## **Problem Set 7**

1. State whether each of the following reactions is non-enantioselective, partially enantioselective, completely enantioselective, non-diastereoselective, partially diastereoselective, and/or completely diastereoselective. If relevant, state if these reactions are enantiospecific and/or diastereospecific. Describe your reasoning clearly and succinctly.

1:1 ratio

2. Draw the structure of the expected major organic product for each of the following four (4) questions. Specify stereochemistry clearly, if relevant. For some of the reactions, the starting material possesses an asymmetric carbon. If any of these reactions proceed with stereochemical control, state whether the transformation occurs with retention or inversion of configuration. If a reaction occurs with inversion of configuration, state whether the transformation occurs with partial or complete inversion.

A. 
$$\begin{array}{c} CH_{3} \\ H_{3}C \end{array} \longrightarrow \begin{array}{c} (H_{3}CCH_{2})_{2}CuLi \end{array} \longrightarrow \\ \end{array}$$

C. 
$$\begin{array}{c} OH \\ H_3C \end{array} \longrightarrow \begin{array}{c} CH_3 \end{array}$$