INDIAN SCHOOL NIZWA - WORKSHEET

CHEMISTRY

CH: 4 Carbon and its compounds

Name: _____ Date:_____ Class: XSec: ___

1. How is ethene prepared from ethanol? Give the reaction involved in it?

2. Give reasons for the following;

a) Air holes of a gas burner have to be adjusted when the heated vessels get blackened by the flame

b) Use of synthetic detergents causes pollution

c) Covalent compound have low melting and boiling point and do not conduct electricity

3. 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.

4. Complete the following reactions;

a) $CH_3CH_2OH \xrightarrow{\text{Conc. } H_2SO_4}$

b) $CH_3COOH + NaHCO_3 \longrightarrow$

c) $CH_4 + Cl_2 \xrightarrow{\text{sunlight}}$

d) $CH_3COOC_2H_5 \xrightarrow{NaOH}$

5. An organic compound 'X', is a liquid which often freezes during winter climate in cold countries, has the molecular formula $C_2H_4O_2$. On warming with ethanol in the presence of a few drops of concentrated H_2SO_4, a compound 'Y'with a sweet smell is formed.

a) Identify X and Y

b) Write a chemical equation for the reaction involved

c) How can we get compound 'X' back from 'Y'?

d) Which gas is produced when compound 'X' reacts with washing soda? Write the chemical equation?

6. What would be observed an adding 5% solution of alkaline $KMnO_4$ solution drop by drop to some warm ethanol taken in a test tube?

7. Differentiate between soaps and detergents.

8. Intake of small quantity of methanol can be lethal. Comment.

9. What is soap? Explain the cleaning action of soap.

10. Describe an activity to form an ester.

11. Pure ethanoic acid is called glacial acetic acid. Why?

12. The structural formula of an ester is $CH_3CH_2COOC_2H_5$. Write the name and structural formula of products obtained when it is hydrolysed with dil. HCl.

13. Explain the structure of diamond and graphite.

14. How does saturated hydrocarbons differ from unsaturated hydrocarbons in combustion?

15. How do soaps differ from detergents?