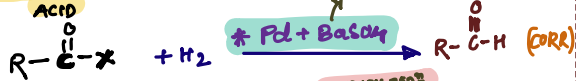
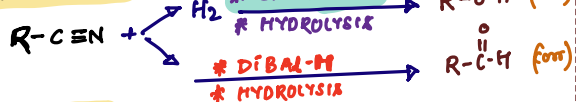


PREPARATION OF ALDEHYDE

a. FROM ACYL HALIDE:



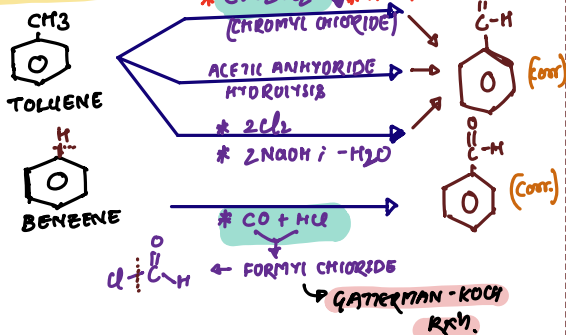
b. FROM CYANIDE:



c. FROM ESTER:

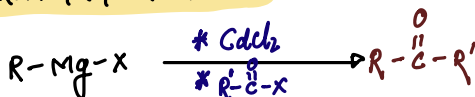


d. FROM HYDROCARBON:

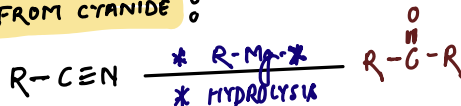


PREPARATION OF KETONE

1. FROM GRIGNARD REAGENT:



2. FROM CYANIDE:



PREPARATION OF AMINES

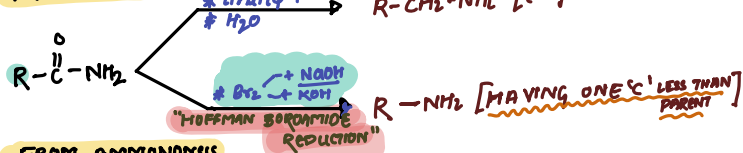
a. FROM NITRO COMPOUND:



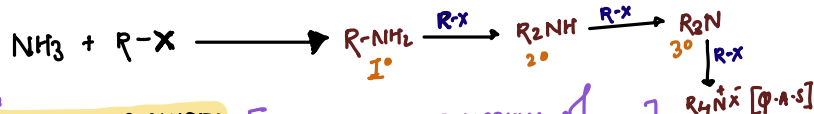
b. FROM CYANIDE:



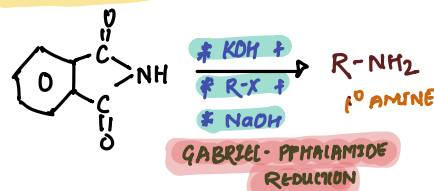
c. FROM AMIDE:



d. FROM AMMONOLYSIS OF ALKYL HALIDE:



e. FROM PHTHALAMIDE:

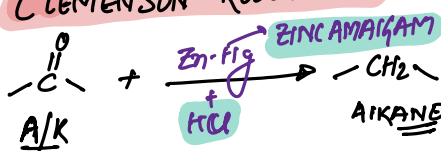


REDUCTION TO ALCOHOLS



REDUCTION TO HYDROCARBON

a. CLEMENSON REDUCTION:

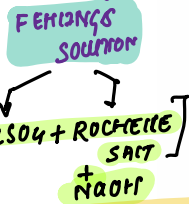


b. WOLF-KISHNER REDUCTION:



OXIDATION TO CARBOXYLIC ACID

OXIDATION OF ALDEHYDE TO ACID



NUCLEOPHYLIC ADDITION [NA]:

FROM NOTES

* ARRANGING IN REACTIVITY ORDER

* SOME SMA NA R₂ FROM NOTES ONLY

OXIDATION OF KETONE TO ACID



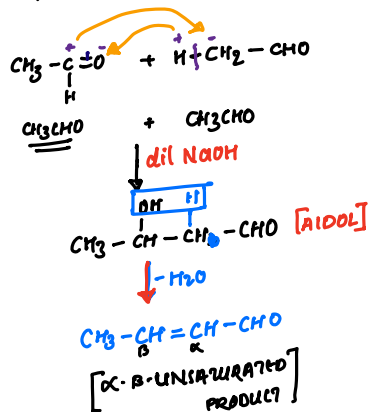
e.g. HNO₃

* MAJOR PPT WILL FOLLOW POP-OF-RULE



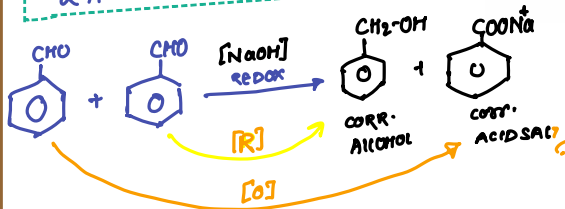
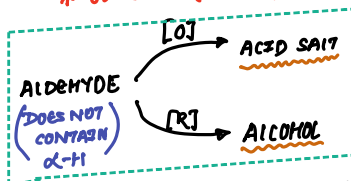
ALDOL CONDENSATION

- * $\alpha\text{-H}$ ✓
- * TWO MOLECULES OF ALDEHYDE & KETONE



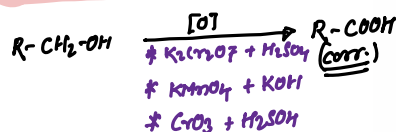
CANNIZARO R^{xn}:

- * $\alpha\text{-H}$ ✗
- * TWO MOLECULES OF ALDEHYDE only
- * it is a REDOX R^{xn}.



PREPARATION OF CARBOXYLIC ACID

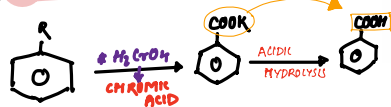
a. FROM ALCOHOL:



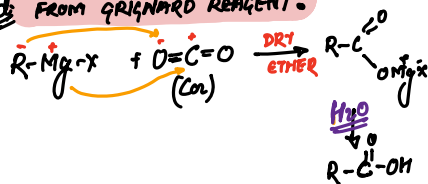
b. FROM ALDEHYDE:



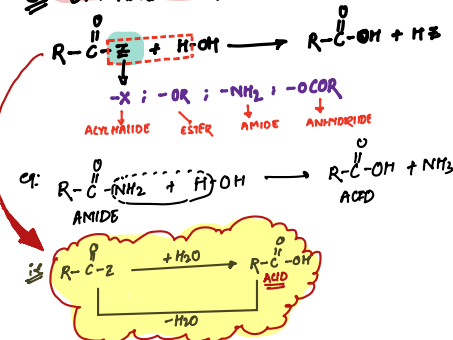
c. FROM ALKYL BENZENE



d. FROM GRIGNARD REAGENT:

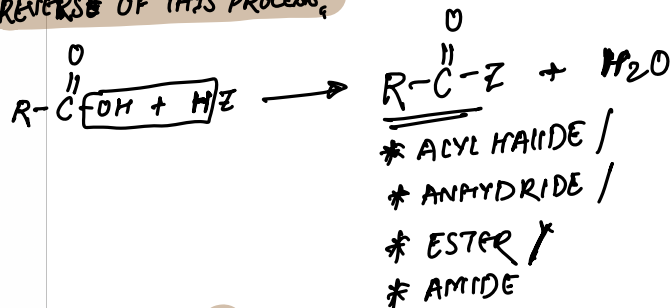


e. BY HYDROLYSIS OF ACID DERIVATIVES:

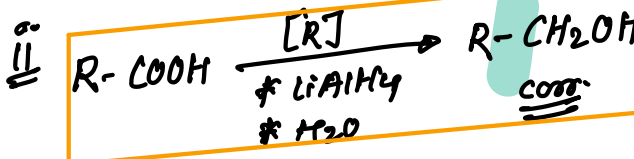
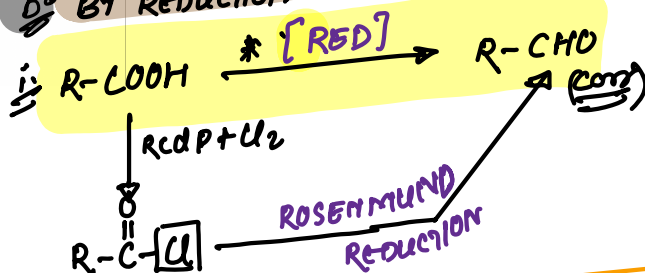


CHEMICAL PROPERTIES OF ACID

a. REVERSE OF THIS PROCESS

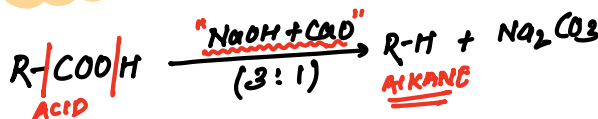


b. BY REDUCTION:



c. BY DECARBOXYLATION:

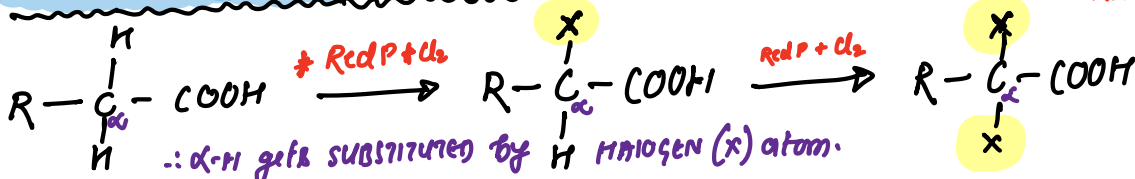
i. SODA-LIME DECARBOXYLATION: (-CO₂)



ii. KOLBE'S ELECTROLYSIS:



HEIL-VOLTARD ZELINSKY R^{xn}:

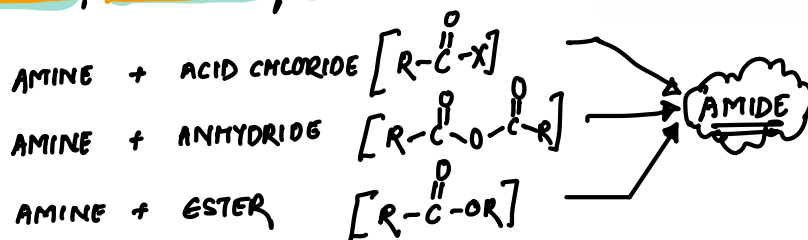


CHEMICAL PROPERTIES OF AMINE:

a. ALKYLATION:

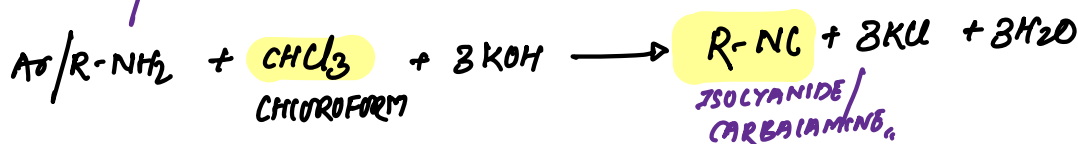


b. ACYLATION / ACETYLATION / BENZYLATION (SCHOTEN-BAUMAN RXN):



c. CARBALAMINE REACTION: / HOFFMAN CARBALAMINE RXN

* ONLY FOR 1° ALIPHATIC & AROMATIC AMINE.



☞ MORE THREE ARE THERE FOR THE TESLA NOTES => CONSULT NOTES

#NOTE:

☞ ALL THE NAME REACTION IN NCERT ARE VERY VERY VERY IMP: (100%)
OR
SHORT NOTES

☞ ALL THE IUPAC NAMING OF NCERT IS MUST

☞ ALL THE NCERT CONVERSIONS ARE V-V-IMP. SO BEFORE SOLVING LEARN ALL TESLA TRICKS & PRACTICE ON ALL THE REACTION GIVEN BELOW.

☞ BEFORE DOING ANYTHING FIRST GO THROUGH THE TYPES OF COMPOUNDS =

ORGANIC COMPOUNDS

R-OH ALCOHOL

R-O-R ETHER

R-X ALKYL HALIDES

R-CHO ALDEHYDE

R-C(=O)-R KETONE

RCOOH / R-C(=O)-OH ACID

R-C(=O)-NH₂ AMIDE

R-C(=O)-X ACYL HALIDE / ACID

R-C(=O)-OR ESTER

R-C(=O)-O-C(=O)-R ANHYDRIDE

R-NH₂ AMINE (1°)

R₂-NH 2° AMINE

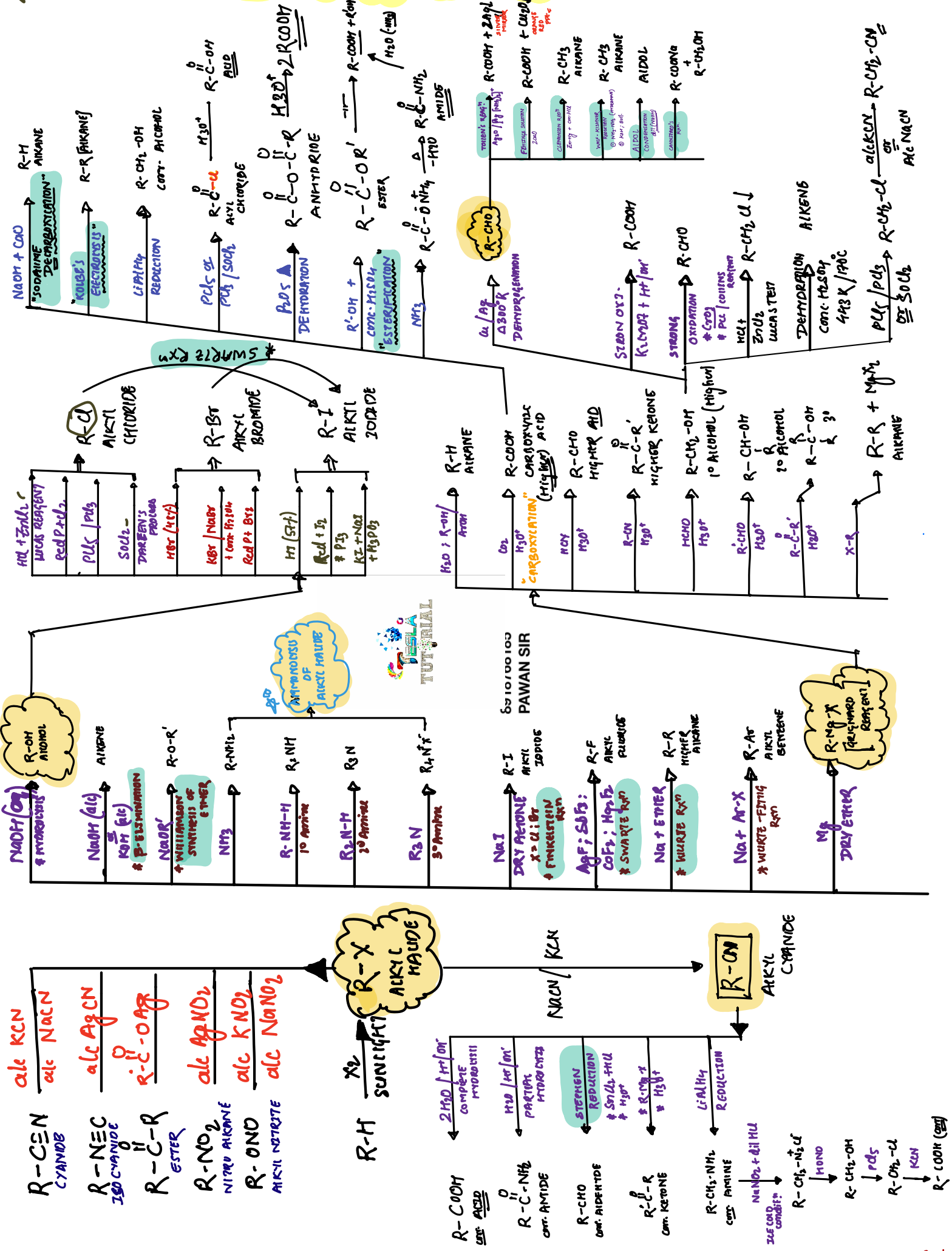
R₃-N 3° AMINE

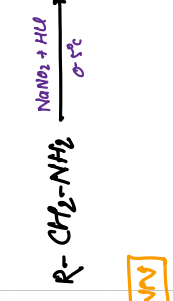
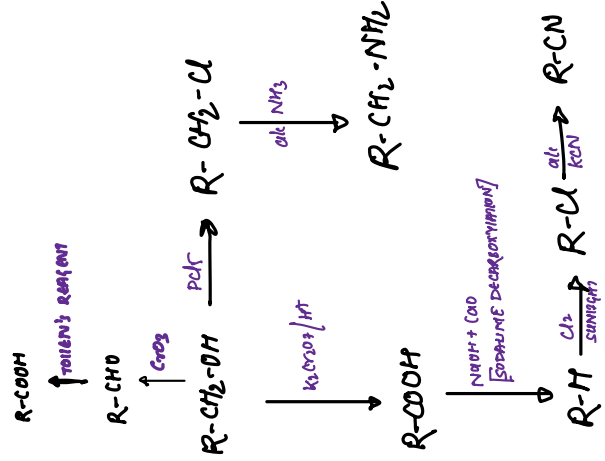
DIAZONIUM SALT

→ complete section.

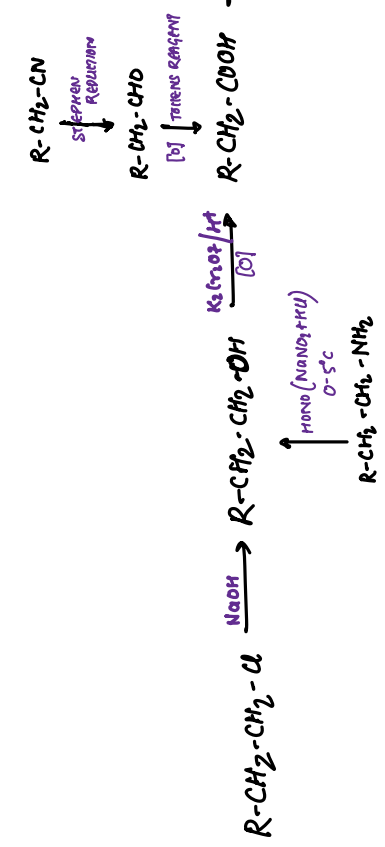


Red signature

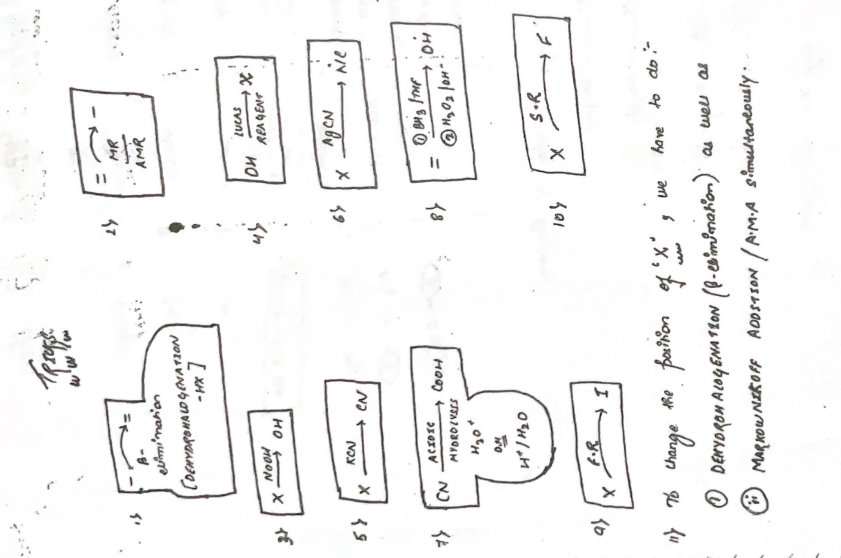
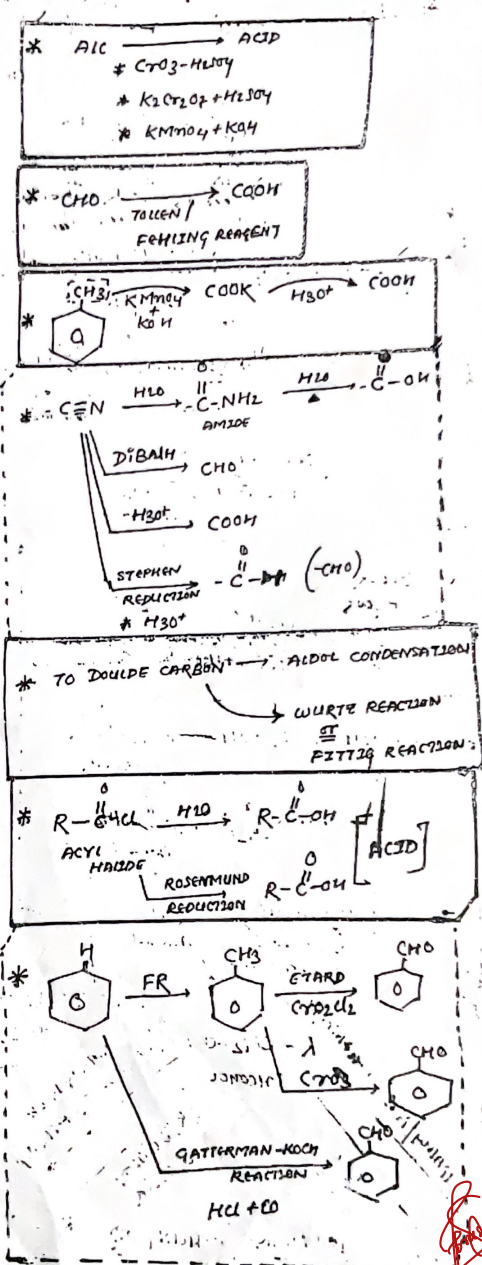
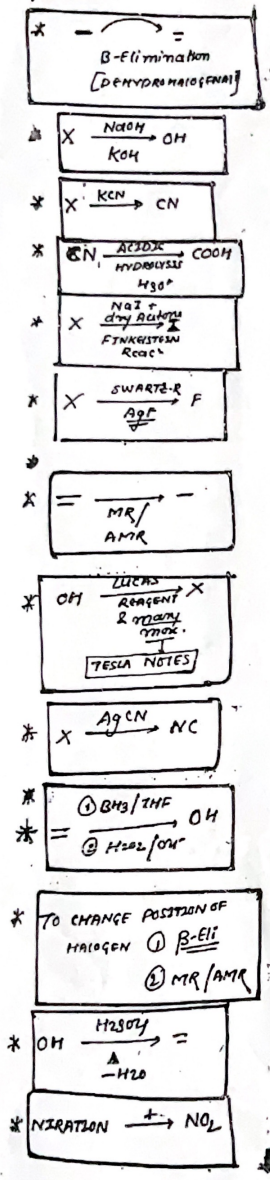




STEP DOWN



BY-PAWAN SIR



To change the position of 'X', we have to do:
 1) DEHYDRATION (B-Elimination) as well as
 2) MARKOVNIKOFF ADDITION / ANTI-MARKOVNIKOFF