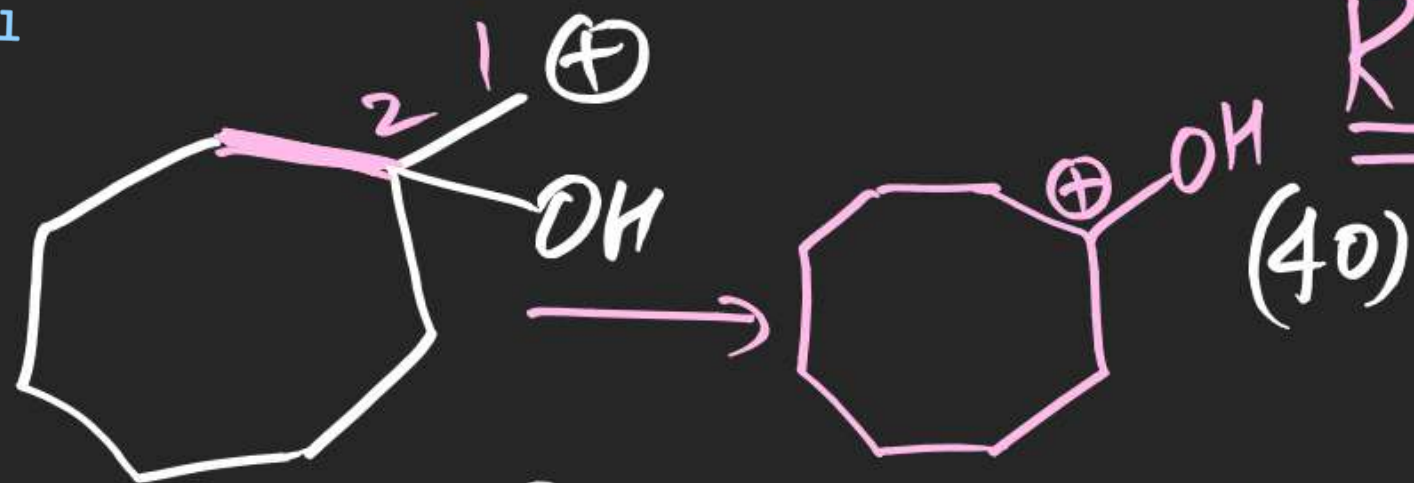
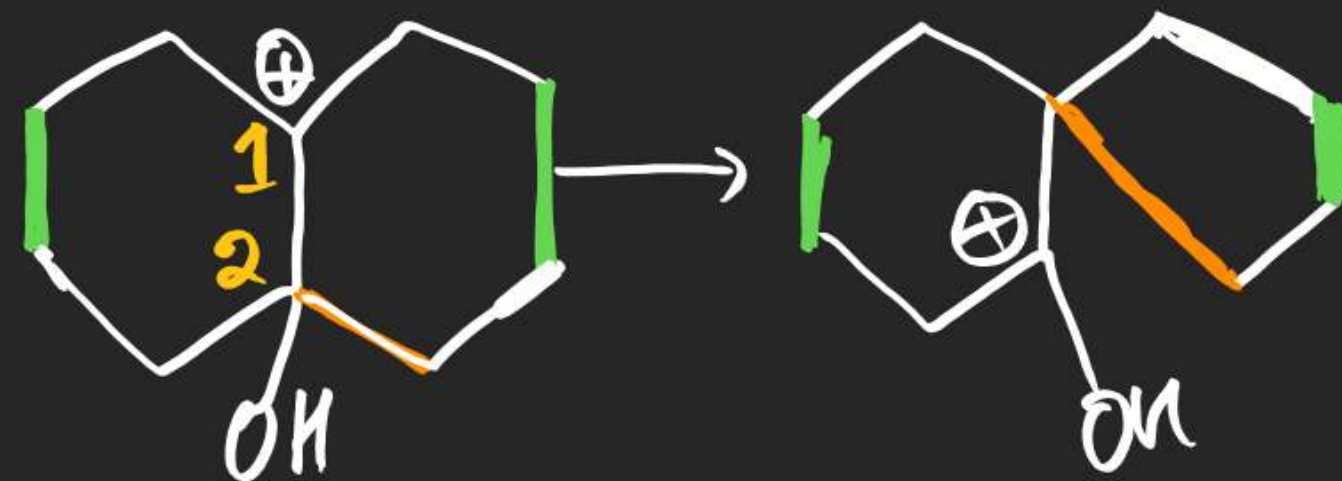
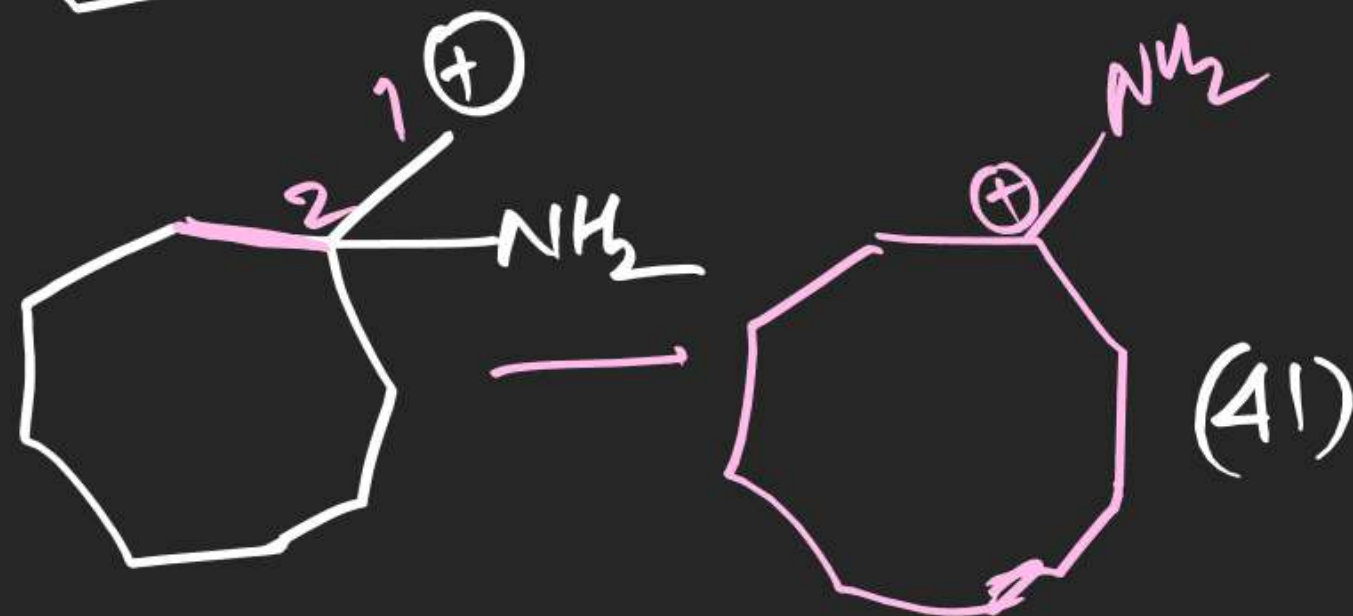


(37)

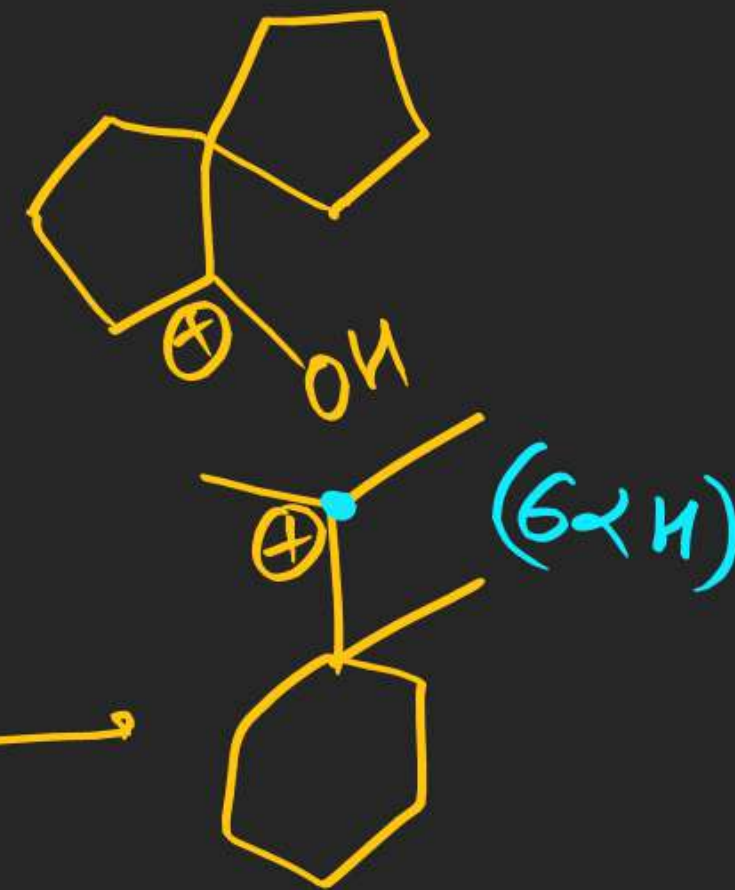


Ring Contraction (1,2 shift)

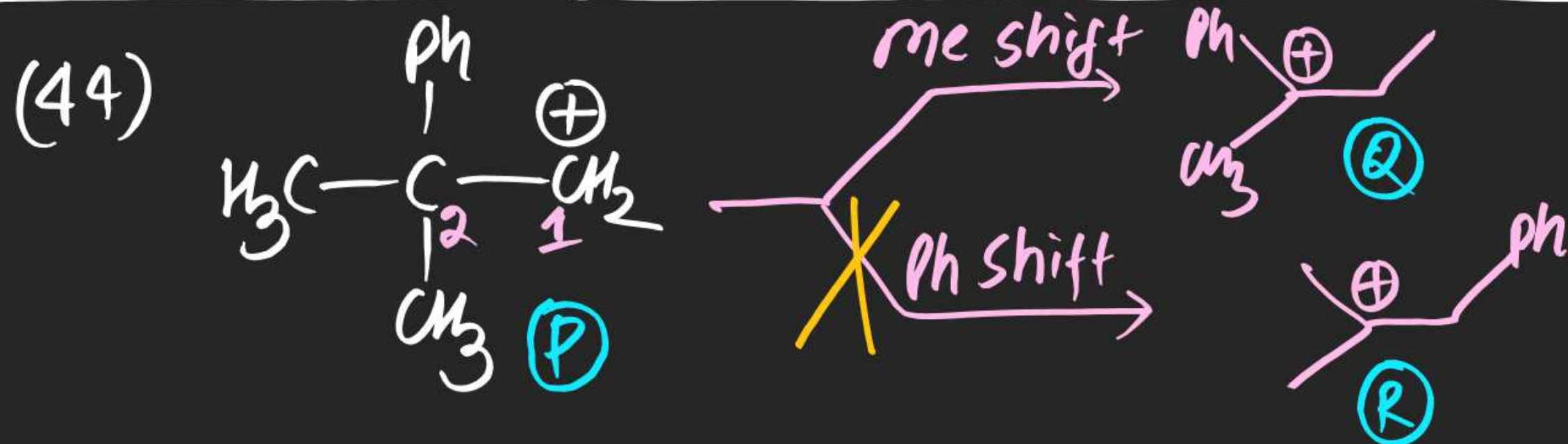
(38)



(39)



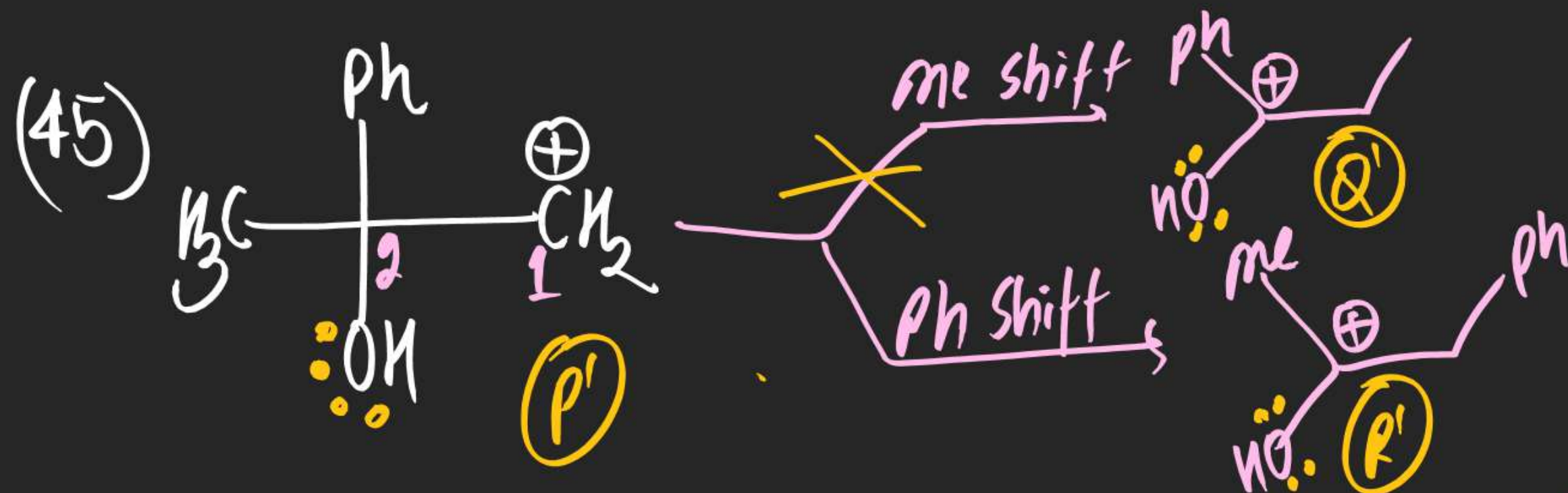
(6<11)



Stability order



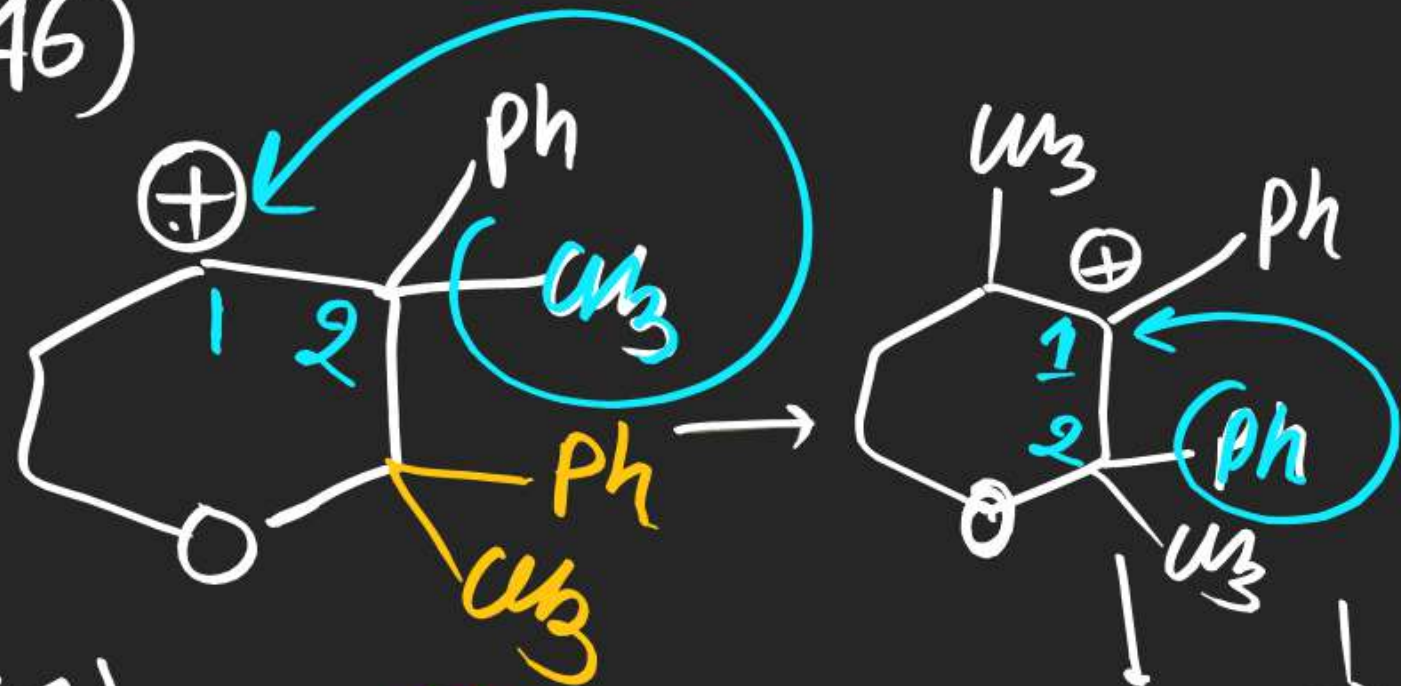
Try to obtain most stable cation



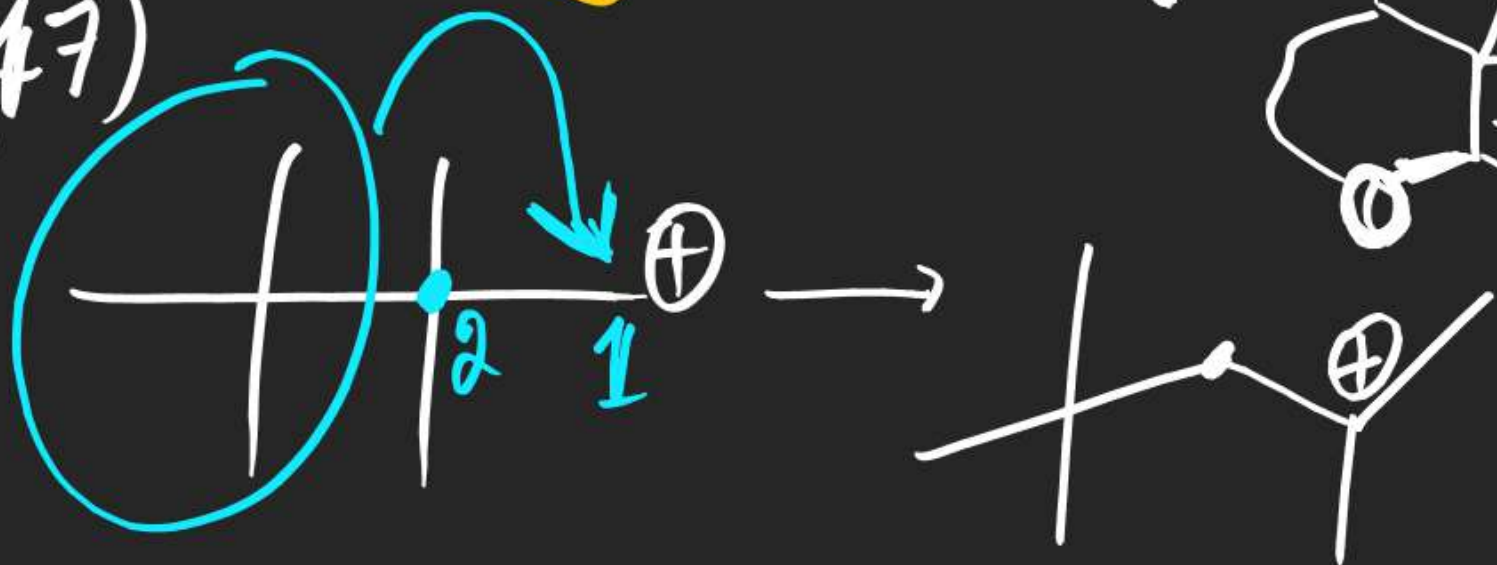
Follow migratory order

Note: when cation is Back Bonding stabilised just after Reagent follow migratory order otherwise Try to obtain most stable cation

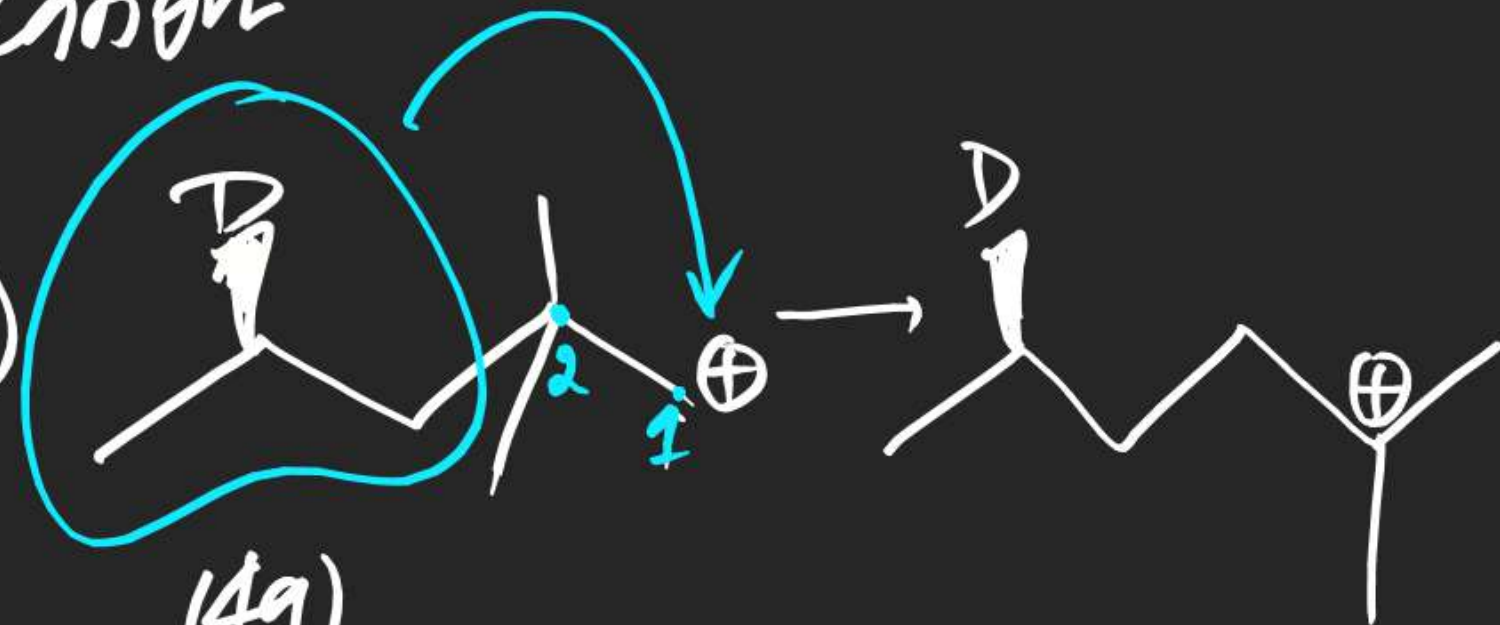
(46)



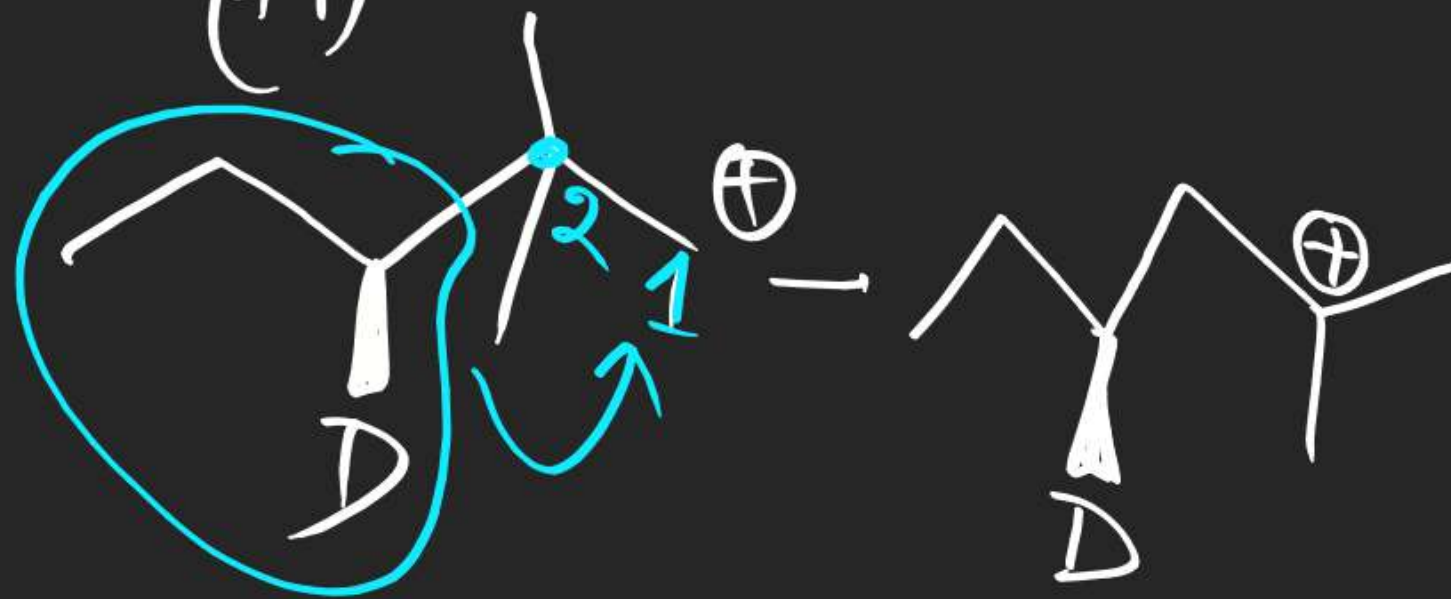
(47)



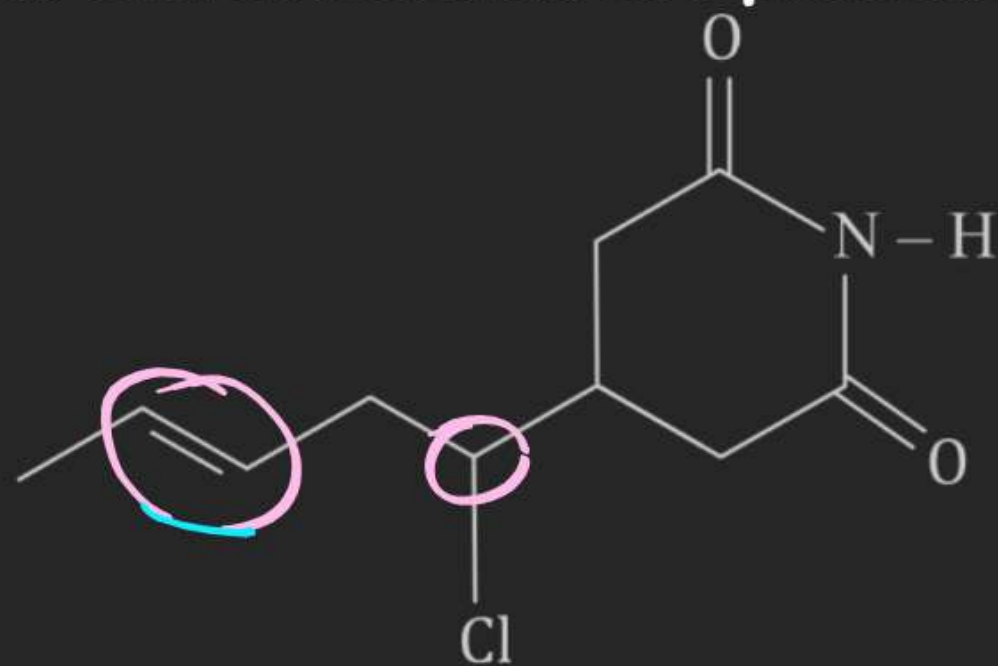
(48)



(49)



Q.88 Total number of stereoisomers are possible for the given compound is:

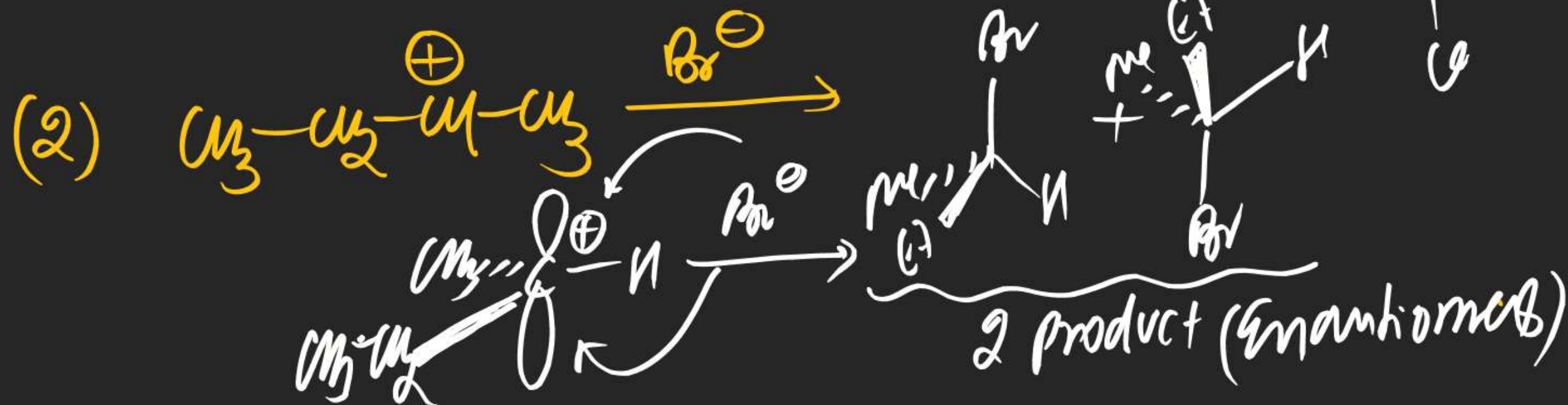
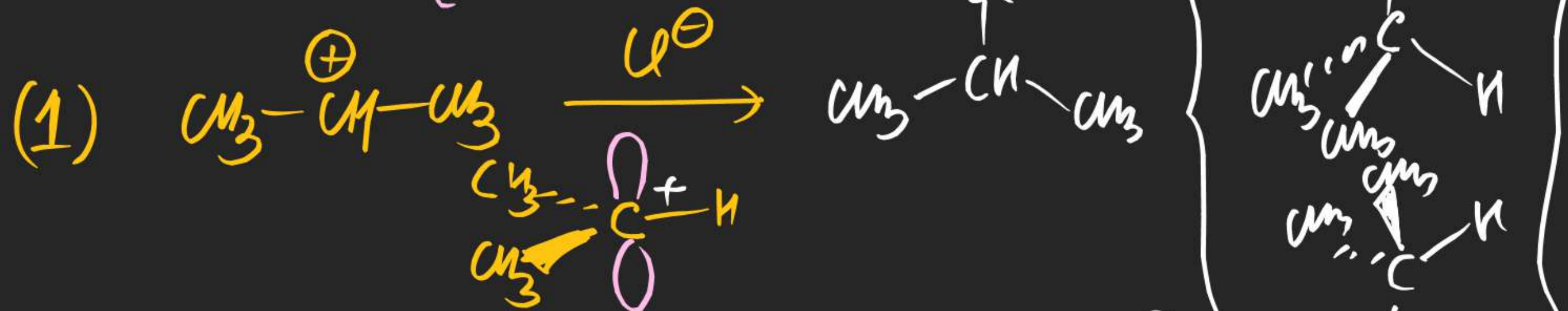


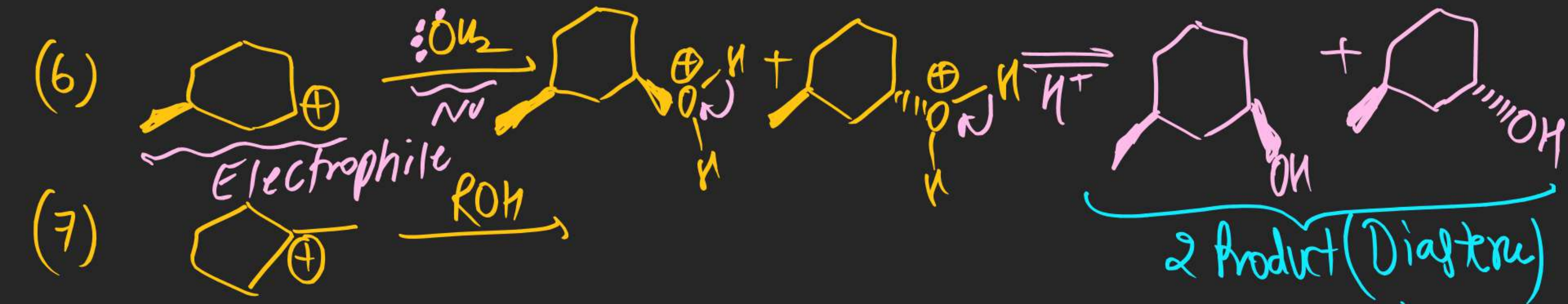
Total stereoisomers = $2^2 = 4$

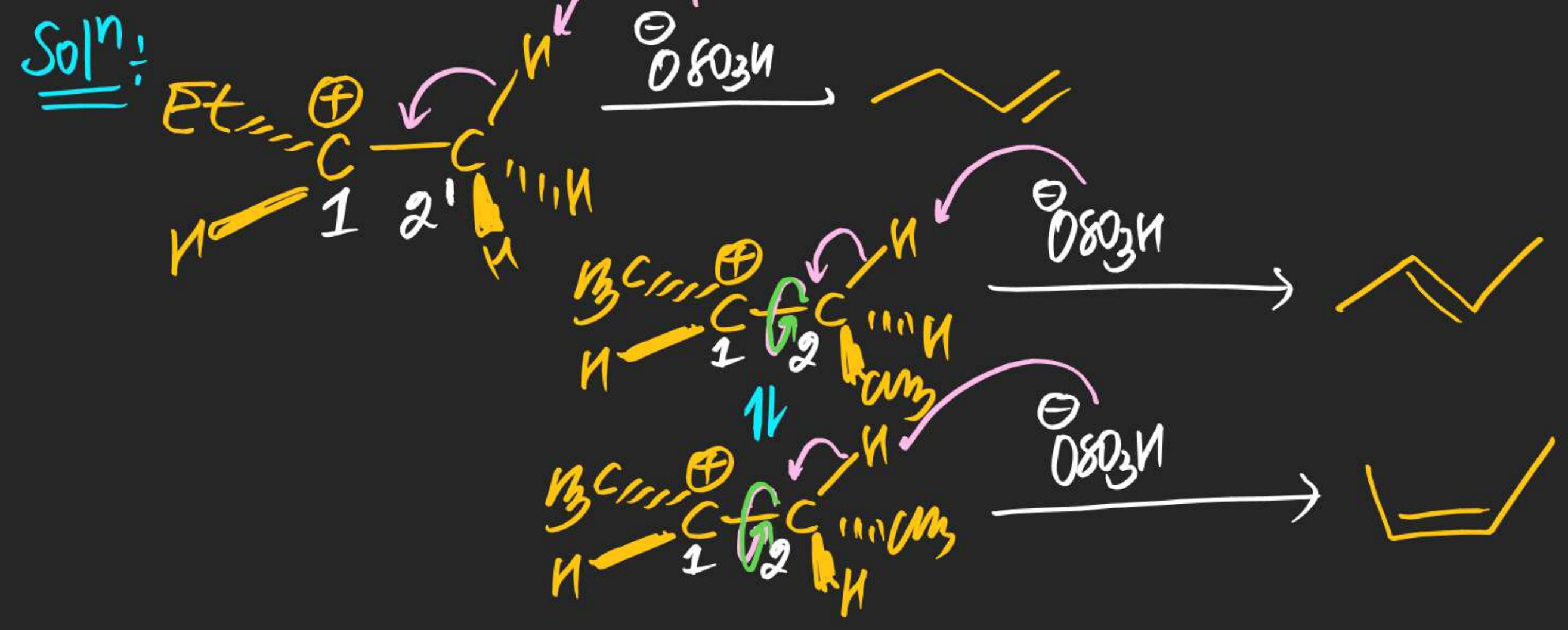
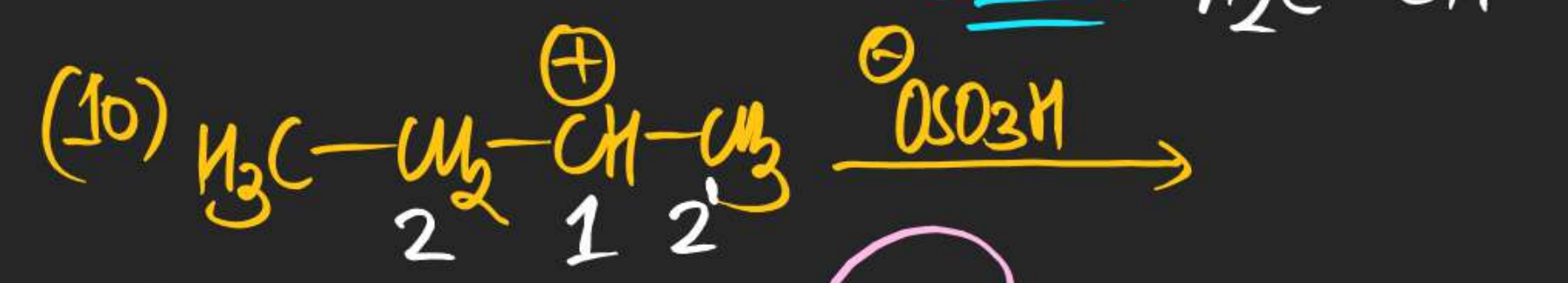
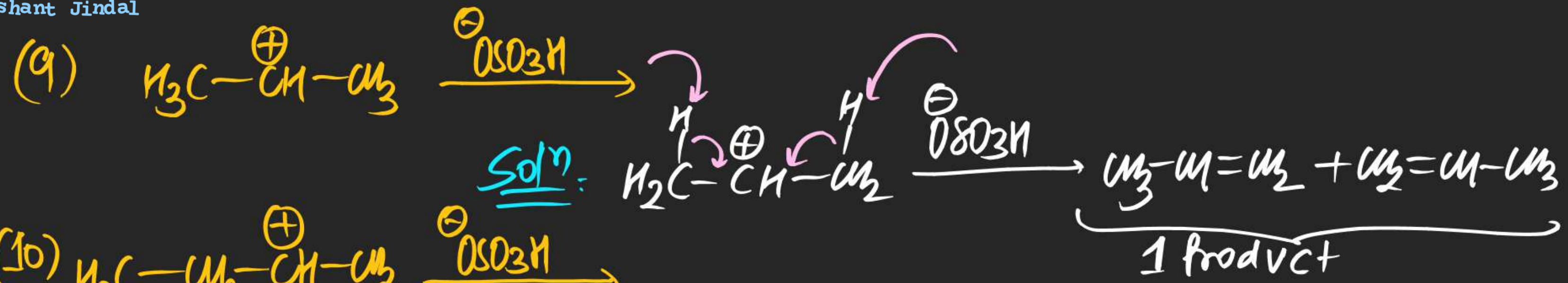
(#) RX Shown By Carbocation!

Combination [In Presence of Nucleophile like X^- , H_2O , ROH , $R-COOH$]

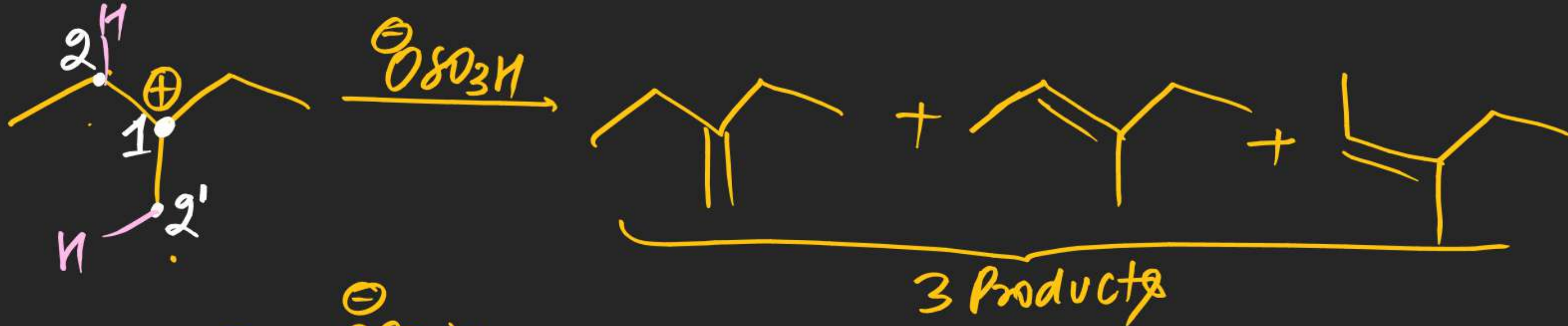
or
Elimination [In Presence of Base like OH^- , KPO_4^-]







(11)



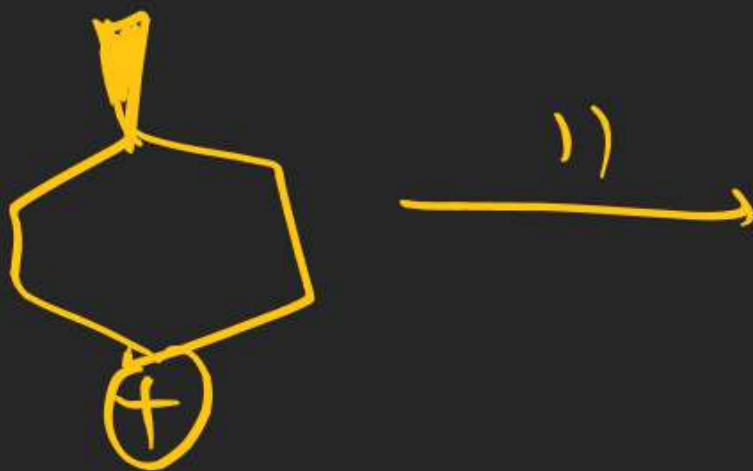
(12)



(13)

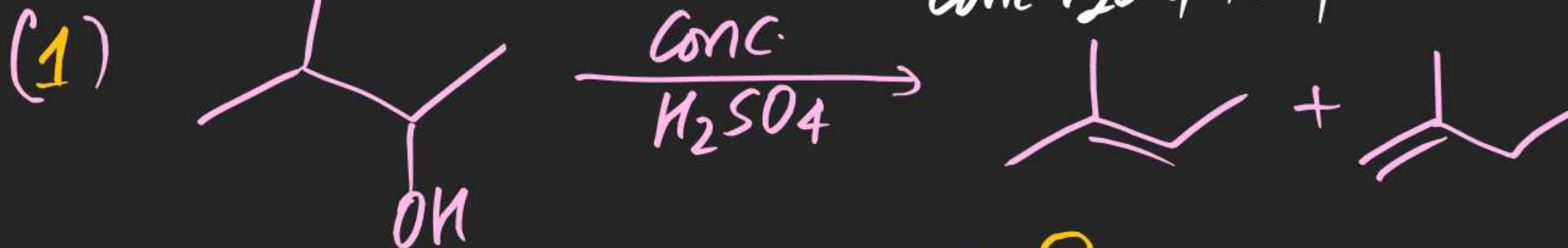


(14)

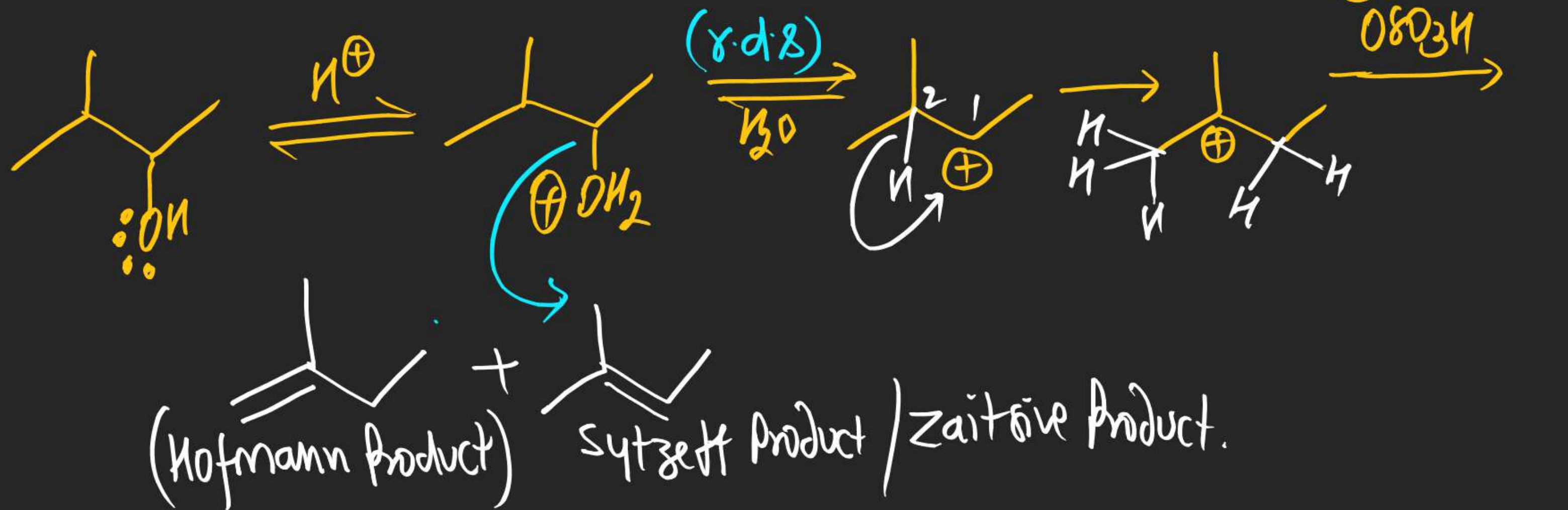


(#) Dehydration of Alcohol:

Whenever Alcohols are treated with Conc. H_2SO_4 , alkenes are obtained as a product.



Mechanism:



Note (i) Carbocation intermediate

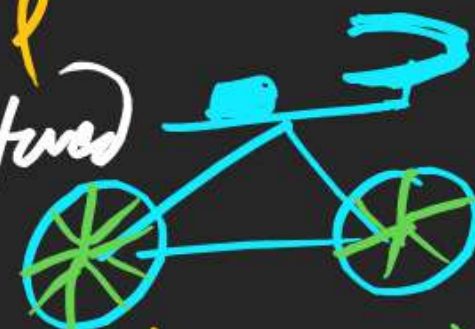
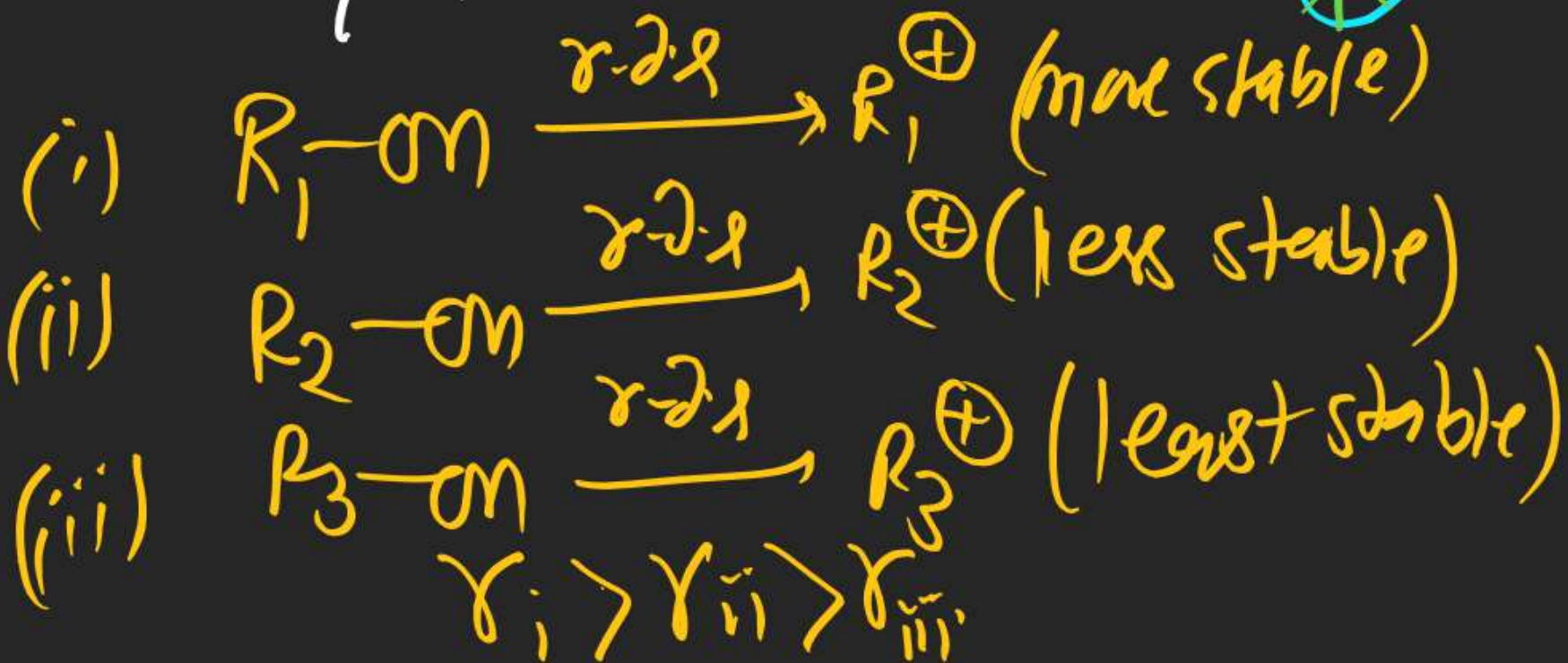
(ii) Rearrangement possible

(iii) Formation of First Carbocation is r.d.s


(*) { r.d.s
(*) { rate determining step
(*) { slowest step of any rxn


M.F.M


(iv) Rate of dehydration of Alcohol
α stability of Carbocation first formed




Per day Product

10 lakh 

8 lakh 

7 lakh 

50K 

(v) rate expr



(vi) Elimination rxn

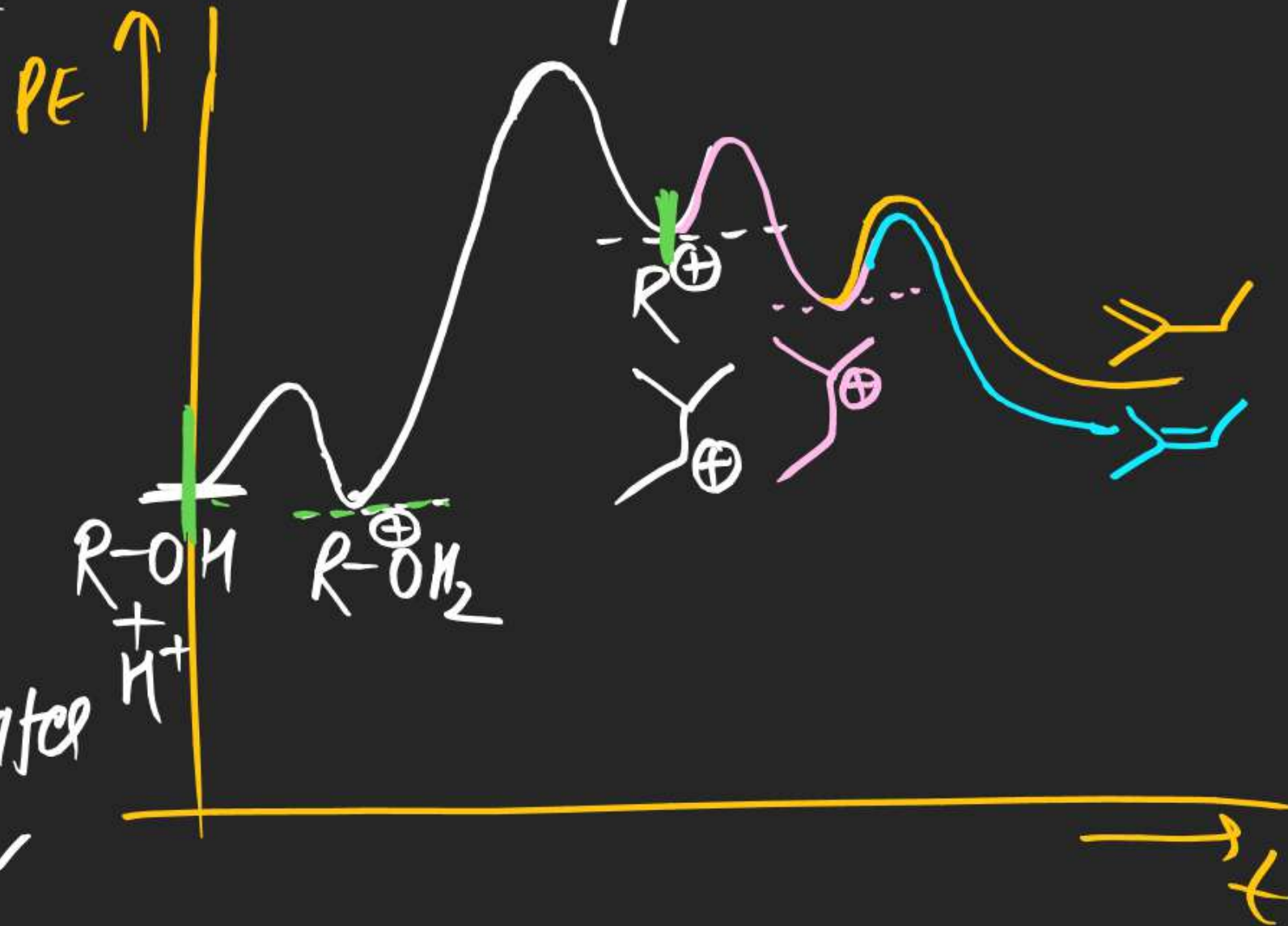
(vii) Reversible rxn

(viii) Unimolecular

(ix) E¹ mechanism

(x) Usually Saytzeff alkene dominates over Hofmann alkene as a major product (due to high stability of Saytzeff product)

(xi) Potential Energy Curve



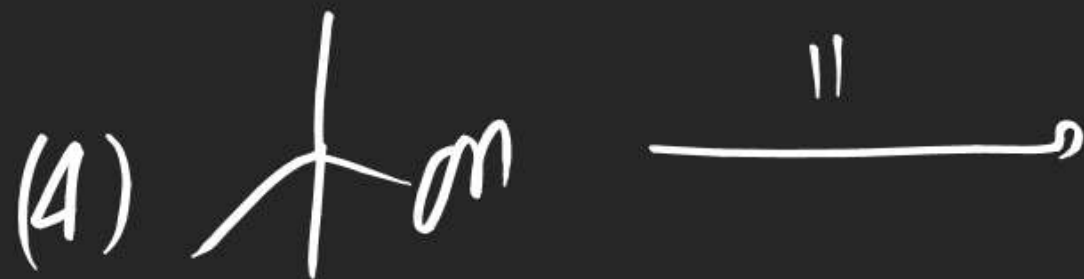
(xii) Endothermic rxn

(xiii) higher Temp. is reqd

(xiv) For alcohol dehydration

Reagents: H^+/Δ or $Conc. H_2SO_4$ or $Conc. H_2SO_4, \Delta$

(xv) At very low Temp alkene is not obtained as a product.
Remyed alcohol / ether is obtained as a product.

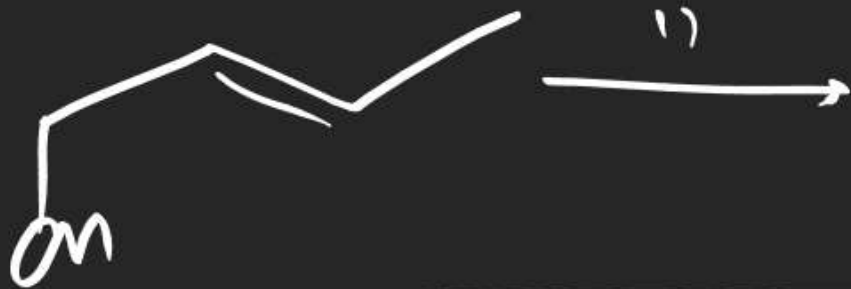




(11)



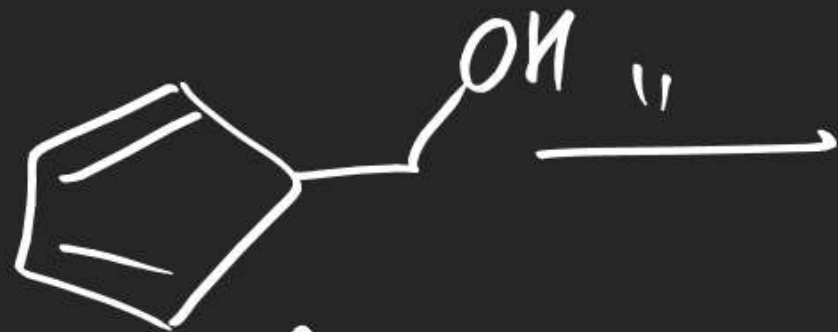
(12)



(13)



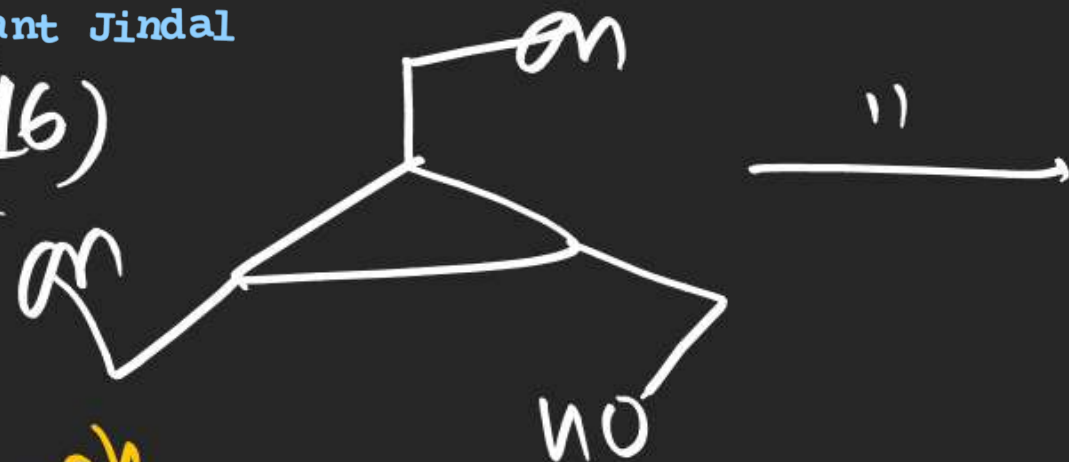
(14)



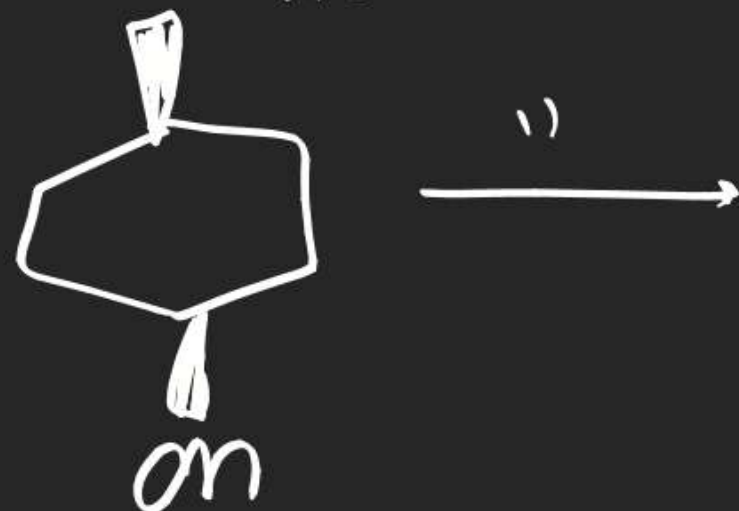
(15)



(16)



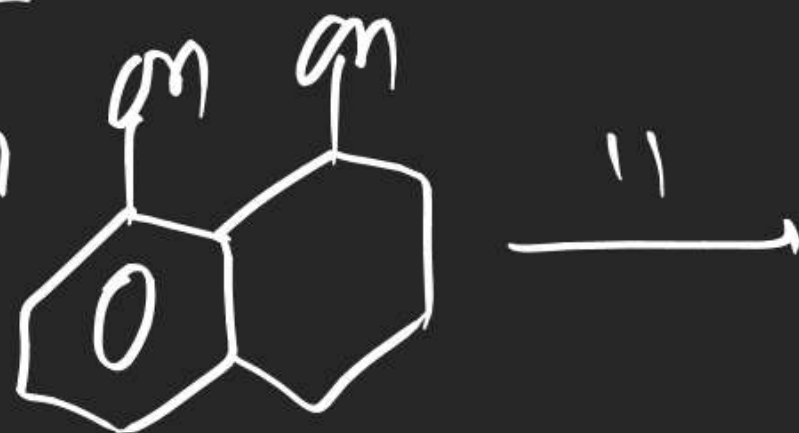
Graph
(17)



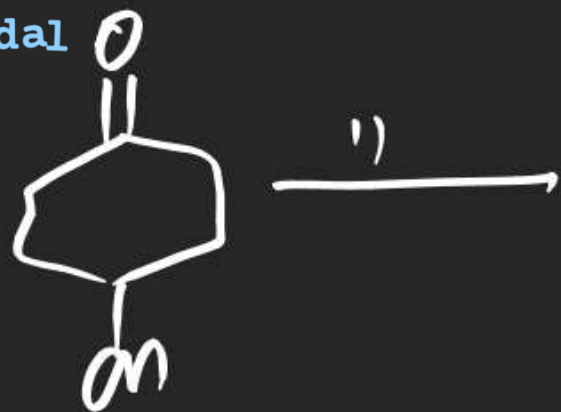
(18)



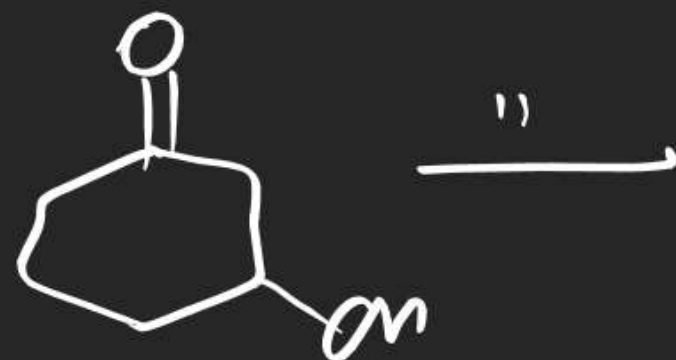
(19)



(20)



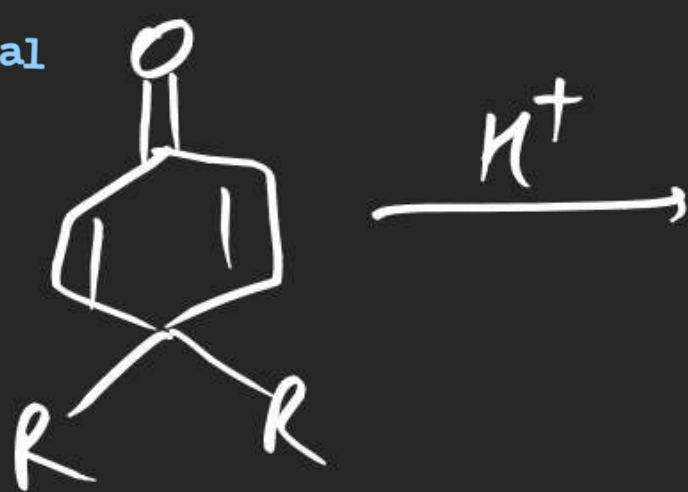
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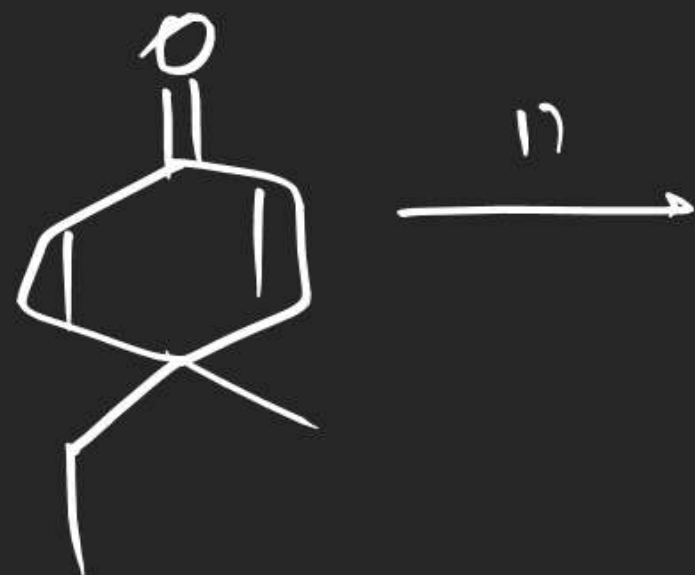
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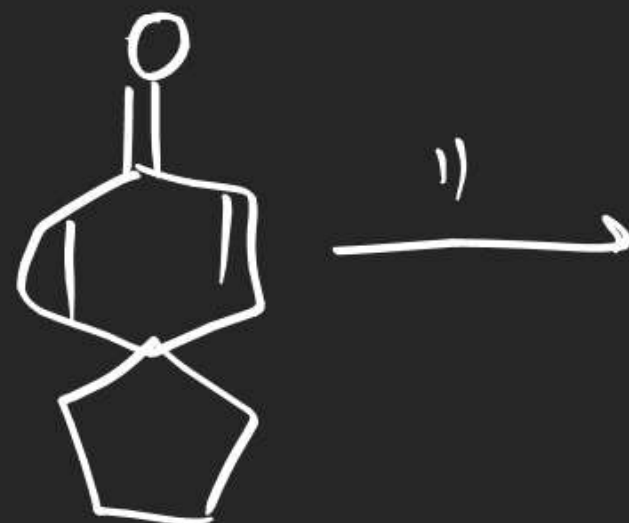
(23)



(24)



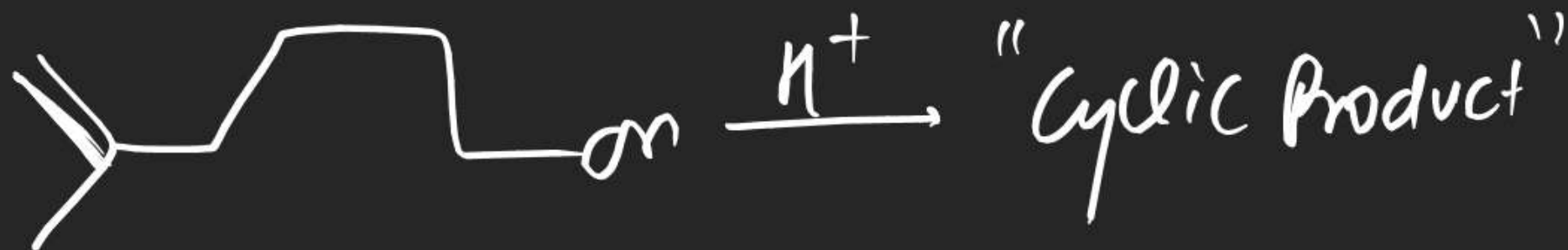
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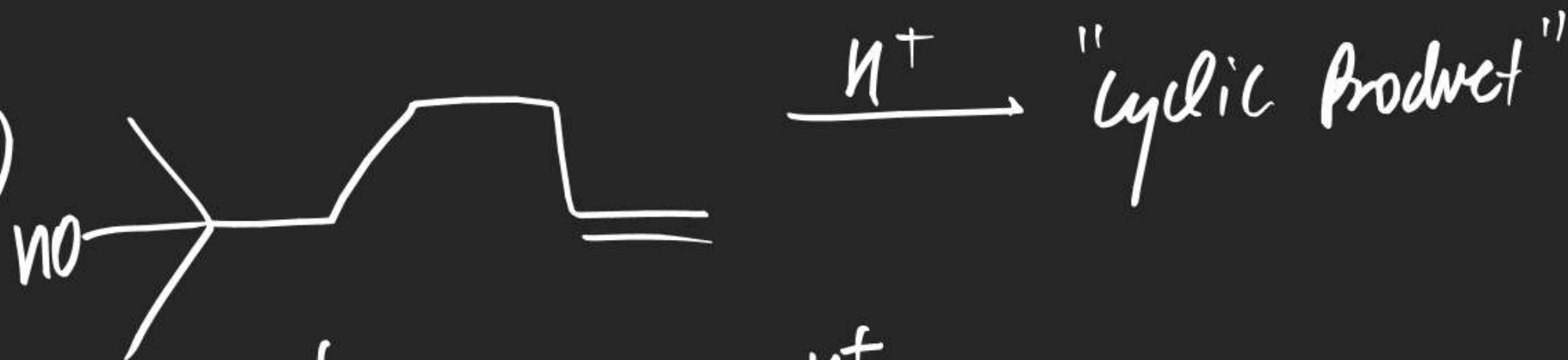
(26)



(27)



(28)



(29)



