Drill Questions: Week 9 (10.27.03 - 10.31.03)

Amines and Carboxylic Acids

1. Match compounds A-F with a pKa from the following: 4.76, 5.21, 6.95, 9.2, 15.1, 38

   Why do you think they have to be in this order? (i.e. Why is any compound more/less acidic than another?)

   ![Chemical structures]

   A: ___  B: ___  C: ___  D: ___  E: ___  F: ___

2. 

   ![Chemical reaction]

   1 eq MeI
   1 eq NaH

   4 products isolated, what are they?

3. 

   ![Chemical structures]

   - provide missing reagents
   - why doesn't multiple addition occur?

4. 

   ![Chemical structures]

   - provide missing reagents
   - why doesn't the iminium route work?
Synthesis: Provide a Synthetic Scheme

5. \( \text{Br} \quad \text{NH}_2 \quad \rightarrow \quad \text{N} \quad \text{H} \)

6. \( \text{I} \quad \rightarrow \quad \text{CH}_3 \quad \text{CH} \quad \text{CH} \quad \text{CH}_2 \quad \text{NH} \quad \text{H} \quad \text{don't overalkylate} \)

7. \( \text{I} \quad \rightarrow \quad \text{N} \quad \text{H} \quad \text{NH}_2 \quad \text{hints: pg 870 and 871} \)

8. \( \text{I} \quad \rightarrow \quad \text{N} \quad \text{H} \quad \text{Br} \quad \text{hints: pg 873} \)

9. \( \text{I} \quad \text{Br} \quad \rightarrow \quad \text{C} \quad \text{H} \quad \text{OH} \quad \rightarrow \quad \text{C} \quad \text{H} \quad \text{O} \quad \text{COOH} \quad \text{hints: pg 919 + 926} \)

10. \( \text{I} \quad \rightarrow \quad \text{N} \quad \text{C} \quad \text{O} \)