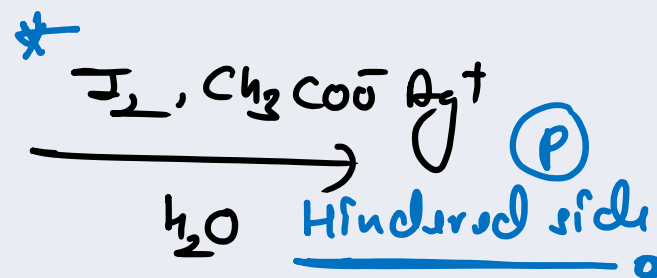
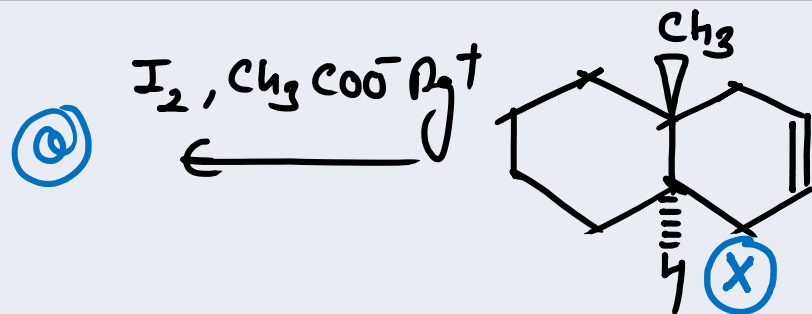
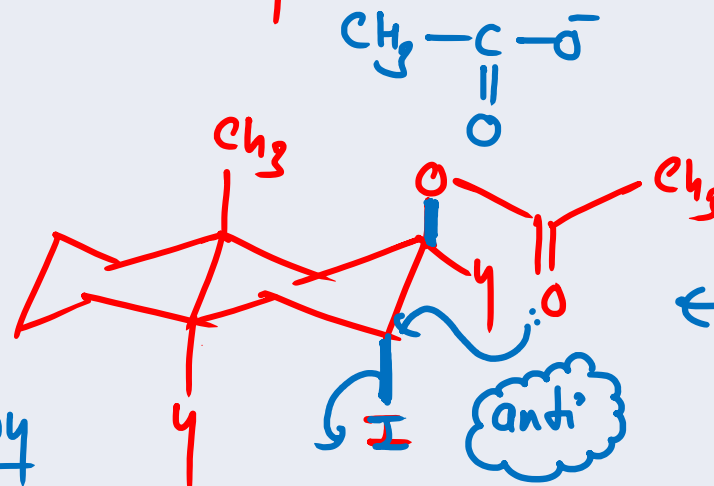
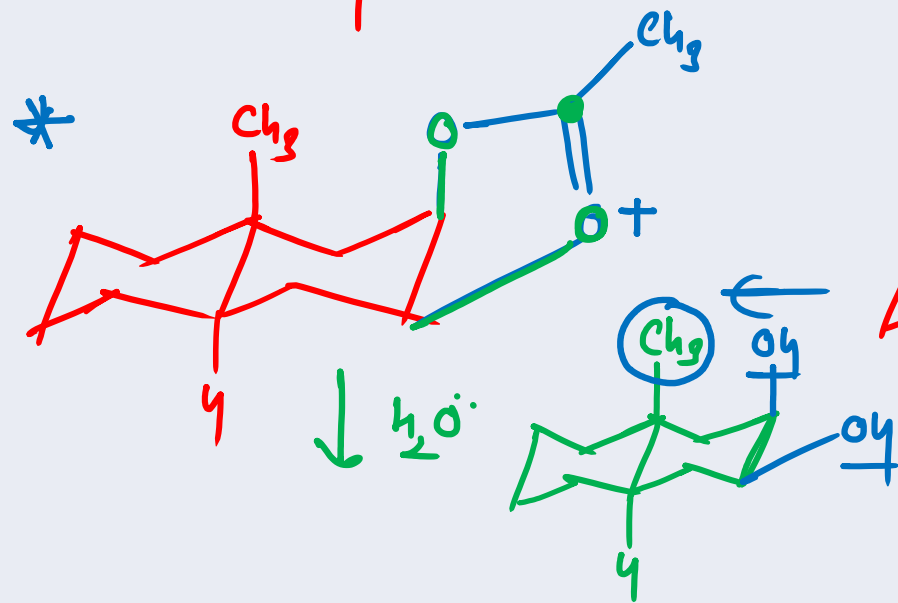
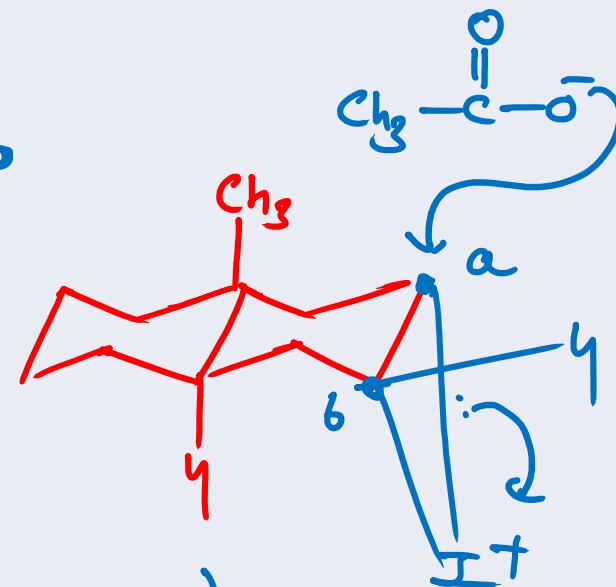
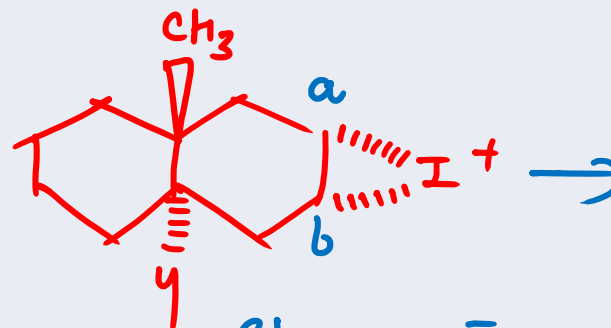
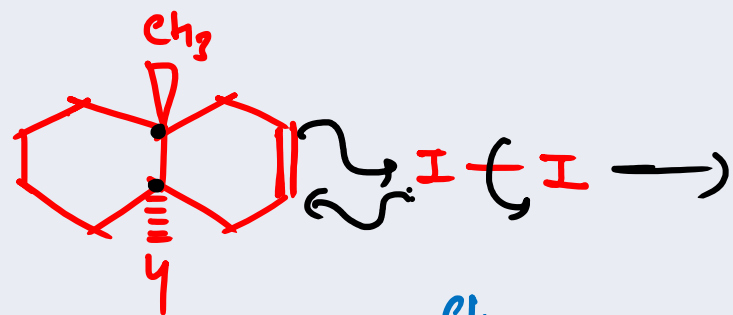


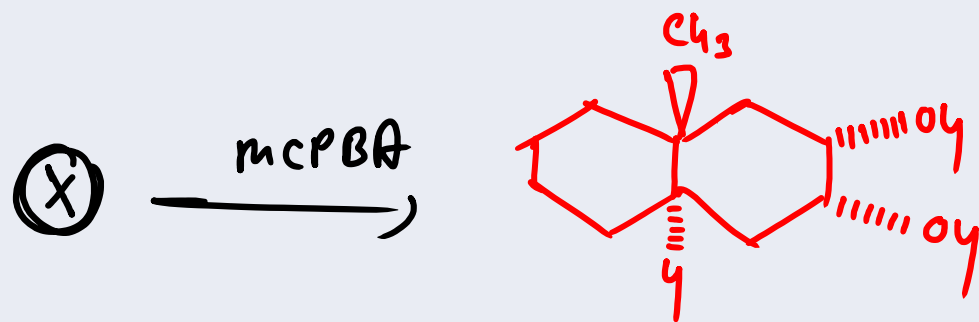
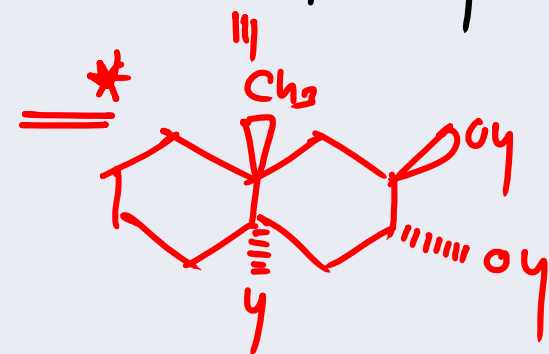
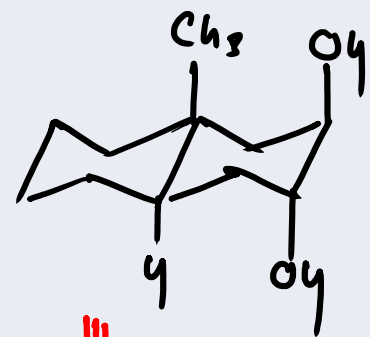
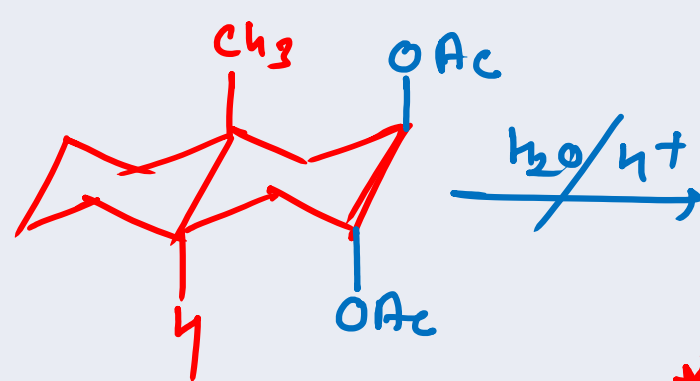
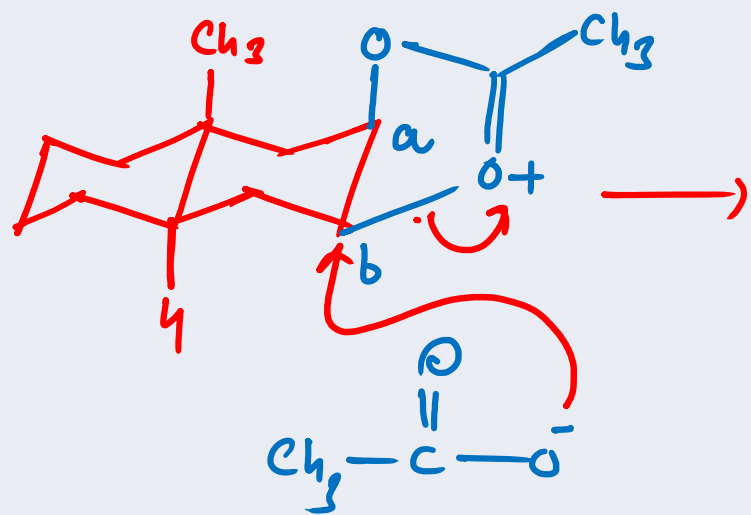


Q4



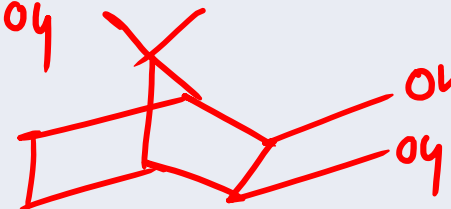
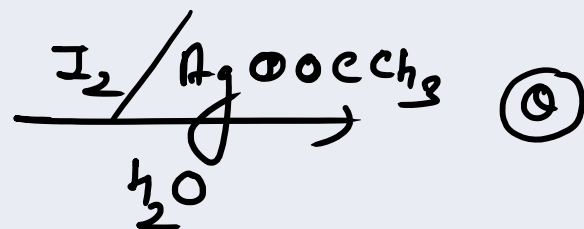
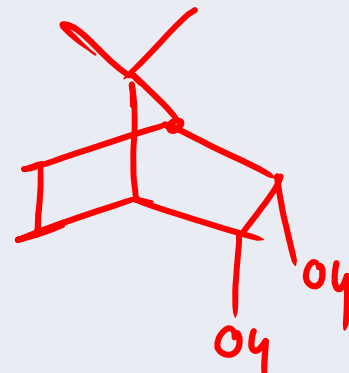
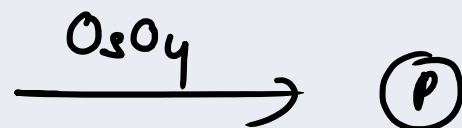
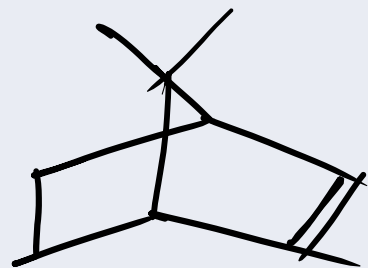
mechⁿ



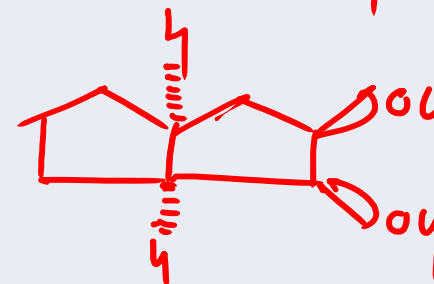
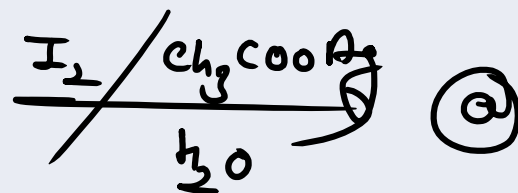
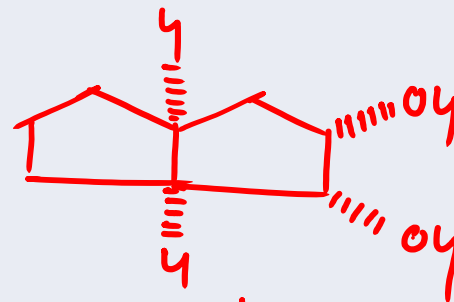
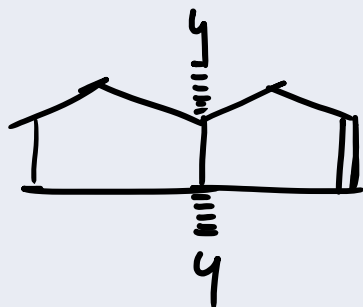




11Q



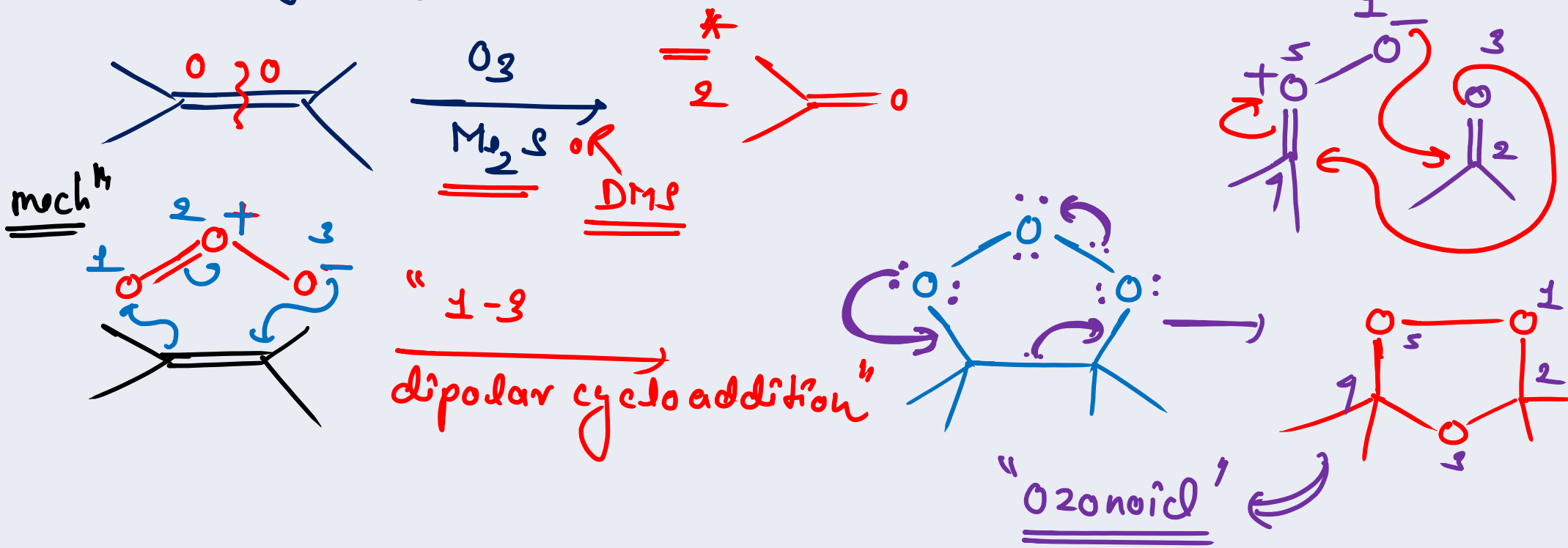
11Q





"Oxidative cleavage of alkenes and diols"

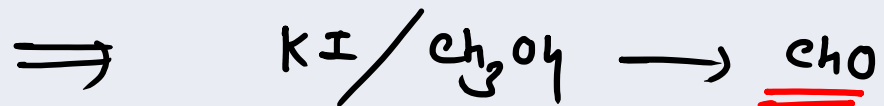
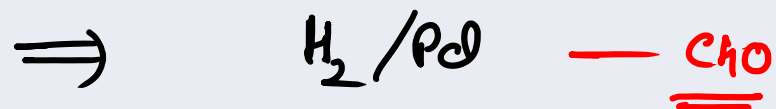
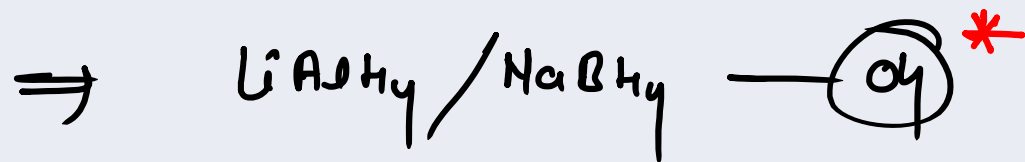
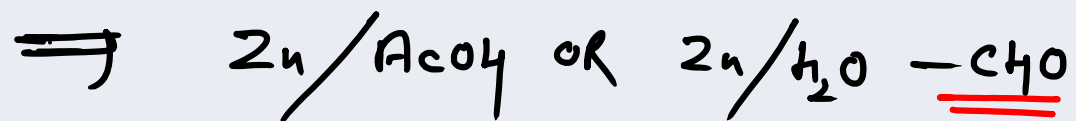
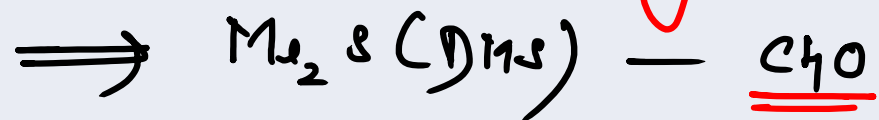
① Ozonolysis





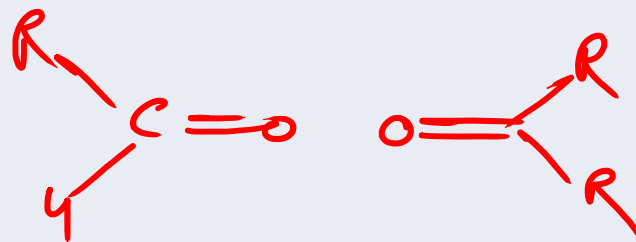
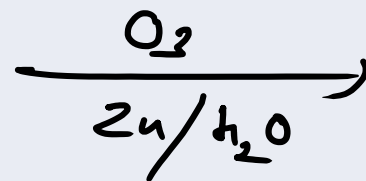
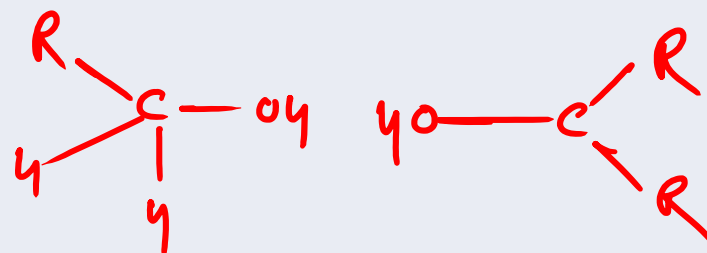
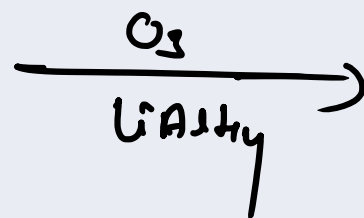
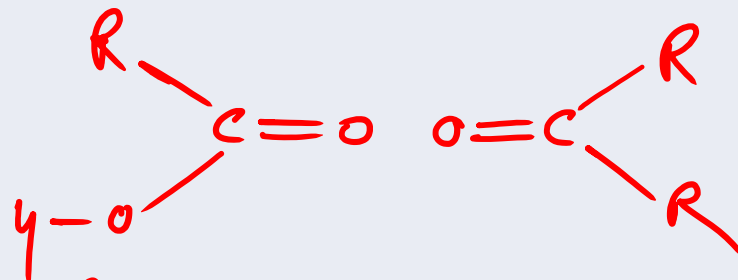
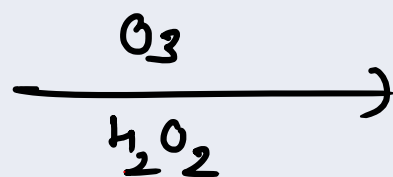
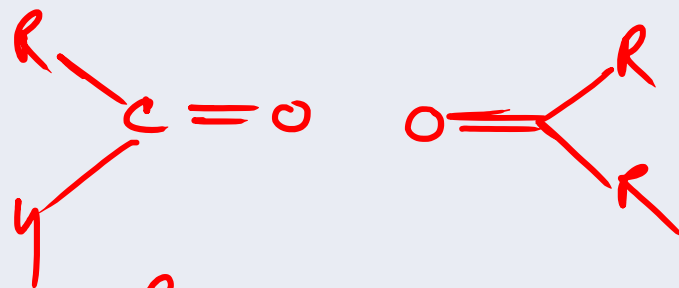
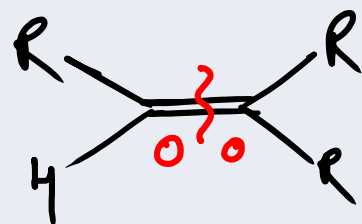
Ozonoid

“Reductive cleavage”



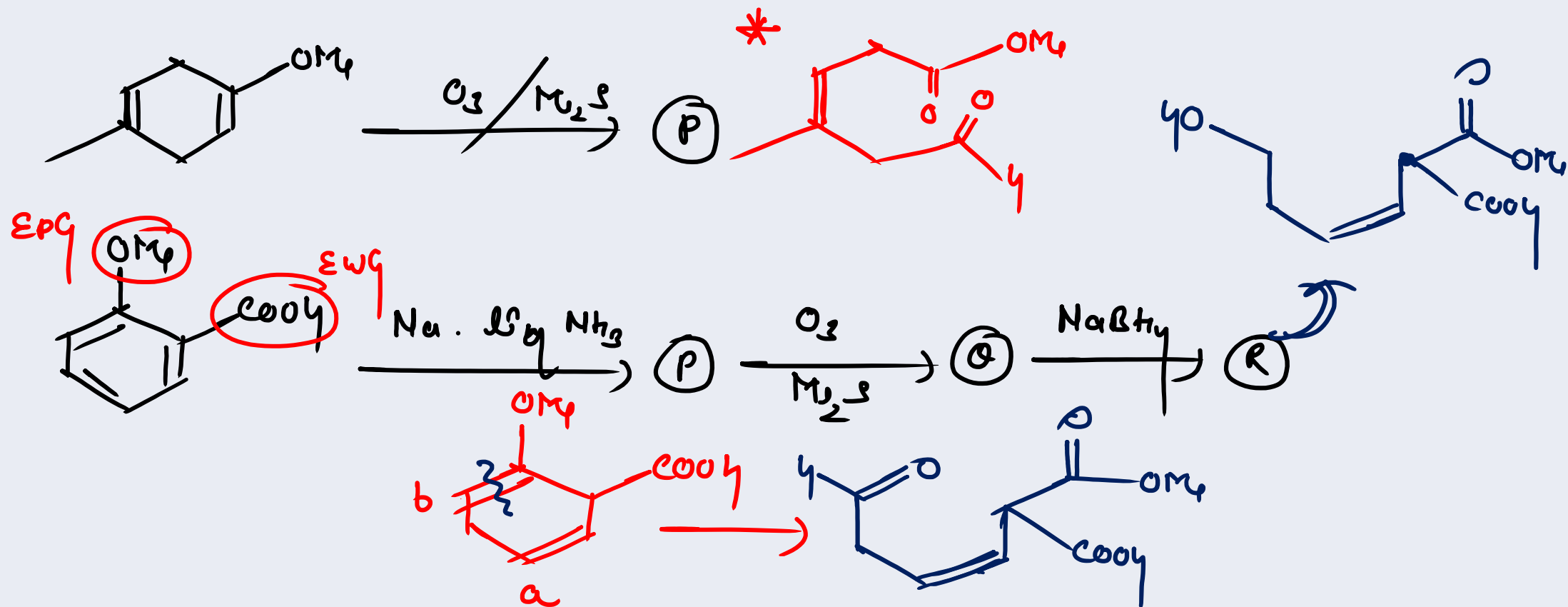
“Oxidative cleavage”





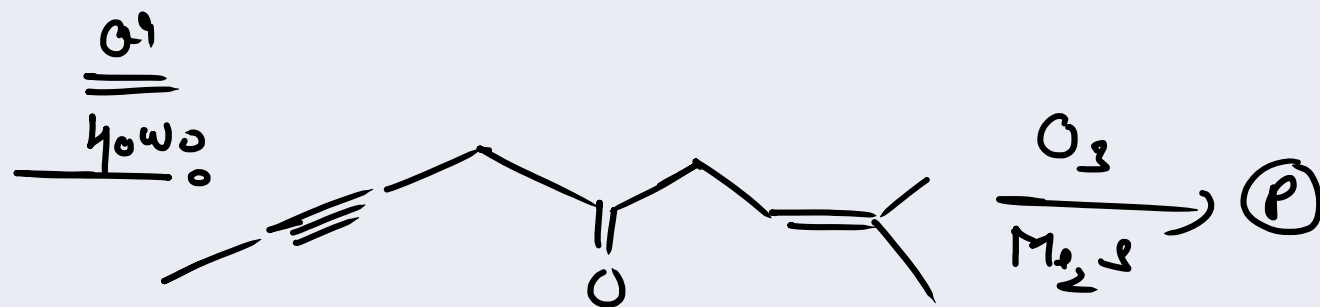
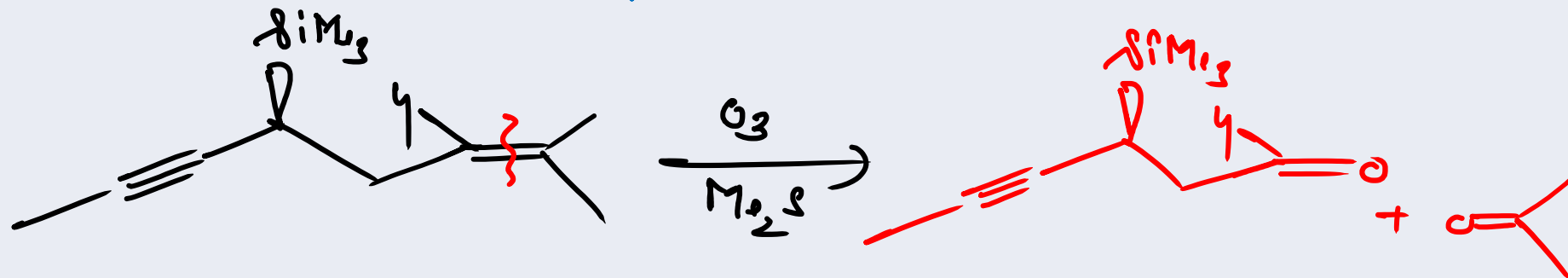


case ① selective for "more π rich" alkene.



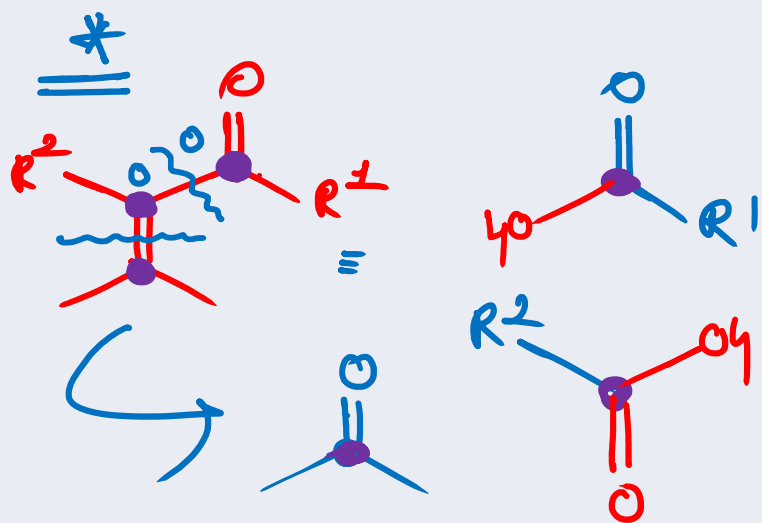
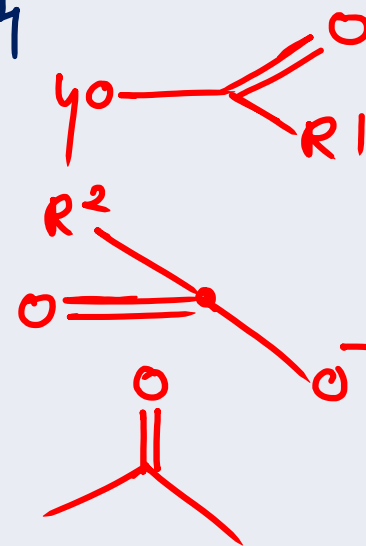
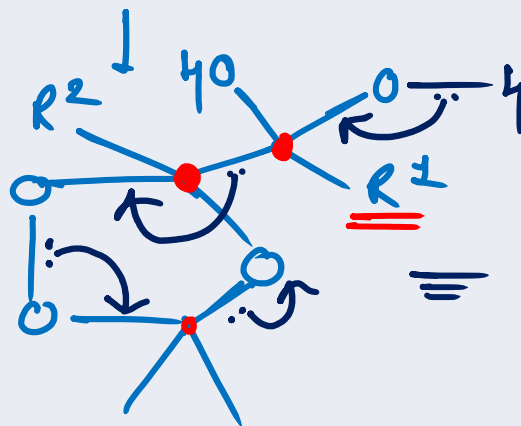
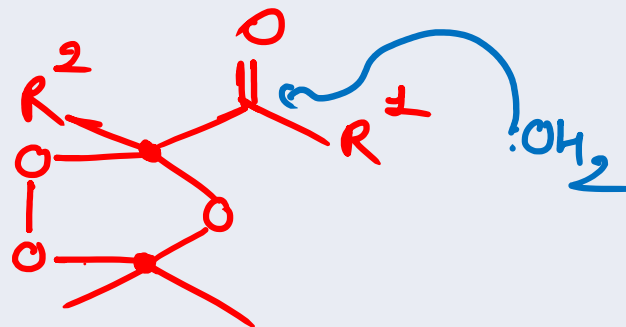
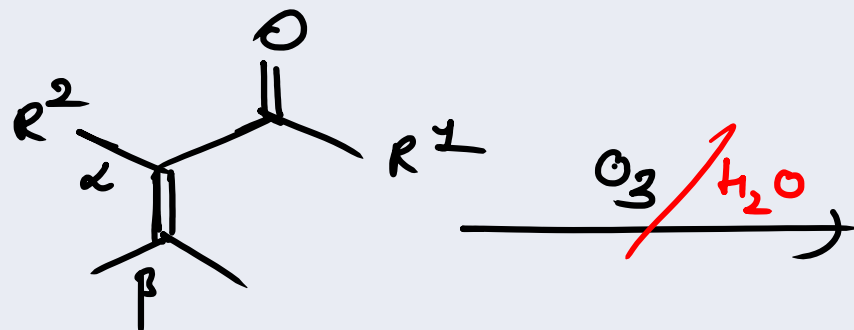


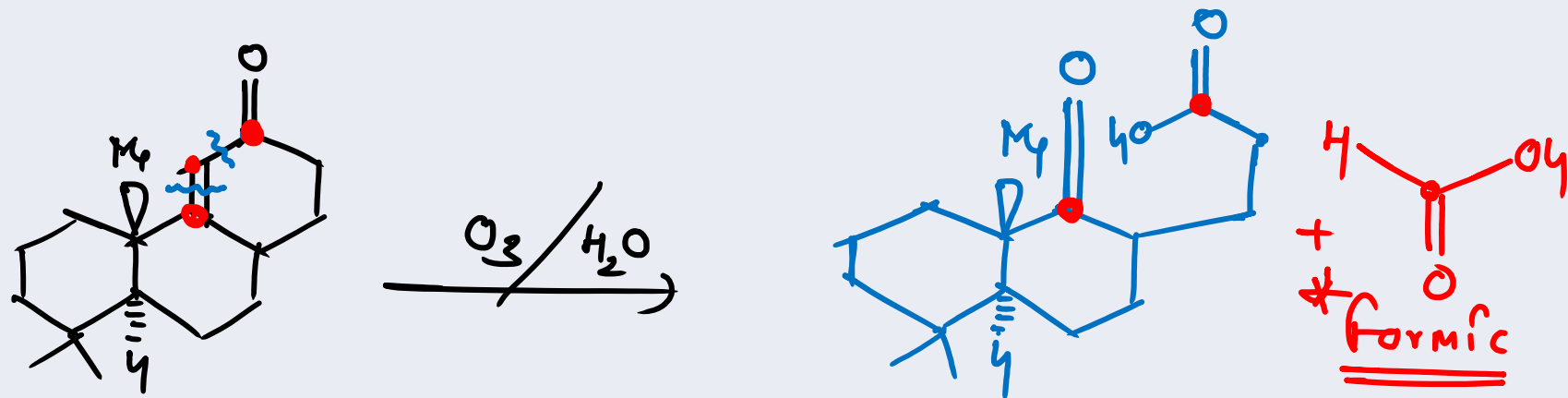
case (2) In presence of $\equiv$ and $=$



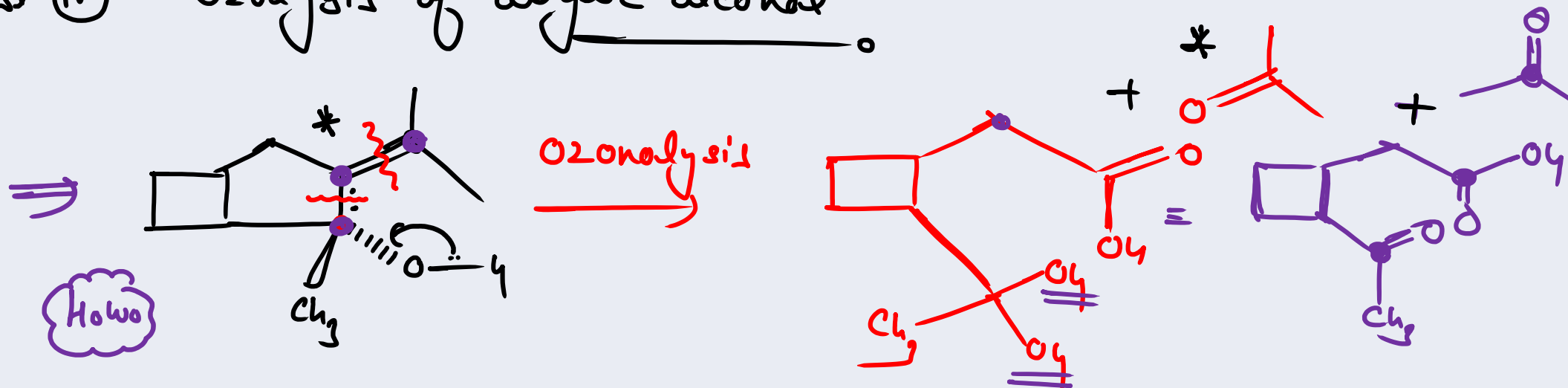


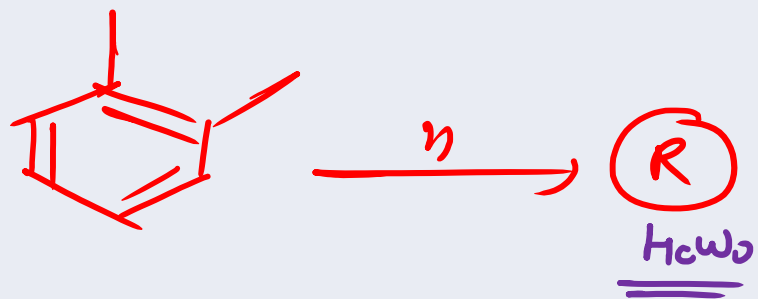
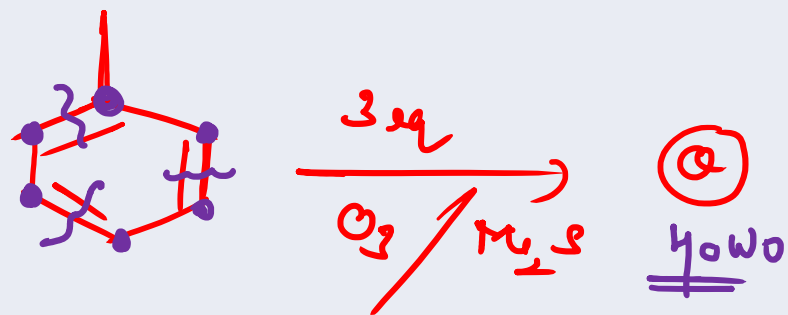
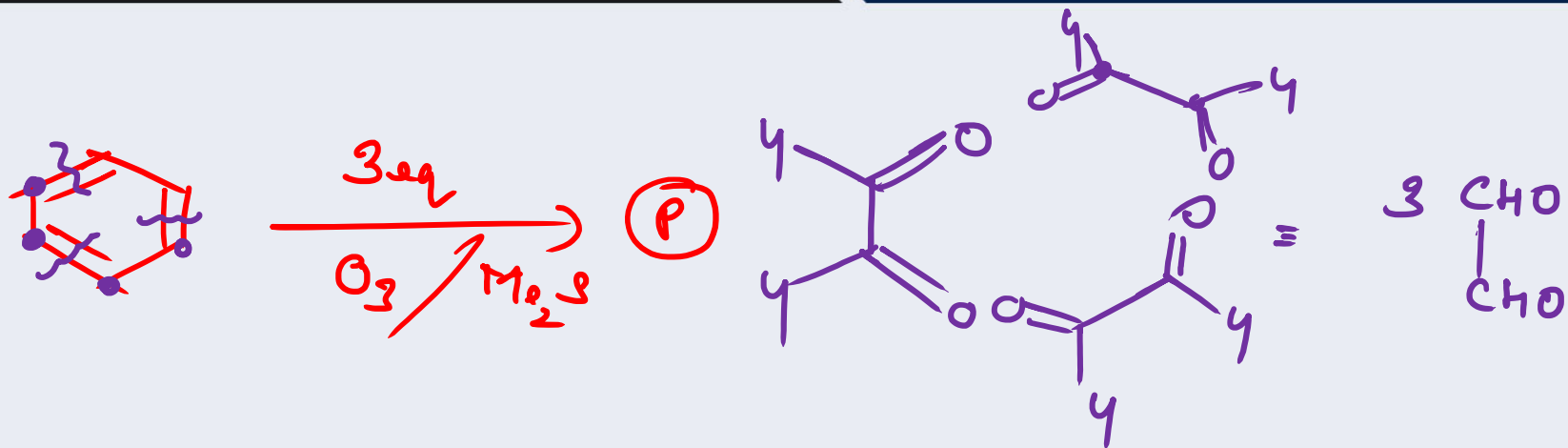
Case ③ α, β unsaturated alkene ($\text{O}_3 / \text{H}_2\text{O}$)

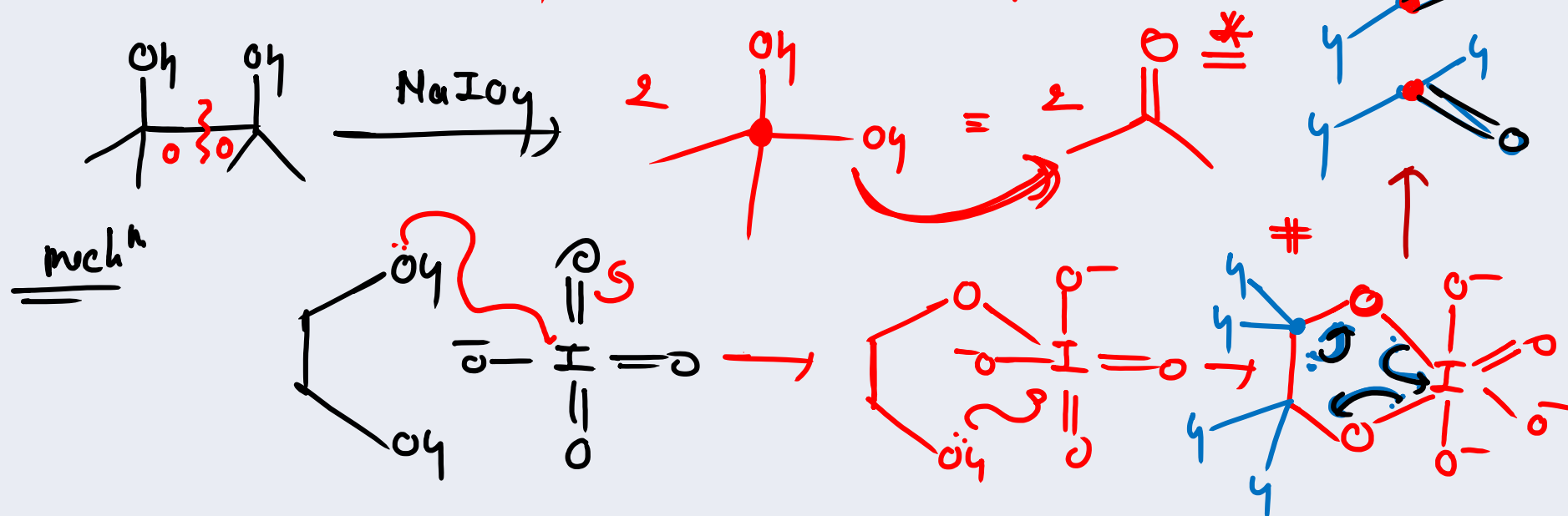
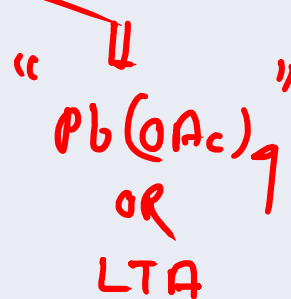


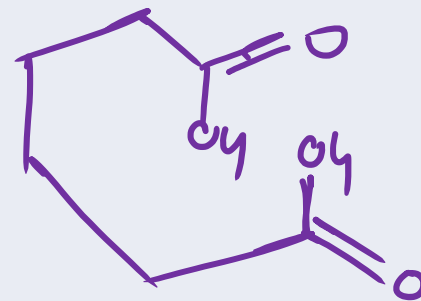
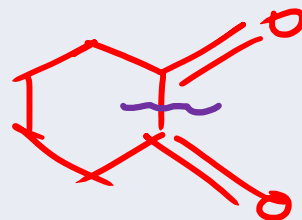
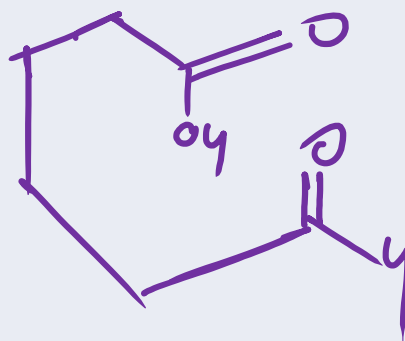
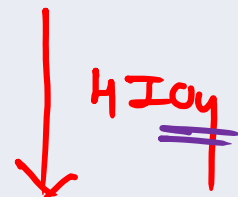
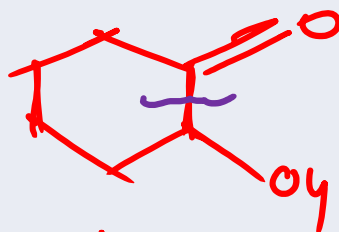
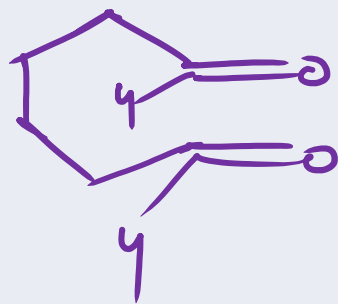
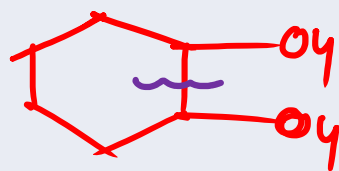


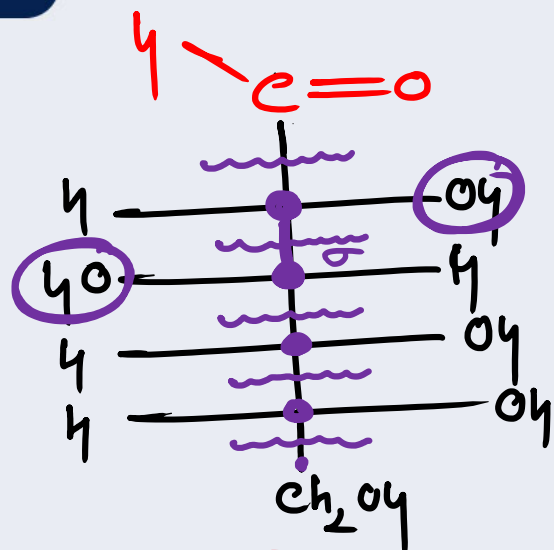
Case (iv) Ozonolysis of 'allylic alcohol'.



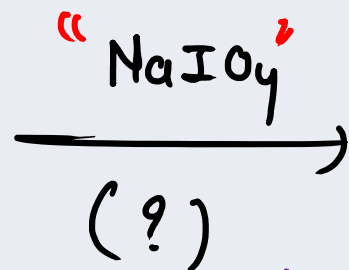






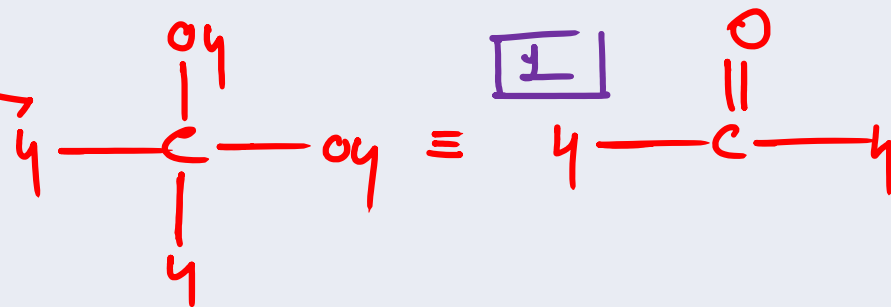
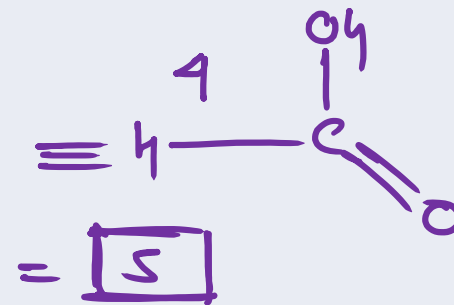
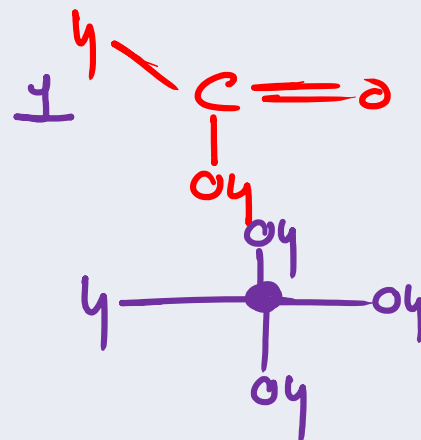


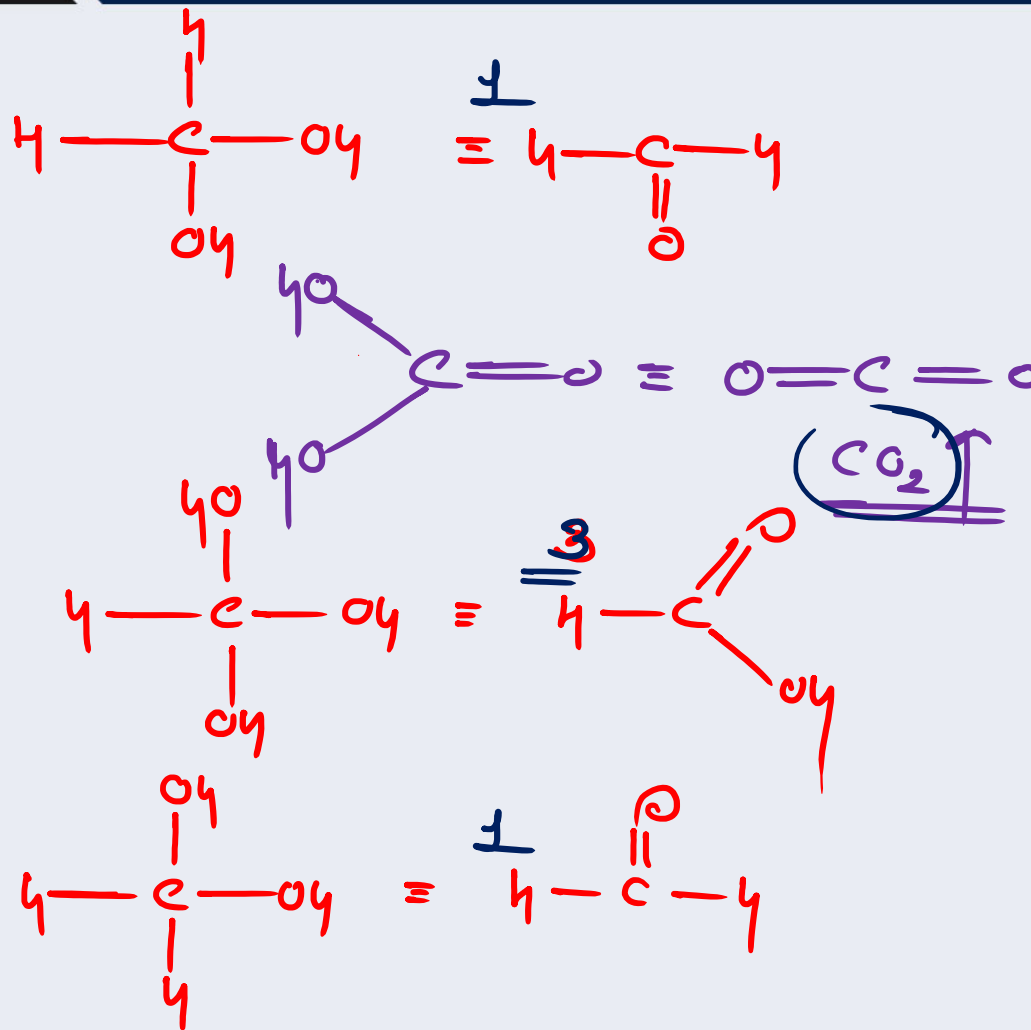
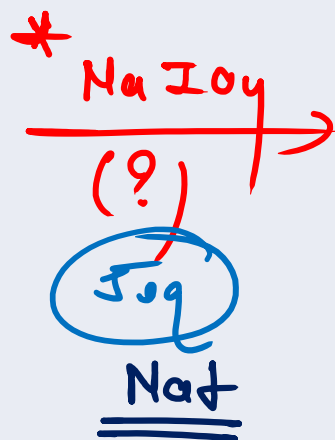
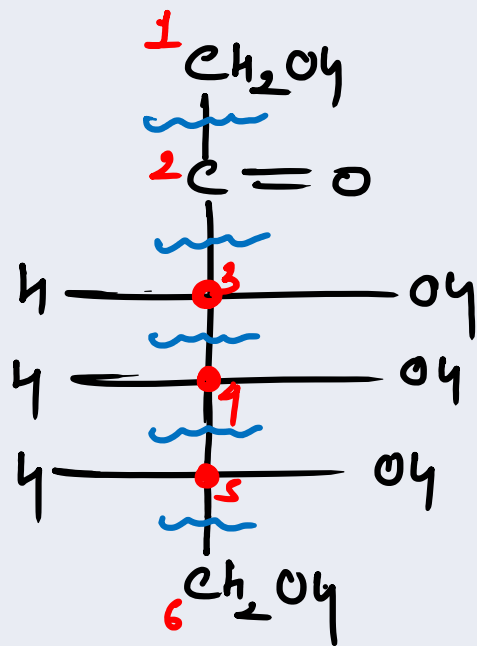
glucose



5eq * GATE

9

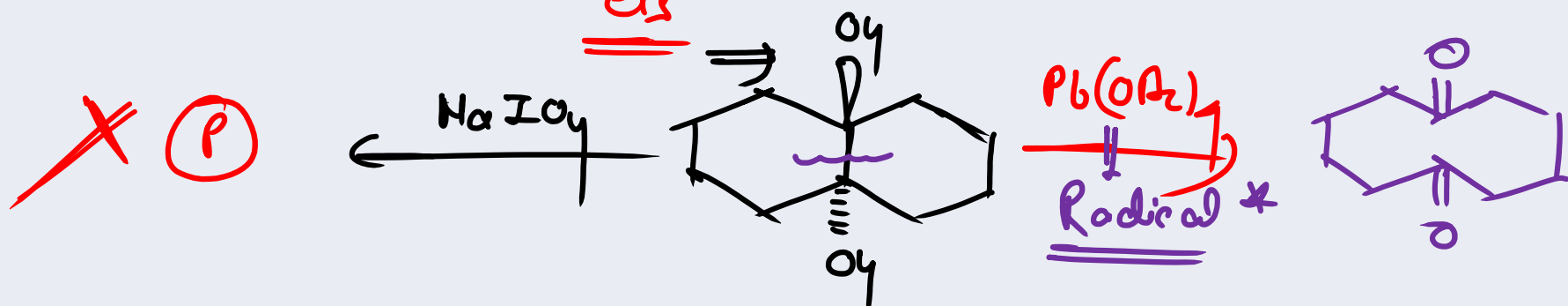
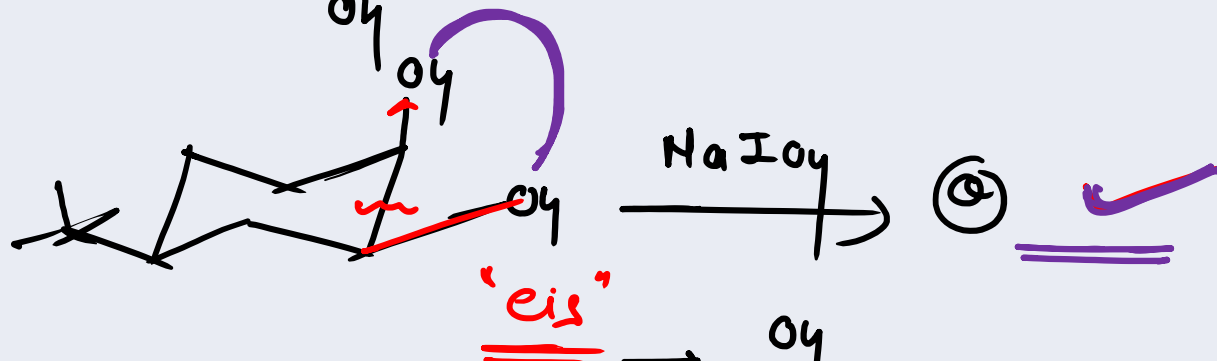
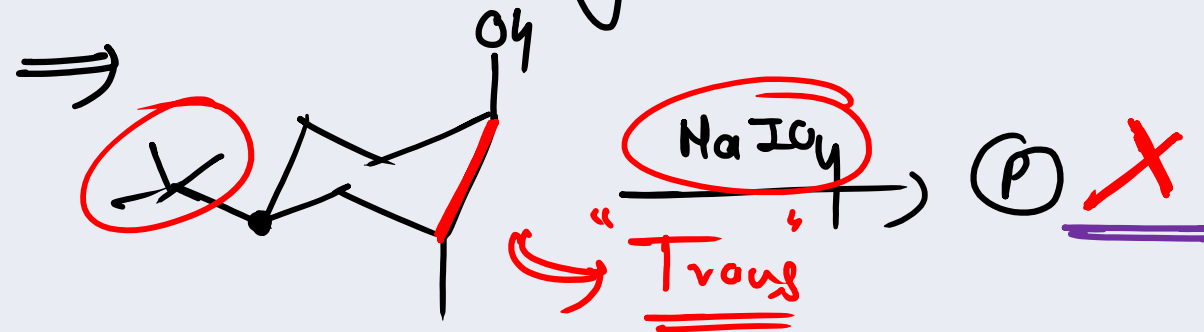






Stereochemistry

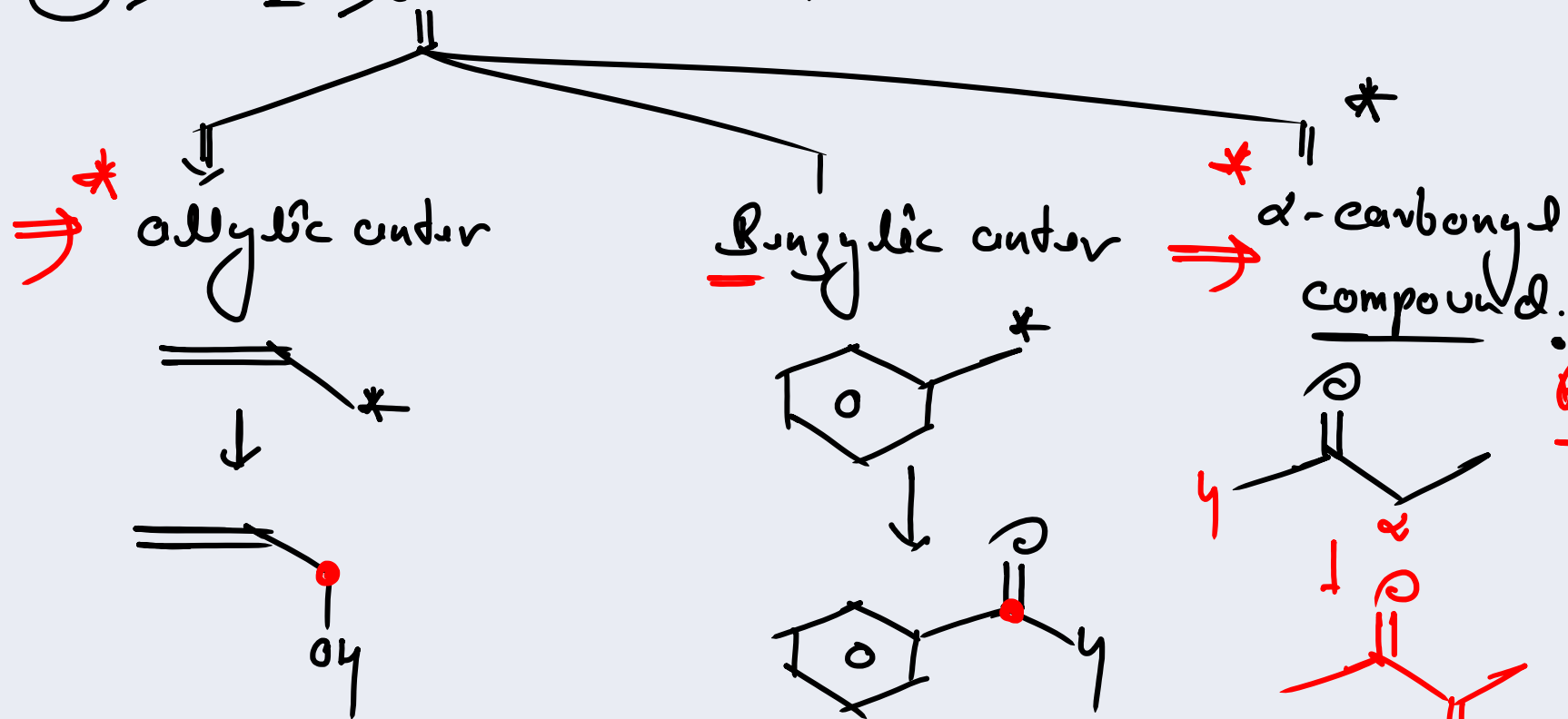
* 10:00





Oxidation of allylic center.

① "SeO₂" Selenium dioxide

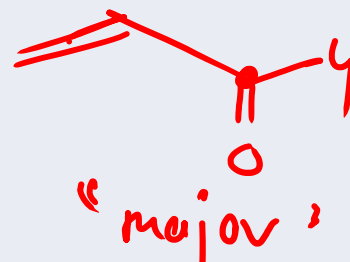
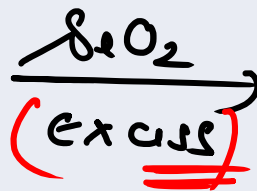
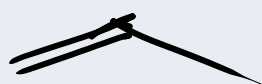
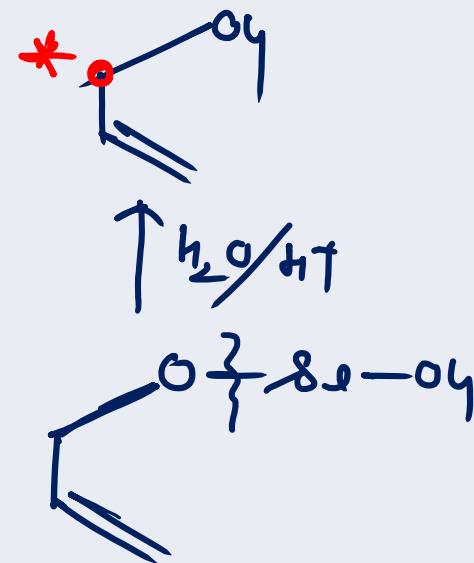
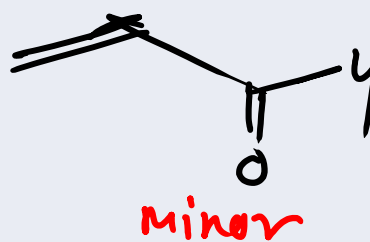
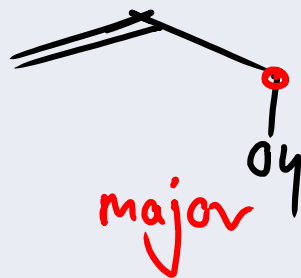
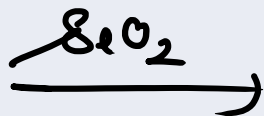
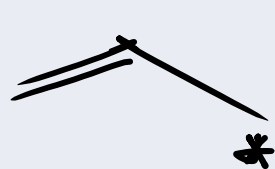


Risky oxidation

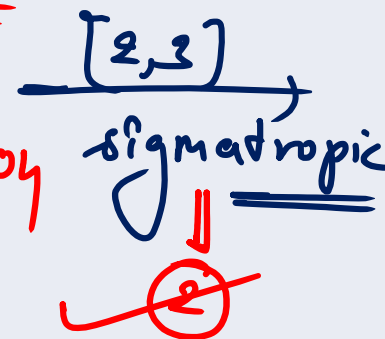
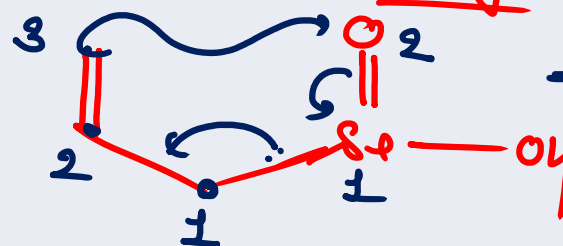
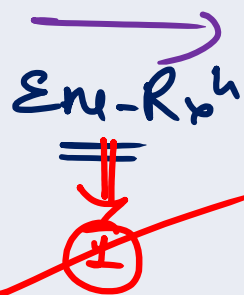
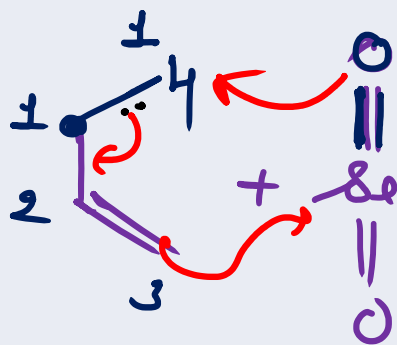
α-keto



① δeO_2



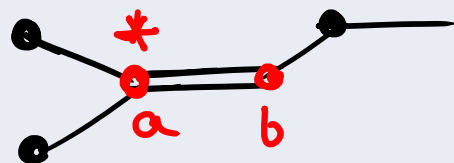
Mech^m





Product formation

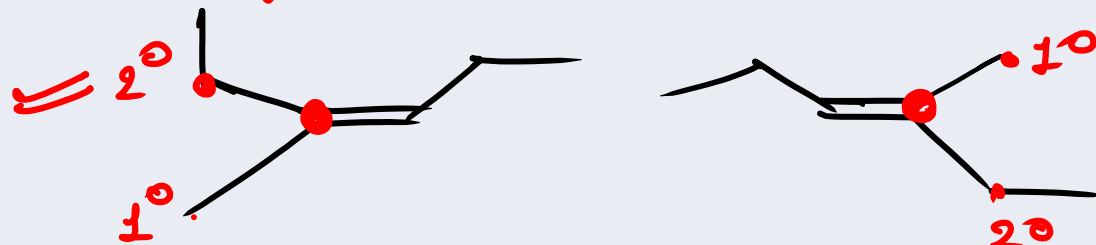
Rule (i)



Always go for more substituted side.

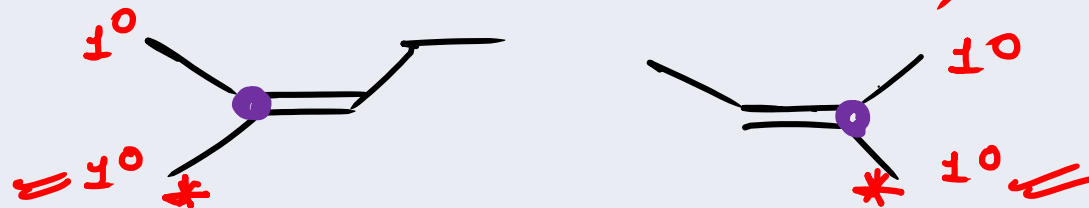
Rule (ii)

Preference order should be $2^\circ > 1^\circ > 3^\circ$



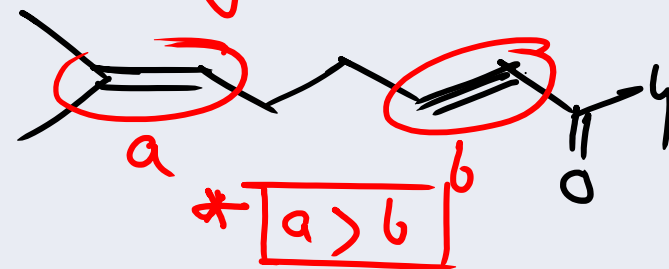
Rule (iii)

If molecule can show ' $\frac{E}{2}$ ' go for E-form



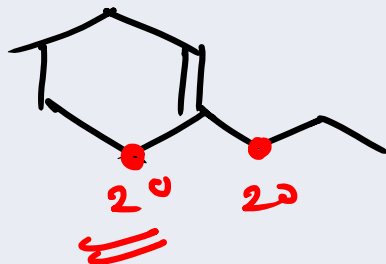
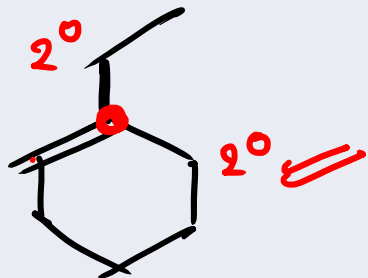
Rule (iv)

More Nucleophilic alkene go for oxidation.



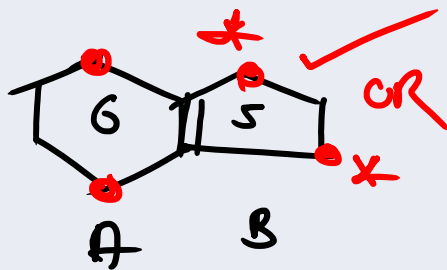


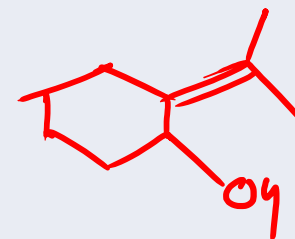
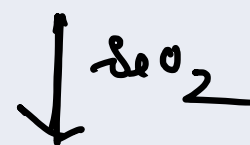
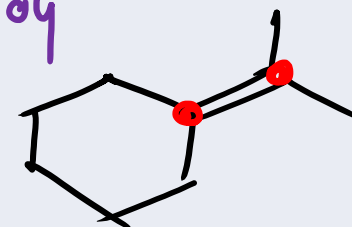
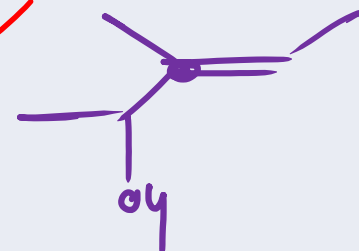
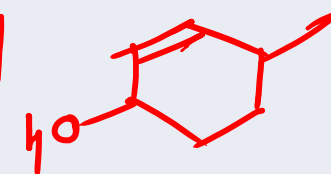
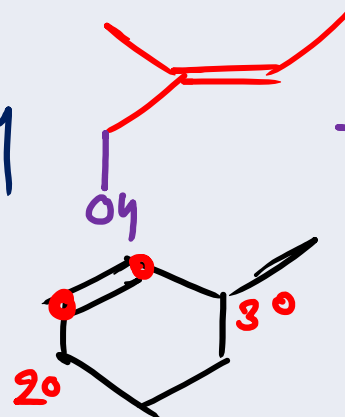
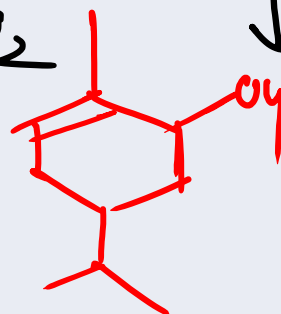
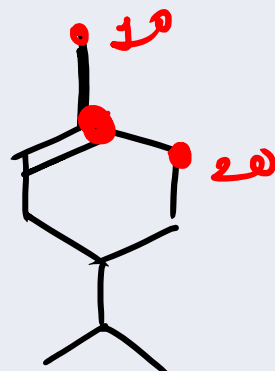
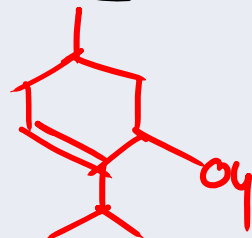
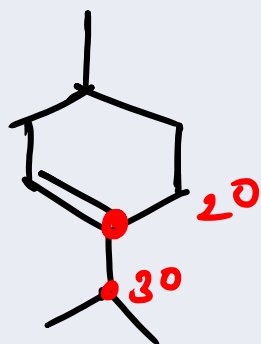
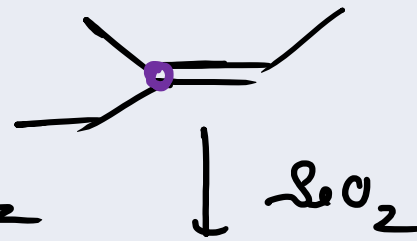
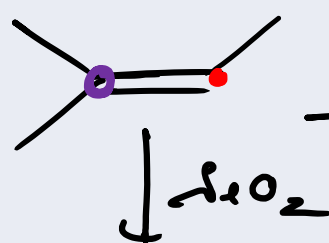
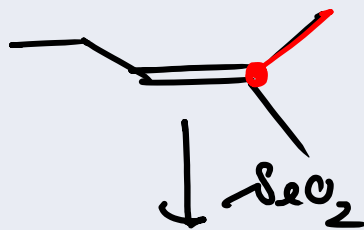
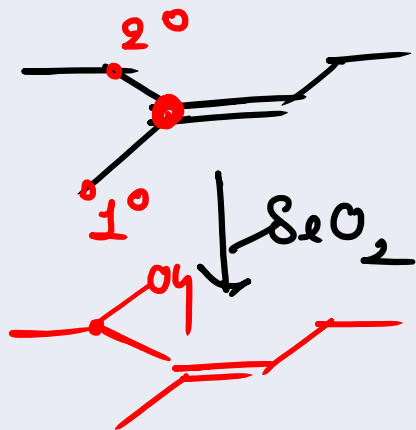
Rule (v) If we have cyclic alkenes
 $\Rightarrow$ cyclic carbonyl is highly selective

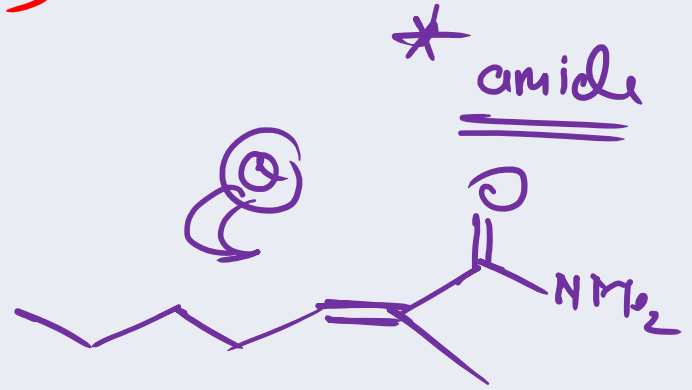
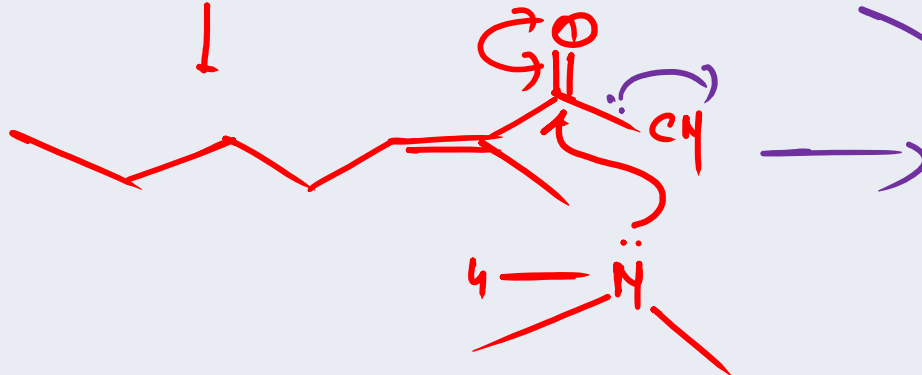
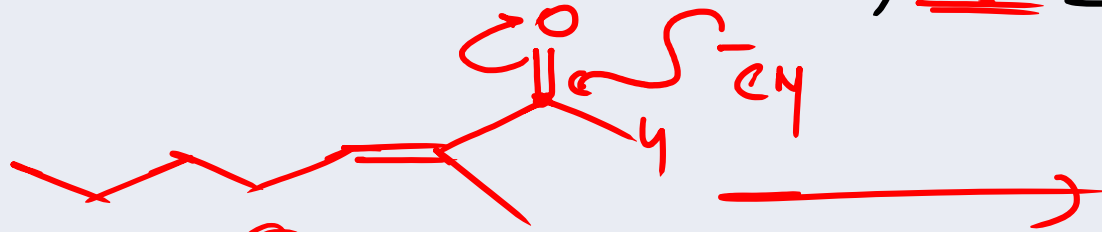
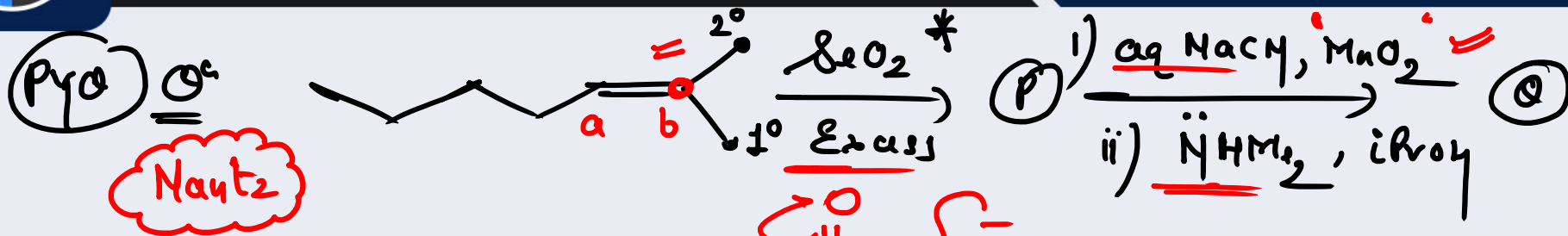


Rule (vi)

If fused ring are present go for carbonyl having steric.

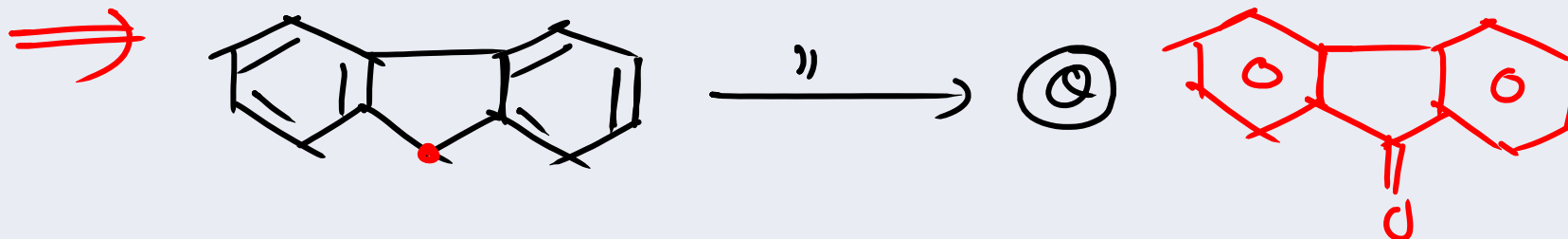
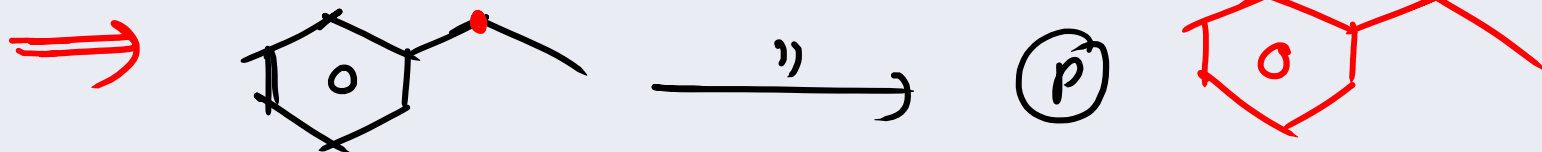
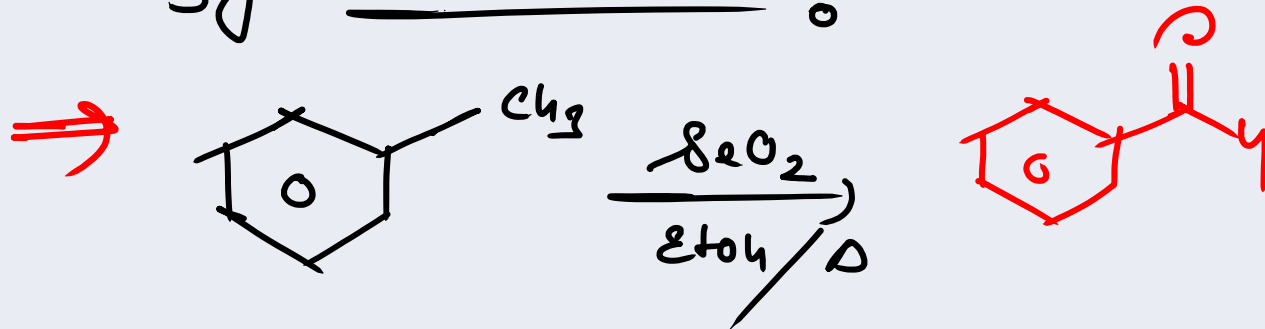






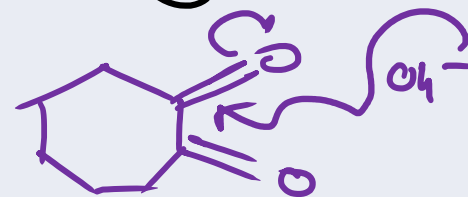
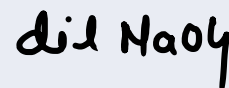
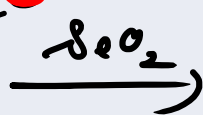
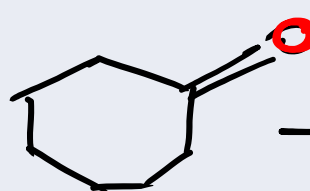
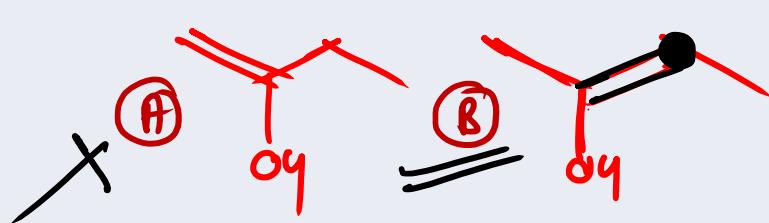
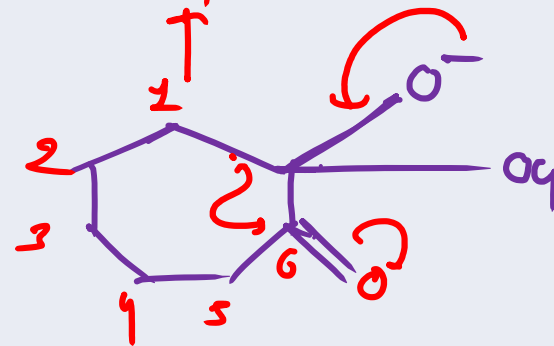
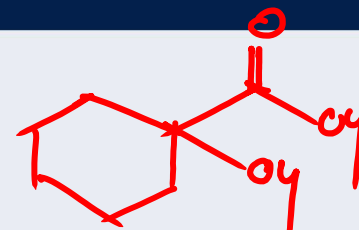
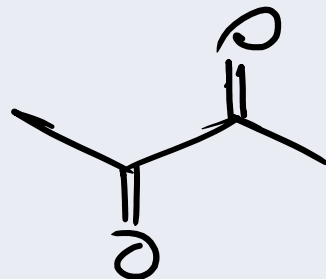
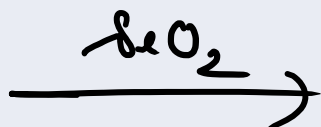
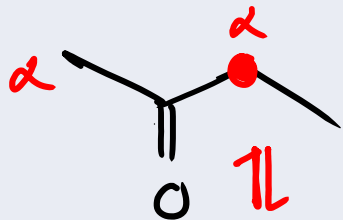
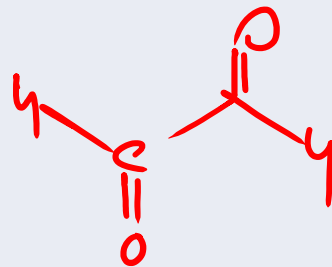
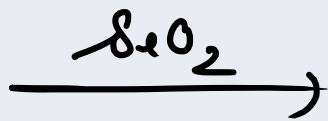
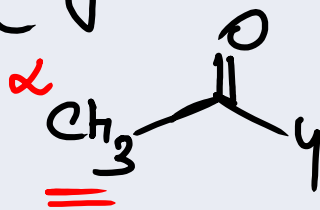


(ii) Benzyllic center oxidation





3) Reilly oxidation

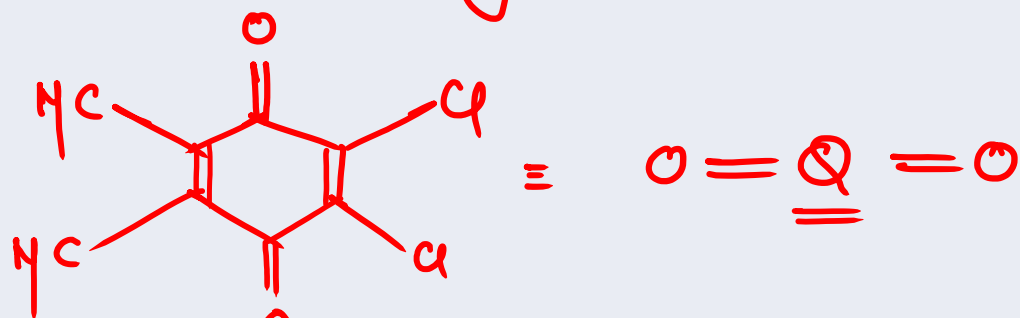




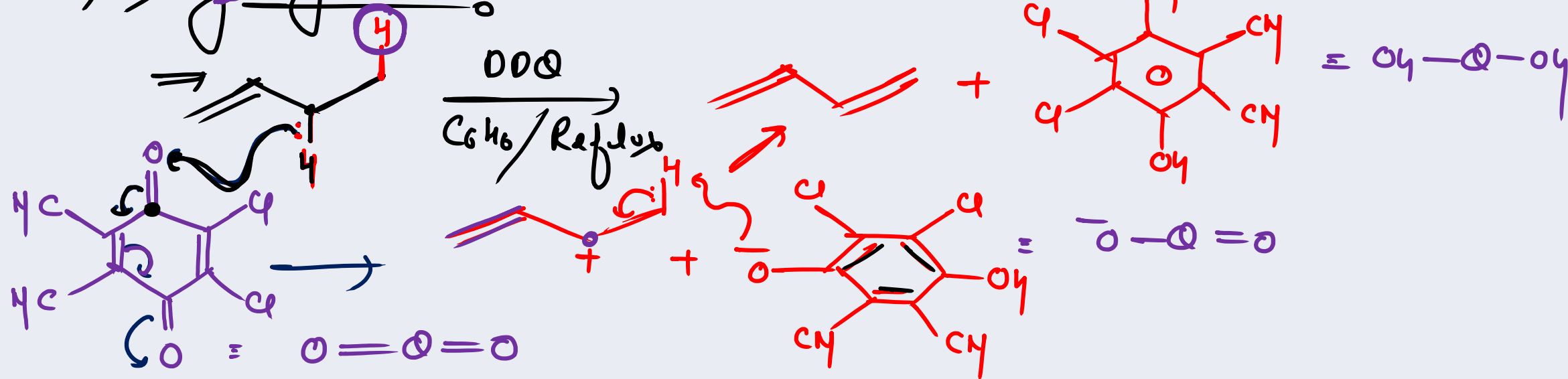
DDQ

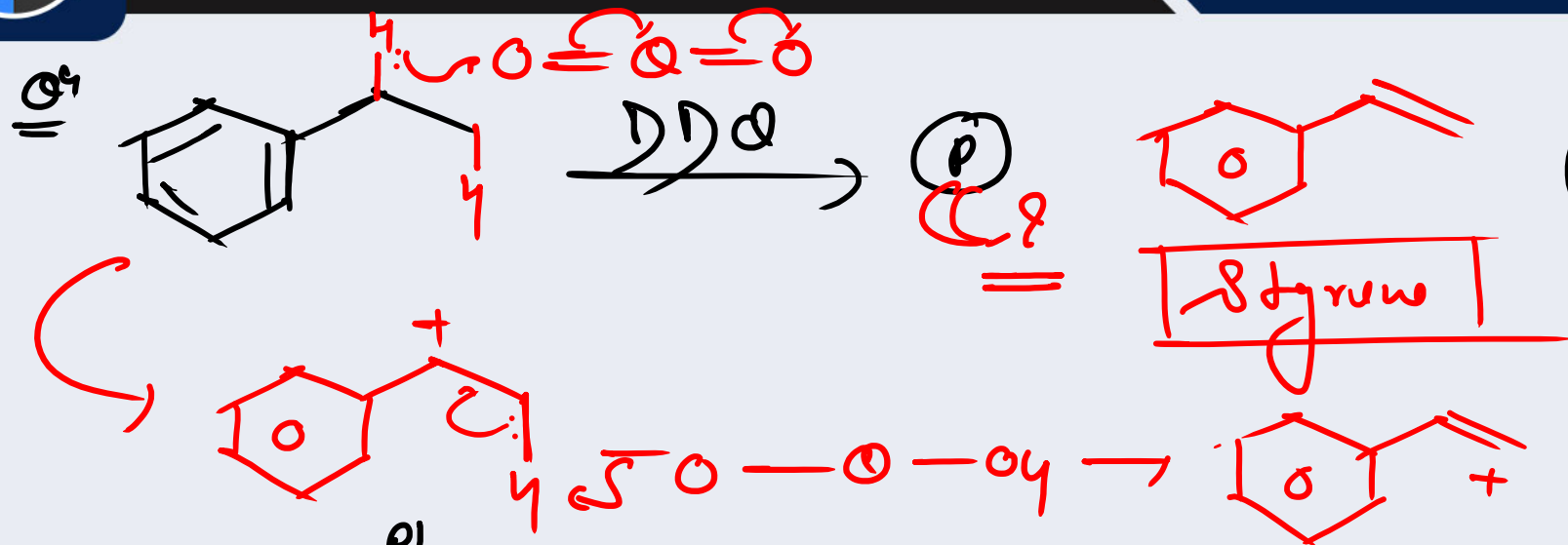
Dichloro Dicyano Benzoguinone

* LiAlH_4



1) Dehydrogenation





Thank you *

