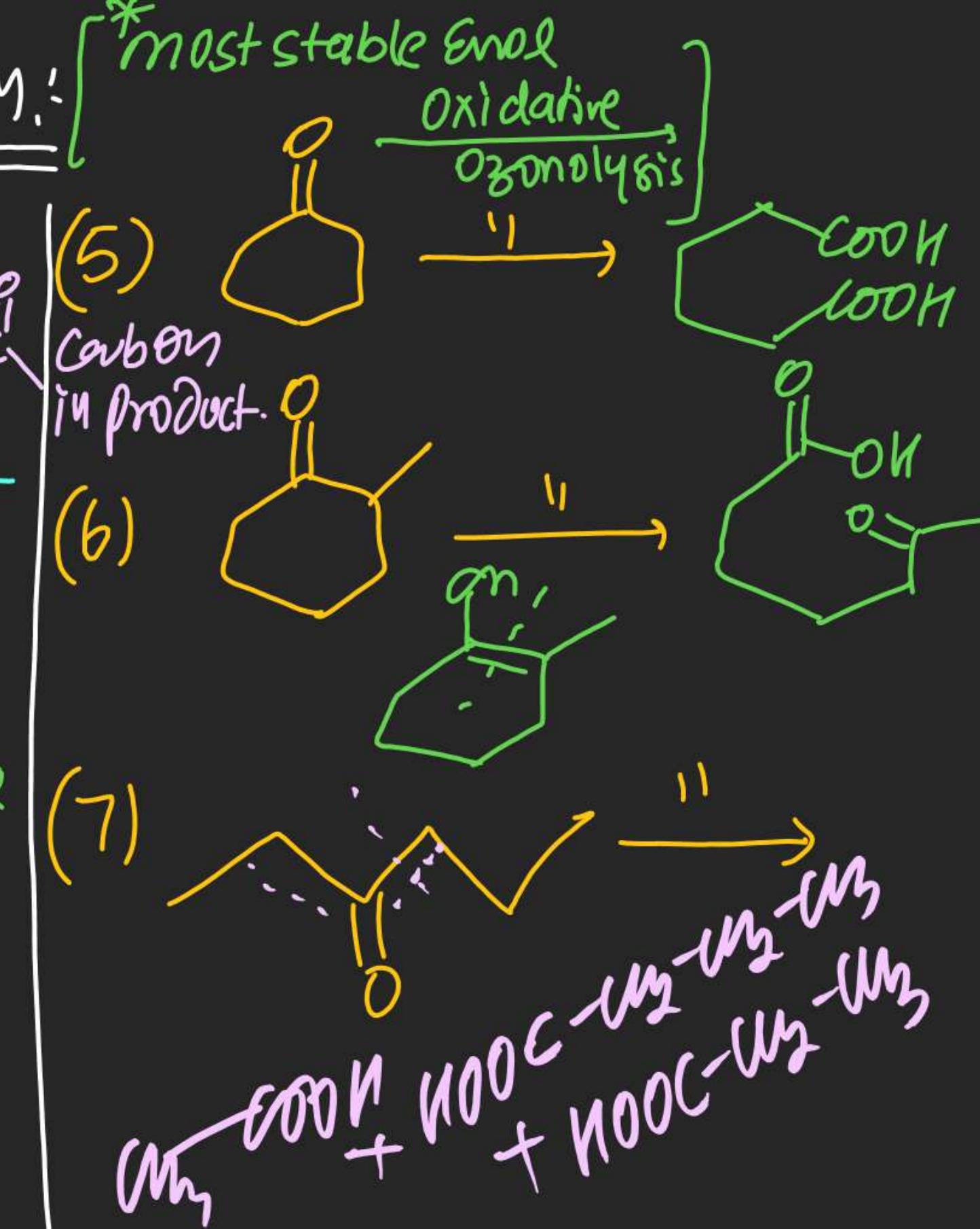
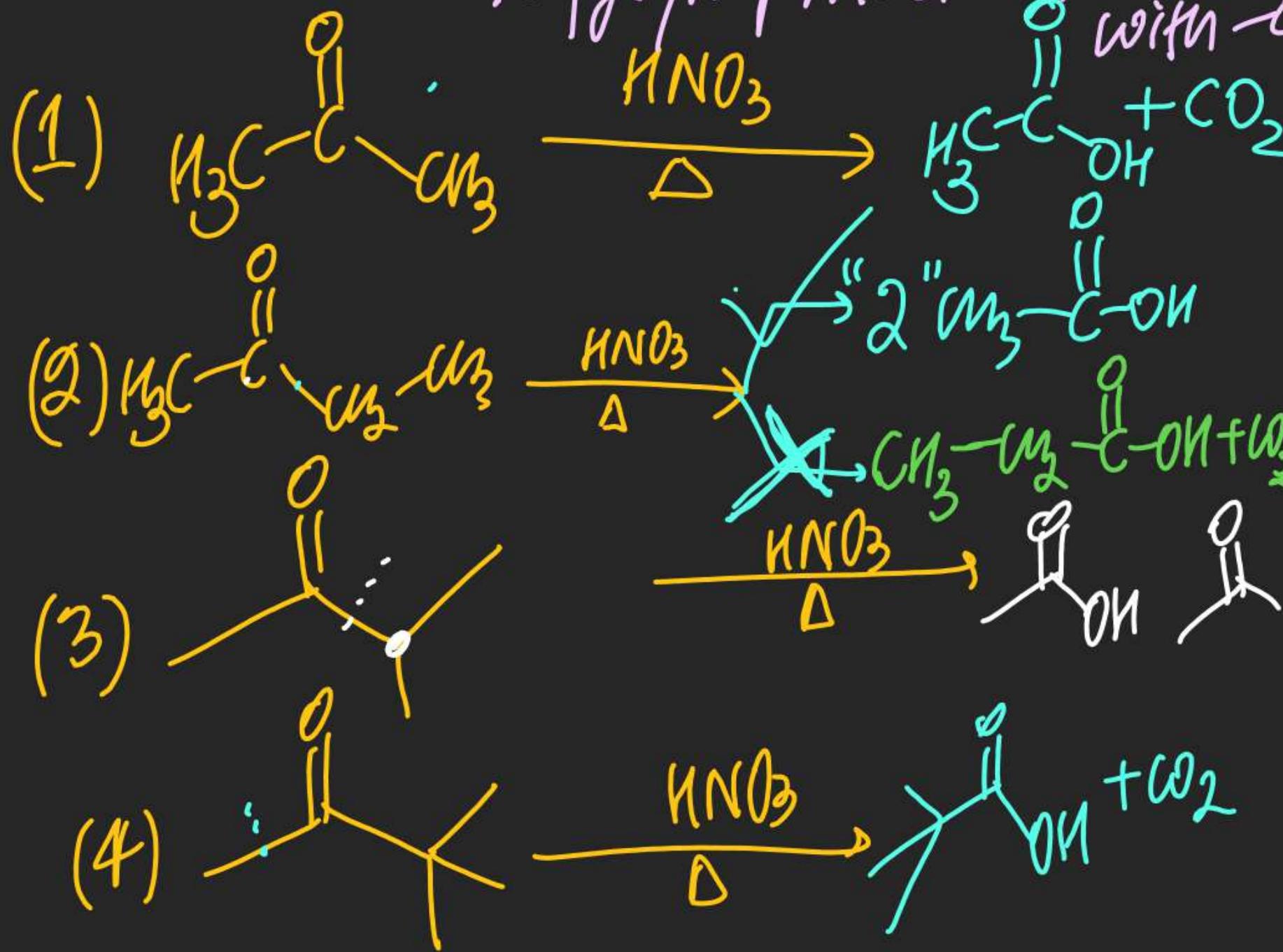
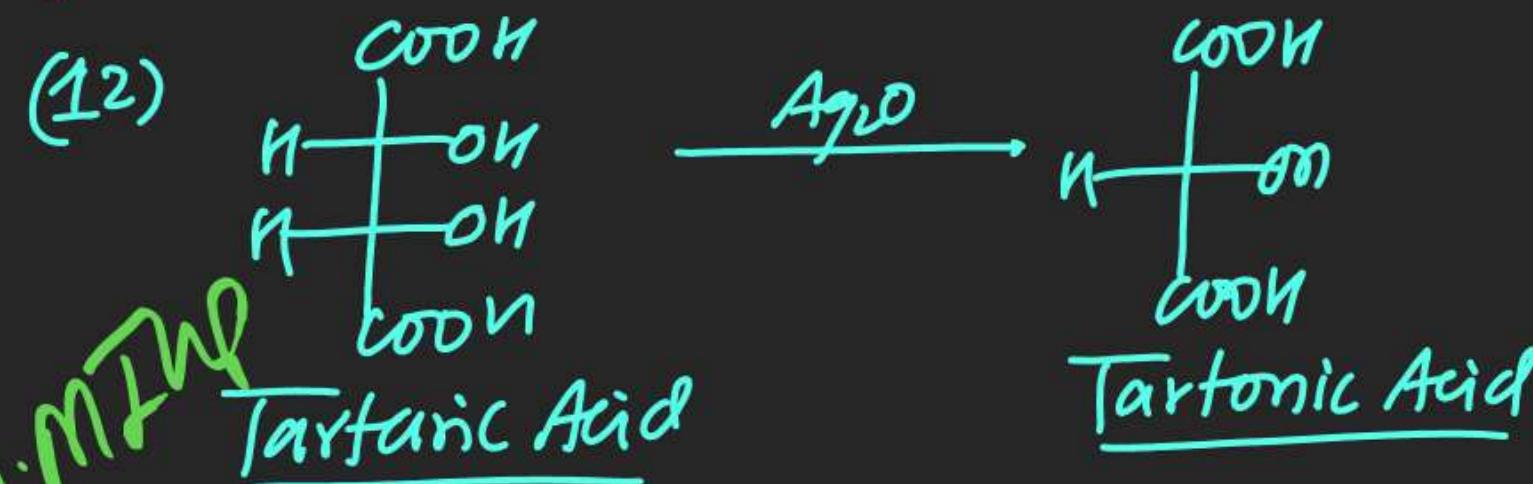


# (#) Oxidation of $\text{C}^{\prime}$ in Drastic Condition:

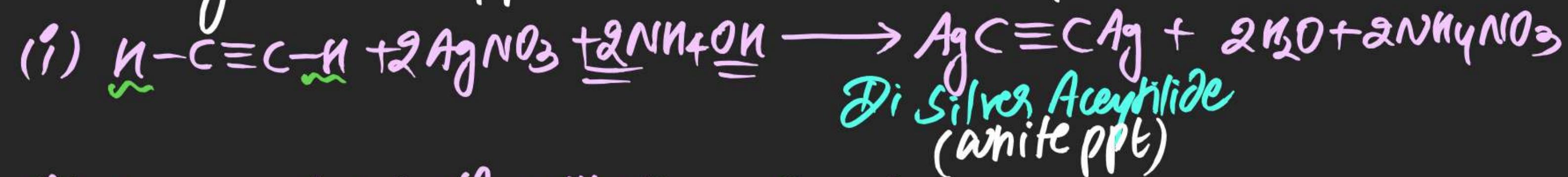
Pop off Rule: Acc. to this Rule smaller Alkyl group must be present with  $\text{C}^{\prime}$





(13) By Ammonical  $\text{AgNO}_3$  Solution:-

→ It gives white ppt with Terminal alkyne



(14) By Ammonical Cuprous chloride:

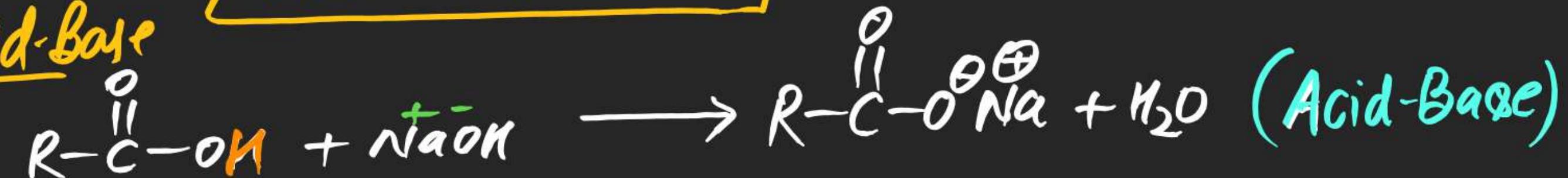
⇒ Terminal alkyne gives **Red colour ppt.**



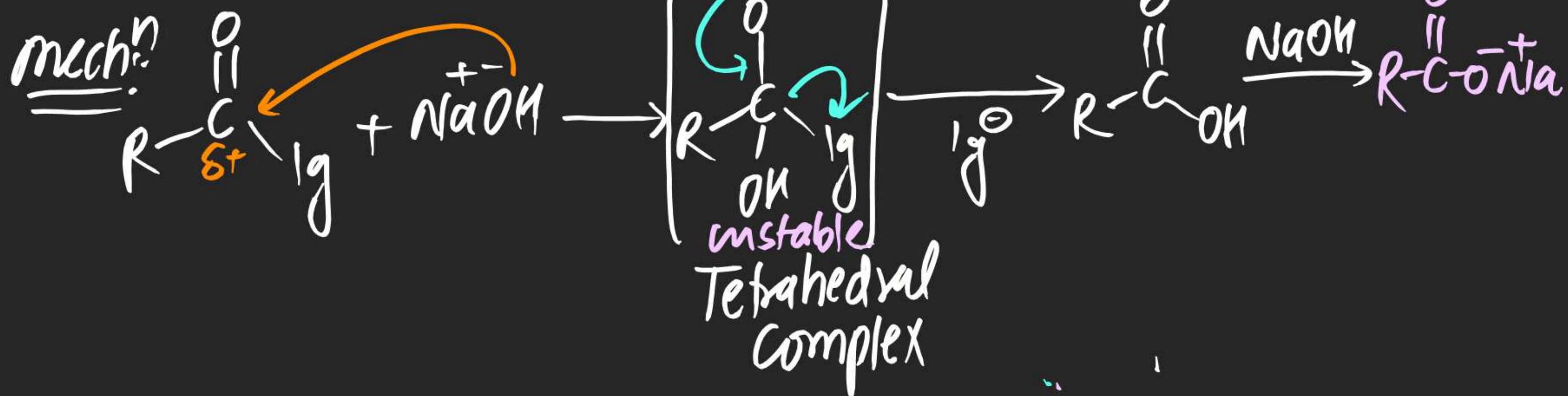
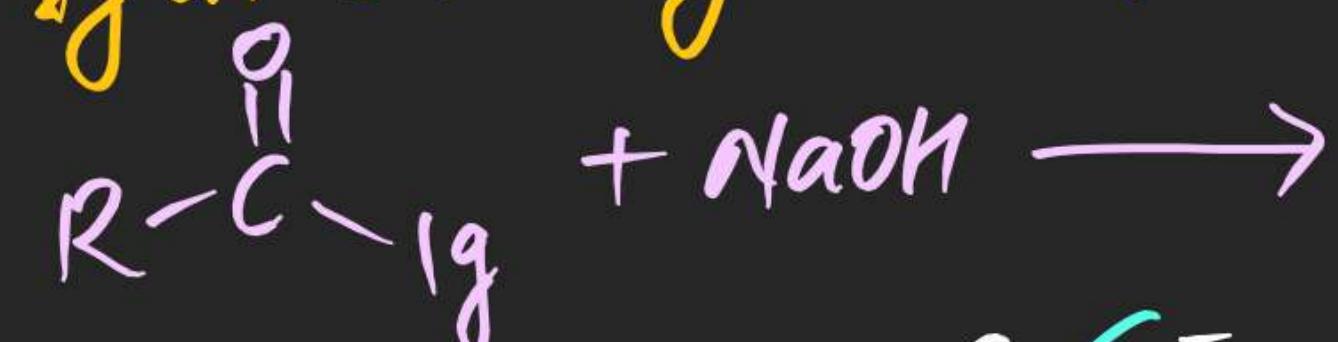
~~Note:~~ Ammonical  $\text{AgNO}_3$  & Ammonical  $\text{W}_2\text{O}_8$  Both can be used  
 ✓ for distinction b/w Terminal & Non Terminal alkyne.

## Named Reaction

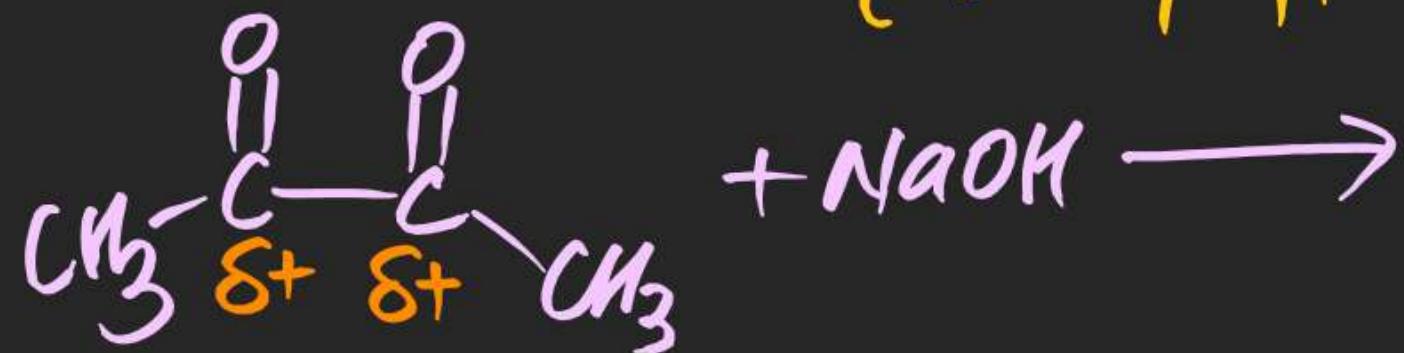
Case (i) Acid-Base



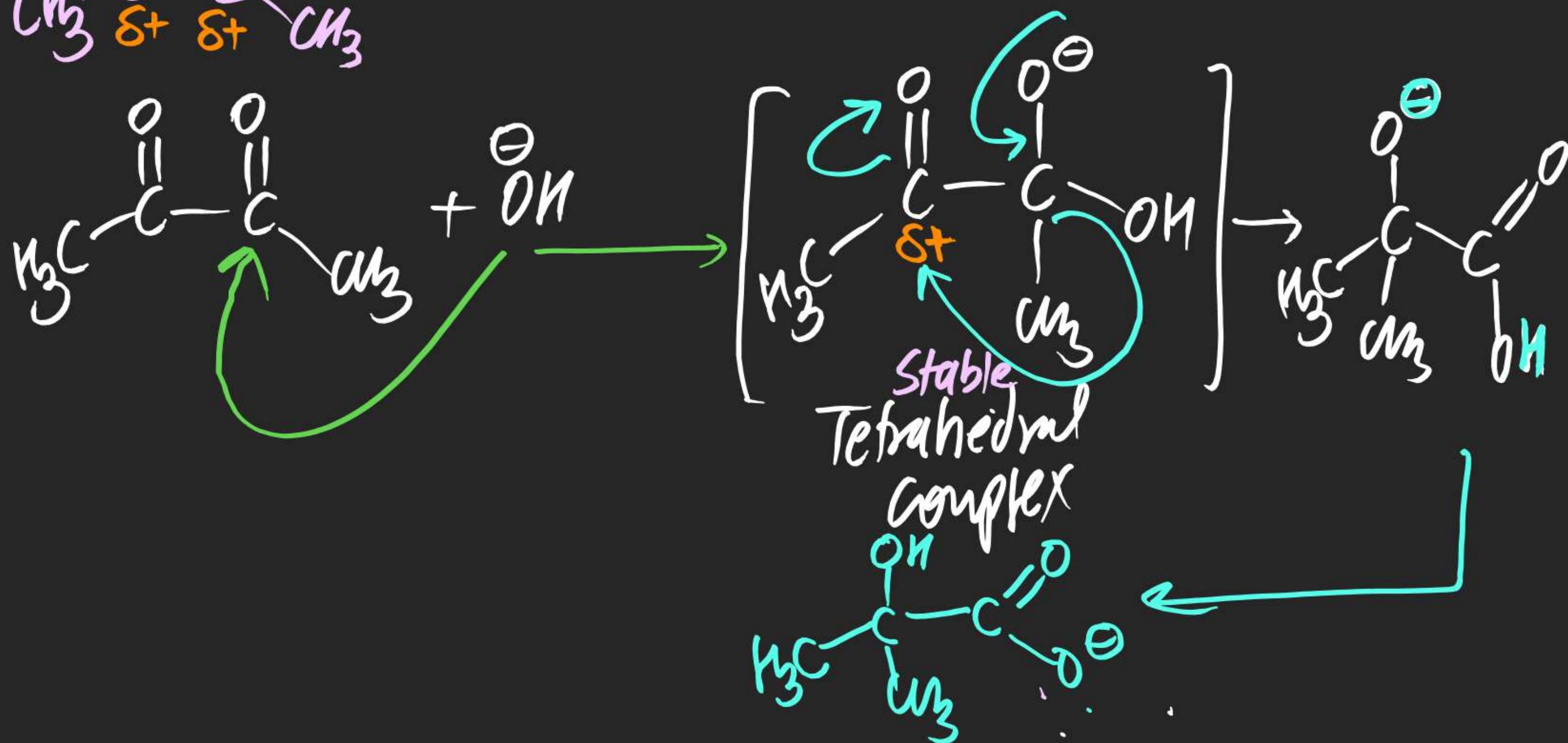
Case (ii) Ig at Carbonyl Carbon

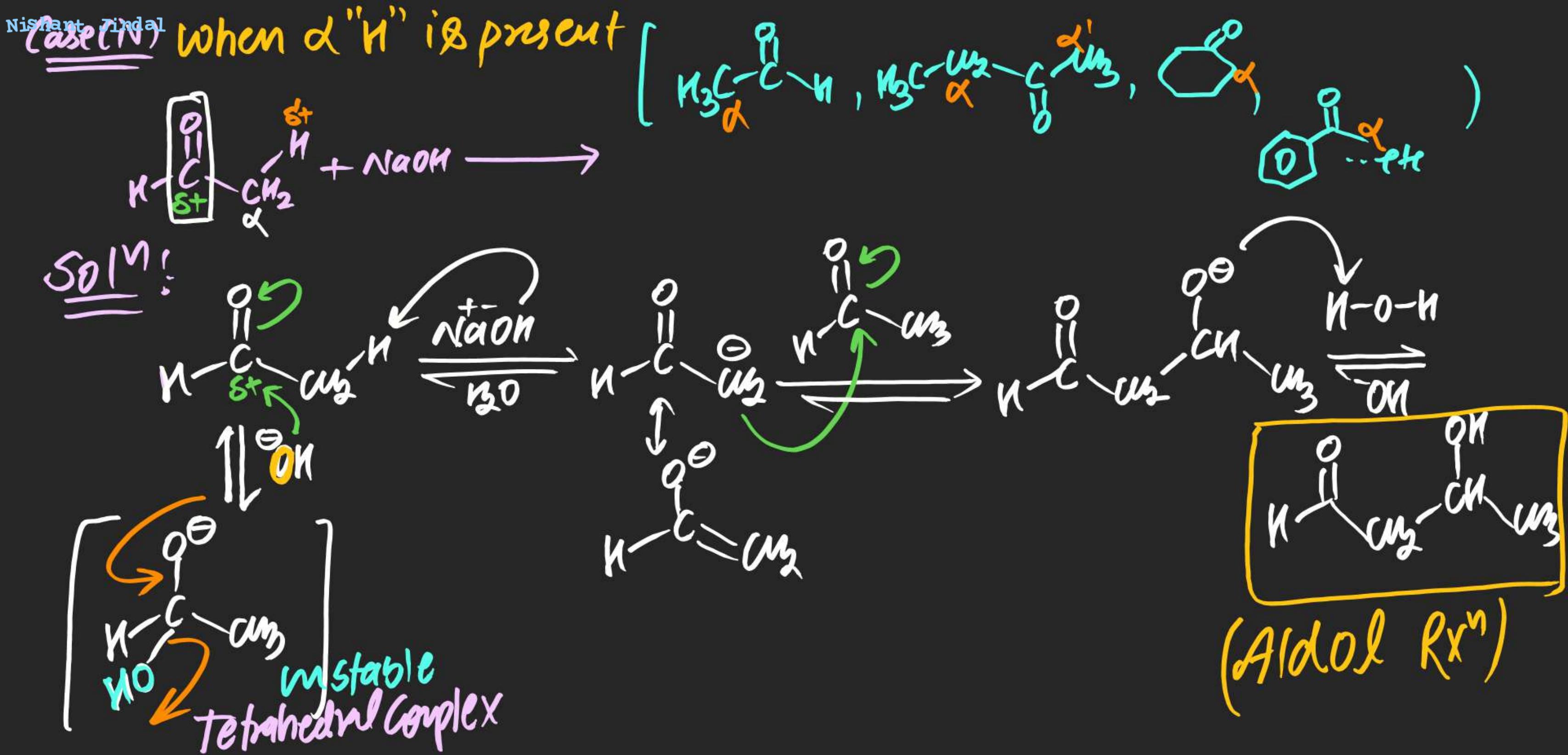


Nishant Jindal  
Case (iii) In Case of 1,2 di(Carbonyl compound).  
= (Aldehyde/ketone)

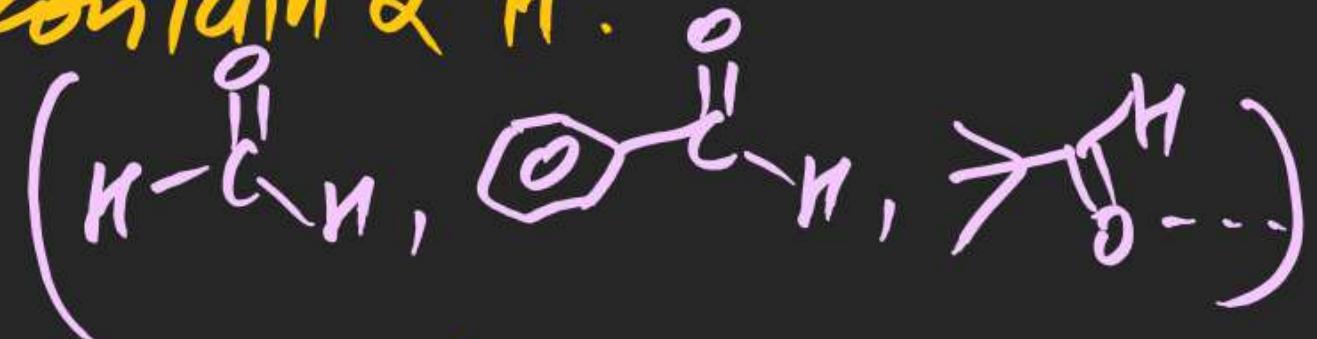


mech?



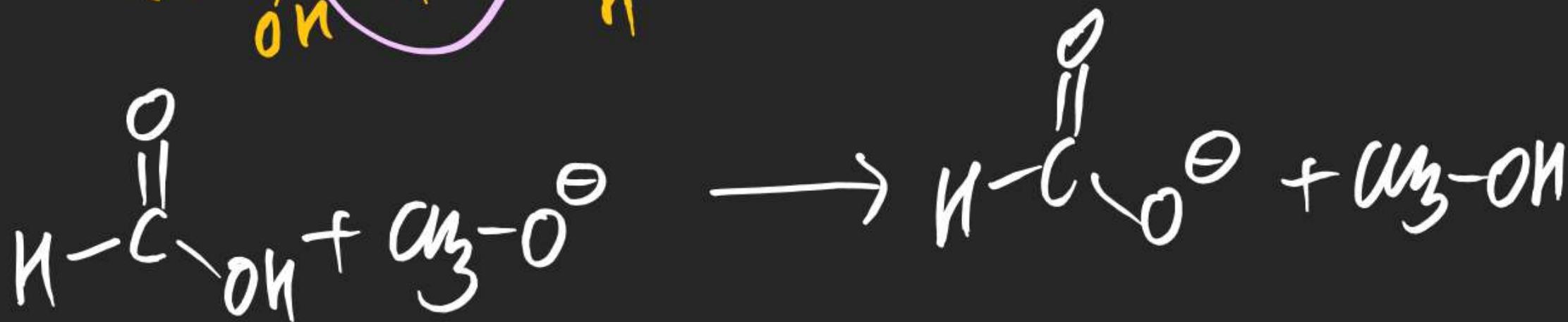
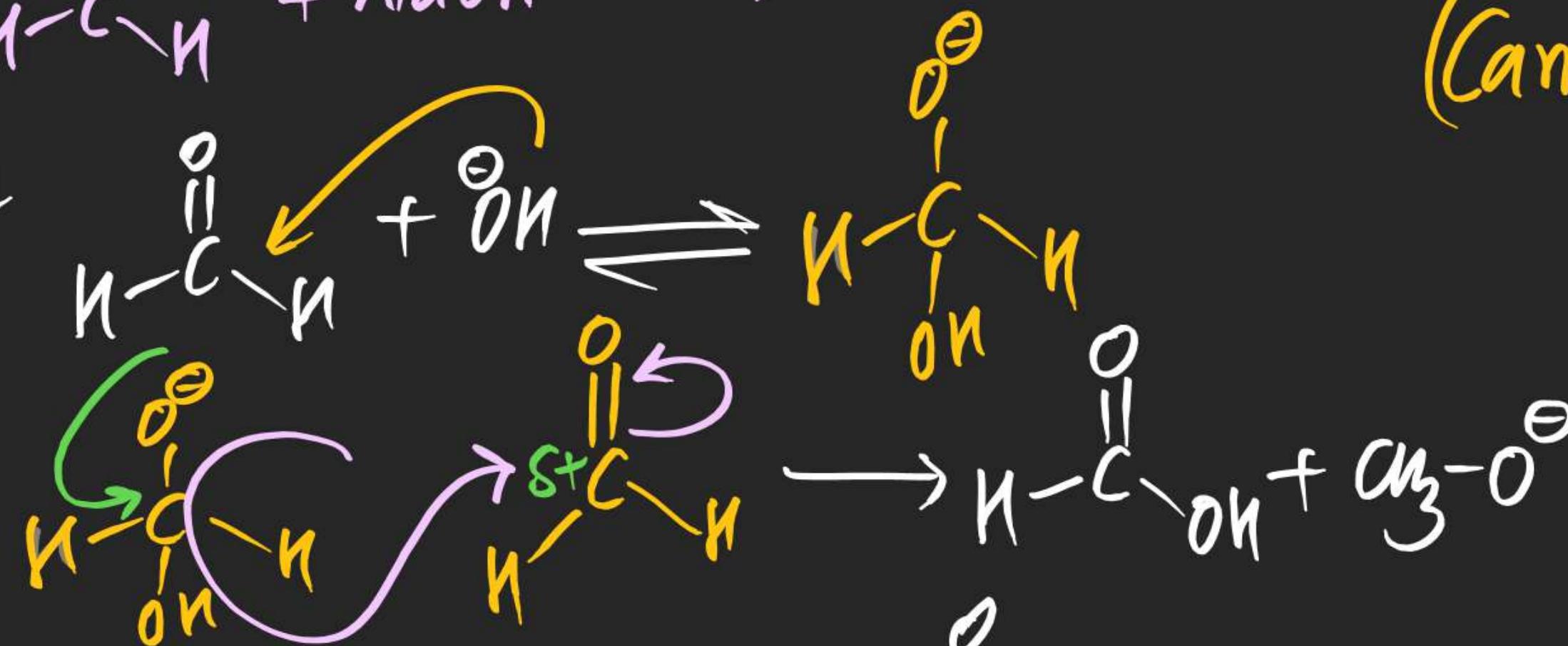


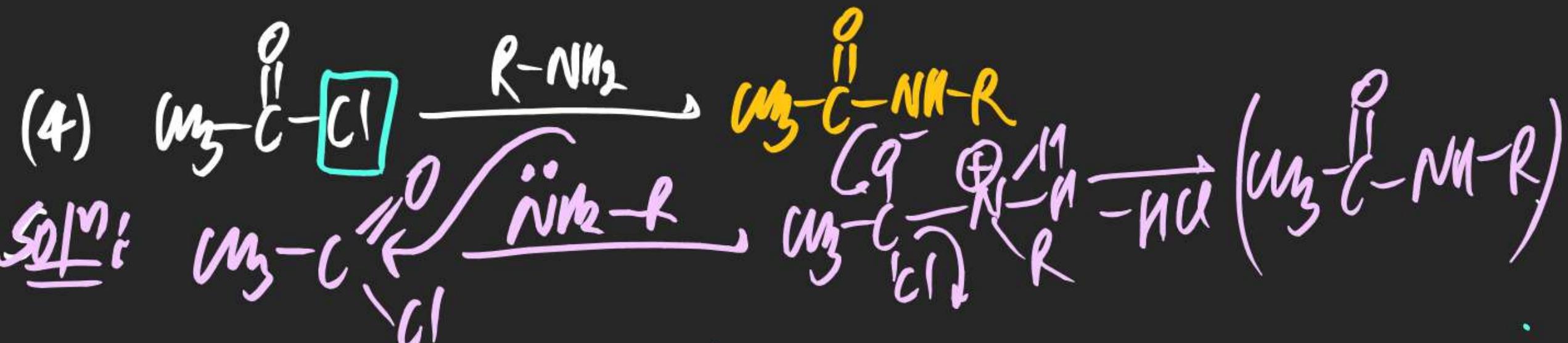
Case(v): When Carbonyl Compound doesn't contain 2 "H".

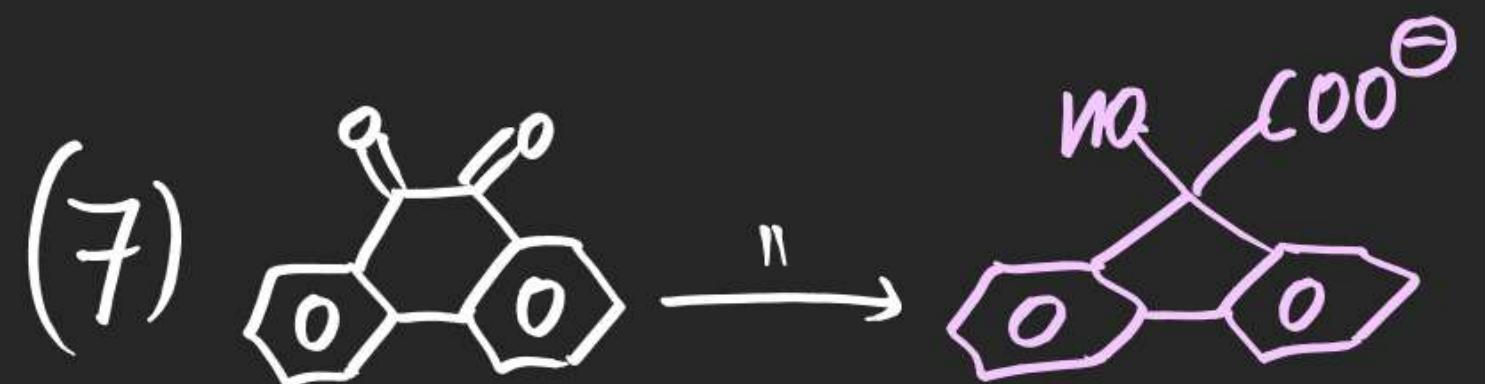
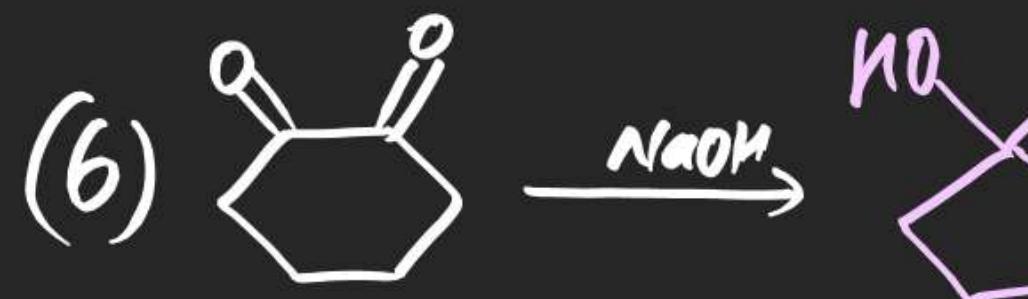
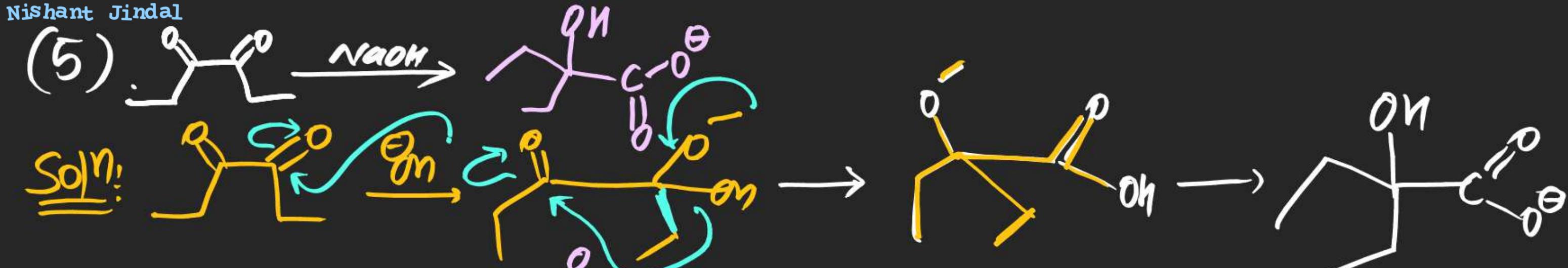


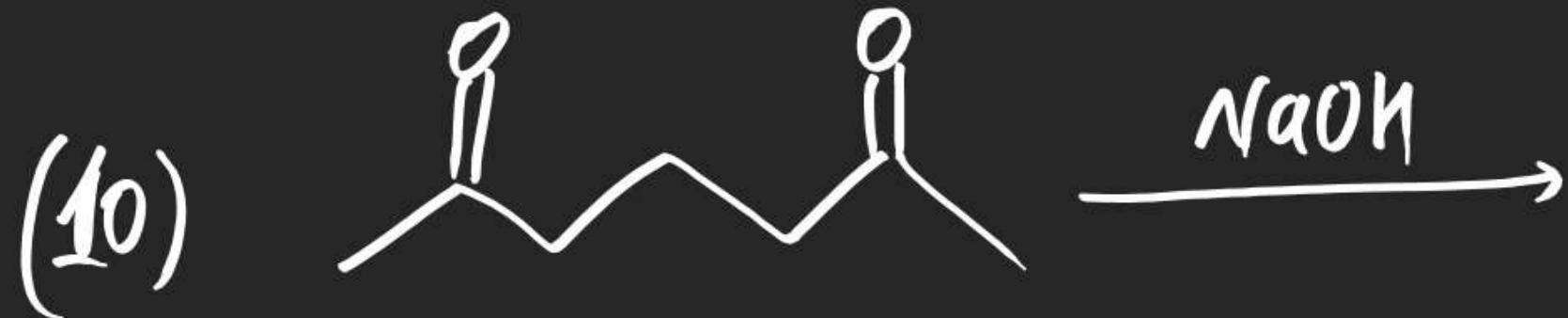
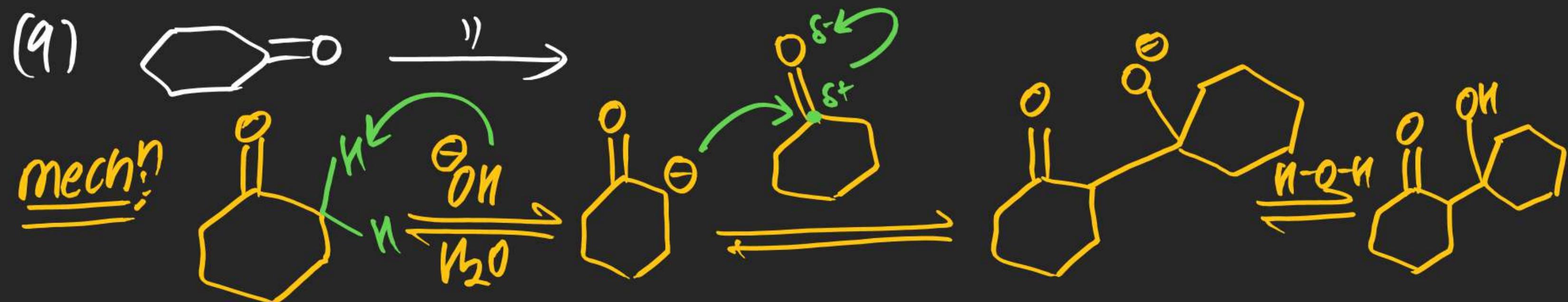
(Cannizaro Rxn)

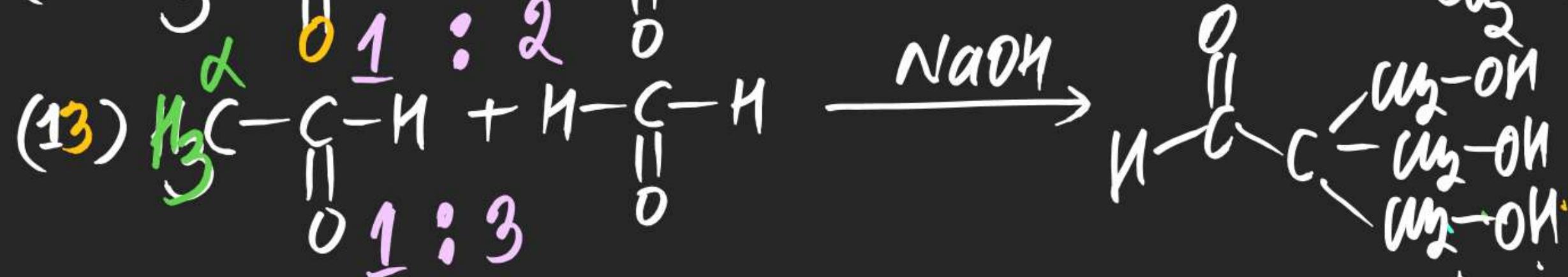
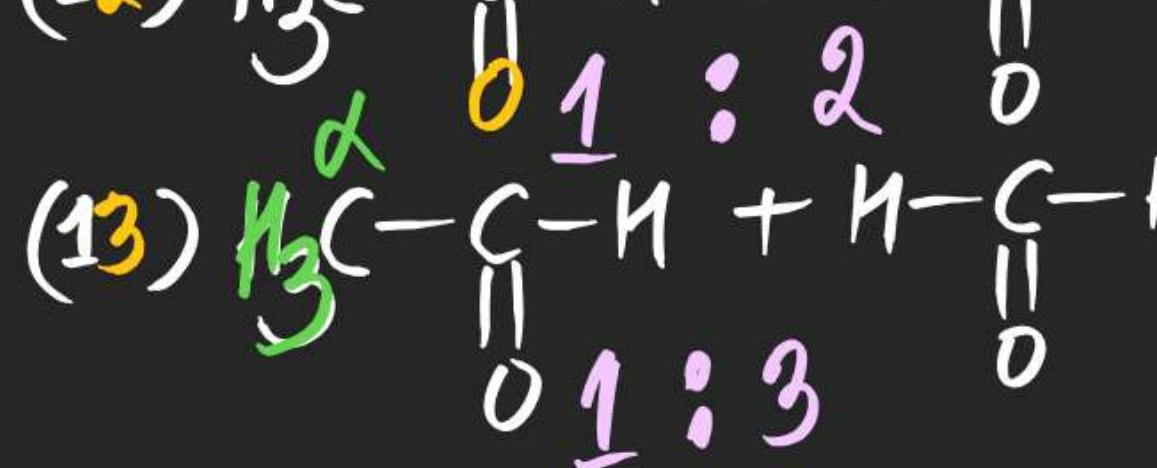
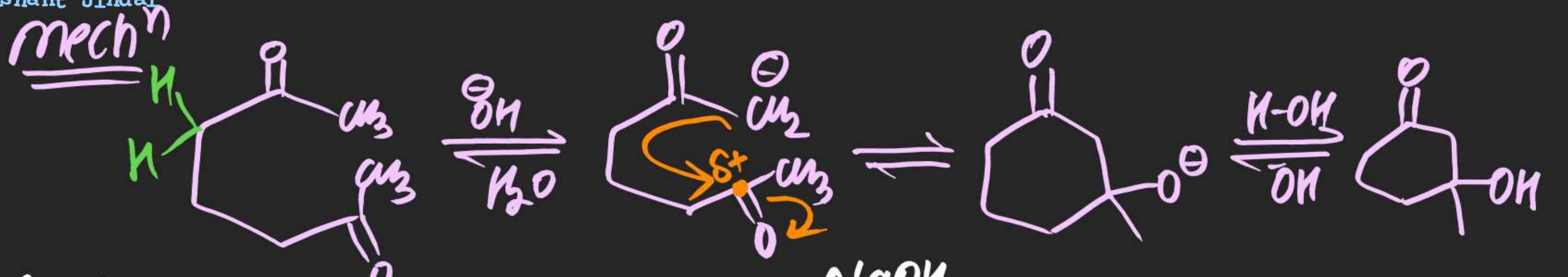
mech^n:

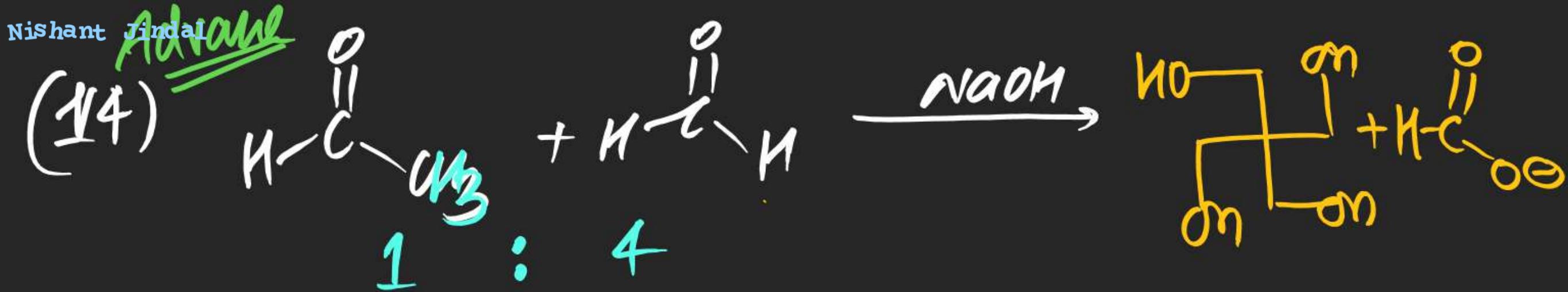
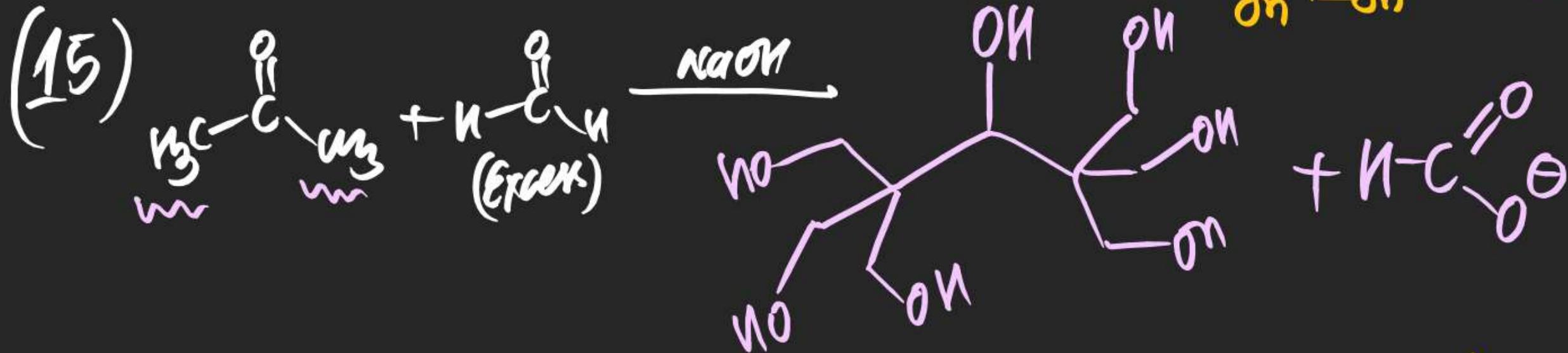
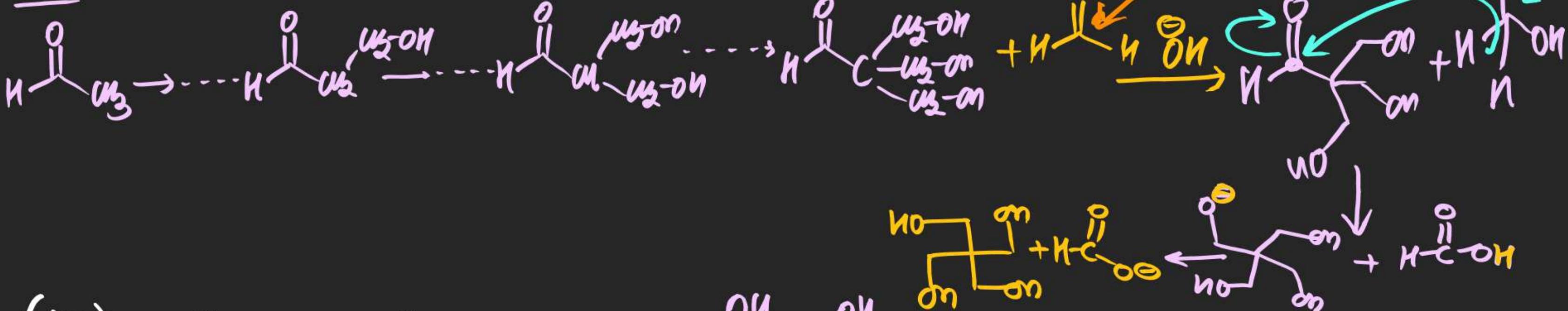


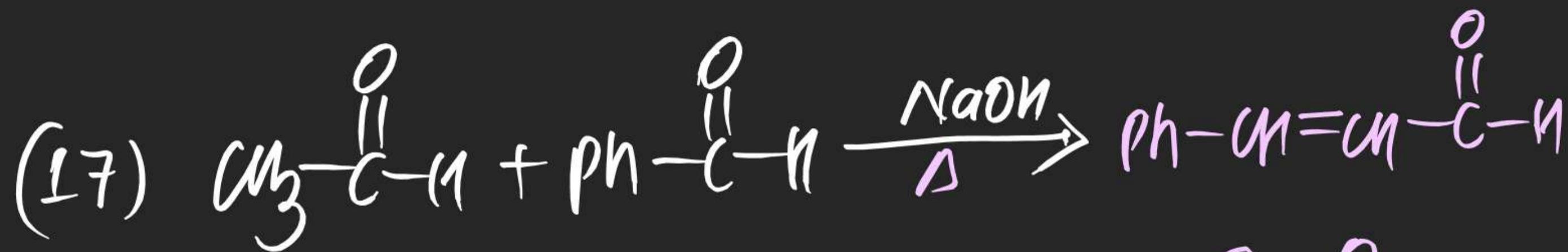


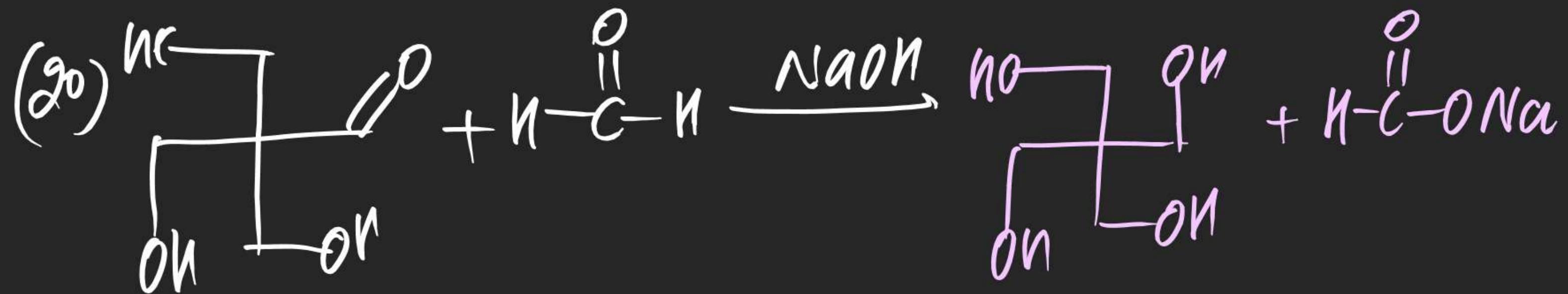
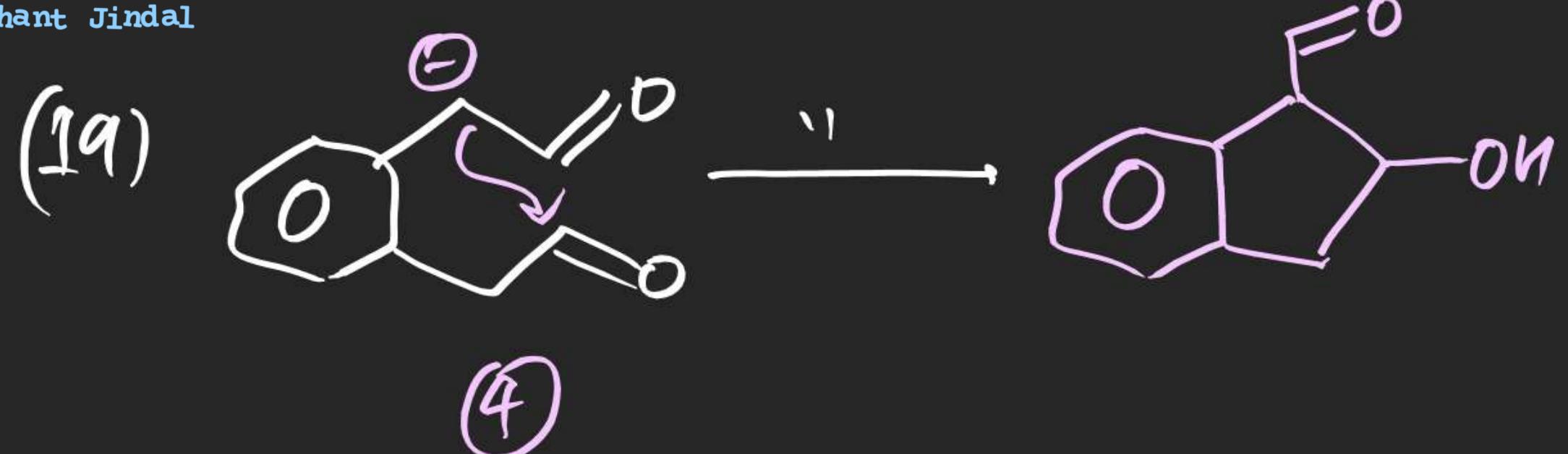






Sol'n:





## (#) Haloform Reaction



$\Rightarrow$  Trihalogen derivative of methane

Ex:  $\text{CHF}_3$ ,  $\text{CHCl}_3$ ,  $\text{CHBr}_3$ ,  $\text{CHI}_3$

## (\*) Iodoform:

$\Rightarrow$  Used as a Antiseptic

~~M.~~ yellow crystal

~~M.~~ Iodoform Test is used in POC  
for distinction of methyl carbonyls  
& methyl carbinols.



$\Rightarrow$  Gradually darken on exposure  
of Sunlight.



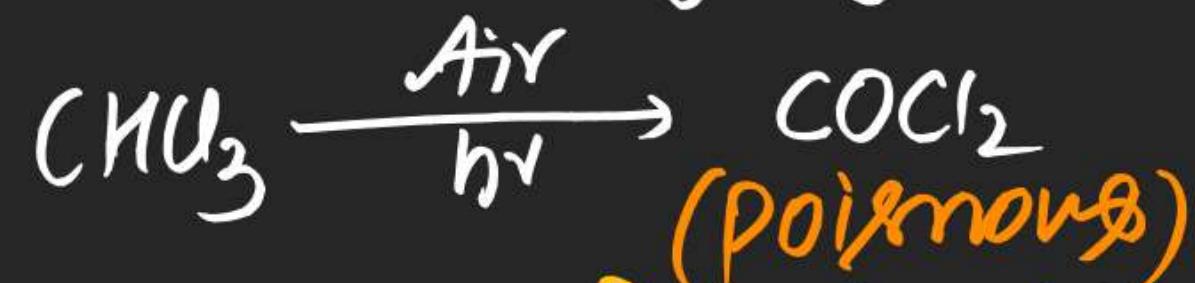
## (\*) Chloroform

$\Rightarrow$  Used as Anesthetic

$\Rightarrow$  Sweet smelling liquid.

$\Rightarrow \text{CHCl}_3$  gets easily oxidised

in to poisonous phosgene gas.



$\Rightarrow$   $\text{CHU}_3$  is stored under higher pressure.

(a) Bottle must be completely filled

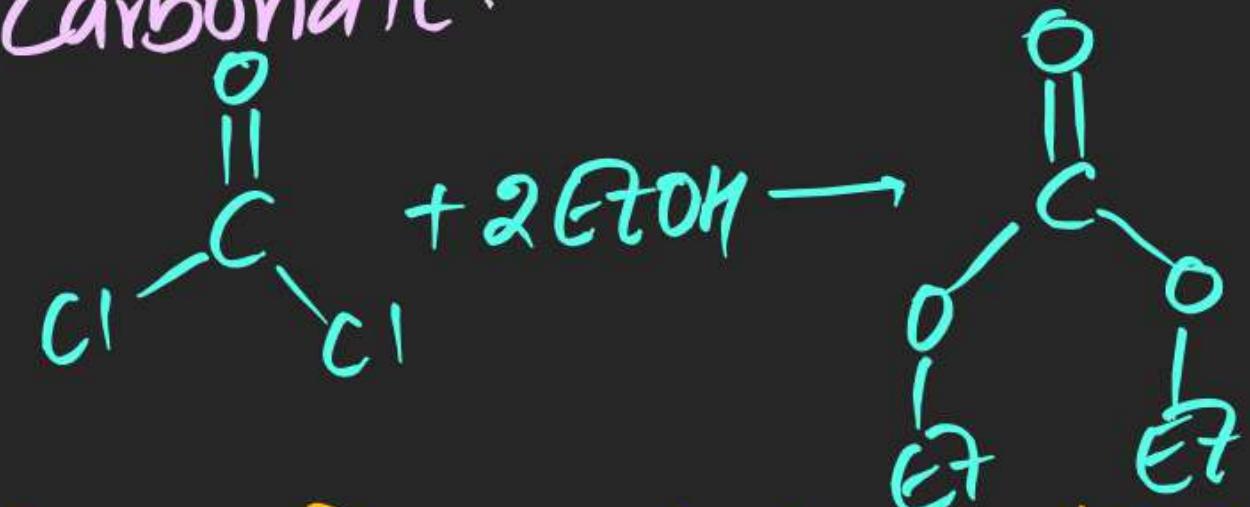


(b) ————— closed

(c) ————— Dark in Color.

(d) Add small instalment of Ethanol  
it converts poisonous  $\text{COCl}_2$  in to

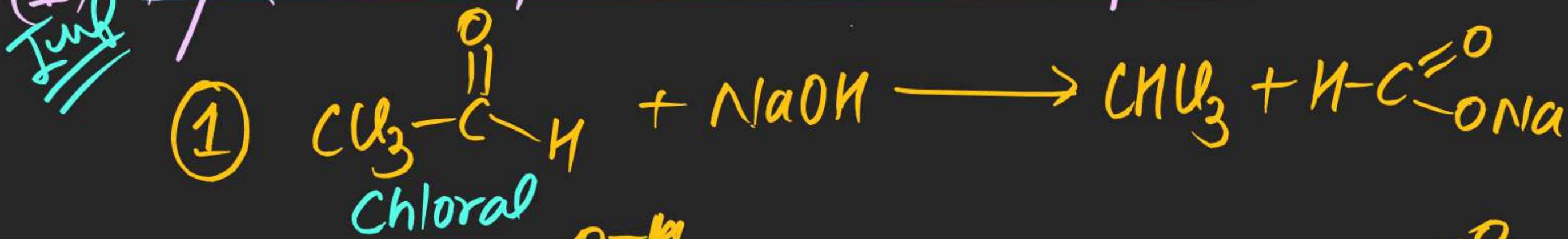
non poisonous Di Ethyl Carbonate.



(Non Poisonous)

# Method of Preparation of haloform:

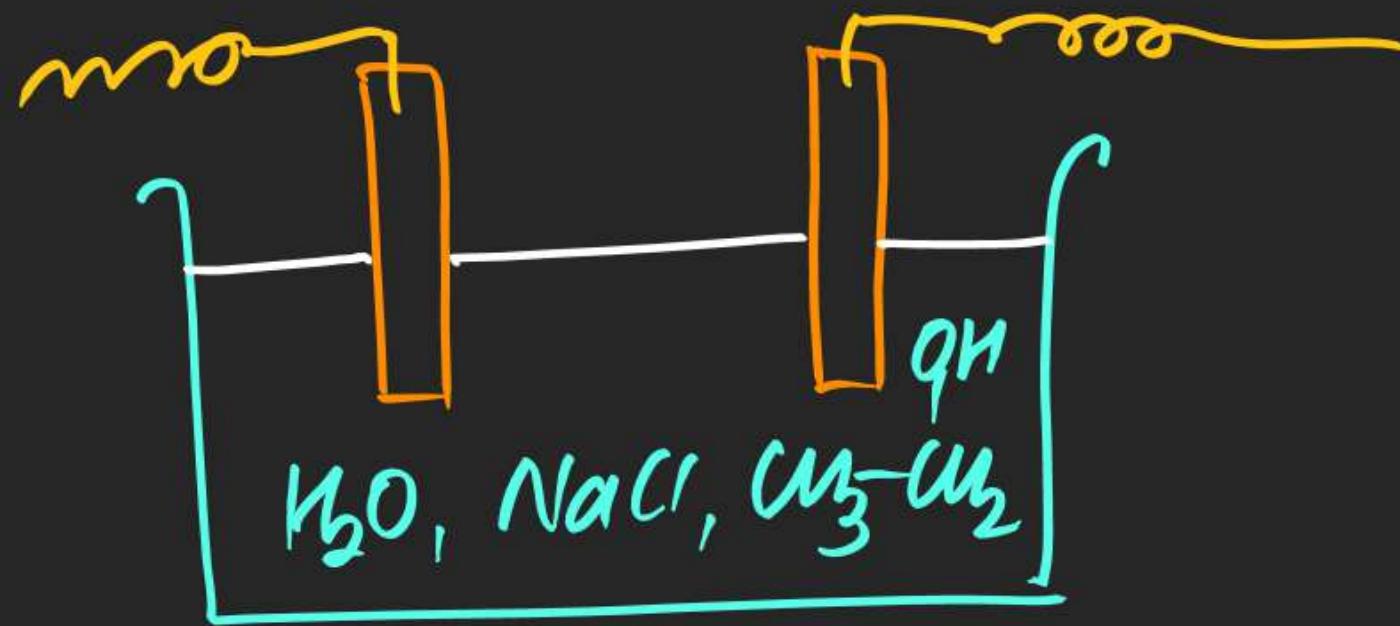
(1) By Reaction of chloral or chloral Hydrate with alkali



(2) By Reaction of Acetone with Bleaching Powder:

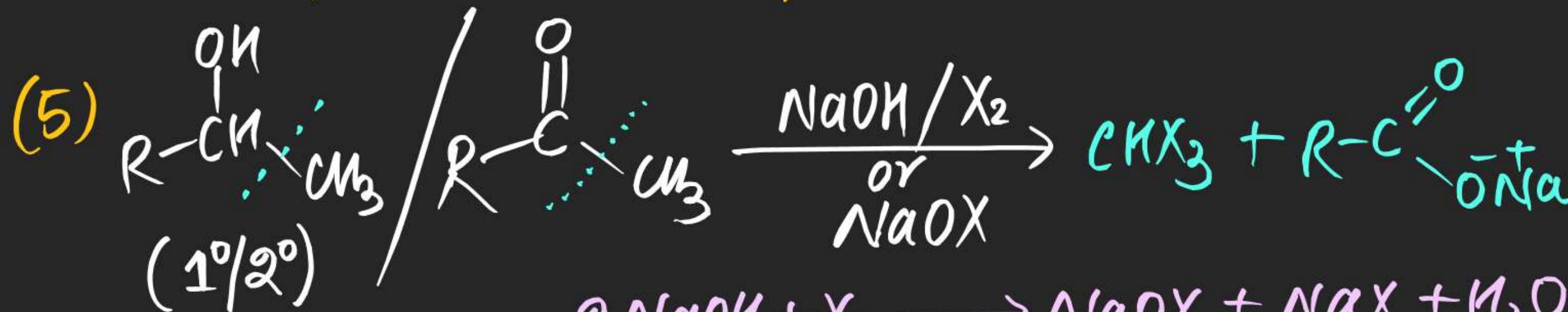


(3) By Electrolysis of Aq Solution of Ethanolic Sodium chloride  
Sodium

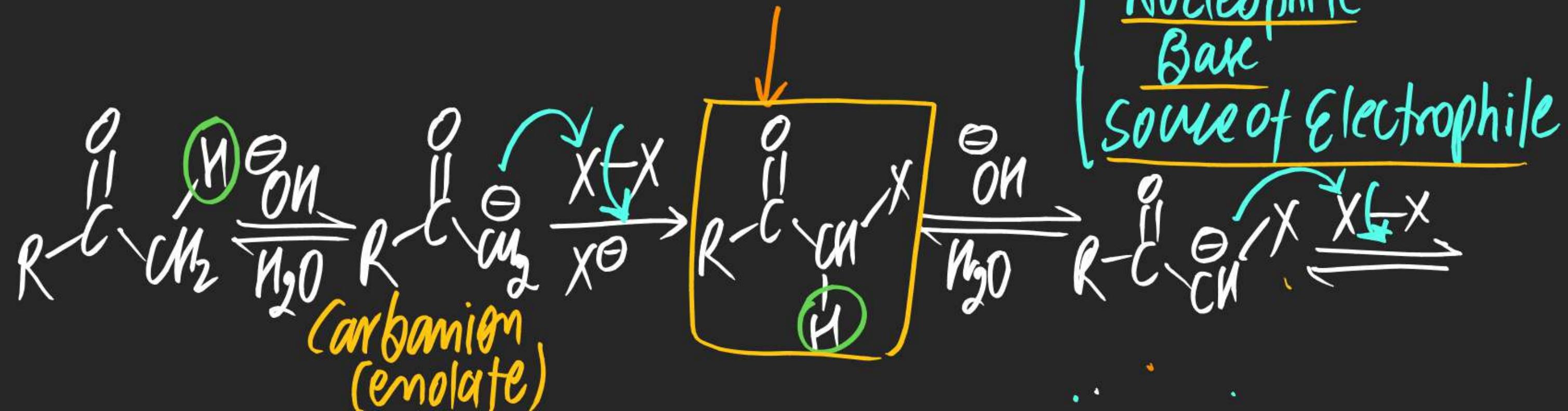
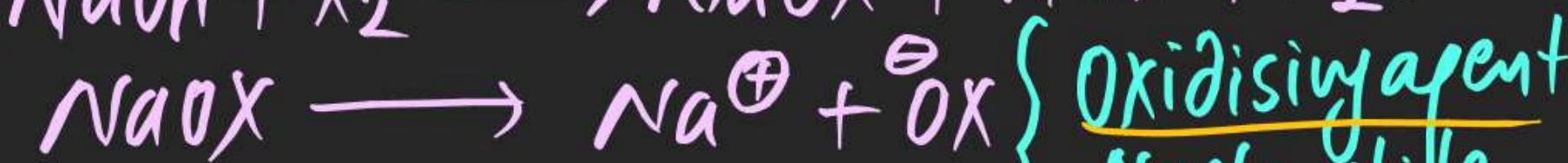


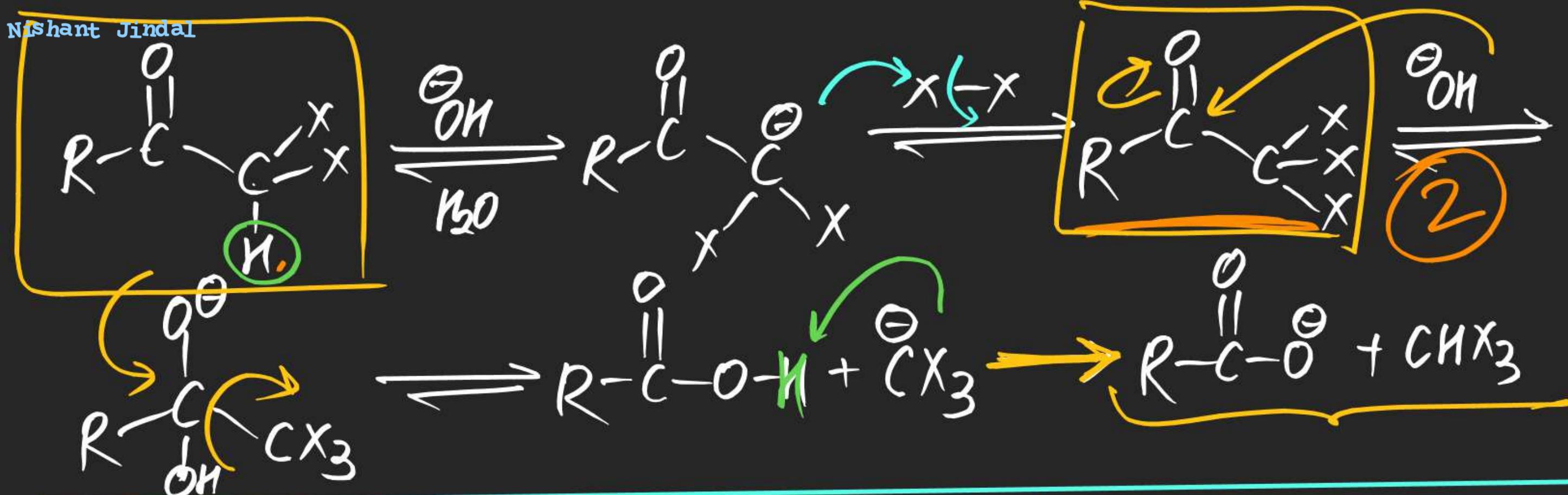
(4)

(4) Reaction of Methyl Carbinol ( $1^\circ/2^\circ$ ) or Methyl Carbonyl with alkaline Solution of  $X_2$ .



Mechanism:



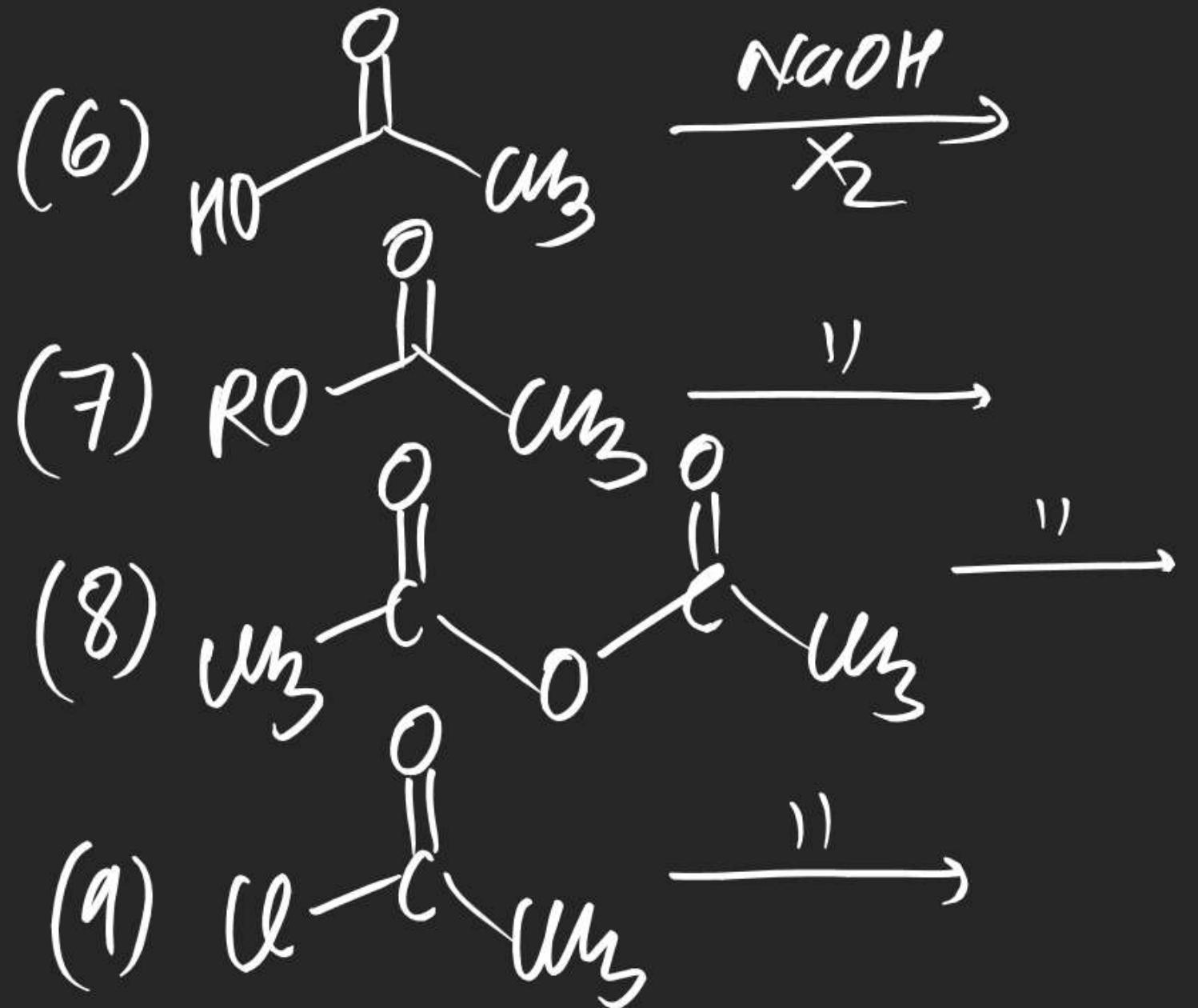


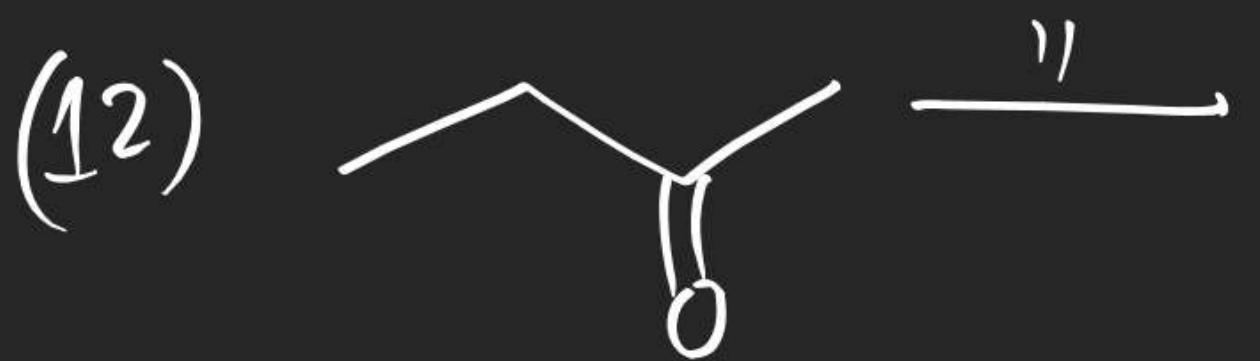
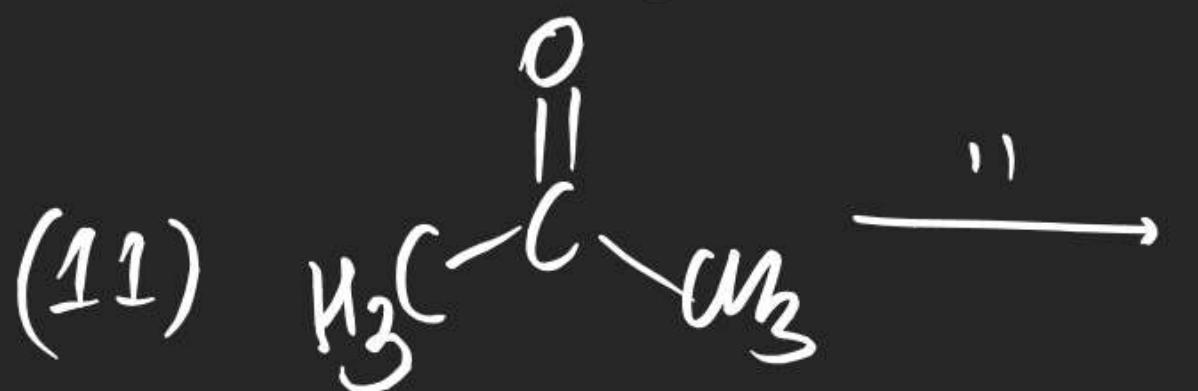
Note (i) Carbanion (Emolate) intermediate

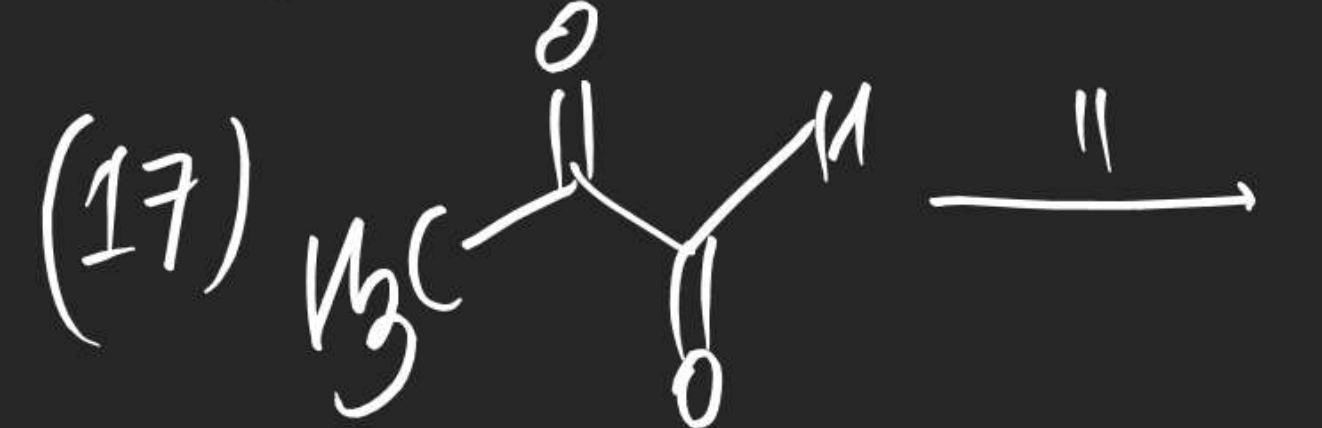
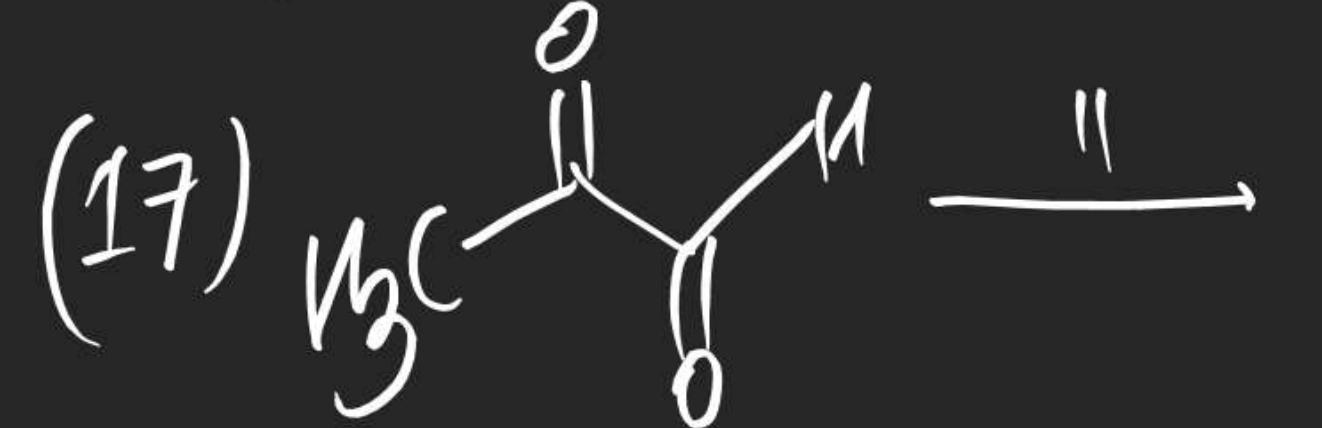
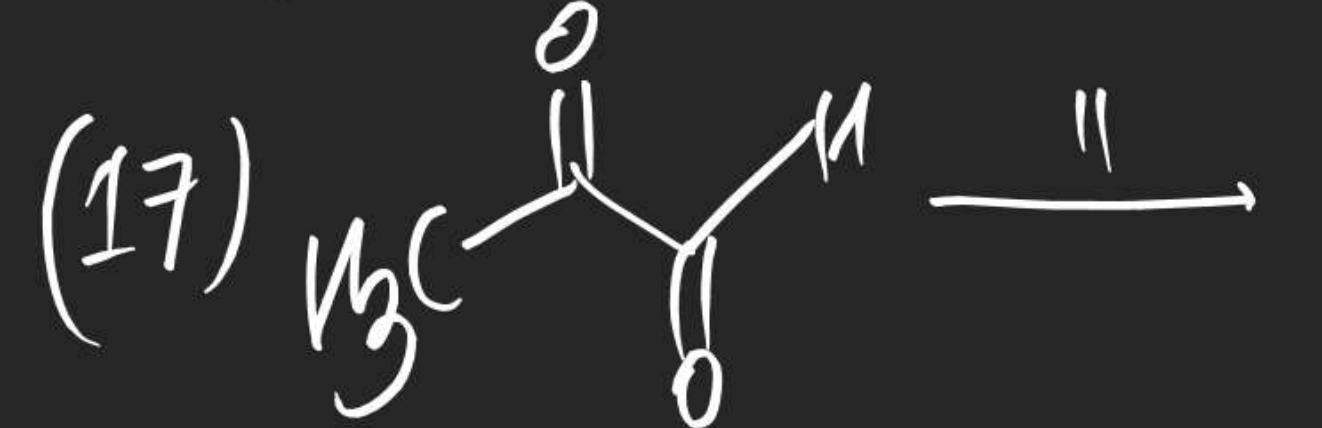
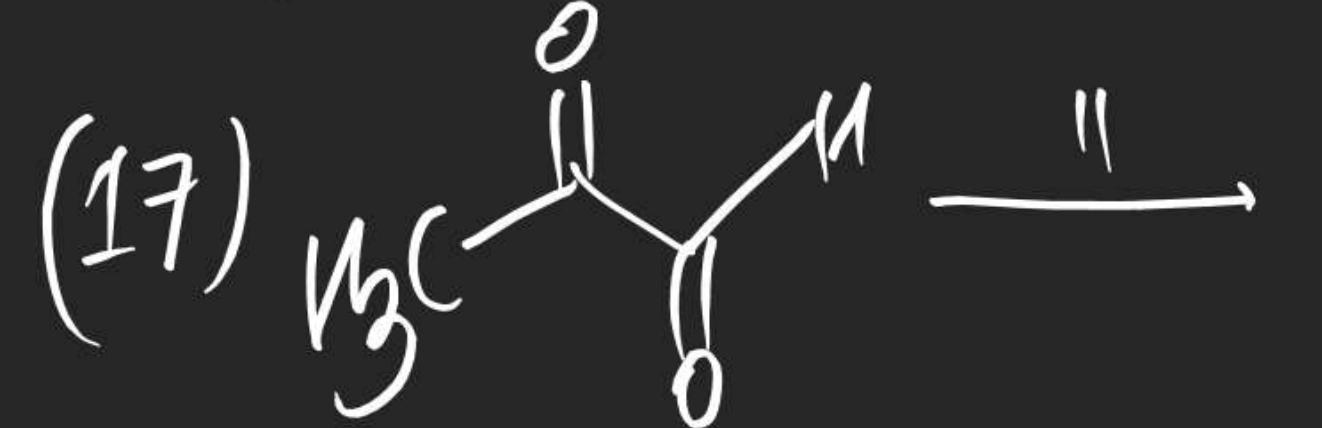
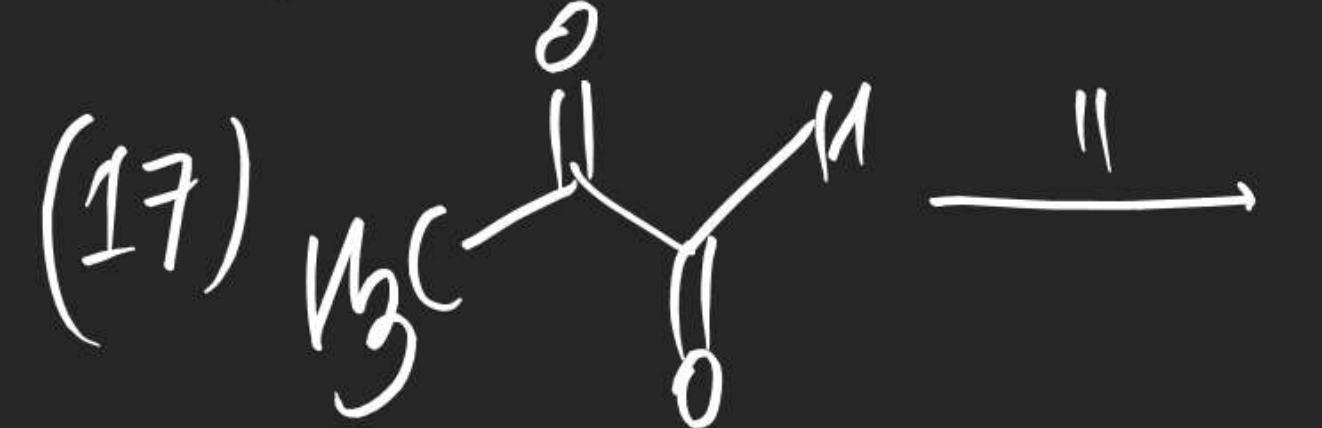
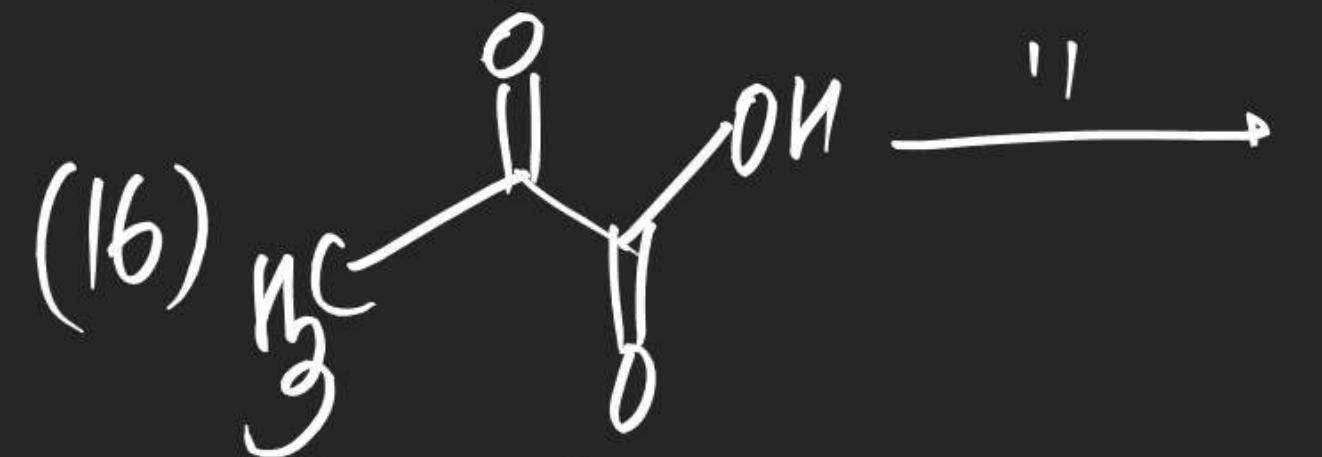
(ii) Oxidation Rxn

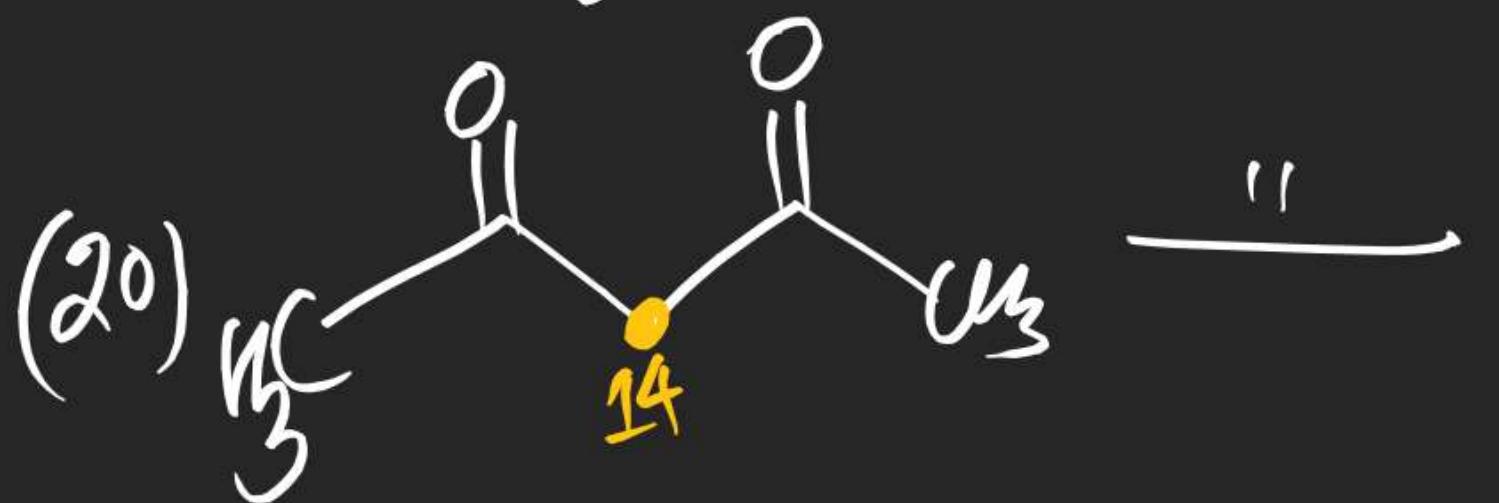
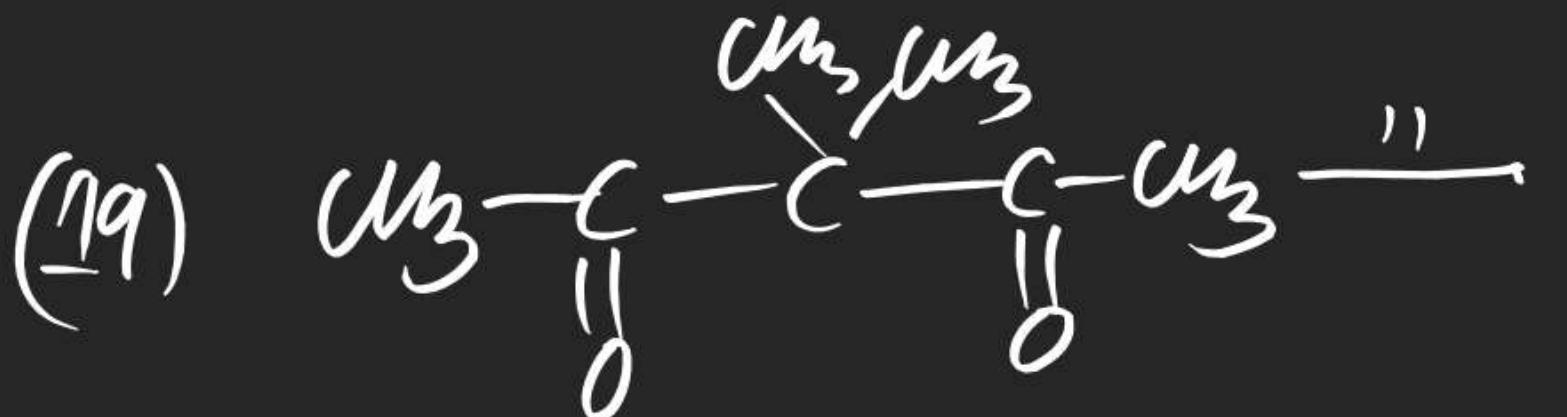
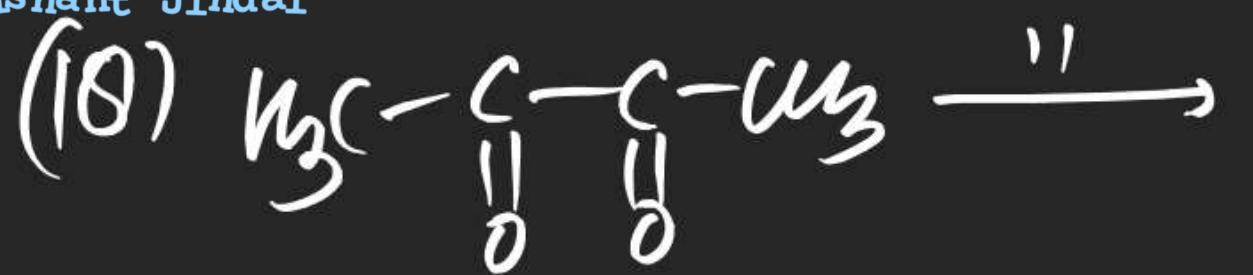
~~most~~ (iii) Reaction is throughout selectively hence monohalogenation  
Dihalogenated & Trihalogenated product never can be

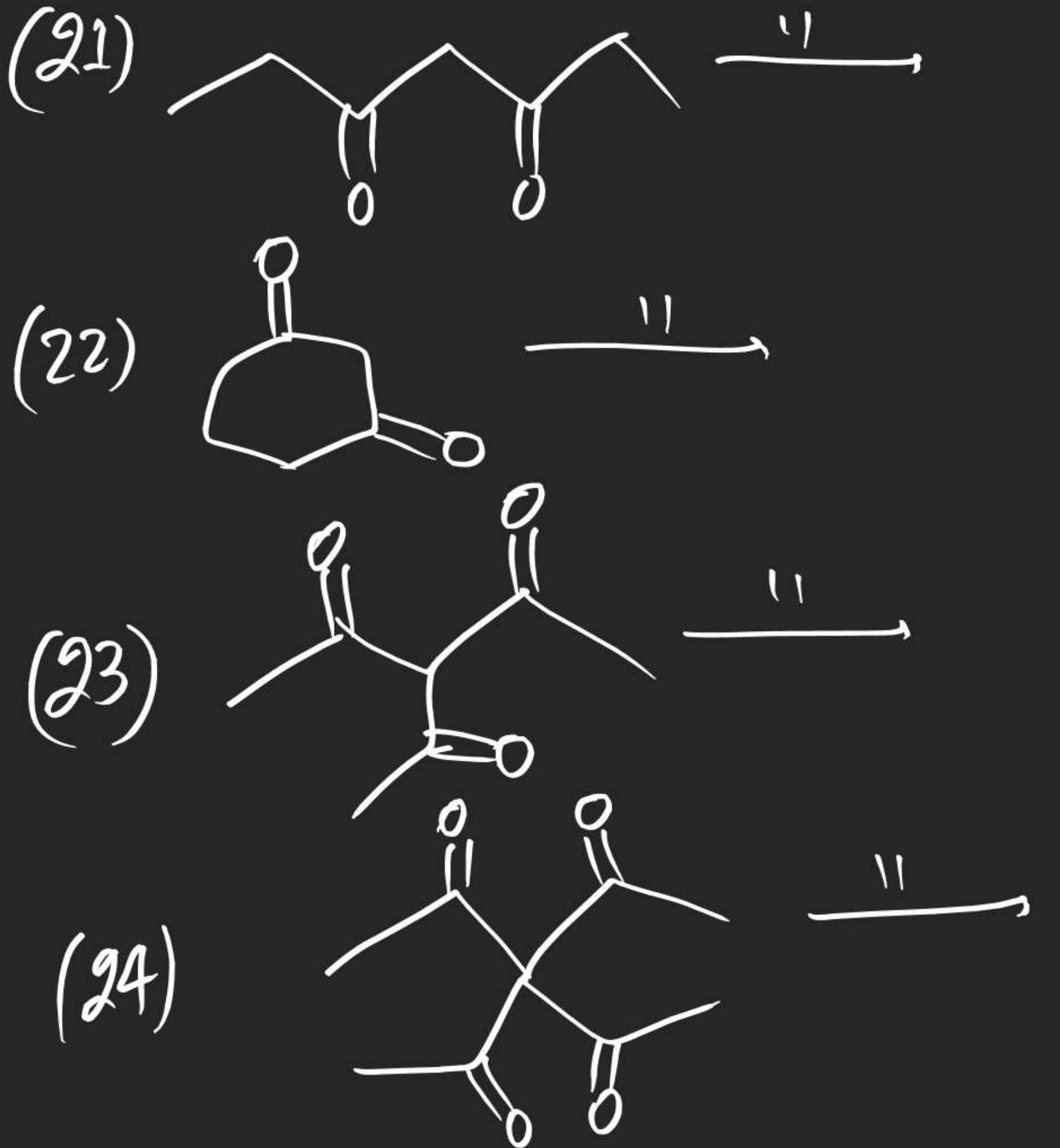
isolated in Basic condn.

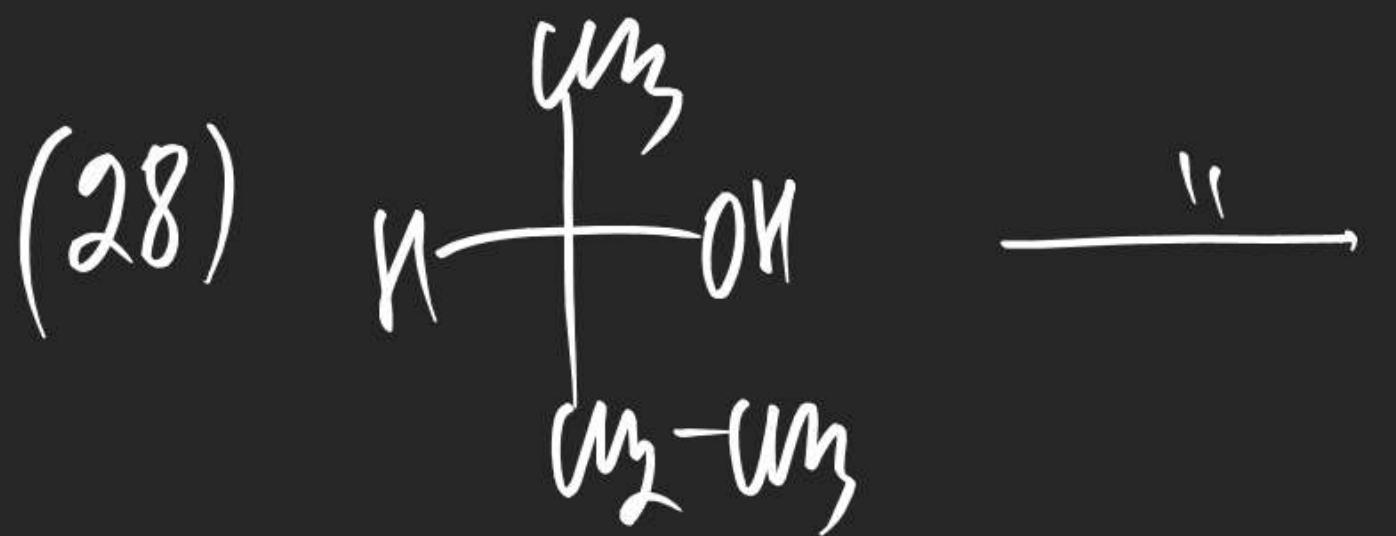
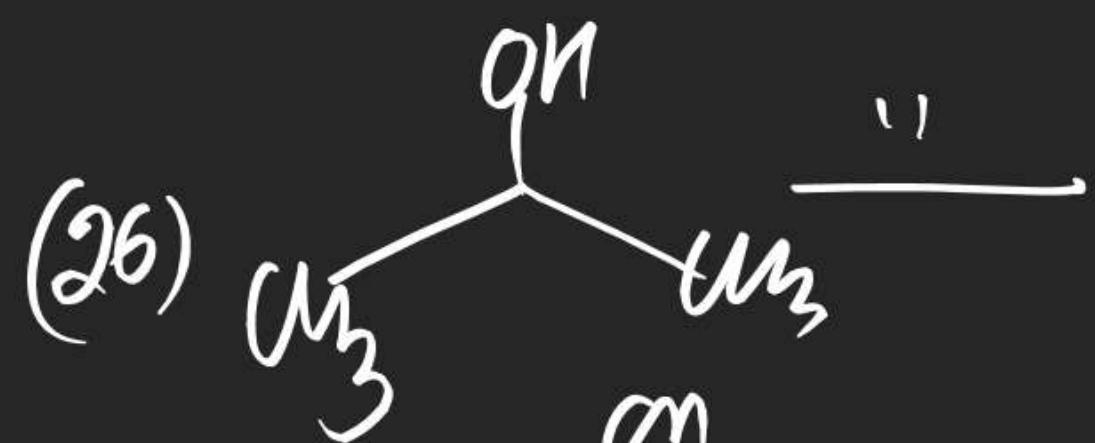


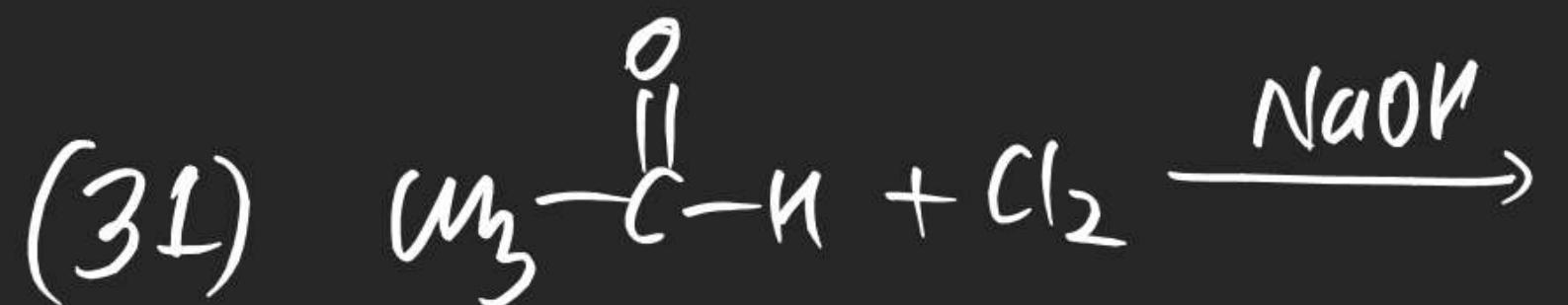












(H) Acid Catalysed Halogenation :-