

ORGANIC NAMED REACTION 1.

10/09/2020

LECTURE -2

By-Dr.Rinky

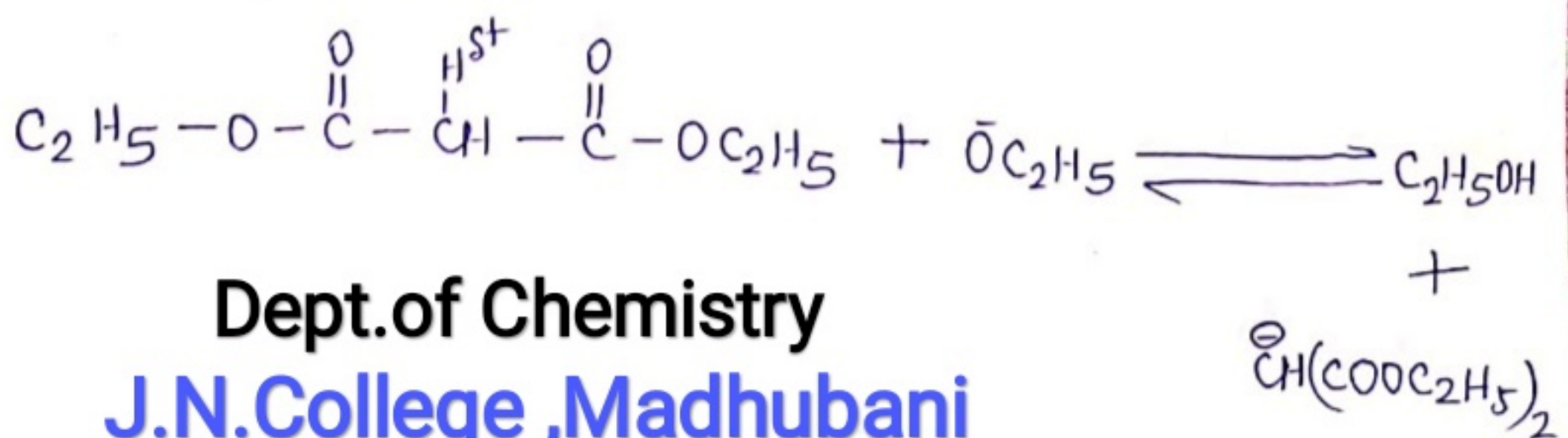
DEGREE-III (HONS.), PAPER-VII

MICHAEL ADDITION REACTION

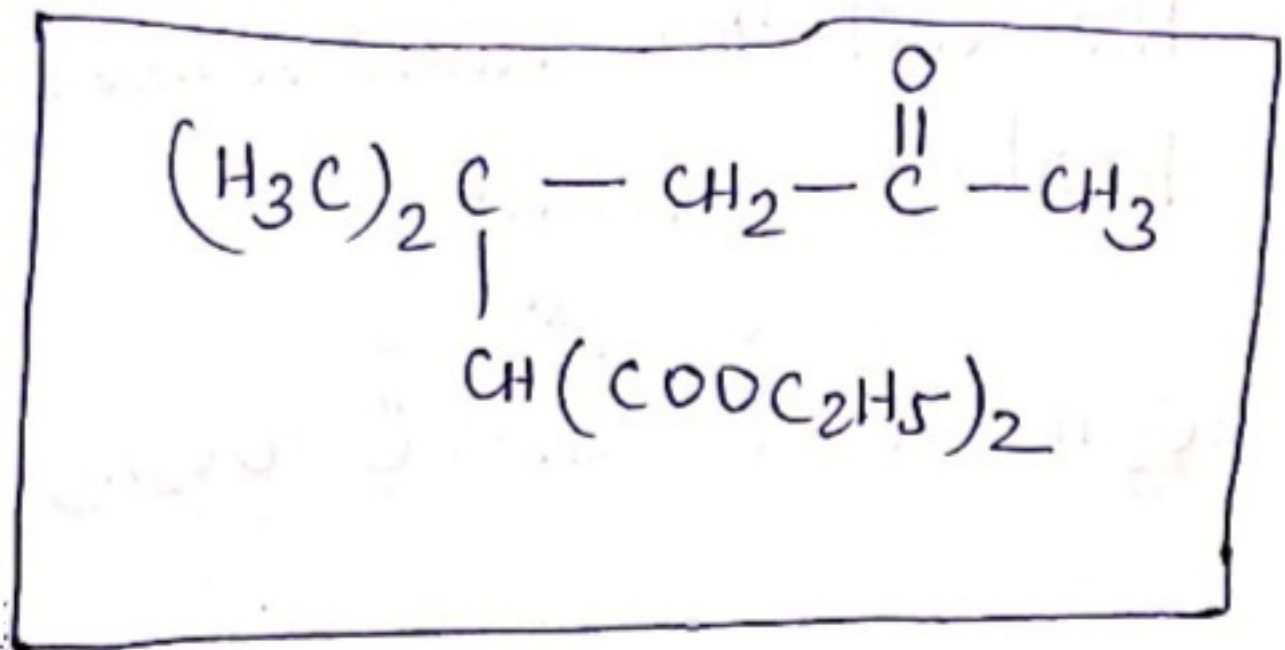
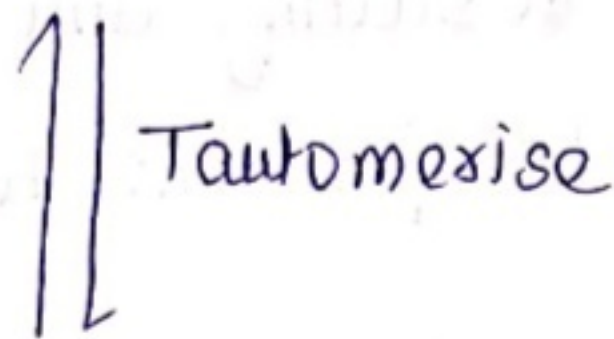
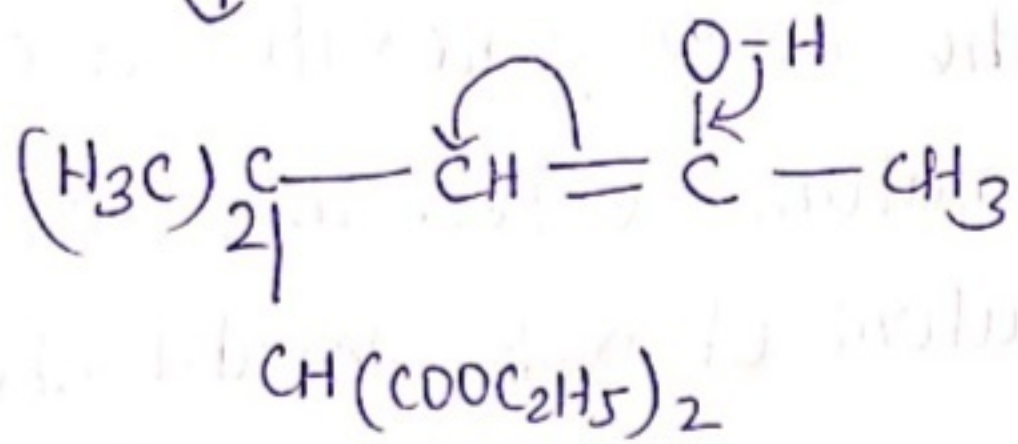
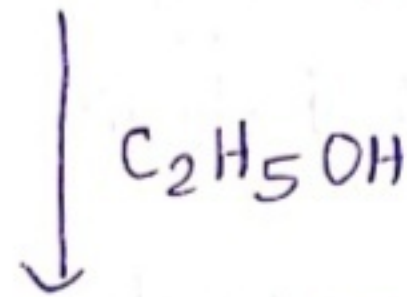
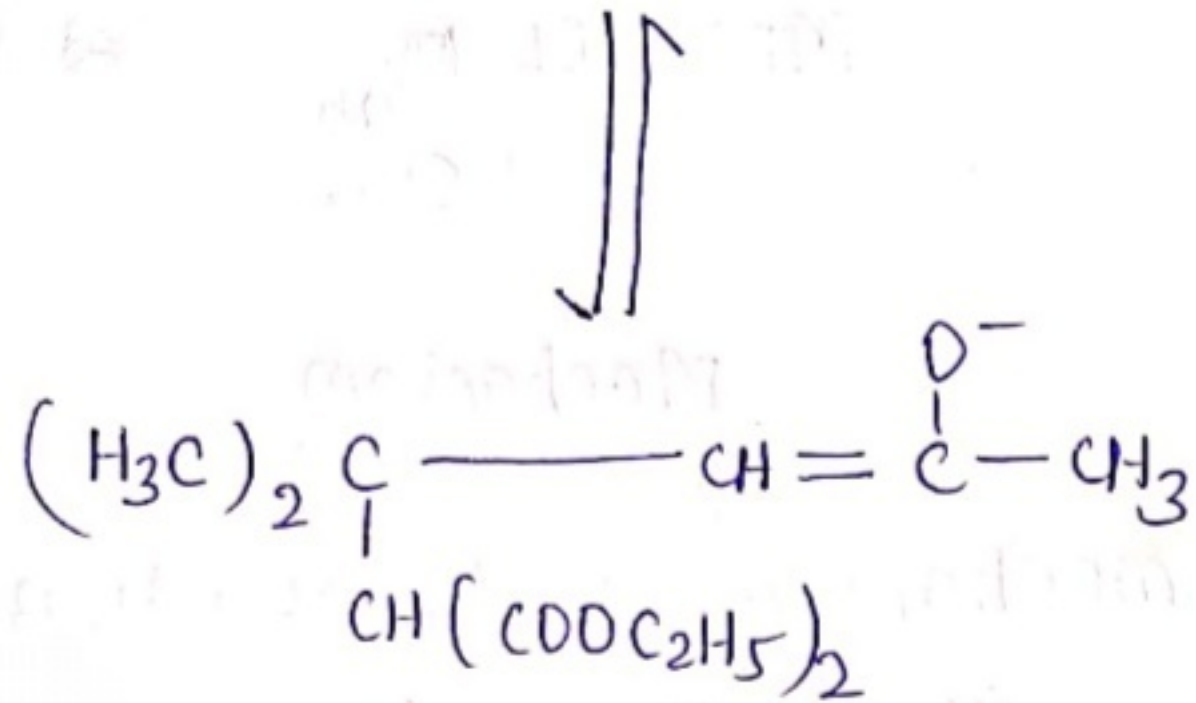
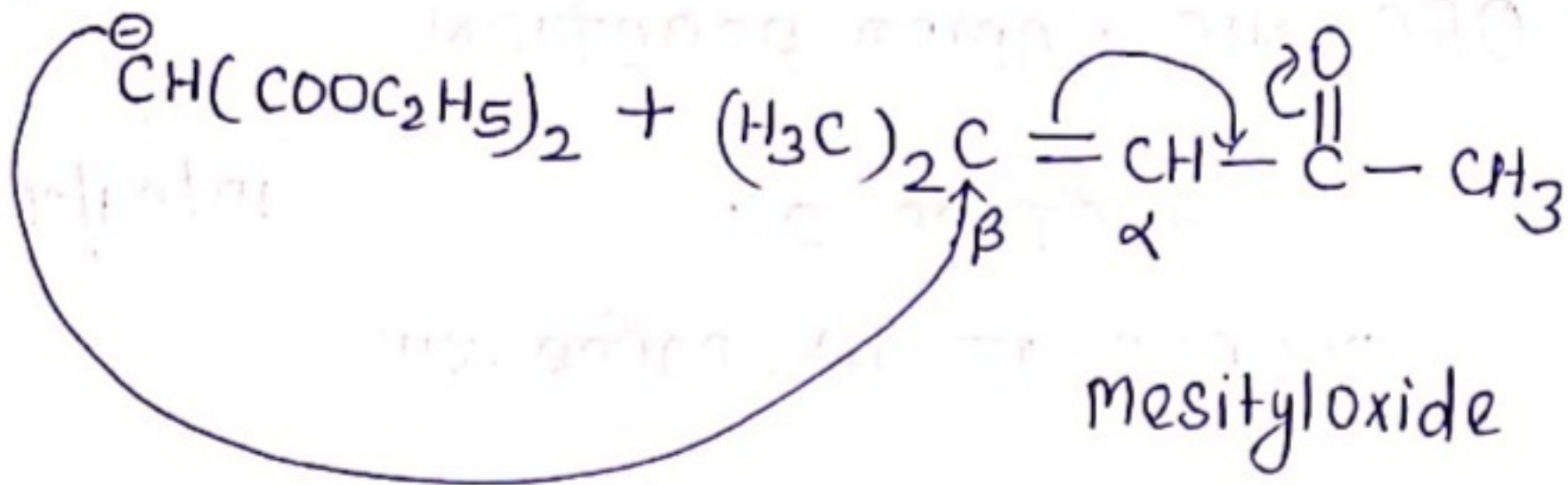
MECHANISM

(Continued..)

- * The mechanism of the reaction using malonic ester and mesityl oxide to give dimedone is represented below.
- * The base generates a carbanion from the donor malonic ester. This carbanion attacks the β -carbon atom of α, β -unsaturated compounds.
- * The resulting anion takes up a proton (H^+) from alcohol present to produce an enol.
- * The enol then tautomerises to the more stable product, ketone.



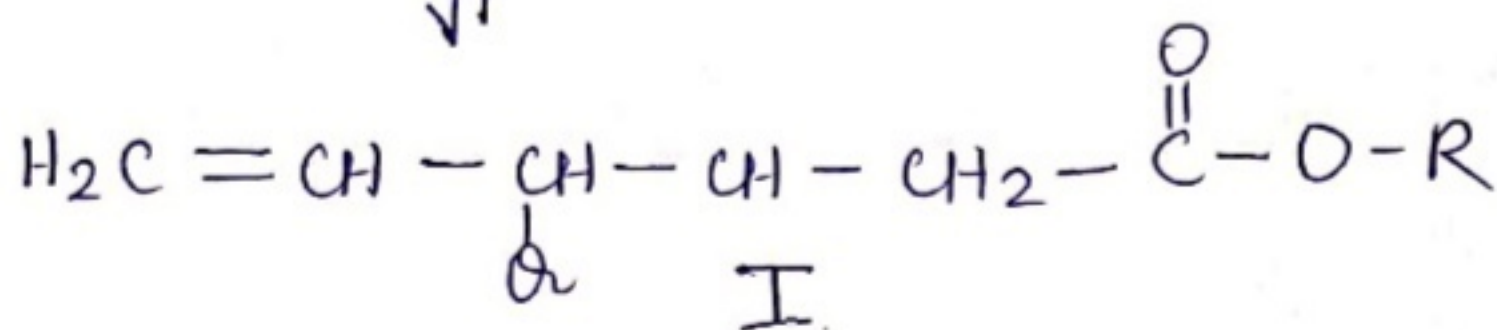
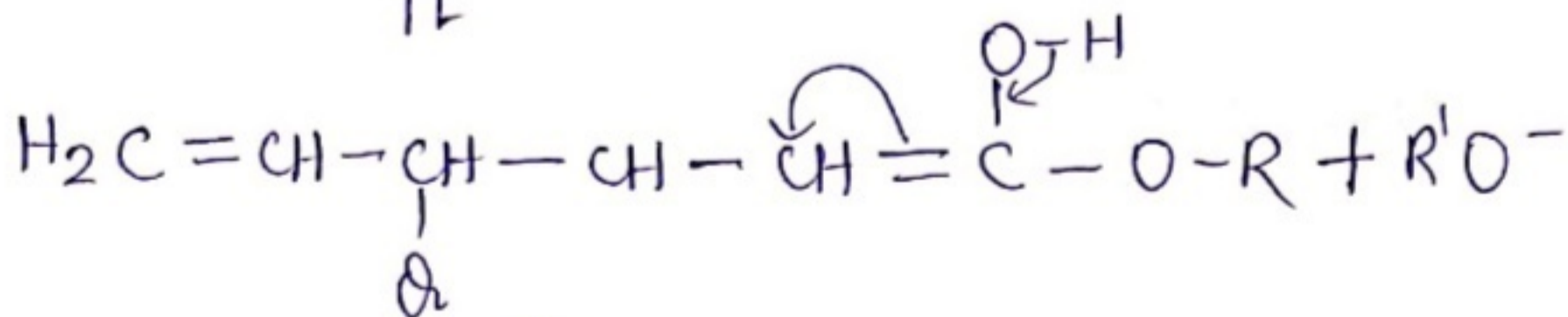
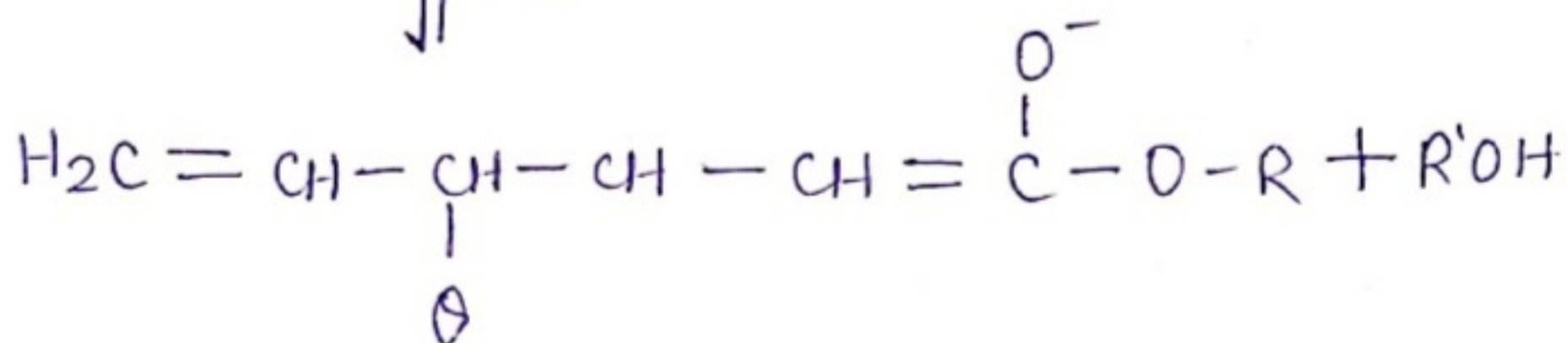
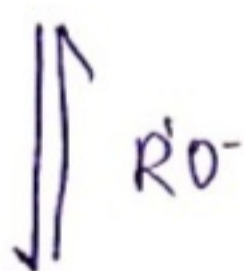
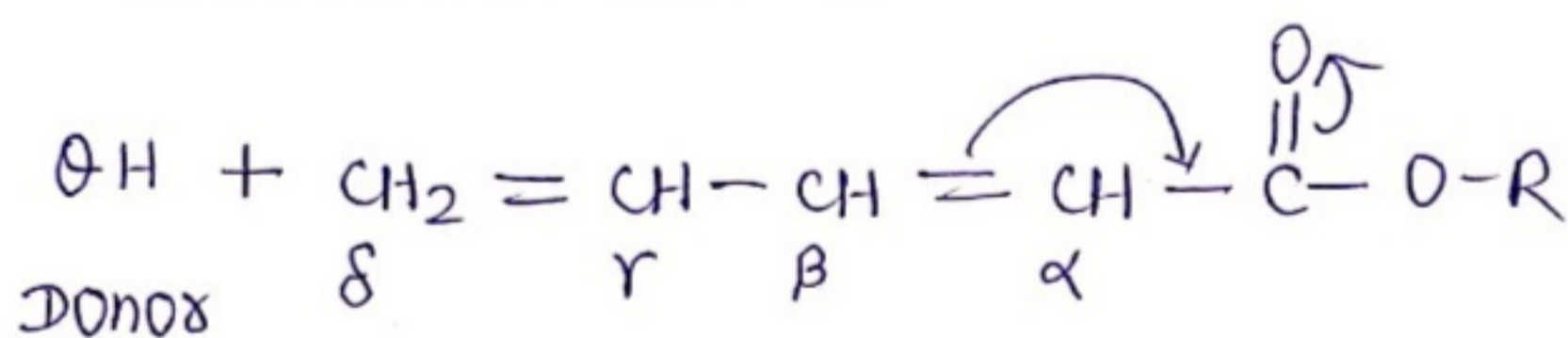
2.



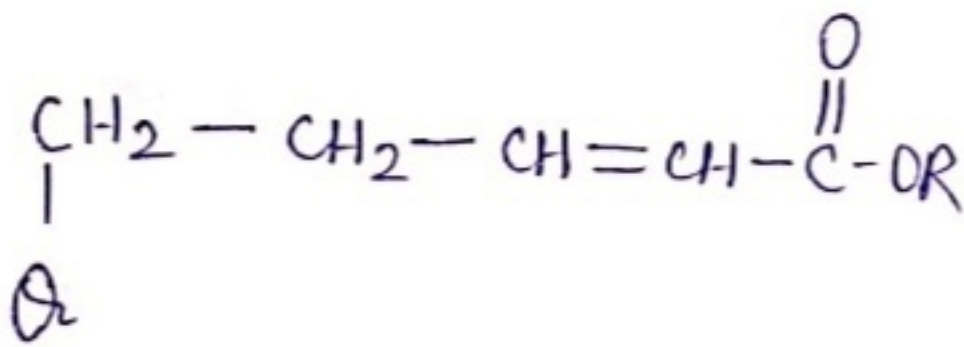
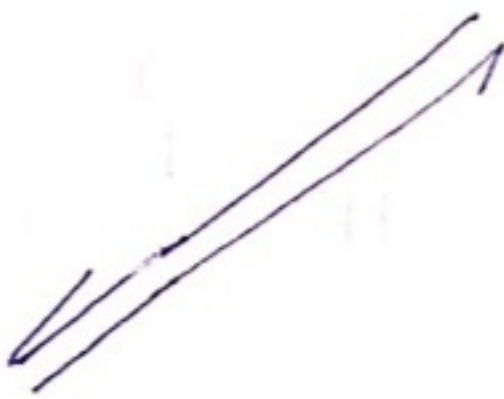
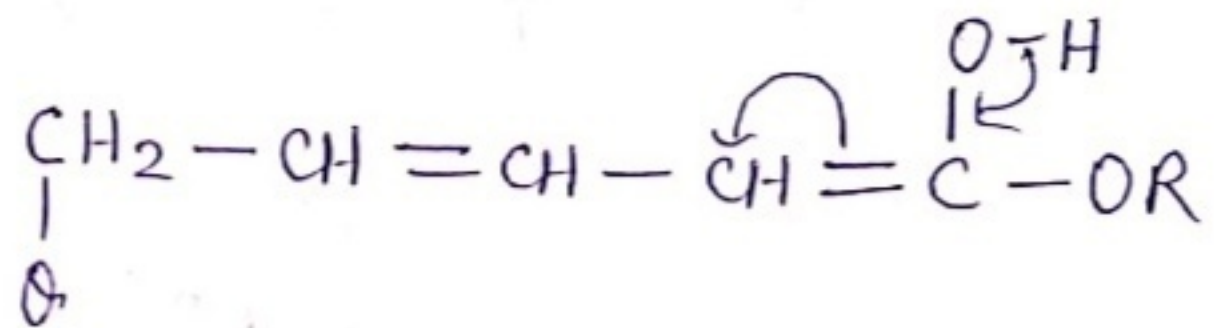
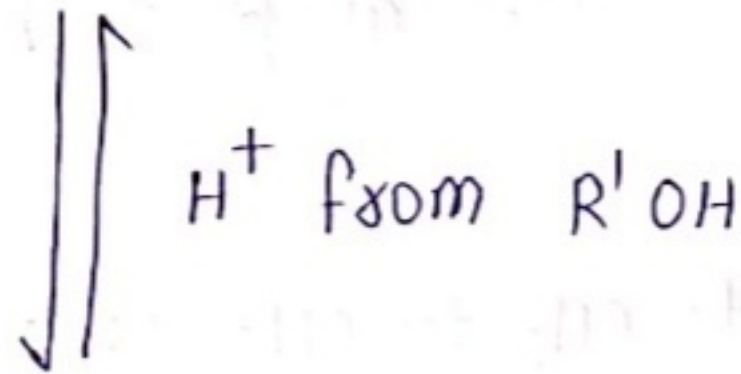
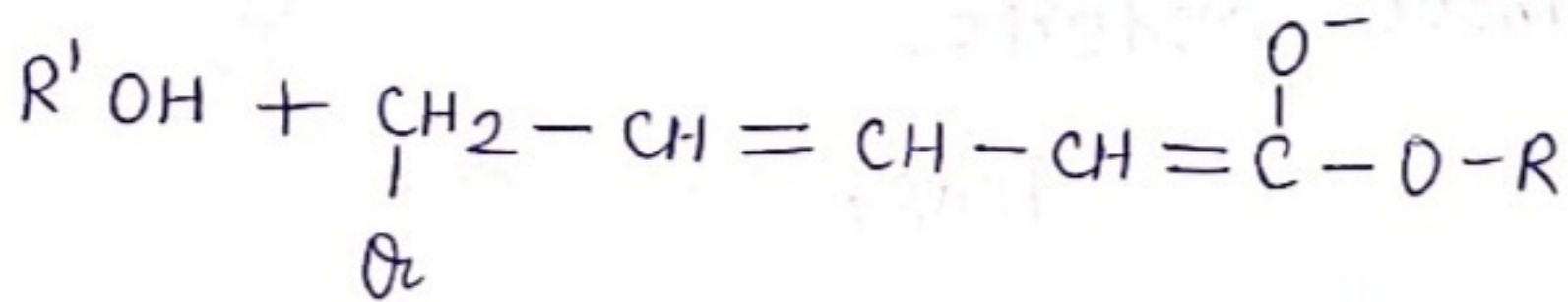
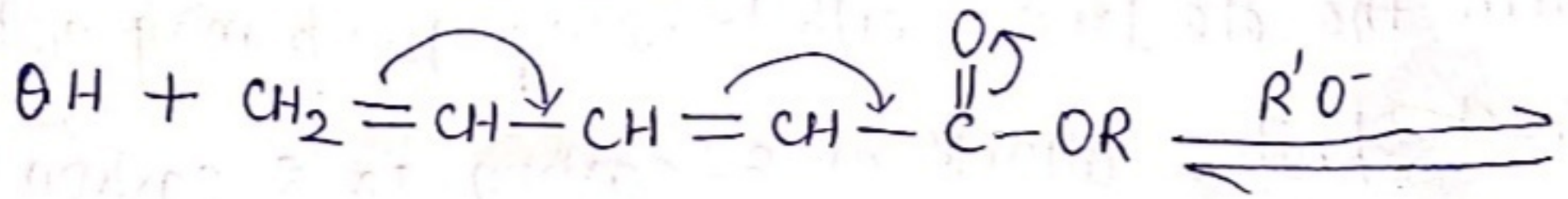
* Compounds with two double bonds in conjugation **3.**
 With the electron-withdrawing group may undergo nucleophilic attack at β -carbon or δ -carbon to give three products.

Thus;

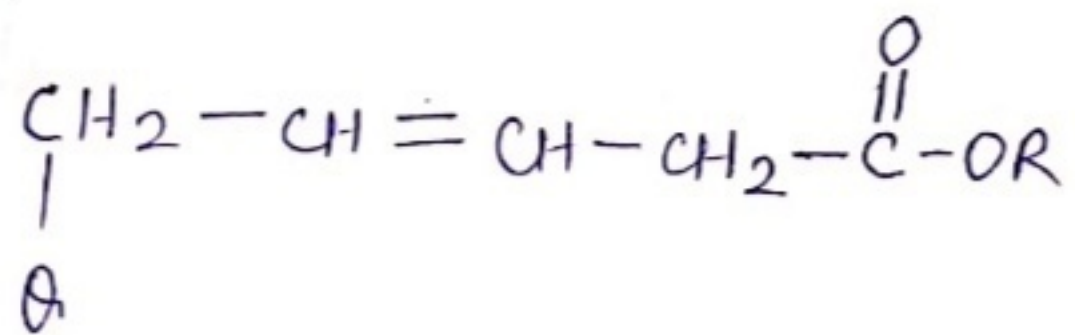
a) On attack at β -carbon



b. on attack at S-carbon



III



II

* Since the double bond is conjugated in (III), it is the most stable of the three products.

Hence, it is predominant product. **To be continued in next lecture**