

## CBSE TEST PAPER 02

### CLASS XI CHEMISTRY (Organic Chemistry Some Basic Principle and Techniques)

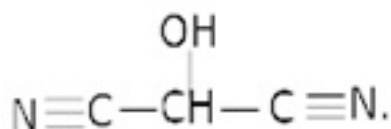
#### General Instruction:

- All questions are compulsory.
- Marks are given alongwith their questions.

1. How are organic compounds classified? [1]
2. What is a functional group? [2]
3. Define homologous series? [1]
4. Give two examples of aliphatic compounds. [2]
5. Write an example of non – benzenoid compound. [1]
6. Write an example of alicyclic compound. [2]
7. Name the chain isomers of  $C_5H_{12}$  which has a tertiary hydrogen atom. [1]
8. For each of the following compounds write a condensed formula and also their bondline formula. [2]



(b)



---

## CBSE TEST PAPER 02

### CLASS XI CHEMISTRY (Organic Chemistry Some Basic Principle and Techniques)

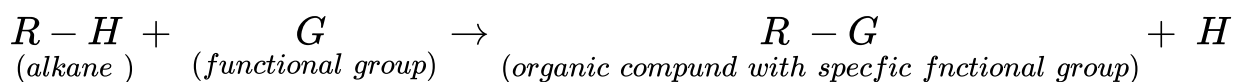
#### [ANSWERS]

---

Ans 1. on the basis of nature organic compounds can be classified into following categories.

(i) Acyclic or open chain compounds (ii) Alicyclic or closed chain or ring compounds. (iii) Aromatic compounds.

Ans 2. It may be defined as an atom or group of atoms within the molecule which is responsible for the characteristic chemical properties of the organic compounds.



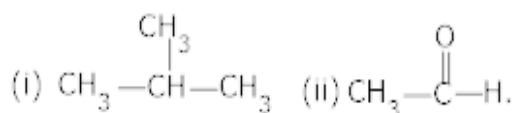
where G may be : hydroxyl group (- OH, alcohol), aldehyde group (- CHO), carboxylic acid group (-COOH) etc.

Ans 3. A series of similarly constituted compounds in which the members present have same functional group, same chemical properties and show a gradation in physical properties and any two successive members in a particular series differ in their molecular formula by  $-\text{CH}_2$  group or by **14** mass units.

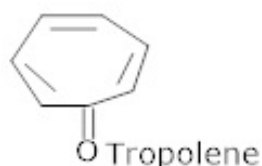
e.g. the general formula of alcohol family is  $\text{C}_n\text{H}_{2n}\text{-OH}$  ( $n= 1,2,3,4\dots$ ) a few members of family are methyl alcohol ( $\text{CH}_3\text{OH}$ ), ethyl alcohol ( $\text{C}_2\text{H}_5\text{OH}$ ) and propyl alcohol ( $\text{C}_3\text{H}_7\text{OH}$ ).

Ans 4. organic compounds in which all carbon atoms are linked to one another to form open chains are called as aliphatic compounds. these may be saturated or unsaturated.

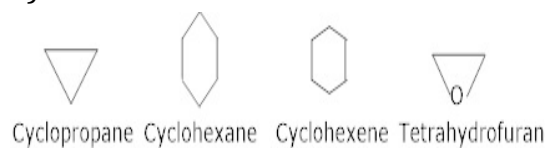
for example. 2-methyl propane and ethanal.



Ans 5. non-benzoid compounds are cycle compounds having no benzene ring but extra stable compounds. e.g. tropolene, shown below.



Ans 6. Alicyclic compounds: carbocyclic compounds which resembles aliphatic compounds in their properties are called as alicyclic compounds. for example: cyclopropane, cyclohexane, cyclohexene and THF etc.



Ans 7. out of possible chain isomers of compound with formula  $C_5H_{12}$  give isomer having tertiary carbon is 2 – methyl butane,  $(CH_3)_2C^*H-CH_2-CH_3$ .

Ans 8. Condensed formula of given compounds are represented below:



Bond line formula of given compounds are given below.

