

INTERNATIONAL INDIAN SCHOOL-RIYADH

CHEMISTRY WORKSHEET 2017-18

GRADE-X Chapter-Carbon and its compounds

1. How many structural isomers can you draw for pentane?
2. How can ethanol and ethanoic acid be differentiated on the basis of their physical and chemical properties?
3. What is meant by functional group in an organic compound. State in tabular form the structural formula and functional groups present in ethanol and ethanoic acid?
4. Two carbon compounds P and Q have the molecular formula C_3H_6 and C_3H_8 respectively. Which one of the two is most likely to show addition reaction. Justify your answer. Also give the chemical equation to explain the process of addition reaction in this case.
5. What happens when (a) ethanol is burnt in air.
(b) ethanol heated with excess concentrated H_2SO_4 at 443k.
(c) a piece of sodium is dropped in to ethanol.

6. Distinguish between esterification and saponification reactions. What is the use of (1) esters (2) saponification process.

7. Write IUPAC name of (1) $\text{CH}_3\text{-CO-CH}_2\text{-CH}_3$ (2) HCOOH

(3) $\text{CH}_3\text{-COOH}$ (4) $\text{CH}_3\text{-CH}_2\text{-OH}$

8. Explain the cleansing action of soap ?

9. Draw the structural formula and electron dot structure of simplest carboxylic acid?

10. A organic compound A of molecular formula $\text{C}_2\text{H}_4\text{O}_2$ turns blue litmus red and gives brisk effervescence with NaHCO_3 .

Identify A and give chemical reaction.

11. Write the name and formula of the second member of the series of carbon compounds whose general formula is $\text{C}_n\text{H}_{2n+1}\text{-OH}$

12. Give reasons for the following

(1) Carbon forms compounds mainly by covalent bonding.

(2) Acetylene burns with a sooty flame.

(3) Kerosene does not decolourise bromine water while cooking oils do.

(4) Soaps are not suitable for washing clothes when the water is hard?