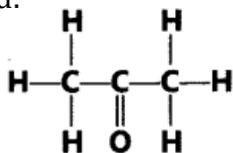


Science | Worksheet | Class X

Carbon and its Compounds

- What is the difference in the molecular formula of any two consecutive members of a homologous series of organic compounds?
- (a) Give a chemical test to distinguish between saturated and unsaturated hydrocarbons.
(b) (i) Name the products formed when ethanol burns in air.
(ii) What two forms of energy are liberated on burning alcohol?
(c) Why is the reaction between methane and chlorine considered a substitution reaction?
- What is meant by a saturated hydrocarbon?
- Draw the structure of ethanol molecule.
- What happens when a small piece of sodium is dropped into ethanol?
- State two characteristic features of carbon which when put together give rise to large number of carbon compounds.
- Write the structural formula of chloroethane.
- How many covalent bonds are there in a molecule of ethane (C_2H_6)?
- Write the electron dot structure of ethane molecule (C_2H_6).
- Draw the structure of butanone molecule, $CH_3COC_2H_5$
- Write a chemical reaction to show the dehydration of ethanol.
- Give reasons for the following:
 - Element carbon forms compounds mainly by covalent bonding.
 - Diamond has a high melting point.
 - Graphite is a good conductor of electricity.
 - Acetylene burns with a sooty flame.
 - Kerosene does not decolourise bromine water while cooking oils do.
- Write the name and formula of the 2nd member of the series of carbon compounds whose general formula is C_nH_{2n} .
- Which class of carbon compounds is responsible for the depletion of ozone layer at the higher level of the atmosphere?
- (a) Why are covalent compounds generally poor conductors of electricity?
(b) Name the following compound:



- Write the next homologue of each of the following:
 - C_2H_4
 - C_4H_6
- Write the chemical equation of the reaction of ethanoic acid with the following:
 - Sodium; (b) Sodium hydroxide; (c) Ethanol
 Write the name of one main product of each reaction.