

Class – X
Carbon & its Compounds
Assignment

1. Name the functional group present in propanone (acetone) and hexanal.
2. (a) What is a functional group in a carbon compound? Identify the functional group present in CH_3COOH and $\text{C}_2\text{H}_5\text{OH}$.
3. Write the structural formula of two isomers of n- pentane C_5H_{12} .
4. Name the properties of carbon that makes it versatile in nature.
5. (a) Why does carbon form compounds mainly by covalent bonding?
(b) Why do covalent compounds have low melting and boiling points?
6. What is a homologous series of compounds? List any two characteristics of a homologous series. Write two examples of homologous series.
7. (a) Why does carbon form compounds mainly by covalent bonding?
(b) List any two reasons for carbon forming a very large number of compounds.
8. Draw the electron dot structure of the following compounds:-
(i) Cyclopentane (ii) Butyne (iii) Ethene (iv) Sulphur molecule
9. How would you name the following compounds?
 - (i) $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{Cl}$
 - (ii)
$$\begin{array}{c} \text{H} \\ | \\ \text{H} - \text{C} = \text{O} \\ \text{H} \ \text{H} \ \text{H} \ \text{H} \ \text{H} \end{array}$$
 - (iii)
$$\begin{array}{cccccccc} & | & | & | & | & | & & \\ \text{H} - & \text{C} & - \text{C} & - \text{C} & - \text{C} & - \text{C} & \equiv \text{C} & - \text{H} \\ & | & | & | & | & | & & \\ & \text{H} & \text{H} & \text{H} & \text{H} & \text{H} & & \end{array}$$
10. Draw the structures for the following compounds:-
 - (i) Propanoic acid
 - (ii) Hexanone
 - (iii) Fluoropentane
 - (iv) Benzene
 - (v) Butene

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