

TENDER HEART HIGH SCHOOL, SEC-33B, CHD.

CHAPTER- 12

SUBJECT - CHEMISTRY

CLASS- X

TEACHER- ANAMIKA

11.11.24

Types of Organic Compound:-

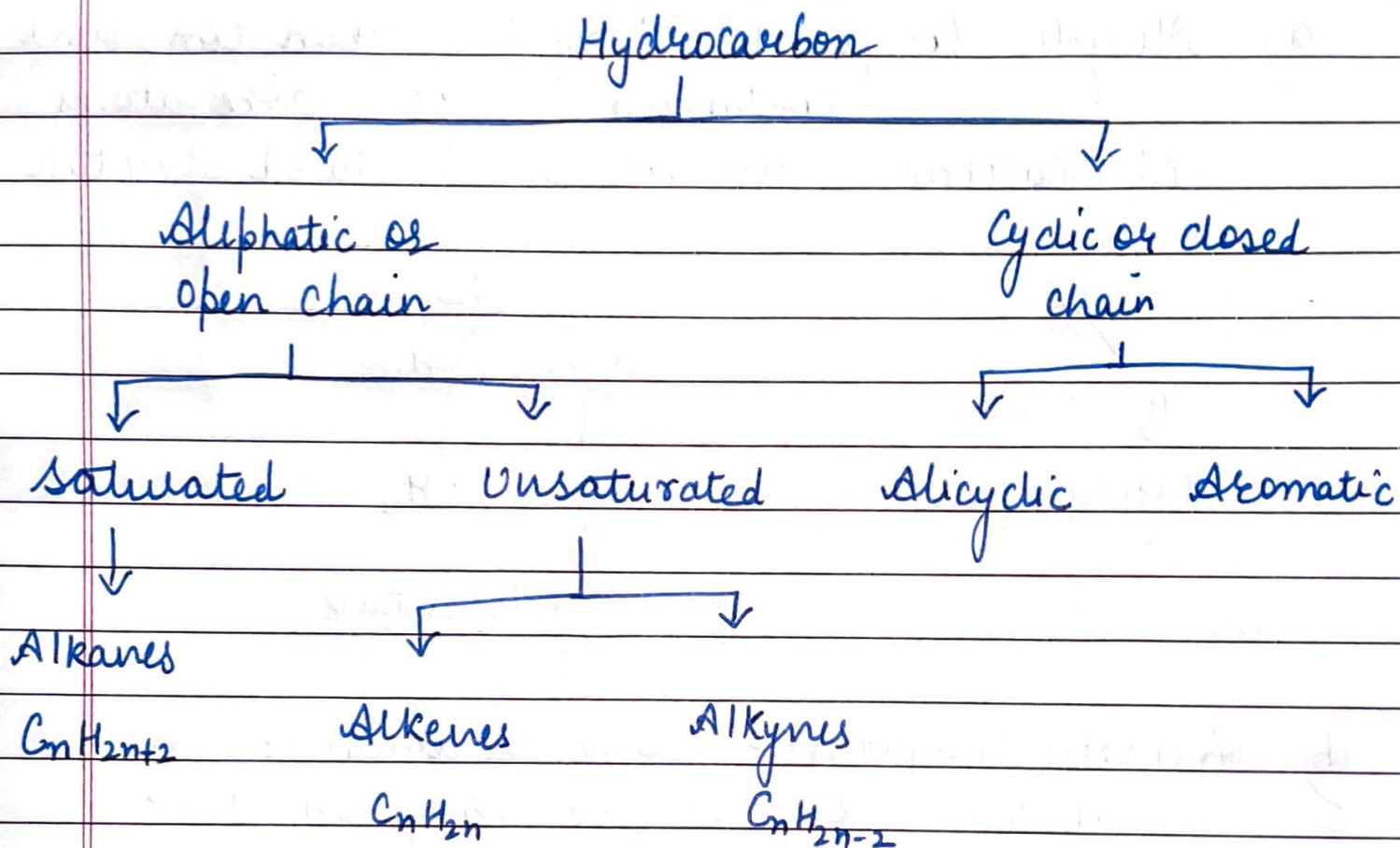
Organic Compound have been classified as hydrocarbon whereas their derivative are classified as alcohol, aldehyde, carboxylic acid, ethers, halides etc.

Type of Compound	Identified by presence	Example
1. Hydrocarbon		
a) alkane	$-C-C-$	Ethane $HC-CH_3$
b) alkene	$-C=C-$	Ethene $HC=CH_2$
c) alkyne	$-C\equiv C-$	Ethyne $HC\equiv CH$
2. Alcohol	$-OH$ group	Methanol CH_3OH
3. Aldehyde	$-CHO$ group	Ethanal CH_3CHO
4. Ketone	>C=O	propanone $HC-\overset{\overset{O}{\parallel}}{C}-CH_3$
5. Carboxylic acid	$-COOH$ group	Ethanoic acid CH_3COOH
6. Ether	$-C-O-C-$	Dimethyl ether $HC-O-CH_3$
7. Halide	$-X (F, Cl, Br)$	Chloroethane CH_3CH_2Cl

Hydrocarbon:-

These are Compounds that are made up of only carbon and hydrogen.

Classification of hydrocarbon:-



Organic Chemistry may be defined as Chemistry of hydrocarbon & their derivative

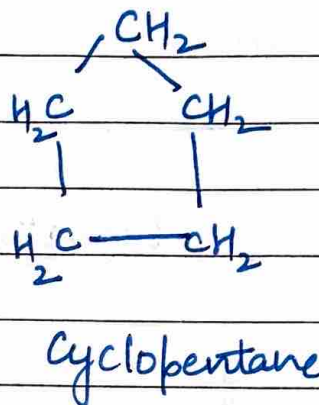
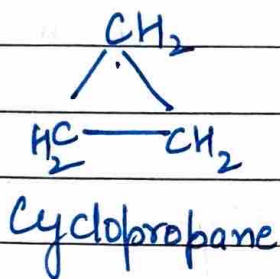
Saturated Compounds:-

The simplest open chain hydrocarbon is alkane. It is represented by C_nH_{2n+2} where n is natural number.

Unsaturated Compounds:- These have double or triple covalent bond b/w two adjacent carbon atoms are called Unsaturated Compound.

Cyclic or closed chain or ring chain

a) Alicyclic Compound:- Ringed carbon compound containing 3 or more atoms of carbon arranged in closed structure



b) Aromatic Compound:- Some hydrocarbon contain at least one benzene ring in their molecule.



benzene

Functional group:- It is defined as an atom or group of atoms joined in a specific manner which is responsible for characteristic chemical property.

Characteristic of functional group:-

1. Chemical properties of same functional group are same.
2. There exist a homologous series of compounds containing a particular type of functional group. for e.g. CH_3OH .

Homologous series:- It is a group of organic compounds having similar structure and similar chemical properties in which successive compound differ by CH_2 group.

Characteristics of a homologous series:-

1. All members share general formula.
2. Each member differs from preceding one by addition of CH_2 group.
3. The physical properties change gradually.
4. They have similar chemical properties.
5. They have same general method of preparation.