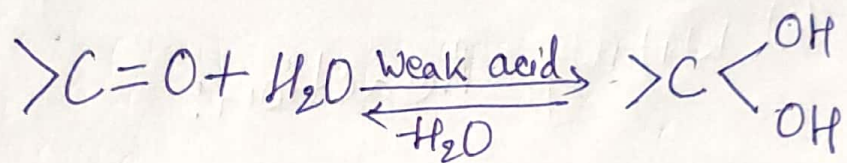


D. B. College (Jaynagar) Lect-16
Akhilesh Kumar Singh
Chemistry department B.Sc (Sub) Part-I
Mob: - 8750 390927

(8) Reaction with H_2O : It is a reversible reaction.



(Neutral)

(unstable hydrate)

Ex: which compound form more stable hydrate with H_2O ?

(A) $HCHO$ (B) CH_3CHO (C) CH_3COCH_3

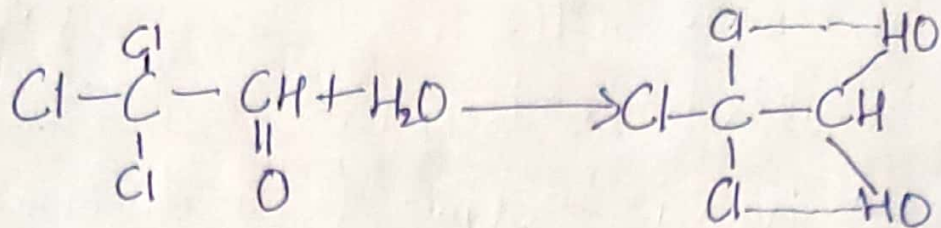
(D) $CH_3COC_2H_5$

[Hint: $HCHO$ since it is more reactive towards this reaction.]

Ans.
(A)

Ex. which carbonyl compound not gives reversible reaction with water?

Sol. Chloral hydrate.



(Chloral)

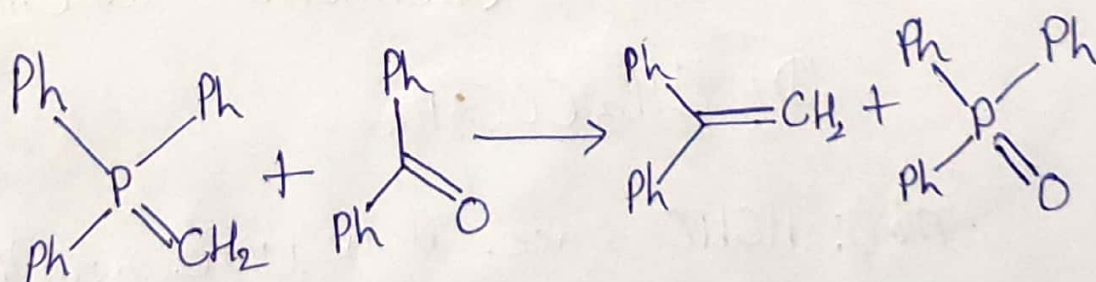
(Chloral hydrate)

stable by intra molecular hydrogen bonding.

(B) Other Reactions!

(1) Wittig Reaction!

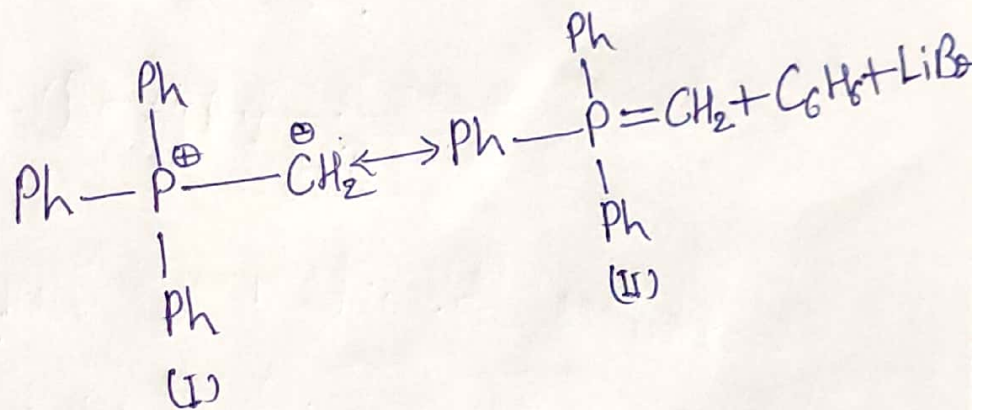
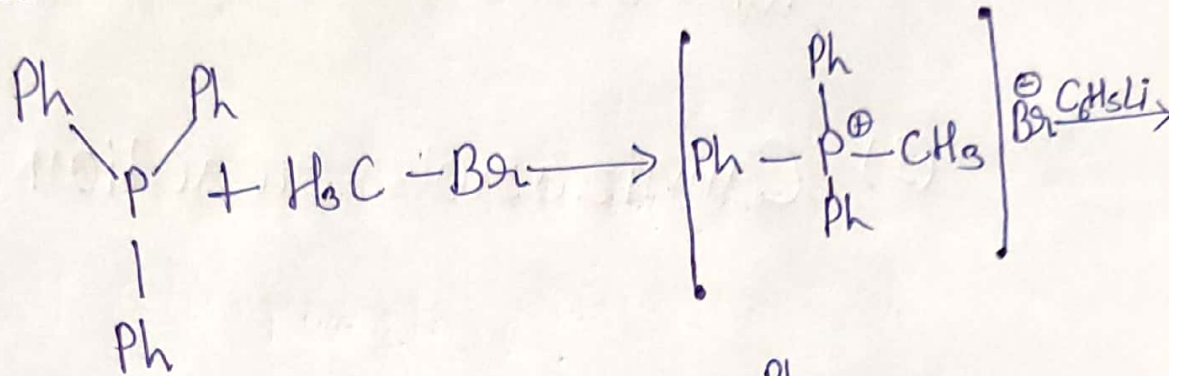
Wittig reaction affords an important and useful method for the synthesis of alkenes by the treatment of aldehydes or ketones with alkylidene triphenylphosphorane ($\text{Ph}_3\text{P}=\text{CH}_2$) or simply known as phosphorane.



(1-Phenylvinyl) benzene triphenylphosphorane oxide

The Wittig reagent, alkylidene triphenylphosphorane (ylide), is prepared by treating trialkyl or triarylphosphine usually the latter with an

alkyl halide in either solution. The resulting phosphonium salt is treated with strong base (such as C_6H_5Li , $BuLi$, $NaNH_2$, NAH , C_2H_5ONa , etc.)



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