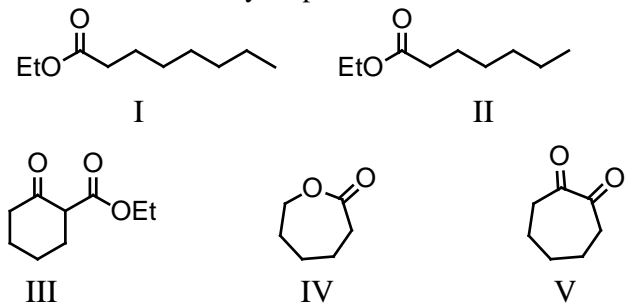


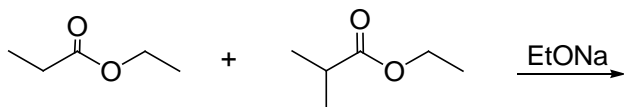
Homework/Problem Set

Chapter 19 (Aldol reactions: Additions of enolates. Conjugate additions to carbonyl compounds)

1. The reaction of diethyl heptanedioate with sodium ethoxide would give as the product:

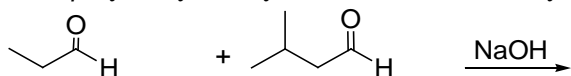


2. Write structural formula(s) for ALL possible Claisen condensation products between the following esters.



3. Proposed an aldol synthesis of 2-ethyl-2-hexen-1-al. Proposed a likely mechanism. occur

4. What β -hydroxy aldehydes would be formed by a cross aldol reactions between the following two aldehydes



5. What product would you expect to obtain from the base-catalyzed Michael reaction of ethyl propenoate and 2-methylcyclopentanone under thermodynamic conditions for the generation of the enolate anion.