

2.

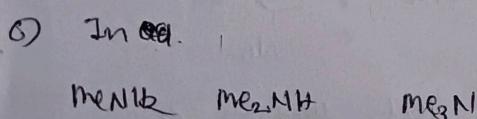
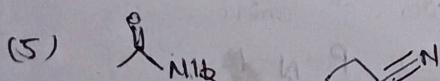
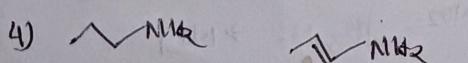
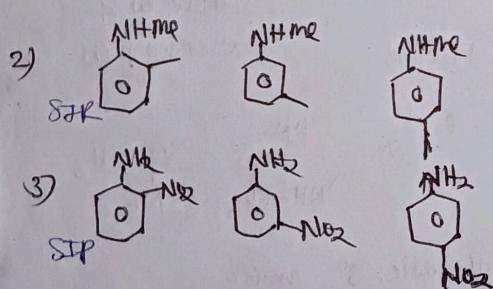
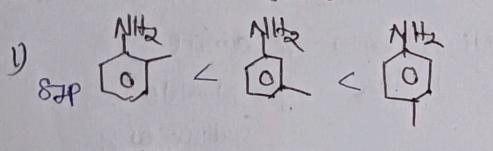
Properties of Amines

4. Basic Strength

- 1) B.S. $\propto +m\alpha + 1 \propto \frac{1}{-m} \propto \frac{1}{-T}$
 - 2) S.T.P 7° Aro amine B.S. \downarrow
 - 3) S.T.R 2° Aro amine, 3° Aro amide \Rightarrow B.S. \uparrow
 - 4) $8^{\circ} > 2^{\circ} > 1^{\circ}$ in gase
 - 5) In cat. medium $2^{\circ} > 1^{\circ} > 3^{\circ}$ R=Me
 - 6) Amide $>$ Amines $>$ Cyanides R=Et
 - 7) Aliph. amine $>$ Aro amine

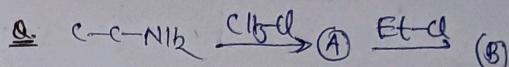
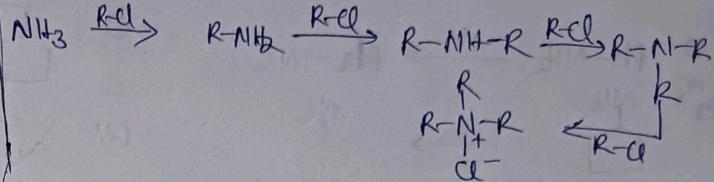
Q. Compare

B.S. 3

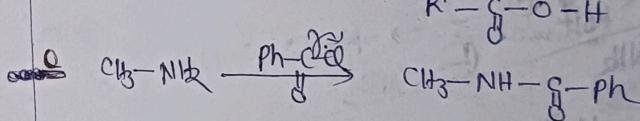
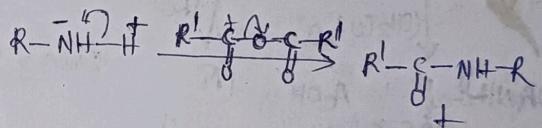
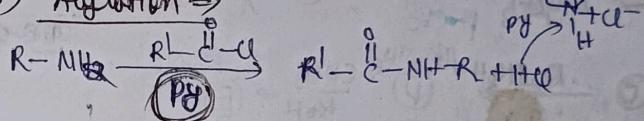


Properties of Amines

(2.) Alkylation \Rightarrow

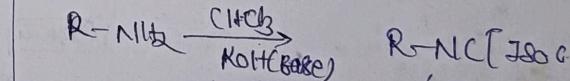


(3) Aeylation \Rightarrow

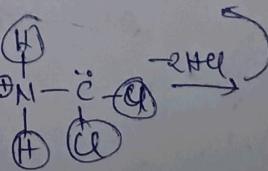
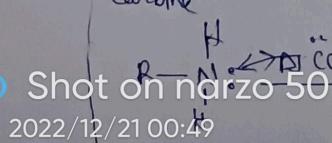
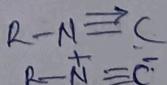
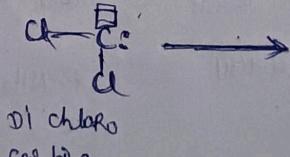
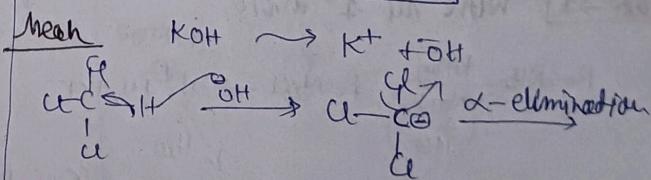
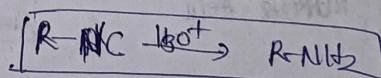


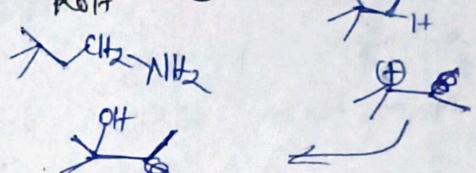
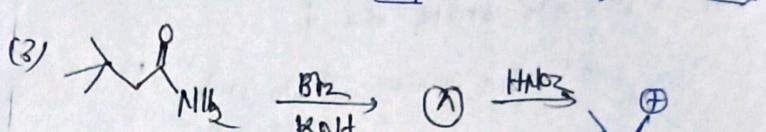
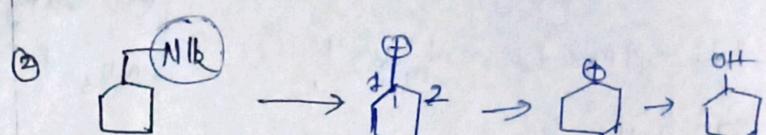
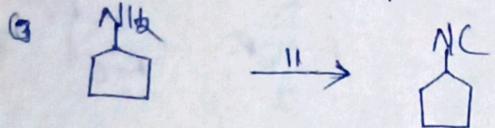
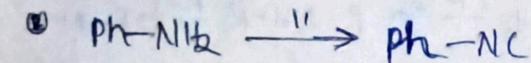
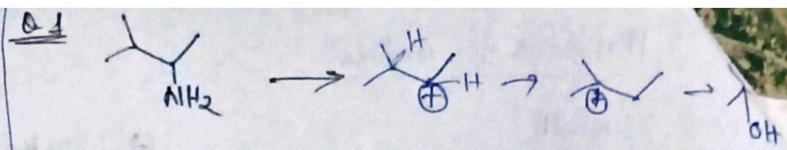
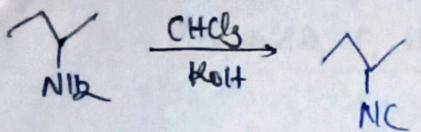
(Iso cyanide test)

(4.) Carbonyl Amine test [1° amine will give positive result]

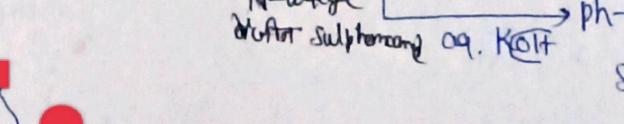
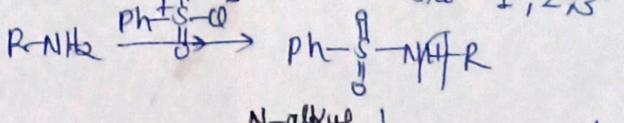
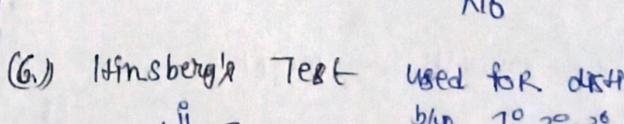
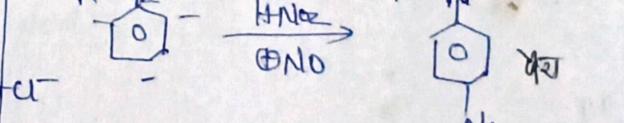
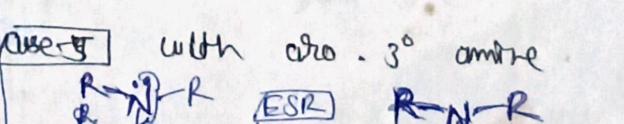
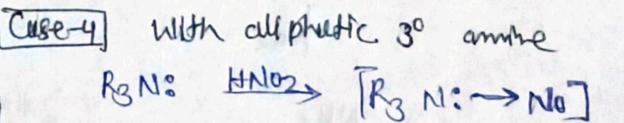
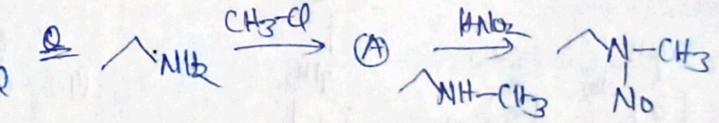
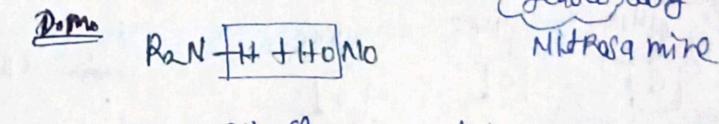
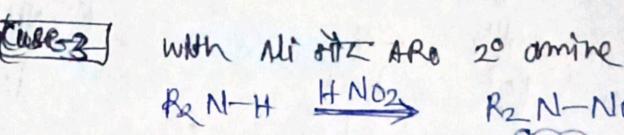
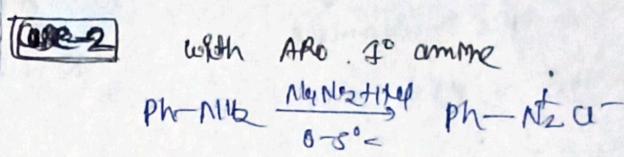
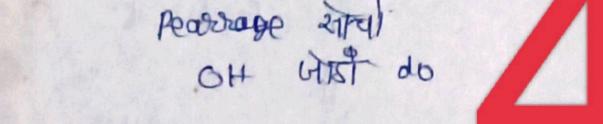
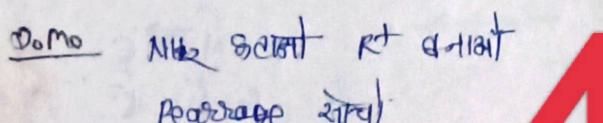
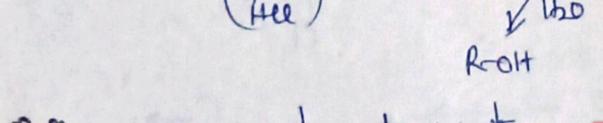
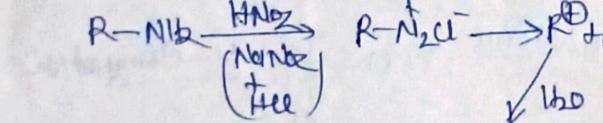
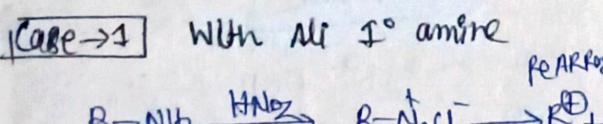
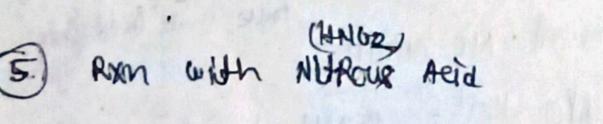
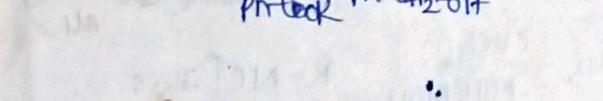
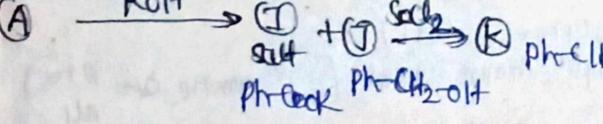
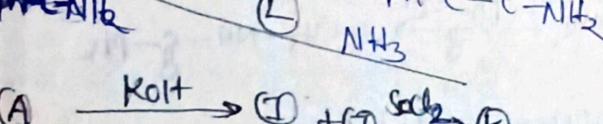
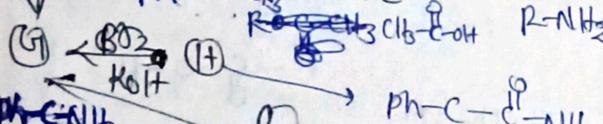
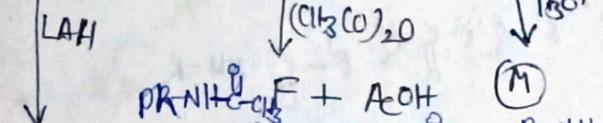
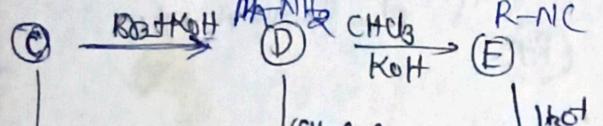
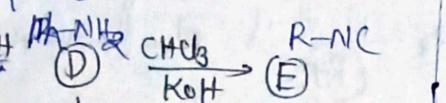
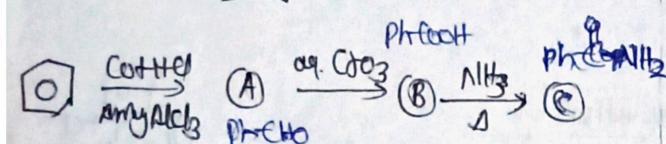


\rightarrow Nitrogen fixation NC mutation four small (Bad genes)

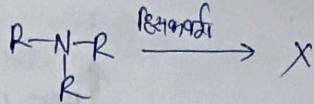
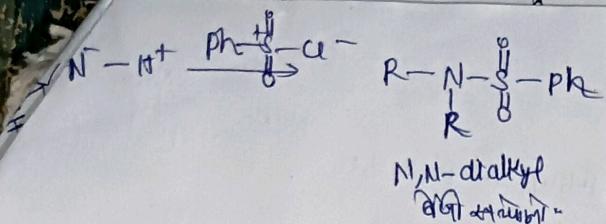




PSS

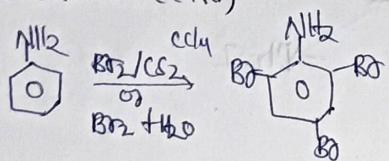


4.



⑦ ESR

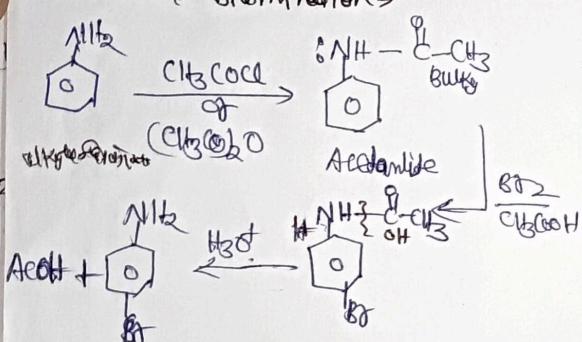
[a] Bromination (tri)



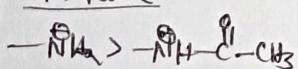
+m power: $\text{--NH}_2 > \text{--OH}$

Reason: due very strong +m power of --NH_2

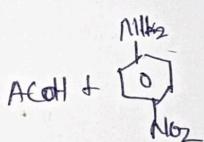
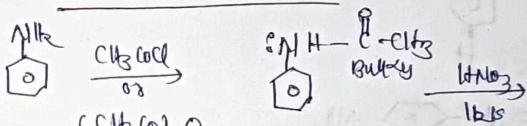
for mono-Bromination



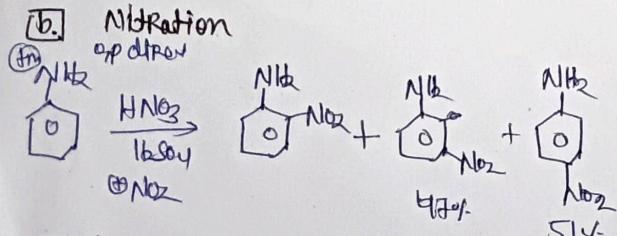
+m power



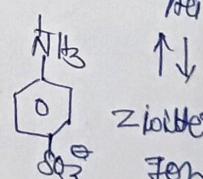
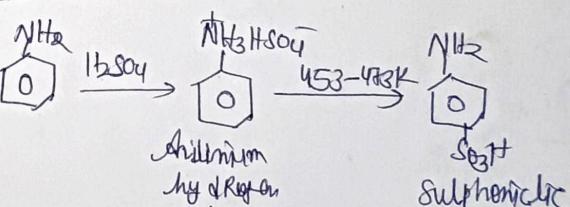
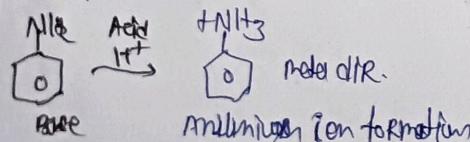
for mono-Nitration



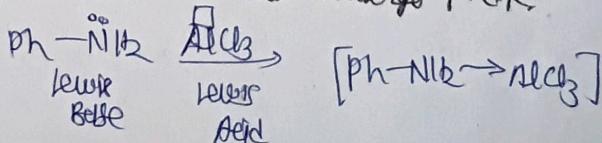
[b] Nitration



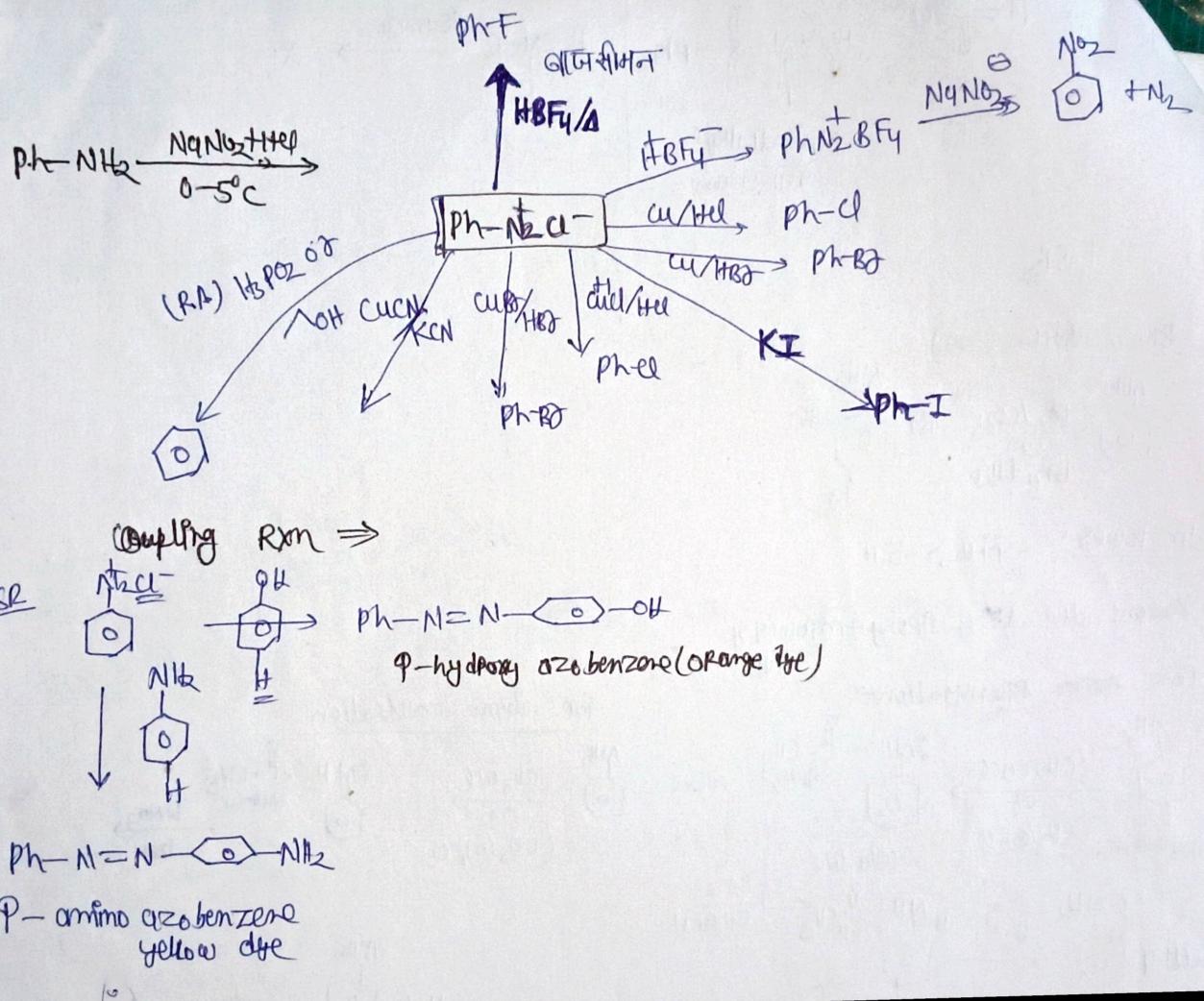
OHRO!



Aniline does not undergo F.C.R.



5.



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