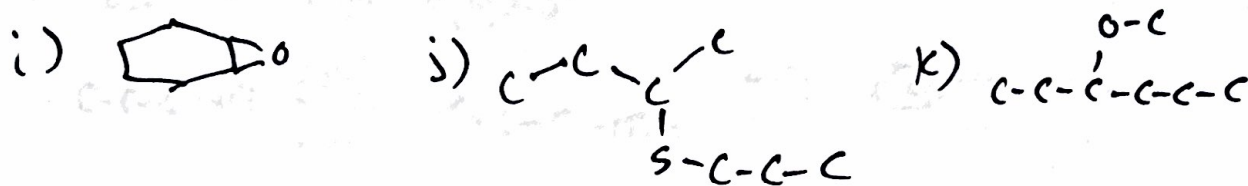
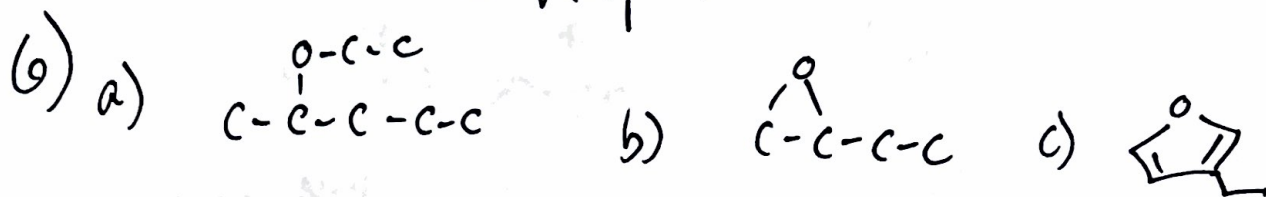


Chapter 15



7) a) 2-ethoxybutane b) 2,3-epoxypentane c) furan

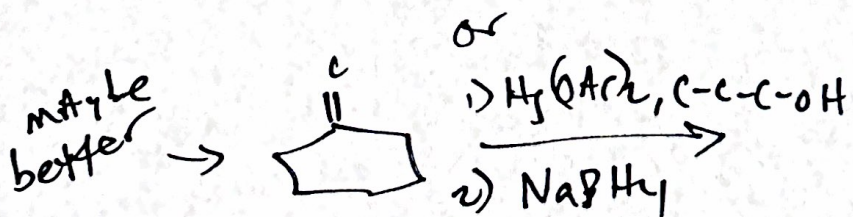
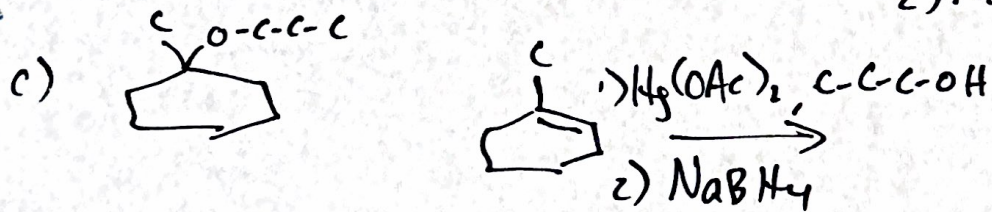
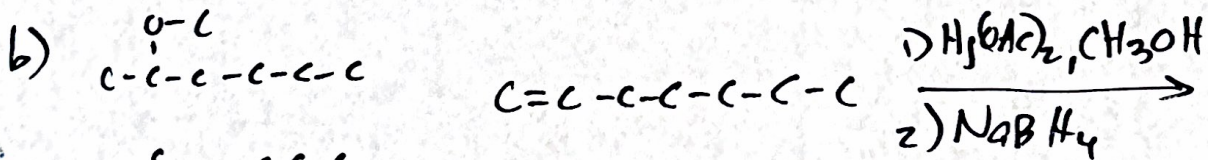
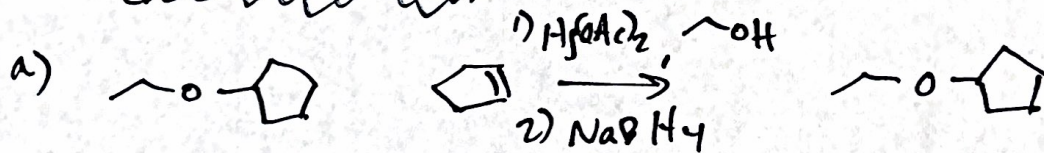
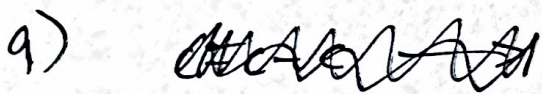
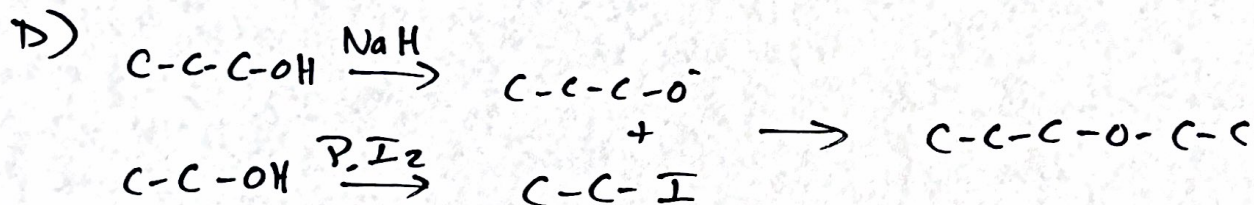
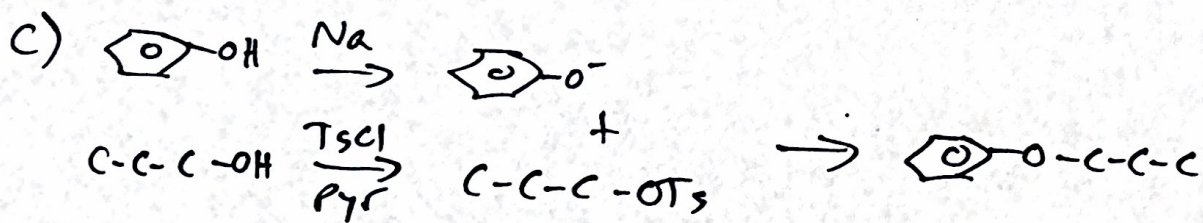
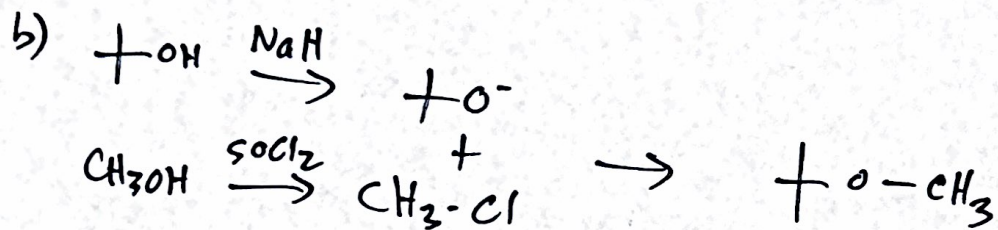
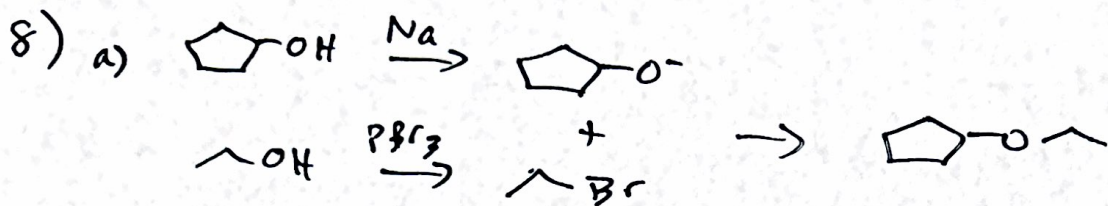
d) THF e) 2,3,4-trimethylthiophene f) diethyl ether, ethyl ether, ether

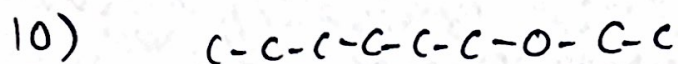
g) 2-isopropylfuran h) 3-methyl-2-propoxybutane (ethoxyethane)

i) butyl ethyl sulfide
or
ethane thio butane

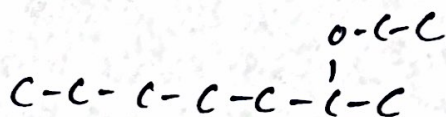
j) butoxybenzene
or
butyl phenyl ether

k) ~~methoxycyclobutane~~
methoxycyclobutane

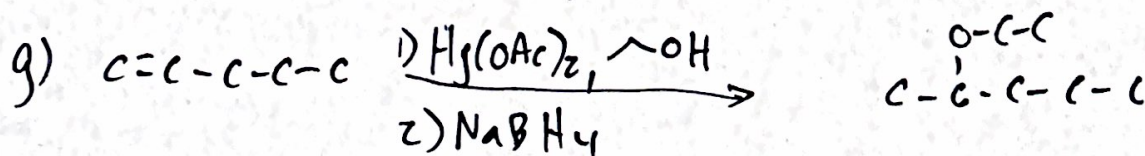
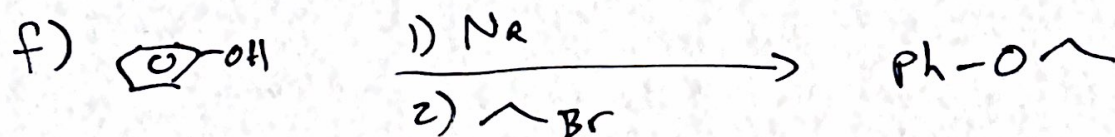
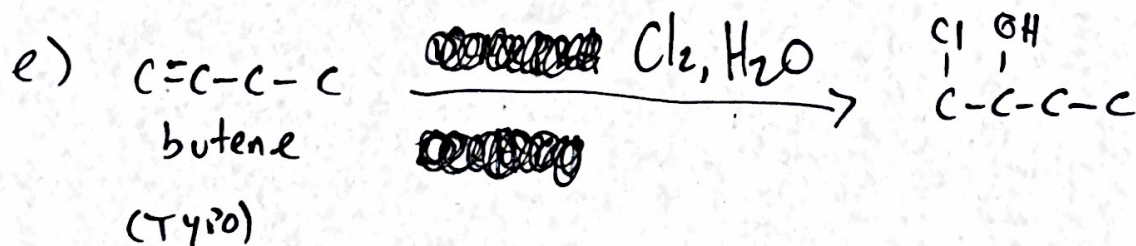
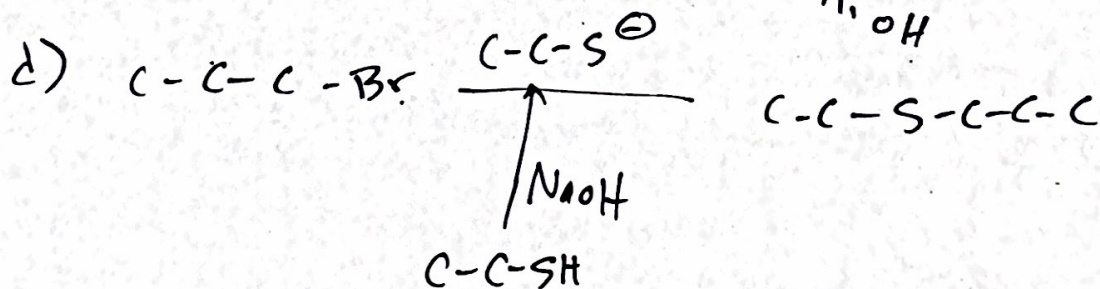
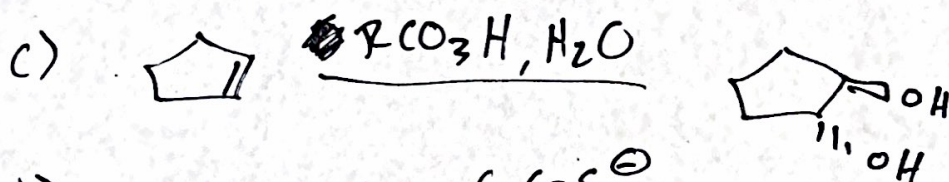
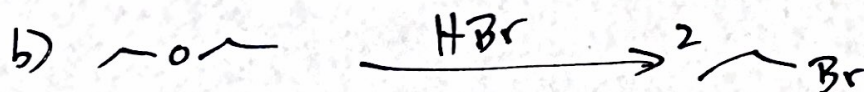
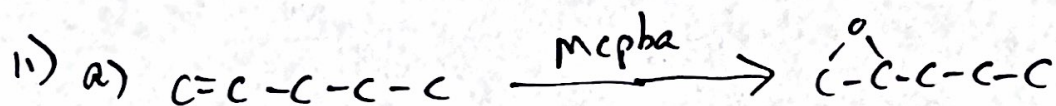


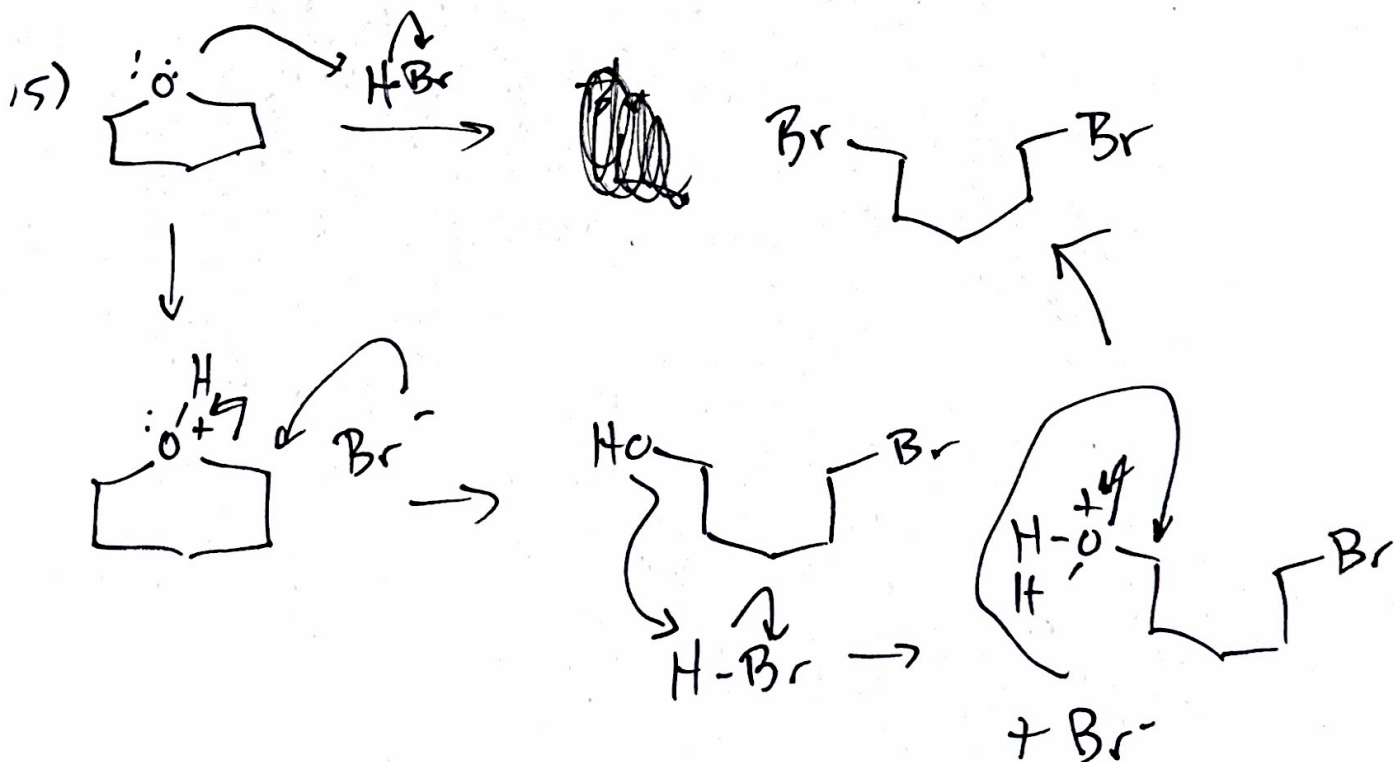
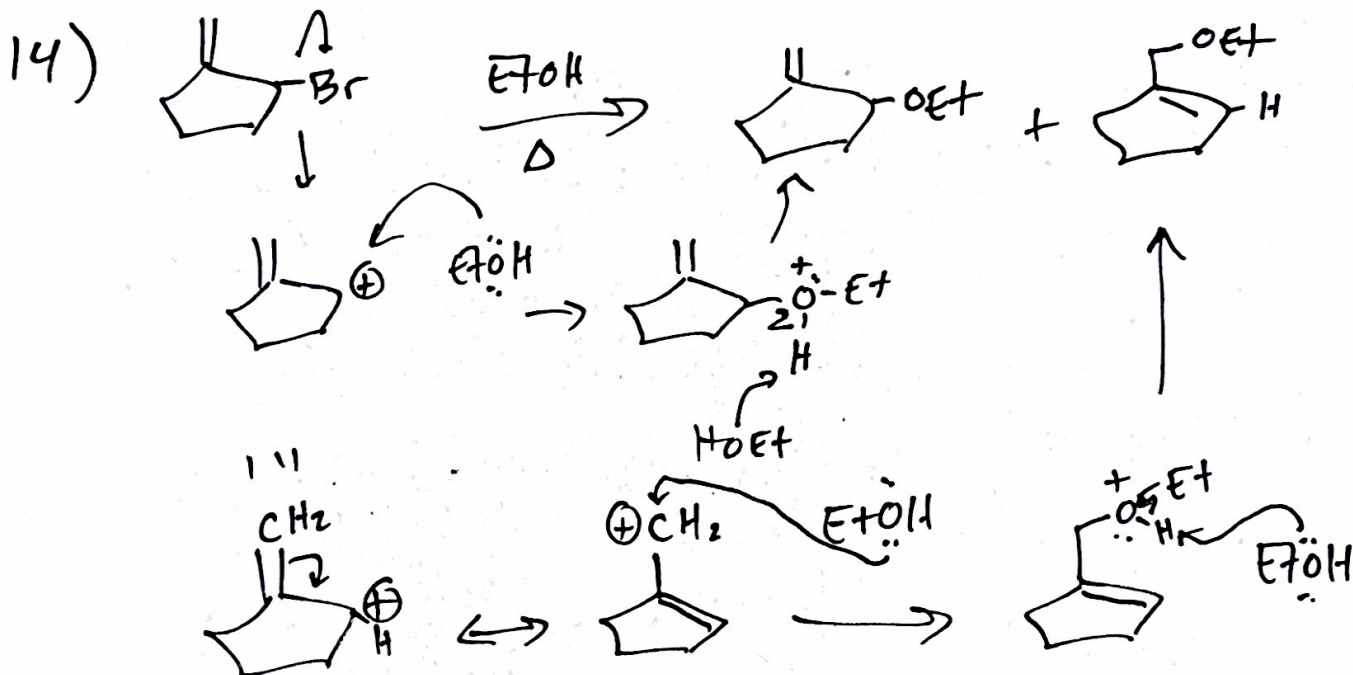
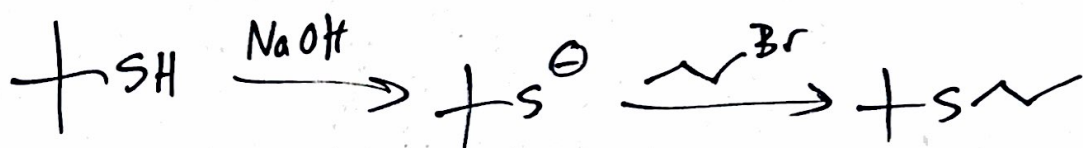
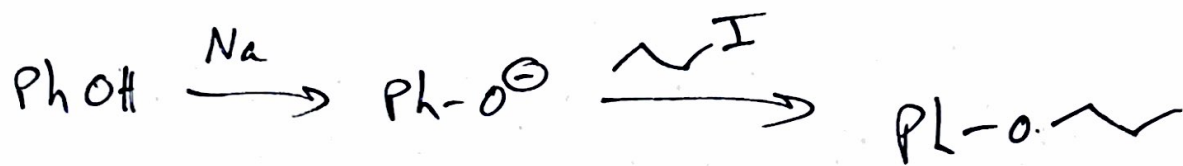


IF START with $\text{C}-\text{C}-\text{C}-\text{C}-\text{C}-\text{C}=\text{C}$ i. run in ethanol. The markovnikov product makes the wrong thing.



$\text{C}=\text{C}$ is a gas. if you try the other way in heptanol.





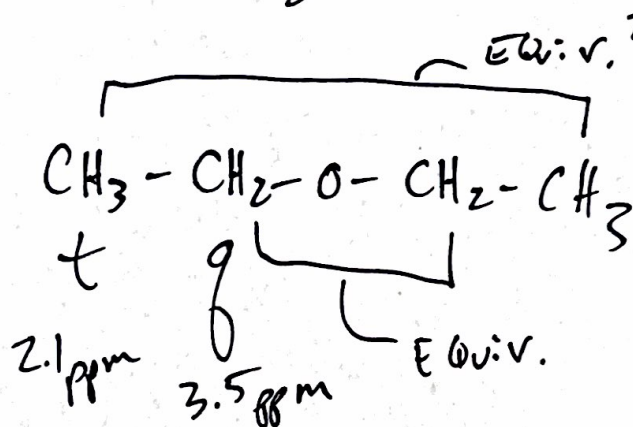
16) IR No O-H, NO C=O

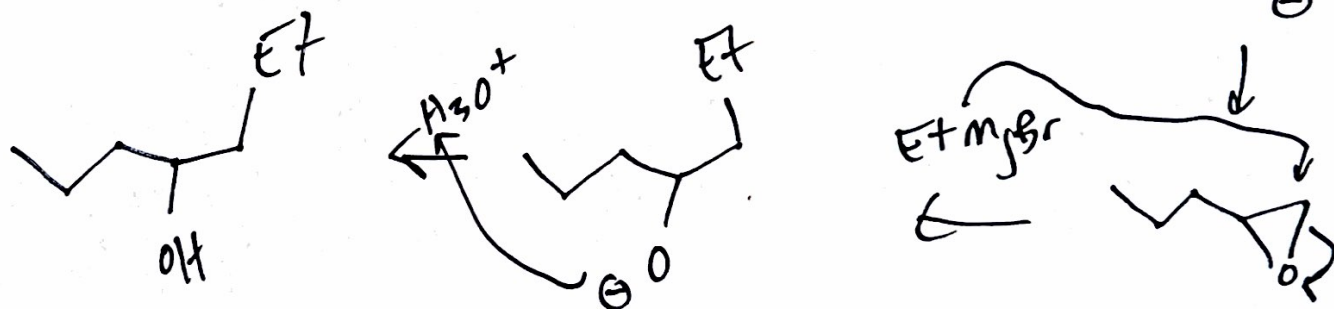
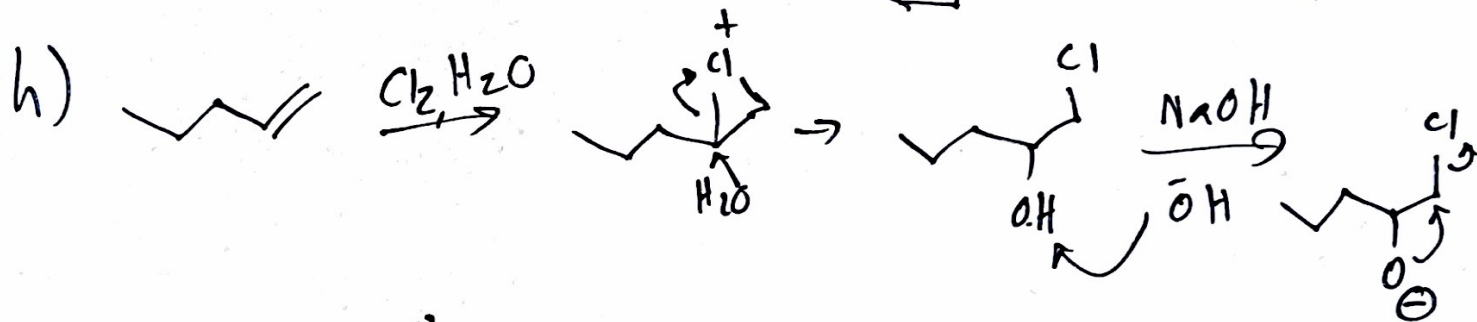
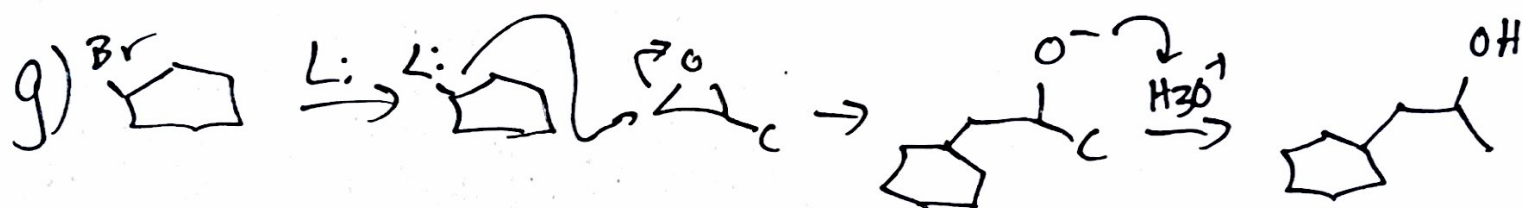
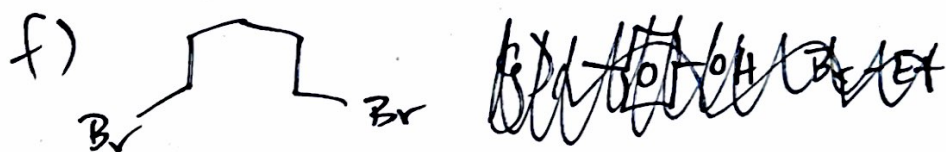
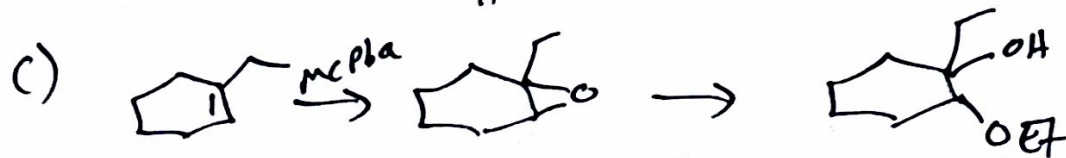
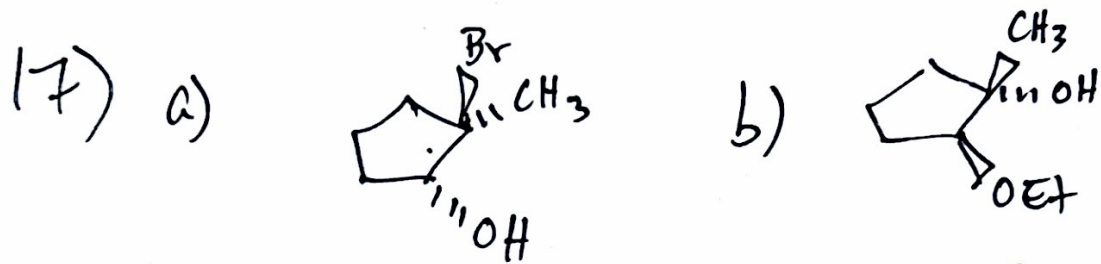
C-O at $\sim 1100 \text{ cm}^{-1}$
Thinking ether C-O-C

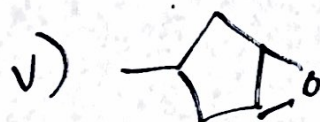
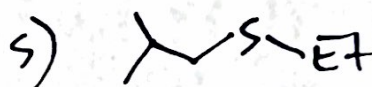
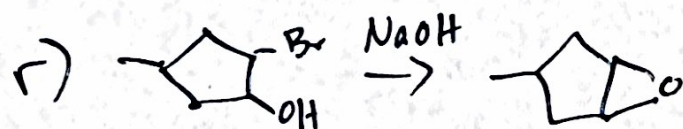
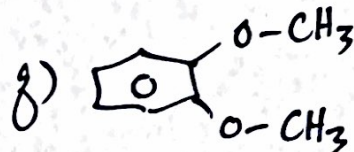
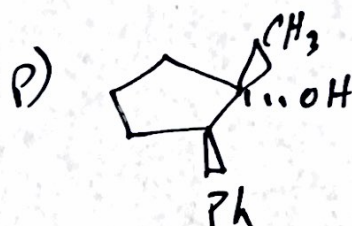
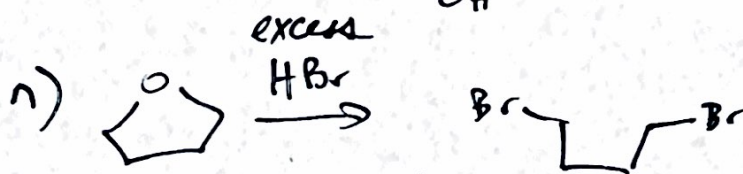
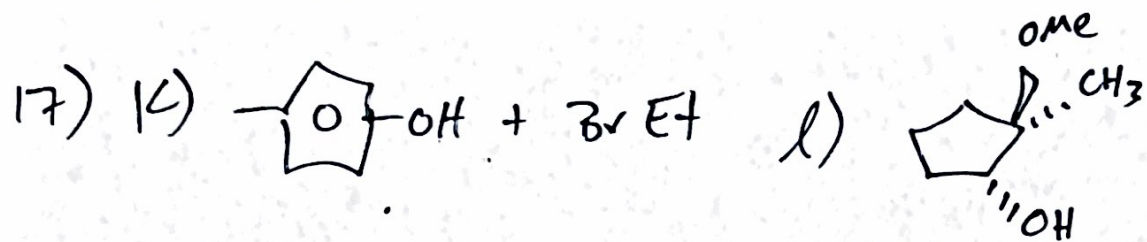
$^{13}\text{C NMR}$ 2 Types of Carbons

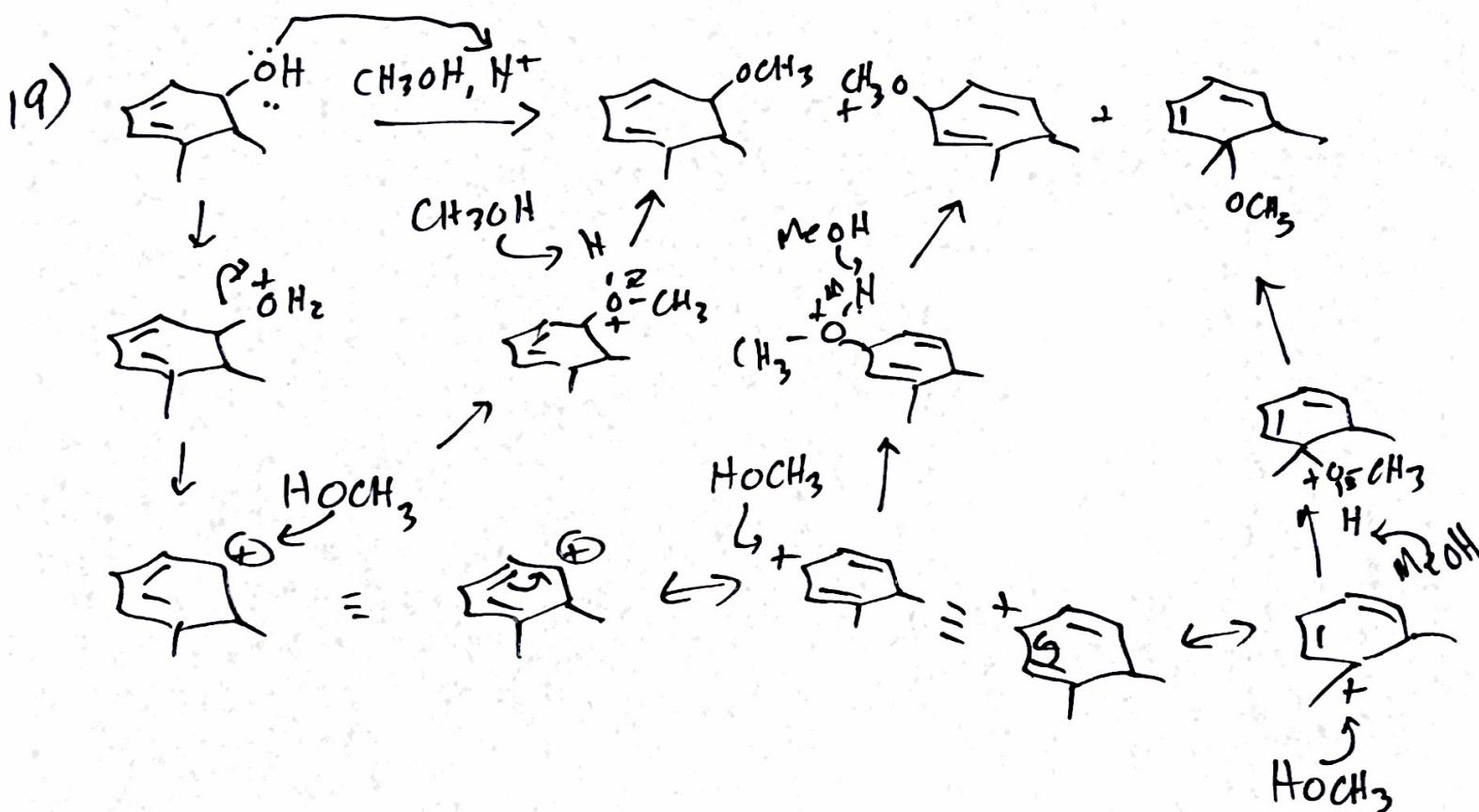
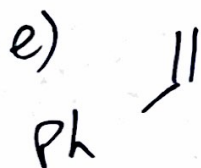
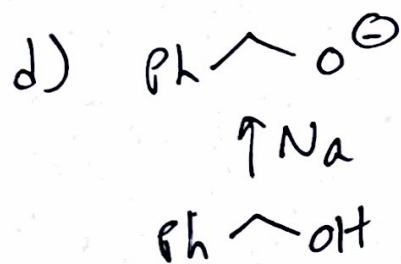
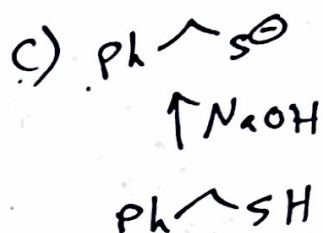
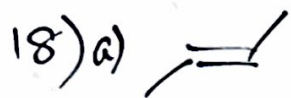
$\text{C}_4\text{H}_{10}\text{O}$ $\frac{(2C + 2 - H)}{2} = \frac{(2(4) + 2 - 10)}{2} = 0$ degrees of unsat

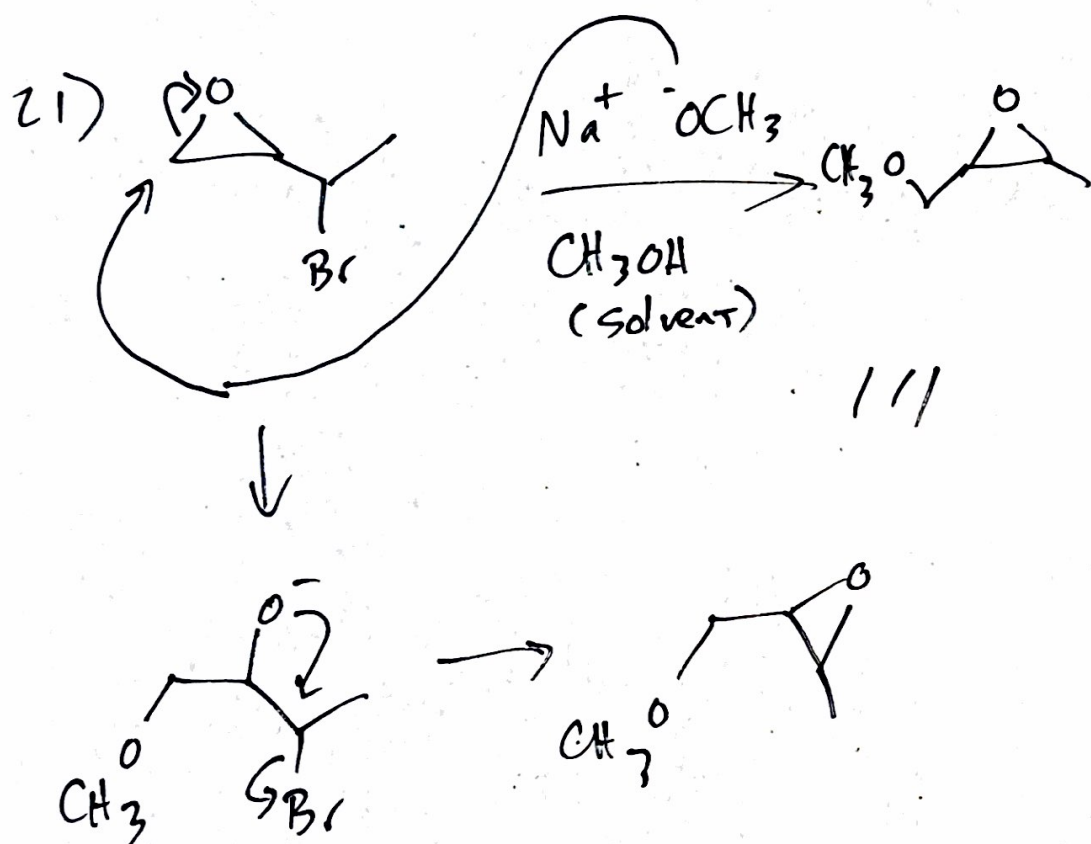
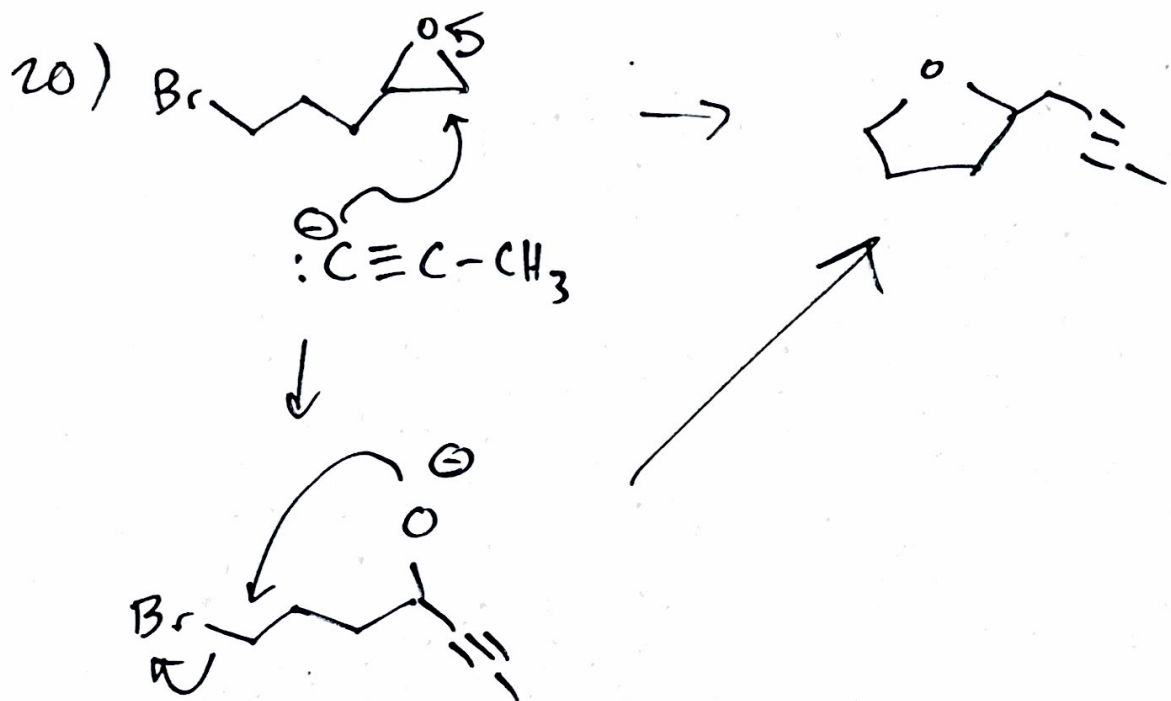
$^1\text{H NMR}$











22)

