**UCD AATC** 

**Ex. 1**: Predict the major product for the following:

НО

NaCl

Addition-Elimination General Mechanisms, Acid Halide Synthesis, Ester Synthesis

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**Ex. 2**: Propose a mechanism for the following transformation:

HO

OH

HO:

$$H_3O:$$

HO:

 $H_3O:$ 
 $H_2O:$ 
 $H_2O:$ 
 $H_2O:$ 
 $H_2O:$ 
 $H_2O:$ 

**Ex. 3**: Propose a synthesis for the following transformations:

a)

1. 
$$(CH_3)_3COK$$
,  $(CH_3)_3COH$ 

2.  $KMnO_4$ ,  $H_2O$ ,  $\Delta$ 

3.  $H_3O^+$ 

4.  $PBr_3$ 

c)
$$\begin{array}{c}
CI & 1. \text{ NaCN} \\
2. \text{ H}_3\text{O}^+, \Delta \\
\hline
3. \text{ SOCl}_2, \text{ pyridine}
\end{array}$$
+ SO<sub>2</sub>