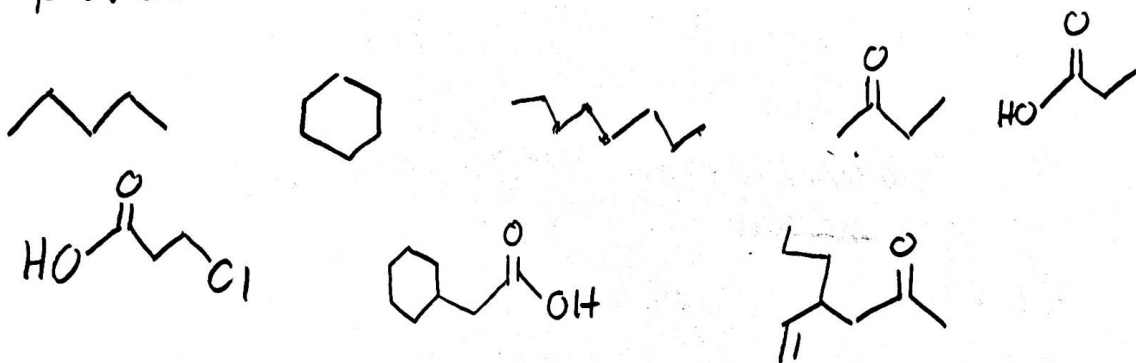


# SL organic chemistry Review

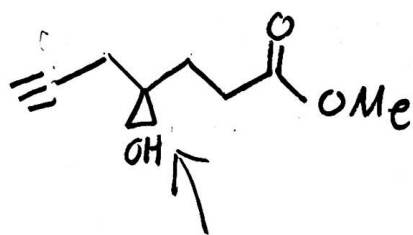
1) Draw the Lewis dot diagram (show all electrons) of the bicarbonate anion.

2) Draw the most stable newman projection for butane as seen through the  $C_2-C_3$  bond.

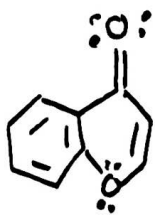
3) provide the IUPAC name for



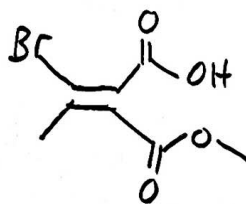
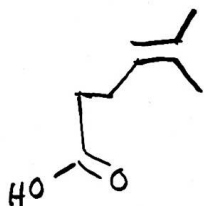
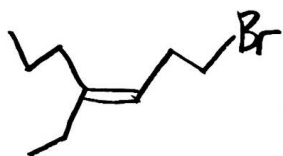
4) What is the stereochemistry of the indicated chiral center?



5) Draw as many resonance forms of : Chromone



6) Determine if the following are Z or E



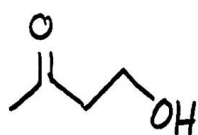
7) Consider the following molecule



a) how many unique Carbon atom environments does the molecule have

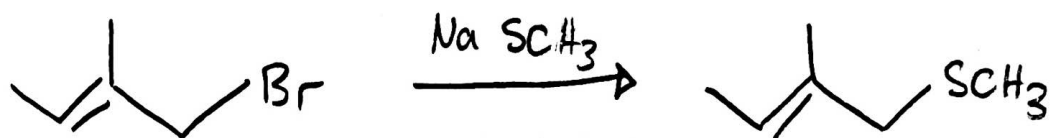
b) How many peaks will this molecule have in a  $^{13}\text{C}$  NMR?

8) Consider the molecule



a) name 2 fragments that will appear on a mass spectrum? of this molecule.

9) Label the reaction as  $S_N1$  or  $S_N2$ , show the mechanism (ALL arrows, be clear)



a) explain your choice for  $S_N1$  vs  $S_N2$ ?

b) is this reaction bimolecular or unimolecular?

c) How many steps are in this reaction?

d) draw a clear representation of the transition state of this reaction.

10) For the following molecule



?

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→ from question (9)  
answer a → d but with respect to this new molecule

e) what is the product?

f) what is the nucleophile?

g) what is the electrophile?

h) what is the Leaving group?

★★★  
helpful to answer these questions first