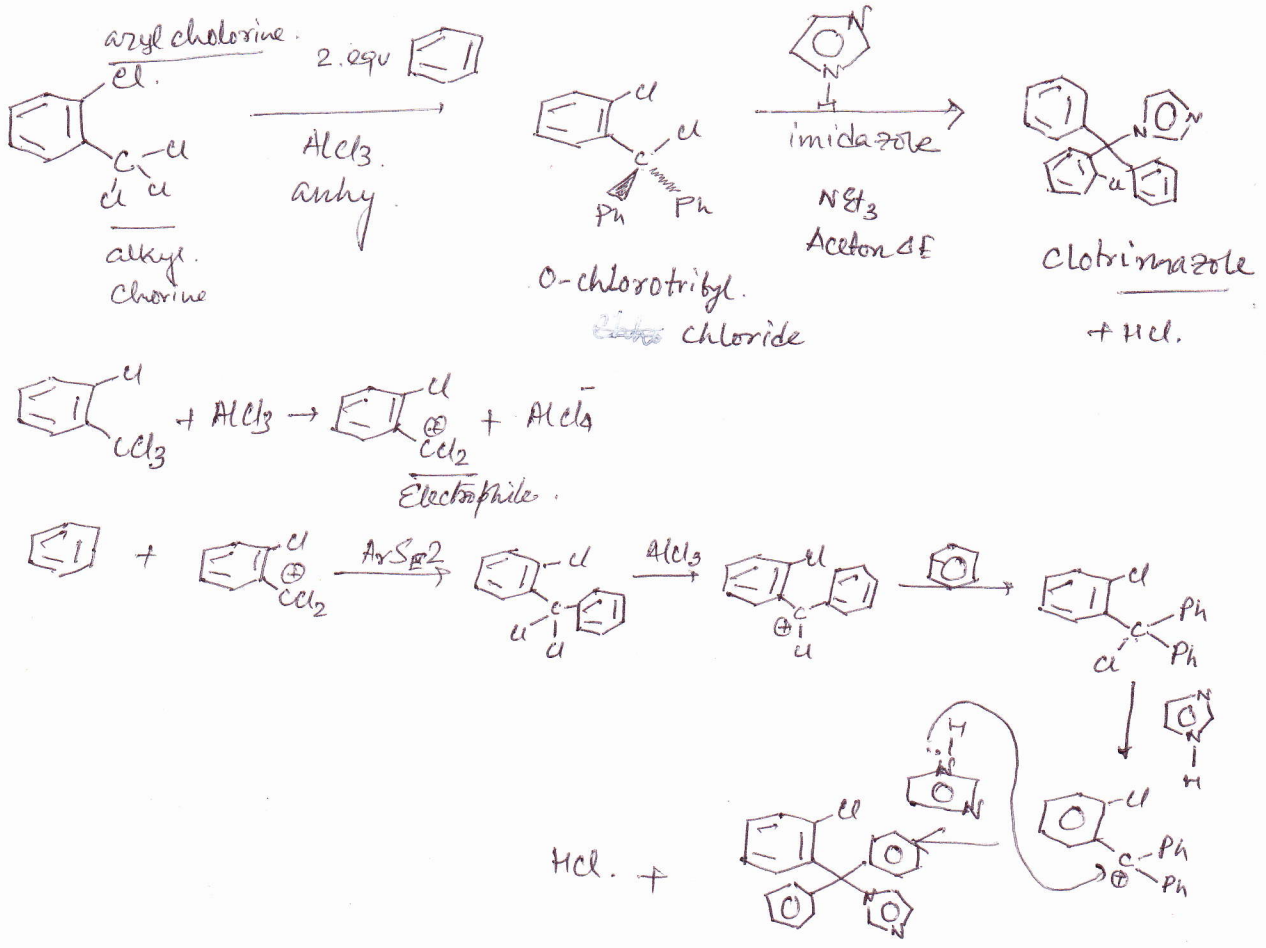
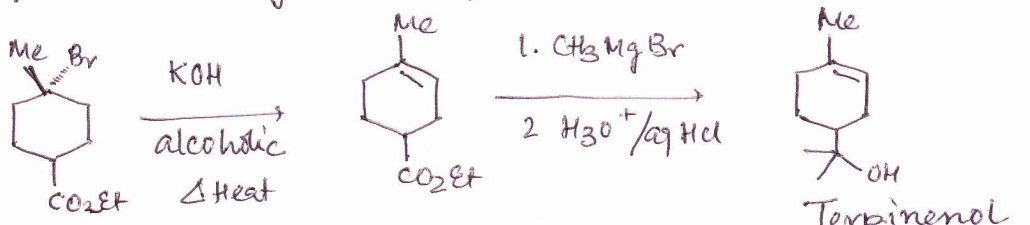
14/a

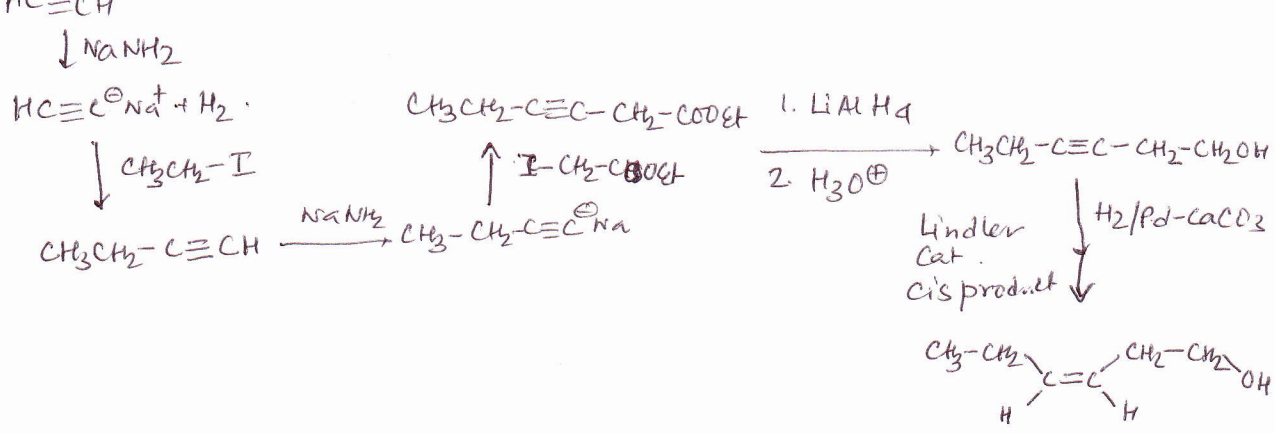


The reaction sch is the preparation of Clotrimazole the ~~last~~ 1st step is alkylation of Benzene to produce O-chlorotrityl chloride the 2nd step is alkylating imidazole with O-chlorotrityl chloride using the Base catalyst (triethylamine Et_3N) in acetone medium.

14(b) Ref Perkin's Synthesis of Terpinenol.

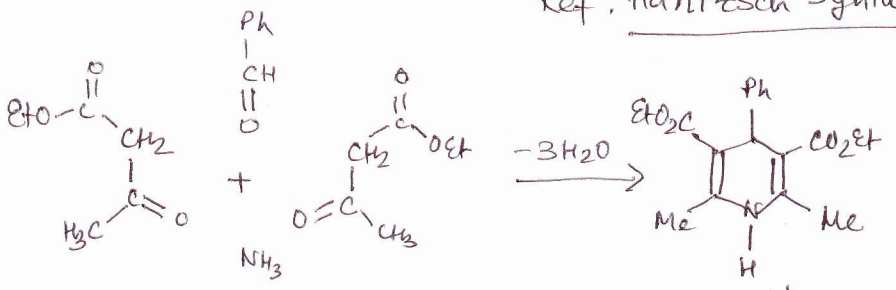


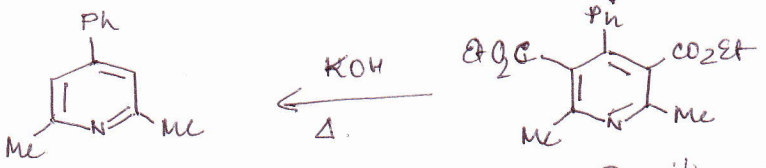
14(c)



14/d)

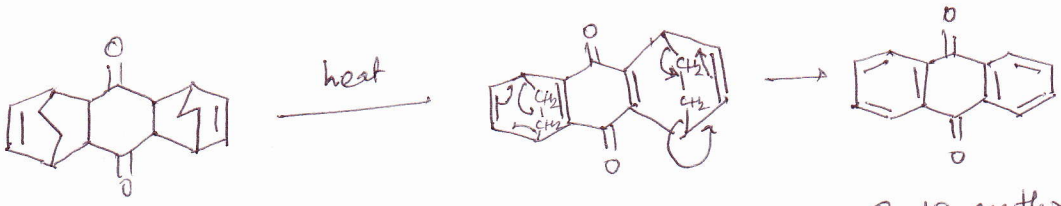
Ref : Hantzsch Synthesis.





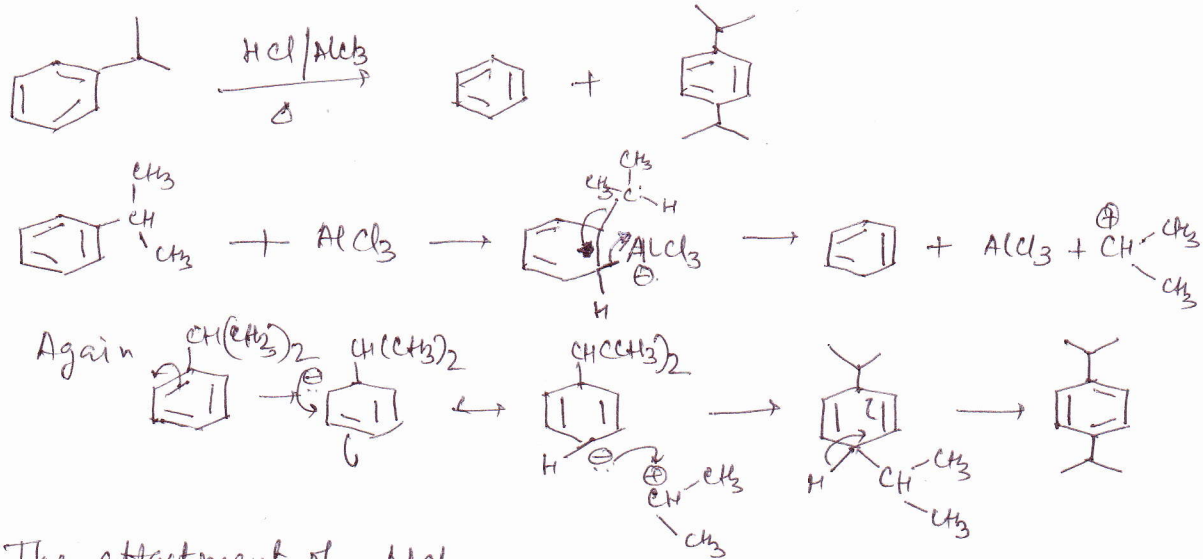
Pyridine derivative

4) 2.



9, 10 anthraquinone

3)

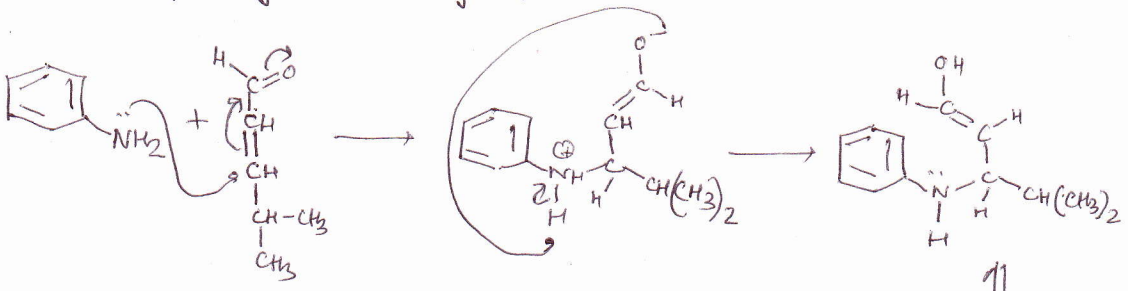


The attactment of $AlCl_3$ with delocated π-clould like and electrophile at° orth position cause removal of Alkyl group (forming stable carbocation) and forms Benzen as by product the alkyl group carbocation then undergoes substitution reaction at para position.

Fridel. ~~Alk~~ Craft Alkylation reversible rearrangements.

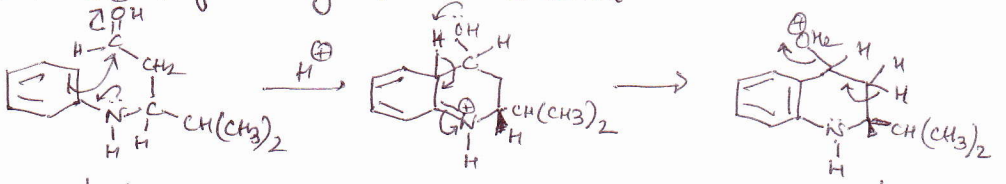
5(4). Skraup Synthesis of Quinolines.

Step 1

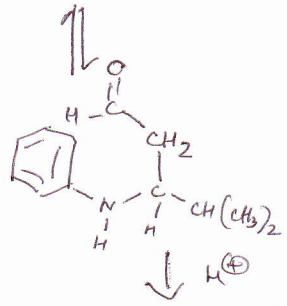


This is Michael type addition of primary aromatic amine to the α,β-unsaturated aldehyde (acraldehyde).

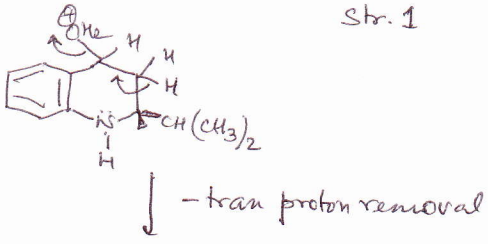
Step 2 Friedel Craft ring closure reaction.



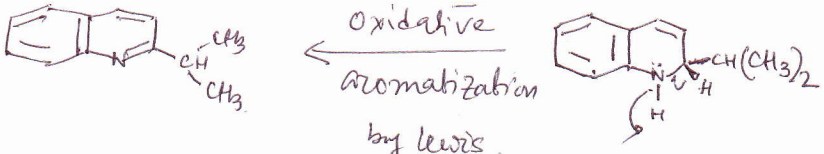
str 1



str. 1

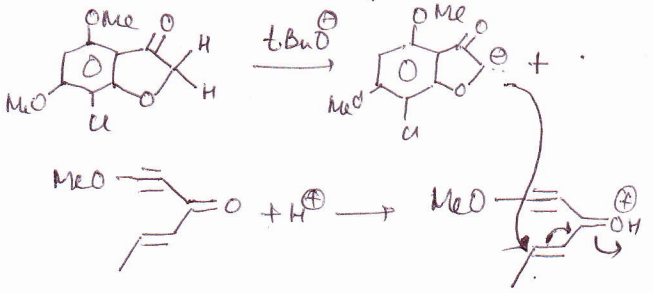


– tran proton removal

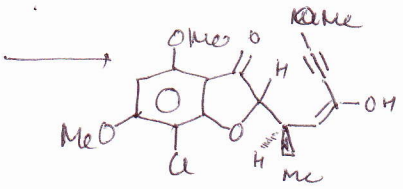


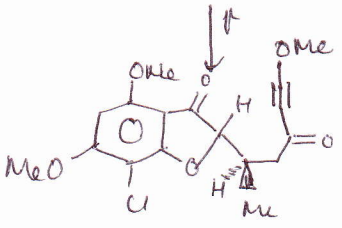
Oxidative aromatization by lewis acid trans proto aromatization initiation.

5(5). Step 1 Formation of Carbanion.



Carbanion attack on α,β unsaturated keto Compound.





Again for of Carbanion by $tBuO^{\ominus}$ and attack on the triple bond