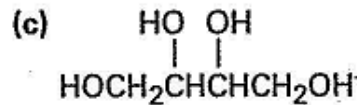
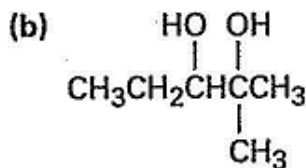
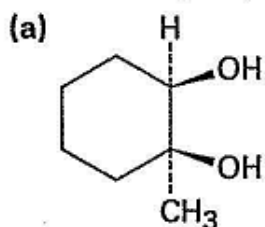
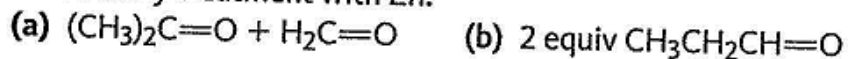


Problem 8.14

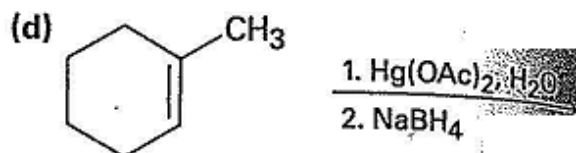
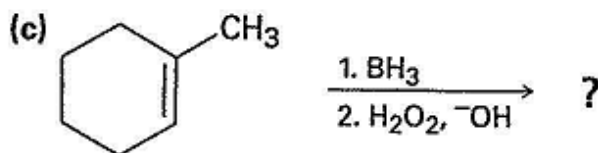
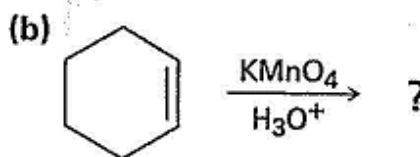
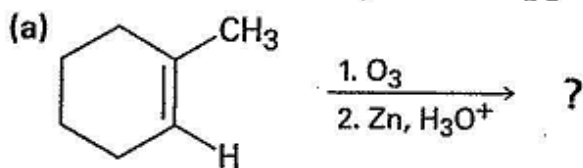
How would you prepare each of the following compounds starting with an alkene?

**Problem 8.16**

Propose structures for alkenes that yield the following products on reaction with ozone followed by treatment with Zn:

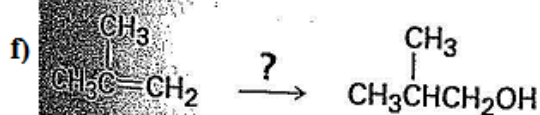
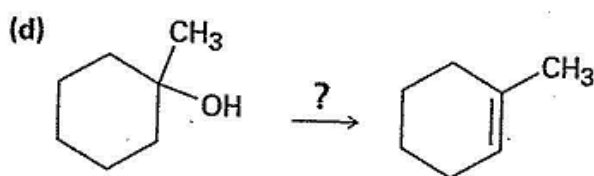
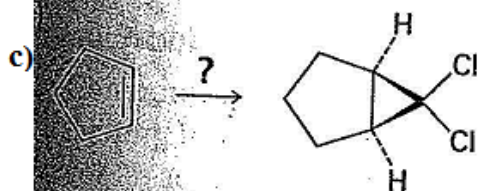
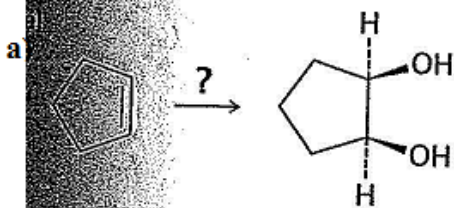
**Problem 8.28a**

Predict the products of the following reactions, showing both regiochemistry and stereochemistry where appropriate:



Problem 8.35 (e,f)

How would you carry out the following transformations? Tell the reagents you would use in each case.



Problem 8.45

Using an oxidative cleavage reaction, explain how you would distinguish between the following two isomeric dienes:

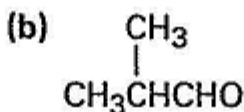


and



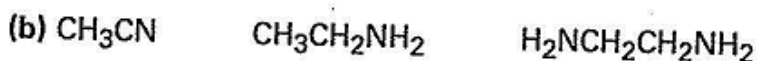
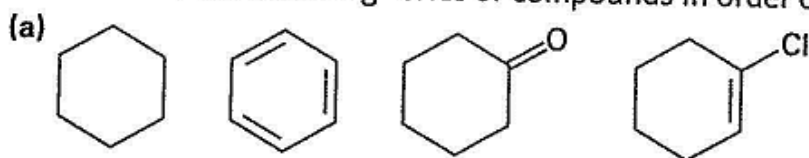
Problem 17.14

Which alcohols would give the following products on oxidation?

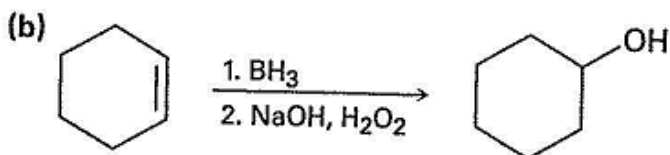
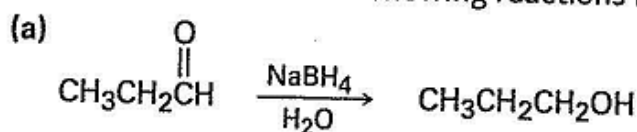


Problem 10.12

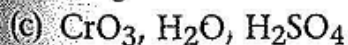
Rank each of the following series of compounds in order of increasing oxidation level.

**Problem 10.13**

Tell whether each of the following reactions is an oxidation, a reduction, or neither.

**Problem 17.34c**

What products would you obtain from reaction of 1-pentanol with the following reagents?

**Problem 17.62**

As a rule, axial alcohols oxidize somewhat faster than equatorial alcohols. Which would you expect to oxidize faster, *cis*-4-*tert*-butylcyclohexanol or *trans*-4-*tert*-butylcyclohexanol? Draw the more stable chair conformation of each molecule.