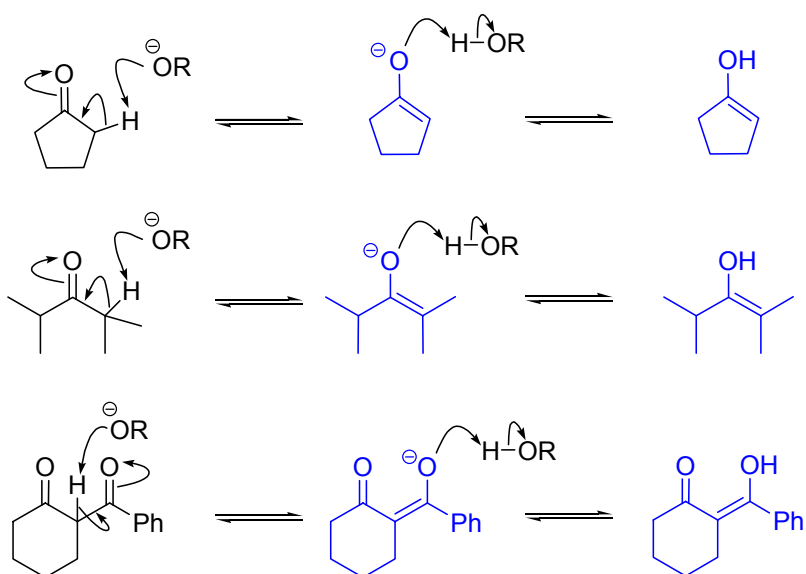


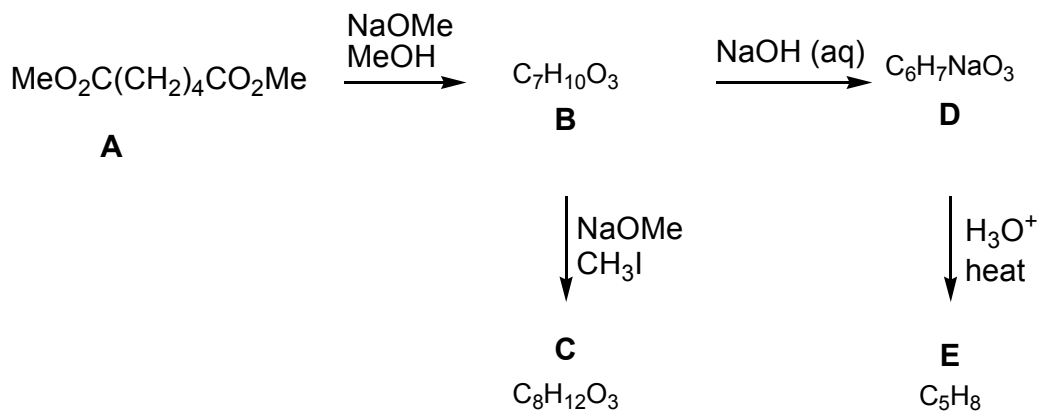
**Year 2 Seminars, 06524, Semester 2, 2010**  
**Bifunctional / Heterocyclic Chemistry Test**

Answer **ALL** of the following parts.

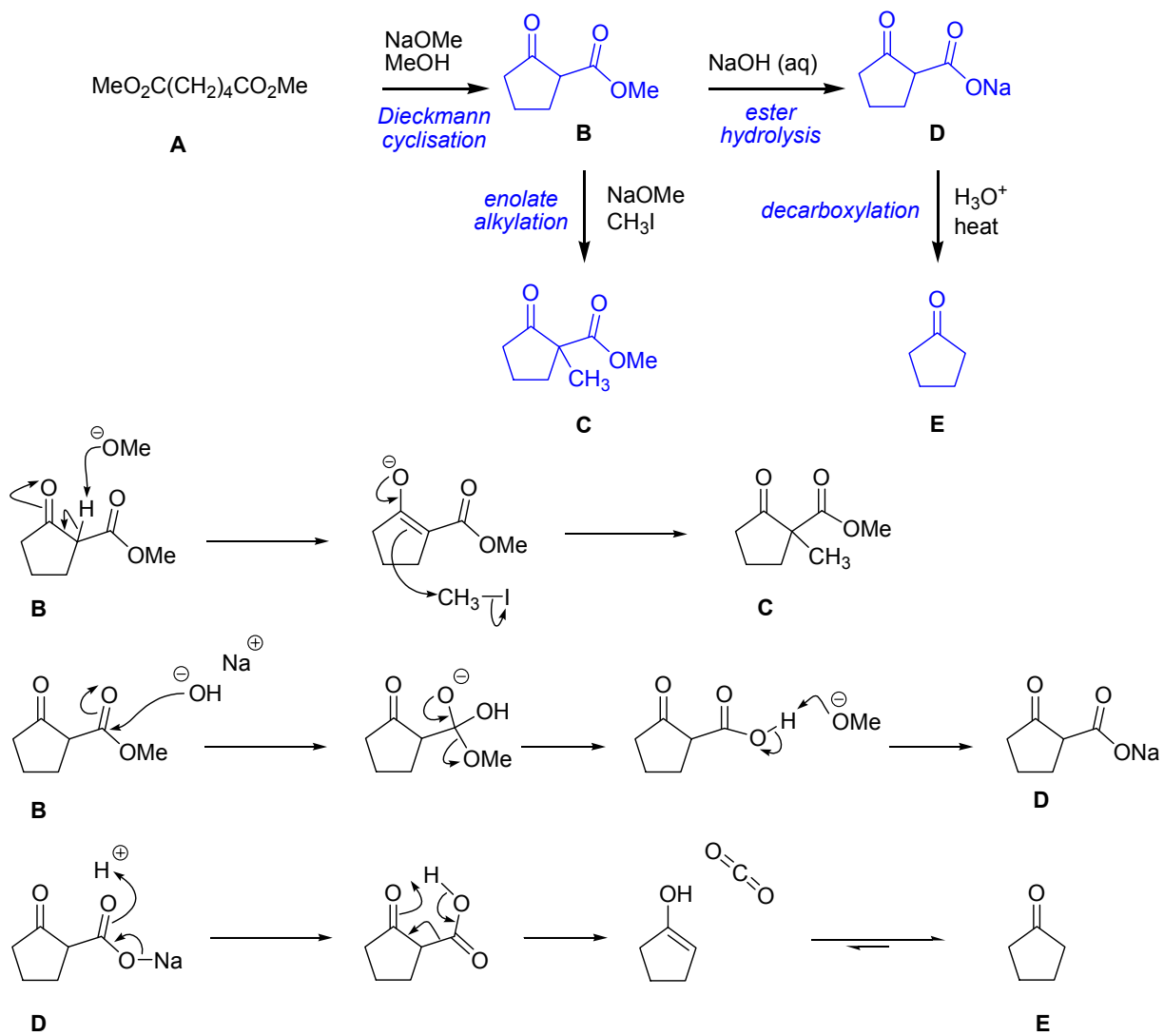
- (a) Draw an enol tautomer for **TWO** of the following carbonyl compounds, and show the mechanism for their formation as catalysed by base (use either hydroxide or ethoxide as base). Show clearly the intermediate enolate.



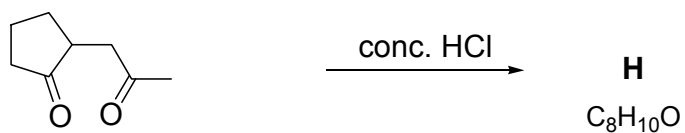
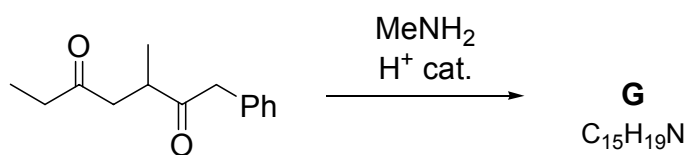
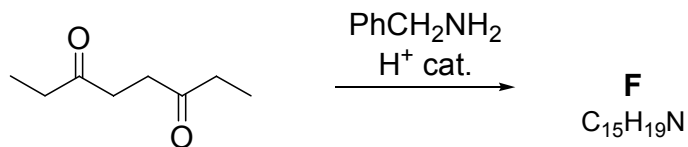
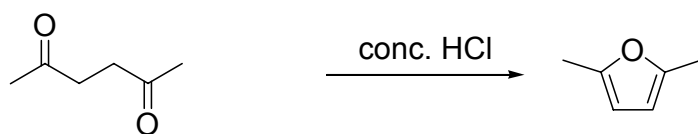
(b) Work out structures for compounds **B** to **E**.



Answers



(c) Using the first example, work out the products for **TWO** of the following reactions.



*Answers*

Paal-Knorr reaction

