

Chemistry Worksheet

Carbon and its Compounds

1. Name the products formed when ethanol burns in air.
2. Name the gas evolved when ethanoic acid is added to sodium carbonate. How would you prove the presence of this gas?
3. Name the following:
 - a. CH_3COCH_3
 - b. HCOOH
4. Name the carbon compound which on heating with excess of con sulphuric acid at 443K gives ethane.
5. Name the functional group present in the following
 - a. CH_5OH
 - b. $\text{C}_2\text{H}_5\text{CHO}$
6. What happens when a small piece of sodium is dropped into ethanol?
7. Give reasons for the following,
 - a. The element carbon forms a very large number of compounds
 - b. Air holes of a gas burner have to be adjusted when the heated vessels get blackened by the flame.
 - c. Use of synthetic detergents causes pollution of water.
8. State two features of carbon which when put together give rise to large number of carbon compounds.
9. Write the name and molecular formula of an organic compound having its name suffixed with—ol and having two carbon atoms in the molecule, With the help of a balanced chemical equation indicate what happens when it is heated with excess of con. Sulphuric acid.
10. Name the functional group of organic compounds that can be hydrogenated. With the help of a suitable example explain the process of hydrogenation mentioning the conditions of the reaction and any one change in physical property with the formation of product. Name any one natural source of organic compounds that are hydrogenated.
11. How many covalent bonds are there in ethane?

12. Draw the structure of butanone.
13. What is esterification reaction? Describe an activity to show esterification.
14. Out of HCl and CH_3COOH , which one is a weak acid and why? Describe an activity to support your answer.
15. Write a chemical equation to show dehydration of ethanol.
16. Explain isomerism. Draw structures of possible isomers of butane.
17. Write the name and formula of the second member of the carbon compounds having functional group $-\text{OH}$.
18. Write the name and formula of the second member of the series of carbon compounds whose general formula is C_nH_{2n}
19. Why can't we have isomers of first three members of alkane series?
20. Write the chemical formula of two consecutive members of a homologous series and state the part of these compounds that determines their physical properties and chemical properties.
21. What is the difference between the chemical-composition of soaps and detergents? Explain in brief the action of soaps in removing oily spot. Why are soaps not suitable for washing in hardwater?
22. What are detergents chemically? State the reason for suitability of detergents for washing even in the case of water having calcium and magnesium ions.
23. An organic compound X is an essential constituent of wine and beer. Oxidation of X yields an organic acid Y which is present in vinegar. Name X and Y. what happens when X reacts with Y?
24. Write the name and formula of first member of carbon compounds having functional group $-\text{COOH}$,