

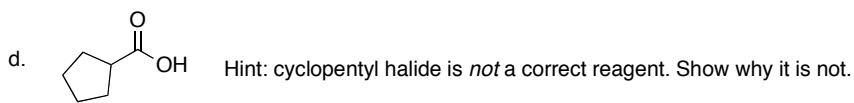
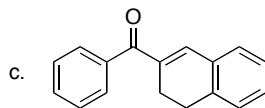
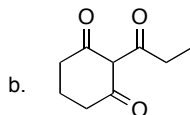
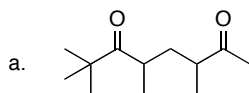
Chem 2062 Spring 2006
Quiz 4 (Take-home)
Due Tue, May 9 at noon

1. Each of the following compounds can be produced by one of the α -carbon substitution reactions we discussed.

Perform retrosynthetic analysis on the compounds below, showing the C-C bond(s) that are formed, and construct a forward reaction showing both the enolate formation as well as the substitution reaction. For full credit, the products must be able to be produced in good yield with minimal side-products, so choose your disconnection carefully.

State the name of the reaction in each case. No mechanisms are necessary.

Excellent performance on this question can earn you up to 5 extra points toward Exam 4.



2. Draw Haworth projections *and* chairs for the following compounds:
- β -D-mannopyranose (C2 epimer of glucose) -
What is the name of its anomer? You don't need to draw its structure.
 - α -D-xylofuranose (C3 epimer of ribose) - draw the Haworth projection only.
 - β -L-idopyranose (C5 epimer of glucose) - why is it L?
3. An imaginary disaccharide contains a D-glucopyranose joined with a D-mannopyranose (like in 2a) by a β -1,4' linkage. Draw this disaccharide as chairs.

