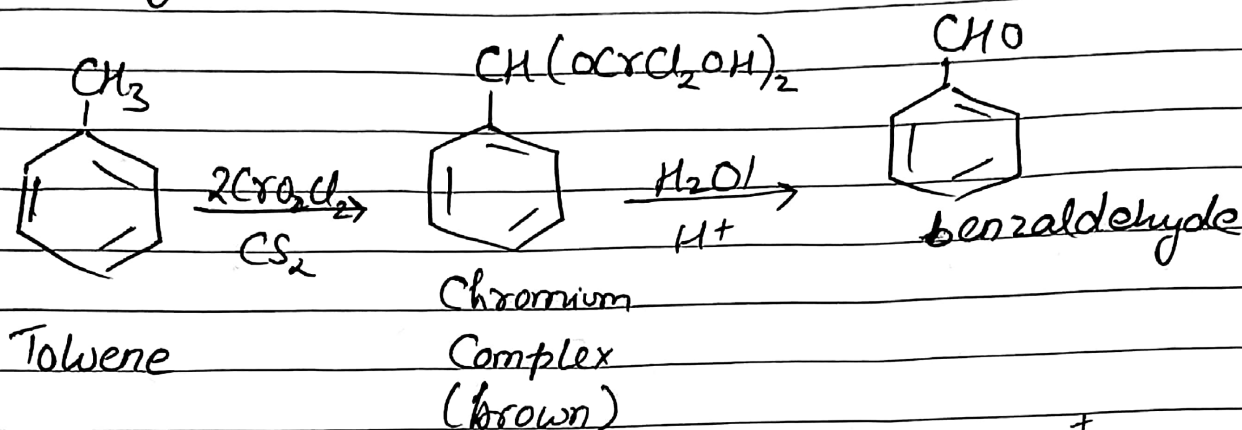


# Aldehydes & Ketones - 04

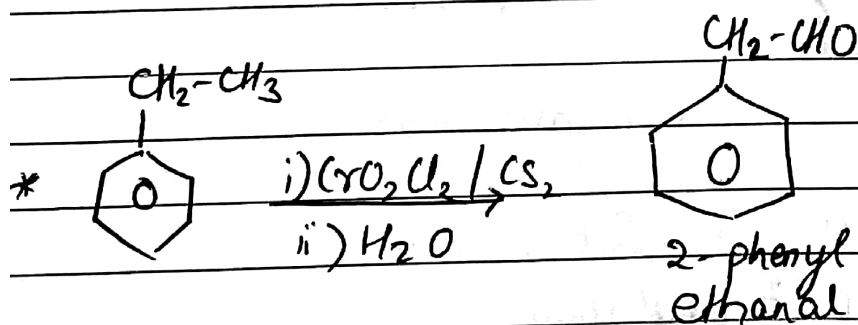
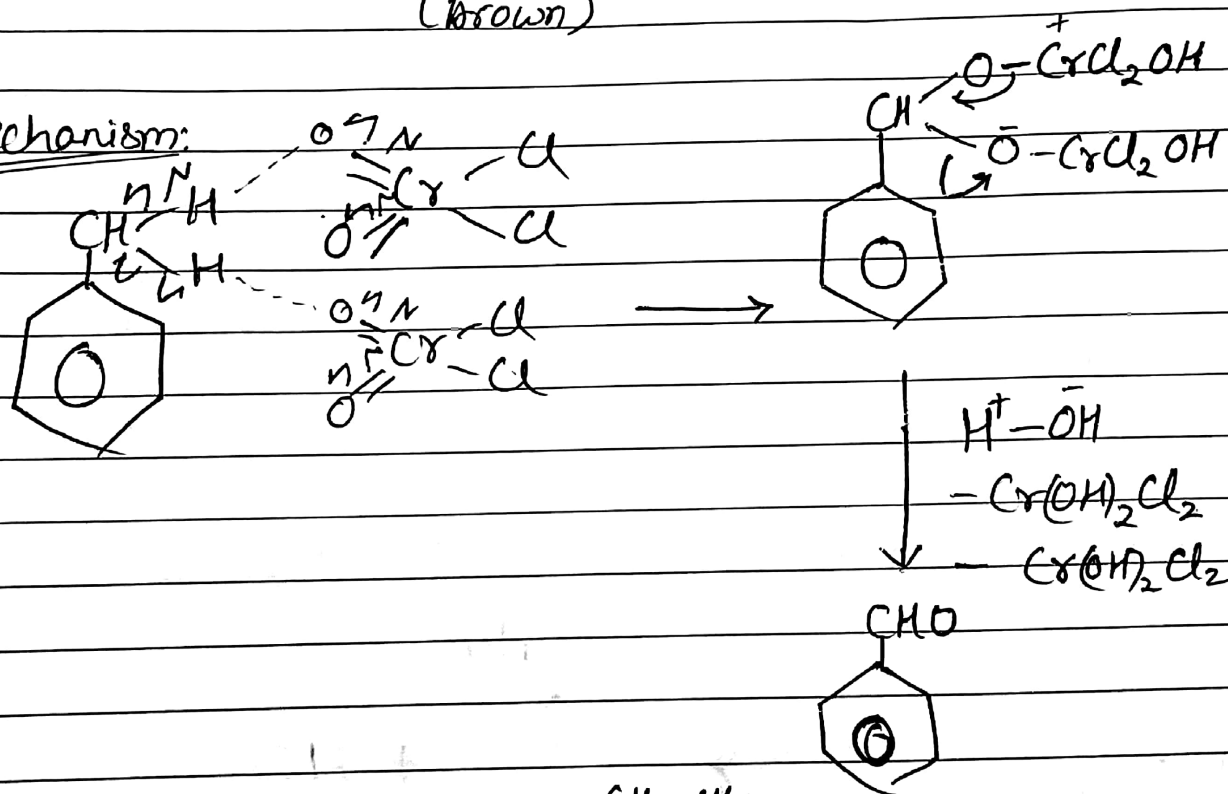
## Preparation of Aldehydes - 2 (Benzaldehyde)

① From Methylbenzene  $\therefore$  By controlled oxidation  
(partial)

a) Using chromyl chloride ( $\text{CrO}_2\text{Cl}_2$ ): Etard's Reaction

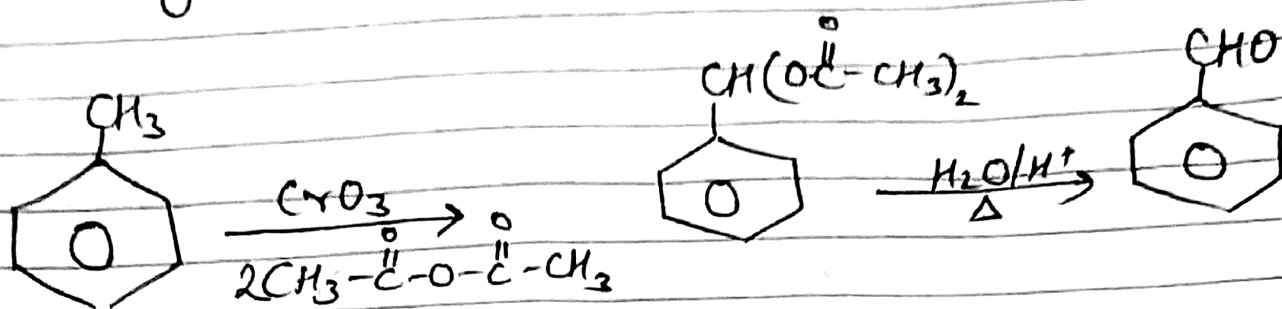


Mechanism:

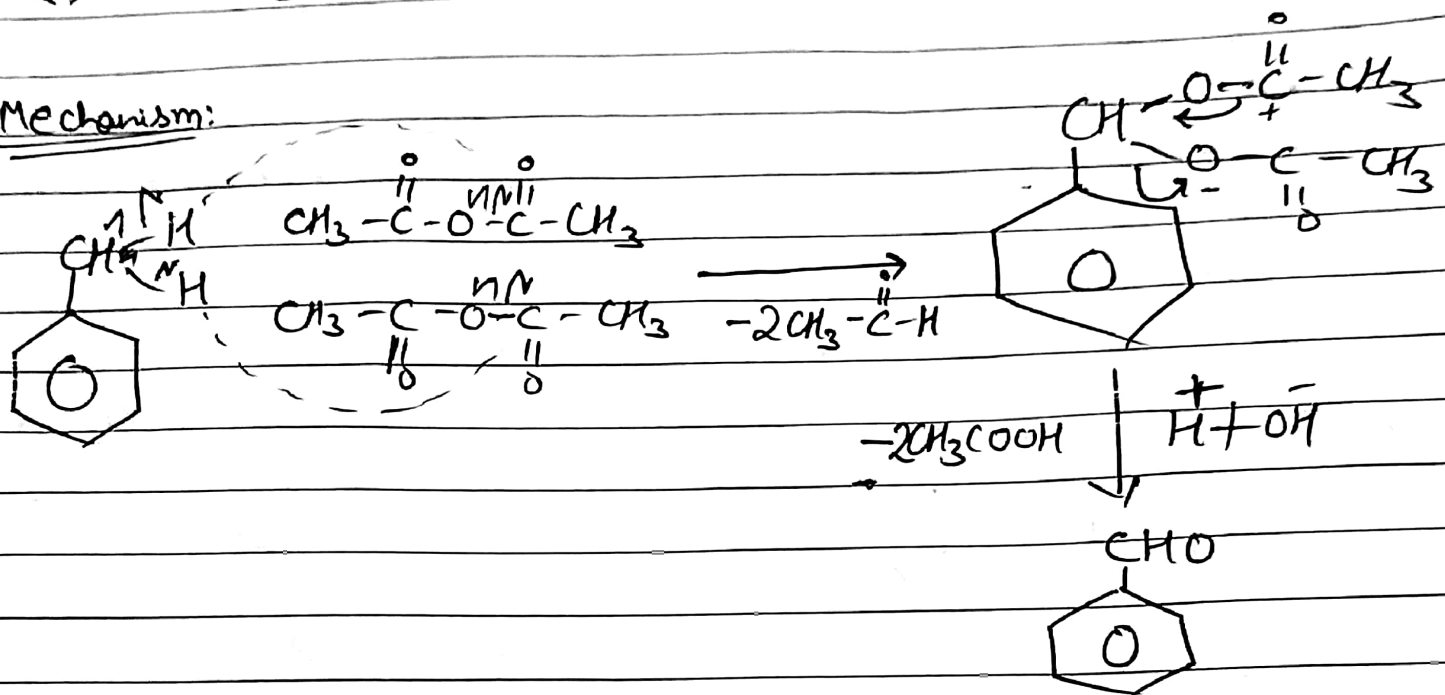


in case side chain  
contains group higher  
than  $\text{-CH}_3$  group,  
the end carbon atom  
is oxidised to  $\text{CHO}$

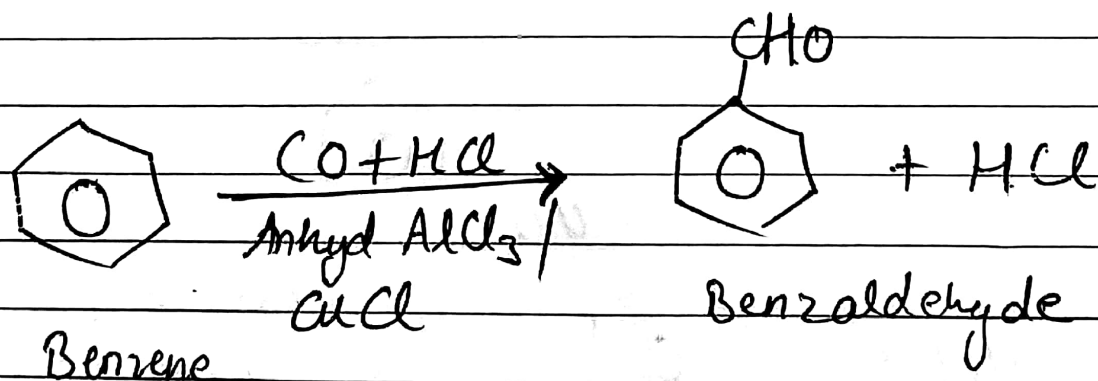
b) using chromic oxide  $\text{CrO}_3$  in presence of acetic anhydride



Mechanism:

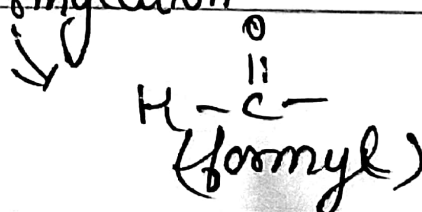


ii) From Benzene  $\rightarrow$  Gatterman-Koch Reaction

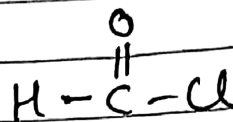
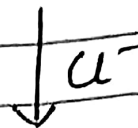
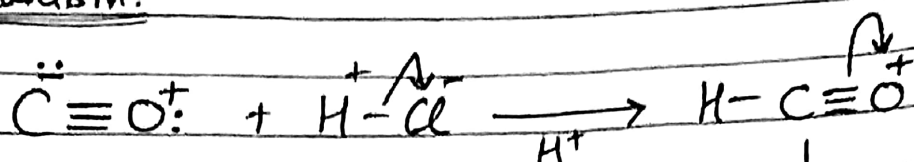


(Electrophilic Substitution)

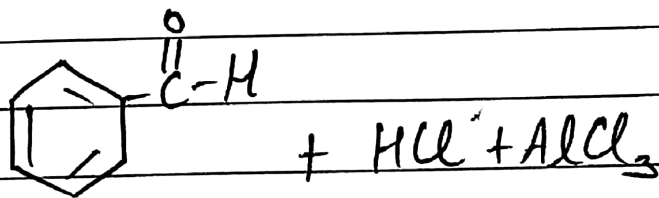
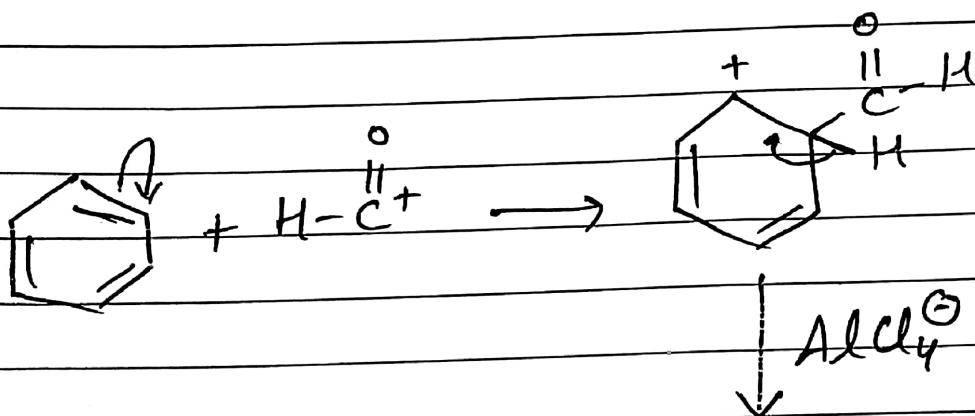
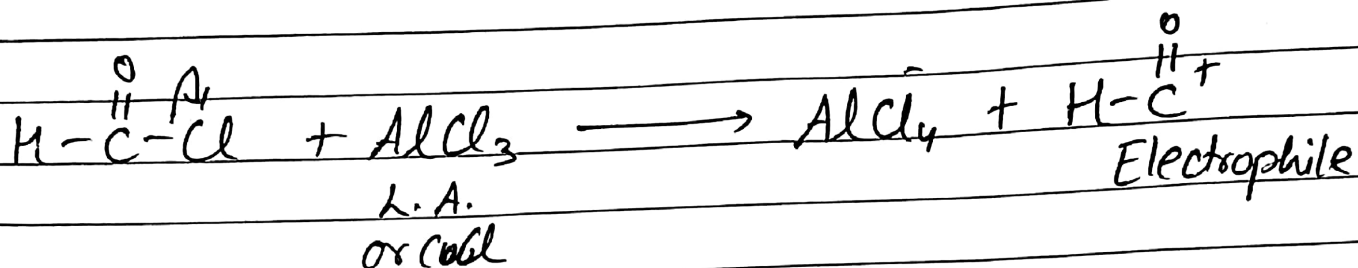
Friedel Craft Acylation



Mechanism:



methanoyl chloride  
(formyl chloride)



Overall reaction

