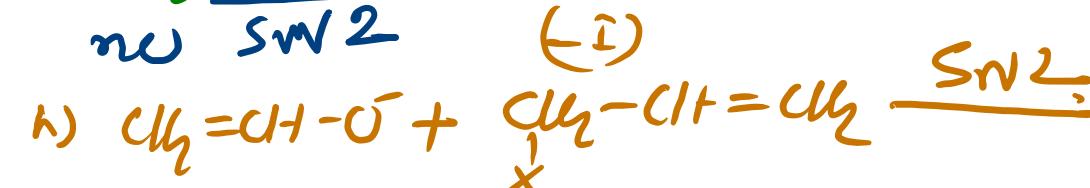
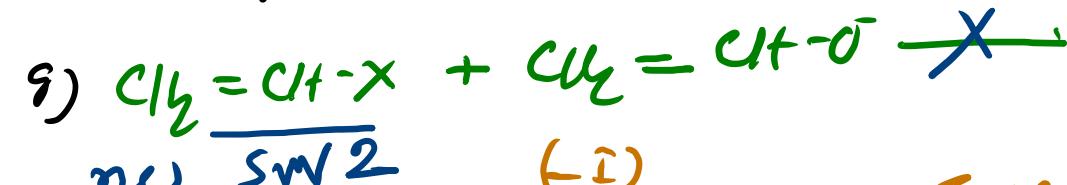
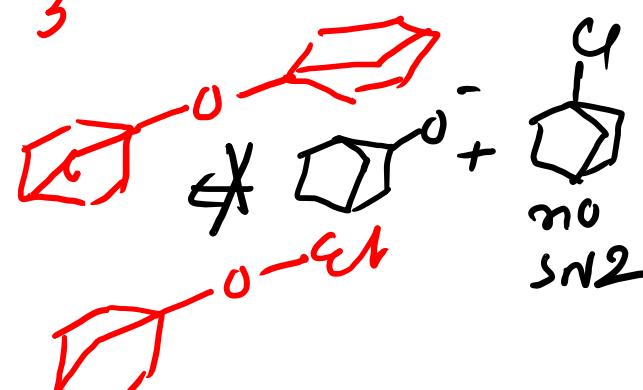
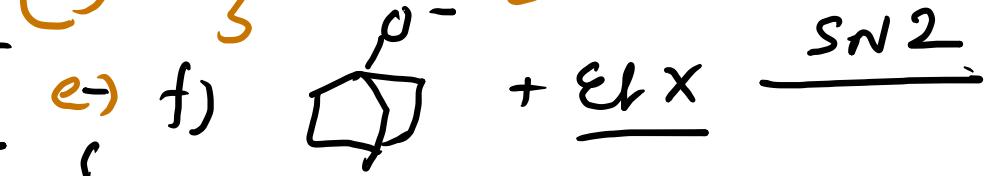
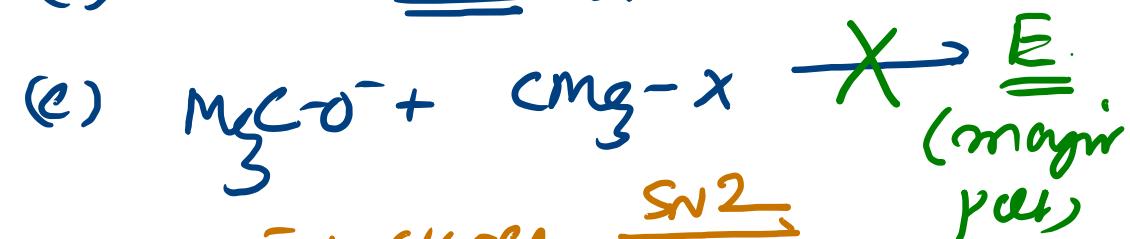
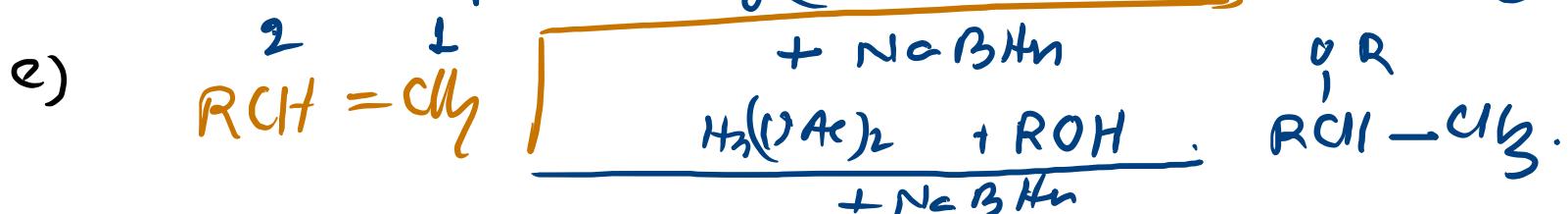
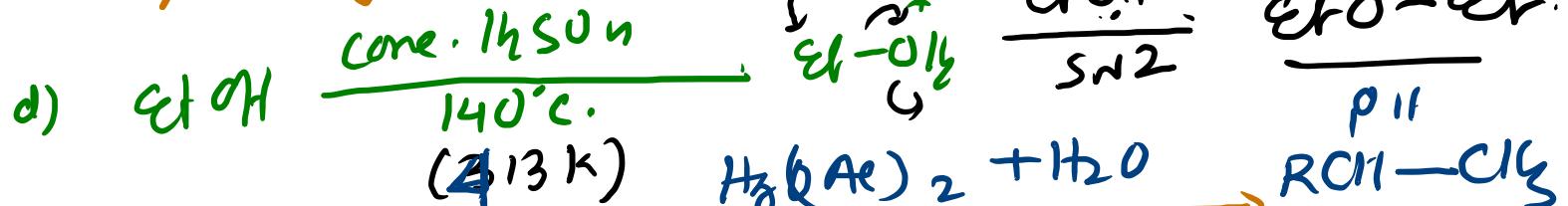
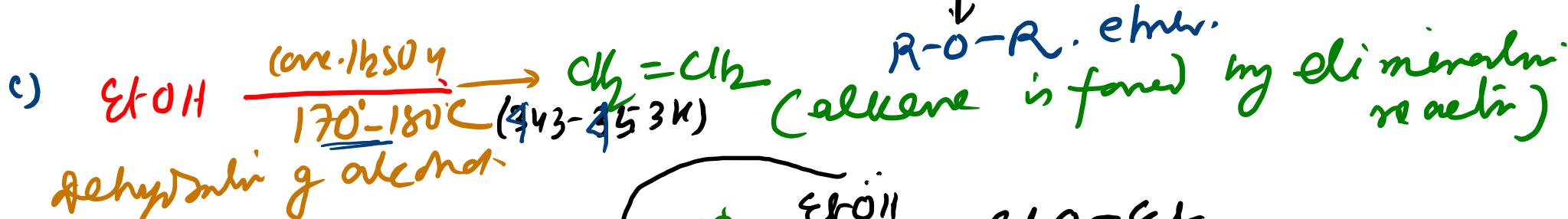
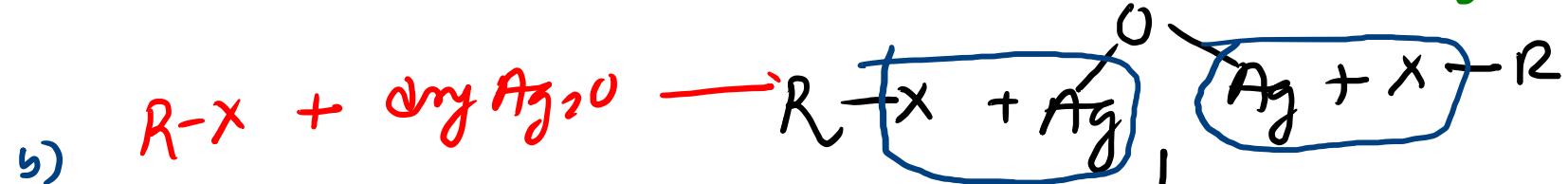
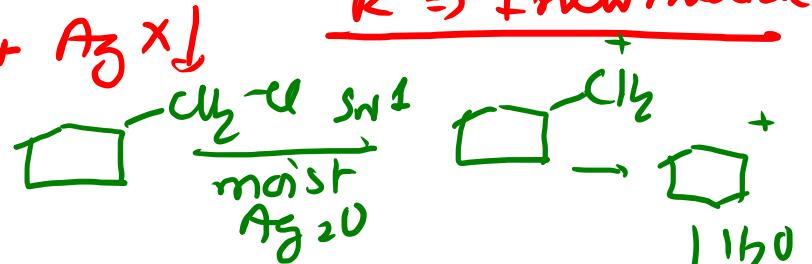
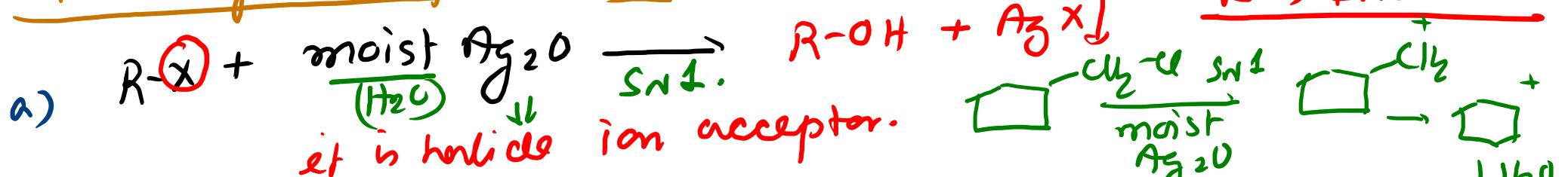


Q. Which of the following ethers can be prepared by
Hawting's Williamson ether system



6)

Other ways to prepare ethers / alcohol.

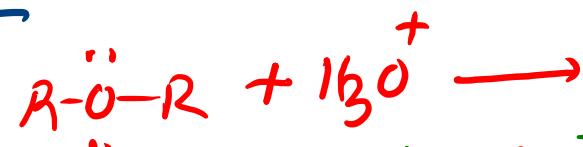


Ether reacn:

nucleop hole



Competency
IIT-JEE

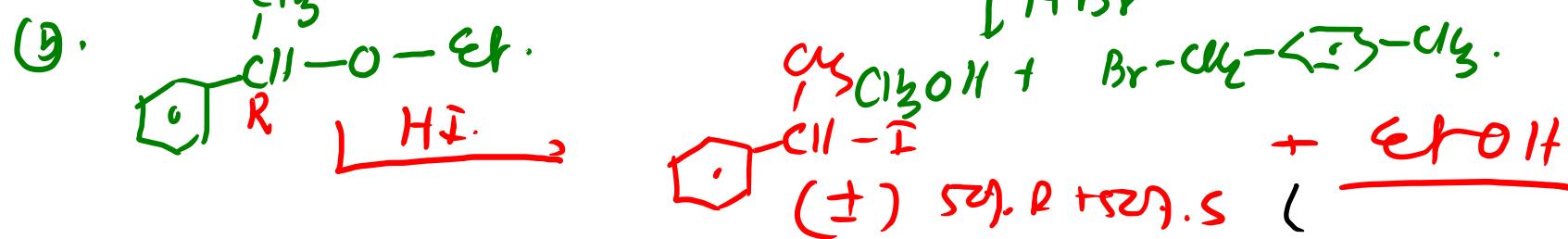
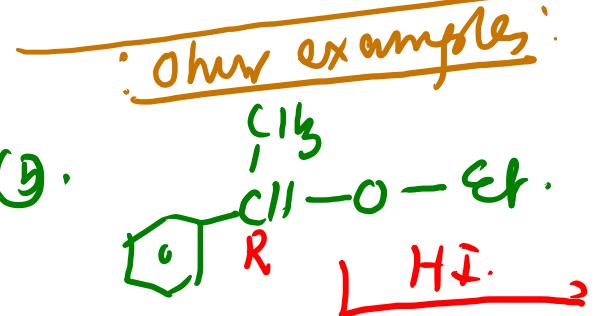
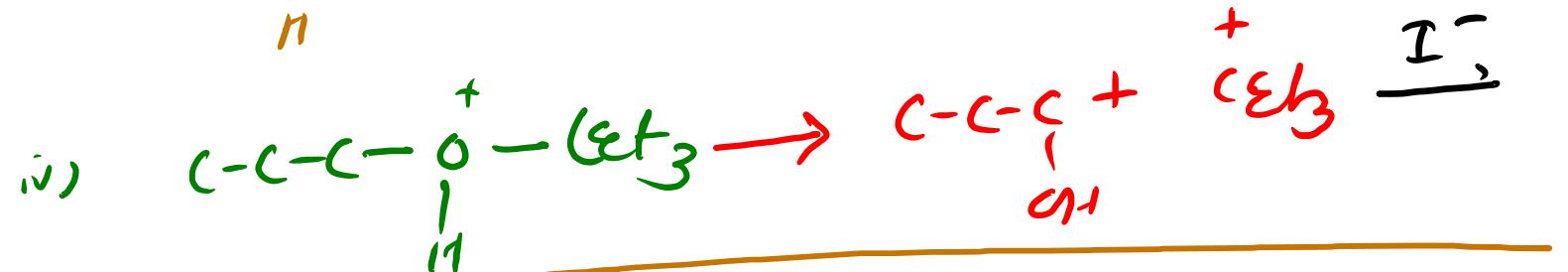
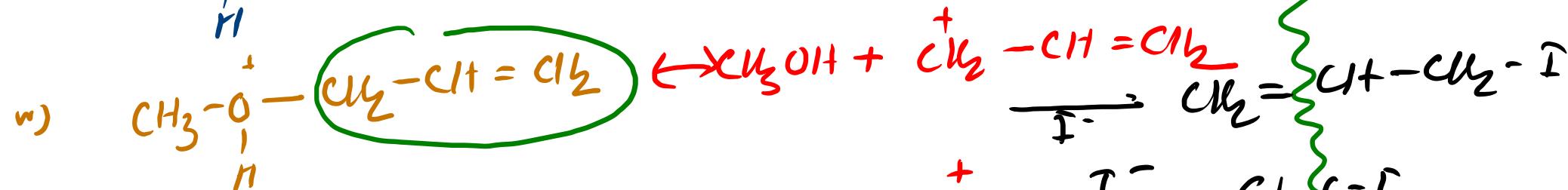
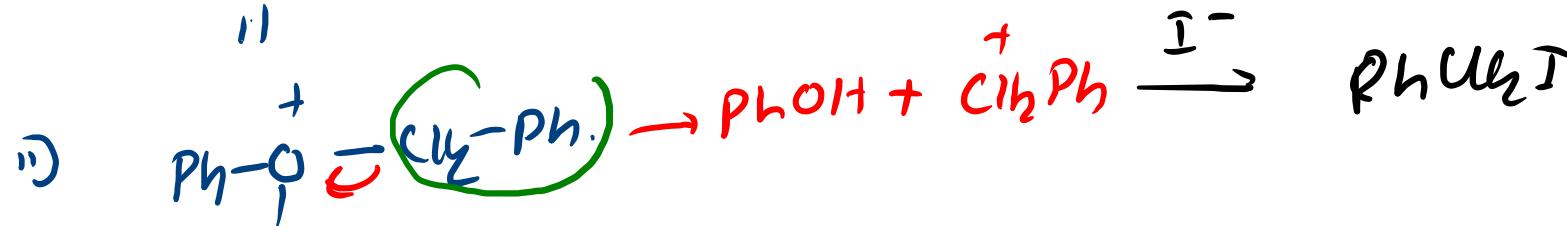


Rona
ether itself is nucleophile, it can not react with other nucleophile.
Ether is stable in basic medium

For Ether cleavage acidic medium must be used.
H⁺ is the best option.

When it undergoes cleavage it can undergo $\text{S}_{\text{N}}2$ or $\text{S}_{\text{N}}1$.

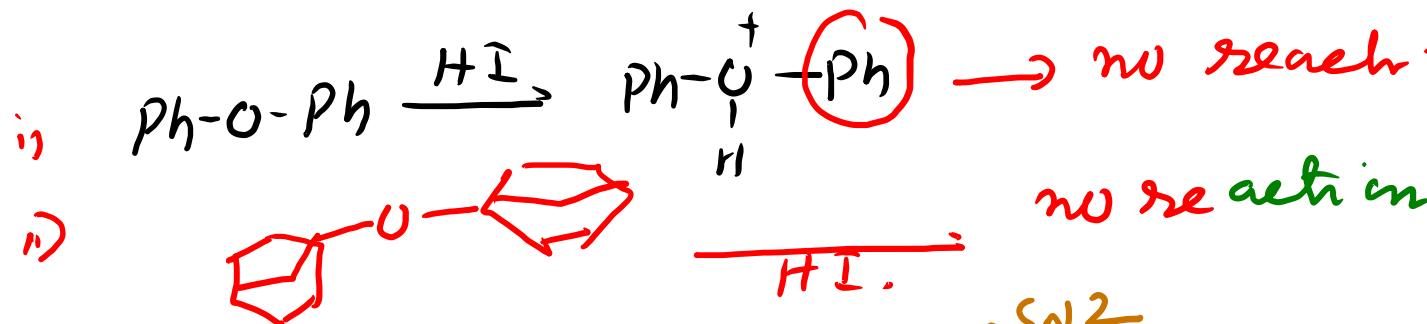
In acidic medium
the first step is protonating Ether. depends on R/R'. it can undergo $\text{S}_{\text{N}}1$ / $\text{S}_{\text{N}}2$ mechanism



Either R^+ or R' is stable,
the mechanism
is $S\text{N}\text{T}$.

I attacks most
carbon on
which carboca-
tion is very
stable.

(Total no. of pdts) = 3.



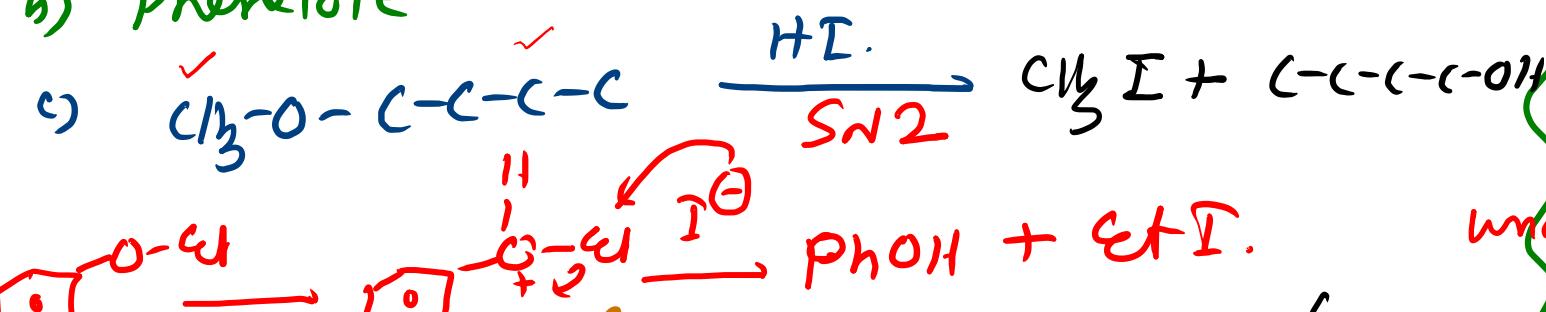
These two ethers do not undergo cleavage.



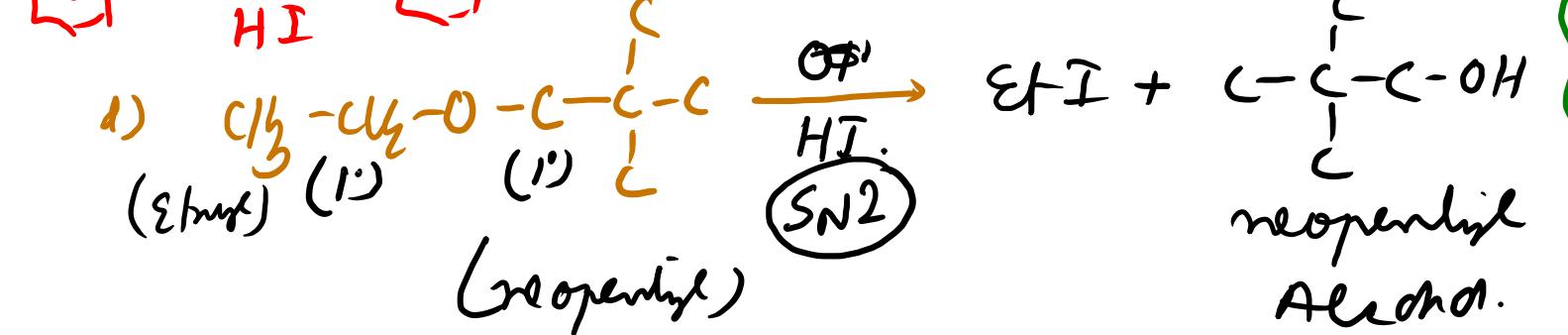
If both sides carbocyclic unstable. ~~if~~



if one side alkyl grp

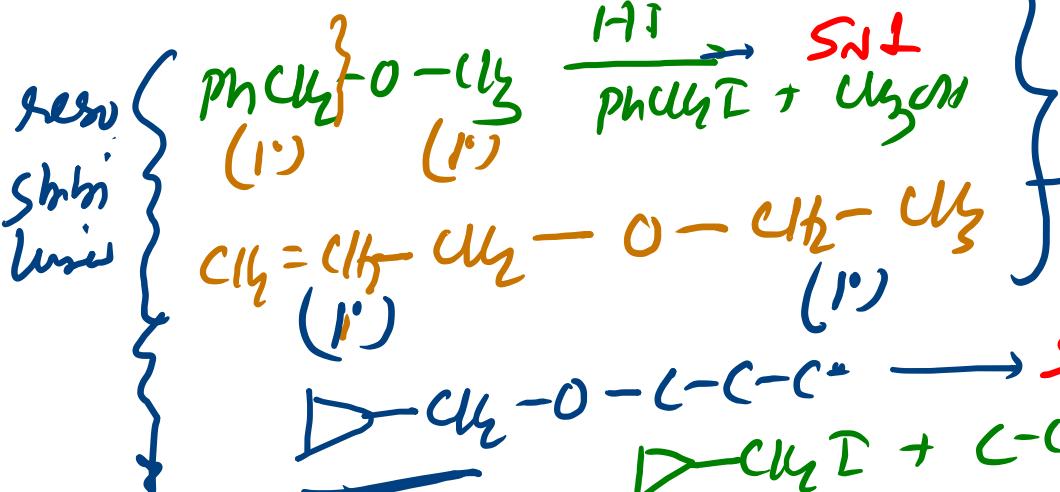
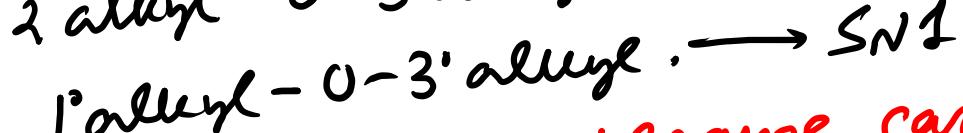
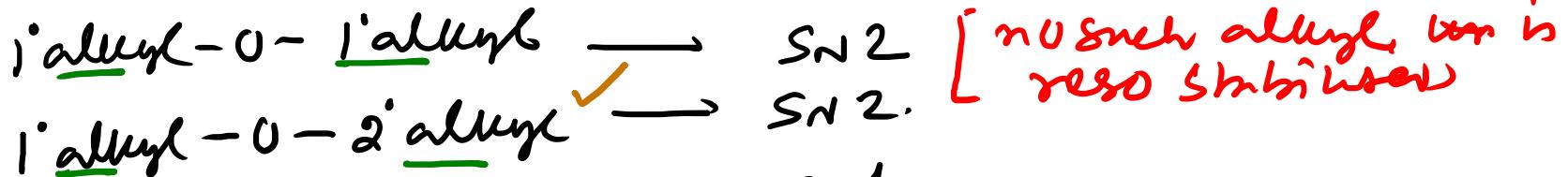
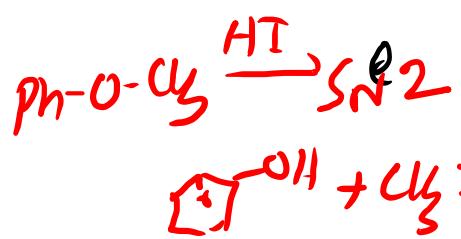


undergoes SN2 , then overall reaction is SN2

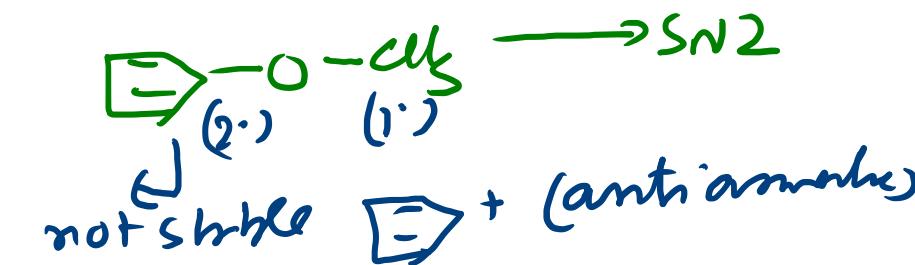


neopentyl
Alcohol.

I^- attacks less sterically crowded carbon.

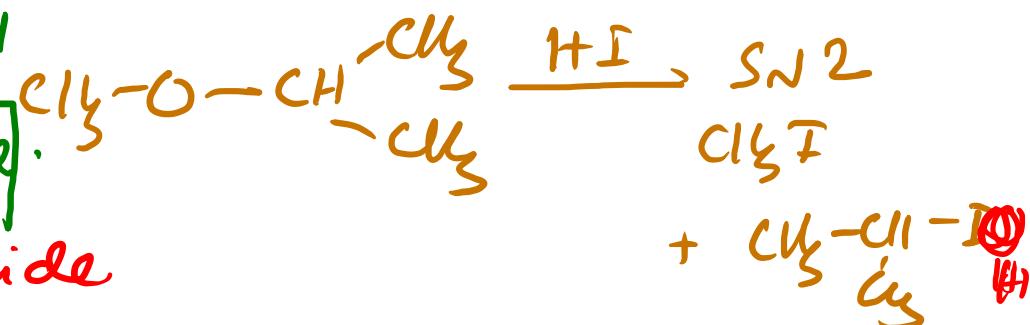


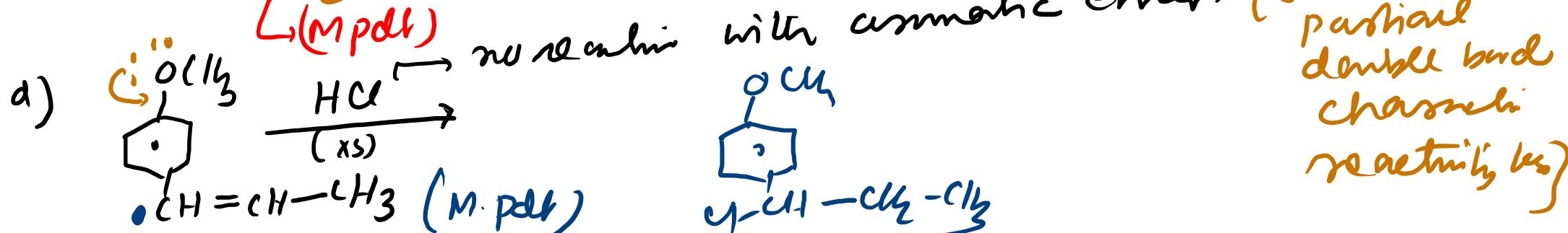
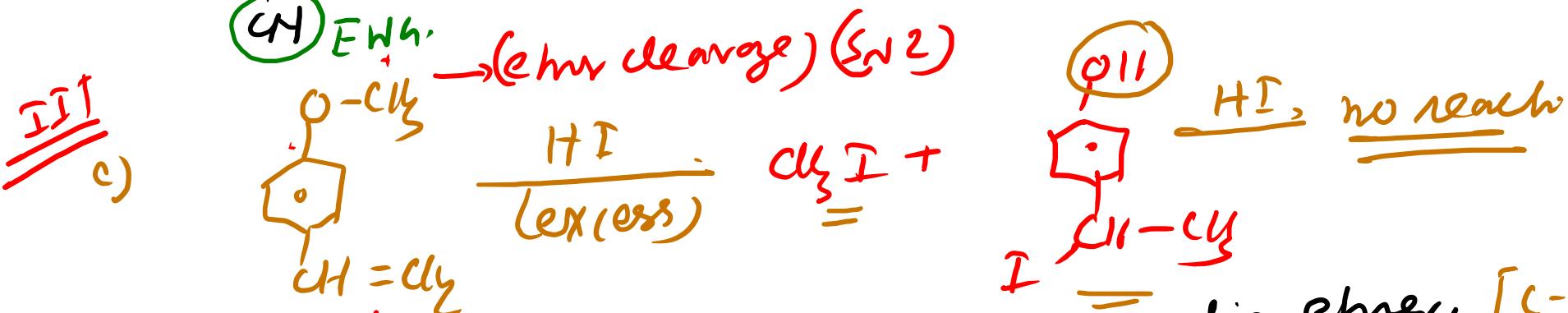
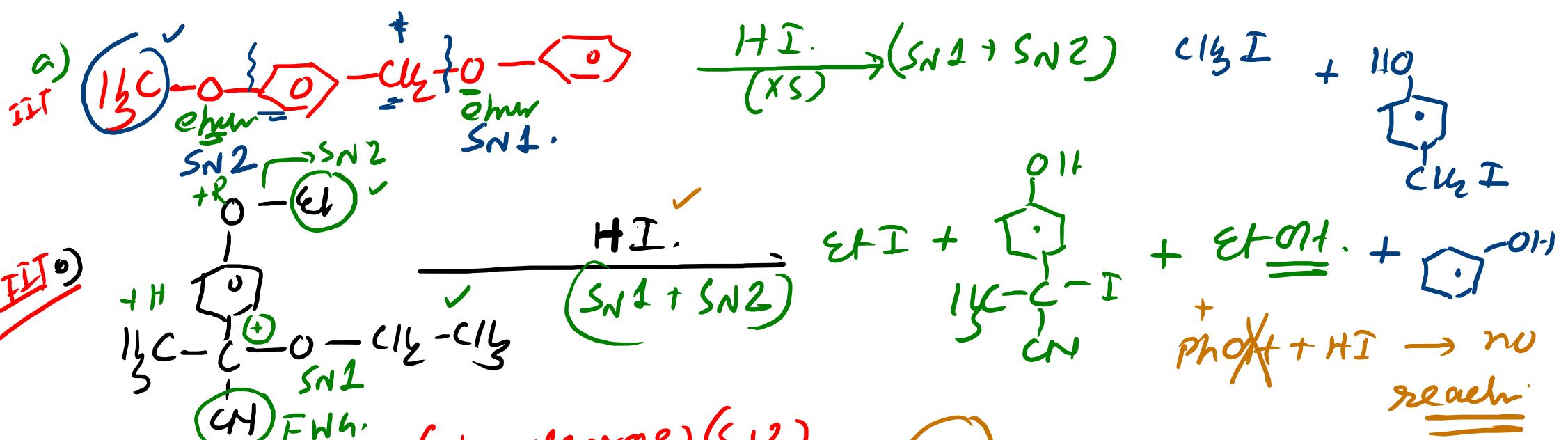
because carbocation of one side
alkyl group is highly stable



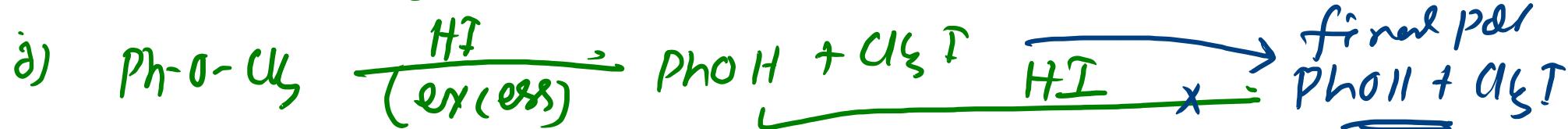
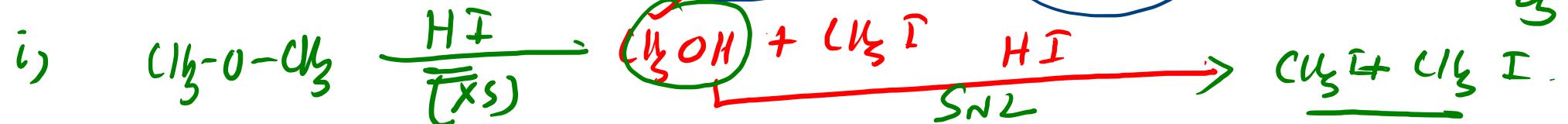
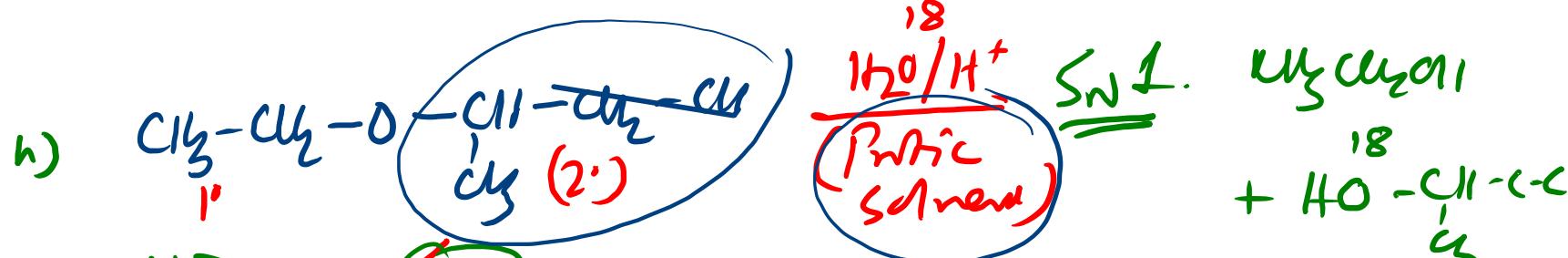
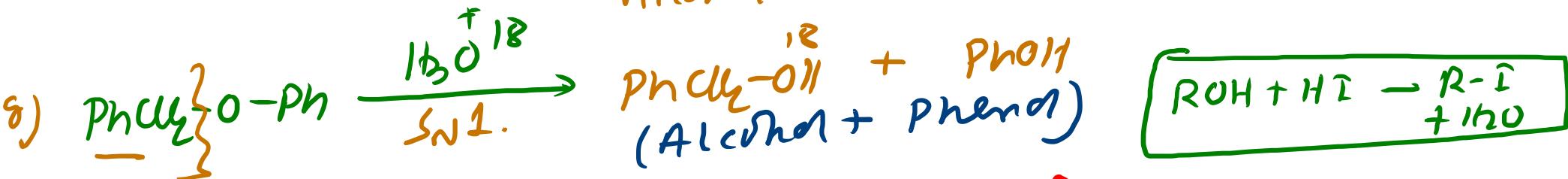
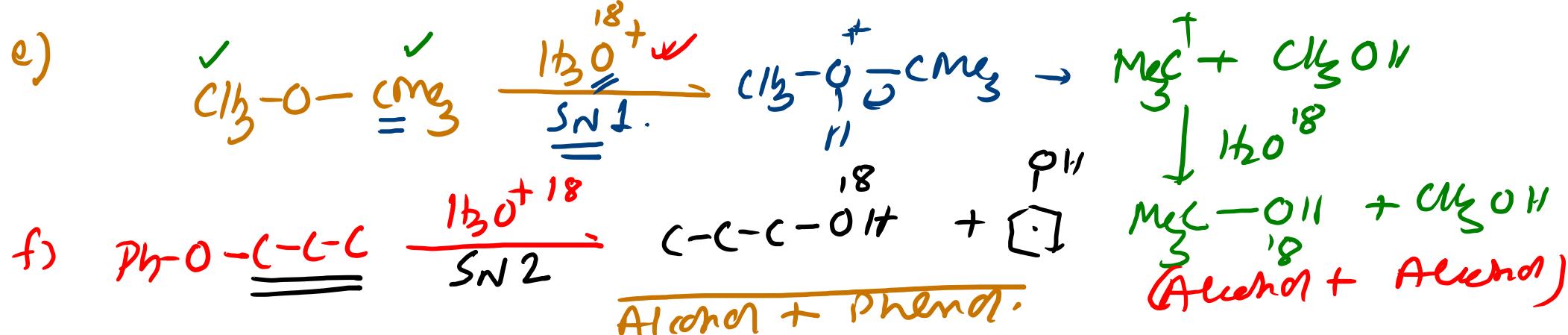
Pdt: mixture of alcohol + Acetyl boride

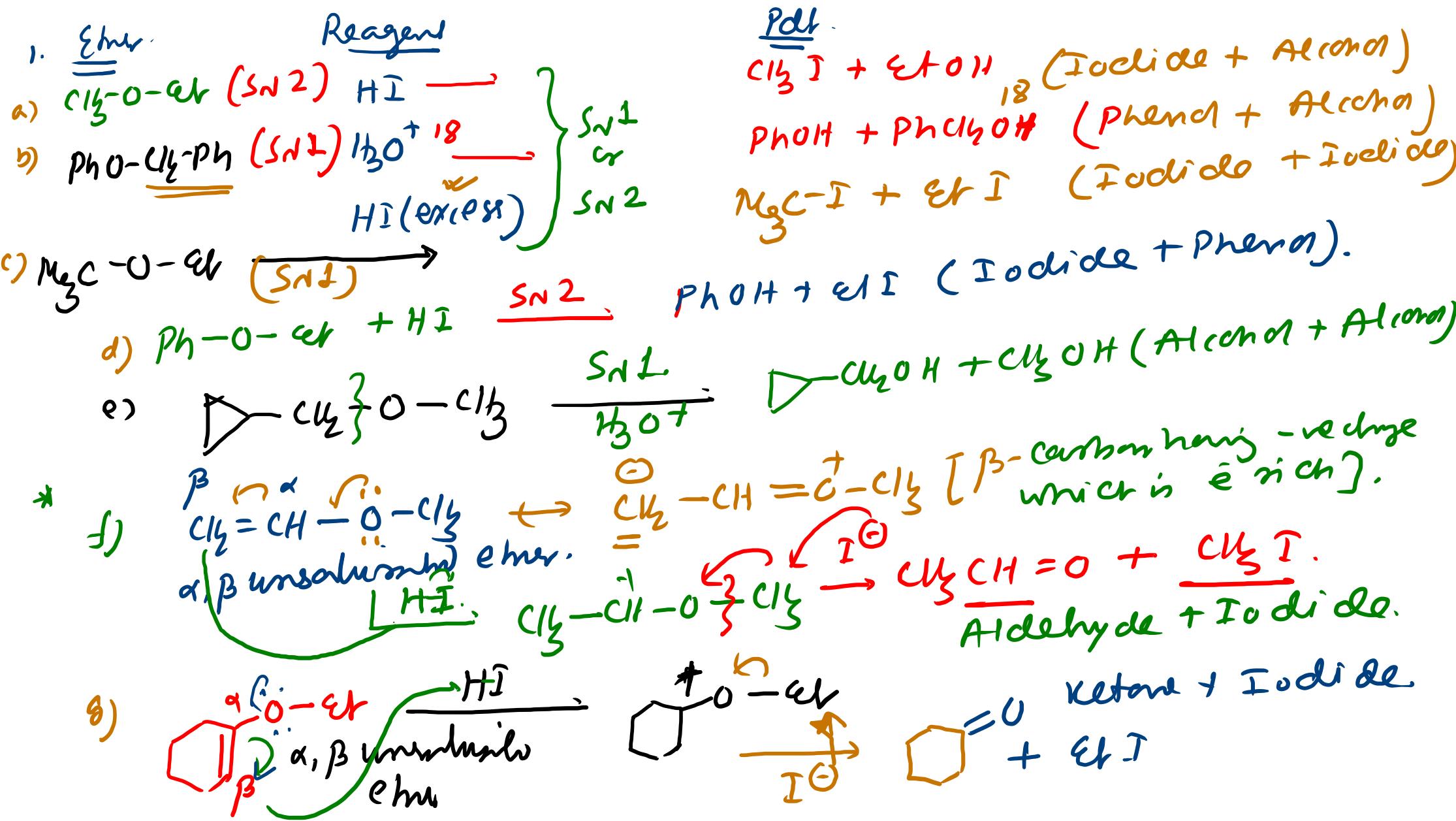
Mixture of Phenol + Alkyl boride



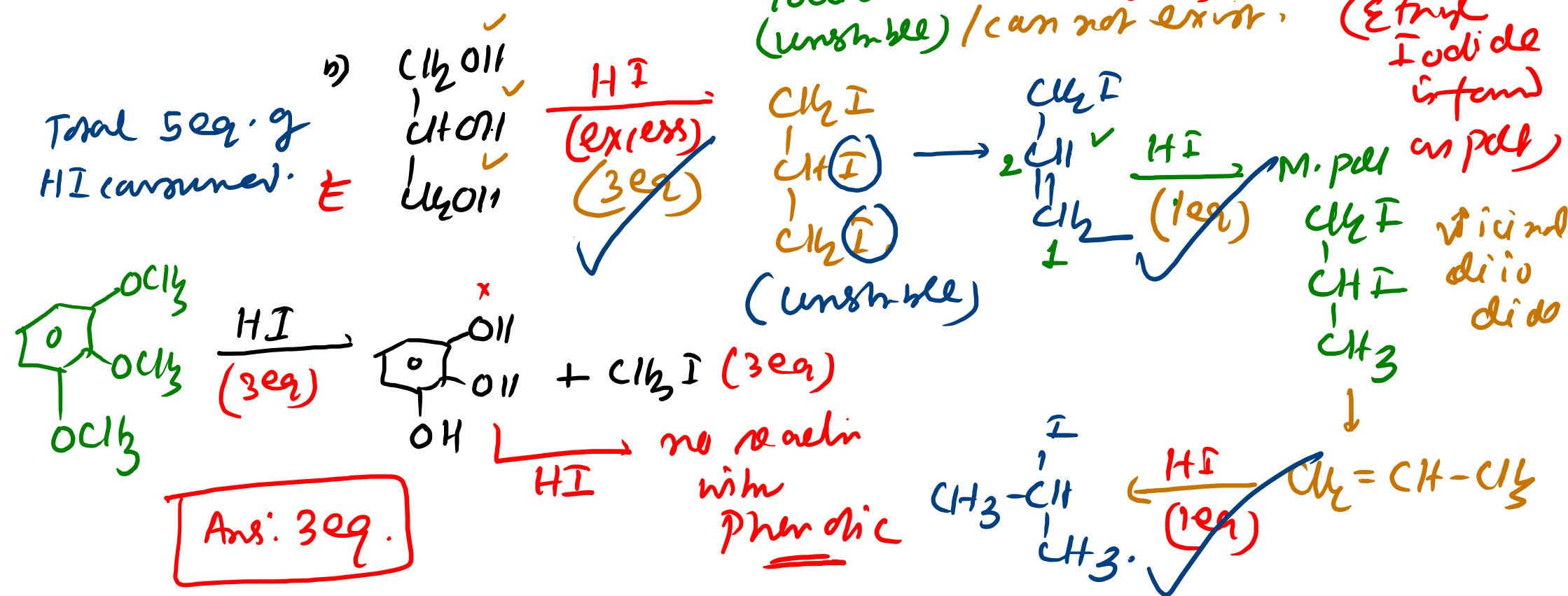


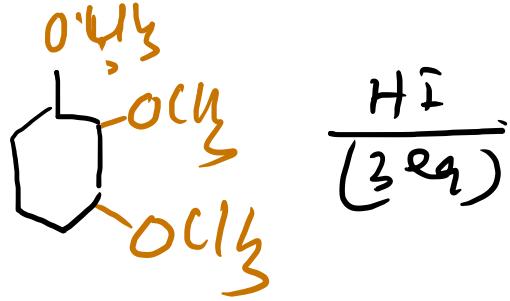
[C-O has partial double bond character reactivity]



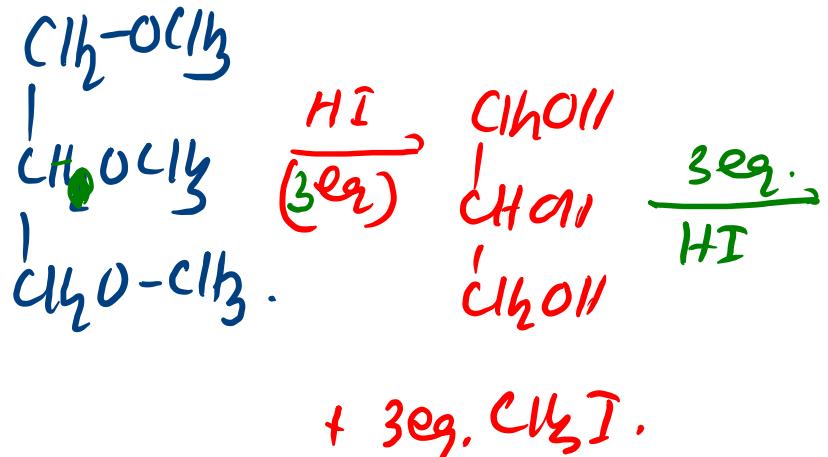
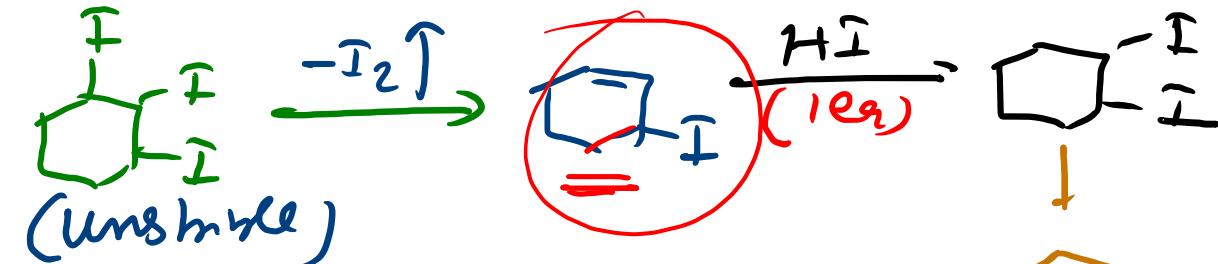
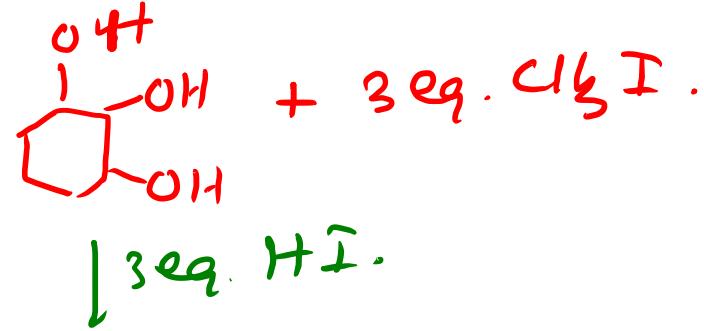


Advanced ~~2022~~ • Integer based Question:
 H₂I reaction on ether & alcohol (multi alcohols OH present)
 Total 3 eq g
HI consumed. $\xrightarrow{\text{H}_2\text{I}}$ $\begin{matrix} \text{Cl}_2\text{OII} \\ | \\ \text{Cl}_2\text{OH} \end{matrix}$ $\xrightarrow[\substack{(\text{ex}) \\ (\text{2eq})}]{} \begin{matrix} \text{Cl}_2\text{I} \\ | \\ 2\text{Cl}_2\text{I} \end{matrix}$ vicinal iodide.
 $\xrightarrow{\text{H}_2\text{I}}$ $\begin{matrix} \text{Cl}_2=\text{Cl}_2 \text{ multi ether present} \\ + \text{I}_2 \text{ ROH} \xrightarrow{\text{H}_2\text{I}} \text{RI.} \\ (\text{ex}) \quad \text{Cl}_2-\text{Cl}_2-\text{I} \end{matrix}$
 (unstable) / can not exist. (Ethyliodide)





total equivalent
of HI consumed = 8.



⑧ \leftarrow

