

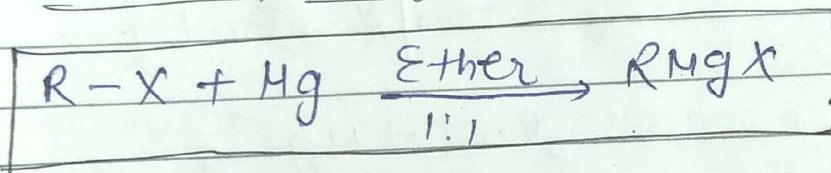
SBG STUDY

* Carboanion *

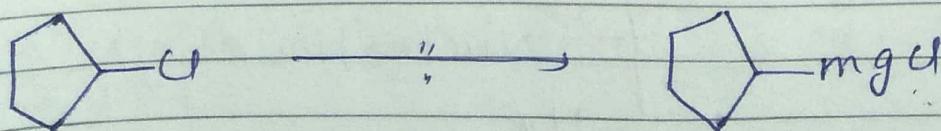
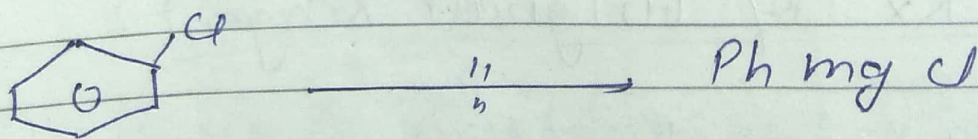
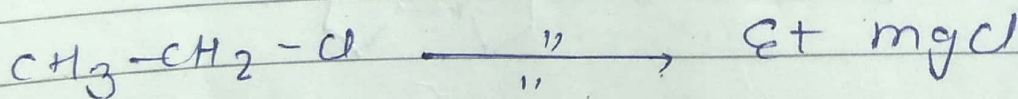
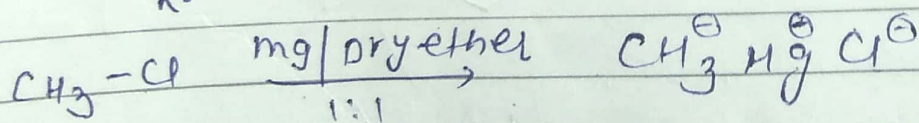
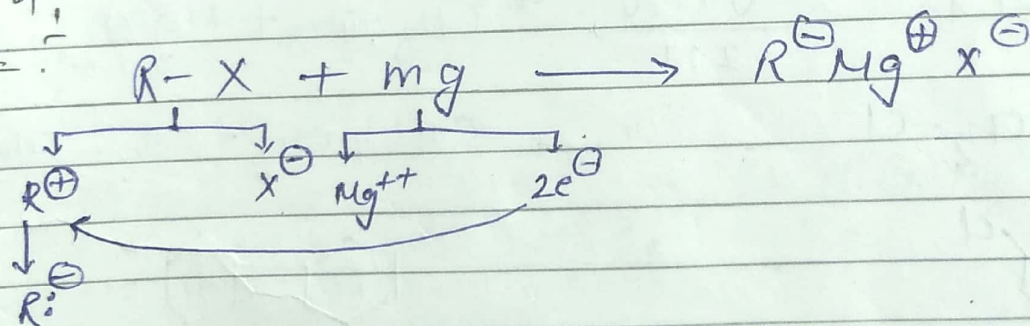
* Wignart Reagents:-

Organometallic Compounds
 $RMgX$ (Alkyl Mg Halide)
 $ArMgX$ (Aryl magnesium Halide)

* General method of Preparation of $Gr.R$:-

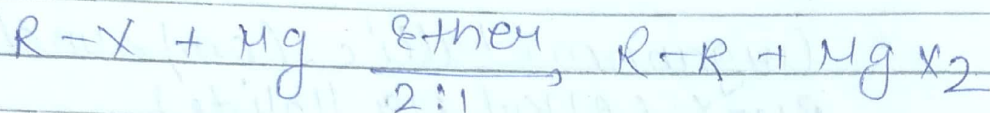


Mech:-

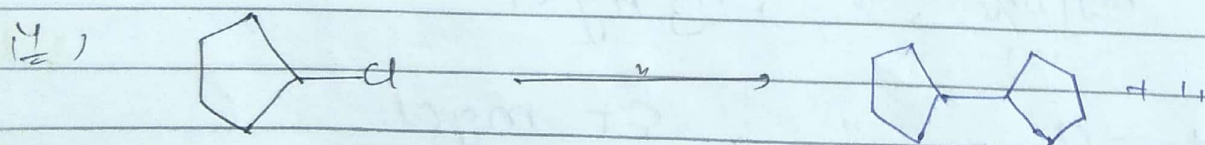
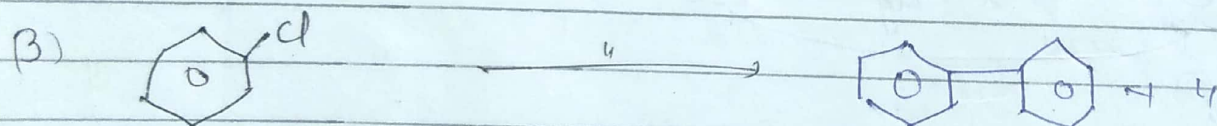
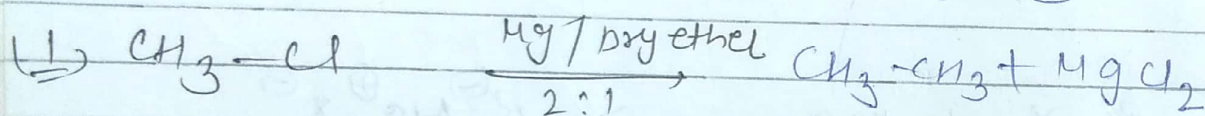
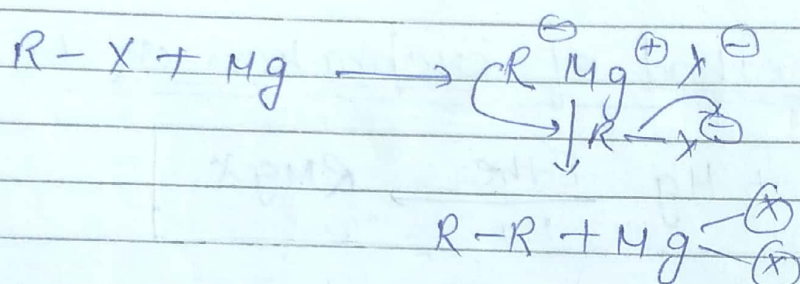


Practical:

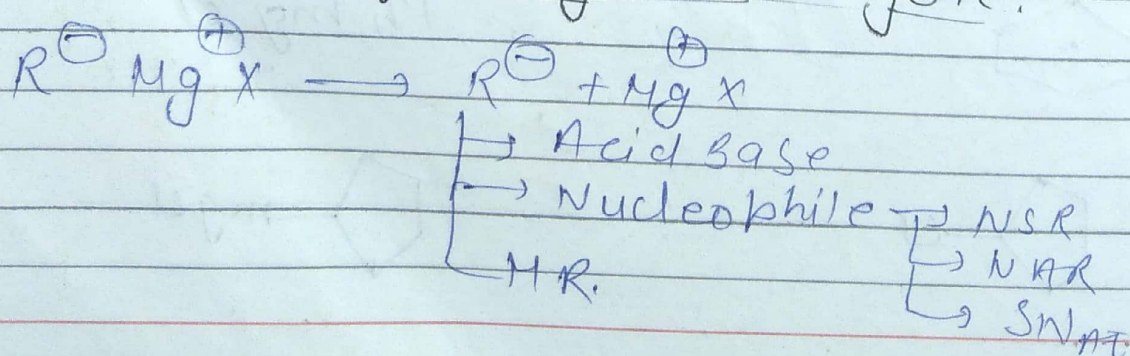
During formation of Grignard ratio of R-X should be 1:1 if Ratio of R-X & Mg becomes 2:1 then RX^n hydrocarbon form & RX^n become Frankland RX^n



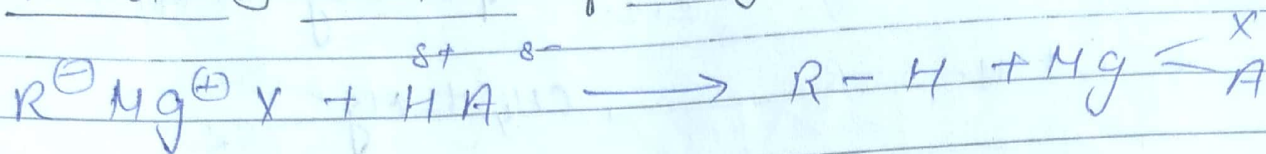
Mechⁿ:



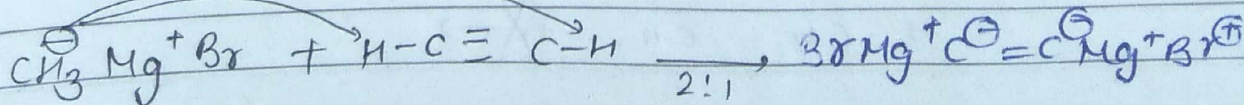
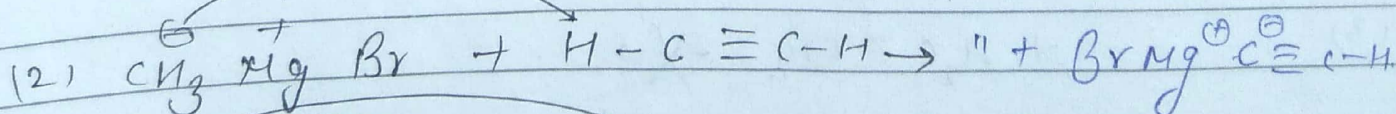
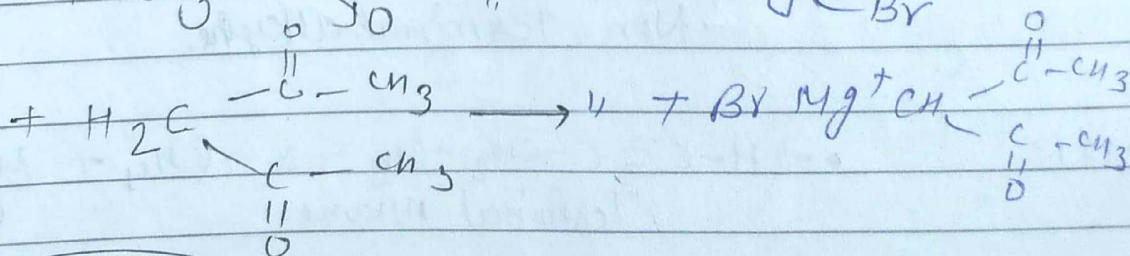
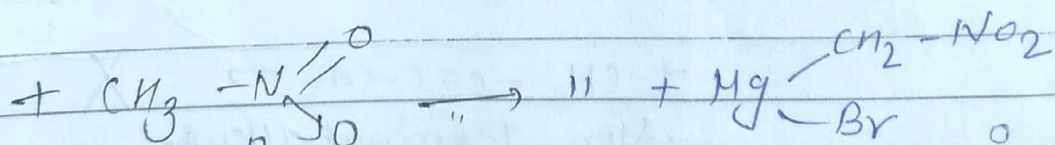
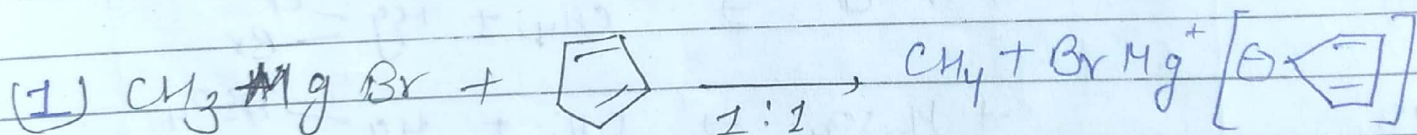
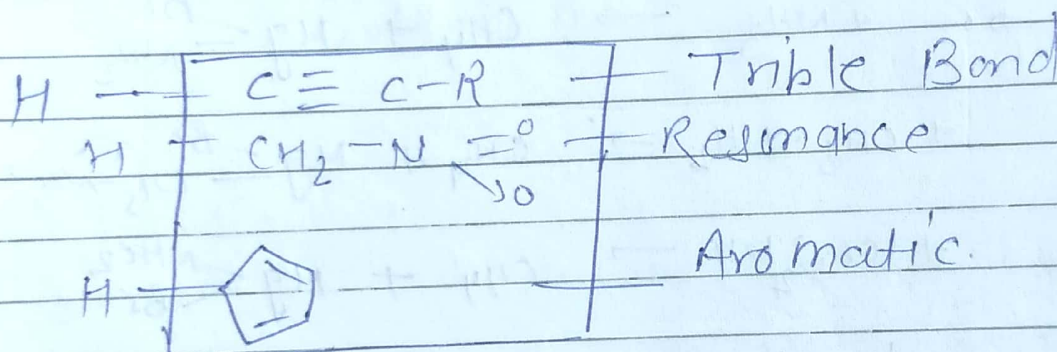
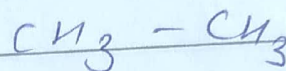
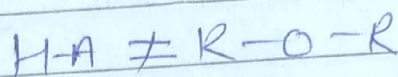
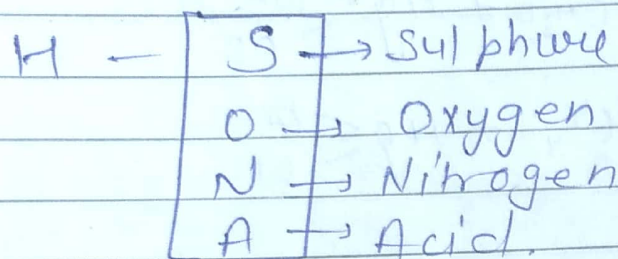
* General RX^n of Grignard Reagent:

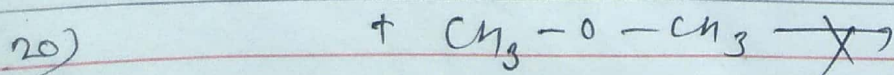
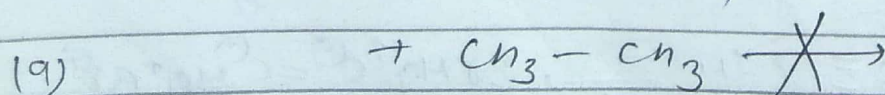
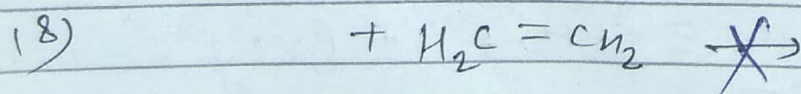
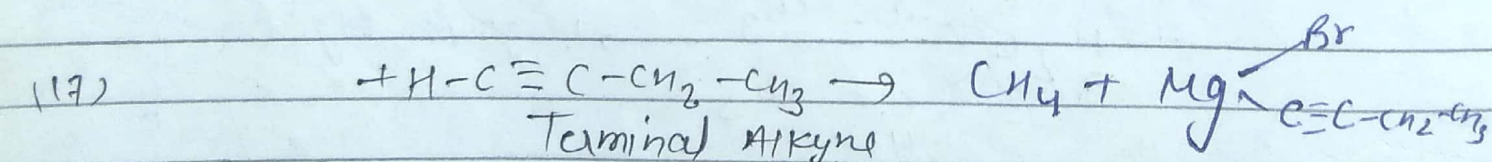
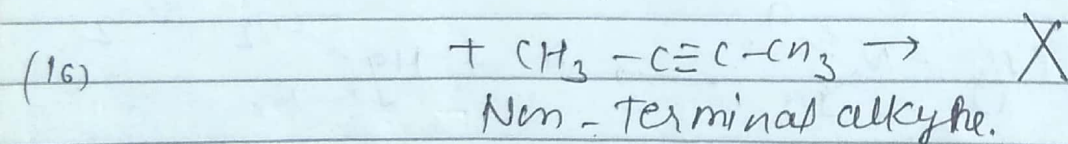
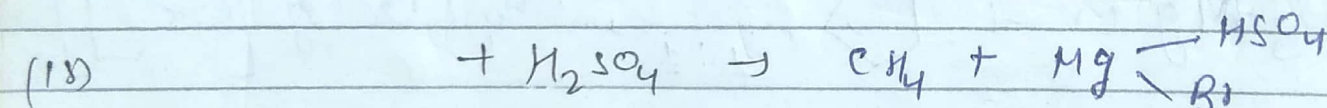
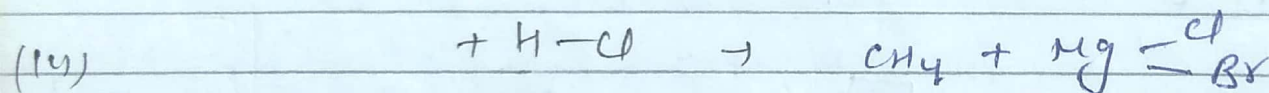
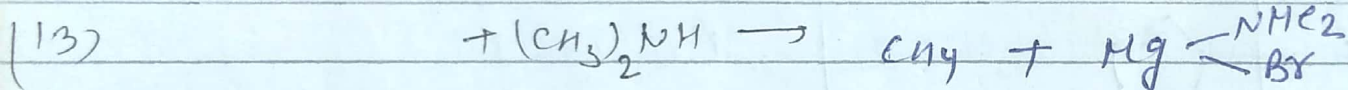
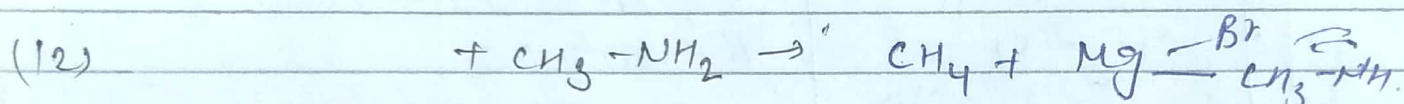
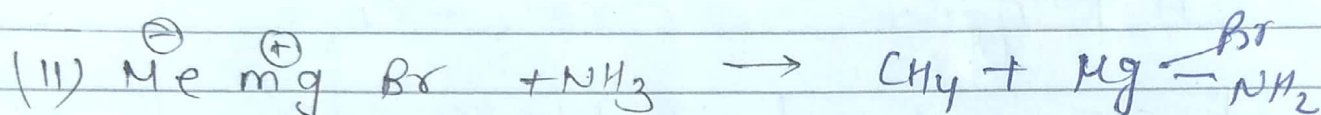
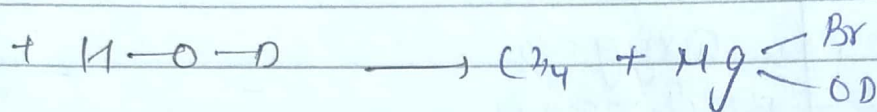
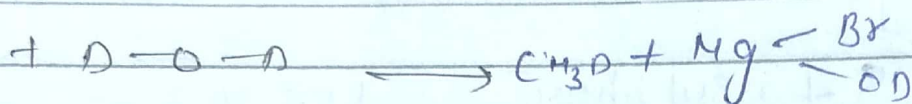
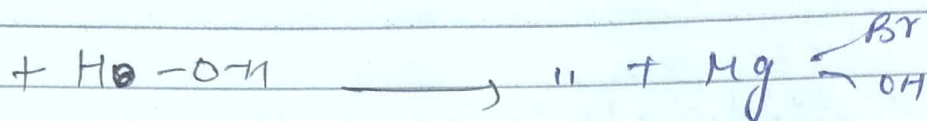
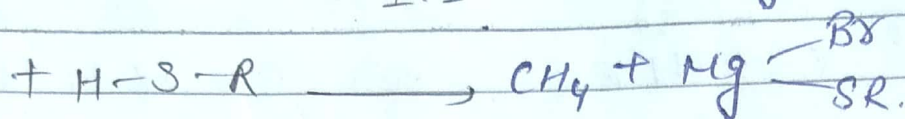
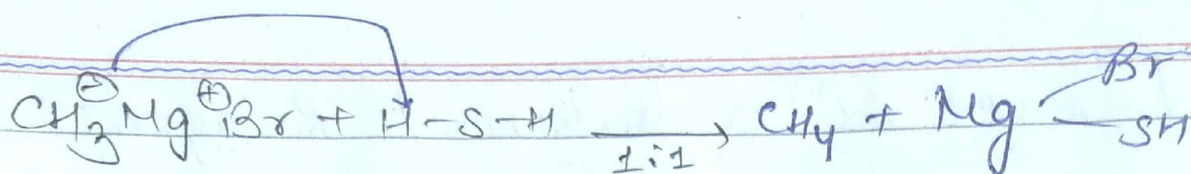


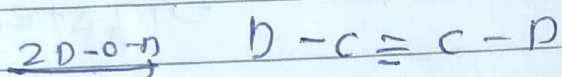
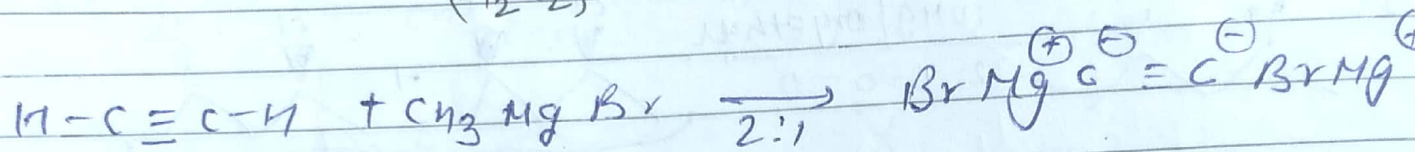
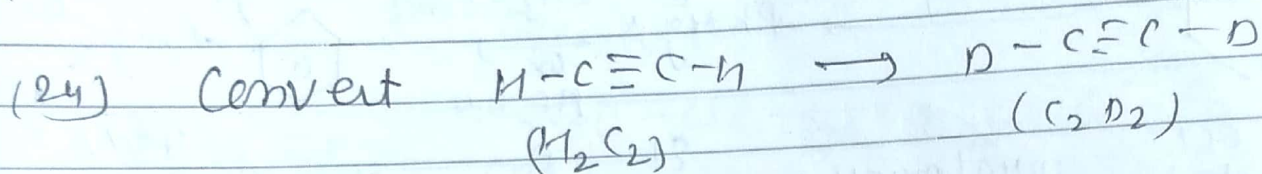
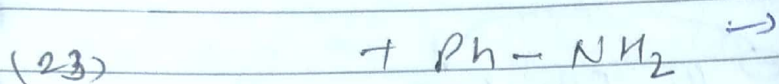
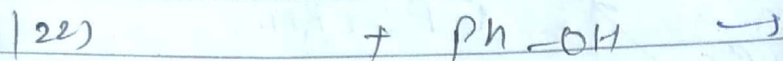
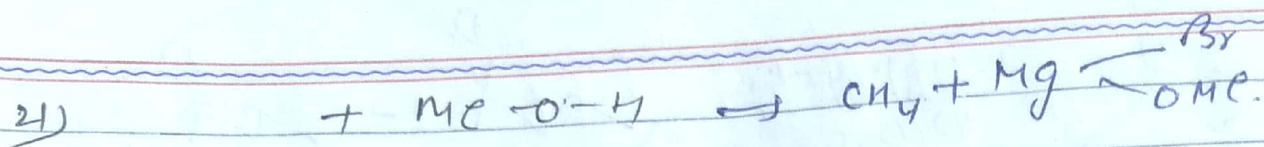
* Acid-Base Rxⁿ of Grignard Reagent:

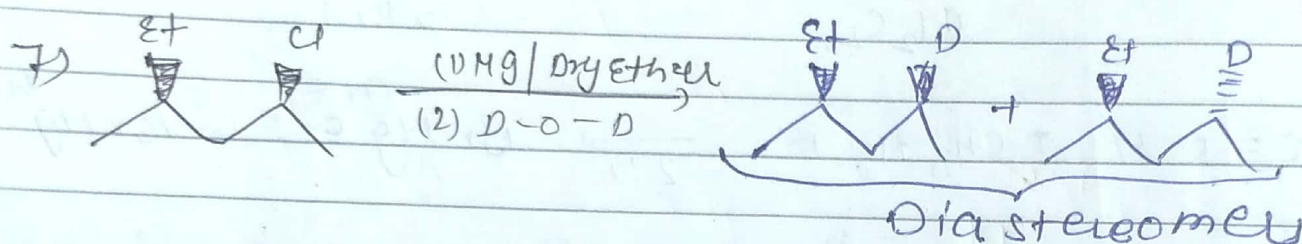
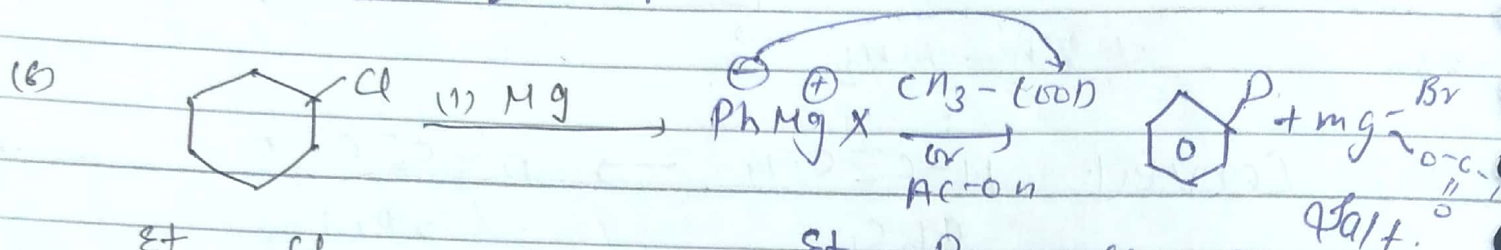
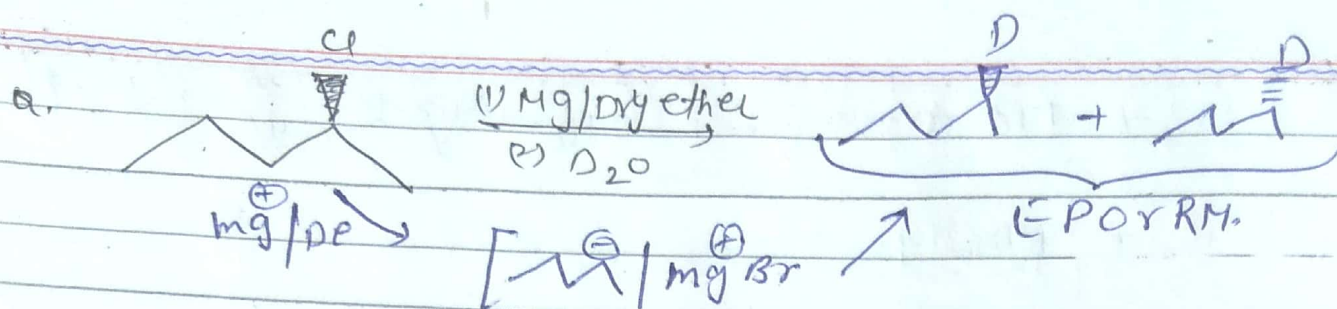


Acidic nature of HA > Alkene



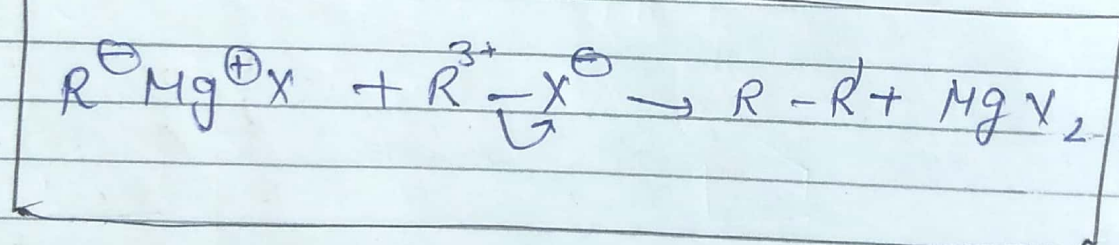






* NSR of GR+

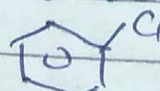
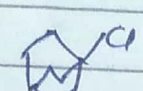
GR show NSR with R-X (Alkyl Halide/comp. having leaving gp) generally. It mean $\$N_2\$$



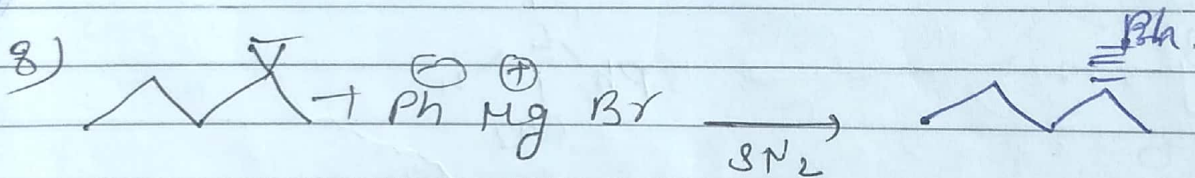
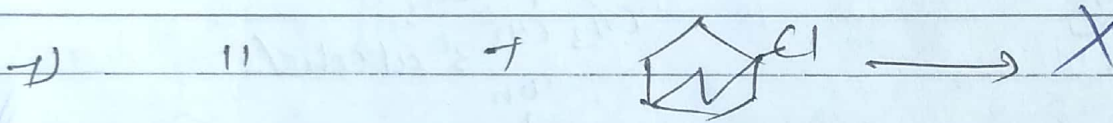
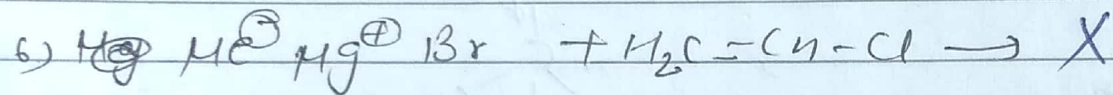
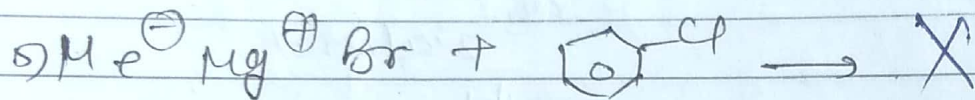
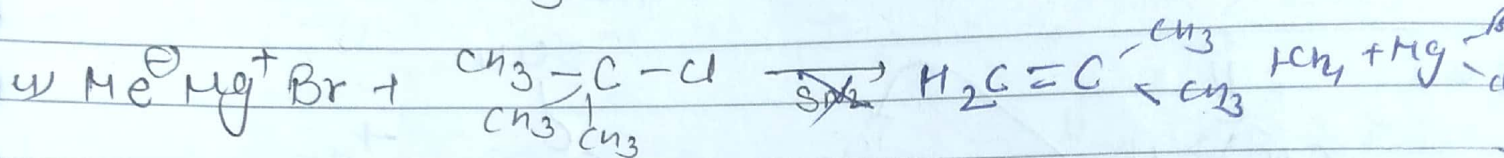
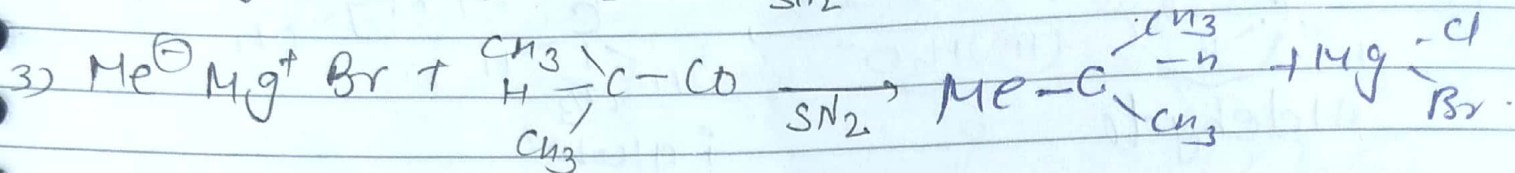
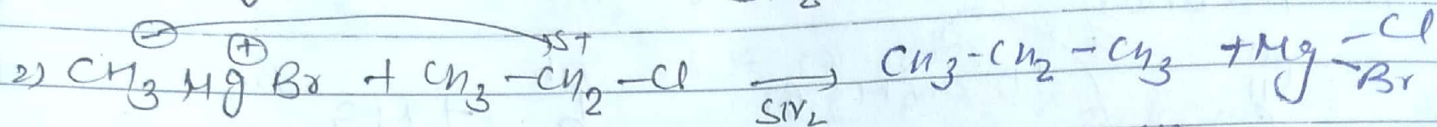
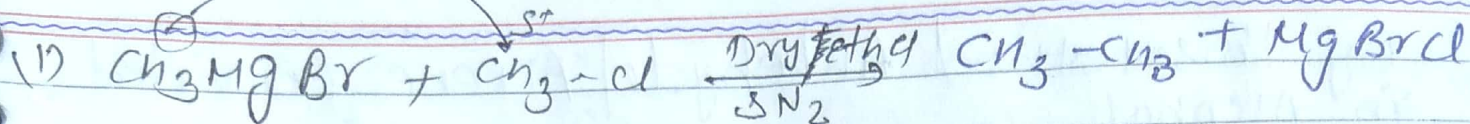
Mechⁿ — SN²

सावधान!

$R'-X = 1^\circ$ or 2° halide

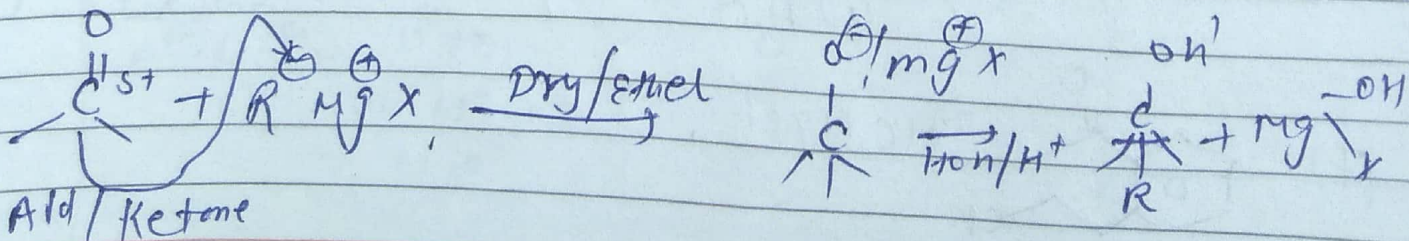
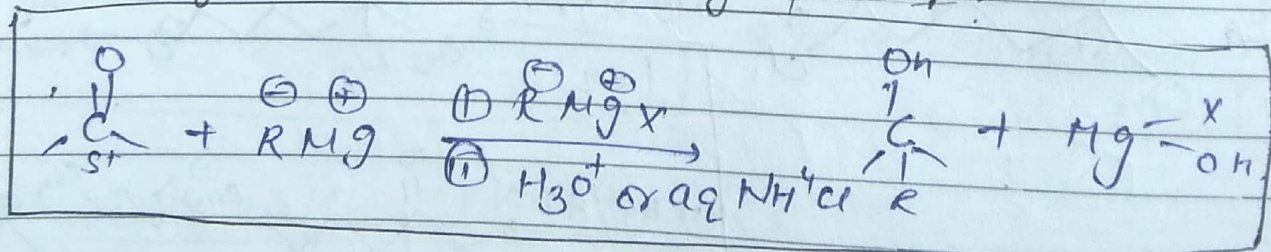
$R'-X \neq 3^\circ$ or  or  or

$H_2C=CH-Cl$

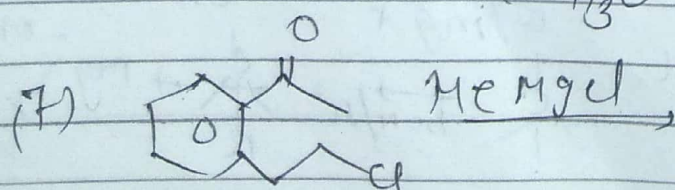
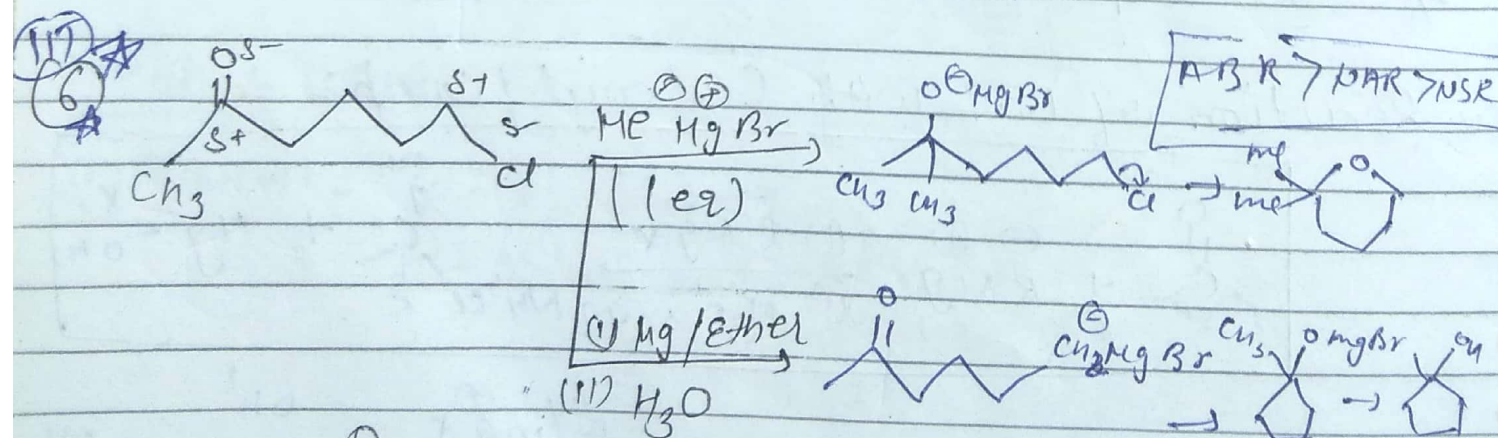
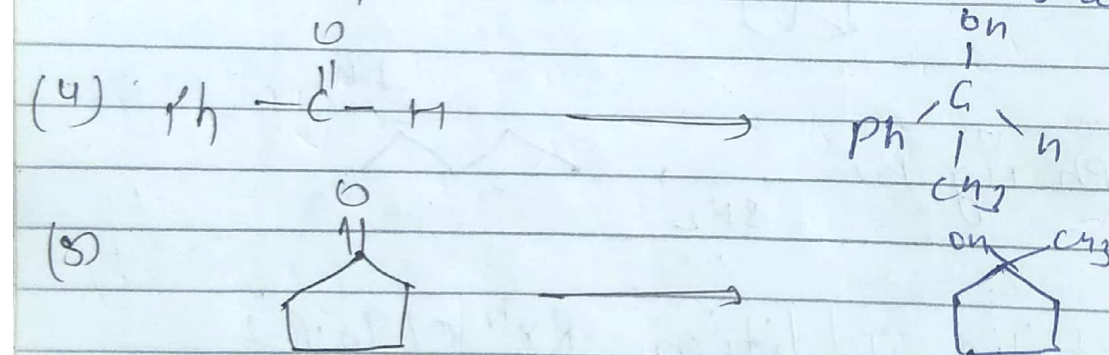
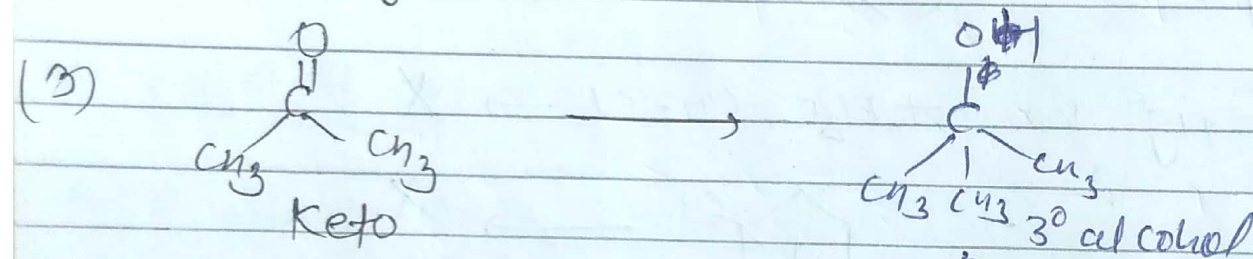
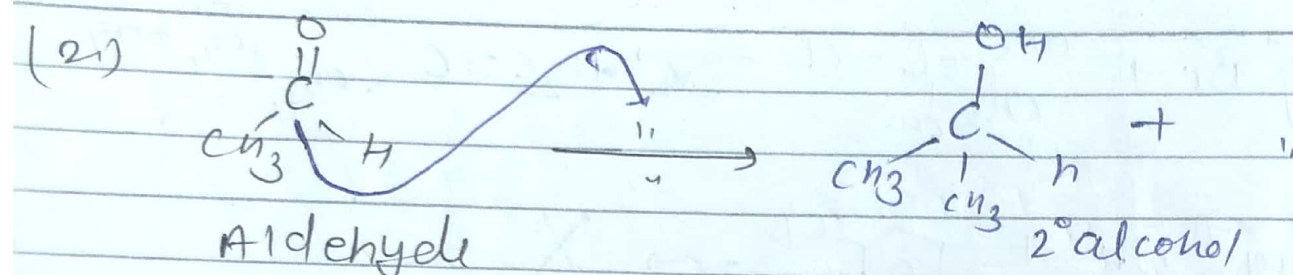
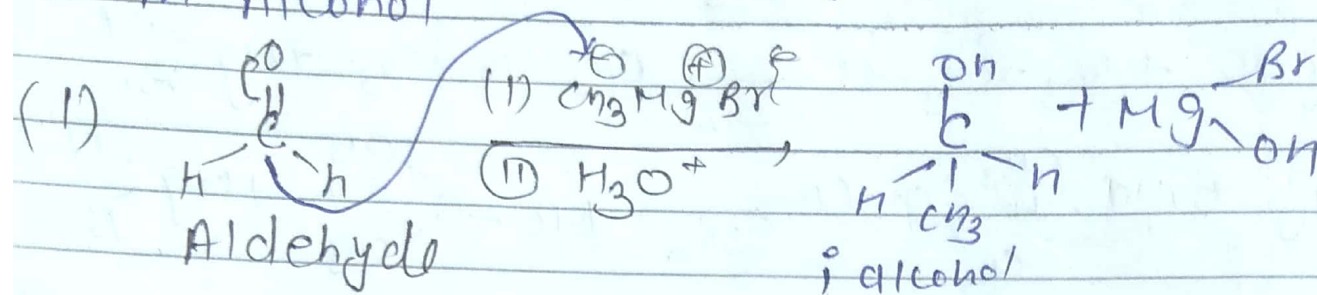


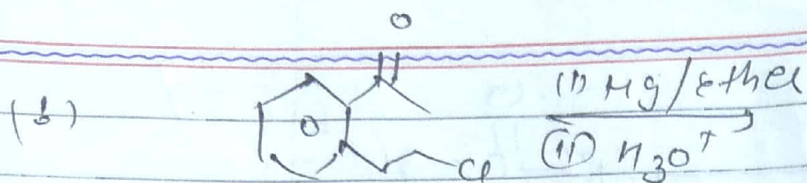
* Nucleophilic addition Rx^n of $Gr.R$!

* Reaction of Gr with Carbonyl comp:

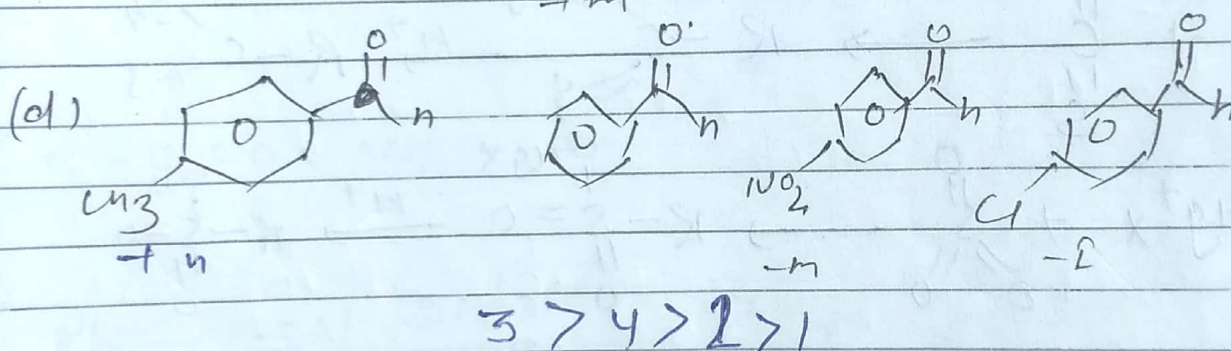
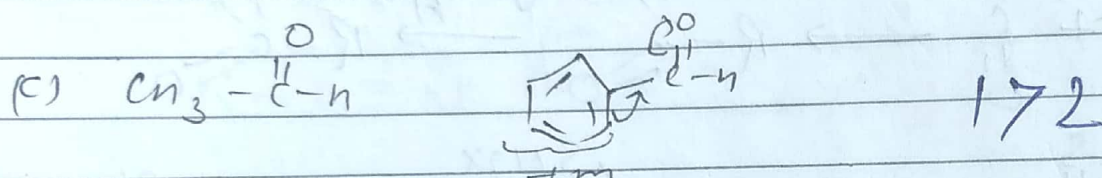
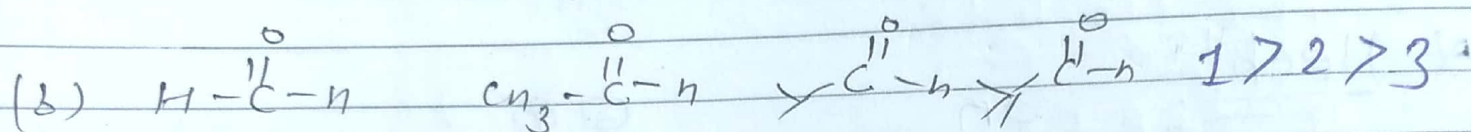
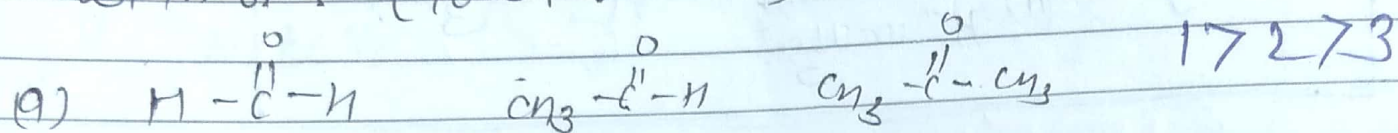


By this method Aldehyde / Ketone converted in Alcohol



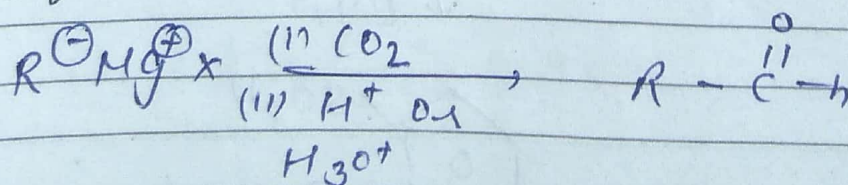


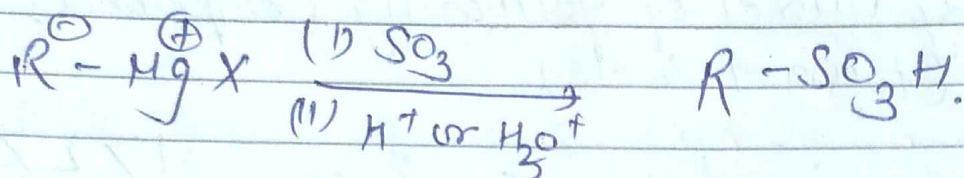
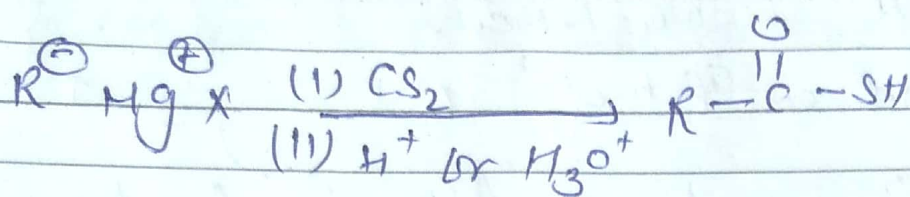
d. Reactivity order of following Compounds with Gr (towards NAR)



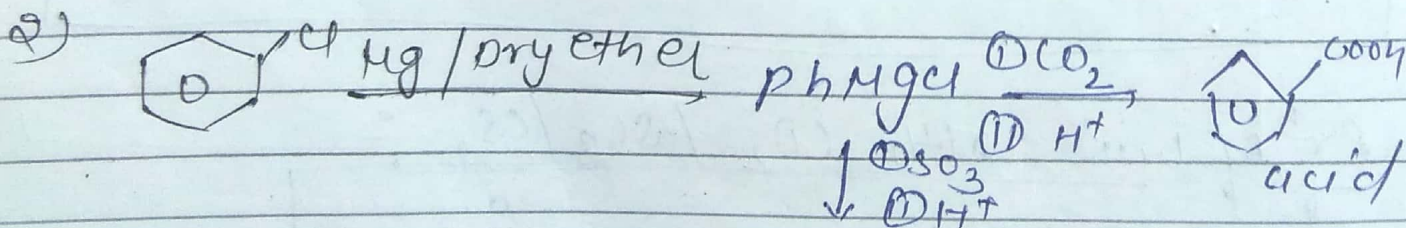
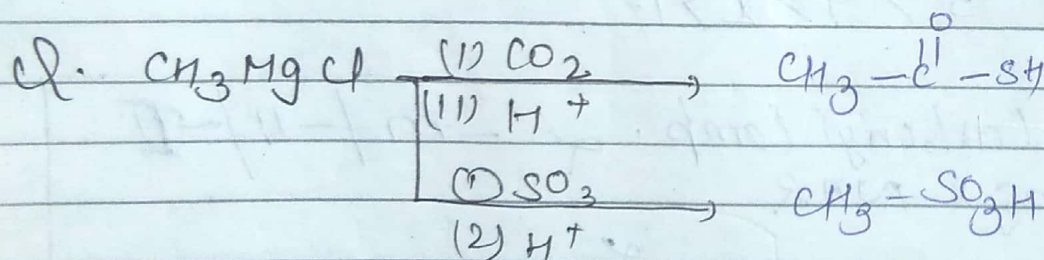
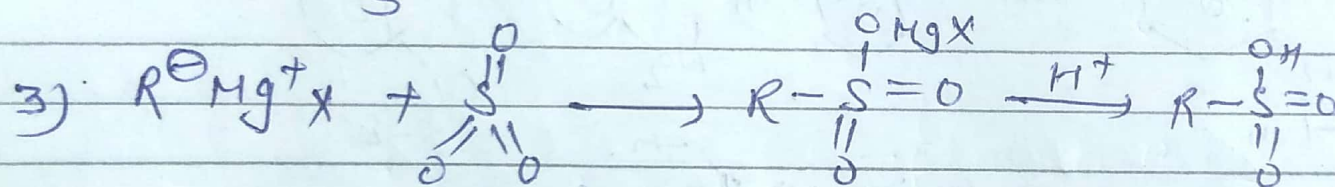
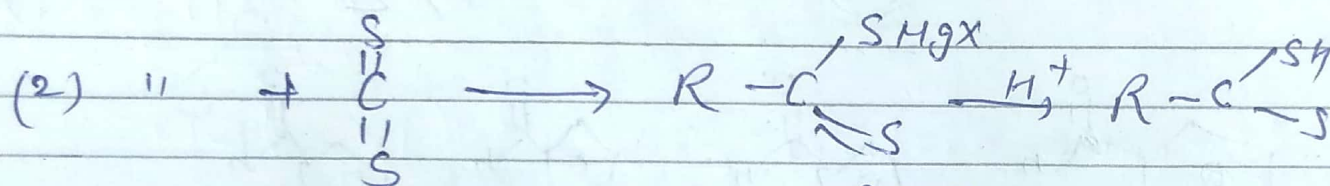
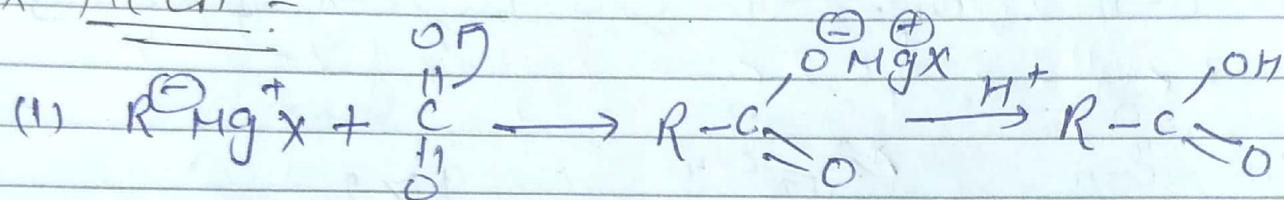
Reactivity of Carbonyl Comp. $\propto -m / -H / -I$
towards $RMgX$ NAR
 $\propto \frac{1}{\text{steric Hindrance}}$

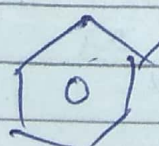
* Rxn of Gr with CO_2 / SO_3 / CS_2 :-



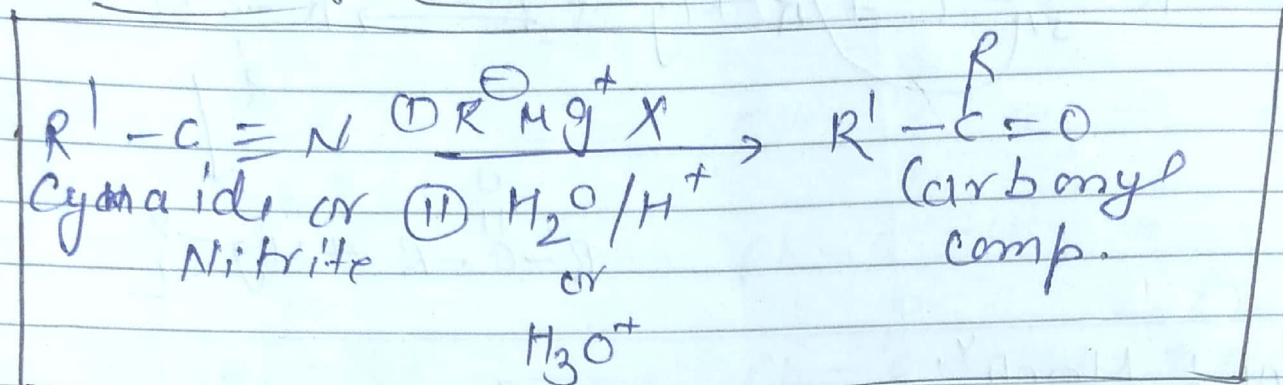


* Mechⁿ:

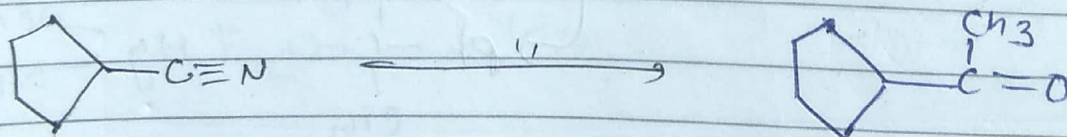
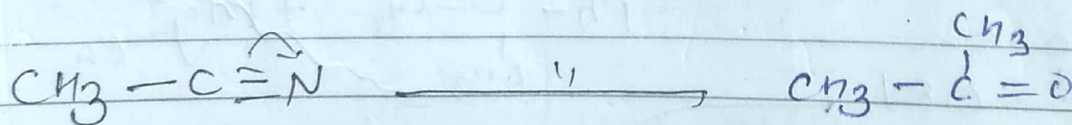
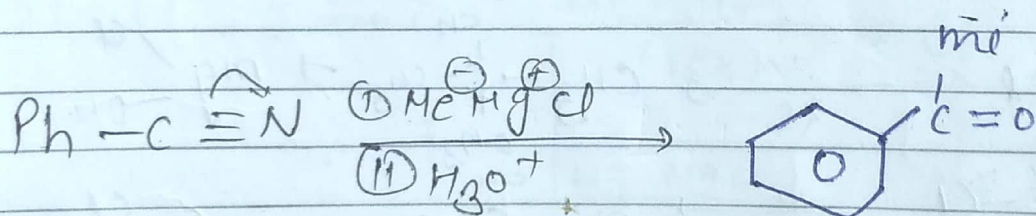
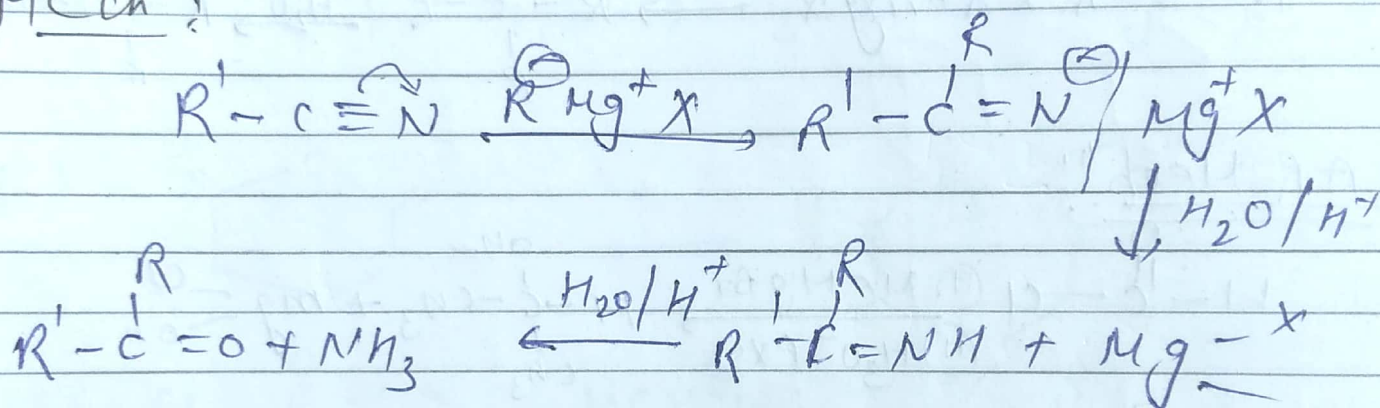


 Sulphonic acid.

* Reacⁿ of alk with Nitrate / cyanide (R-CN)



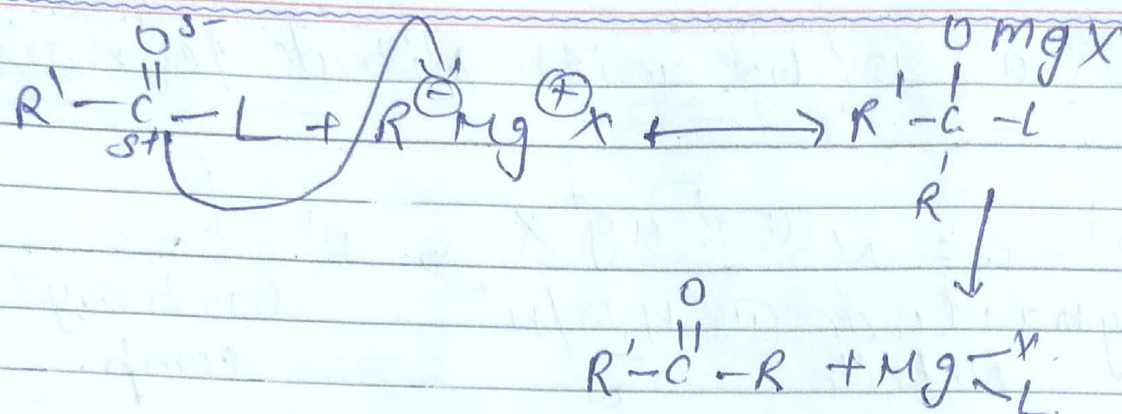
Mechⁿ:



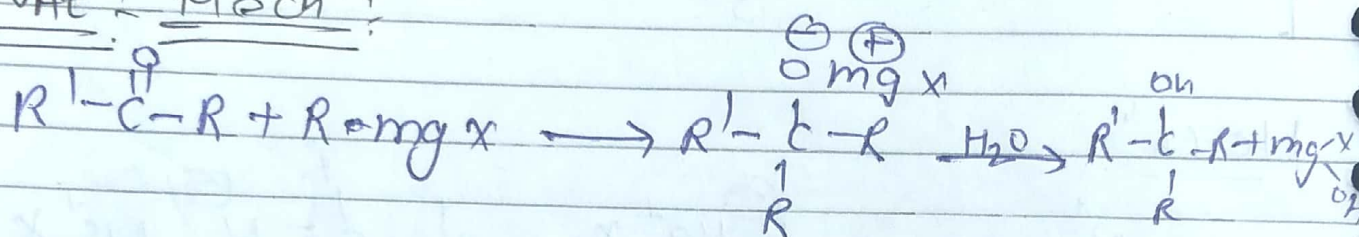
By this method $-\text{C}\equiv\text{N} \longrightarrow >\text{C}=\text{O}$.

It is a kind of NAR.

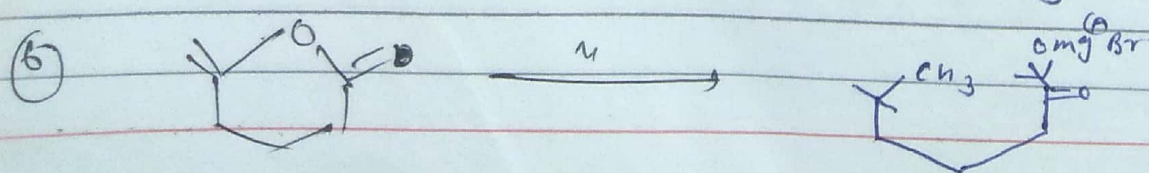
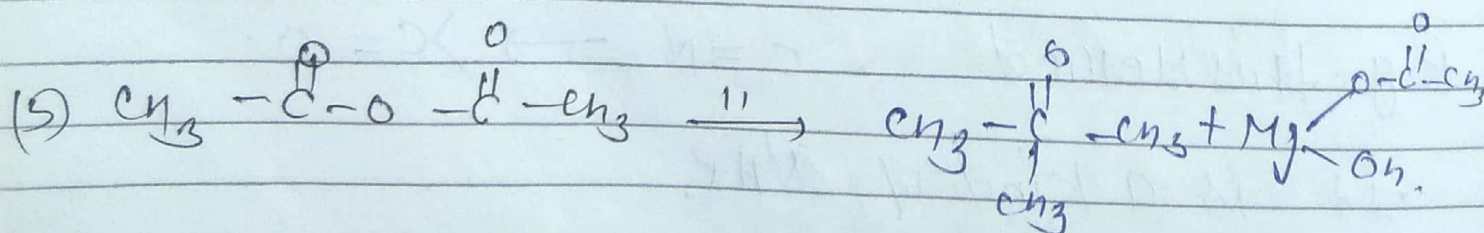
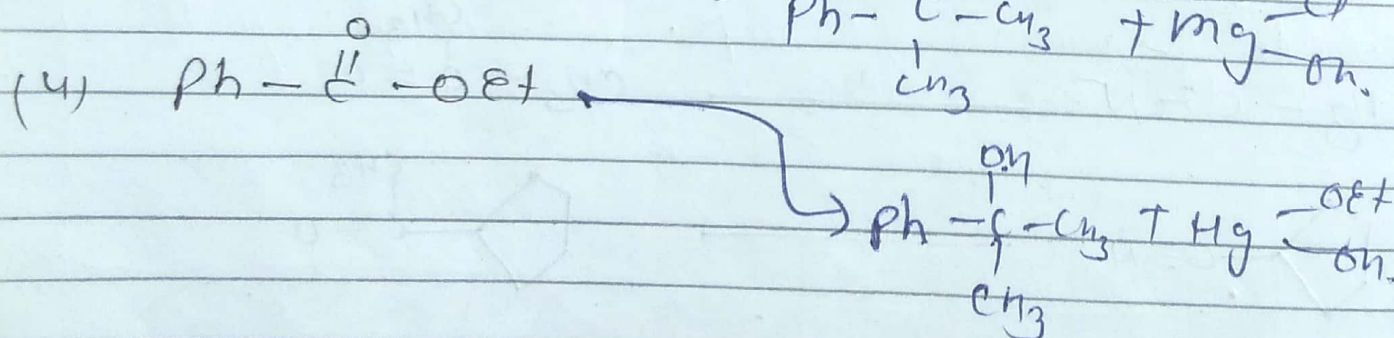
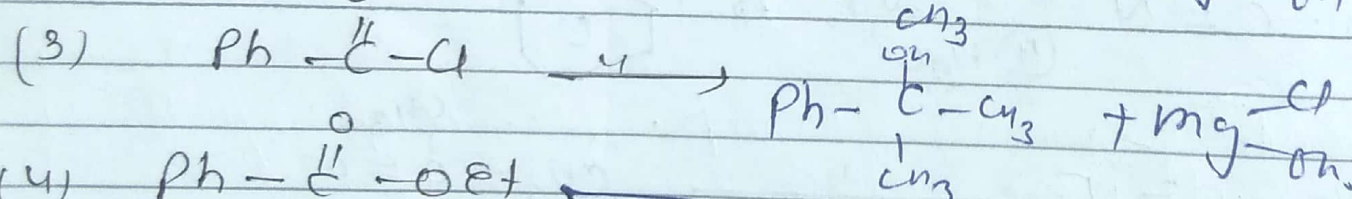
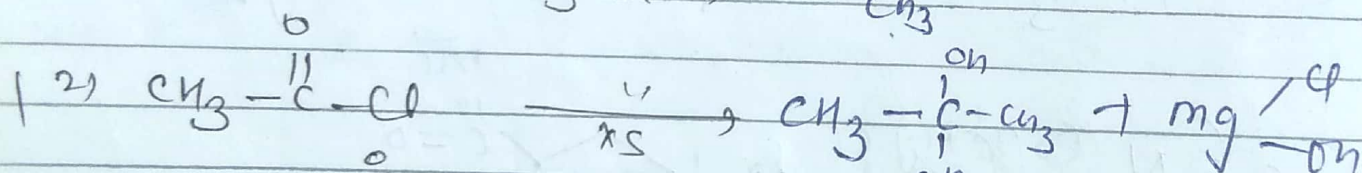
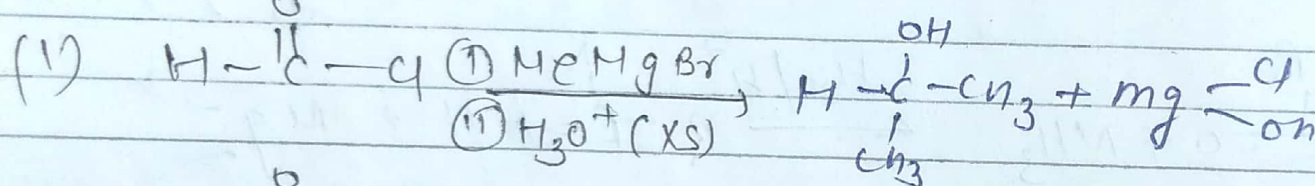
Mech^y!

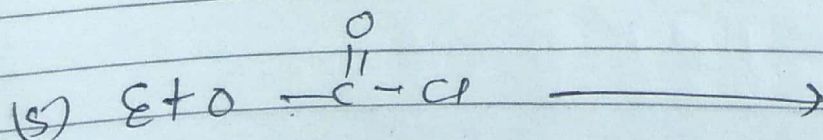
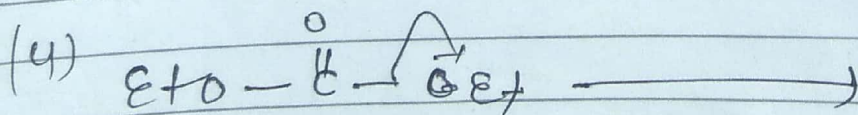
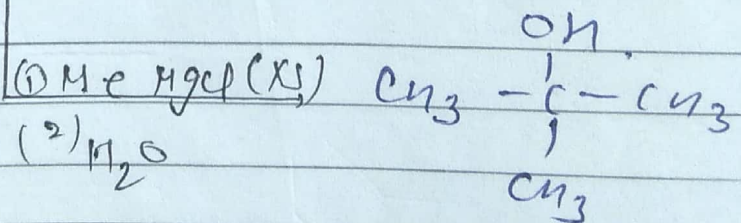
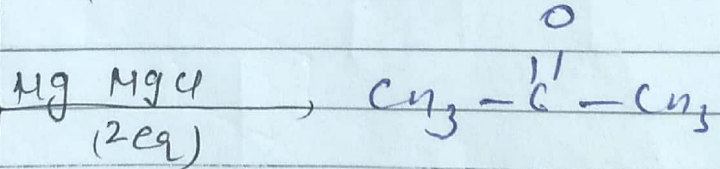
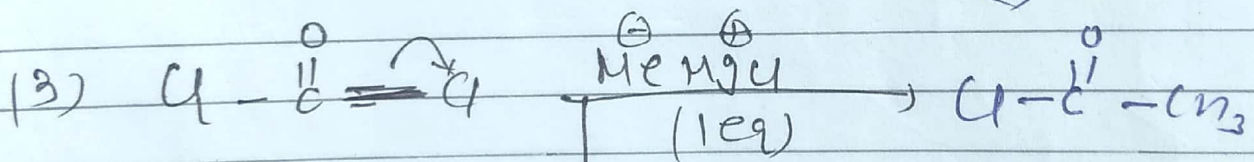
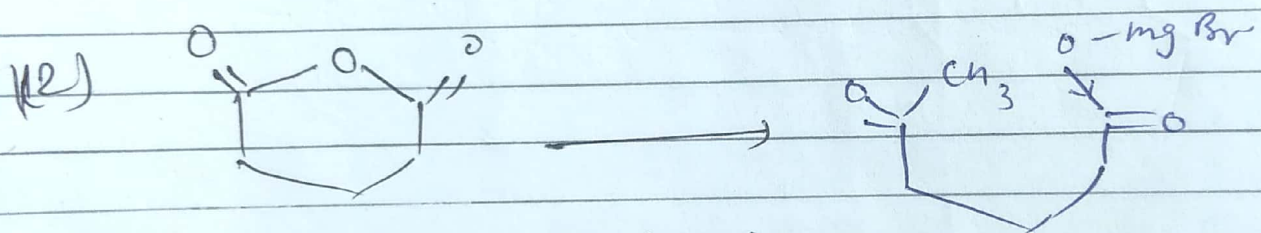
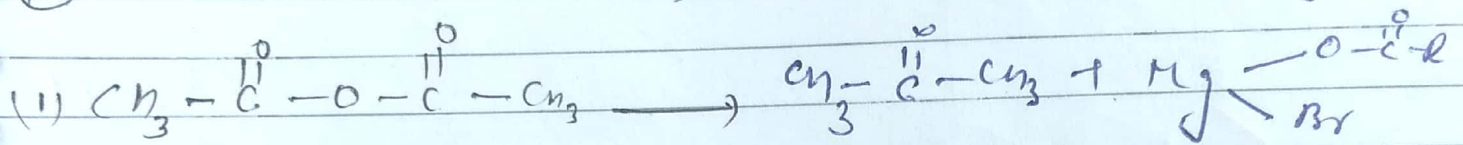
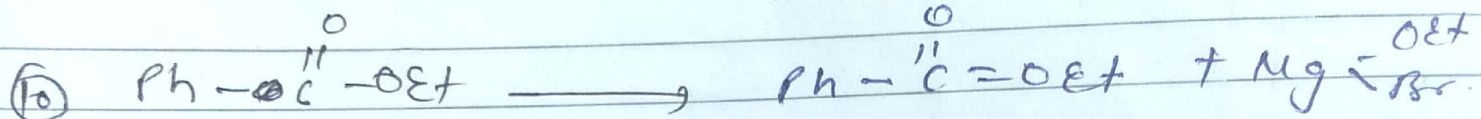
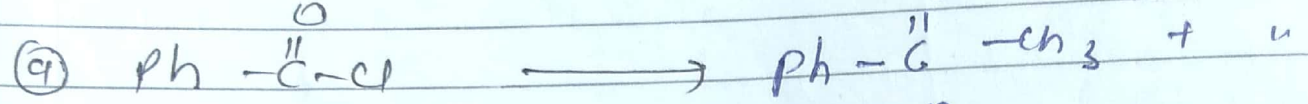
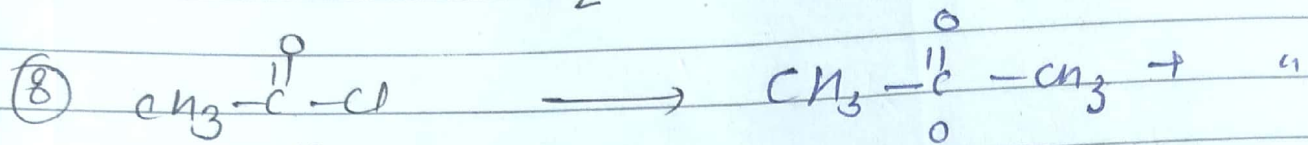
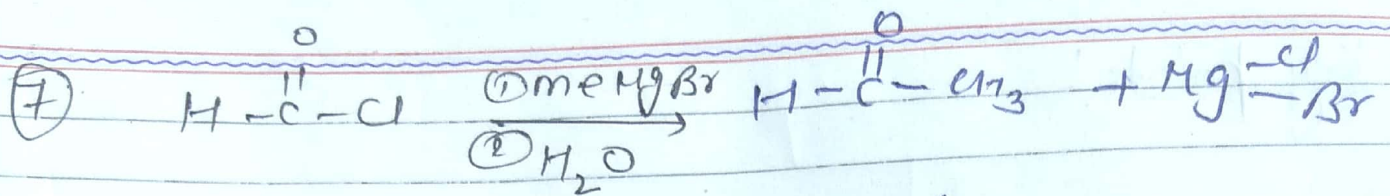


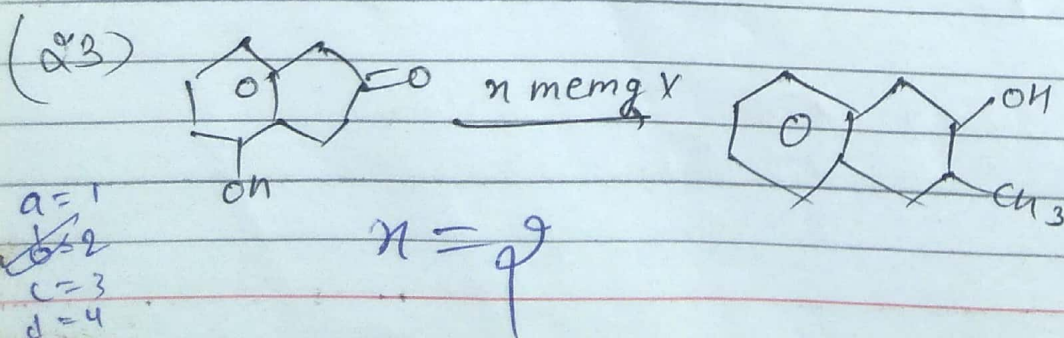
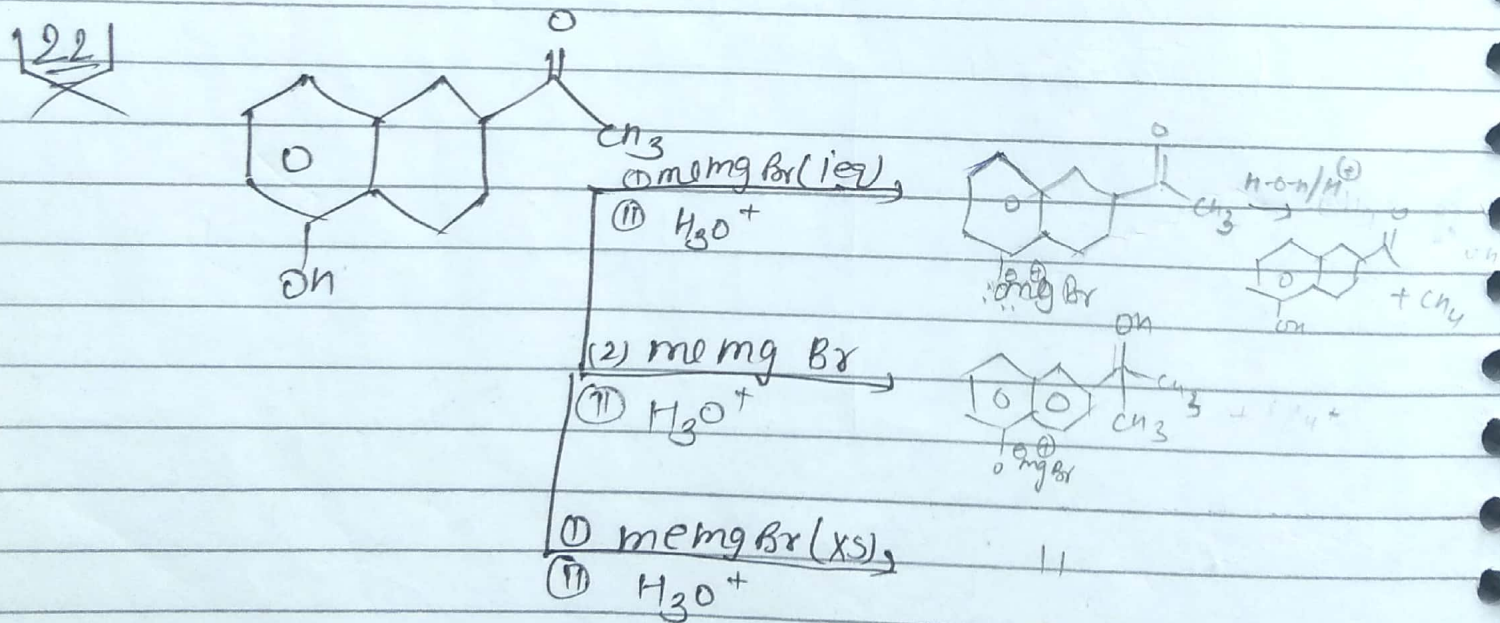
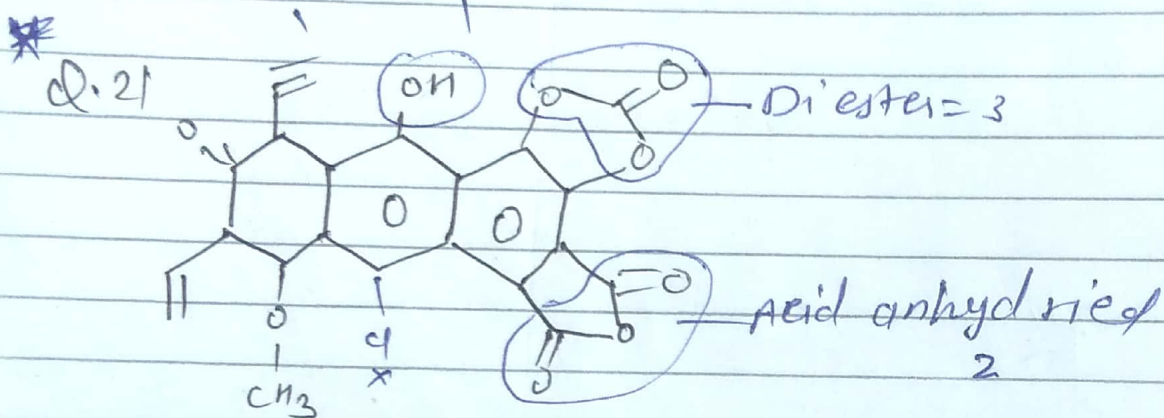
§ NAE: Mech^y!



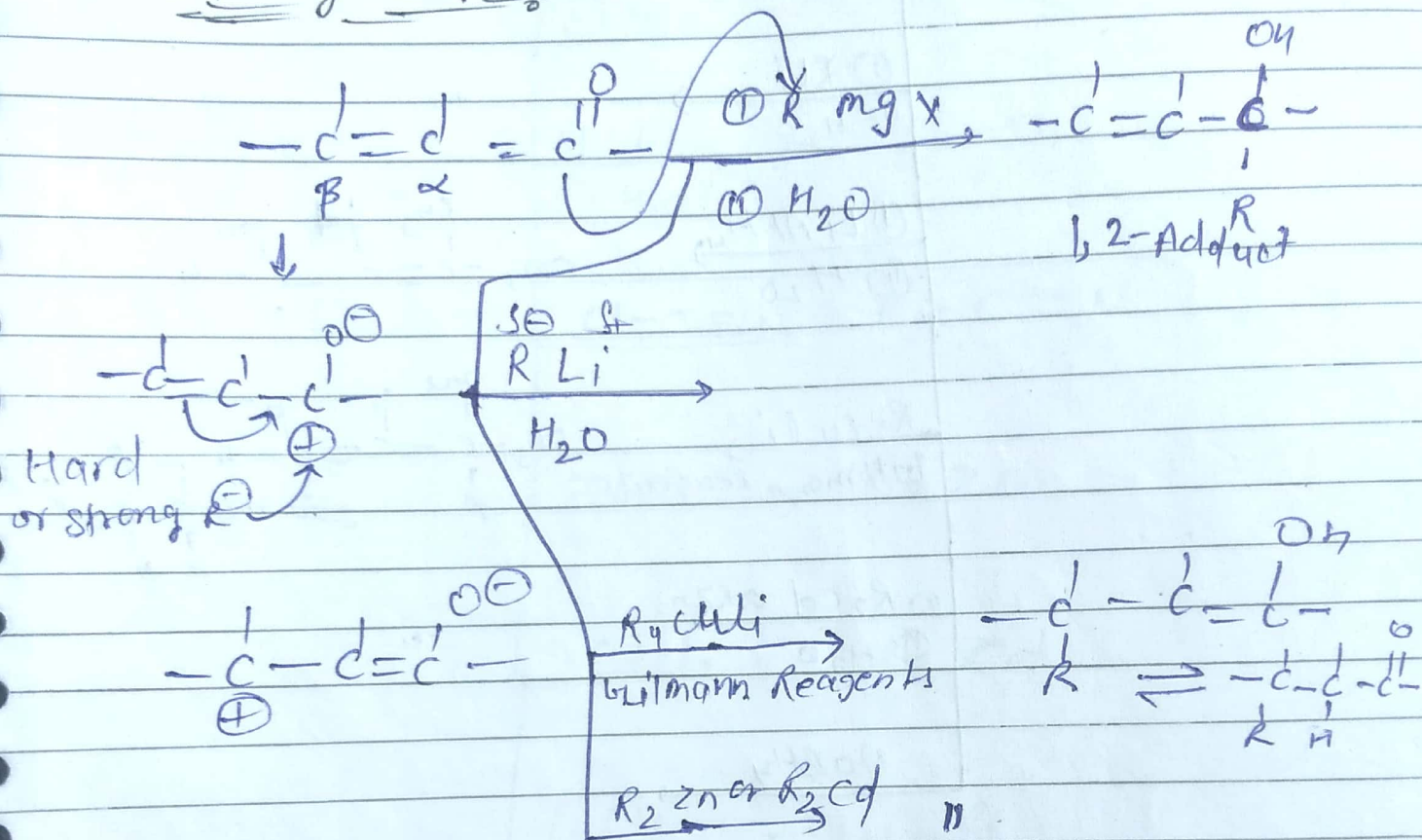
NAR Mech^y!



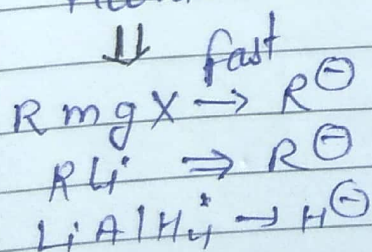




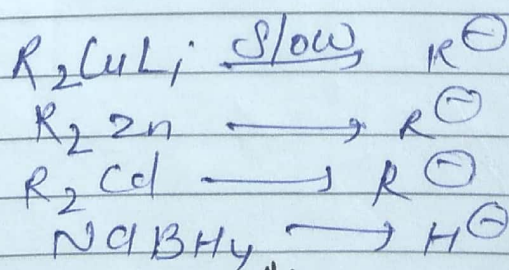
* Rxn of memgr with α, β -unsaturated Carbonyl comp.



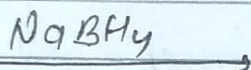
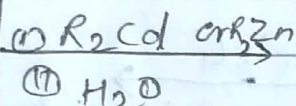
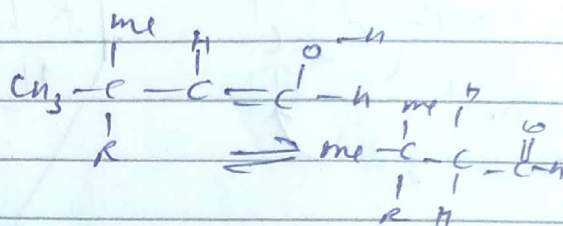
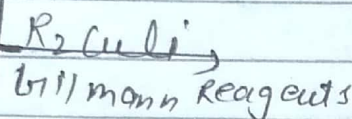
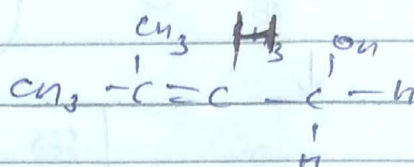
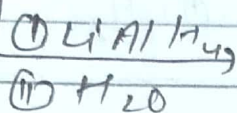
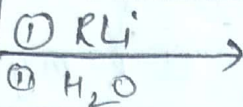
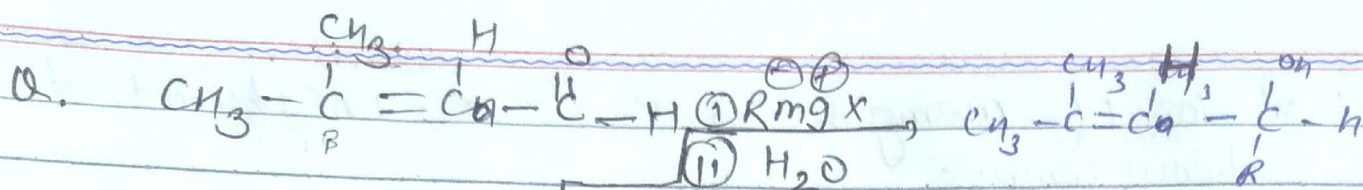
Nu^-
 $\swarrow$ $\searrow$
 Strong Hard Soft weak



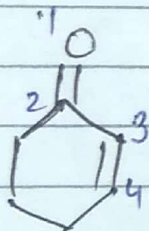
Form 1,2-Adduct with α, β -unsaturated C=C



Form 1,4-Adduct.



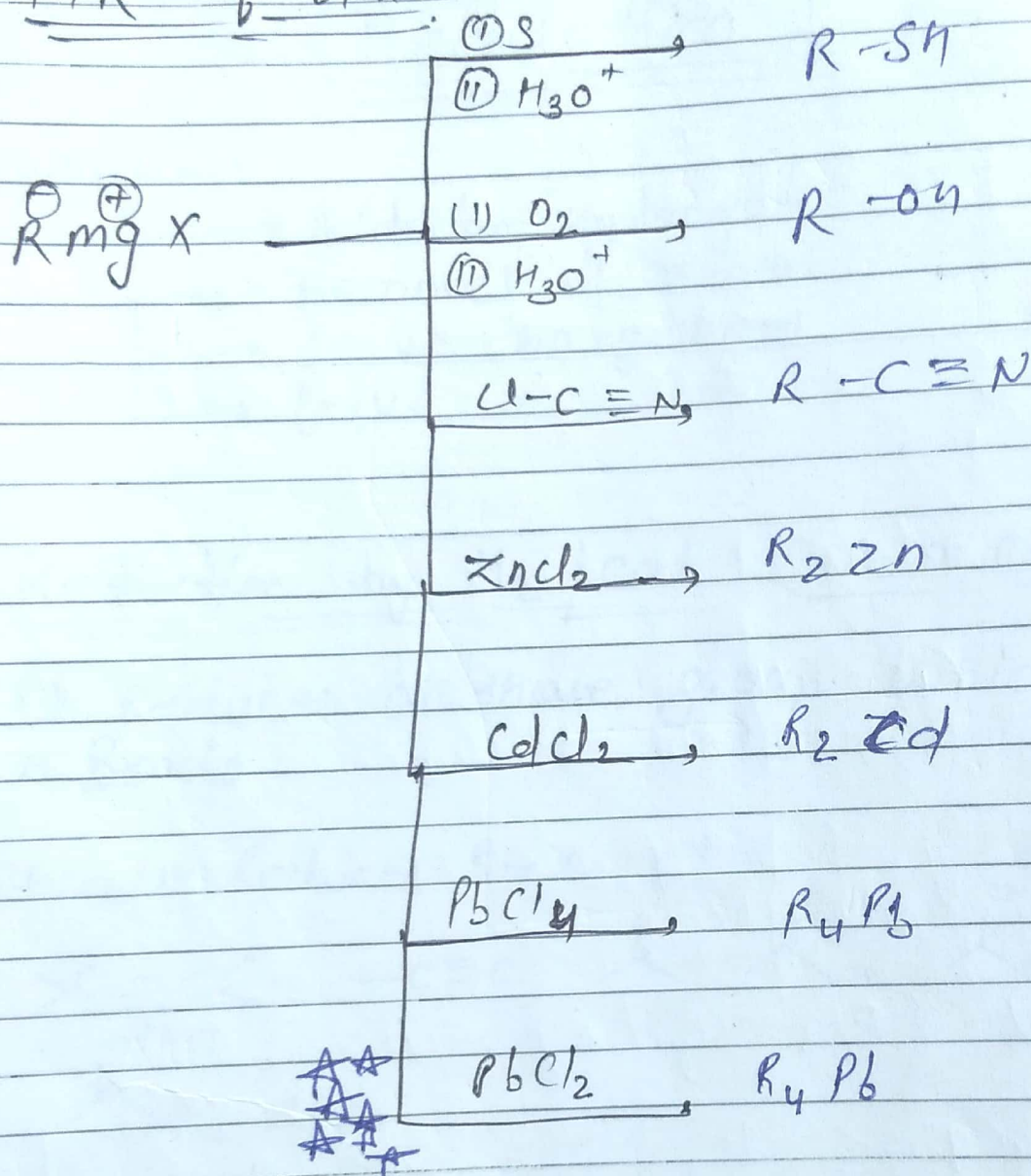
Q.



Upto Reduction.
Test syllabus
Substitution

Dmp Race : 15 Test
For test [16] Race | Ex-20 Halogen D.
19. 17-13

* MR of G.R.



SBG STUDY