

SUBJECT - CHEMISTRY

CLASS - B.Sc (Hons) PART-II

PAPER - IV

TOPIC - Benzilic Acid Rearrangement

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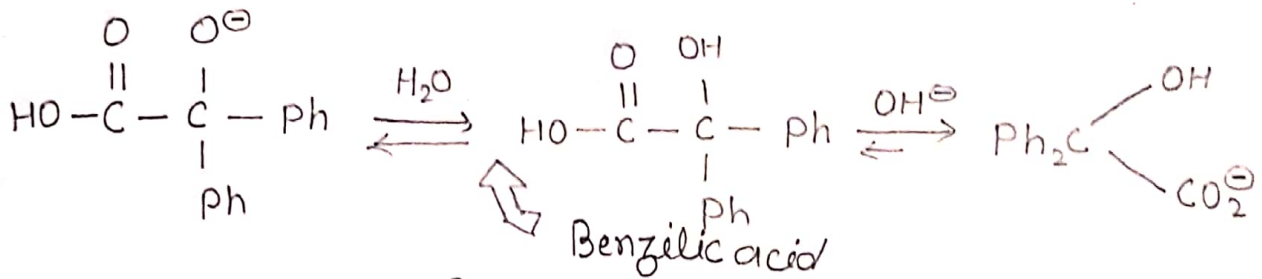
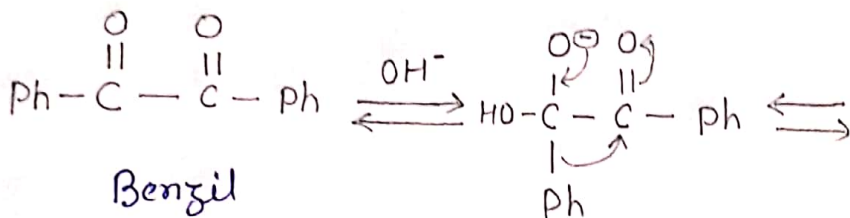
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## Benzilic Acid Rearrangement

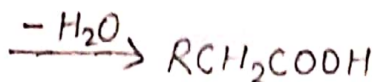
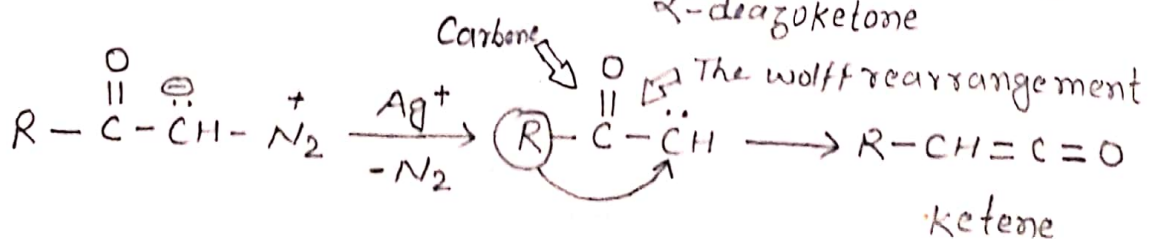
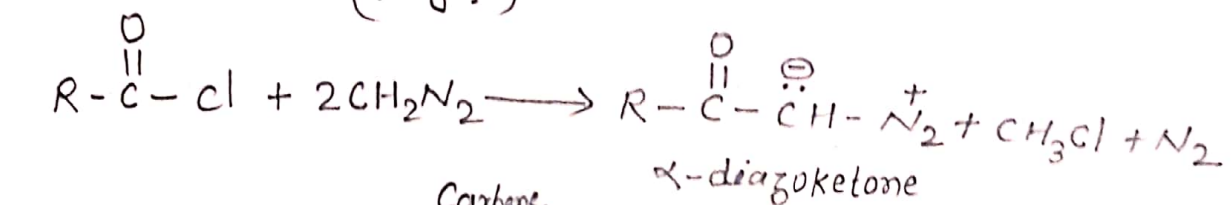
1,2-Diketones ( $\alpha$ -diketones) on treatment with hydroxide ion undergo a rearrangement to give  $\alpha$ -hydroxy acids e.g benzil gives benzilic acid (fig 1)

The arrangement has its driving force in the removal of the product by ionization of the carboxyl group.



Benzilic acid rearrangement

(fig 1)



Arndt-Eistert synthesis

fig (2)