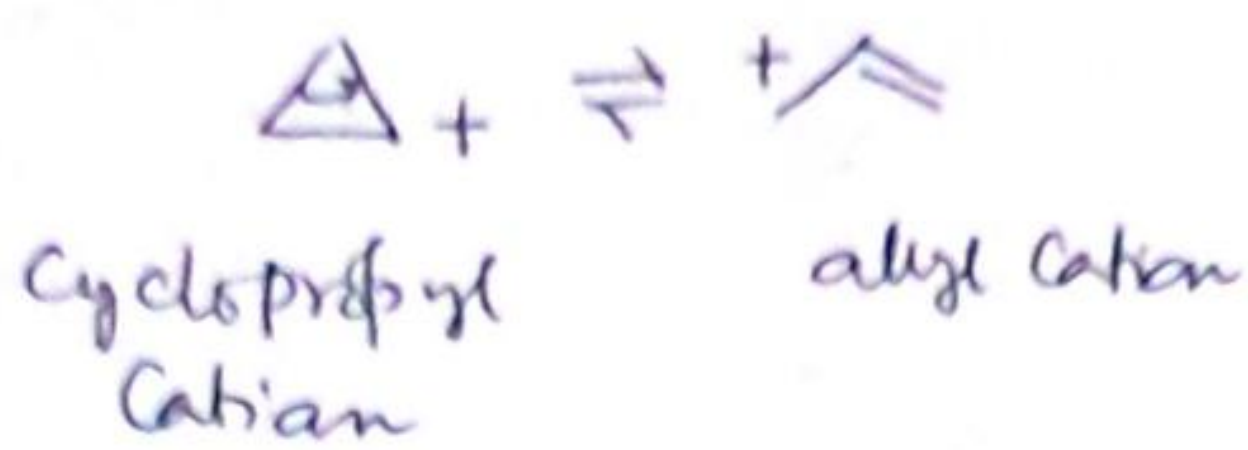
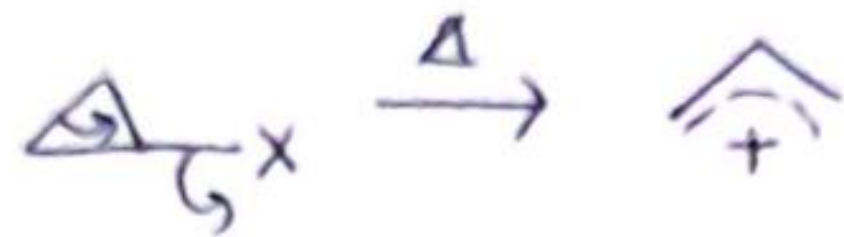


cyclopropane Ring opening rxn

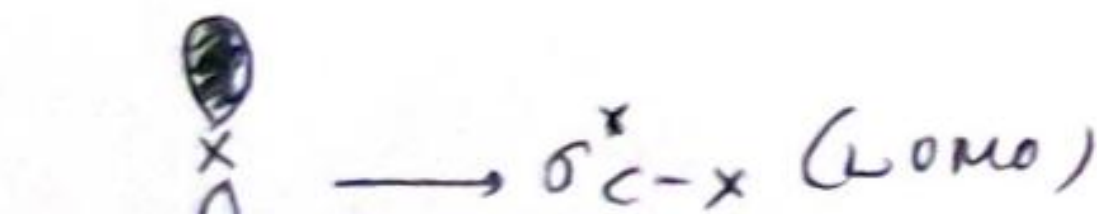
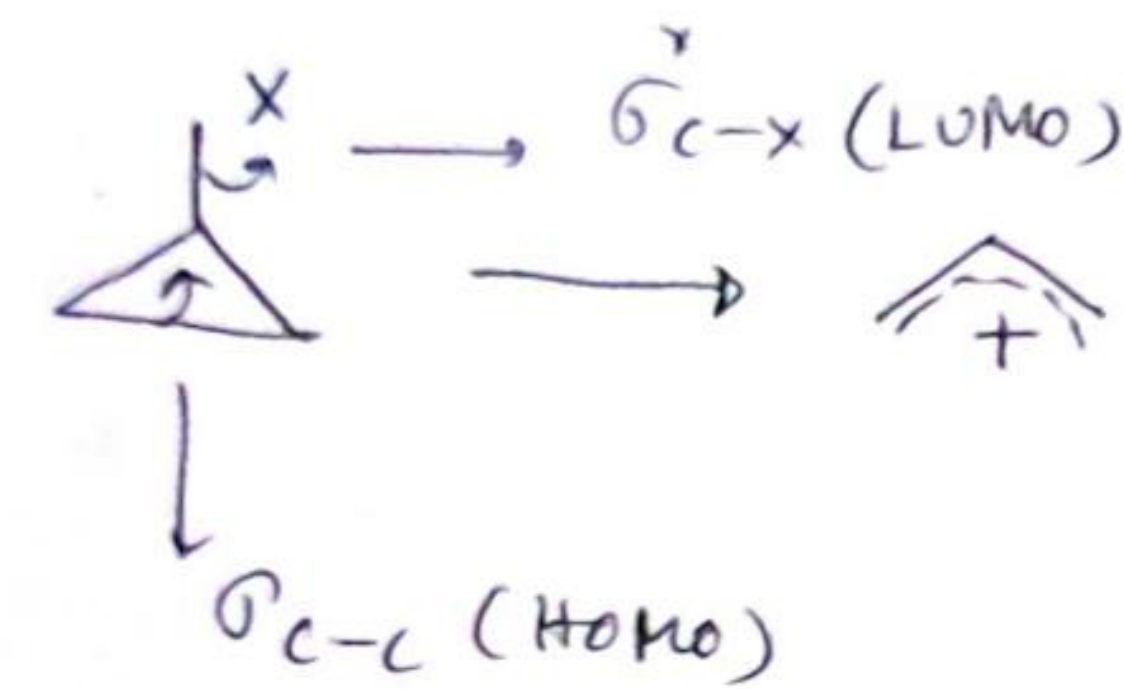


[2π electron involved in this electrocyclic rxn]

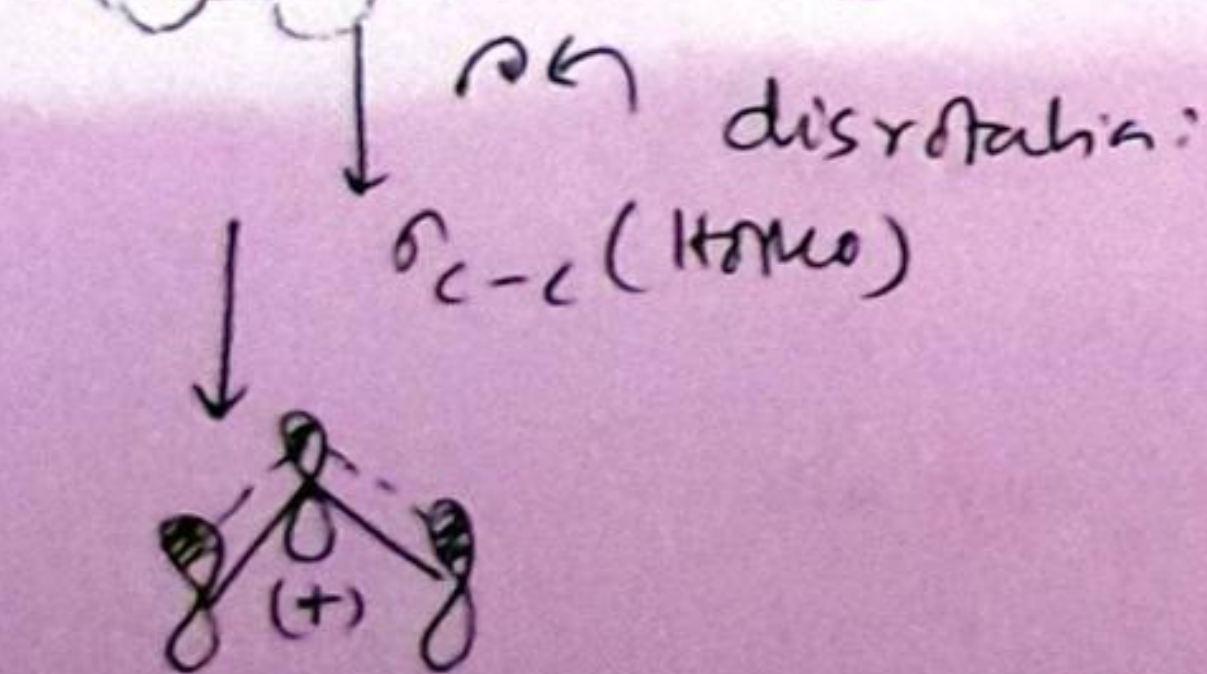
So, heating conditions → Disrotatory
 hv → Conrotatory



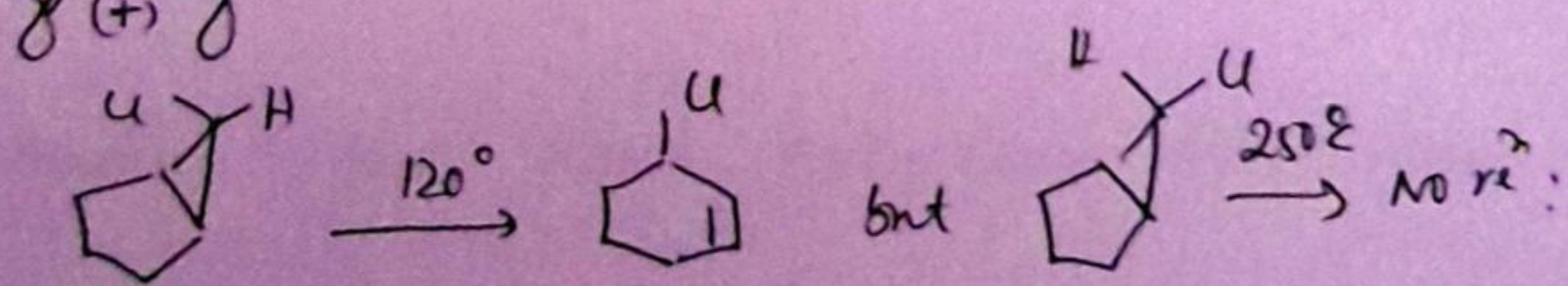
FMO approach:



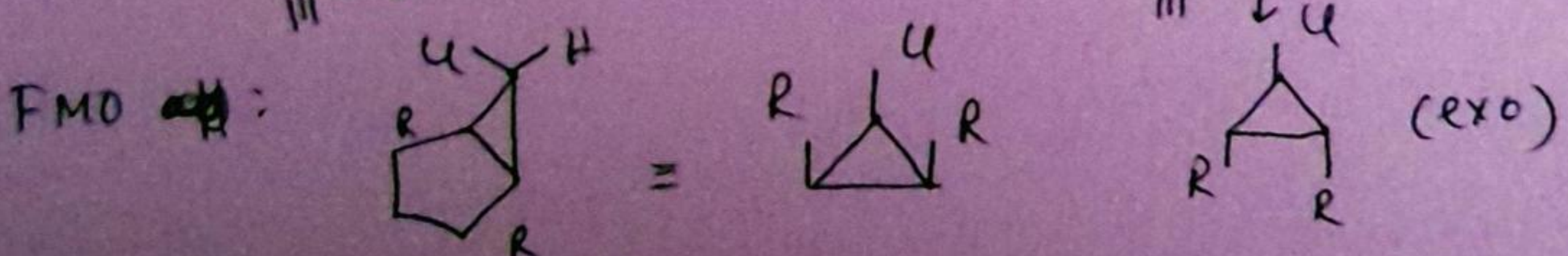
[nucleophilic attack back side of the leaving group]



Problem 1:

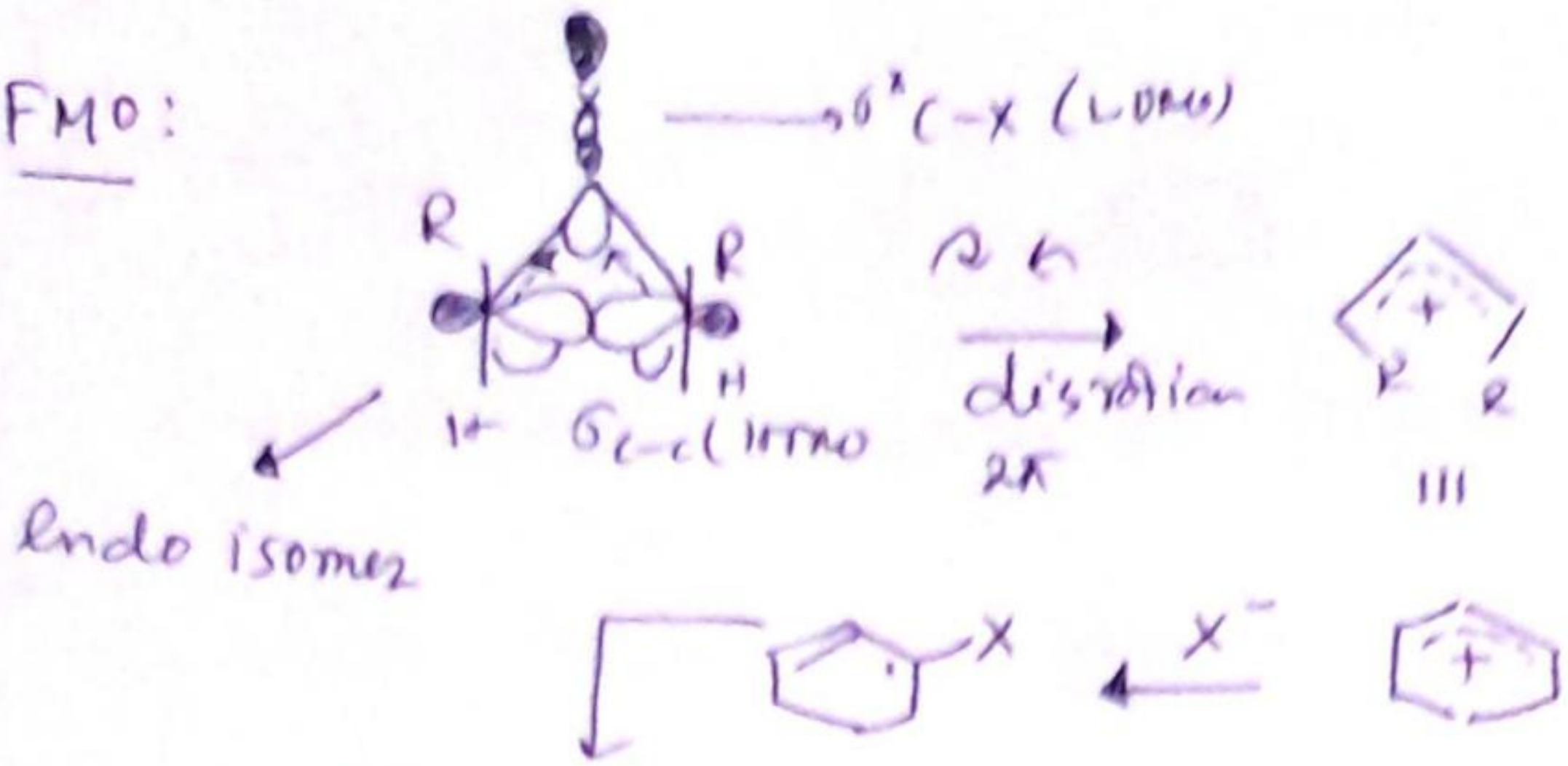


III Endoism



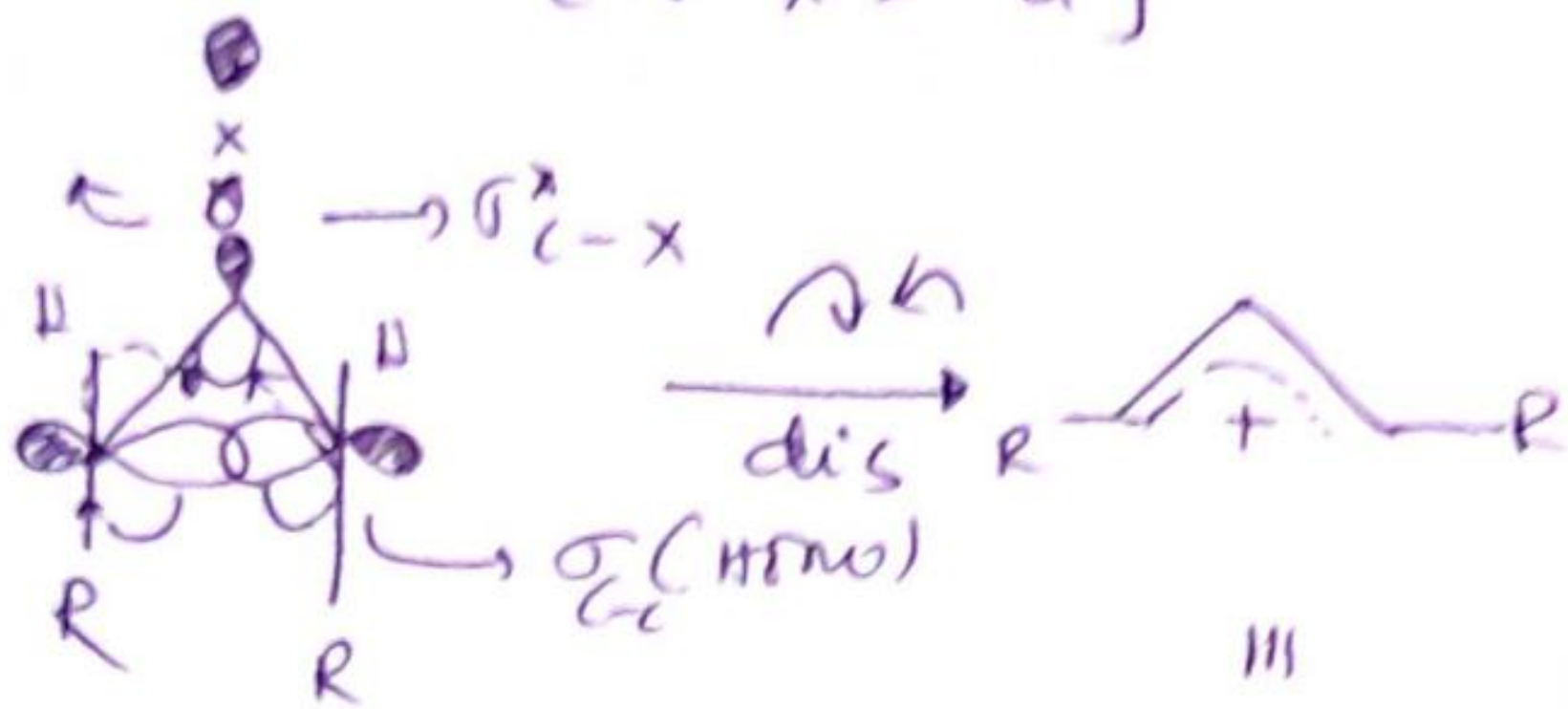
Ratna Jais
5th Sem, Chemistry

FMO:

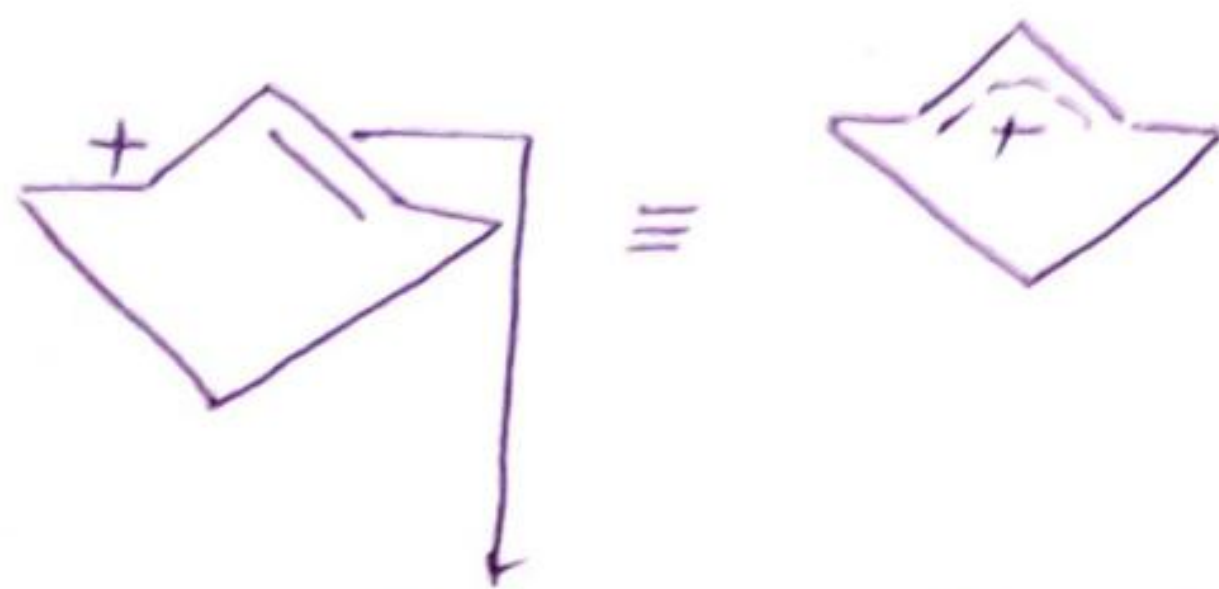


R is replaced
by Ring system

exo double bond (When $X = -H$)



R is replaced by
Ring system



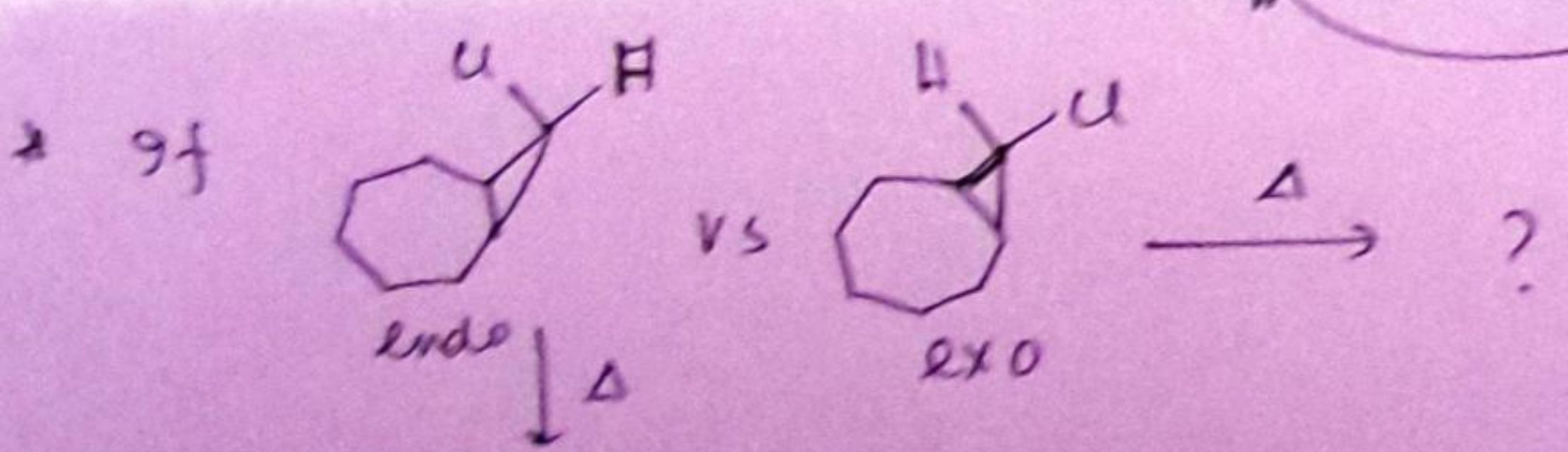
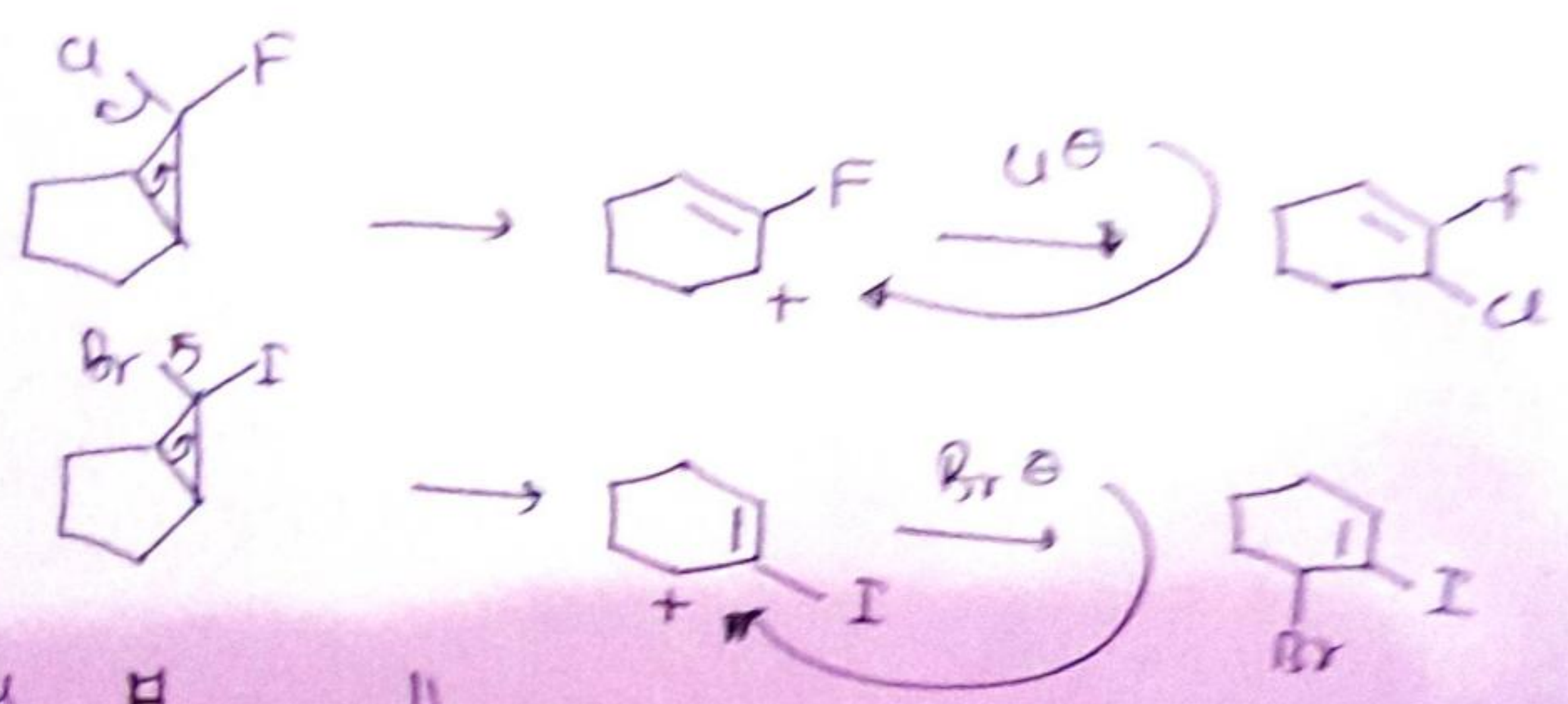
6 membered ring system with ~~trans~~ ^{trans-} geometry
is strain molecule, so exo isomers
do not respond faster under heating conditions

* So endo isomers react faster than exo isomers.



Predict the product at the following rxn.

Here endo leaving group leaves from the system to form 6 membered cis double bond. If exo leaving group leaves from the system then the 6 membered trans double bond will be formed, which is unfavorable.



Here exo isomers react slightly faster than endo isom.

Because 8 membered ring shows cis-trans geometrical isomerism and trans isomer is slightly more stable than cis isomer.

