Carbon and Its Compounds

ONE MARKS QUESTION

1. Name the compound form heating ethanol at 443 K with excess of conc.H_2SO_4.
2. What happened when a small piece of sodium is dropped into ethanol ?
3. Write the chemical equation for the decarboxylation of ethanoic acid?
4. Give an example of esterification reaction.
5. Name the product obtained when ethanol is oxidized by acidified potassium dichromate or

   Alkaline potassium permanganate.

6. Write the chemical equation representing the preparation reaction of ethanol from ethane.
7. Which of the following formulae represents a saturated hydrocarbon?

   CnH2n, CnH2n-2, CnH2n+2, CnH2n+1

8. Draw the electron dot structure of Ethene .

TWO MARKS QUESTION

9. Name the 2 elements which are present both in CNG and Petroleum
10. Draw the electronic dot structure of ethane molecule (C_2H_6)
11. Write the IUPAC name of the next homologous of $CH_3OHCH_2CH_3$.
12. Define homologous series of organic compounds series of organic compounds ,Mention any two characteristics of homologous series.
13. Describe a chemical test to distinguish between ethanol and ethanoic acid.
14. Give the name of functional groups : (i)-CHO (ii) –C=0
15. Why does carbon form compounds mainly by covalent bonding ?
16. Give a chemical test to distinguish ethanol from ethanoic acid.
17. Allotropy is a property shown by which class: substances elements compounds or mixtures?
18. Give one examples of allotropy.
19. How may be the following be obtained from ethanol ? Express giving chemical equations.
    (i) Ethyl ethanoate (ii) Sodium ethoxide.
20. Describe with chemical equation how ethanoic acid may be obtained from.
    (i) Ethanol (ii) Methanol
21. Why is the conversion of ethanol to ethanoic acid an oxidation reaction?

THREE MARKS QUESTION

22. Explain the cleansing action of soap.
23. Distinguish between esterification and saponification reactions of organic compounds.

24. Explain the structure of graphite in term of bonding and give one property based on this structure.
25. Name the organic acid present in vinegar .write a chemical equation which represents the commercial method for the preparation of this acid from methanol.
26. An organic compound A of molecular formula C_2H_6O on heating with excess of conc.H_2SO_4 gives compound B of molecular formula C_2H_4 .Compound B on reduction gives compound C of molecular formula C_2H_6. (a)Name A, B and C. (b) Write the chemical equation for the conversion of A to B. (c) What is the role of conc.H_2SO_4 in above equation?

FIVE MARKS QUESTION

27. Two carbon compound A and B have molecular formula C_3H_8 and C_3H_6 respectively. Which one of the two is most likely to show addition .justify your answer .Explain with the help of a chemical equation, how an addition reaction is used in vegetable ghee industry.
28. 6.1ml glacial acetic acid and 1ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added in the mixture are warmed in a water bath for 5 min. Name the resultant compound formed. Represent the above change by a chemical equation .What term is given to such a reaction. What are the special characteristics of the compound formed.
29. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation in the presence of alkaline $KMnO_4$ and forms the compound 'Y'. Identify 'X' and 'Y' .Write your observation when the compound 'X' is made to react with compound 'Y' which is used as a preservative for pickles.
30. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate /bicarbonate.(a)Identify the organic compound. Name the gas evolved. How will you test the gas evolved? Write the chemical equation for the above reaction. List two important uses of the above compound
31. a. List two reasons for carbon forming a large number of compounds.
    b. Name the type of bonding found in most of the carbon compounds. Why does carbon form compounds mainly by this kind of bonding?
    c. Give reason.