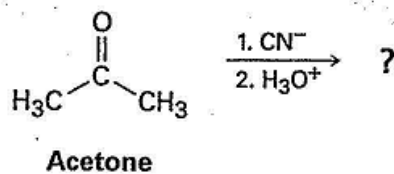


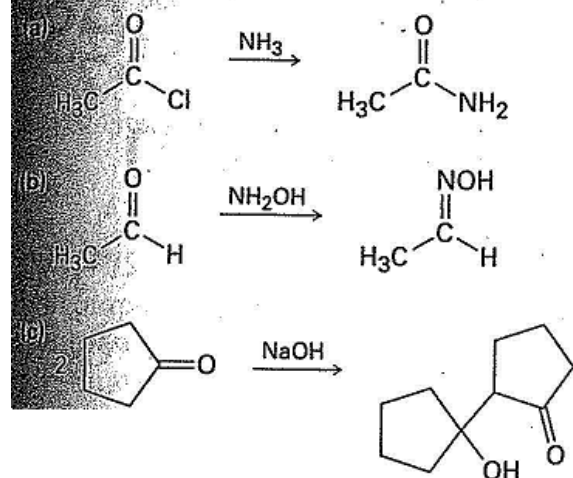
Problem 2 (p. 721)

Predict the product formed by nucleophilic addition of cyanide ion (CN^-) to the carbonyl group of acetone, followed by protonation to give an alcohol:



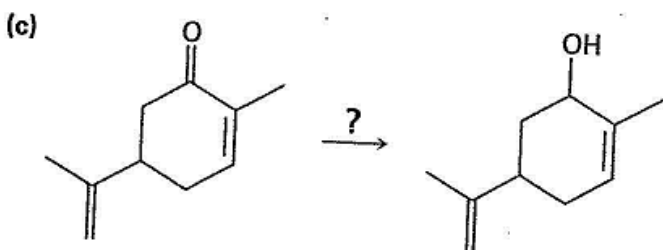
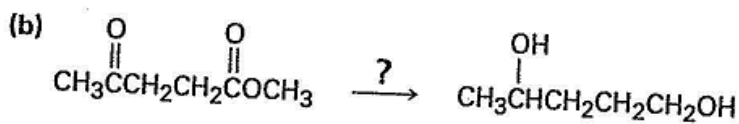
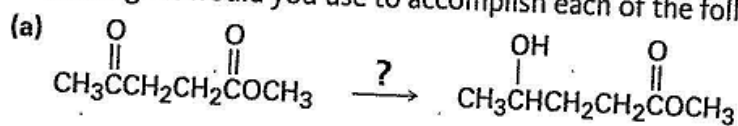
Problem 3 (p. 721)

Identify each of the following reactions as a nucleophilic addition, nucleophilic acyl substitution, an α substitution, or a carbonyl condensation:



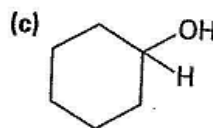
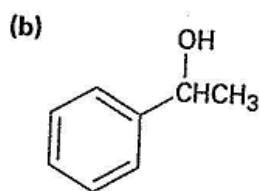
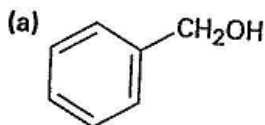
Problem 17.7

What reagent would you use to accomplish each of the following reactions?

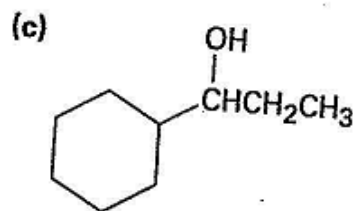
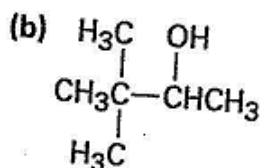
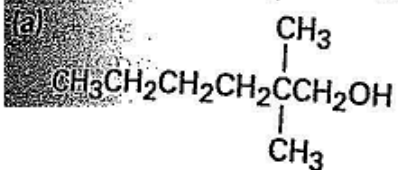


Problem 17.8

What carbonyl compounds give the following alcohols on reduction with LiAlH_4 ? Show all possibilities.

**Problem 17.31**

What carbonyl compounds would you reduce to prepare the following alcohols? List all possibilities.

**Problem 17.43**

Reduction of 2-butanone with NaBH_4 yields 2-butanol. Is the product optically active? Explain.