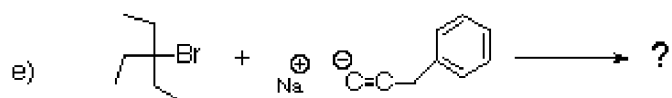
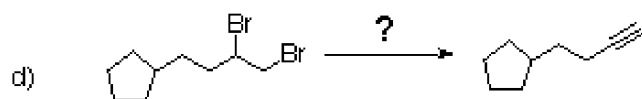
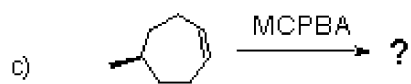
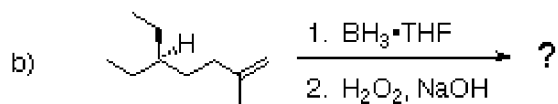
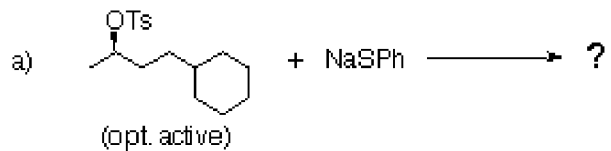


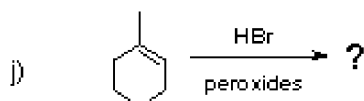
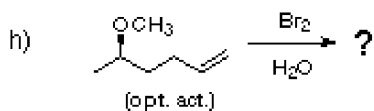
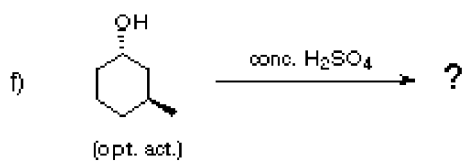
THIRD HOUR EXAM

CHEMISTRY 3311

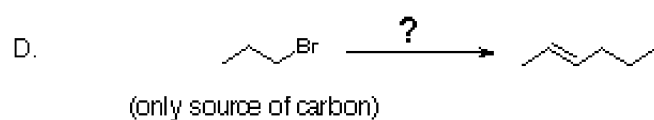
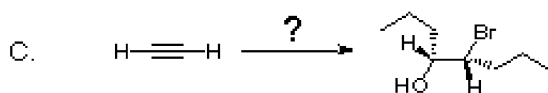
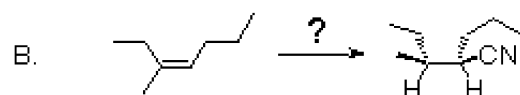
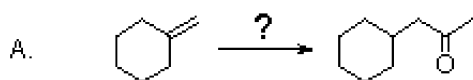
November 21, 1996

1. (30 points) Provide the missing reagents or products for the following





2. (20 points) Propose a synthesis of the target compounds starting

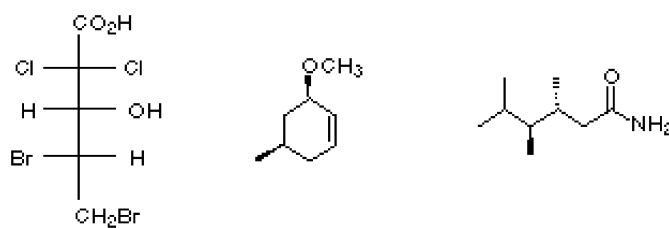


3. (25 points) Write out a detailed, stepwise mechanism for the substitution

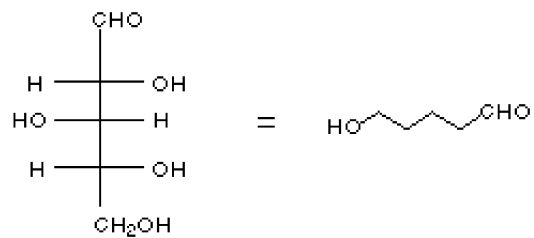
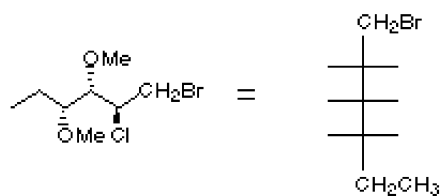


4. (25 points)

A. Label each stereocenter in the following structures using the CIP



B. Complete the structures below for the equivalent compounds.



C. Very briefly explain the advantages of using polar aprotic solvents