

REACTION MECHANISM

1.

DEGREE-I (HONS.)

PAPER-II, GROUP-B , 05/04/2021

Topic :- Types of Organic Reactions

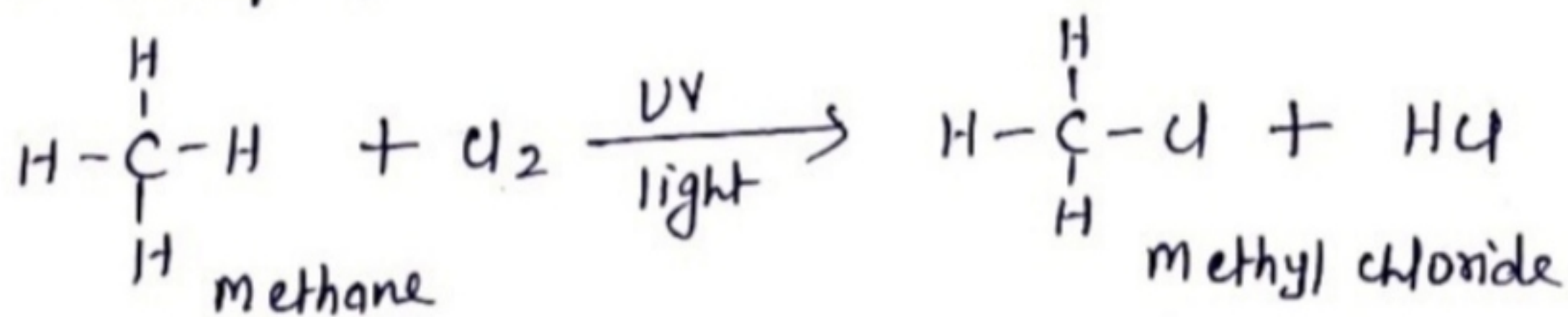
The reaction of organic compounds can be classified into four main types: - - -

1. Substitution Reaction
2. Addition Reaction
3. Elimination Reaction
4. Rearrangement Reaction

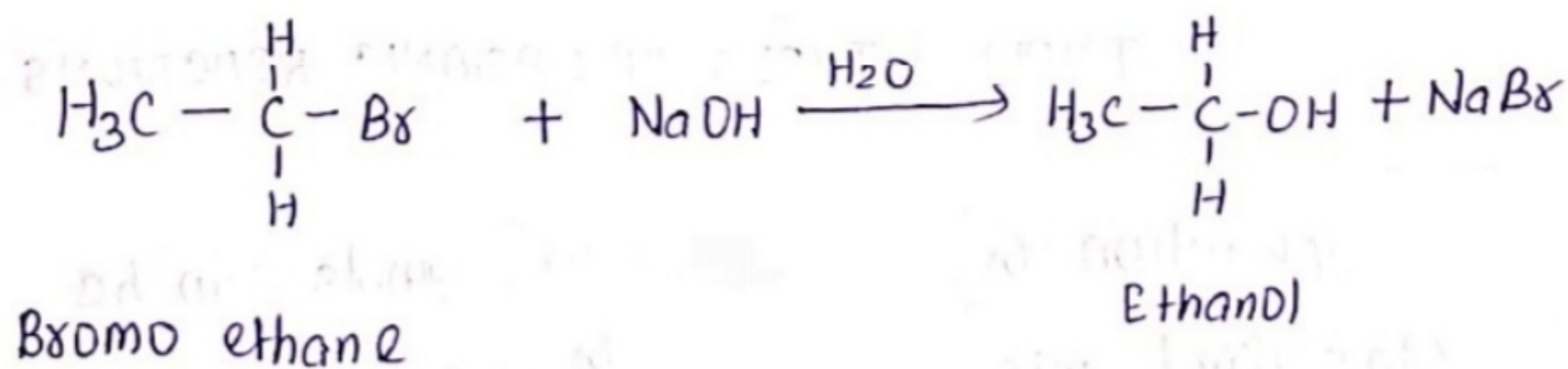
Substitution Reaction

Substitution reactions are those reactions in which an atom or group of atoms directly attached to a carbon in the substrate molecule is replaced by another atom or group of atoms.

For example,



A hydrogen atom of the methane molecule is replaced by a -chloride atom.



In this reaction, the bromine atom of ethyl bromide is substituted by a hydroxyl group.

Addition Reaction

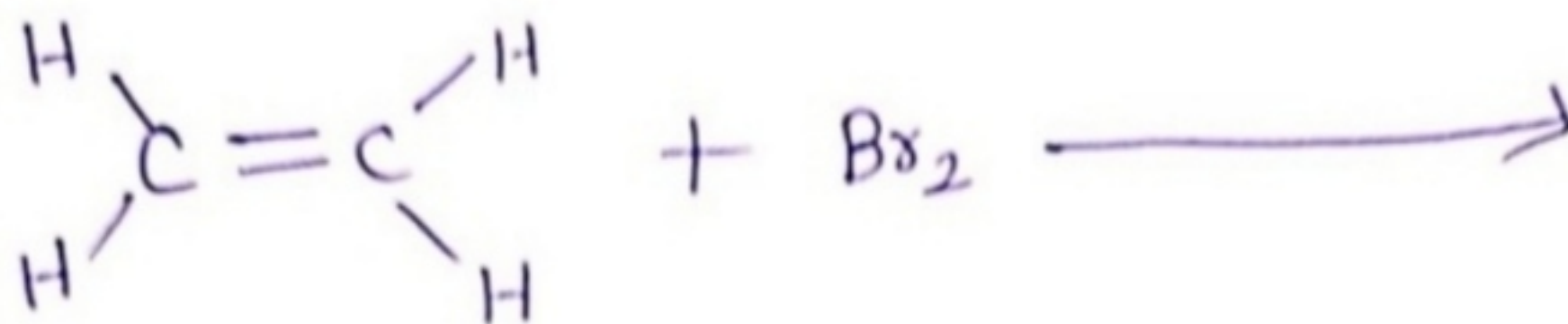
Addition reaction are those in which atoms or groups of atoms are simply added to a double or triple bond without the elimination of any atom or other molecules.

In these reactions, at least one π -bond is lost while two new σ -bonds are formed.

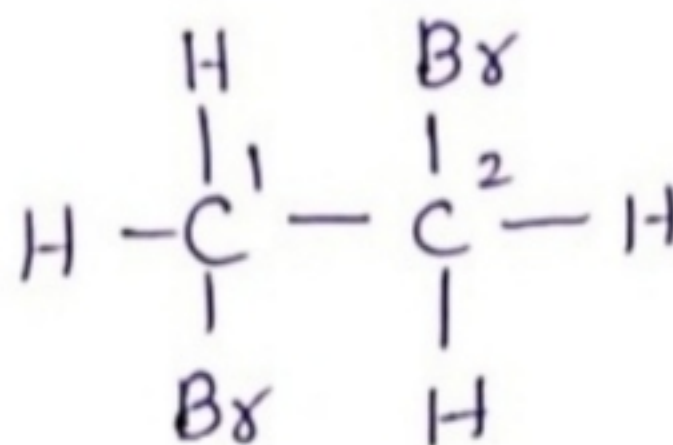
Double bond become saturated and triple bonds are converted into double bonds or may become saturated by further addition.

For example;

3.



ethene



1, 2 - Dibromoethane



Acetaldehyde
cyanohydrin.

**Substitution & Addition Reaction
Completed**