**CHM 257 Spring 2013 Exam III**

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 50 pts total**

1. Give the product(s) of this reaction:



1. Give the major product of this reaction:



1. Give a name for this compound:



1. Give a name for this compound:



1. Give the oxidation product for this alcohol:



1. Draw all reasonable resonance structures for this ion:
2. Draw the structure of this compound: aniline
3. Draw the structure of this compound: (*2S*)-3-methoxybutan-2-ol
4. Give the organic product(s) of this reaction:



1. How can you convert a hydroxyl group into a good leaving group?
2. Circle the alkyl halides that can undergo β-elimination:



Alkanes: 2800 – 3000 cm-1, 1400-1500 cm-1

C=C: 3100 cm-1, 1600 cm-1

ROH: broad OH, 1050 – 2050 cm-1

ROR: 1050 – 2050 cm-1

Amines: 3100 – 3500 cm-1 : 1o: 2 peaks, 2o: 1 peak, 3o: no peaks

C=O: 1705 – 1780 cm-1

Benzene: 3030 cm-1, 1700 – 2000 cm-1 (benzene fingers), 1600 cm-1, 1500 cm-1, 700 – 750 cm-1

1. Why is phenol acidic?
2. Circle the compounds that are aromatic: 
3. Show the product and mechanism of this reaction:

