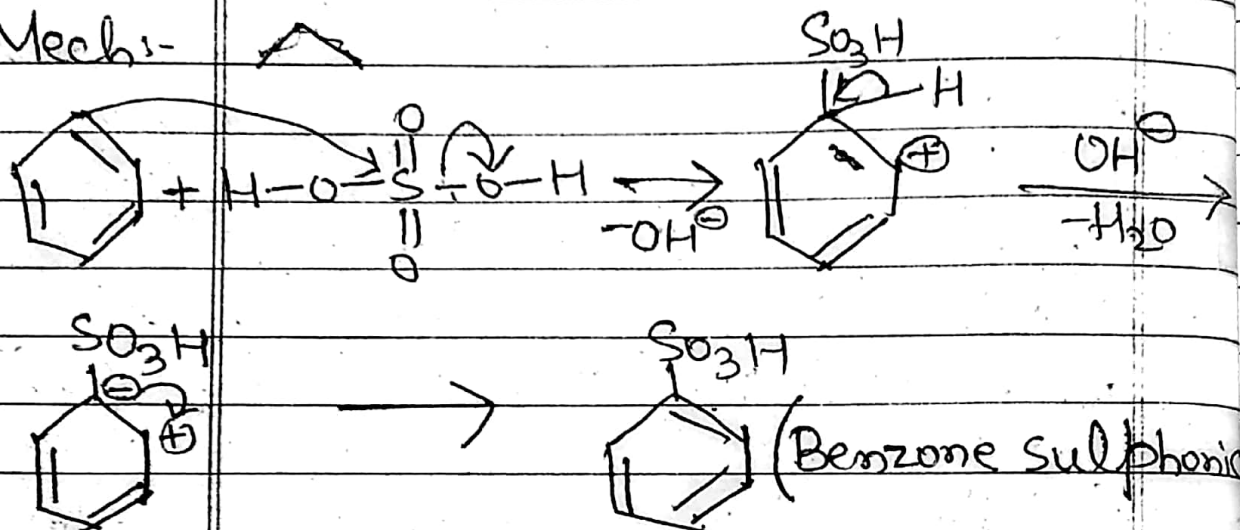


(i) With Sulphonate (addition of sul acid SO_3H)

When benzene react with H_2SO_4 then form benzene Sulphonic acid

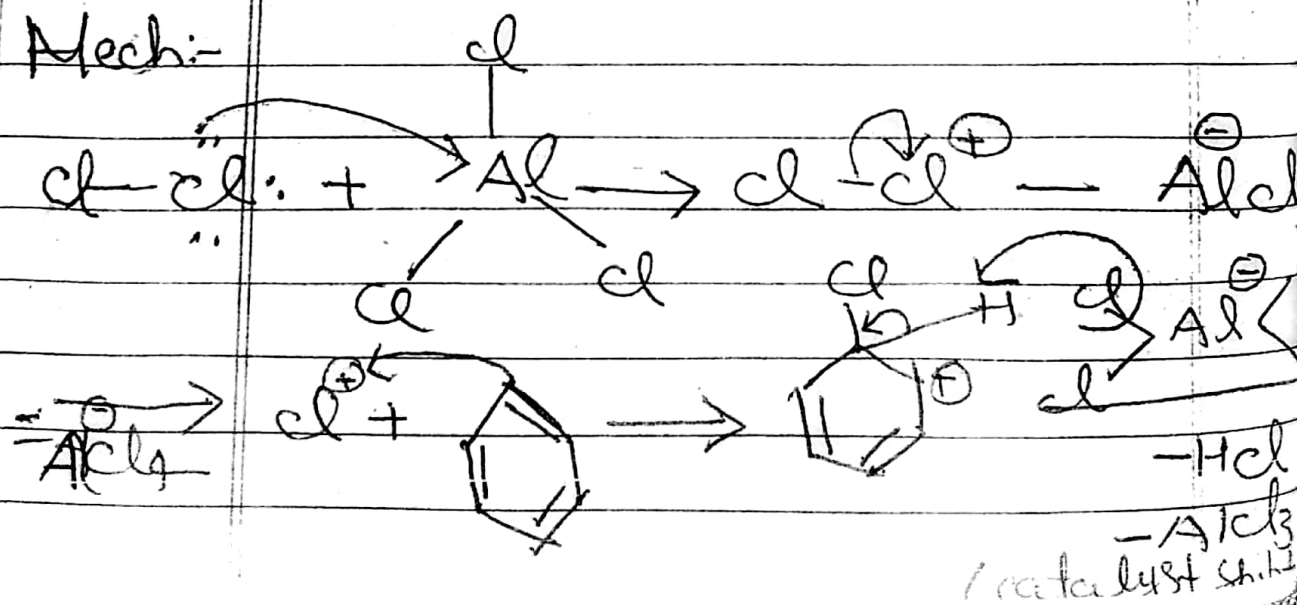
Mech:-

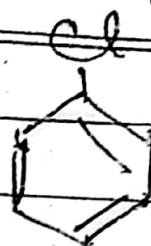


(ii) Halogenation (addition of Hal)

- When benzene react with halogen in presence of metal or metal salt then form halo benzene

Mech:-





Chloro benzene

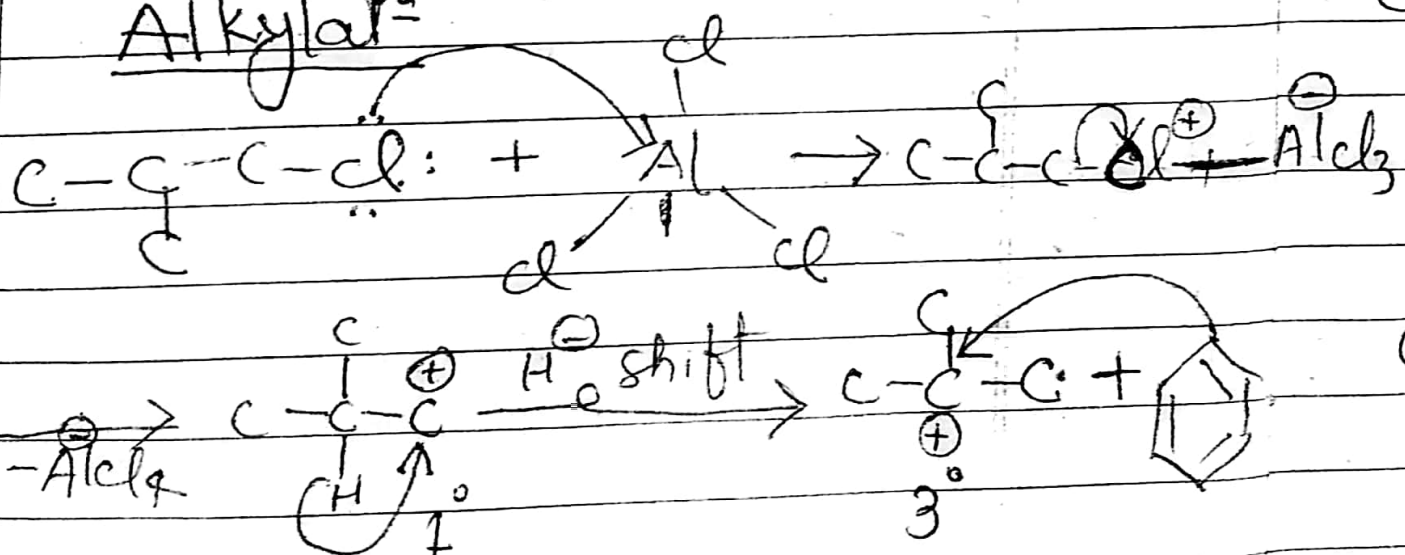
Friedel Craft rxn

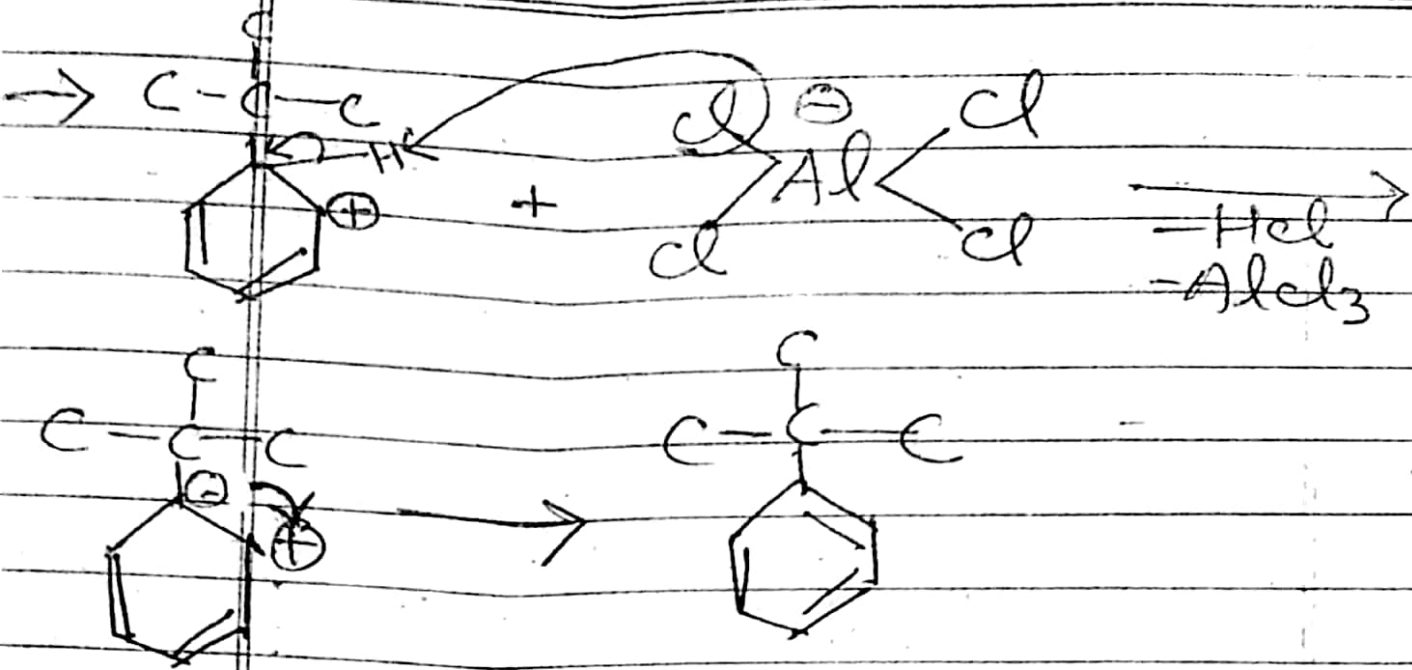
- When benzene react with chlorinated compd. (compound containing chlorine in presence of anhydrous $AlCl_3$, $ZnCl_2$, $FeCl_3$ etc) then undergoes alkylatⁿ (additⁿ of alkyl group) and acylatⁿ (additⁿ of acyl group)

- Alkylatⁿ obey carbocation stability and rearrangement rxnⁿ but acylatⁿ does not obey carbocation stability and rearrangement rxnⁿ

Mech:

Alkylatⁿ





* Acylation

