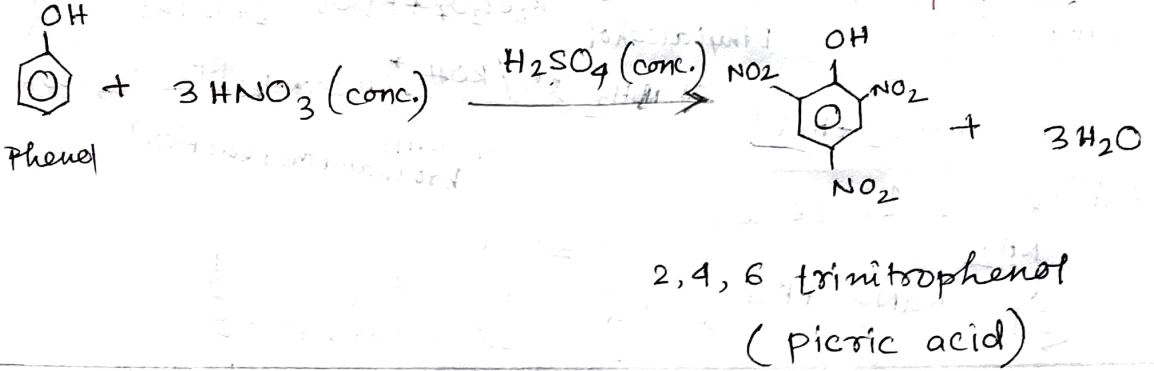
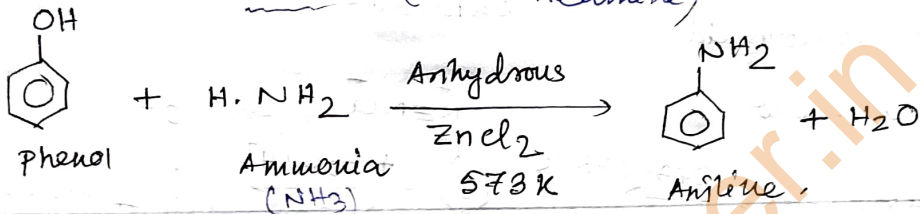


Conversion: [How will the following be obtained?]  
**Worksheet : 05**

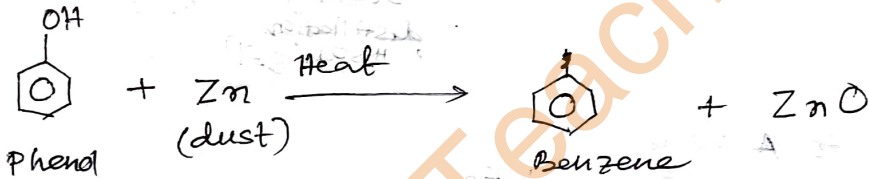
1) Phenol to Picric acid [Picric acid from phenol] ISC 2023 - Specimen



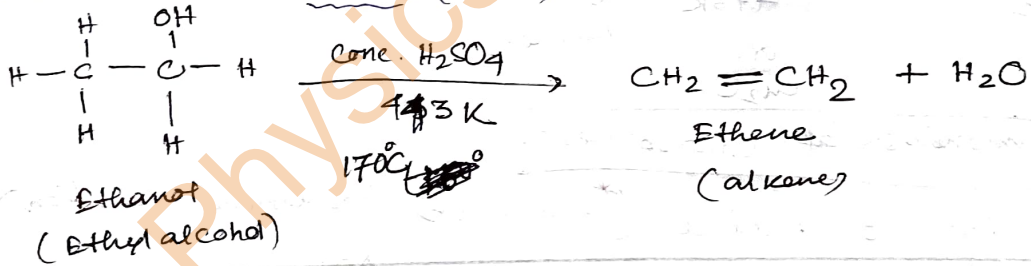
2) Phenol to Aniline (Benzeneamine)



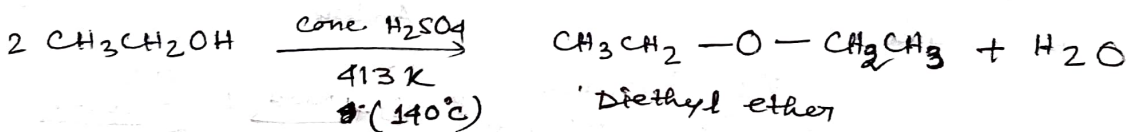
3) Phenol to Benzene \*



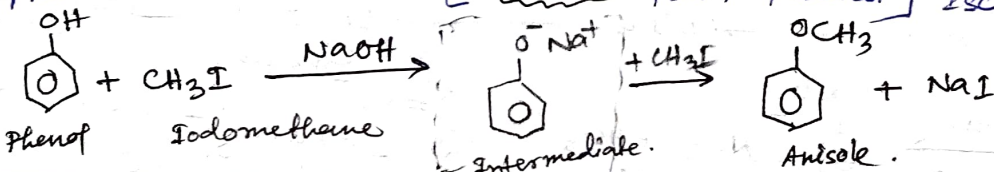
4) Ethanol to Ethene (alkene) \* Dehydration



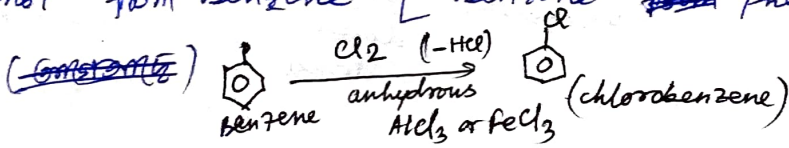
5) Ethanol to Ether (Diethyl ether) \* Dehydration

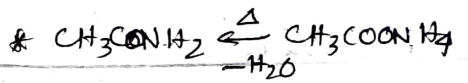


6) Phenol to Anisole [Anisole from Phenol] ISC 2023 specimen

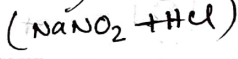
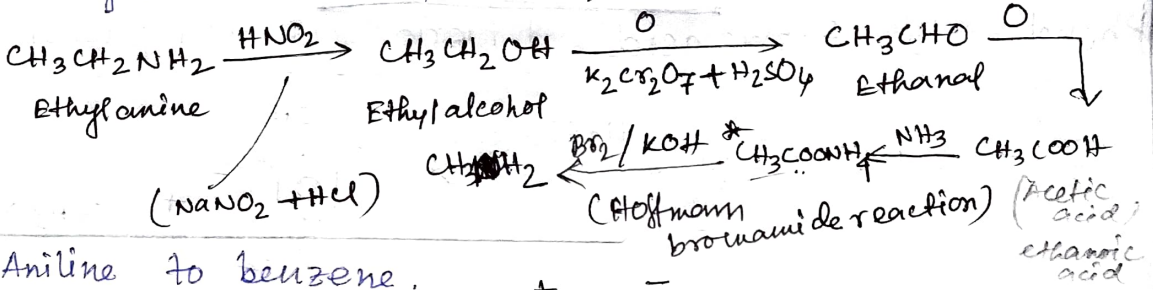


7) Phenol from Benzene [Benzene to phenol] ISC 2019

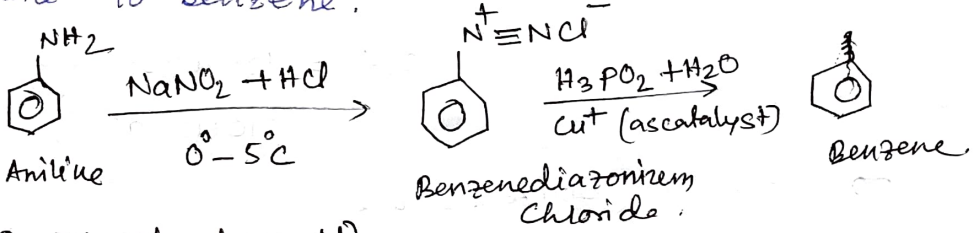




7) Ethylamine to methylamine?

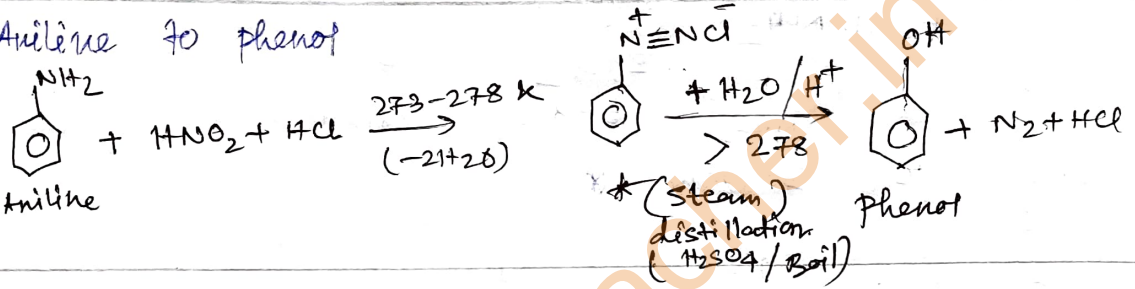


8) Aniline to benzene.

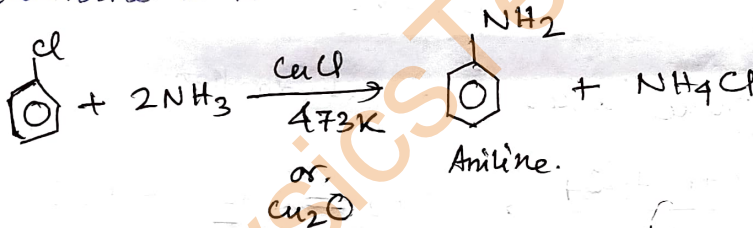


(\*  $\text{H}_3\text{PO}_2 \rightarrow$  Hypophosphorous acid.)

9) Aniline to phenol

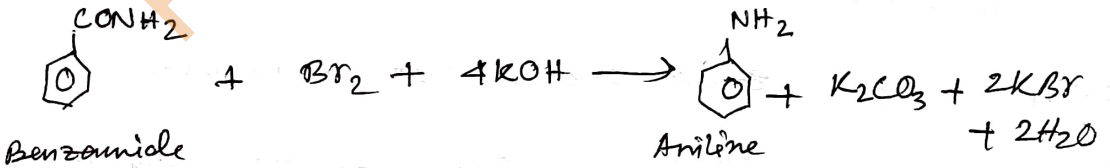


10) Chlorobenzene to Aniline

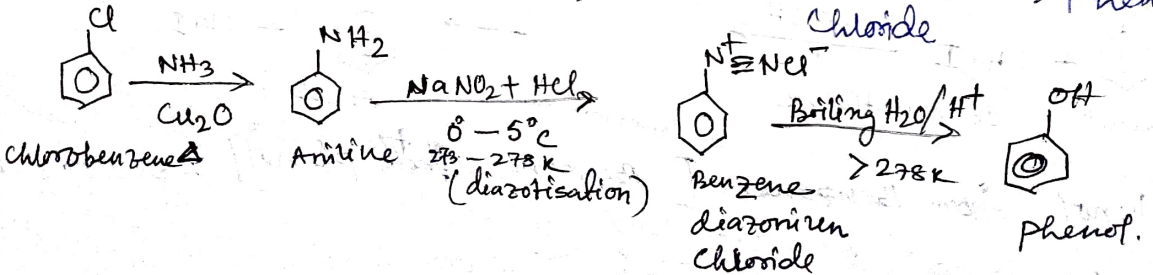
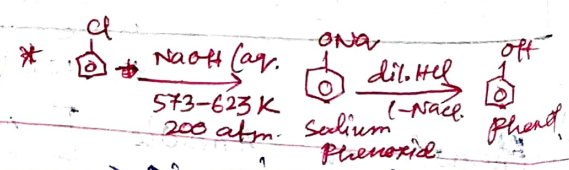


\* Ammonolysis of chlorobenzene.

11) Benzamide to Aniline (\* Hoffmann or Bromamide reaction)



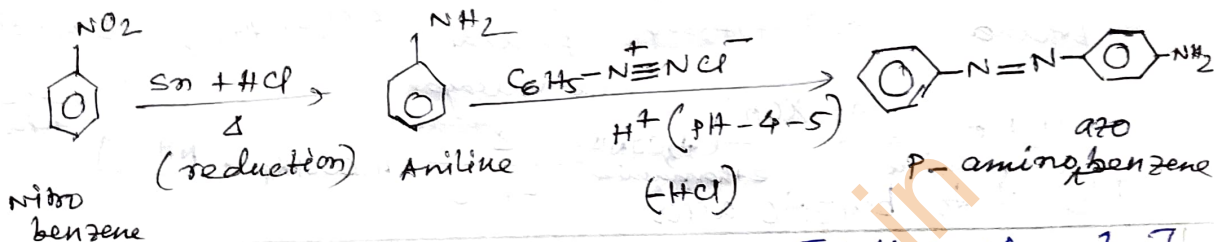
12) Chlorobenzene to Phenol (\* Dow's process)



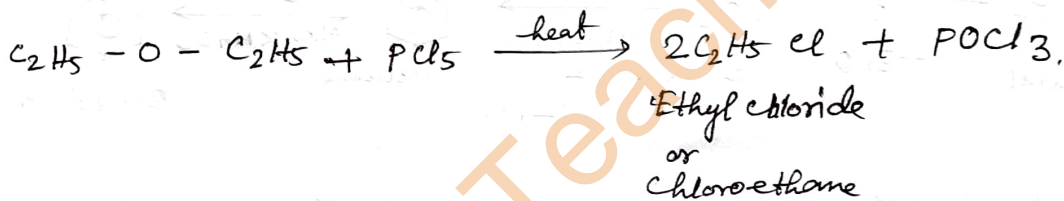
13) Nitrobenzene to p-aminobenzene

\* [Azo-dye  $\rightarrow$  means coupling reaction]  
 Amino  $\rightarrow$  means (Aniline + diazonium chloride)  
 reaction with aniline (in acidic medium).

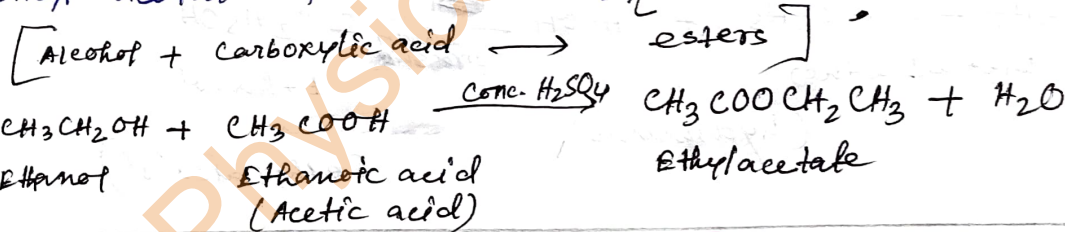
Nitrobenzene  $\xrightarrow{\hspace{2cm}}$  Aniline  $\xrightarrow[\text{benzene diazonium chloride}]{\hspace{2cm}}$  p-aminobenzene.



14) Ethyl chloride from diethyl ether [diethyl ether to ethyl chloride]  
 (alkyl halide)

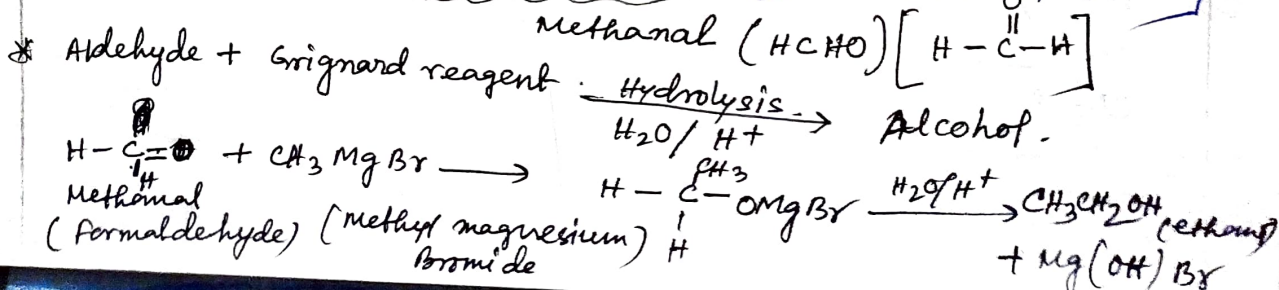


15) Ethyl acetate from ethanol [Ethanol to ethyl acetate]

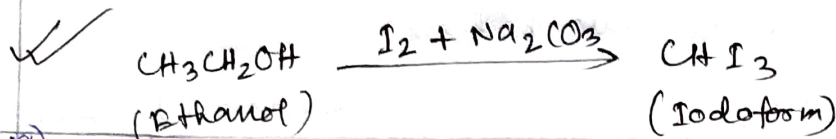
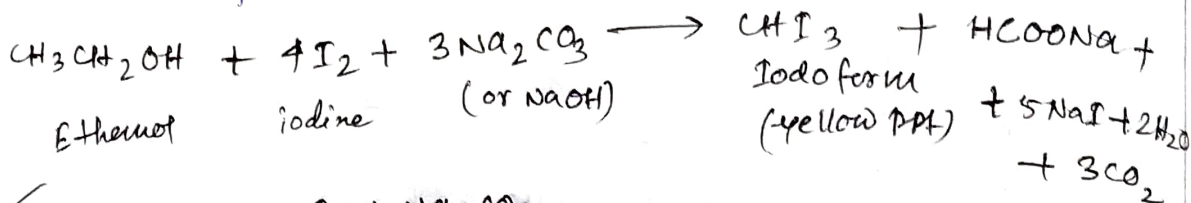


16) Salicylaldehyde from phenol [Reimer-Tiemann Reaction]

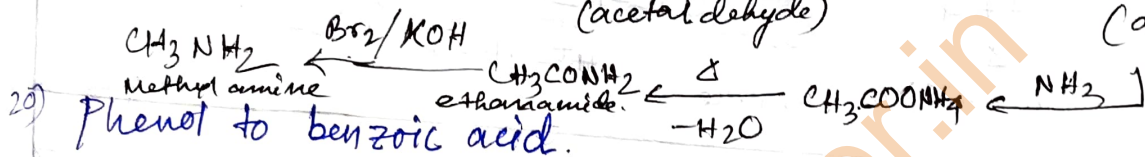
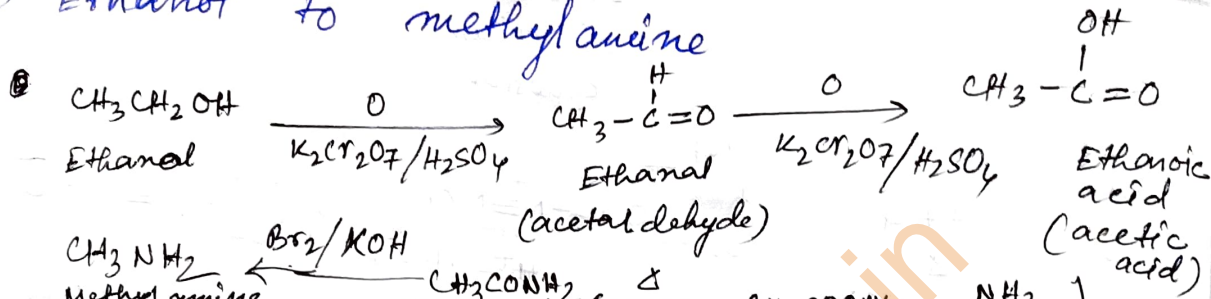
\* 17) Ethanol from formaldehyde [ISC 2023 specimen]



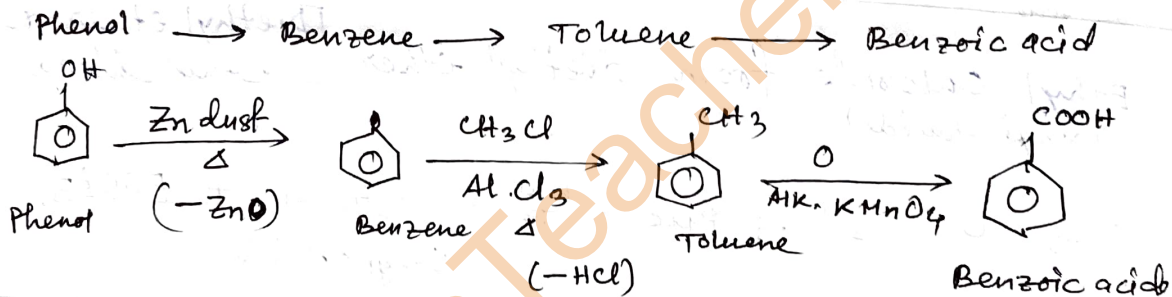
18) Iodoform from ethanol



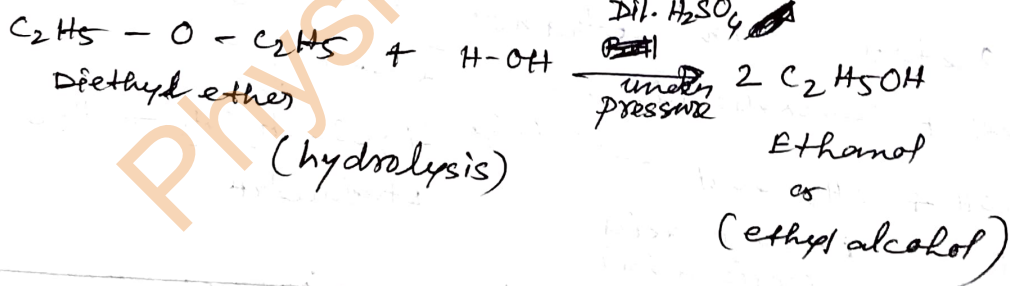
19) Ethanol to methylamine



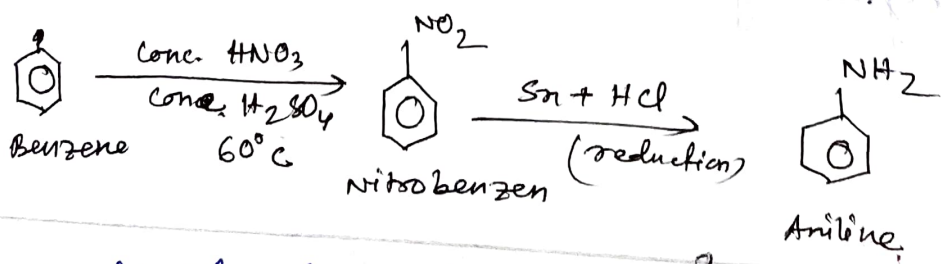
20) Phenol to benzoic acid.



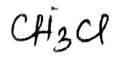
21) Diethyl ether to ethanol. Boiled with Dil. H<sub>2</sub>SO<sub>4</sub>



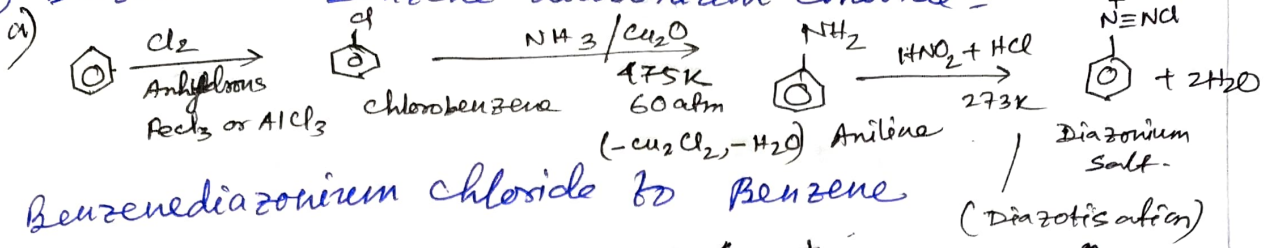
22) Benzene to Aniline



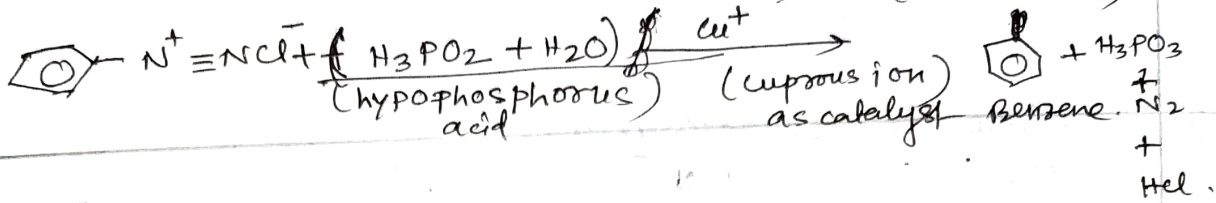
23) methyl chloride to acetone ( $\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$ )



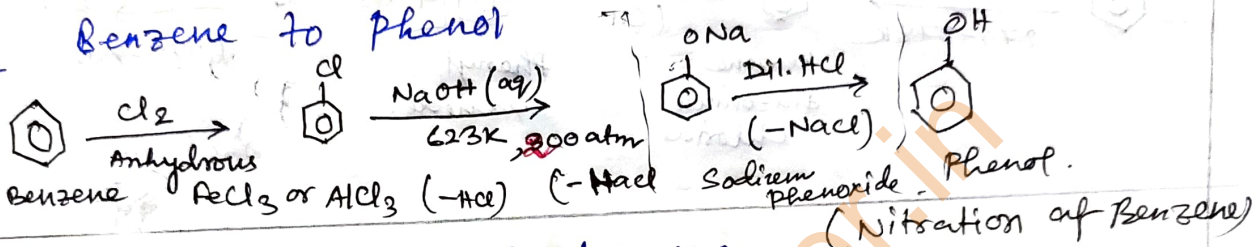
24) Benzene to benzene diazonium chloride -



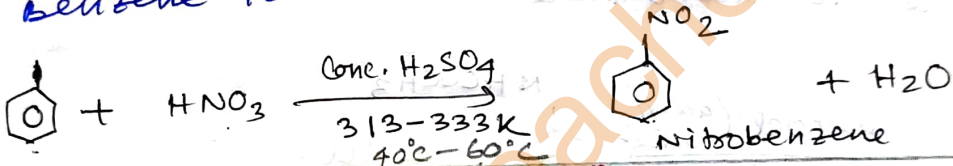
b) Benzene diazonium chloride to Benzene



25) Benzene to Phenol

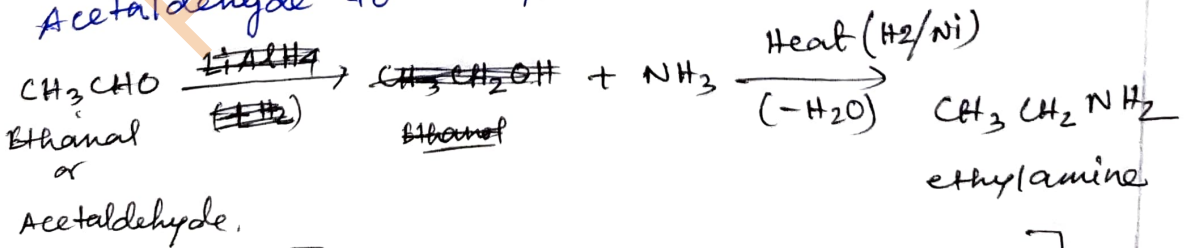


26) Benzene to Nitrobenzene



26) Acetamide to methylamine. [\* Hoffmann's Bromamide reaction]

27) Acetaldehyde to ethylamine.

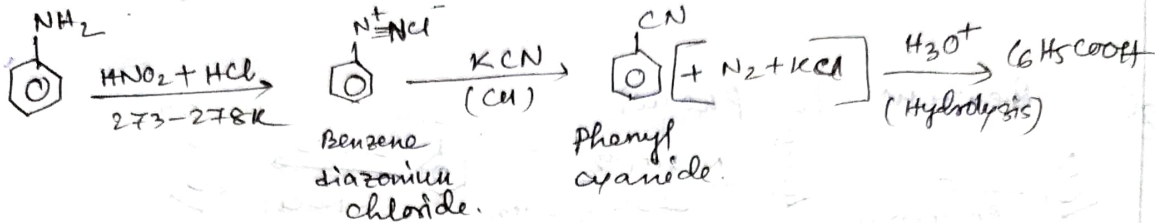


[\* Reaction :- Reductive amination.]

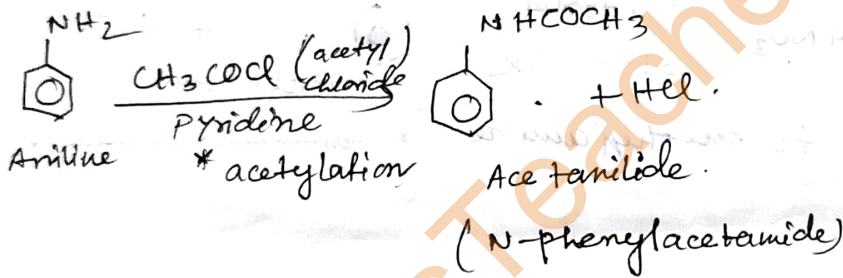
28) Methylamine to ethylamine

29. Ethanoic acid to ethylamine

30. Aniline to benzoic acid.

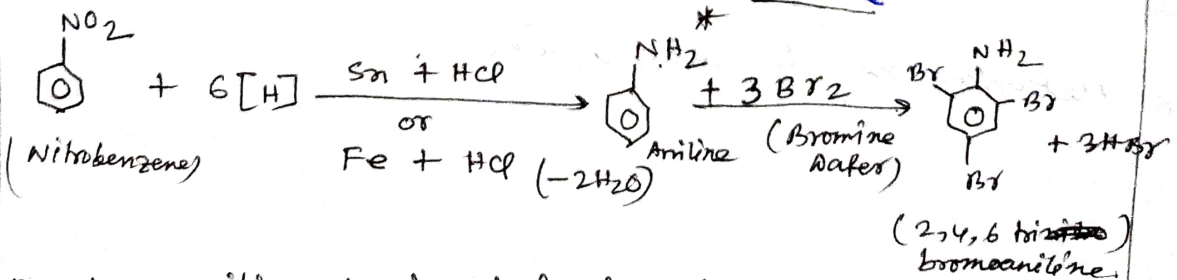


31) Aniline to acetanilide



32) Acetic acid to methyl cyanide

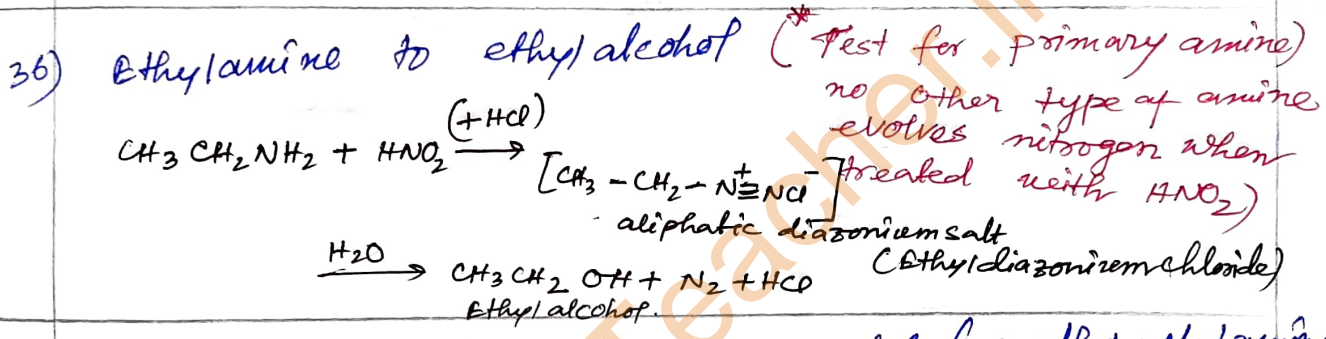
33) Nitrobenzene to 2,4,6-tribromoaniline



\* when aniline is treated with bromine water a white ppt of 2,4,6-trinitroaniline is obtained.

34) Acetic acid to methylamine

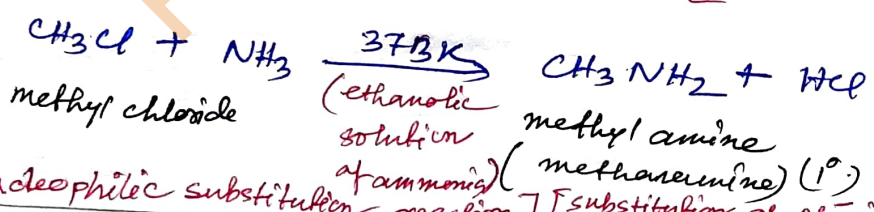
35) Methyl cyanide to ethyl alcohol



37) Methylamine to methyl isocyanide (methyl carbamate)  
(Carbamine) reaction

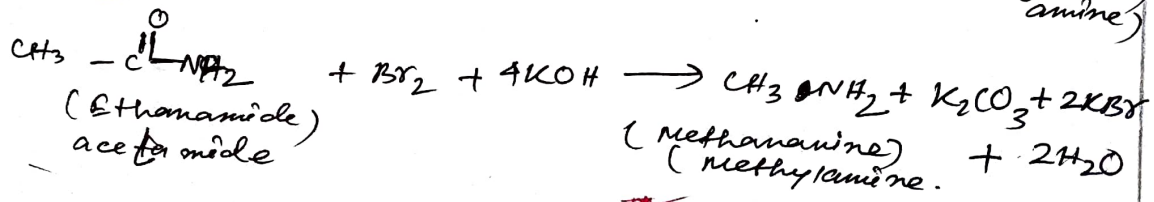
[\*Carbamine reaction]

38) Haloalkane to primary amine. [\*Hoffmann's ammonolysis method]



[nucleophilic substitution reaction] [substitution of  $Cl^-$  ion by  $NH_2^-$  ion]

39) Ethanamide (primary amide) to methylamine (primary amine)



[\*Hoffmann's Bromamide reaction]