

Chemistry 212**Test 2** (Chapters 17, 18 & 19 plus 16.7 & 16.8)

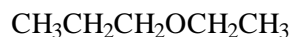
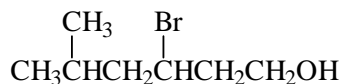
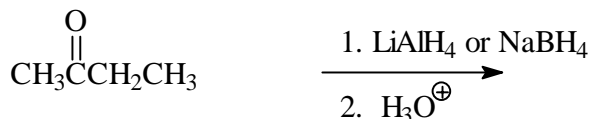
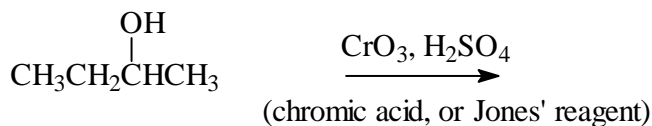
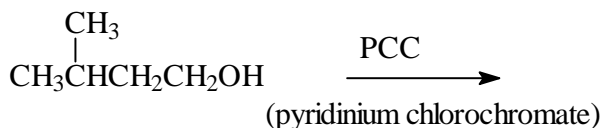
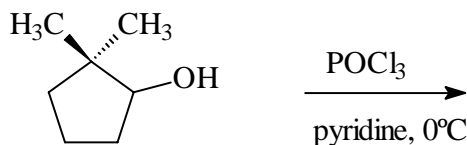
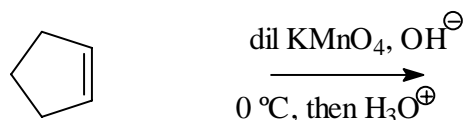
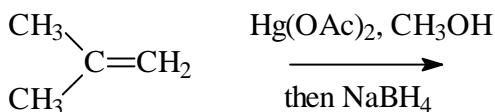
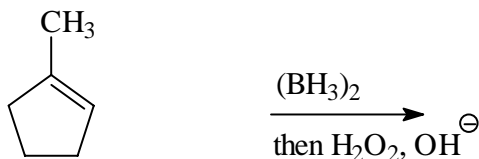
Name _____

60 points

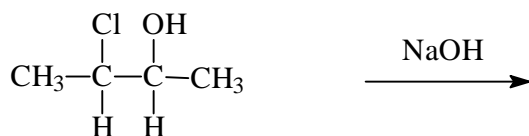
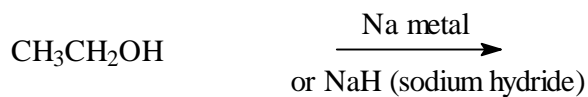
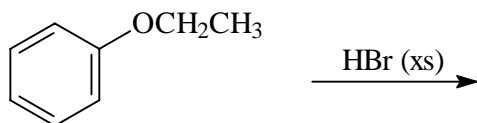
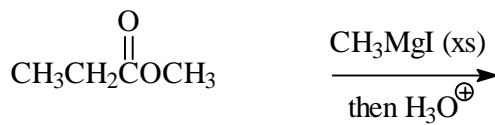
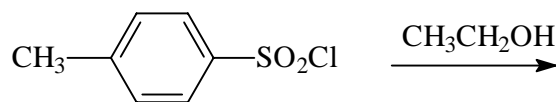
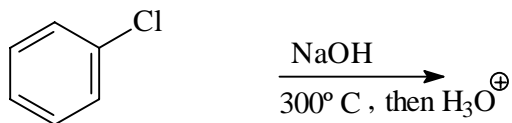
July 10, 2009

1. (2) Circle the species within each group that would have the higher value of the indicated propertypK_a: CH₃OH or CF₃OHboiling point: CH₃CH₂CH₂Cl or CH₃CH₂CH₂OH

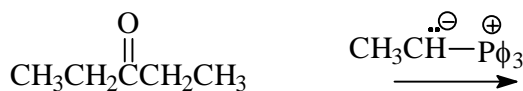
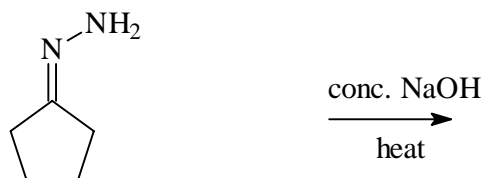
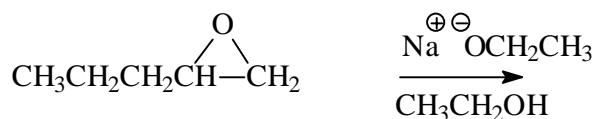
2. (2) Write the correct IUPAC name for each of the following (including the correct punctuation!):

3. (14) Draw the structure of the major organic product of each of the following; if two products are formed in equal amounts, draw both products.

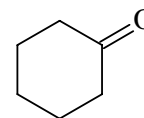
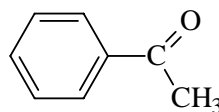
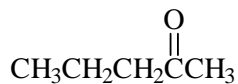
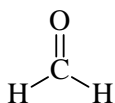
4. (18) Draw the structure of the major organic product of each of the following; if two products are formed in equal amounts, draw both products.



5. (14) Draw the structure of the major organic product of each of the following; if two products are formed in equal amounts, show both products.



6. (4 points) Write the correct name under each of the following:



7. (3 points) Show how you could perform the following transformation. Be sure to indicate the reactants and conditions needed for each step, and draw the structure of the intermediate.



8. (3 points) Compound **X** (C_7H_8O) is oxidized to compound **Y** using PCC (pyridinium chlorochromate). Compound **X** also reacts with NaH (sodium hydride) to form an intermediate which then reacts with methyl iodide (CH_3I) to give compound **Z** ($C_8H_{10}O$). The IR and proton NMR spectra of **Y** are shown below. The proton NMR spectrum of **Z** is also provided. Draw the correct structures of **X**, **Y** and **Z** at the bottom of the page.

