

Sub. : Chemistry .

B.Sc. Part II (Hons.)

Group "A"

Topic : Name Reactions and
their Mechanism .

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Maharaja college, Ara

Chemistry

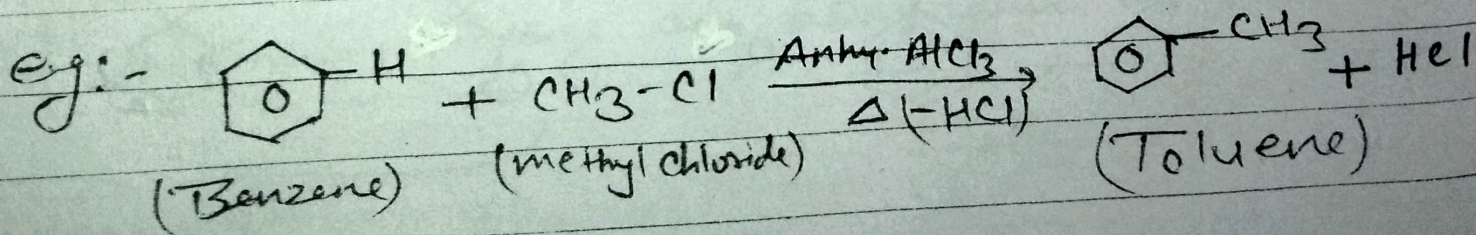
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Paper: III C

Date: 21/02/2020

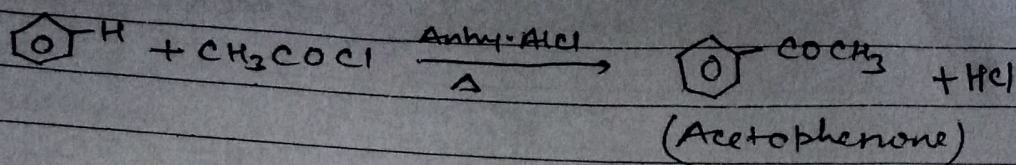
Friedel-Craft Reaction: — This reaction is used

for introducing (addition) an alkyl (R-) or an acyl (R-CO-) group into an aromatic compound in presence of anhydrous aluminium chloride is called Friedel-Craft reaction.

on this $2K^{\text{th}}$ aromatic compound is heated with alkyl halide or acyl halide in presence of anhydrous aluminium chloride to give alkyl or acyl substituted products.



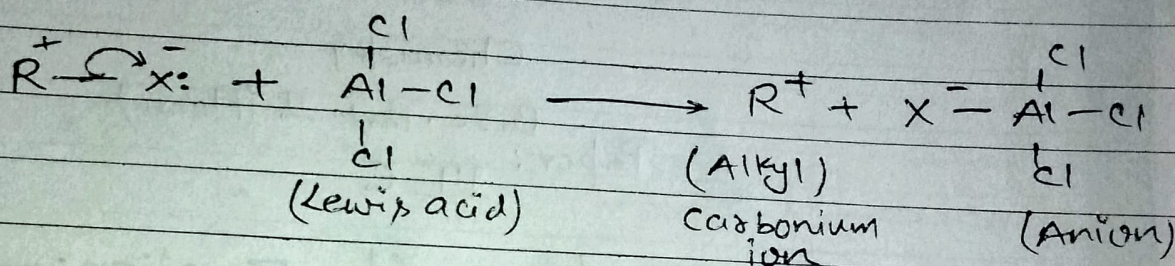
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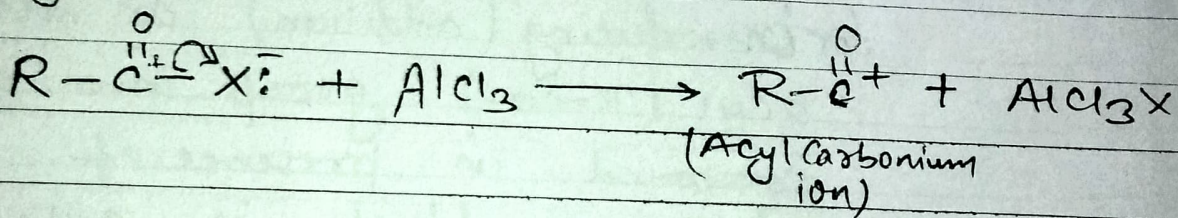
Mechanism: — This rxn takes place in following steps.

⇒ Step-I → formation of electrophile.

Alkylation:—

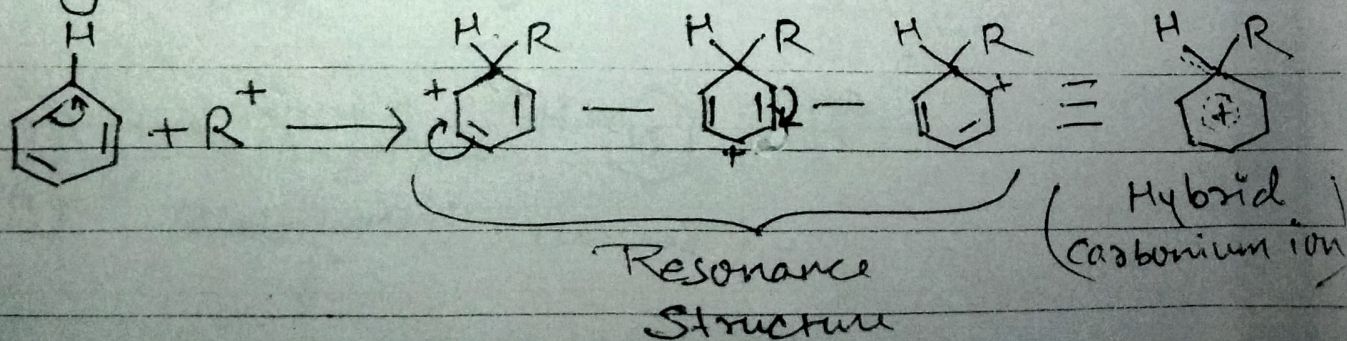


Acylation:—

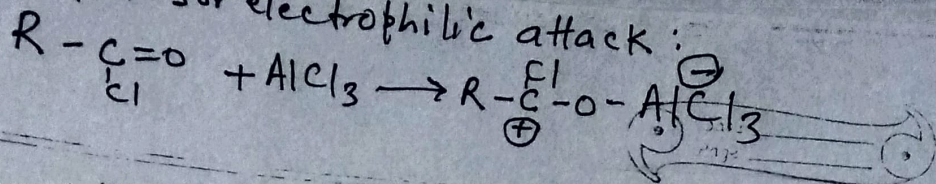


⇒ Step-II → Attack of electrophile on aromatic system.

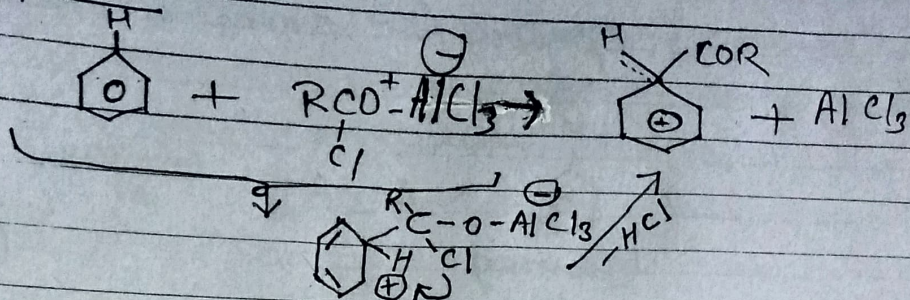
Alkylation:—



3) complex for electrophilic attack:

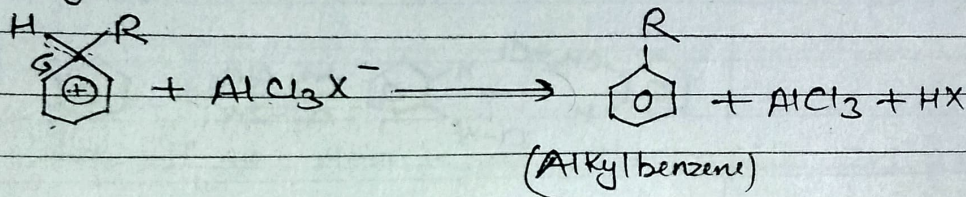


Acylation:-

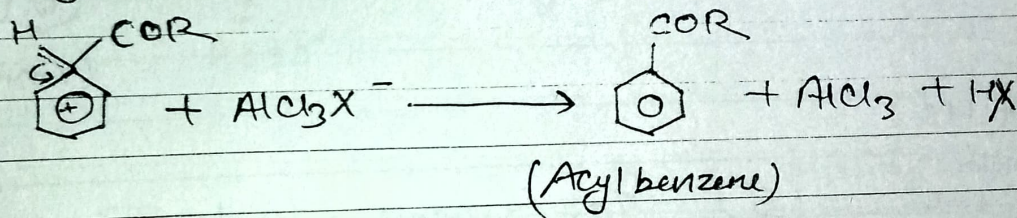


⇒ Step- III → Loss of proton to give substituted product

Alkylation:-



Acylation:-



→ X ←