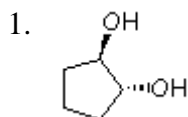


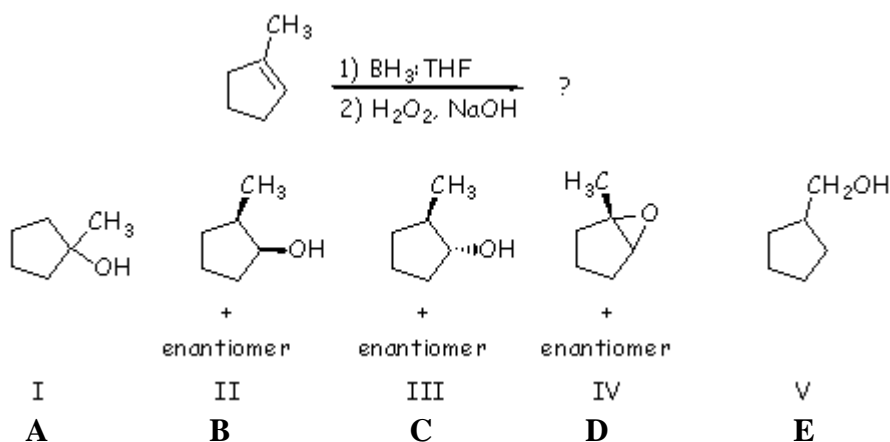
Homework/Problem Set #11
Chapter 11. Alcohols and Ethers



is properly named:

- A) cis-1,2-Cyclopentanediol
 B) meso-1,2-Cyclopentanediol
 C) (1R,2R)-1,2-Cyclopentanediol
 D) (1R,2S)-1,2-Cyclopentanediol
 E) (1S,2S)-1,2-Cyclopentanediol

2. Which product(s) would you expect to obtain from the following sequence of reactions?



3. trans-3-Methylcyclopentanol is treated with $\text{CH}_3\text{SO}_2\text{Cl}$ in the presence of base. The product of this reaction is then heated with KI in methanol. What is the final product?

- A) trans-1-Iodo-3-methylcyclopentane
 B) cis-1-Iodo-3-methylcyclopentane
 C) 1-Methylcyclopentene
 D) 2-Methylcyclopentene
 E) 3-Methylcyclopentene

4. Outlined below is a synthesis of pheromone **E** of a gypsy moth sex attractant. Give the structure of **E** and intermediates **A-D**. If necessary, show the correct stereochemistry.

