Chapter 20

1. Draw the products for each reaction (6th Ed., #20.16)
   a. 
   ![Image of a reaction](image)
   b. 
   ![Image of a reaction](image)
   c. 
   ![Image of a reaction](image)
   d. 
   ![Image of a reaction](image)

2. Draw a stepwise mechanism for the following reaction (6th Ed., #20.24)
   ![Image of a reaction](image)

3. Draw the organic products formed in each reaction.
   a. 
   ![Image of a reaction](image)
4. Synthesize each compound from ethyl acetoacetate. You may use any other organic compounds or inorganic reagents.

a. 

b. 

c. 

\[
\text{[1] } \text{Br}_2, \text{CH}_3\text{CO}_2\text{H} \\
\text{[2] } \text{Li}_2\text{CO}_3, \text{LiBr, DMF}
\]