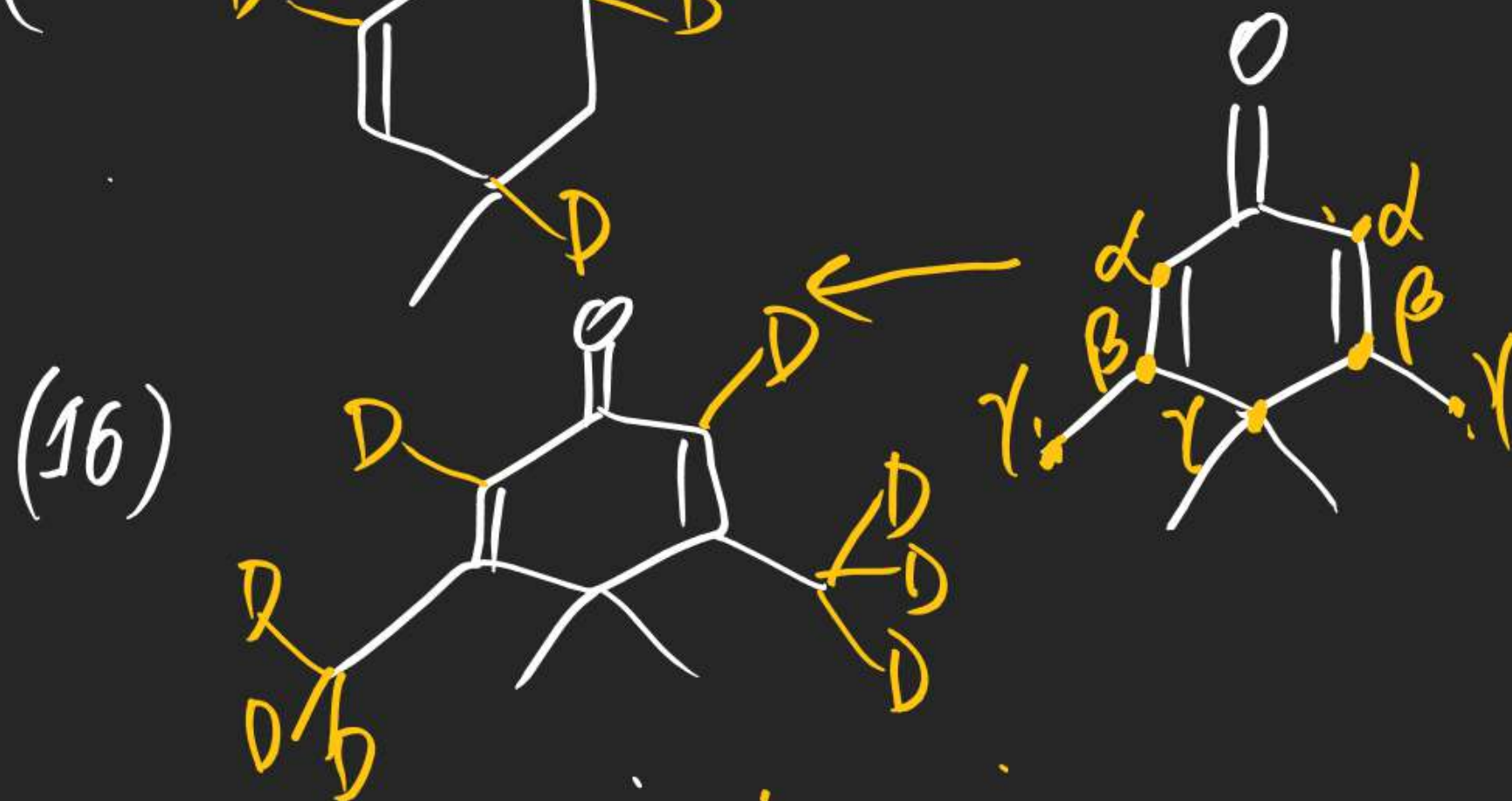
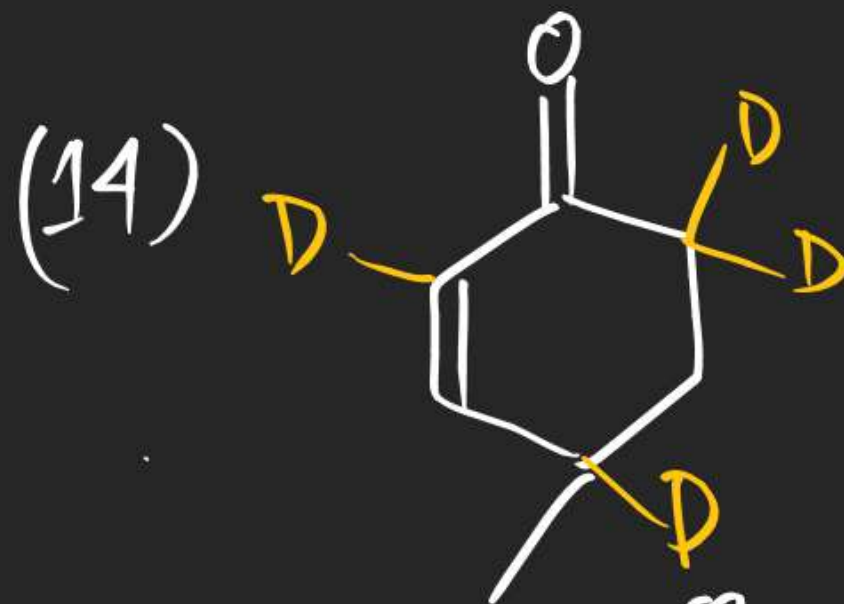
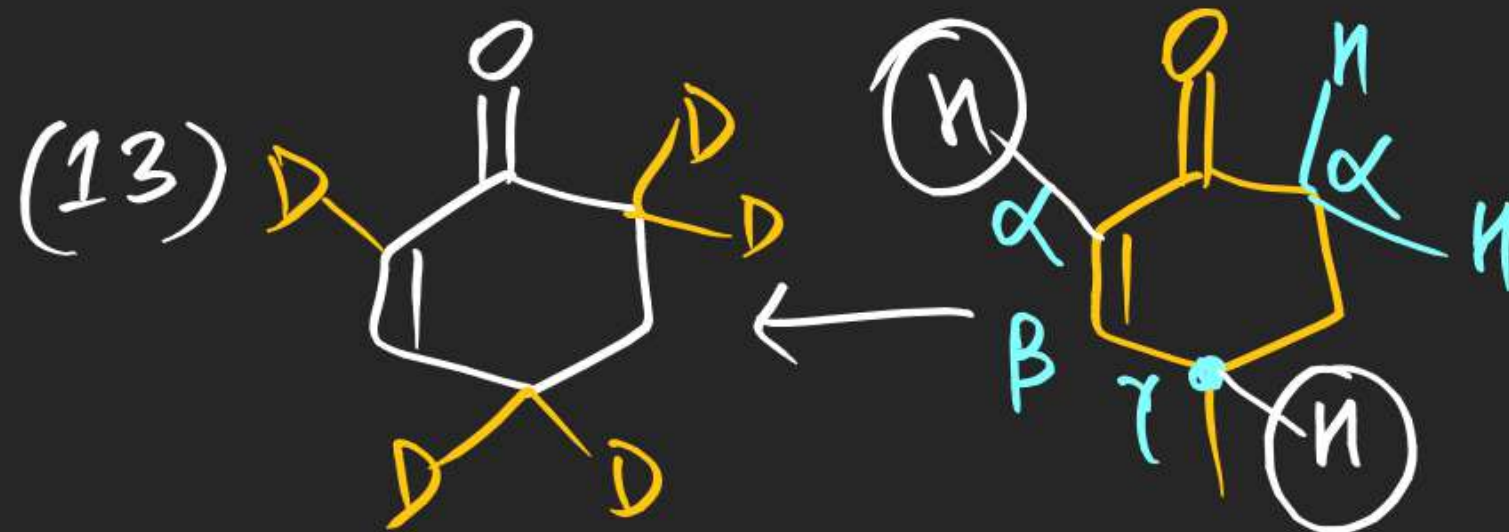
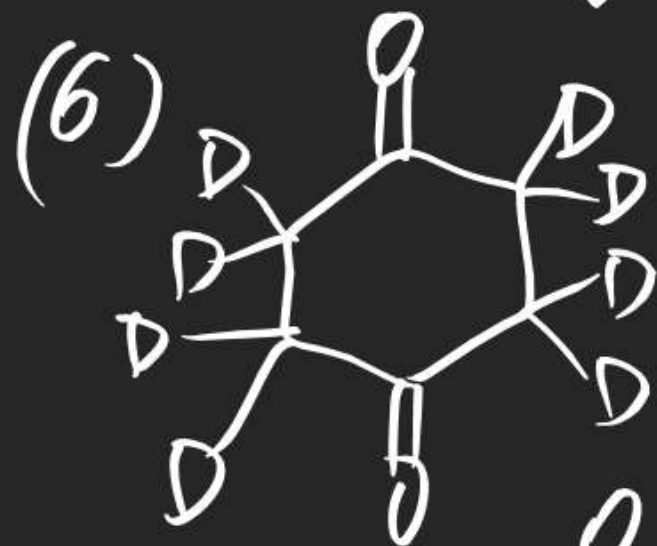
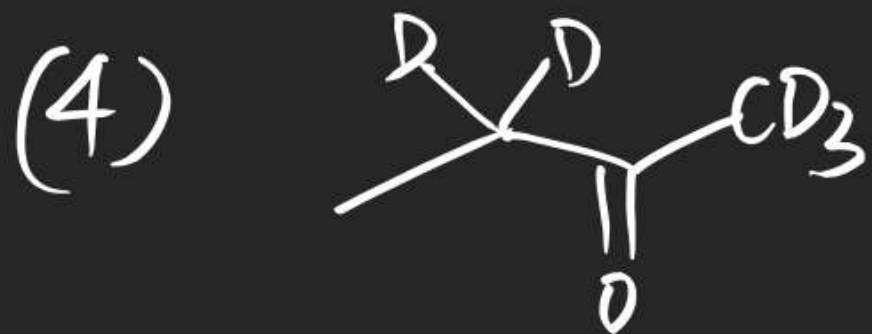


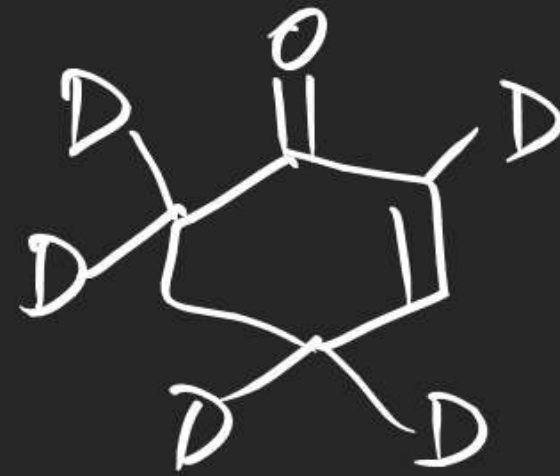
STEREISOMERISM

(#)

NW (Discussion) Theory copy



(20)



Ex: Any ↓ ante of % Enol

(2)



Aromatic

(3)



No tautomerism



X

π/σ

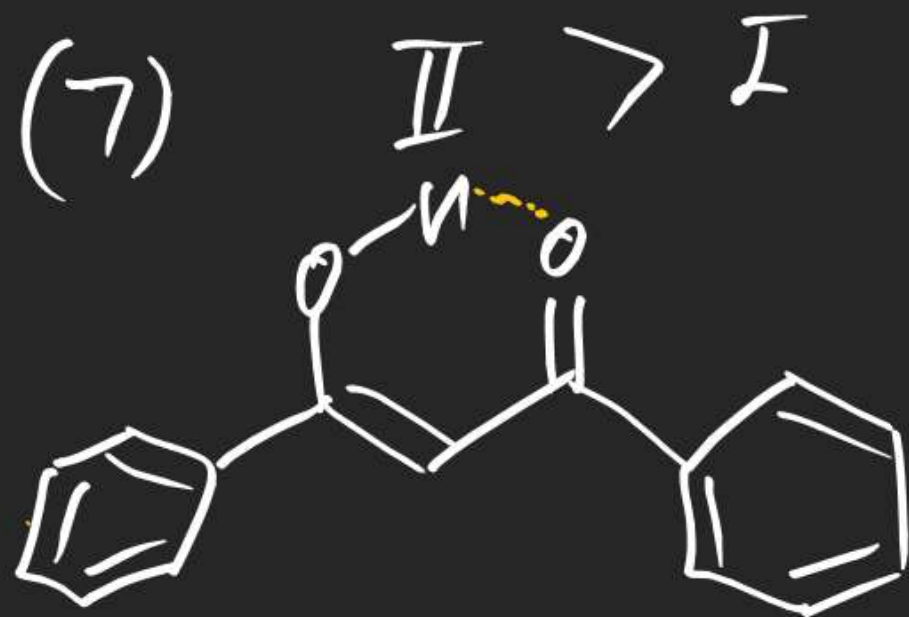
(4) $II > I$



(5) $II > I$



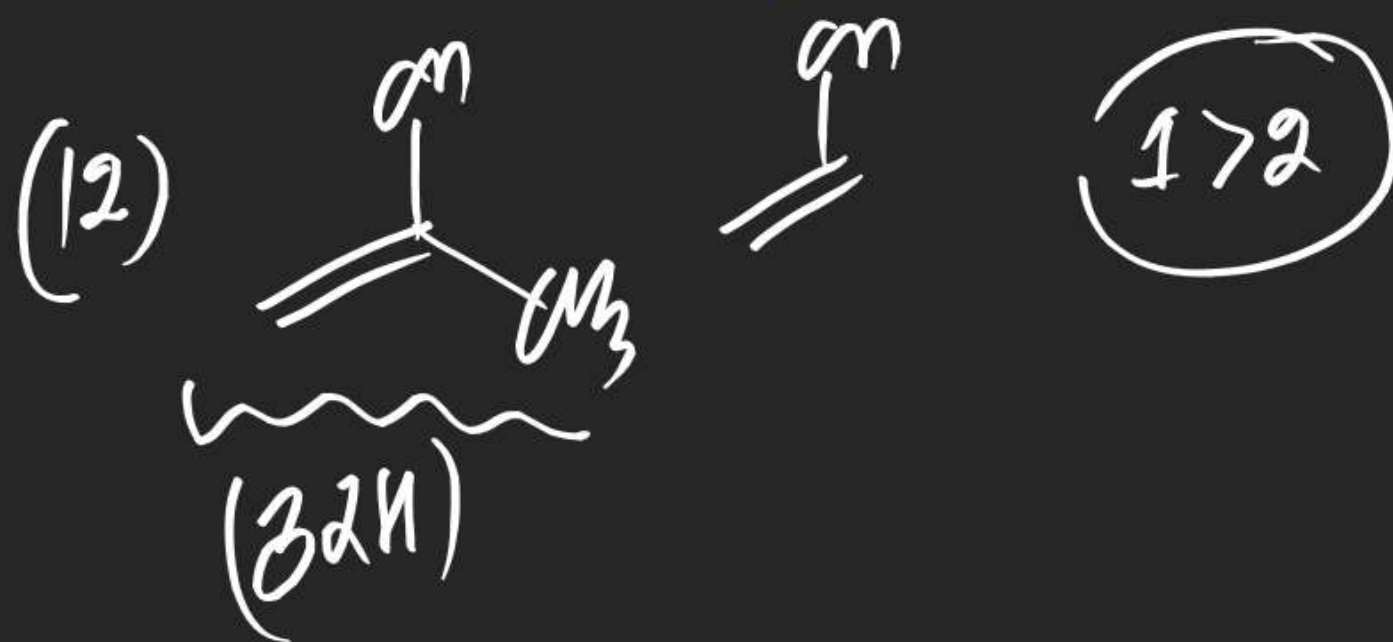
(6) $III > II > I$
 2 ketone 1 ketone 2 ester
 &
 1 ester



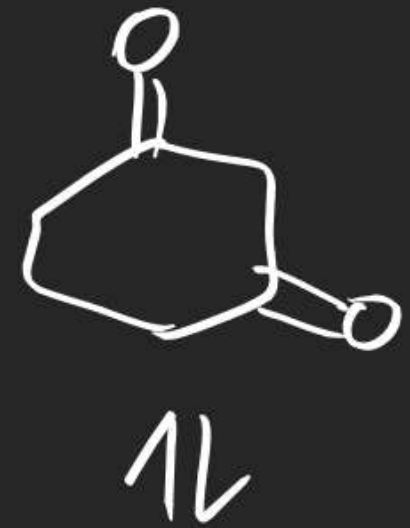
(8) $I > II$

(9)

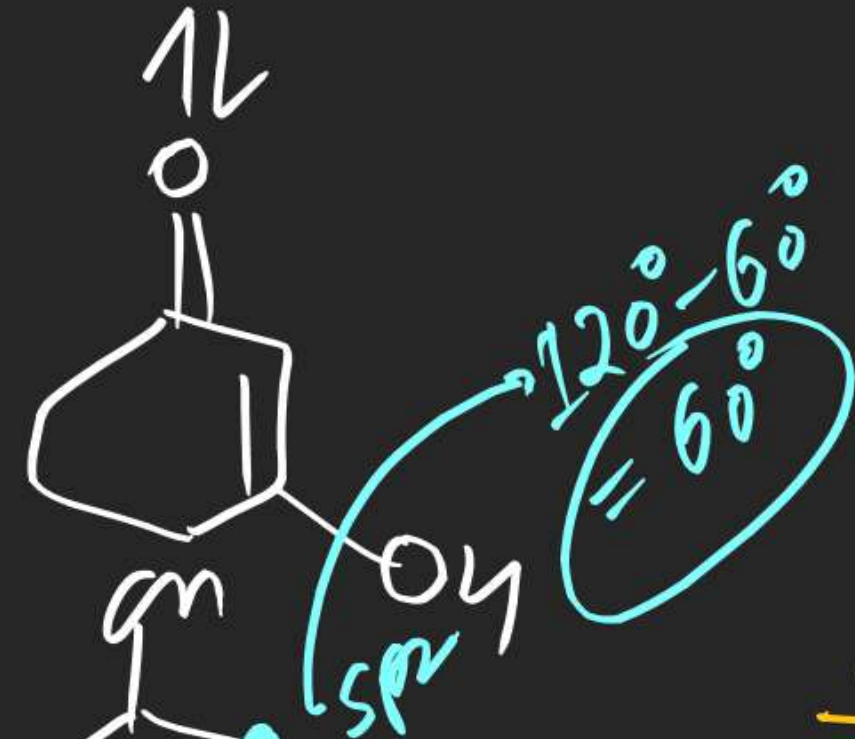
(10)



(13)



$\text{II} > \text{I}$

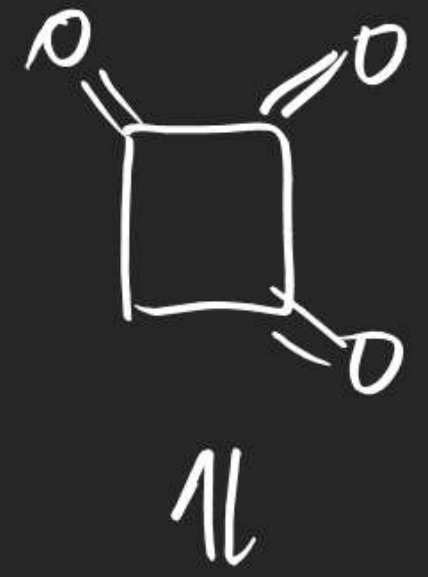
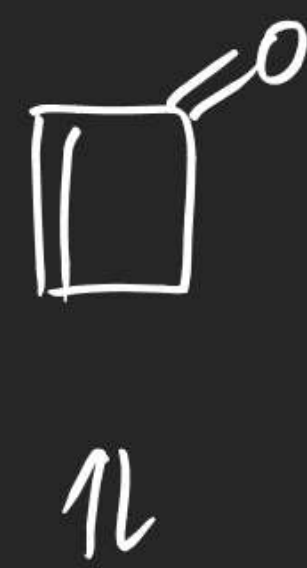


(15)



$\text{I} > \text{II}$

(14)

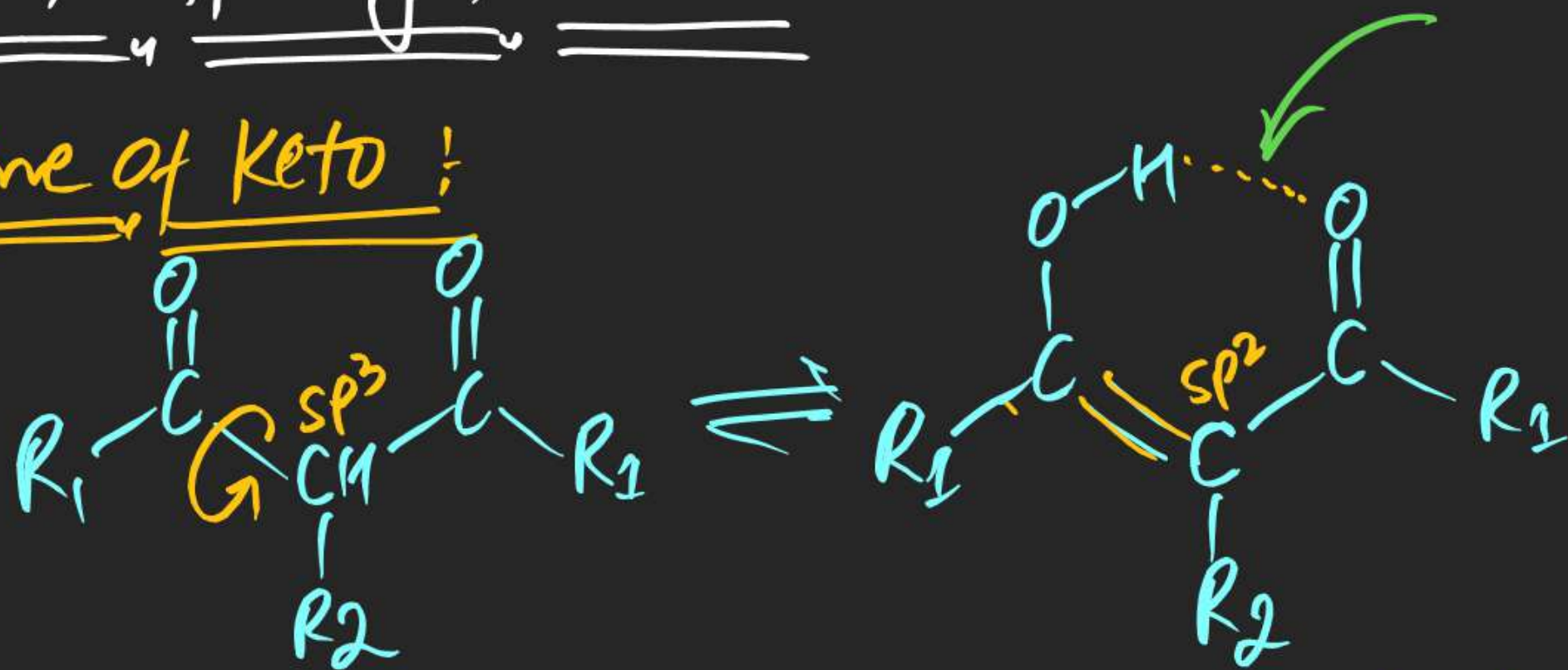


Non Aromatic Anti Aromatic Aromatic

$\text{III} > \text{I} > \text{II}$

(#) Factors affecting % Enol:

(1) Structure of Keto:



\Rightarrow on increasing size of $\text{R}_2 \Rightarrow \% \text{ enol } \downarrow$ because of - - - - -

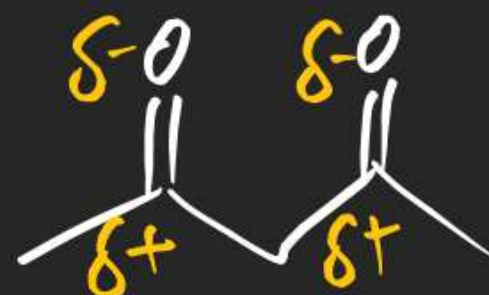
\Rightarrow on increasing size of $\text{R}_1 \Rightarrow \% \text{ enol } \uparrow$ due to having stable
chelate beam - - - - -

(2) Effect of Temperature:



on increasing Temp \Rightarrow % Enol \downarrow due to destruction of Chelation.

(3) Effect of Solvent:



Polarity \uparrow Solvent

Solvent	% Enol
H ₂ O	16
Liq. Sol ⁿ	33
n-hexane	52
Gas phase	78

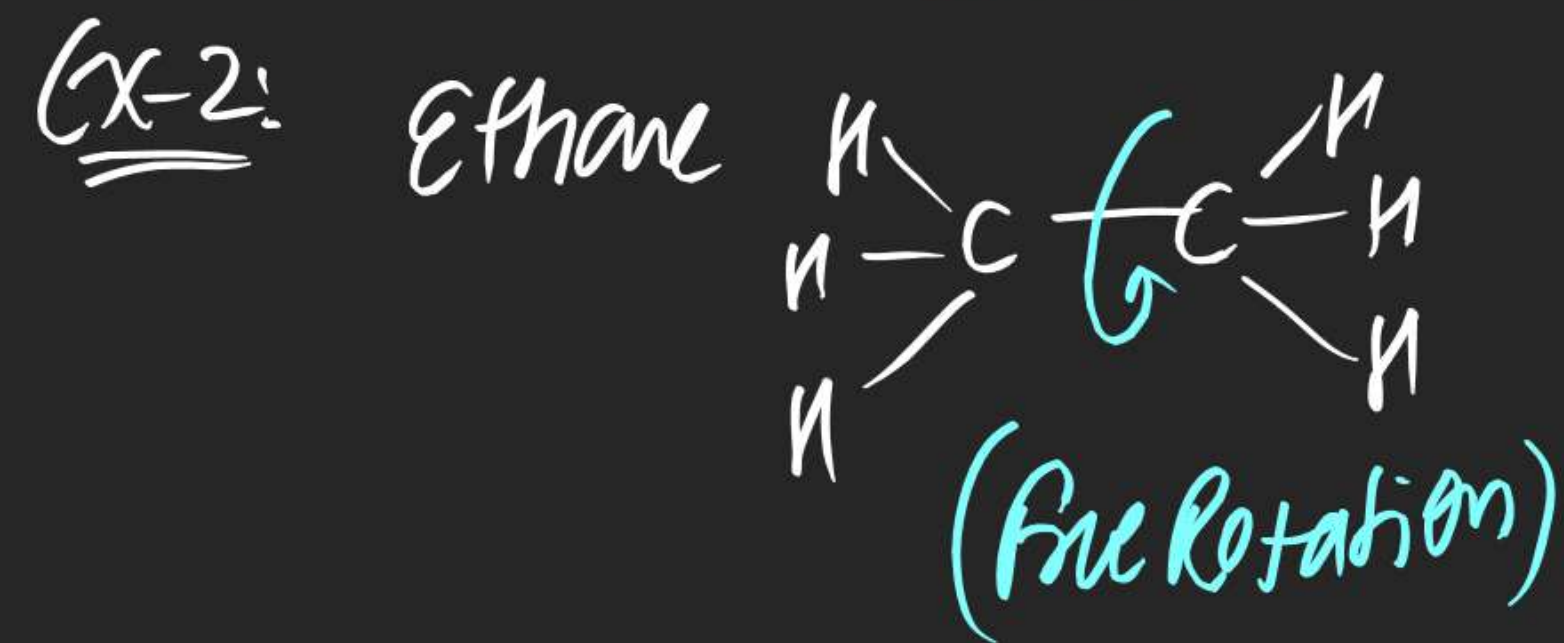
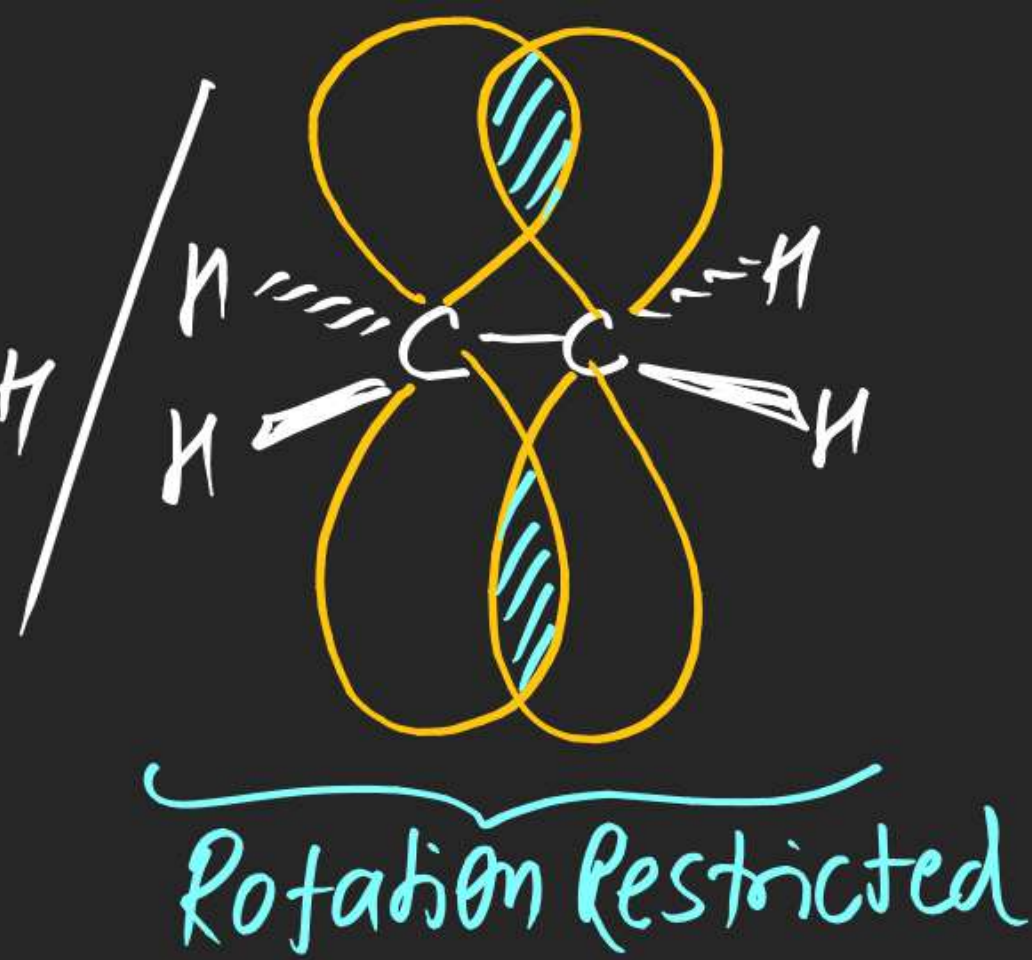
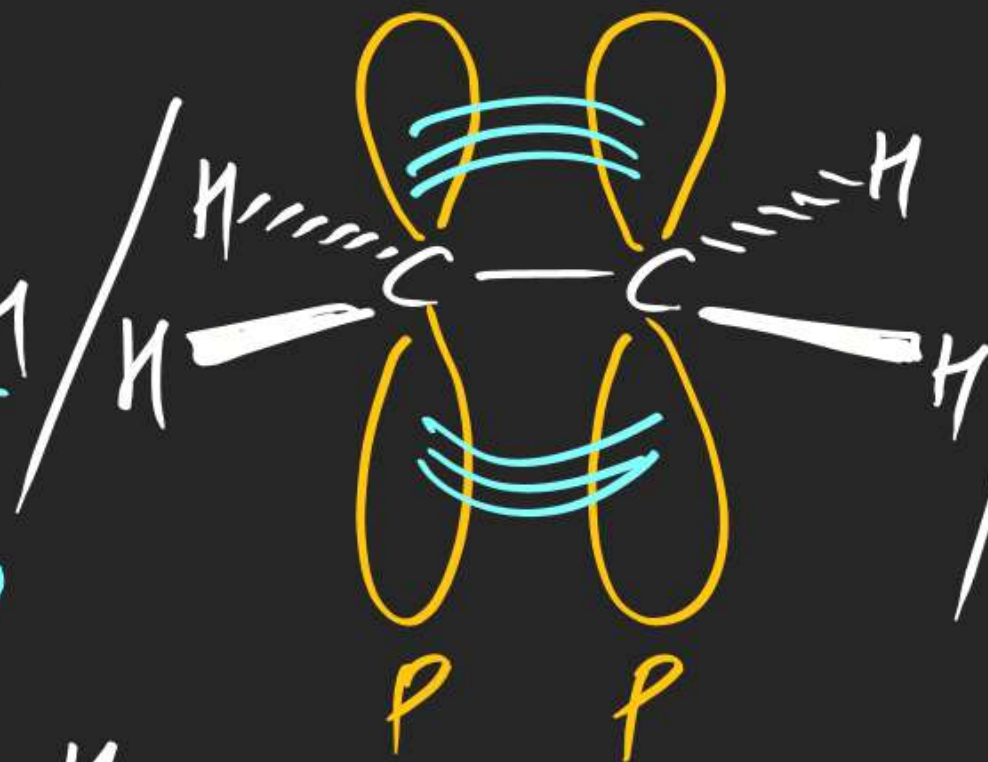
Stereo Isomerism:-

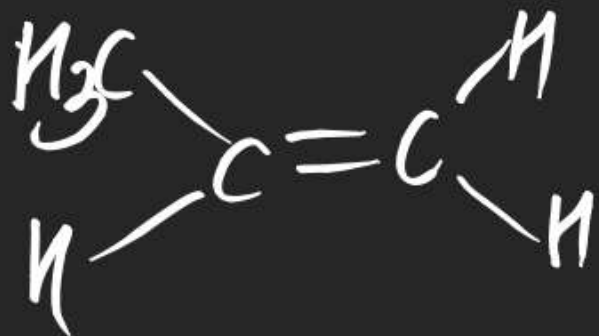
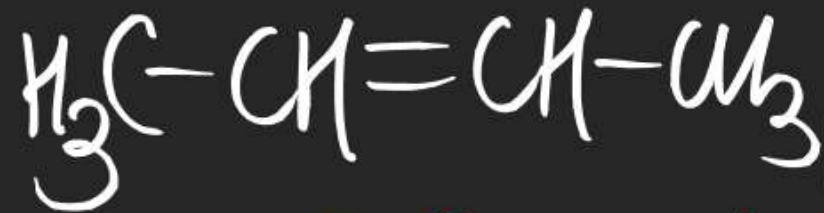
Geometrical
Isomerism

Conformational
Isomerism

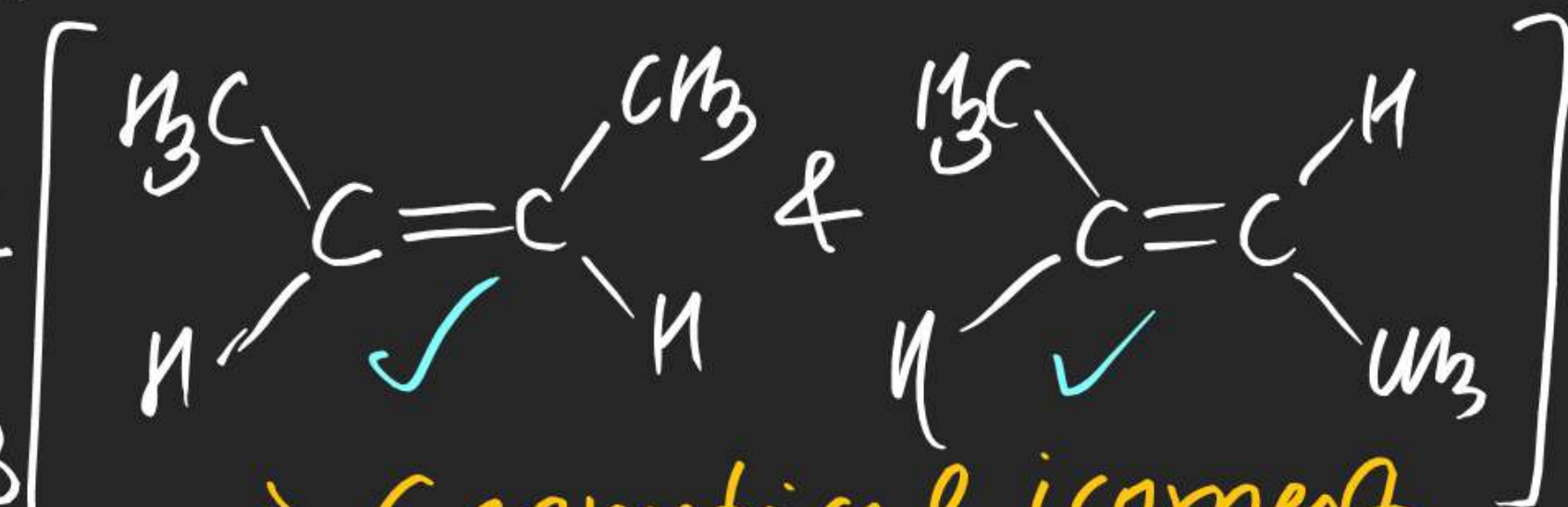
Optical
Isomerism

Geometrical Isomerism:- Compounds having same molecular formula & same structural formula but different geometry of atoms/groups in space across a Restricted Rotation segment



Ex-4PropeneEx-5But-2-ene

Shows Geometrical isomerism



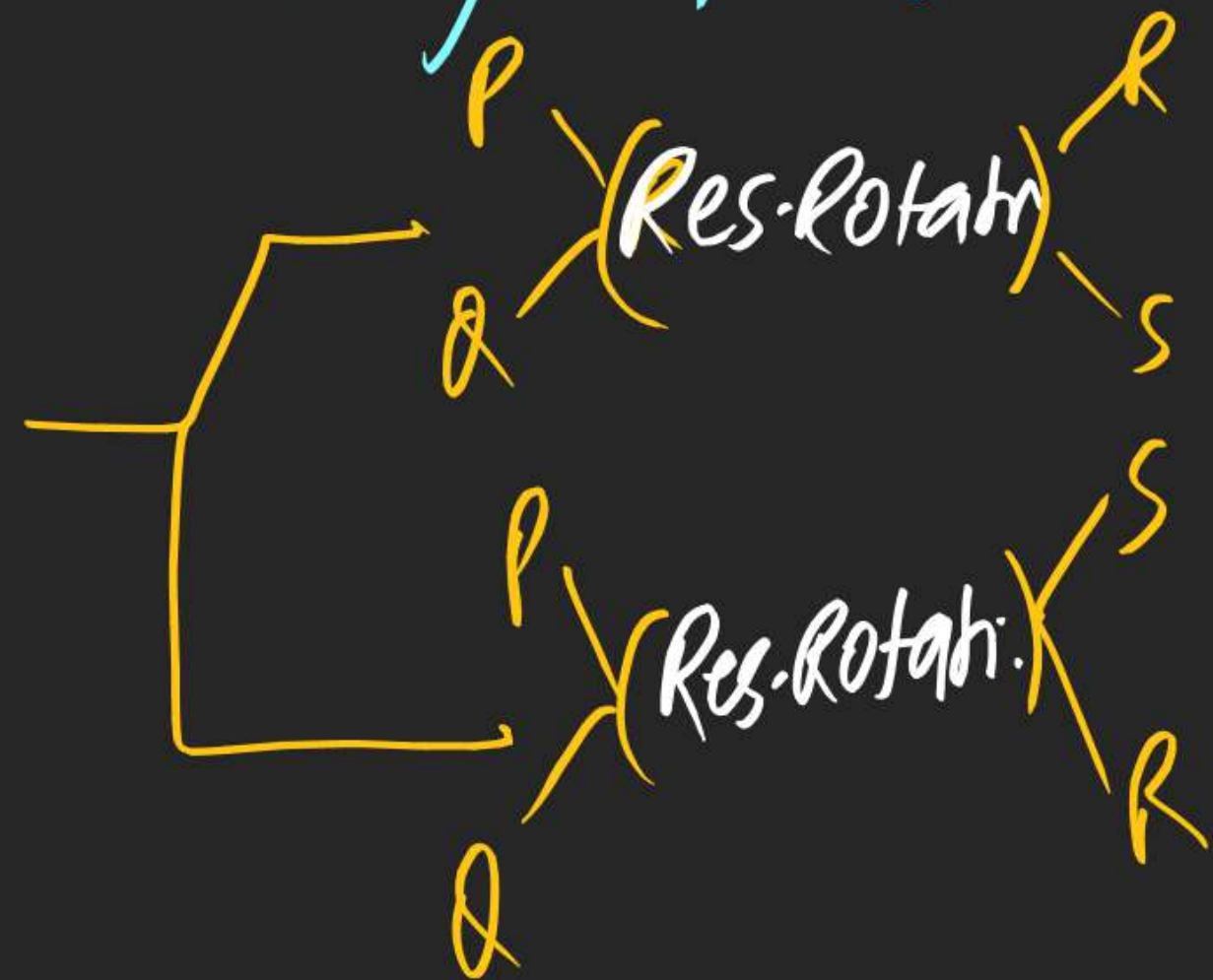
- \Rightarrow Geometrical isomers
- \Rightarrow Restricted Rotation
- \Rightarrow Non interconvertible
- \Rightarrow Diastereomers.

Condition for Geometrical Isomerism!

(1) Restricted Rotation

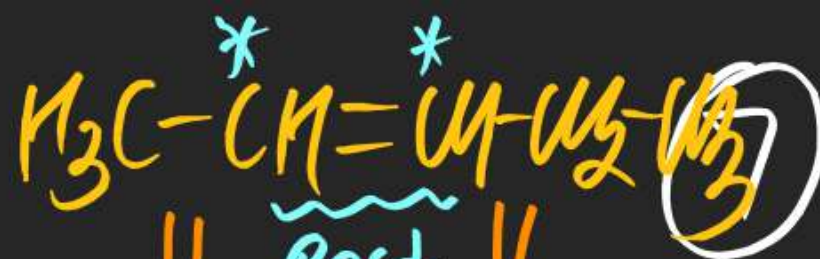
$\left\{ \begin{array}{l} \diagup C = C \diagdown, \diagup C = N' \diagdown, -N=N-, \text{Cyclic/Ring, S/R system...} \end{array} \right.$

(2)



Ex-1!

Pent-2-ene



② 2-methyl But-2-ene

