- Nomenclature of Organic Compounds:-

There are two system or methods are used for nomenclature of organic compounds -

1. Common name or trivial name
2. IUPAC system of nomenclature

→ Common name - In early days of organic chemistry, each new compounds was given an individual name. Such a name was based on the source, some property or some other trivial reason. for eg- formic acid (HCOOH) was so named as it was obtained by distillation of red ants (latin, formica- ant). A group of sedative was named barbiturates after the name of the woman barbara. The structure of many of these compounds was not known at the time.
An ordinary name given to a compound without reference to it's structure is called a common name or trivial name.
The common names are like nicknames.

eg- The first four members of ALKANE series are know by their common name -
Methane
Ethane
Propane
Butane

2. IUPAC system - With the rapid growth of organic chemistry, the number of compound increased fantastically (now about 6 million). it became impossible to given common name to such a large number of compound.

In 1957, the International union of pure and applied chemistry evolved a scheme for giving systemic name to organic compound on the basis of structure. This is known as IUPAC System. This system has set rules for naming organic molecules from their structure.

The systemic name of a compound derived from its structural formula by applying IUPAC rules, is offered to as its IUPAC name.

One organic compound can have only one IUPAC name. This nomenclature system is superior to a common name because it is give the information about the structure of the molecule. With help of IUPAC nomenclature of a compound we can write its structural formula. The common name of the first few members of a homologous series have been retained in the IUPAC system.

{Common name identify compound / IUPAC represent structure}

* Functional Group - A functional group is an atom or group of atoms in a molecule that gives the molecule its characteristic chemical properties.

Double, triple bond and also -Cl, -Br, -OH, NH_2 groups are functional group. Hydrocarbon portion is linked with functional group. Functional group is the action group.

[$CH_3CH_2CH_2CH_2$] - OH : functional group

Hydrocarbon portion

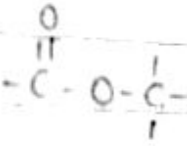
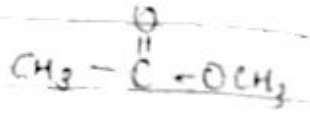
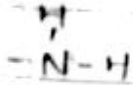
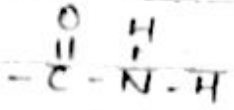
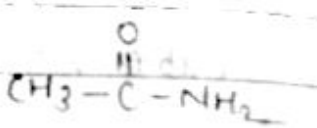
Hydrocarbon portion

[R] - OH - functional group

[R. represent hydrocarbon portion]

Functional Group of Organic Compounds

Class	Functional Group	Example
Alkene	$>C=C<$	$CH_2=CH_2$
Alkyne	$-C\equiv C-$	$CH\equiv CH$
Alcohol	$-OH$	CH_3CH_2-OH
Ether	$-\overset{\vert}{\underset{\vert}{C}}-O-\overset{\vert}{\underset{\vert}{C}}-$	CH_3-O-CH_3
Aldehyde	$-\overset{O}{\overset{\Vert}{C}}-H$	$CH_3-\overset{O}{\overset{\Vert}{C}}-H$
Ketone	$-\overset{O}{\overset{\Vert}{C}}-$	$CH_3-\overset{O}{\overset{\Vert}{C}}-CH_3$
Carboxylic acid	$-\overset{O}{\overset{\Vert}{C}}-OH$	$CH_3-\overset{O}{\overset{\Vert}{C}}-OH$

Ester		
Amine		CH_3-NH_2
Amide		
Halide	$-X$ $[X = Cl, F, Br, I]$	CH_3CH_2-Br

Functional group serve nomenclature (naming), classify organic compound in to asses (families), and also show similar chemical property in the same class.

* Homologous Series- -A homologous series is a series of compounds in which adjacent members differ by a CH_2 unit.
- The individual members are called Homologs.
For example,
- the homologous series of alcohol can be represent as

General formula $C_nH_{2n+1}OH$

n	R	Formula
1.	CH_3-	CH_3OH
2.	CH_3CH_2-	CH_3CH_2OH
3.	$CH_3CH_2CH_2-$	$CH_3CH_2CH_2OH$