

# GENERAL CONCEPTS OF HYBRIDISATION

DEG-I (S), SESSION 2020-23

CH-1, GR.-C, LECTURE-4, 08/12/2020

## TYPES OF ORGANIC REACTIONS

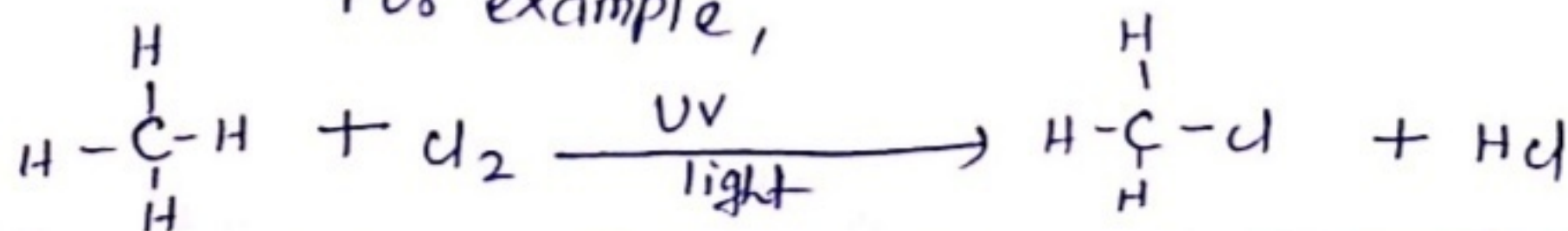
\* The reaction of organic compounds can be classified into four main types:-----

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

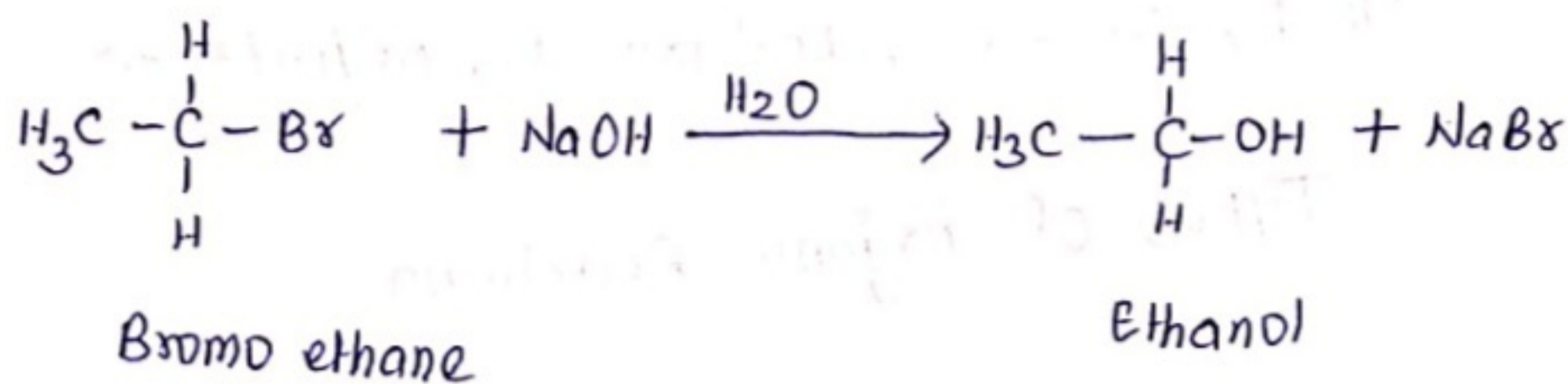
### Substitution Reaction

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 chlorine atom.



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

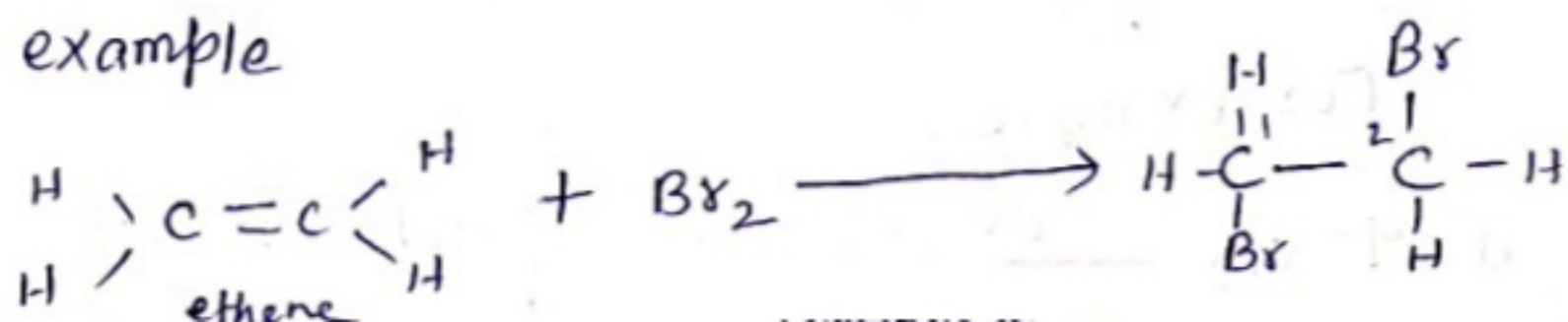
## Addition Reaction

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 another molecules.

In these reactions, at least one  $\pi$ -bond is lost while two new  $\sigma$ -bonds are formed.

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

For example



contd.