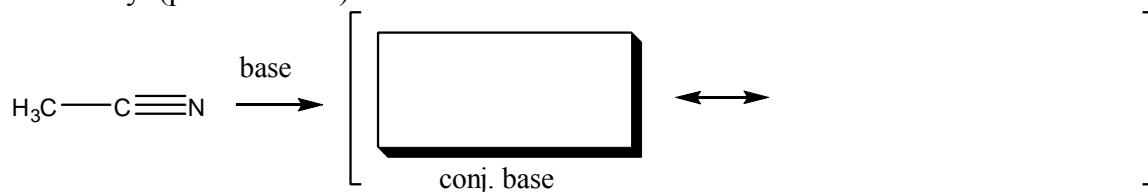
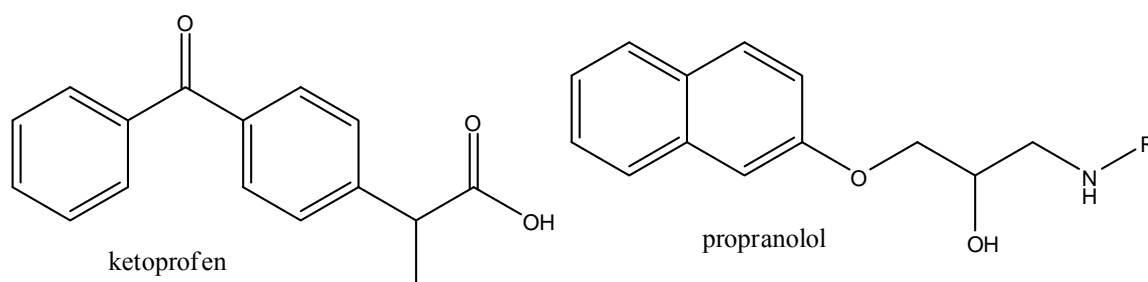


Discussion Problem Set #3  
Acid/Base, Functional Groups, Intermolecular Forces

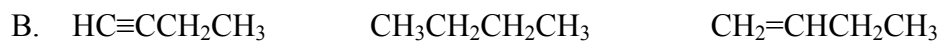
1. Acetonitrile (shown below) has a pKa of 25, much lower than many compounds with C-H bonds. Draw the conjugate base and resonance structures to explain this acidity. (problem 2.17)



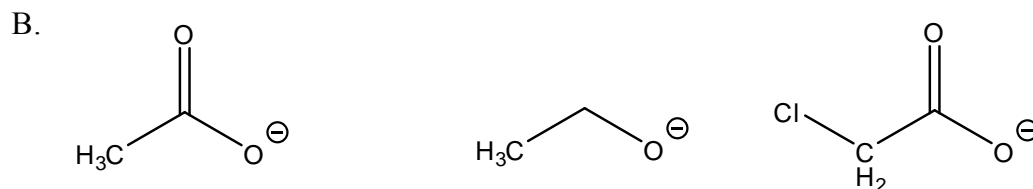
2. Which proton in each of the following drugs is most acidic? (Problem 2.20)



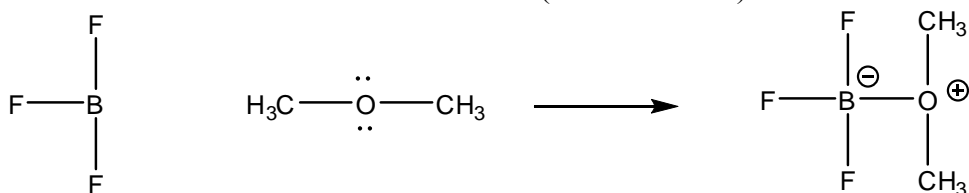
3. Rank the following compounds in order of increasing acidity. (problem 2.38gh)



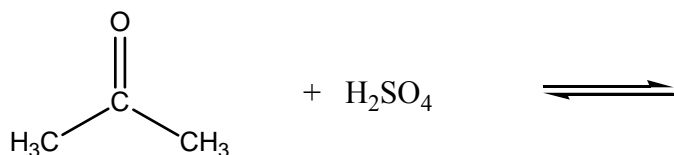
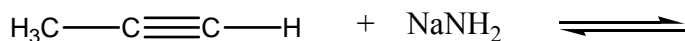
4. Rank the following compounds in order of increasing basicity. Explain your rationale. (problem 2.39bc)



5. For this reaction, label the Lewis acid and Lewis base. Draw curved arrows to show the electron flow of the reaction. (Problem 2.25a)



6. Draw the products of these acid/base reactions (problem 2.31cf)



7. The indicated hydrogen on 1,4-pentadiene is more acidic than the indicated hydrogen on pentane. Explain.



8. Draw a structure of a compound fitting each description.

