CBSE TEST PAPER-02

SCIENCE & TECHNOLOGY (Class-10)

Chapter 4. Carbon and its compounds

1. What is the action of carboxylic acid on litmus solution? (1 mark)
2. Write the formula of ethanol. (1 mark)
3. Give the electron-dot structure of CH_3Cl. (1 mark)
4. Give the electron dot structure of Ethyne (C_2H_2). (1 mark)
5. Name the product formed when hydrogen is added to ethane. (1 mark)
6. What happens when Ethanoic acid is warmed with ethanol in the presence of a few drops of concentrated sulphuric acid? Write equation of the reaction involved. (2 marks)
7. Why carbon atoms cannot form ionic bonds in its compounds? (2 marks)
8. Give reasons for following: (2 marks)
   (i) Oxidation of ethanol with CrO_3 produces ethanal while ethanol when oxidised with alkaline $KMnO_4$ produces Ethanoic acid.
   (ii) Alcohol supplied for industrial purposes is mixed with copper sulphate.
9. Give two differences between soap and synthetic detergent? (2 marks)
10. What is hydrogenation? What is its industrial application? (2 marks)
11. Define "isomerism". Write the names and structure of two isomers of butane. (3 marks)
12. What are synthetic detergents? Give example of a synthetic detergent. Write its two advantages over soap. (3 marks)
13. Describe along with chemical equations, what happens when: (3 marks)

(i) Ethane reacts with bromine water.
(ii) Ethanol burns in air.
(iii) Ethanoic acid reacts with ethanol on the presence of sulphuric acid.

14. (i) People use a variety of methods to wash clothes, usually after adding the soap they beat the clothes on a stone, or beat with a paddle, scrub with a brush or the mixture is agitate in a washing machine. Why is agitation necessary to get clean clothes?
   (ii) State one advantage of soap over detergents and also state one disadvantages.
   (iii) Why have detergents replaced soap as a washing agents? (5 marks)