



STD 10 – FIRST BELL 2.0– CHEMISTRY – CLASS – 38

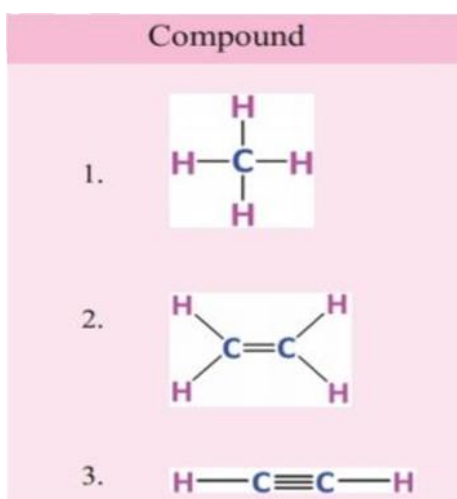
CHAPTER- 6

NOMENCLATURE OF ORGANIC COMPOUNDS AND ISOMERISM

- Organic chemistry is the branch of chemistry that deals with the carbon compounds.

Characteristics of Carbon compounds:

- The valency of carbon is four.
- Ability of catenation is high
- Single, double and triple bonds are possible between carbon atoms.



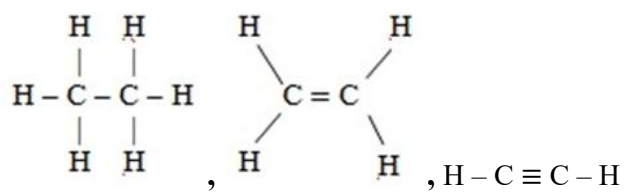
- Single bond
 - Double bond
 - Triple bond.
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Molecular formula of organic Compounds

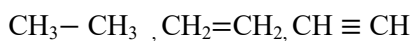
Structure of the Compound	Molecular formula
$ \begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H} - \text{C} - \text{C} - \text{H} \\ \quad \\ \text{H} \quad \text{H} \end{array} $	C_2H_6
$ \begin{array}{c} \text{H} \quad \text{H} \\ \diagdown \quad / \\ \text{C} = \text{C} \\ / \quad \diagdown \\ \text{H} \quad \text{H} \end{array} $	C_2H_4
$\text{H} - \text{C} \equiv \text{C} - \text{H}$	C_2H_2

- Hydrocarbons are compounds containing only carbon and hydrogen.
- They are hydrocarbons.
- There are compounds having single bond, double bond and triple bond between the carbon atoms.

Condensed formula



The structure of these compounds can also be written in condensed forms.



Complete the Table

Number of carbon	Structure of the compound	Condensed formula	Molecular formula
1	$ \begin{array}{c} \text{H} \\ \\ \text{H} - \text{C} - \text{H} \\ \\ \text{H} \end{array} $	CH_4	CH_4
2	$ \begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H} - \text{C} - \text{C} - \text{H} \\ \quad \\ \text{H} \quad \text{H} \end{array} $	$\text{CH}_3 - \text{CH}_3$	C_2H_6
3	$ \begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ \quad \quad \\ \text{H} - \text{C} - \text{C} - \text{C} - \text{H} \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H} \end{array} $	$\text{CH}_3 - \text{CH}_2 - \text{CH}_3$	C_3H_8
4	$\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{CH}_3$

5	C ₅ H ₁₂
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Answer

Number of carbon	Structure of the compound	Condensed formula	Molecular formula
1	<pre> H H-C-H H </pre>	CH ₄	CH ₄
2	<pre> H H H-C-C-H H H </pre>	CH ₃ -CH ₃	C ₂ H ₆
3	<pre> H H H H-C-C-C-H H H H </pre>	CH ₃ -CH ₂ -CH ₃	C ₃ H ₈
4	<pre> H H H H H-C-C-C-C-H H H H H </pre>	CH ₃ -CH ₂ -CH ₂ -CH ₃	C ₄ H ₁₀
5	<pre> H H H H H H-C-C-C-C-C-H H H H H H </pre>	CH ₃ -CH ₂ -CH ₂ -CH ₂ -CH ₃	C ₅ H ₁₂

HOME WORK

- What are the characteristics of Carbon compounds?

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