

CHEMISTRY STUDY MATERIALS FOR CLASS 10

(NCERT Based: Questions with Answers)

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CARBON AND ITS COMPOUNDS

Very Short Answer Type Questions (1 Mark)

1. Give the names of the following functional groups:

(i) —OH (ii) —COOH

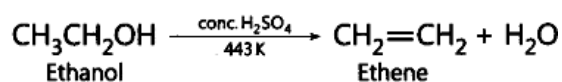
Answer. (i) Alcohol group (ii) Carboxylic acid group

2. What is the difference in the molecular formula of any two consecutive members of a homologous series of organic compounds?

Answer. —CH₂— is the difference in the molecular formula of any two consecutive members of a homologous series of organic compounds.

3. Name the carbon compound which on heating with excess of concentrated sulphuric acid at 443 K gives ethene.

CH₃CH₂OH, ethanol



Answer.

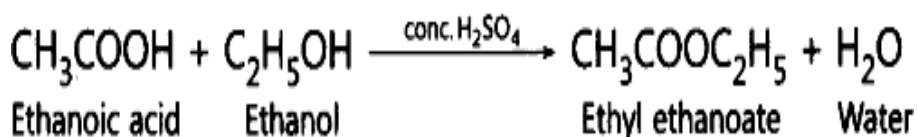
4. What is meant by a saturated hydrocarbon?

Answer. Those hydrocarbons in which valency of carbon is satisfied by single bonds only are called saturated hydrocarbons.

5. Name the compound formed when ethanol is warmed with ethanoic acid in the presence of a few drops of conc. H₂SO₄

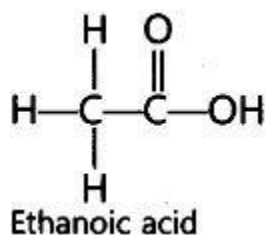
Answer.

Ethyl ethanoate is formed.



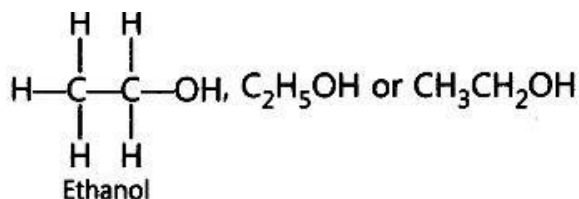
6. Draw the structure of CH_3COOH molecule.

Answer.



7. Draw the structure of ethanol molecule.

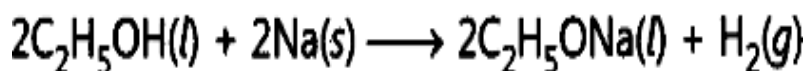
Answer.



8. What happens when a small piece of sodium is dropped into ethanol?

Answer.

Hydrogen gas will be evolved.



9. Carbon has four electrons in its valence shell. How does carbon attain stable electronic configuration.

Answers. By sharing four electrons with other atoms.

10. State two characteristic features of carbon which when put together give rise to large number of carbon compounds.

Answer. (i) Catenation (ii) Tetravalency of carbon

11. Write the structural formula of chloroethane.

Answer

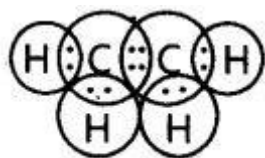


12. How many covalent bonds are there in a molecule of ethane (C_2H_6)?

Answer. There are 7 covalent bonds in a molecule of ethane.

13. Write the electron dot structure of ethene molecule (C_2H_4).

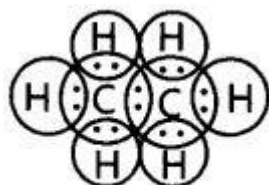
Answer.



Ethene

14. Write the electron dot structure of ethane molecule (C_2H_6).

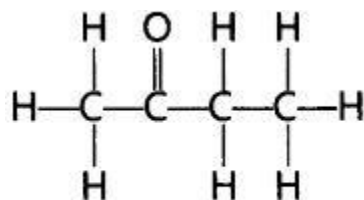
Answer.



Ethane

15. Draw the structure of butanone molecule, $CH_3COC_2H_5$.

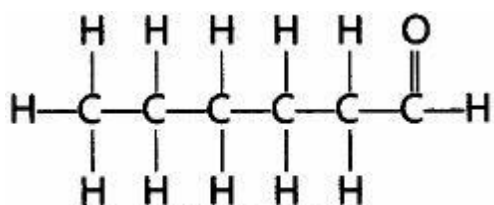
Answer.



Butanone

16. Draw the structure of the hexanal molecule, $C_5H_{11}CHO$.

Answer.



Hexanal ($C_5H_{11}CHO$)

17. Name the following compound:

Answer. 1-Hexyne is IUPAC name of the compound.

