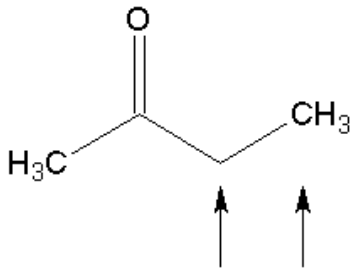
CONCEPT: ALPHA CARBONS AND TAUTOMERIZATION

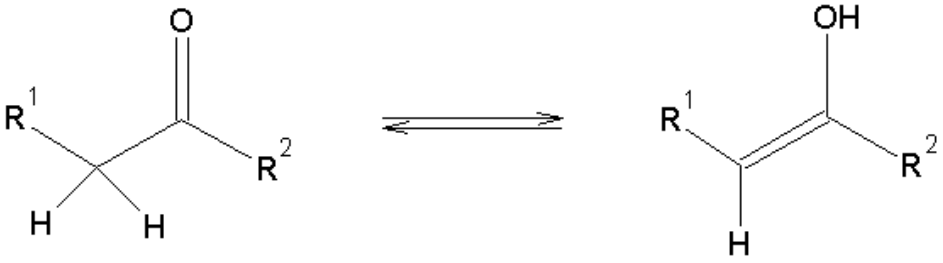


We have discussed the high reactivity of the carbonyl carbon.

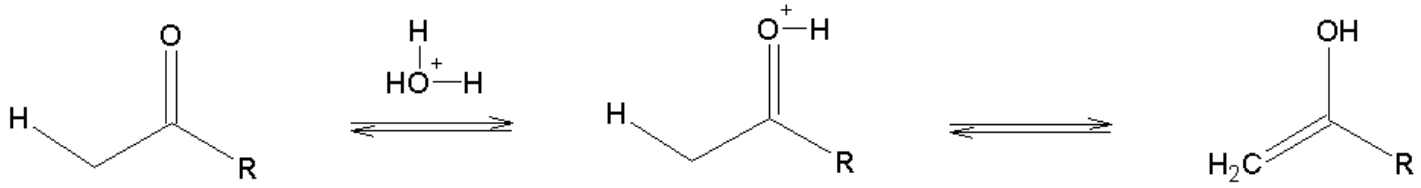
However, carbonyls contain another highly reactive component.

- What is the acidity of the β-carbon? _____
- What is the acidity of the α-carbon? _____
- Which phenomenon is responsible for this difference?

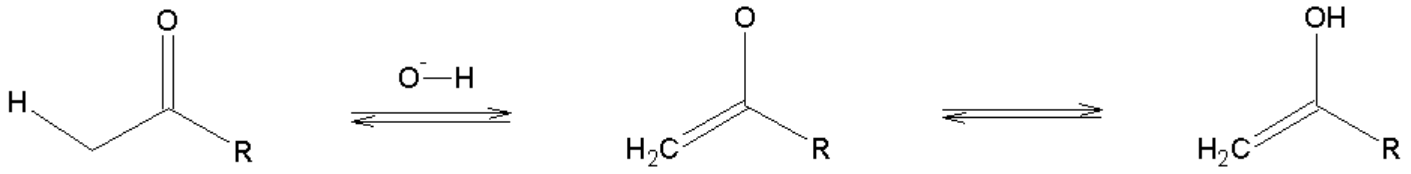
Tautomerization General Reaction:



Acid-Catalyzed Mechanism:



Base-Catalyzed Mechanism:



PRACTICE: Draw the enol tautomer for the following compound.

Cyclopentanone