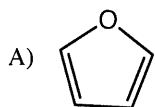
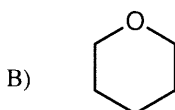


(27 Points)

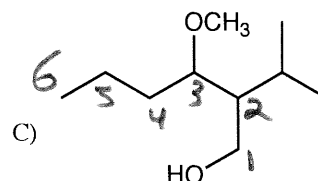
1. (6 Points) Give the correct names for each of the following compounds.



A)



B)



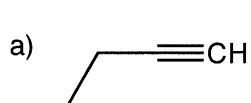
C)

Furan

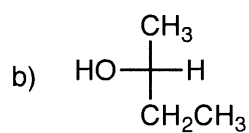
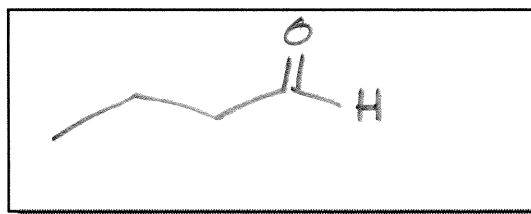
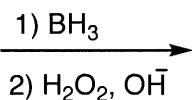
Tetrahydropyran

2-isopropyl-3-methoxy-1-hexanol

2. (8 Points, 2 Pts. Each) Complete the following chemical transformations by filling the boxes appropriately with reactant, reagents, or products.



a)

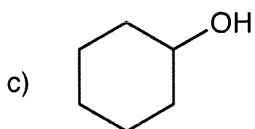
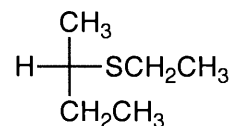


b)

1)

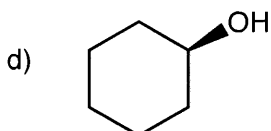
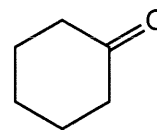
Tos-Cl

2)



c)

Jones or PCC



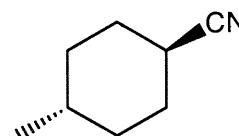
d)

1)

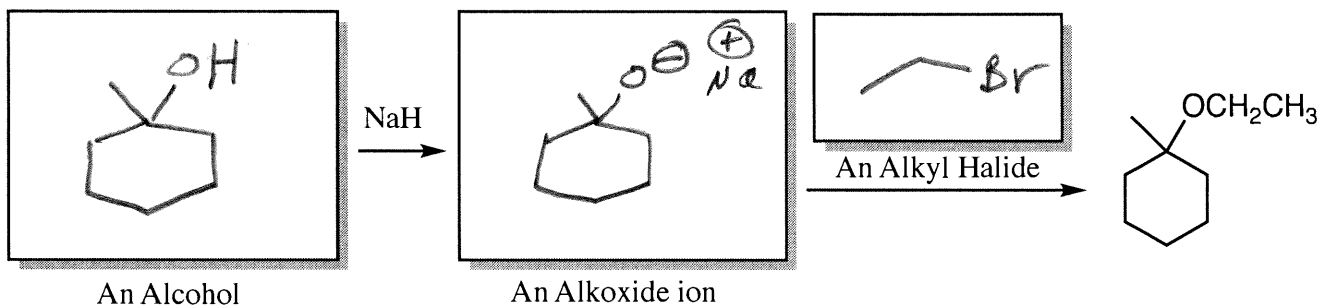
SOCl₂

2)

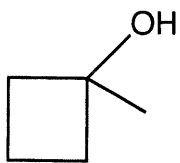
KCN



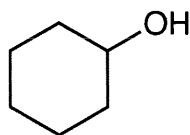
3. (6 Points) Complete the following Williamson Ether Synthesis by filling the boxes appropriately.



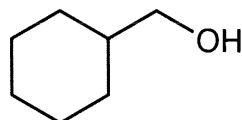
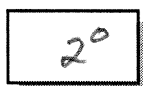
4. (4 Pts) Label each of the following alcohols as primary (1°), secondary (2°), or tertiary (3°).



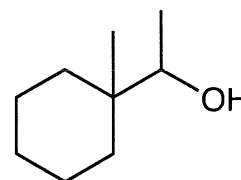
A



B



C



D



5. (3 Points) provide an example of a Grignard reagent.

