Name:

1. Circle the product for the following reactions. (2 points)

i. O
$$\xrightarrow{\text{pH 5}}$$
 a. b. c. $\xrightarrow{\text{NH}_2}$ OH $\xrightarrow{\text{NH}_2}$ OH $\xrightarrow{\text{NH}_2}$ $\xrightarrow{\text{NH}_2}$ OH $\xrightarrow{\text{NH}_2}$ $\xrightarrow{\text{NH$

2. Identify the monomer unit(s) and propose polymerization conditions for the following polymer. (2 points)

3. a. Identify the monomer unit(s) needed to prepare the following polymer.

b. Will this polymer form via chain growth or step growth? Briefly explain your choice. (2 points)

4. Provide a mechanism for the following transformation. (4 points)

$$\begin{array}{c|c} OH & & OH \\ \hline & & OH \\ \hline & & OH \\ \hline \end{array}$$