CHE 173 Winter, 2005 Practice Quiz 5

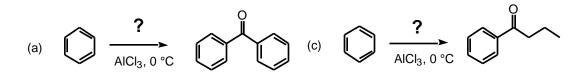
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Section: 201	202	203	204	205	206
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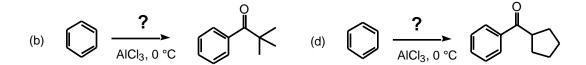
1. Show the mechanism of the reaction of p-xylene with nitric acid in the presence of a catalytic amount of sulfuric acid. (10 pts)

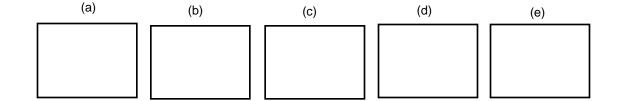
2. Predict the major organic product the will form from each of the following Friedel-Crafts alkylation reactions of benzene: (10 pts)

(a) 
$$CI \leftarrow AICI_3, 0 °C$$
 (c)  $AICI_3, 0 °C$  (d)  $CH_3CI \leftarrow AICI_3, 0 °C$  (e)  $CI \leftarrow AICI_3, 0 °C$ 

3. Show the acyl chloride that would need to be used to effect each of the Friedel-Crafts acylation reactions shown below:







4. Show a mechanism for the following reaction: (10 pts)

5. Show how you could carry out the following synthesis: (10 pts) (No need to show the mechanisms here, just the synthetic steps)

