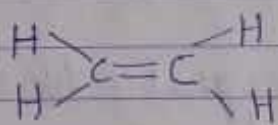
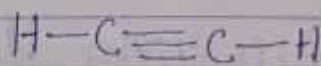


2 unsaturated Hydrocarbon  $\rightarrow$  A hydrocarbon in which the two carbon atoms are connected by a double bond or a triple bond is called an unsaturated hydrocarbon. Ethene ( $\text{H}_2\text{C}=\text{CH}_2$ ) and ethyne ( $\text{HC}\equiv\text{CH}$ ) are two important unsaturated hydrocarbons, because ethene contains a double bond and ethyne contains a triple bond between two carbon atoms.



Ethene



Ethyne

A double bond is formed by the sharing of two pairs of electrons between the two carbon atoms whereas a triple bond is formed by the sharing of three electron pairs between two carbon atoms. The unsaturated hydrocarbon

(ii) Alkynes:  $\rightarrow$  An unsaturated hydrocarbon in which the two carbon atoms are connected by a triple bond is called an alkyne.

The general formula of alkynes is  $C_nH_{2n-2}$  where  $n$  is the number of carbon atom in one molecule of the alkyne.

(i) If an alkyne has 2 carbon atoms in its molecule then  $n=2$  and its molecular formula will be  $C_2H_{2 \times 2 - 2}$  or  $C_2H_2$

(ii) If an alkyne has 3 carbon atoms in its molecule then  $n=3$  and its molecular formula will be  $C_3H_{2 \times 3 - 2}$  or  $C_3H_4$

are obtained mostly from petroleum by a process called cracking. Unsaturated hydrocarbons are of two types (i) those containing Carbon-Carbon double bonds (alkenes) and (ii) those containing Carbon-Carbon triple bonds (alkynes)

1 Alkenes:  $\rightarrow$  An unsaturated hydrocarbon in which the two Carbon atoms are connected by a double bond is called an alkene.

The general formula of an alkene is  $C_nH_{2n}$  where  $n$  is the number of Carbon atoms in its one molecule.