

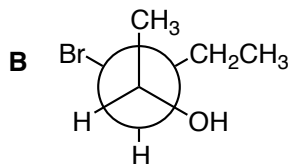
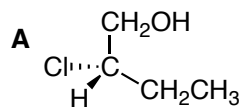
Name.....

L. I. U.

Chem. 121, Sect 005, Quiz 3

Fall, 2011, 50 points

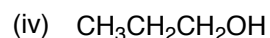
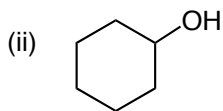
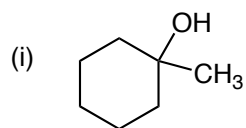
1. Assign the absolute configuration (R or S) to each chirality center. Be sure to number the carbons for molecule **B**. (15 pts)



2. Show the reaction that occurs between (S)-2-bromopentane and cyanide anion (NC^-). Assign the absolute configuration to the product. (10 pts)

3. In the preparation of cyclohexene from cyclohexanol using sulfuric acid (a) show the complete reaction that occurs, including the complete reaction mechanism. (b) The reaction is reversible. Explain how we drove the reaction to completion. (c) Explain the purpose of adding sodium chloride to the distillate in the first step of the work up. (11 pts)

4. In the Lucas Test for alcohols using HCl and ZnCl_2 as a Lewis Acid, which alcohol would (a) react fastest? (b) Which alcohol would react slowest? Explain briefly in each case. (8 pts)



5. In the preparation of 1-bromobutane from 1-butanol using sodium bromide and aqueous 65% sulfuric acid, one student could not find the aqueous sulfuric acid and so decided to just use 100% water instead. Would the reaction still work? Why/why not? Explain briefly. (6 pts)