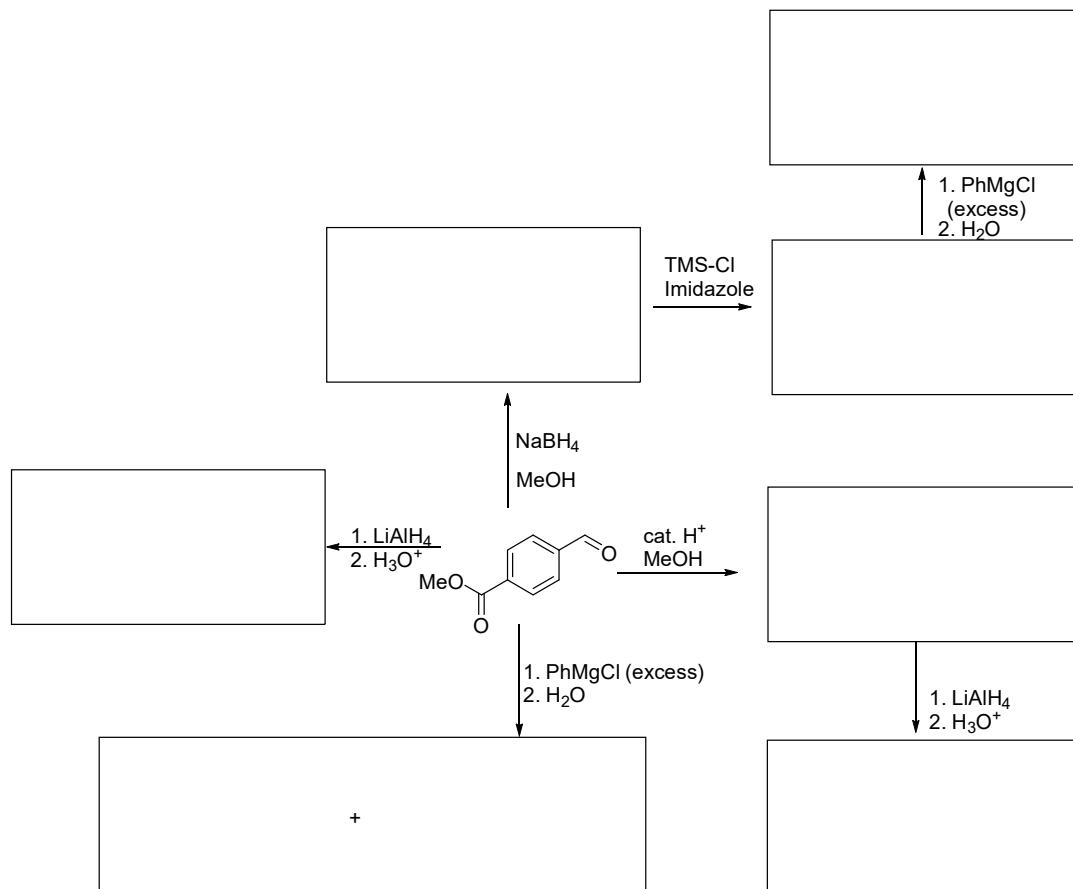




Question 5 (5 points)

Complete the following reaction schemes.

a)



b)

