



CHEMISTRY

BOOKS - CHETAN CHEMISTRY (TAMIL ENGLISH)

CARBON COMPOUNDS

Fill In The Blanks

1. Non - essential element in plant is

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2. Organic compounds are soluble in

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3. Methanogens do not produce

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4. The sharing of valence electrons between the atoms will lead to the formation of _____

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5. Differentiate inorganic compounds and organic compounds.

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6. Unsaturated hydrocarbons

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7. The general formula for alkadiene is

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8. E-Waste contain

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9. Aromatic compounds are

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10. The chemical bonds in carbon compounds do not produce.....

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11. Homolytic fission of covalent bond leads to the formation of



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12. Carbon atoms in fullerene with formula C_{60} have



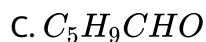
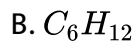
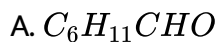
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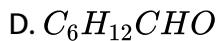
13. Vectors designed to replicate in cells of two different species are called.



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14. The molecular formula of cyclohexanal is..... a. $C_6H_{11}CHO$ b. C_6H_{12}
c. C_5H_9CHO d. $C_6H_{12}CHO$





Answer: A

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15. Unsaturated hydrocarbons

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16. The functional group $\begin{array}{c} C \\ || \\ -C- \end{array}$ is called

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17. Difference between successive members of homologous series is.....

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18. Ethanol gets oxidized by alkaline Potassium permanganate to form.....

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19. The reaction in which the place of one type of atom/ group in a reactant is taken by another atom/group of atoms is called.....

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20. Cocaine is commonly called as

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21. Neutrophils are also called

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22. In cold countries, ethylene glycol is added to water in the radiators of cars during winters. It results in :

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23. The compounds formed from two units, namely cation and anion are called _____

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24. A mRNA molecule is produced by

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25. The isomer of ethanol is

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26. Homologous series

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27. The IUPAC name of Epsom salt is _____.

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28. Hydrocarbons having identical molecular formula but different structures are called.....

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29. Ethanoic acid is commonly called.....

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30. A macro molecule formed by regular repetition of a small unit is called.....

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True False

1. Unsaturated hydrocarbons

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2. The essential element in all the organic compound is

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3. True or False

Non-metals are good conductors of heat and electricity.

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4. In N_2 , how many number of bonds are there between two nitrogen atoms?

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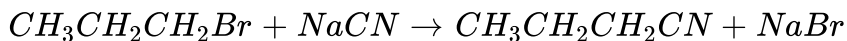
5. Boron reacts with fused sodium hydroxide to forms.....

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6. Give the uses of carbon dioxide.

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7. Consider the reaction,



This reaction will be the fastest in

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8. The presence of this substance in bacteria can undergo replication independently along with chromosomal DNA

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9. $CH_3 - CH_2 - \overset{O}{\parallel}C - OH$ is propane.

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10. Covalent compounds have low melting and boiling points.

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11. Monomer of proteins.

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12. PEN is referred as

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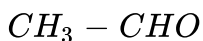
Iupac Names Of The Questions

1. Write the IUPAC names of the following structural formula



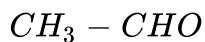
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2. Write the IUPAC names of the following structural formula



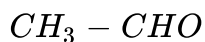
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3. Write the IUPAC names of the following structural formula



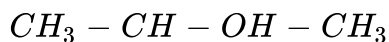
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4. Write the IUPAC names of the following structural formula



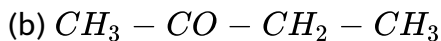
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5. Write the IUPAC names of the following structural formula



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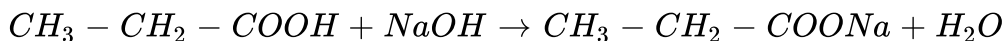
6. Write the IUPAC names of the following structural formulae .



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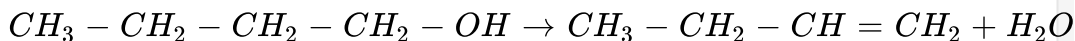
Types Of The Reactions Of Carbon Compound

1. Identify the type of the following reaction of carbon compounds



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2. Identify the type of the following reaction of carbon compounds



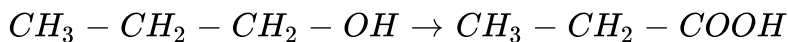
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3. Identify the type of the following reaction of carbon compounds



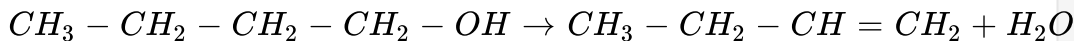
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4. Identify the type of the following reaction of carbon compounds



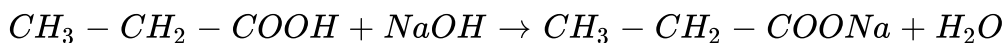
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5. Identify the type of the following reaction of carbon compounds



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6. Identify the type of the following reaction of carbon compounds



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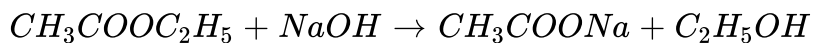
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7. Identify the type of the following reaction of carbon compounds



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8. Identify the type of the following reaction of carbon compounds



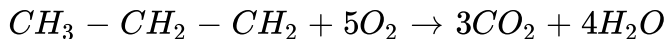
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9. Identify the type of the following reaction of carbon compounds



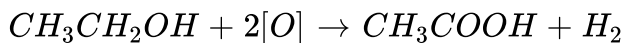
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10. Identify the type of the following reaction of carbon compounds



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11. Identify the type of the following reaction of carbon compounds



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Answer The Questions

1. Name the five important sense organs.

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2. How can air pollution be controlled?

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3. Which organic compounds are named as alkanol in IUPAC system?

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4. What is glacial acetic acid ?

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5. (i) What is meant by covalent bond?

(ii) Explain the covalent bonding in H_2 , O_2 , N_2 .

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6. What are Isomers? Give examples.

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7. What are functional groups ? Give examples .

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8. What are the types of motion?

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9. Give an account of various types of compounds which are formed by xenon?

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10. To which group in the periodic table does the element carbon belong?

Write down the electronic configuration of carbon and deduce the valency of carbon.

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11. What is meant by Amher

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12. What is mass number of an atom?

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13. What are the two main types of stele?

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14. With which bond C atom in CO_2 is bonded to each of the O atoms?

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15. Give the molecular formula and structural formula of acetic acid .

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16. Write the reaction for photosynthesis.

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17. Which is not a component of bacterial cell ?

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18. Which compound is formed by acetylation of morphine ?

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19. Is the biogas combustion reaction endothermic or exothermic

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20. Which one of ethanoic acid and hydrochloric acid is stronger?

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21. Which one of ethanoic acid and hydrochloric acid is stronger?

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22. When fat is heated with sodium hydroxide solution, soap and glycerin are formed. Which functional groups might be present in fat and glycerin?

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23. What are the chemical names of the nutrients that we get from the food stuff, namely cereals, pulses and meat?

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24. What are chemical mutagens?

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25. Hydrogen peroxide decomposes on its own by the following reaction.

$H - O - O - H \rightarrow 2H - O - H + O_2$ From this, what will be your inference about the strength of O-O, Covalent bond.

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26. Tell from the above example whether oxygen has catenation power or not?

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27. What is the full form of PET?

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28. Give the important uses of the following compounds

NaOH

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29. Why are carbon and its compounds used as fuels for most application?

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30. How is terylene prepared?



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31. State some of the physical properties of covalent compounds.

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32. State the number of bonds essentially present between carbon and carbon in alkenes and alkynes.

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33. Covalent compounds have low melting and boiling points.

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34. Carbon can form a large number of compounds.

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35. True or false . If false, give the correct statement. Pure water is a good conductor of electricity.

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36. List out the uses of magnets in day-to-day life.

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37. Conversion of ethanol to ethanoic acid an oxidation reaction.

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38. Vegetable oils are healthy as compared to vegetable ghee.

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39. Draw an electron dot structure of the molecules. (without showing the circles). Methane

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40. Draw an electron dot structure of the molecules. (without showing the circles). Ethene

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41. Draw an electron dot structure of the molecules. (without showing the circles). Methanol

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42. Draw an electron dot structure of the molecules. (without showing the circles). Water

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43. Draw all possible structural formula of compounds from their molecular formula given below.



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44. Draw all possible structural formula of compounds from their molecular formula given below.



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45. Draw all possible structural formula of compounds from their molecular formula given below.



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46. Write structural formulae for the following IUPAC names.

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47. Draw all possible structural formulae having molecular formula C_6H_{14} . Give names to all the isomers. Which difficulties were faced by you while naming?

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48. Draw an electron dot structure of the molecules. (without showing the circles). Water

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49. The molecular formula of Ammonia is NH_3 . Draw electron dot structure of ammonia molecule.

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50. Carbon atoms in fullerene with formula C_{60} have

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51. Conversion of ethanol to ethanoic acid an oxidation reaction.

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52. By how many $-CH_2-$ (methylene) units do the formulae and the first two members of homologous series of alkane, methane (CH_4) and ethane (C_2H_6) differ? Similarly, by how many $-CH_2-$ Units do the

neighbouring members ethane (C_2H_6) and propane (C_3H_8) differ from each other?

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53. How many methylene units are less in the formula of the second member than the third member of two homologous series of alkenes?

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54. How many methylene units are less in the formula of the second member than the third member of two homologous series of alkenes?

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55. Atomic number of Si is _____

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56. Inspect the molecular formulae of the members of Alkenes.

Do you find any relationship in the number of carbon atoms and the number of hydrogen atoms in the molecular formulae

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57. The number of axial hydrogen atoms in chair form of cyclohexane is

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58. What causes the existence of very large number of carbon compounds?

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59. What is meant by vinegar and gashol? What are their uses?

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60. What is a catalyst? Write any one reaction which is brought about by use of a catalyst.

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61. State some of the physical properties of covalent compounds.

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62. Explain by writing a reaction, which product will be formed on heating n-butyl alcohol with concentrated sulphuric acid.

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63. Explain by writing a reaction, what will happen when pieces of sodium metal are put in n-propyl alcohol.



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64. Write down structural formula of the first four members and the various homologous series formed by making use of the functional groups.

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65. General formula and the homologous series of alkanes is C_nH_{2n+2} . Write down the molecular formula of the 8th and 12th member using this.

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66. Draw three structural formulae having molecular formula C_5H_{12} .

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67. Give the names n-pentene, and Neo-pentane to the above structural formulae. (Use the same logic as used in the names of the isomeric butanes for their purpose).

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68. Describe the structure of a chlorophyll molecule.

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69. Draw an electron dot structure of the molecules. (without showing the circles). Water

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70. The molecular formula of Ammonia is NH_3 . Draw electron dot structure of ammonia molecule.

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71. The molecular formula of carbon-dioxide is CO_2 -Draw the electron dot structure (without showing circle) and line structure of CO_2

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72. In the Chlorination, substitution reaction of propane, two isomeric products containing one chlorine atom are obtained. Draw their structural formula and given their IUPAC names.

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73. Complete the table by writing their IUPAC names

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74. Fill in the graphs in the table a,b,c of homologous series.

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75. Which of the following does not contain any enzyme?


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76. Observe the given reaction and answer the question given below:




What reaction is shown in the above diagram?

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77. Observe the given reaction and answer the question given below: 


Name the chemical equation.

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78. Observe the given reaction and answer the question given below: 


What is the special characteristic of the group that is formed in this reaction?

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79. Answer the question based on the reaction. Observe the given reaction and answer the questions given below. 


What type of reaction is it? Define it

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80. Answer the question based on the reaction. Observe the given reaction and answer the questions given below. 

Name the reactant and the products.

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81. Answer the question based on the reaction. Observed the given reaction and answer the questions given below. 

What are the uses of the product/products?

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82. Give names of the three functional group containing three different heteroatoms, write names and structural formulae and one example each.

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83. Give any four functional groups containing oxygen as the heteroatom in it. Write name and structural formula and one example each.

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84. Lenses are classified into _____ types.



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85. Give the names of these plants.



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86. What is meant by an echo ? Explain.



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87. Explain with an example.



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88. What are macromolecules? Give example.



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89. What is resistance? Give its unit?

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90. What is saponification ?

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91. Study the diagram and answer the following questions 


Which acid is present in the big test tube?

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92. Study the diagram and answer the following questions 

What is the observation and conclusion of this experiment?

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93. Study the diagram and answer the following questions 

Explain neutralization reaction of this acid with a base.

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94. Observe the apparatus and chemicals given below and answer the following questions: Apparatus : Test tube, beakers, burner etc.

Chemicals : Glacial ethanoic acid, ethanol, concentrated Sulphuric acid etc.

Which reaction will you study using above apparatus and chemicals?

Draw a neat labelled diagram for the experimental set up.

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95. How will you identify a vector ?

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96. Write chemical equation involved in this experiment.

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Mcq

1. Aromatic compounds are

- A. parent
- B. father
- C. mother
- D. c.daughter

Answer: A

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2. A functional group mainly determines the properties. a.physical
b.chemical c.both d.none of the above

A. a.physical

B. b.chemical

C. c.both

D. d.none of the above

Answer: A::C



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3. Plasmid is also called.

A. A.ethane

B. B.propane

C. C.methane

D. D.butane

Answer: A

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4. Write all possible isomers with the molecular formula $C_4H_{10}O$ and name them.

A. a.six

B. b.seven

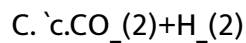
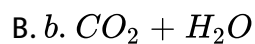
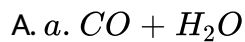
C. c.eight

D. d.nine

Answer:

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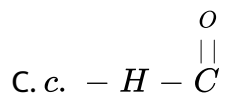
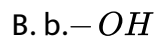
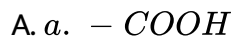
5. What are the products obtained on complete combustion of hydrocarbons?.

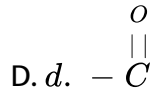


Answer: B::C

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6. Functional group





Answer:

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7. Diode is used as an a

A. a.ethanol

B. b.cananol

C. c.gashol

D. d.methanol

Answer: A

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8. After the formation of four Covalent bonds, Carbon attains the electronic configuration of.....

A. Helium

B. Neon

C. Argon

D. Krypton

Answer:



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9. Graphite has

A. a.chemical properties

B. b.degree of hardness

C. c.electrical conductivity

D. d.physical forms

Answer: A::C

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10. The reaction in which two molecules react to form a single product is known as reaction.

A. substitution

B. addition

C. hydrogenation

D. polymerisation

Answer: A::D

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11. IUPAC name of $CH_3 - CH_3$ is

- A. ethene
- B. ethane
- C. ethyne
- D. ethyne

Answer: A



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12. A saturated hydrocarbon will have suffix.....

- A. -ene
- B. -yne
- C. -ane
- D. -one

Answer: C



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13. The valency of carbon is

A. 2

B. 3

C. 4

D. 6

Answer: C



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14.is a natural macromolecule.

A. Polythene

B. Monosaccharide's

C. Polysaccharides

D. Disaccharides

Answer: A::C::D



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15. Gas evolved during fermentation.....

A. O_2

B. CO

C. H_2

D. CO_2

Answer: D



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16. A small unit that repeats regularly to form a polymer.

- A. Macromolecule
- B. Polysaccharides
- C. Monomer
- D. Dinomer

Answer:

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17. Monomer of polythene is.

- A. $CH \equiv CH$
- B. $CH_2 = CH_2$
- C. $CH_3 - CH_3$
- D. $C_2H_5 - C_2H_5$

Answer: B::C



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18. Carcinogens are cancer causing agents.

A. a.Ethers

B. b.Ethanol

C. c.Ester

D. d.Ethanoic acid

Answer:



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19. is used in illumination of wrist watches.

A. a.PVC

B. b.Teflon

C. c.Polystyrene

D. d.Polypropylene

Answer:

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Define

1. What are structural isomers?

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1. Electrovalent bonding
 2. Covalent bonding
 3. Valence Bond theory
 4. Polarised Bond
 5. Resonance
- a. Benzene
 - b. Heitler and London
 - c. Electron transfer
 - d. Electron sharing
 - e. Fajan.s theory
 - f. Aluminium chloride

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3. Krebs cycle starts with the formation of six carbon compound by a reaction between

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4. Aldoses are the functional group in

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5. Alkane

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6. Unsaturated hydrocarbons

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7. Homopolymer

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8. Monomer

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9. Reduction:

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10. Oxidant

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11. Catenation

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12. Structural Isomerism

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13. Homologous series

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14. Explain briefly on the following

Addition reaction.

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15. Explain briefly on the following

Substitution reaction.

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16. Aromatic compounds are

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17. Aromatic compounds are

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Difference Between

1. Unsaturated hydrocarbons

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2. Alkanes and Alkenes

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3. Alkenes and Alkynes

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4. Covalent compound and Ionic compounds

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5. Ethanol and Ethanoic acid (Physical properties)

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6. Ethanol and Ethanoic acid (Chemical properties)

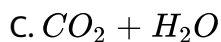
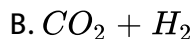
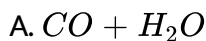
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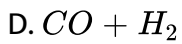
Choose And Write The Correct Options

1. What are the products obtained on complete combustion of hydrocarbons?.

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2. Ethanol is used as an additive to increase the efficiency of petrol such a fuel is called





Answer:



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Answer The Following Any 2

1. What is glacial acetic acid ?

A. Ethanol

B. cananol

C. Gasohol

D. methanol

Answer:



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2. Differentiate between anus and cloaca.

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3. The molecular formula of Ammonia is NH_3 . Draw electron dot structure of ammonia molecule.

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4. Detergents are superior to soaps - Justify.

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Answer The Following Any 1

1. Explain with an example what is meant by substitution and addition reactions.

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2. Give example of epimers.



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