

Organic chemistry (basics)

>organic chemistry-	'chemistry of specific carbon compound'
>nature of carbon atom	- tetra valency, catenation, isomerism
*[catenation	tendency of an element to form chains of identical atoms]
*[isomerism	-same molecular formula but different structural formula]
*Hydrocarbons	-organic compounds containing 'C' and 'H' atoms only
*Nomenclature	-system of assignment of names to organic compounds
*Homologous series	-series of organic compounds where the successive members follow a regular structural pattern differing by a 'CH ₂ ' group

organic v/s inorganic

ORGANIC	INORGANIC
>covalent	>electrovalent (ionic)
>low melting/boiling points	>high melting/boiling points
>insoluble in water/ soluble in organic solvents	>soluble in water/ insoluble in organic solvents
>non-conductors of electricity	>good conductors of electricity
>combustible	>non-combustible
>volatile	>non-volatile
>exhibits catenation and isomerism	>doesn't exhibit catenation and isomerism

CLASSIFICATION

<i>ALIPHATIC</i> (hydrocarbons)- open chains/straight chain	<i>ATROMATIC</i> (cyclic)- closed chains
>saturated (cannot take up more alkanes)	>homocyclic (only carbon and hydrogen atoms)
>unsaturated (double bond/triple bond-can take up more alkanes)	>heterocyclic (C,O,N,H, and S atoms)

NOMENCLATURE

STEM	number of carbons
meth-	1
eth-	2
prop-	3
but-	4
penta-	5
hexa-	6
hepta-	7
octa-	8
nona-	9
deca-	10
stem/suffix	.
-ane	Alkanes (single bonds)



NOMENCLATURE (cont)

-ene	Alkenes (double bonds)
-yne	Alkynes (triple bonds)

ISOMERISM

<i>chain arrangment</i>	<i>position of functional groups</i>	<i>geometrical arrangement of atoms around double bond</i>
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