



CHEMISTRY

BOOKS - VGS BRILLIANT CHEMISTRY (TELUGU ENGLISH)

CARBON AND ITS COMPOUND

Exercise

1. What are the general molecular formulae of alkanes, alkenes and alkynes?

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2. Name the product other than water formed on burning of ethanol in air.

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3. Name the simplest ketone and write its molecular formula.

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4. Name the compound formed by heating ethanol at 443K with excess of conc. H_2SO_4 .

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5. Name the product obtained when ethanol is oxidized by either chromic anhydride Or alkaline potassium permanganate.



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6. Write the homologous series of carbon compounds after $CH_3OHCH_2CH_3$ and write the IUPAC name.



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7. Why does carbon form compounds mainly by covalent bonding?



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8. Explain the sodium ethoxide is obtained from ethanol. Give chemical equations.



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9. Explain the cleansing action of soaps.

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10. Distinguish between esterification and saponification reactions of organic compounds.

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11. Distinguish between esterification and saponification reactions of organic compounds.

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12. What happens when a small piece of sodium is dropped into ethanol?

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13. Draw the electronic dot structure of ethane molecule(C_2H_6).

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14. Explain with the help of a chemical equation, how an addition reaction is used in vegetable ghee industry.

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15. Explain with the help of a chemical equation, how an addition reaction is used in vegetable ghee industry.

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16. Write the various possible structural formulae of a compound having molecular formula C_3H_6O ?

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17. Allotropy is a property shown by which class of substances: elements, compounds or mixtures? Explain allotropy with suitable examples.

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18. Two carbon compounds A and B have molecular formulae C_3H_8 and C_3H_6 respectively. Which one of the two is most likely to undergo addition reactions? Justify your answer.

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19. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5 min. answer the question: What are the special characteristics of the compound formed?



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20. 1 ml glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5 min. Represent the above change by a chemical equation.



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21. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5min.answer the question:What name is given to such a reaction?

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22. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5min.answer the question:What are the special characteristics of the compound formed?

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23. Which of the following solution of acetic acid in water can be used as preservative?

A. 5-10%

B. 10-15%

C. 15-20%

D. 1

Answer:



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24. The suffix used for naming an aldehyde is ___

A. -ol

B. -al

C. -one

D. -ene

Answer:

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25. Acetic acid when dissolved in water it dissociates into ions reversibly because it is a _____

A. weak acid

B. strong acid

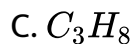
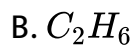
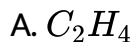
C. weak base

D. strong base

Answer:

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26. Which one of the following hydrocarbons can show isomerism?



Answer:



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27. Combustion of hydrocarbon is generally accompanied by the evolution of _____

A. Heat

B. Light

C. Both heat and light

D. Electric current

Answer:



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28. 2ml of ethanoic acid was taken in each of the three test tubes A, B and C and 2ml, 4ml and 8ml of water was added to them respectively. A clear solution is obtained in_____

A. Test tube A only

B. Test tubes A & B only

C. Test tubes B and C only

D. All the test tubes

Answer:

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29. If 2ml of acetic acid was added slowly in drops to 5ml of water then we will notice

- A. The acid forms a separate layer on the top of water
- B. Water forms a separate layer on the top of the acid
- C. Formation of a clear and homogenous solution
- D. Formation of a pink and clear solution

Answer:

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30. A few drops of ethanoic acid were added to solid sodium carbonate. The possible results of the reactions are

- A. A hissing sound was evolved
- B. Brown fumes evolved
- C. Brisk effervescence occurred
- D. A pungent smelling gas evolved

Answer:



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31. When acetic acid reacts with ethyl alcohol, we add conc. H_2SO_4 , which acts as _____ and the process is called _____

- A. Oxidizing agent, saponification

B. Dehydrating agent, esterification

C. Reducing agent, esterification

D. Acid & esterification

Answer:

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32. Suggest a test to find the hardness of water and explain the procedure.

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33. Suggest a chemical test to distinguish between ethanol and ethanoic acid and explain procedure.

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34. Suggest a chemical test to distinguish between ethanol and ethanoic acid and explain procedure.

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35. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the compound 'Y', that has molecular formula $C_2H_4O_2$. Identify "X" and "Y".

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36. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the compound 'Y', that has molecular formula $C_2H_4O_2$: Write your

observation regarding the product when compound 'X' is made to react with compound "Y" Which is used as a preservative for pickles.

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37. Prepare models of methane, ethane, ethene and ethyne molecules using clay balls and matchsticks.

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38. Collect information on the process of artificial ripening of fruits in fruit markets and discuss whether it is useful or harmful.

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39. How do you condemn the use of alcohol as a social practice?

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40. Write an activity to show esterification.

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41. Write an activity to show soap solution separates oil from water.

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42. What are bond angles of HCH in CH_4 , C_2H_4 and C_2H_2 molecules?

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43. Why we are advised not to use animal fats for cooking?

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44. Which oil is recommended for cooking? Why?

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45. How do carbon atoms form bonds in so many ways

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46. Where this energy to excited electron comes from?

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47. In methane(CH_4) molecule all four carbon-hydrogen bonds are identical and bond angle $H\hat{C}H$ is 109.28° .how can we explain this?

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48. How to explain the four orbitals of carbon containing unpaired electrons as energetically equal?

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49. How do you explain the ability of C- atom to form two single covalent bonds and one double bond?

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50. How do you explain the ability of carbon atom to form one single bond and one triple bond?

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51. How do you understand the marking(writings) of a pencil on a paper?

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52. What are hydrocarbons?

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53. Do all the organic compounds have equal number of 'C' and 'H' atoms?



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54. Can carbon form bonds with the atoms of other elements?

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55. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

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56. Do you know what is a catalyst ?

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57. What is a true solution?



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58. Can carbon get helium configuration by losing four electrons from the outer shell?



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59. Explain the four unpaired electrons in carbon atom through excited state.



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60. Allotting completely one special branch in chemistry to compounds of only one element. Is it justified when there are so many elements and their compounds but not with any special branches?



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61. What are esters?



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62. How these energetically unequal valence electrons form four equivalent covalent bonds in methane molecule?



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63. Can we write the structure of a compound if the name of the compound is given ?



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64. Do you know how the police detect whether suspected drivers have consumed alcohol or not?

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65. What is the action of soap particles on the greasy cloth?

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66. How do you appreciate the role of oxygen in combustion process?

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67. Complete the following reactions: $CH_2 = CH_2 + H_2Ni \xrightarrow{\quad}$

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68. Why dough rises swells, when it is treated with yeast ?

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69. Write two uses of nano tubes.

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70. Write two uses of ethanol in day to day life.

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71. Write the atomic structure of the following carbon compounds.

3,7 -dibromo -4, 6 dichloro -oct5 - ene - 1,2 - diol

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72. Why do the various micelles present in water do not come together to form a precipitate ? Guess the reason.

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73. Mention any two uses of graphite in day to day life.

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74. Why are vegetable oils healthy us compared to vegetable ghee ?

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75. Draw the structure of the methane molecule. Write its bond angle.

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76. What are alkenes ?

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77. Write the general formula of alkenes. Give an example for alkenes.

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78. What is allotropy? Name the crystalline allotropes of Carbon. What are their uses?



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79. What are the characteristics of homologous series ?



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80. Why alkanes are known as paraffins ?



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81. List out the materials required to conduct the experiment to understand the esterification reaction. Explain the procedure of the experiment. How can you identify that an ester is formed in this reaction?



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82. Explain the isomerism and catenation properties of carbon.

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83. What is the position of carbon in periodic table ?

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84. What is hybridisation?

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85. Draw the diagram showing sp^2 hybridization in ethene.

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86. Draw the structure of the methane molecule. Write its bond angle.

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87. Allotropy is a property shown by which class of substances: elements, compounds or mixtures? Explain allotropy with suitable examples.

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88. Amorphous allotrope of carbon is

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89. Name the crystalline allotropes of carbon and mention any hybridization involved in them

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90. What property of carbon allows it to form a large number of carbon compounds?

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91. Why carbon is versatile element in nature?

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92. What are hydrocarbons?

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93. Give one example for straight chain compound.

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94. Give an example for branched chain compound.

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95. What are alkanes

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96. Write the general formula of alkenes. Give an example for alkenes.



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97. What are alkynes?



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98. The formula of a hydrocarbon is $C_{12}H_{24}$ Name the family to which it belongs and also predicts its nature.



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99. What is a functional group? Give three examples of functional groups.



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100. What do you mean by a functional group?

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101. Example showing ionisation isomerism

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102. What is the difference between two successive homologs?

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103. Write the structure of 3-bromo-2-chloro-5 oxo hexanoic acid.

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104. What is saponification?



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105. What is a micelle? Give an example of micelle formation.



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106. Do you know what 'soap' is?



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107. Graphite is a good conductor - explain.



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108. What are the uses of fullerenes?

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109. What are oxidising agents?

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110. Why alkanes are known as paraffins ?

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111. What is the use of ethanol in motors?

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112. What is a colloidal solution ? How is it different from a true solution with respect to dispersed particle size and homogeneity ?

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113. Other than carbon which elements show catenation?

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114. Open chain hydrocarbons are also called

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115. Expand IUPAC.

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116. How do you appreciate the role of diamond in space probes ?

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117. How do you appreciate the role of diamond in surgery ?

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118. What is the reason behind blue and yellow coloured flames in combustion process?

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119. How do you appreciate the role of ethanol as a fuel?

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120. How do you appreciate the role of acetic acid as a preservative?

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121. How do you detect the leakage of gas?

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122. How LPG gas is useful for environment?

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123. How ethanol useful in pharmaceutical industry ?



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124. How synthetic detergents are harmful for environment?

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125. How do you prepare Ethanol from ethene?

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126. Write the reactions of ethanol with sodium and conc.

H_2SO_4 –

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127. Write the reactions of ethanoic acid with metals, metal hydroxide, metal carbonates and metal hydrogen carbonates.

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128. The purest form of carbon is

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129. Draw the structure of: 2-methyl pentan-3-ol

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130. Draw the structure of: 2-Bromo-3-ethyl penta-1,4-diene

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131. Draw the structure of: 3-amino-2-bromo hexan-1-ol

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132. Draw the structure of: 3,4-dichloro but-1-ene

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133. Draw various structure of C_5H_{12}

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134. Draw various structure of C_6H_{14} .

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135. What are nanotubes?

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136. What is an homologous series? Explain with an example.

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137. Write the molecular formula of the fourth member of the homologous series of alcohols.

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138. Do you know what is a catalyst ?

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139. Why oils are in liquids at room temperature?

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140. Why fats are solids at room temperature ?

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141. Do you know how the police detect whether suspected drivers have consumed alcohol or not?

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142. Name the gas evolved when acetic acid is react with sodium hydrogen carbonate.



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143. Name the organic acid present in vinegar-write it's chemical formula.



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144. What change will you observe if you test soap with litmus paper (red and blue)?



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145. Out of butter and ground nut oil which is unsaturated in nature?



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146. What are hydrophobic and hydrophilic parts in soap?

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147. Name the carboxylic acid used as preservation.

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148. Draw the structure of butanoic acid C_3H_7COOH .

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149. How do you appreciate the role of esters in daily life ?

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150. Draw the diagram showing sp^2 hybridization in ethene.

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151. Draw the diagram showing sp hybridization in ethyne.

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152. What type of reaction is involved in the conversion of ammonium cyanate to urea.

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153. Give an example for ring or cyclic compound.

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154. Which of the following compounds are unsaturated ? Justify your answer. $CH_3 - CH \equiv CH_2$

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155. The following compounds are unsaturated ? Justify your answer. $CH_3 - C \equiv CH$

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156. Which of the following compounds are unsaturated ? Justify your answer. $HC \equiv C - CH = CH_2$

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157. What are hydrophobic and hydrophilic parts in soap?



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158. Give the decreasing order of priority for choosing and naming a principal characteristic group.



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159. How do you appreciate the role of carbon in everyday life ?



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160. A carbon compound has many functional groups, then order of preference while naming it according to IUPAC nomenclature is



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161. Write the physical properties of Ethanol.

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162. Explain the occurrence of carbon.

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163. Explain about allotropic forms of carbon.

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164. Explain the classification of hydrocarbons.

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165. Explain addition reactions.

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166. What are ethers ? Give examples.

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167. Why carbon does not form C^{4+} ?

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168. Why does carbon form compounds mainly by covalent bonding?

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169. Allotropy is a property shown by which class of substances: elements, compounds or mixtures? Explain allotropy with suitable examples.

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170. Why diamond is hard compared with graphite?

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171. Identify the unsaturated compounds of the following :



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172. Identify the unsaturated compounds of the following :



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173. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

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174. What are isotones and isomers.

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175. Draw the structure of isomers of butane.

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176. What happens when a small piece of sodium is dropped into ethanol?

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177. What type of reaction takes place between ethane and chlorine?

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178. What are the two properties of carbon which lead to the huge number of carbon compounds we see around us?

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179. Draw the structure for the following compounds : Propanoic acid

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180. Draw the structure for the following compounds : Chlorobutane

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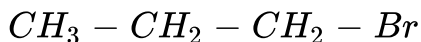
181. Draw the structure for the following compounds : Hexanone

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182. Draw the structure for the following compounds : Pentanal

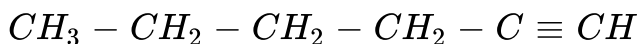
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183. How could you name the following compounds ?



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184. How could you name the following compounds ?



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185. An organic compound X with a molecular formula C_2H_6O undergoes oxidation with in presence of alkaline $KMnO_4$ to form a compound Y. X on heating in presence of con. H_2SO_4 at 443 k gives Z. Which on reaction with Br_2 and decolorizes, it. Identify X, Y and Z write the reactions involved.



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186. A mixture of oxygen and ethyne is burnt for welding. Can you tell why a mixture of ethyne and air is not used ?



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187. How do you prepare Ethanol from ethene?



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188. Write the names of the organic compounds which have the following structure : $CH_3 - CH_2 - CH_2 - CH_2 - CH_3$



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189. Draw the structure of isomers of butane.

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190. Draw the structure of: Ethanoic acid

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191. Draw the structure of: propanol

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192. Draw the structure of: propene

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193. Draw the structures of the following : 2-Chloro Propene.

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194. Draw the structure of ethane and electron dot structure of chlorine.

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195. Draw the structure of: 2-bromo pentane

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196. Draw the structure of:2-methyl propane

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197. Explain the possibility of bonds formation by a carbon atom with examples.

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198. Explain sp^2 hybridization with an example.

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199. Explain sp hybridization.

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200. How do you explain the ability of carbon atom to form one single bond and one triple bond?



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201. Explain the structures of Diamond.



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202. Write about the structures of buckminsterfullerene.



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203. What are nanotubes?



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204. What is the information given by the IUPAC name of an organic compound ?

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205. Define substitution reaction and give an example.

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206. What is amine group ?

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207. Explain various types in amines.

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208. Give next Homologs of the following compounds and also give structure, formula and name : HCHO .

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209. Give next Homologs of the following compounds and also give structure, formula and name : CH_3OH

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210. What are the characteristics of homologous series ?

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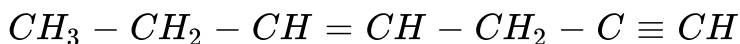
211. Write the IUPAC name of:



,

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212. Write the IUPAC names of the following compounds:



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213. Write the IUPAC names of the following compounds:



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214. Write the IUPAC name of:



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215. Draw the electronic dot structure of ethane molecule (C_2H_6).

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216. Explain the structure of graphite in terms of bonding and give one property based on this structure.

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217. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate /

bicarbonate. Answer the following : Identify the organic compound.

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218. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : Write the chemical equation for the above reaction.

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219. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : Name the gas evolved.

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220. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : How will you test the gas evolved?

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221. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : List two important uses of the above compound.

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222. Vinegar is a solution of

- A. 50 - 60 % acetic acid in alcohol
- B. 5 - 8% acetic acid in alcohol
- C. 5- 8% acetic acid in water
- D. 50 - 60% acetic acid in water

Answer:



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223. Pentane has the molecular formula C_5H_{12} . It has

- A. 5 covalent bonds
- B. 12 covalent bonds
- C. 16 covalent bonds
- D. 17 covalent bonds

Answer:

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224. Which of the following compounds are unsaturated ? Justify your answer. $CH_3 - CH \equiv CH_2$

A. a and c

B. b and c

C. b and d

D. c and d

Answer:

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225. The heteroatoms present in $CH_3CH_2 - O - CH_2 - CH_2Cl$ are a) Oxygen, b) Carbon, c) Hydrogen, d) Chlorine

A. a and b

B. b and c

C. c and d

D. a and d

Answer:

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226. A molecule of ammonia (NH_3) has

A. only single bonds

B. only double bonds

C. only triple bonds

D. two double bonds and one single bond

Answer:



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227. Mineral acids are stronger acids than carboxylic acids because

A. mineral acids are completely ionised

B. carboxylic acids are completely ionised

C. mineral acids are partially ionised

D. carboxylic acids are partially ionised

Answer:



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228. The reaction of an alcohol with carboxylic acid is called

- A. Combustion
- B. Esterification
- C. Saponification
- D. None of these

Answer:

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229. In the presence of concentrated sulphuric acid acetic acid reacts with ethyl alcohol to produce

- A. Aldehyde

B. Alcohol

C. Ester

D. Carboxylic acid

Answer:



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230. Which of the following has shortest carbon-carbon bond length ?

A. C_2H_2

B. C_2H_4

C. C_2H_6

D. C_6H_6

Answer:



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231. Which of the following are isomers ?

- A. Butane and Isobutene
- B. Ethane and Ethene
- C. Propane and Propyne
- D. Butane and Isobutane

Answer:



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232. Which of the following statements are usually correct for carbon compounds ? These

a) are good conductors of electricity

b) are poor conductors of electricity

c) have strong forces of attraction between their molecules

d) do not have strong forces of attraction between their molecules .

A. 1. *a&c*

B. 2. *b&c*

C. 3. *a&d*

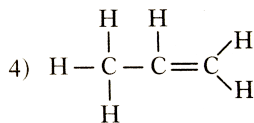
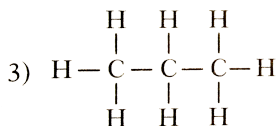
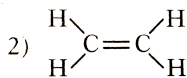
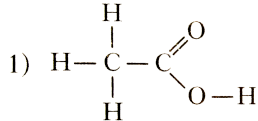
D. 4. *b&d*

Answer:

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233. The structures of four organic compounds are shown below .

Which compounds decolourise bromine water ?



A. 1 and 2 only

B. 1,2 and 4 only

C. 2 and 4 only

D. 3 and 4 only

Answer:

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234. A spherical aggregate of soap molecules in water is called

A. Hydrophilic end

B. Hydrophobic end

C. Miscelle

D. Cation

Answer:

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235. Bad conductor of electricity is

A. Graphite

B. Graphen

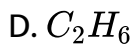
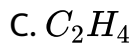
C. Diamond

D. Nanotube

Answer:

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236. Sp^3 hybridization is found in



Answer:



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237. Which of the following is a good conductor of heat and electricity?

A. Anthracite

B. Charcoal

C. Diamond

D. Graphite

Answer:

 [Watch Video Solution](#)

238. The functional group of Ketones is ____

A. -OH

B. -CHO

C. -O-

D.

Answer:

 [Watch Video Solution](#)

239. Chief component of cooking gas is

A. Butane

B. Methane

C. Ethane

D. Octane

Answer:

 [Watch Video Solution](#)

240. The functional group present in carboxylic acid is _____

A. -OH

B. -CHO

C. -COOH

D. -CO

Answer:

 [Watch Video Solution](#)

241. The sodium salt of a long chain fatty acids is called _____

A. An ester

B. A detergent

C. A soap

D. A fat

Answer:

 [Watch Video Solution](#)

242. A dilute solution of ethanoic acid in water is called

- A. Tincture of iodine
- B. Fehling's solution
- C. Vinegar
- D. Tollen's reagent

Answer:

 [Watch Video Solution](#)

243. Ethanol on oxidation gives

- A. Ethane
- B. Formalin
- C. Ethanoic acid

D. Methane

Answer:



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244. Methane is a major constituent of _____

A. Coal gas

B. Water gas

C. Petroleum

D. Bio gas

Answer:



Watch Video Solution

245. n-butane and iso butane are

- A. Alkanes
- B. Alkynes
- C. Isomers
- D. Polymers

Answer:

 [Watch Video Solution](#)

246. What property of carbon allows it to form a large number of carbon compounds?

- A. Tetravalency
- B. Catenation

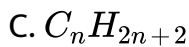
C. Electronegativity

D. Electropositivity

Answer:

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247. The general formula of alkenes is



Answer:

 [Watch Video Solution](#)

248. Compounds made up of carbon and hydrogen only are called

- A. Alkanes
- B. Alkenes
- C. Alkynes
- D. Hydrocarbons

Answer:

 [Watch Video Solution](#)

249. The IUPAC name of C_2H_2 _____

- A. Ethylene
- B. Ethene
- C. Ethyne

D. Alkene

Answer:

 [Watch Video Solution](#)

250. The portion left on dropping a hydrogen atom from an alkane is called__

A. Functional group

B. Alkenyl group

C. Alkyl group

D. Phenyl group

Answer:

 [Watch Video Solution](#)

251. Open chain saturated hydrocarbons are called

- A. Paraffins
- B. Alkenes
- C. Alkynes
- D. Alkyl groups

Answer:

 [Watch Video Solution](#)

252. Diamond and graphite are

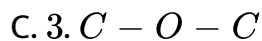
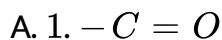
- A. isomers
- B. Allotropes
- C. Homologous

D. Metals

Answer:

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253. The functional group present in ethers is



Answer:

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254. C_{60} has arranged by _____ pentagons and _____ hexagons.

A. 20, 12

B. 12, 20

C. 21, 20

D. 12, 01

Answer:



[Watch Video Solution](#)

255. Carbon compounds containing double and triple bonds are called _____

A. Saturated hydrocarbons

B. Unsaturated hydrocarbons

C. Semi saturated hydrocarbons

D. Hydrocarbons

Answer:

 [Watch Video Solution](#)

256. The sweet smelling substance formed when carboxylic acid reacts with alcohols

A. Hydroxy

B. Ester

C. Benzene

D. Ethyl alcohol

Answer:

 [Watch Video Solution](#)

257. The functional group present in methanol is ___

- A. Alcohol
- B. Acid
- C. Ester
- D. Ketone

Answer:



[Watch Video Solution](#)

258. IUPAC name of alkene containing 3 carbon atoms is ___

- A. Propane
- B. Propyne

C. Propene

D. Propylene

Answer:

 [Watch Video Solution](#)

259. The first member of homologous series among alkynes is ____

A. Ethyne

B. ethane

C. Pentyne

D. Butyne

Answer:

 [Watch Video Solution](#)

260. Number of single covalent bonds in ammonia are

A. 2

B. 3

C. 4

D. 1

Answer:



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261. Type of reactions shown by alkanes is ____

A. 1. Addition

B. 2. thermal

C. 3. Substitution

D. 4. Chain

Answer:



[Watch Video Solution](#)

262. The distance between two graphite layers is

A. $3A$

B. 4

C. $33 \cdot 6A$

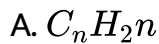
D. $3 \cdot 35A$

Answer:



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263. General formula of saturated hydro carbon is

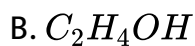
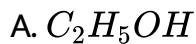


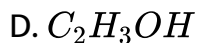
Answer:



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264. Give next Homologs of the following compounds and also give structure, formula and name : CH_3OH





Answer:

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265. Hydrolysis of an ester in presence of NaOH is called saponification. Explain.

A. Carbonation

B. esterification

C. Calcination

D. Saporification

Answer:

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266. $C_2H_2 : sp :: CH_4 : \text{_____}$

A. Sp

B. sp^2

C. sp^3

D. sp°

Answer:



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267. IUPAC name of glycerol is

A. Propane

B. propaol

C. Propane 1, 2,3-diol

D. Propane 1, 2, 3- triol

Answer:

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268. Carbon compounds having same molecular formula but different properties are known as

A. Isomers

B. homologues

C. Carboxyles

D. Monomers

Answer:

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269. Carbon has _____ electrons in its valence shell.

A. 2

B. 4

C. 6

D. 8

Answer:



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270. The first two members of alkene series is

A. Methene, ethene

B. Methane, ethane

C. Ethene, propene

D. Ethyne, propyne

Answer:

 [Watch Video Solution](#)

271. _____ is also known as marsh gas.

A. Methane

B. Ethane

C. Propane

D. Butane

Answer:

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272. Biogas on burning does not create _____

- A. 1. Hydrocarbons
- B. 2. pollution
- C. 3. noise
- D. 4. heat

Answer:



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273. Natural gas is mixture of gaseous _____

- A. Hydrocarbons
- B. esters
- C. acid

D. bases

Answer:

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274. Combustion reaction of carbon i) requires O_2 ii) releases heat
iii) releases CO_2

A. (i) is true

B. (ii) is true

C. (i) & (ii) are true

D. All are true

Answer:

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275. Black lead is

- A. Coal
- B. Charcoal
- C. Graphite
- D. graphene

Answer:

 [Watch Video Solution](#)

276. Carbon compounds have usually low melting points and boiling points because they are _____ in nature

- A. covalent
- B. Ionic

C. Chemical

D. Gases

Answer:

 [Watch Video Solution](#)

277. Compounds made up of carbon and hydrogen only are called

A. Hydroxy

B. Carboxy

C. Carbohydrates

D. Hydrocarbons

Answer:

 [Watch Video Solution](#)

278. C_nH_{2n} is the general formula of _____ hydrocarbons.

- A. Unsaturated
- B. Saturated
- C. Semi saturated
- D. Super saturated

Answer:

 [Watch Video Solution](#)

279. Ethene and ethyne are examples of ____ hydrocarbons

- A. Saturated
- B. Unsaturated

C. Semi saturated

D. Super saturated

Answer:

 [Watch Video Solution](#)

280. Ethyne has _____ carbon-hydrogen single bonds.

A. 3

B. 4

C. 2

D. 1

Answer:

 [Watch Video Solution](#)

281. The IUPAC name of ethylene is _____

- A. Ethane
- B. Ethene
- C. Ethyne
- D. Ethyl

Answer:

 [Watch Video Solution](#)

282. The sodium salt of a long chain fatty acids is called _____

- A. Sodium salt
- B. Acidic fat
- C. Detergent

D. Soap

Answer:

 [Watch Video Solution](#)

283. Aromatic compounds readily undergo _____substitution reactions.

A. Addition

B. Substitution

C. Thermal

D. Oxidation

Answer:

 [Watch Video Solution](#)

284. Chloromethane _____

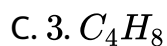
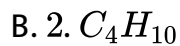
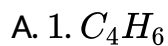


Answer:



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285. Butene _____



D. 4. C_4H_4

Answer:



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286. Ethylene _____

A. 1. C_2H_2

B. 2. C_2H_6

C. 3. C_2H_4

D. 4. CH_3

Answer:



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287. In which of the following state carbon undergoes hybridisation?

- A. Ground state
- B. First excited state
- C. Second excited state
- D. In atomic state

Answer:

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288. Diamond is hard. This is due to

- A. 1. Strong bonds
- B. 2. Network structure

C. 3. High refractive Index

D. 4. All the above

Answer:

 [Watch Video Solution](#)

289. C_{60} also called

A. 1. Nanotubes

B. 2. Stem tubes

C. 3. Buckminsterfullerene

D. 4. All the above

Answer:

 [Watch Video Solution](#)

290. Nanotubes were discovered by

A. 1. Kroto & Smalley

B. 2. F.Curi

C. 3. Sumio Iijima

D. 4. Pauling

Answer:



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291. The versatile nature of carbon is due to

A. Forms large number of compounds

B. Catenation

C. Forms various types of bonds

D. All the above

Answer:

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292. Structural Isomers differ in

A. Molecular formula

B. Structures

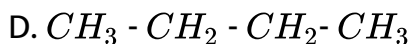
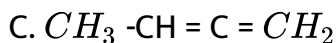
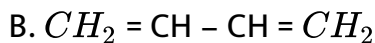
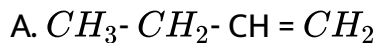
C. Nature of atoms

D. All the above

Answer:

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293. Which of the following is correct structure for But - 1, 2 - diene ?



Answer:



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294. The type of substitution reaction that takes place when methane is treated with Cl_2 in presence of light

A. Oxidation reaction

B. Combustion reaction

C. Addition reaction

D. Substitution reaction

Answer:



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295. Carbon compounds containing double and triple bonds are called _____

A. Saturated compounds

B. Unsaturated compounds

C. Cyclo compounds

D. Aromatic compounds

Answer:



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296. Carbon undergoes hybridisation in excited state. The energy for excitation is obtained from

- A. 1. Neighbouring atoms
- B. 2. From bond energies
- C. 3. Self generated
- D. 4. All

Answer:



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297. Diamond is insulator, but graphite is a conductor. Why?

- A. Tetrahedral arrangement of carbons in diamond
- B. Trigonal arrangement of carbons in grapic
- C. Delocalised π electron system in graphite
- D. Delocalised π electron system in diamond

Answer:

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298. Ethanoic acid reacts with ethanol in presence conc. H_2SO_4 .

This is called esterfication. Which of the following is incorrect about above process ?

- A. 1. Product has sweet smell
- B. 2. Product contain functional group
- C. 3. The IUPAC name of product is ethyl ethanoate

D. 4. It is an oxidation reaction

Answer:

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299. Explain sp^3 hybridization in methane.

A. Sp^3

B. $sp^2 A$

C. Sp

D. $sp^3 d$

Answer:

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300. Hybridisation and bond angle in ethene is

- A. $Sp^3, 120^\circ$
- B. $Sp, 120^\circ$
- C. $Sp, 180$
- D. $sp^3, 109^\circ 28'$

Answer:



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301. Diamond and graphite are

- A. Strong electrostatic forces
- B. London dispersion-Bond forces
- C. Ionic forces

D. Dipole – dipole forces

Answer:

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302. Which of the following scientist disproved vital force theory?

A. 1. Berzelius

B. 2. Wurtz

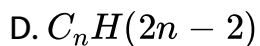
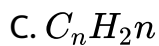
C. 3. Wohler

D. 4. Kolbe's

Answer:

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303. Alkyl group is represented by

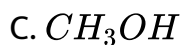
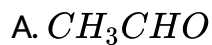


Answer:



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304. The molecular formula of formaldehyde is



D. CH_3COOH

Answer:

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305. The nature of second grade functional groups is given by

- A. Primary prefix
- B. Secondary prefix
- C. Primary suffix
- D. Secondary suffix

Answer:

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306. Conversion of ethyl alcohol into Acetic acid is

A. Combustion

B. Oxidation

C. Addition

D. Substitution

Answer:



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307. Unsaturated carbon compound usually give

A. Combustion

B. Oxidation

C. Addition

D. Substitution

Answer:

 [Watch Video Solution](#)

308. Vegetable oils contains

- A. Saturated long chain fatty acid
- B. Saturated long chain alcohols
- C. Unsaturated long chain fatty acid
- D. Unsaturated long chain alcohols

Answer:

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309. Gasohol is a mixture of

- A. Alcohol + ether
- B. Alcohol + water
- C. Alcohol + gasoline
- D. Alcohol + Kerosene

Answer:



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310. Alkaline hydrolysis of fats is called

- A. Esterification
- B. Saponification
- C. Hydrolysis

D. Hydrogenation

Answer:

 [Watch Video Solution](#)

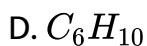
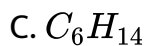
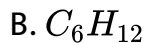
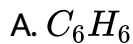
311. The solvent in colloidal solution is

- A. Solution
- B. Dispersion medium
- C. Dispersion phase
- D. Suspension

Answer:

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312. Hexane _____



Answer:



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313. Assertion (A): Carbon cannot form C^{4-} ions so easily. Reason (R): It would be difficult for a nucleus with six protons to hold ten electrons.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:

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314. P: Carbon absorb the energy to getExcited state. q: The energy required for excitation carbon taken up from bond energies when bonds are formed

A. P and q are true

B. P is true but is false

C. P is false but q is true

D. P and q are false

Answer:



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315. Assertion (A) : Diamond is one of the hardest materials.

Reason (R): The C-C bonds in diamond are very strong and requires large amounts of energy to distroy.

A. Both 'A' and 'R are true and 'R' is the correct explanation of 'A'

B. Both 'A And 'R' are true but 'R' does not the correct explanation of 'A'

C. 'A' is true but 'R' is false

D. A is false but 'R' is true

Answer:

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316. Assertion (A) : $CH_3-CH_2-CH_2-CH_3$, and are isomers. Reason (R) : Isomers have different molecular formulae and same properties.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:

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317. (A) : Carbon forms a large number of compounds

(R) : Carbon has high catenation power

A. (i)

B. (ii)

C. (iii)

D. None

Answer:

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318. Assertion (A): CH_4 , C_2H_6 , C_3H_8 is a homologous series.

Reason (R) : A homologous series of carbon compounds which two successive compounds differ by-CH unit.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:



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319. (A): An oxidation reaction requires oxygen always.(B) : A combustion reaction requires oxygen always.

- A. Both A and B are true
- B. Both A and B are false
- C. 'A' is true but 'B' is false
- D. 'A' is false but 'B' is true

Answer:

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320. Assertion (A) : Unsaturated organic compounds undergo substitution reactions. Reason (R) : Unsaturated organic compounds contain $=$ or \equiv bonds.

- A. Both 'A' and R' are true and 'R' is the correct explanation of 'A

B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'.

C. 'A' is true but 'R' is false

D. A is false but R' is true

Answer:

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321. P : Particles in a true solution are less than 1 nm in diameter.

Q: Particles in a colloidal solution are greater than 1 nm but lesser than 1000 nm in diameter.

A. P is true

B. q is true

C. A and B

D. P and q are false

Answer:

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322. Why fats are solids at room temperature ?

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but R is true

Answer:

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323. Alkanes are also known as

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but R is true

Answer:

324. Predict a substance which can be used as a good conductor and also as a lubricant.

- A. Graphite
- B. Diamond
- C. Graphene
- D. Nanotubes

Answer:

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325. What is the product when carbon undergoes combustion reaction?

- A. CH_4

B. CO_2

C. C_2H_5OH

D. Above all

Answer:



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326. What will happen if soap solution Add to dirty grease ?

A. It forms micelle

B. It forms acetic acid

C. It forms methanol

D. If forms esters

Answer:



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327. Assertion (A) : Micelles present in water will attracts each other. Reason (R) : Micelles exhibits ion – ion attraction in water.

- A. A and R are true
- B. A and R are false
- C. A is true but R is false
- D. A is false but R is true

Answer:

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328. There is a substance 'P', it has a sweet odour. The 'P' may be

- A. Ethanoic acid

B. Ehanol

C. Sodium bicarbonate

D. Ethyl acetate

Answer:

 [Watch Video Solution](#)

329. + $O_2 \rightarrow CO_2 + \text{heat}$.

A. 1. Sulphur

B. 2. Helium

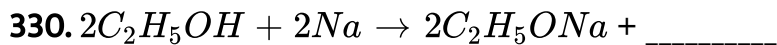
C. 3. Carbon

D. 4. Chlorine

Answer:

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A. CO_2

B. H_2

C. O_2

D. CH_4

Answer:

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331. Grease + soap $\xrightarrow{\text{water}}$

A. Ethanol

B. Micelle

C. Oil

D. Ester

Answer:

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332. CH_4 : Substitution Reaction:: C_2H_2 :

A. Oxidation reaction

B. Reduction reaction

C. Addition reaction

D. Fermentation

Answer:

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333. Which of the following is formed when ethyl alcohol is treated with Con H_2SO_4 at $170^\circ C$?

- A. Ethanal
- B. Ethene
- C. Ethane
- D. Ethanol

Answer:

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334. The product that is formed by dehydration of ethanol in conc. Sulphuric acid is

- A. Ethane

B. Methane

C. Ethane

D. Ethyne

Answer:



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335. _____ reacts with sodium metal to produce hydrogen gas.

A. Alcohol

B. Aldehyde

C. Ester

D. Ketone

Answer:



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336. When ethanoic acid is heated with Ethanol and conc. _____ compound formed is ethyl ethanoate.

A. HCL

B. HNO_3

C. H_2SO_4

D. CH_3COOH

Answer:



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337. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the

compound 'Y', that has molecular formula $C_2H_4O_2$. Identify "X" and "Y".

- A. Acetic acid, ethyl alcohol
- B. Acetic' acid, ethyl acetate
- C. Ethyl alcohol, acetic acid
- D. Ethyl alcohol, ethyl acetate

Answer:

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338. A few drops of ethanoic acid were added to solid sodium carbonate. The possible results of the reactions are

- A. A hissing sound was evolved
- B. Brown fumes evolved

- C. Brisk effervescence occurred
- D. A pungent smelling gas evolved

Answer:

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339. If 2ml of acetic acid was added slowly in drops to 5ml of water then we will notice

- A. The acid forms a separate layer on
- B. Water forms a separate layer on top of acid
- C. Formation of clear and homogeneous solution
- D. Formation of a pink and clear solution

Answer:

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340. Which one is required to prepare vinegar ?

- A. Ethyl acetate
- B. Ethanoic acid
- C. Ethanol
- D. Ethene

Answer:



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341. Take Ethanol in a test tube add metallic sodium to it. If you test the liberated gas with a burning, sprint

- A. Will put off

B. Will put off with a pop sound

C. Will light very bright

D. Will give fumes

Answer:



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342. $C_6 = 1s^2 2s^2 2p^6$ and the given element i) C has 6 electrons, 6 protons and 6 neutrons ii) C is a metal iii) C can form 6 covalent bonds

A. i) is true

B. (ii) is true

C. (ii) and (iii) are true

D. All are true

Answer:

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343. The carbon can form:

- i) All single bonds
- ii) One double and two single bonds
- iii) One single and one triple bond

A. 1. (i) is true

B. 2. (ii) is true

C. 3. (ii) and (iii) are true

D. 4. All are true

Answer:

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344. CH_4 has _____ bonds.

- A. 1. Four sp - s
- B. 2. Four $sp^2 - s$
- C. 3. Four $sp^3 - s$
- D. 4. Four $sp - sp$

Answer:

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345. Name the bonds in the given molecules i) CH_4 ii) C_2H_4 iii)



- A. I -single, ii -double, iii -triple
- B. I -triple, ii - double, iii - single

C. i-double,ii-triple, iii-single

D. All are single bonds

Answer:

 [Watch Video Solution](#)

346. i) CH_4, C_3H_5, C_3H_6 , ii) $CH_3OH, C_2H_5OH, C_3H_8OH$ iii)

$C_8H_{16}, C_9H_{18}, C_{10}H_{20}$, Which of the above is a homologous

series ?

A. (i)

B. (ii)

C. (iii)

D. (ii) and (iii)

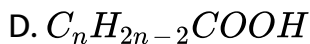
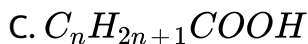
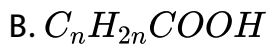
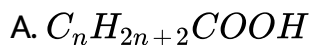
Answer:



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347. What is the general formula for the homologous series,

CH_3COOH , C_2H_5COOH , C_3H_7COOH _____



Answer:



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348. Cyclo butane, the primary prefix is

A. Cyclo

B. but

C. an

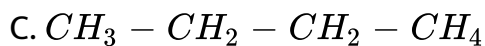
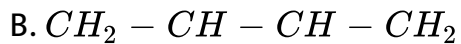
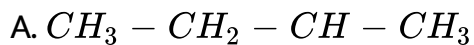
D. E

Answer:



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349. Which of the following is an incorrect structure ?



D. Above all

Answer:

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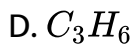
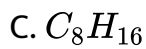
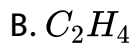
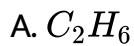
350. Which of the following is not a compound of C, H and O?

- A. Alcohol
- B. Aldehyde
- C. Ether
- D. Amine

Answer:

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351. Which of the following is not a alkene?

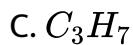
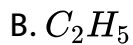


Answer:



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352. Which of the following is not belongs to C_nH_{2n+1}



D. None

Answer:

 [Watch Video Solution](#)

353. Which of the following is not a saturated hydrocarbon?

- A. Hexane
- B. Benzene
- C. Butane
- D. Isobutane

Answer:

 [Watch Video Solution](#)

354. Which one of the following is not an allotrope of carbon?

- A. Soap
- B. Fullerence
- C. Diamond
- D. Graphite

Answer:

 [Watch Video Solution](#)

355. Which of the following is alkane?

- A. C_4H_{10}
- B. C_4H_8
- C. C_4H_6
- D. C_6H_6

Answer:

 [Watch Video Solution](#)

356. Which of the following has a foot-ball like structure?

- A. Diamond
- B. Nanotubes
- C. Buckminsterfullerenes
- D. All the above

Answer:

 [Watch Video Solution](#)

357. Which of the following is closed chain hydrocarbon?

- A. Butane
- B. Pentane
- C. Cyclo pentane
- D. Neo pentane

Answer:

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358. The isomer of n-butane is

- A. 2-methyl propane
- B. 2-methyl butane
- C. 2 – butene
- D. 3 -methyl butane

Answer:

 [Watch Video Solution](#)

359. What are the characteristics of homologous series ?

- A. have one general formula
- B. Have similar functional group
- C. Similar chemical properties
- D. All the above

Answer:

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360. Which of the following is not a amorphous form of carbon ?

A. Coal

B. Coke

C. C_{60}

D. Gas carbon

Answer:



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361. In which one of the following halides, $C_{sp^2} - X$ bond is present?

A. C_2H_2

B. C_2H_4

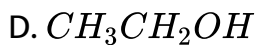
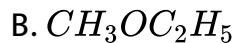
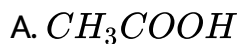
C. C_2H_6

D. C_2H_8

Answer:

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362. Which of the following is ester?



Answer:

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363. Wohler Friedrich is appreciable because, he prepared _____ in lab

- A. 1. Nanotubes
- B. 2. Organic urea
- C. 3. Buckyballs
- D. 4. Ester

Answer:



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364. Graphite is appreciable because it used to making of

- A. Organic urea
- B. Nanotubes

C. Conductors

D. Papers

Answer:

 [Watch Video Solution](#)

365. This reaction helps us in cooking

A. Combustion

B. Oxidation

C. Esterification

D. Saponification

Answer:

 [Watch Video Solution](#)

366. Drunken drive related to

A. Alcohol

B. Ester

C. Acid

D. Ketone

Answer:



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367. Esters are appreciable because they have

A. 1. Aromatic smell

B. 2. Gold colour

C. 3. Light weight

D. 4. Above all

Answer:

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368. Hydrocarbons are appreciable because they are used as

A. 1. Oxidizing agents

B. 2. Conductors

C. 3. Fuels

D. 4. Catalysts

Answer:

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369. Graphite is used as lubricant because of its

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and R' are true but 'R' does not the correct explanation of 'A'
- C. A' is true but 'R Is false
- D. A' is false but 'R' is true

Answer:



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370. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

- A. Insufficient fuel
- B. Insufficient air
- C. Insufficient ignition
- D. Above all

Answer:



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371. Cooking gas contains

- A. 1. C_4H_{10}
- B. 2. CH_4
- C. 3. C_2H_5OH
- D. 4. C_2H_2

Answer:

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372. Micelles are found in

- A. 1. Tea
- B. 2. Soap water
- C. 3. Alcohol
- D. 4. Vinegar

Answer:

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373. Vinegar _____

- A. Ethanoic acid
- B. Preservative
- C. Sour in taste
- D. Above all

Answer:



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374. Riped fruits contain

- A. Butane
- B. Alcohol
- C. Ester
- D. Above all

Answer:

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375. Alcoholic drinks contain

- A. Ester
- B. Soap
- C. Ethanol
- D. Venegar

Answer:

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376. Which of the following is better cooking ?

- A. Vegetable oils
- B. Animal fat oils
- C. Hydrogenated oils
- D. Vanaspathi

Answer:

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377. Scientists inserted bio molecules into_____ to inject them into a single cell

- A. Graphite
- B. Graphene
- C. Nanotube
- D. Bucky balls

Answer:

 [Watch Video Solution](#)

378. Lead is

- A. Graphite
- B. Graphene
- C. Nanotube
- D. Bucky balls

Answer:

 [Watch Video Solution](#)

379. Which of the following give aromatic smell ?

A. Alcohol

B. Ester

C. Acid

D. Vinegar

Answer:

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380. What are the general molecular formulae of alkanes, alkenes and alkynes?

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381. Name the product other than water formed on burning of ethanol in air.

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382. Name the simplest ketone and write its molecular formula.

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383. Name the compound formed by heating ethanol at 443K with excess of conc. H_2SO_4 .

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384. Name the product obtained when ethanol is oxidized by either chromic anhydride Or alkaline potassium permanganate.

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385. Write the homologous series of carbon compounds after $CH_3OHCH_2CH_3$ and write the IUPAC name.

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386. Why does carbon form compounds mainly by covalent bonding?

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387. Explain the sodium ethoxide is obtained from ethanol. Give chemical equations.

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388. Explain the cleansing action of soaps.



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389. Distinguish between esterification and saponification reactions of organic compounds.

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390. Distinguish between esterification and saponification reactions of organic compounds.

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391. What happens when a small piece of sodium is dropped into ethanol?

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392. Draw the electronic dot structure of ethane molecule(C_2H_6).

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393. Explain with the help of a chemical equation, how an addition reaction is used in vegetable ghee industry.

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394. How is hydrogenation used in vegetable ghee industry?
Explain with chemical equation.

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395. Write the various possible structural formulae of a compound having molecular formula C_3H_6O ?



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396. Allotropy is a property shown by which class of substances: elements, compounds or mixtures? Explain allotropy with suitable examples.



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397. Two carbon compounds A and B have molecular formulae C_3H_8 and C_3H_6 respectively. Which one of the two is most likely to undergo addition reactions? Justify your answer.



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398. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid

is added to the mixture and warmed in a water bath for 5min.answer the question:What name is given to such a reaction?

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399. 1 ml glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5 min. Represent the above change by a chemical equation.

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400. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5min.answer the question:What name is given to such a reaction?

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401. 1 ml of glacial acetic acid and 1 ml of ethanol are mixed together in a test tube. Few drops of concentrated sulphuric acid is added to the mixture and warmed in a water bath for 5min. answer the question: What are the special characteristics of the compound formed?

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402. Which of the following solution of acetic acid in water can be used as preservative?

- A. 5-10%
- B. 10-15%
- C. 15-20%
- D. 1

Answer:

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403. The suffix used for naming an aldehyde is ___

A. -ol

B. -al

C. -one

D. -ene

Answer:

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404. Acetic acid when dissolved in water it dissociates into ions reversibly because it is a_____

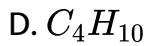
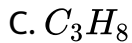
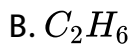
- A. weak acid
- B. strong acid
- C. weak base
- D. strong base

Answer:

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405. Which one of the following hydrocarbons can show isomerism?

- A. C_2H_4



Answer:



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406. Combustion of hydrocarbon is generally accompanied by the evolution of _____

A. Heat

B. Light

C. Both heat and light

D. Electric current

Answer:



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407. 2ml of ethanoic acid was taken in each of the three test tubes A, B and C and 2ml, 4ml and 8ml of water was added to them respectively. A clear solution is obtained in _____

- A. Test tube A only
- B. Test tubes A & B only
- C. Test tubes B and C only
- D. All the test tubes

Answer:



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408. If 2ml of acetic acid was added slowly in drops to 5ml of water then we will notice

- A. The acid forms a separate layer on the top of water
- B. Water forms a separate layer on the top of the acid
- C. Formation of a clear and homogenous solution
- D. Formation of a pink and clear solution

Answer:

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409. A few drops of ethanoic acid were added to solid sodium carbonate. The possible results of the reactions are

- A. A hissing sound was evolved

- B. Brown fumes evolved
- C. Brisk effervescence occurred
- D. A pungent smelling gas evolved

Answer:

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410. When acetic acid reacts with ethyl alcohol, we add conc. H_2SO_4 , which acts as _____ and the process is called _____

- A. Oxidizing agent, saponification
- B. Dehydrating agent, esterification
- C. Reducing agent, esterification
- D. Acid & esterification

Answer:



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411. Suggest a test to find the hardness of water and explain the procedure.



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412. Suggest a chemical test to distinguish between ethanol and ethanoic acid and explain procedure.



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413. Suggest a chemical test to distinguish between ethanol and ethanoic acid and explain procedure.



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414. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the compound 'Y', that has molecular formula $C_2H_4O_2$. Identify "X" and "Y".

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415. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the compound 'Y', that has molecular formula $C_2H_4O_2$: Write your observation regarding the product when compound 'X' is made to react with compound "Y" Which is used as a preservative for pickles.

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416. Prepare models of methane, ethane, ethene and ethyne molecules using clay balls and matchsticks.

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417. Collect information on the process of artificial ripening of fruits in fruit markets and discuss whether it is useful or harmful.

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418. How do you condemn the use of alcohol as a social practice?

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419. Write an activity to show esterification.

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420. Write an activity to show soap solution separates oil from water.

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421. What are bond angles of HCH in CH_4 , C_2H_4 and C_2H_2 molecules?

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422. Why we are advised not to use animal fats for cooking?

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423. Which oil is recommended for cooking? Why?

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424. How do carbon atoms form bonds in so many ways

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425. Where this energy to excited electron comes from?

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426. In methane(CH_4) molecule all four carbon-hydrogen bonds are identical and bond angle $H\hat{C}H$ is 109.28° .how can we explain this?

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427. How to explain the four orbitals of carbon containing unpaired electrons as energetically equal?

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428. How do you explain the ability of C- atom to form two single covalent bonds and one double bond?

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429. How do you explain the ability of carbon atom to form one single bond and one triple bond?

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430. How do you understand the marking(writings) of a pencil on a paper?

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431. What are hydrocarbons?

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432. Do all the organic compounds have equal number of 'C' and 'H' atoms?

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433. Can carbon form bonds with the atoms of other elements?

 [Watch Video Solution](#)

434. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

 [Watch Video Solution](#)

435. Do you know what is a catalyst ?

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436. What is a true solution?

 [Watch Video Solution](#)

437. Can carbon get helium configuration by losing four electrons from the outer shell?

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438. Explain the four unpaired electrons in carbon atom through excited state.

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439. Allotting completely one special branch in chemistry to compounds of only one element. Is it justified when there are so many elements and their compounds but not with any special branches?

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440. What are esters?

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441. How these energetically unequal valence electrons form four equivalent covalent bonds in methane molecule?

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442. Can we write the structure of a compound if the name of the compound is given ?

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443. Do you know how the police detect whether suspected drivers have consumed alcohol or not?



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444. What is the action of soap particles on the greasy cloth?



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445. How do you appreciate the role of oxygen in combustion process?



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446. $CH_2 = CH_2 + H_2 \xrightarrow{Ni} CH_3 - CH_3$ is an addition reaction.

$CH \equiv CH + H_2 \xrightarrow{Ni}$? Predict and write the products.



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447. Why dough rises swells, when it is treated with yeast ?

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448. Write two uses of nano tubes.

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449. Write two uses of ethanol in day to day life.

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450. Write the atomic structure of the following carbon compounds. 3,7 -dibromo -4, 6 dichloro -oct5 - ene - 1,2 - diol

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451. Why do the various micelles present in water do not come together to form a precipitate ? Guess the reason.

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452. Mention any two uses of graphite in day to day life.

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453. Why are vegetable oils healthy us compared to vegetable ghee ?

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454. Draw the structure of the methane molecule. Write its bond angle.



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455. What are alkenes ?



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456. Write the general formula of alkenes. Give an example for alkenes.



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457. What is allotropy? Name the crystalline allotropes of Carbon. What are their uses?



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458. What are the characteristics of homologous series ?

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459. Why alkanes are known as paraffins ?

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460. List out the materials required to conduct the experiment to understand the esterification reaction. Explain the procedure of the experiment. How can you identify that an ester is formed in this reaction?

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461. Explain the isomerism and catenation properties of carbon.

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462. What is the position of carbon in periodic table ?

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463. What is hybridisation?

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464. Draw the diagram showing sp^2 hybridization in ethene.

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465. What are the shapes of ethyne and methane?

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[Watch Video Solution](#)

466. What is allotropy ? Give the crystalline allotropes of carbon.

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467. Amorphous allotrope of carbon is

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468. Name the crystalline allotropes of carbon and mention any hybridization involved in them

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469. How do you explain the ability of carbon atom to form one single bond and one triple bond?

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470. Why carbon is versatile element in nature?

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471. What are hydrocarbons?

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472. Give one example for straight chain compound.

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473. Give an example for branched chain compound.

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474. What are alkanes

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475. Write the general formula of alkenes. Give an example for alkenes.

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476. Discuss the structure of carbon - carbon triple bond in alkynes.



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477. The formula of a hydrocarbon is $C_{12}H_{24}$ Name the family to which it belongs and also predicts its nature.



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478. What is a functional group? Give three examples of functional groups.



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479. What do you mean by a functional group?



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480. Define Isomerism.

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481. What is the difference between two successive homologs?

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482. Write the structure of 3-bromo-2-chloro-5 oxo hexanoic acid.

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483. What is saponification?

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484. What is a micelle? Give an example of micelle formation.

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485. Do you know what 'soap' is?

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486. Graphite is a good conductor - explain.

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487. What are the uses of fullerenes?

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488. What are oxidising agents?

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489. Why alkanes are known as paraffins ?

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490. What is the use of ethanol in motors?

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491. What is collodion solution ?

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492. Other than carbon which elements show catenation?

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493. What are hydrocarbons?

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494. Expand IUPAC.

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495. How do you appreciate the role of diamond in surgery ?

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496. How do you appreciate the role of diamond in surgery ?

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497. What is the reason behind blue and yellow coloured flames in combustion process?

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498. How do you appreciate the role of ethanol as a fuel?

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499. How do you appreciate the role of acetic acid as a preservative?

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500. How do you detect the leakage of gas?

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501. How LPG gas is useful for environment?

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502. How ethanol useful in pharmaceutical industry ?

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503. How synthetic detergents are harmful for environment?

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504. How do you prepare Ethanol from ethene?

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505. Write the reactions of ethanol with sodium and conc.

H_2SO_4 –

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506. Write the reactions of ethanoic acid with metals, metal hydroxide, metal carbonates and metal hydrogen carbonates.

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507. The purest form of carbon is



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508. Draw the structure of the following compounds. 2-Methyl penten-3-ol



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509. Draw the structure of: 2-Bromo-3-ethyl penta-1,4-diene



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510. Draw the structure of: 3-amino-2-bromo hexan-1-ol



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511. Draw the structure of: 3,4-dichloro but-1-ene

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512. Draw various structure of C_5H_{12}

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513. Draw various structure of C_6H_{14} .

 [Watch Video Solution](#)

514. What are nanotubes?

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515. What is an homologous series? Explain with an example.

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516. Write the molecular formula of the fourth member of the homologous series of alcohols.

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517. Do you know what is a catalyst ?

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518. Why oils are in liquids at room temperature?

 [Watch Video Solution](#)

519. Why fats are solids at room temperature ?

 [Watch Video Solution](#)

520. Do you know how the police detect whether suspected drivers have consumed alcohol or not?

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521. Name the gas evolved when acetic acid is react with sodium hydrogen carbonate.

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522. Name the organic acid present in vinegar-write it's chemical formula.



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523. What change will you observe if you test soap with litmus paper (red and blue)?



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524. Out of butter and ground nut oil which is unsaturated in nature?



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525. What are hydrophobic and hydrophilic parts in soap?



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526. Name the carboxylic acid used as preservation.

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527. Draw the structure of butanoic acid C_3H_7COOH .

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528. How do you appreciate the role of esters in daily life ?

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529. Draw the diagram showing sp^2 hybridization in ethene.

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530. Draw the diagram showing sp hybridization in ethyne.

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531. What type of reaction is involved in the conversion of ammonium cyanate to urea.

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532. Give an example for ring or cyclic compound.

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533. Which of the following compounds are unsaturated ? Justify your answer. $CH_3 - CH \equiv CH_2$

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534. Which of the following compounds are unsaturated ? Justify your answer. $CH_3 - CH \equiv CH_2$

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535. Which of the following compounds are unsaturated ? Justify your answer. $HC \equiv C - CH = CH_2$

 Watch Video Solution

536. What are hydrophobic and hydrophilic parts in soap?

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537. Give the decreasing order of priority for choosing and naming a principal characteristic group.

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538. How do you appreciate the role of carbon in everyday life ?

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539. In IUPAC nomenclature, the order followed for naming the compounds is:

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540. Write the physical properties of Ethanol.



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541. Explain the occurrence of carbon.

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542. Explain about allotropic forms of carbon.

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543. Explain the classification of hydrocarbons.

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544. Explain addition reactions.

 [Watch Video Solution](#)

545. What are ethers ? Give examples.

 [Watch Video Solution](#)

546. Why carbon does not form C^{4+} ?

 [Watch Video Solution](#)

547. Why does carbon form compounds mainly by covalent bonding?

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548. Allotropy is a property shown by which class of substances: elements, compounds or mixtures? Explain allotropy with suitable examples.

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549. Why is diamond hard ?

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550. Identify the unsaturated compounds of the following :



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551. Identify the unsaturated compounds of the following :



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552. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

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553. Define Isomerism.

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554. Draw the structure of isomers of butane.

 [Watch Video Solution](#)

 [Watch Video Solution](#)

555. What happens when a small piece of sodium is dropped into ethanol?

 [Watch Video Solution](#)

556. What type of reaction takes place between ethane and chlorine?

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557. What are the two properties of carbon which lead to the huge number of carbon compounds we see around us?

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558. Draw the structure for the following compounds : Propanoic acid

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559. Draw the structure for the following compounds : Chlorobutane

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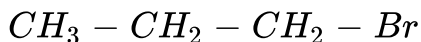
560. Draw the structure for the following compounds : Hexanone

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561. Draw the structure for the following compounds : Pentanal

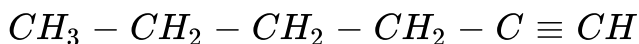
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562. How could you name the following compounds ?



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563. How could you name the following compounds ?



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564. An organic compound X with a molecular formula C_2H_6O undergoes oxidation with in presence of alkaline $KMnO_4$ to form a compound Y. X on heating in presence of con. H_2SO_4 at 443 k gives Z. Which on reaction with Br_2 and decolorizes, it. Identify X, Y and Z write the reactions involved.



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565. A mixture of oxygen and ethyne is burnt for welding. Can you tell why a mixture of ethyne and air is not used ?



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566. How do you prepare Ethanol from ethene?



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567. Write the names of the organic compounds which have the following structure : $CH_3 - CH_2 - CH_2 - CH_2 - CH_3$



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568. Draw the structure of isomers of butane.

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569. Draw the structure of: Ethanoic acid

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570. Draw the structures of the following : 2-Chloro Propene.

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571. Draw the structure of: propene

 [Watch Video Solution](#)

572. Draw the structures of the following : 2-Chloro Propene.

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573. Draw the structure of ethane and electron dot structure of chlorine.

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574. Draw the structure for the following compounds : Hexanone

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575. Draw the structure of:2-methyl propane

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576. Explain the possibility of bonds formation by a carbon atom with examples.

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577. Explain sp^2 hybridization with an example.

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578. Explain sp hybridization.

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579. How do you explain the ability of carbon atom to form one single bond and one triple bond?



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580. Explain the structures of Diamond.



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581. Write about the structures of buckminsterfullerene.



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582. Describe any two special types of Inflorescences.



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583. What is the information given by the IUPAC name of an organic compound ?

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584. Define substitution reaction and give an example.

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585. What is amine group ?

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586. Explain various types in amines.

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587. Give next Homologs of the following compounds and also give structure, formula and name : HCHO .

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588. Give next Homologs of the following compounds and also give structure, formula and name : CH_3OH

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589. What are the characteristics of homologous series ?

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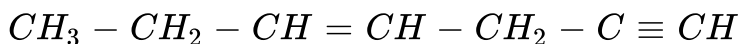
590. Write the IUPAC name of:



,

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591. Write the IUPAC names of the following compounds:



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592. Write the IUPAC names of the following compounds:



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593. Write the IUPAC names of the following compounds:



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594. Draw the electronic dot structure of ethane molecule(C_2H_6).

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595. Explain the structure of graphite in terms of bonding and give one property based on this structure.

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596. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate /

bicarbonate. Answer the following : Identify the organic compound.

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597. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : Write the chemical equation for the above reaction.

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598. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : Name the gas evolved.

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599. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : How will you test the gas evolved?

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600. An organic compound with molecular formula $C_2H_4O_2$ produces brisk effervescence on addition of sodium carbonate / bicarbonate. Answer the following : List two important uses of the above compound.

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601. Vinegar is a solution of

- A. 50 - 60 % acetic acid in alcohol
- B. 5 - 8% acetic acid in alcohol
- C. 5- 8% acetic acid in water
- D. 50 - 60% acetic acid in water

Answer:

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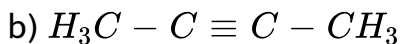
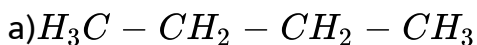
602. Pentane has the molecular formula C_5H_{12} . It has

- A. 5 covalent bonds
- B. 12 covalent bonds
- C. 16 covalent bonds
- D. 17 covalent bonds

Answer:

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603. Which among the following are unsaturated hydrocarbons?



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604. The heteroatoms present in

$CH_3CH_2 - O - CH_2 - CH_2Cl$ are a) Oxygen, b) Carbon, c)

Hydrogen, d) Chlorine

A. a and b

B. b and c

C. c and d

D. a and d

Answer:

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605. A molecule of ammonia (NH_3) has

A. only single bonds

B. only double bonds

C. only triple bonds

D. two double bonds and one single bond

Answer:

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606. Mineral acids are stronger acids than carboxylic acids because

- A. mineral acids are completely ionised
- B. carboxylic acids are completely ionised
- C. mineral acids are partially ionised
- D. carboxylic acids are partially ionised

Answer:



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607. The reaction of an alcohol with carboxylic acid is called

- A. Combustion
- B. Esterification
- C. Saponification

D. None of these

Answer:

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608. In the presence of concentrated sulphuric acid acetic acid reacts with ethyl alcohol to produce

A. Aldehyde

B. Alcohol

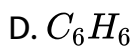
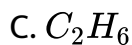
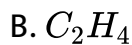
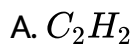
C. Ester

D. Carboxylic acid

Answer:

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609. Which of the following has shortest carbon-carbon bond length ?



Answer:



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610. Which of the following are isomers ?

A. Butane and Isobutene

B. Ethane and Ethene

C. Propane and Propyne

D. Butane and Isobutane

Answer:

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611. Which of the following statements are usually correct for carbon compounds ? These

a) are good conductors of electricity

b) are poor conductors of electricity

c) have strong forces of attraction between their molecules

d) do not have strong forces of attraction between their molecules .

A. a & c

B. b & c

C. a & d

D. b & d

Answer:

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612. Which of the following compound(s) decolourises Bromine water and also gives positive test with neutral $FeCl_3$ solution?

A. 1 and 2 only

B. 1,2 and 4 only

C. 2 and 4 only

D. 3 and 4 only

Answer:

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613. A spherical aggregate of soap molecules in water is called

- A. Hydrophilic end
- B. Hydrophobic end
- C. Miscelle
- D. Cation

Answer:



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614. Bad conductor of electricity is

- A. Graphite
- B. Graphen

C. Diamond

D. Nanotube

Answer:

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615. Sp^3 hybridization is found in

A. CH_4

B. C_2H_2

C. C_2H_4

D. C_2H_6

Answer:

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616. Which of the following is a good conductor of heat and electricity?

A. Anthracite

B. Charcoal

C. Diamond

D. Graphite

Answer:

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617. The functional group of Ketones is ____

A. -OH

B. -CHO

C. -O-

D.

Answer:

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618. Chief component of cooking gas is

A. Butane

B. Methane

C. Ethane

D. Octane

Answer:

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619. The functional group present in carboxylic acid is _____

- A. -OH
- B. -CHO
- C. -COOH
- D. -CO

Answer:

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620. The sodium salt of a long chain fatty acids is called _____

- A. An ester
- B. A detergent
- C. A soap

D. A fat

Answer:

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621. A dilute solution of ethanoic acid in water is called

A. Tincture of iodine

B. Fehling's solution

C. Vinegar

D. Tollen's reagent

Answer:

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622. Ethanol on oxidation gives

- A. Ethane
- B. Formalin
- C. Ethanoic acid
- D. Methane

Answer:

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623. Methane is a major constituent of _____

- A. Coal gas
- B. Water gas
- C. Petroleum

D. Bio gas

Answer:

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624. n-butane and iso butane are

A. Alkanes

B. Alkynes

C. Isomers

D. Polymers

Answer:

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625. What property of carbon allows it to form a large number of carbon compounds?

- A. Tetravalency
- B. Catenation
- C. Electronegativity
- D. Electropositivity

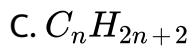
Answer:



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626. The general formula representing alkanes is.....

- A. C_nH_{2n}
- B. C_nH_{2n-1}



Answer:

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627. Compounds made up of carbon and hydrogen only are called

A. Alkanes

B. Alkenes

C. Alkynes

D. Hydrocarbons

Answer:

 [Watch Video Solution](#)

628. The IUPAC name of C_2H_2 _____

- A. Ethylene
- B. Ethene
- C. Etlyne
- D. Alkene

Answer:

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629. The portion left on dropping a hydrogen atom from an alkane is called__

- A. Functional group
- B. Alkenyl group

C. Alkyl group

D. Phenyl group

Answer:

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630. Open chain saturated hydrocarbons are called

A. Paraffins

B. Alkenes

C. Alkynes

D. Alkyl groups

Answer:

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631. Diamond and graphite are

- A. isomers
- B. Allotropes
- C. Homologous
- D. Metals

Answer:

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632. The functional group present in ethers is

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633. C_{60} has arranged by _____ pentagons and _____ hexagons.

A. 20, 12

B. 12, 20

C. 21,20

D. 12,01

Answer:



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634. Carbon compounds containing double and triple bonds are called _____

A. Saturated hydrocarbons

B. Unsaturated hydrocarbons

C. Semi saturated hydrocarbons

D. Hydrocarbons

Answer:

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635. The reaction of an alcohol with carboxylic acid is called

- A. Hydroxy
- B. Ester
- C. Benzene
- D. Ethyl alcohol

Answer:

 [Watch Video Solution](#)

636. The functional group present in methanol is ___

A. Alcohol

B. Acid

C. Ester

D. Ketone

Answer:



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637. IUPAC name of alkene containing 3 carbon atoms is ___

A. Propane

B. Propyne

C. Propene

D. Propylene

Answer:

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638. The first member of homologous series among alkynes is ____

A. Ethyne

B. ethyne

C. Pentyne

D. Butyne

Answer:

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639. Number of single covalent bonds in ammonia are

A. 2

B. 3

C. 4

D. 1

Answer:



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640. Type of reactions shown by alkanes is ____

A. Addition

B. thermal

C. Substitution

D. Chain

Answer:

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641. The distance between two graphite layers is

A. $3A$

B. 4

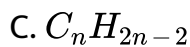
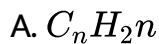
C. $33 \cdot 6A$

D. $3 \cdot 35A$

Answer:

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642. General formula of saturated hydro carbon is

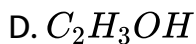
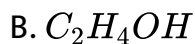
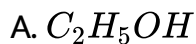


Answer:



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643. Give next Homologs of the following compounds and also give structure, formula and name : CH_3OH



Answer:

 [Watch Video Solution](#)

644. Alkaline hydrolysis of ester, producing soaps is called _____

- A. 1. Carbonation
- B. 2. esterification
- C. 3. Calcination
- D. 4. Saponification

Answer:

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645. C_2H_2 : sp :: CH_4 : _____

A. Sp

B. sp^2

C. sp^3

D. sp°

Answer:



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646. IUPAC name of glycerol is

A. Propane

B. propaol

C. Propane 1, 2,3-diol

D. Propane 1, 2, 3- triol

Answer:

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647. Carbon compounds having same molecular formula but different properties are known as

- A. Isomers
- B. homologues
- C. Carboxyles
- D. Monomers

Answer:

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648. Carbon has _____ electrons in its valence shell.

A. 2

B. 4

C. 6

D. 8

Answer:



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649. The first two members of alkene series is

A. Methene, ethene

B. Methane, ethane

C. Ethene, propene

D. Ethyne, propyne

Answer:

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650. _____ is also known as marsh gas.

A. Methane

B. Ethane

C. Propane

D. Butane

Answer:

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651. Biogas on burning does not create _____

A. Hydrocarbons

B. pollution

C. noise

D. heat

Answer:



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652. Natural gas is mixture of gaseous _____

A. Hydrocarbons

B. esters

C. acid

D. bases

Answer:

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653. Combustion reaction of carbon i) requires O_2 ii) releases heat
iii) releases CO_2

A. (i) is true

B. (ii) is true

C. (i) & (ii) are true

D. All are true

Answer:

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654. Black lead is

- A. Coal
- B. Charcoal
- C. Graphite
- D. graphene

Answer:

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655. Carbon compounds have usually low melting points and boiling points because they are_____in nature

- A. covalent
- B. Ionic

C. Chemical

D. Gases

Answer:

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656. Compounds made up of carbon and hydrogen only are called

A. Hydroxy

B. Carboxy

C. Carbohydrates

D. Hydrocarbons

Answer:

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657. C_nH_{2n} is the general formula of _____ hydrocarbons.

- A. Unsaturated
- B. Saturated
- C. Semi saturated
- D. Super saturated

Answer:

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658. Ethene and ethyne are examples of ____ hydrocarbons

- A. Saturated
- B. Unsaturated

C. Semi saturated

D. Super saturated

Answer:

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659. Ethyne has _____ carbon-hydrogen single bonds.

A. 3

B. 4

C. 2

D. 1

Answer:

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660. The IUPAC name of ethylene is _____

- A. Ethane
- B. Ethene
- C. Ethyne
- D. Ethyl

Answer:

 [Watch Video Solution](#)

661. The sodium salt of a long chain fatty acids is called _____

- A. Sodium salt
- B. Acidic fat
- C. Detergent

D. Soap

Answer:

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662. Aromatic compounds readily undergo _____substitution reactions.

A. Addition

B. Substitution

C. Thermal

D. Oxidation

Answer:

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663. Chloromethane _____

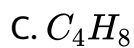
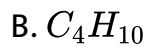
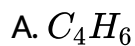


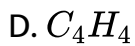
Answer:



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664. Butene _____



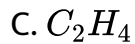
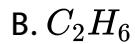
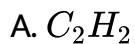


Answer:



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665. Ethylene _____



Answer:



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666. In which of the following state carbon undergoes hybridisation?

- A. Ground state
- B. First excited state
- C. Second excited state
- D. In atomic state

Answer:

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667. Diamond is hard. This is due to

- A. Strong bonds
- B. Network structure

C. High refractive Index

D. All the above

Answer:

 [Watch Video Solution](#)

668. C_{60} also called

A. Nanotubes

B. Stem tubes

C. Buckminsterfullerene

D. All the above

Answer:

 [Watch Video Solution](#)

669. Nanotubes were discovered by

A. Kroto & Smalley

B. F.Curi

C. Sumio Iijima

D. Pauling

Answer:

 [Watch Video Solution](#)

670. The versatile nature of carbon is due to

A. Forms large number of compounds

B. Catenation

C. Forms various types of bonds

D. All the above

Answer:

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671. Structural Isomers differ in

A. Molecular formula

B. Structures

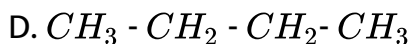
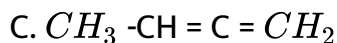
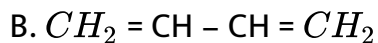
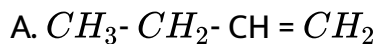
C. Nature of atoms

D. All the above

Answer:

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672. Which of the following is correct structure for But - 1, 2 - diene ?



Answer:



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673. Reaction between methane (CH_4) and chlorine In presence of sunlight is a

A. Oxidation reaction

B. Combustion reaction

C. Addition reaction

D. Substitution reaction

Answer:



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674. Carbon compounds containing double and triple bonds are called _____

A. Saturated compounds

B. Unsaturated compounds

C. Cyclo compounds

D. Aromatic compounds

Answer:



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675. Carbon undergoes hybridisation in excited state. The energy for excitation is obtained from

- A. Neighbouring atoms
- B. From bond energies
- C. Self generated
- D. All

Answer:



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676. Diamond and graphite are Allotropes of carbon. Graphite is good conductor but not diamond. This is due to:

- A. 1. Tetrahedral arrangement of carbons in diamond
- B. 2. Trigonal arrangement of carbons in graphite
- C. 3. Delocalised π electron system in graphite
- D. 4. Delocalised π electron system in diamond

Answer:

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677. Ethanoic acid reacts with ethanol in presence conc. H_2SO_4 .

This is called esterification. Which of the following is incorrect about above process ?

- A. Product has sweet smell
- B. (Picin the end)Product contain functional group
- C. The IUPAC name of product is ethyl ethanoate

D. It is an oxidation reaction

Answer:

 [Watch Video Solution](#)

678. Explain sp^3 hybridization in methane.

A. Sp^3

B. $sp^2 A$

C. Sp

D. $sp^3 d$

Answer:

 [Watch Video Solution](#)

679. Hybridisation and bond angle in ethene is

- A. $Sp^3, 120^\circ$
- B. $Sp^2, 120^\circ$
- C. $Sp, 180$
- D. $sp^3, 109^\circ 28'$

Answer:

 [Watch Video Solution](#)

680. Diamond and graphite are

- A. Strong electrostatic forces
- B. London dispersion-Bond forces
- C. Ionic forces

D. Dipole – dipole forces

Answer:

 [Watch Video Solution](#)

681. Which of the following scientist disproved vital force theory?

A. Berzelius

B. Wurtz

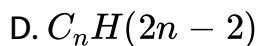
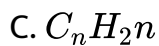
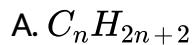
C. Wohler

D. Kolbe

Answer:

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682. Alkyl group is represented by

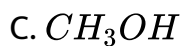
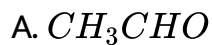


Answer:



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683. The molecular formula of formaldehyde is



D. CH_3COOH

Answer:

 [Watch Video Solution](#)

684. The nature of second grade functional groups is given by

- A. Primary prefix
- B. Secondary prefix
- C. Primary suffix
- D. Secondary suffix

Answer:

 [Watch Video Solution](#)

685. Conversion of ethyl alcohol into Acetic acid is

A. Combustion

B. Oxidation

C. Addition

D. Substitution

Answer:

 [Watch Video Solution](#)

686. Unsaturated carbon compound usually give

A. Combustion

B. Oxidation

C. Addition

D. Substitution

Answer:

 [Watch Video Solution](#)

687. Vegetable oils contains

- A. Saturated long chain fatty acid
- B. Saturated long chain alcohols
- C. Unsaturated long chain fatty acid
- D. Unsaturated long chain alcohols

Answer:

 [Watch Video Solution](#)

688. Gasohol is a mixture of

- A. Alcohol + ether
- B. Alcohol + water
- C. Alcohol + gasoline
- D. Alcohol + Kerosene

Answer:

 [Watch Video Solution](#)

689. Alkaline hydrolysis of fats is called

- A. Esterification
- B. Saponification
- C. Hydrolysis

D. Hydrogenation

Answer:

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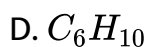
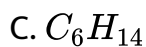
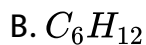
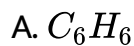
690. The solvent in colloidal solution is

- A. Solution
- B. Dispersion medium
- C. Dispersion phase
- D. Suspension

Answer:

 [Watch Video Solution](#)

691. Hexane _____



Answer:

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692. Assertion (A): Carbon cannot form C^{4-} ions so easily. Reason (R): It would be difficult for a nucleus with six protons to hold ten electrons.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:

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693. P: Carbon absorb the energy to getExcited state. q: The energy required for excitation carbon taken up from bond energies when bonds are formed

- A. P and q are true

B. P is true but is false

C. P is false but q is true

D. P and q are false

Answer:

 [Watch Video Solution](#)

694. Assertion (A) : Diamond is one of the hardest materials.

Reason (R): The C-C bonds in diamond are very strong and requires large amounts of energy to distroy.

A. Both 'A' and 'R are true and 'R' is the correct explanation of 'A'

B. Both 'A And 'R' are true but 'R' does not the correct explanation of 'A'

C. 'A' is true but 'R' is false

D. A is false but 'R' is true

Answer:



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695. Assertion (A) : $CH_3-CH_2-CH_2-CH_3$, and are isomers. Reason (R) : Isomers have different molecular formulae and same properties.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:

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696. (A) : Carbon forms a large number of compounds

(R) : Carbon has high catenation power

A. (i)

B. (ii)

C. (iii)

D. None

Answer:

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697. Assertion (A): CH_4 , C_2H_6 , C_3H_8 is a homologous series.

Reason (R) : A homologous series of carbon compounds which two successive compounds differ by-CH unit.

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R' is false
- D. A is false but 'R' is true

Answer:



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698. (A): An oxidation reaction requires oxygen always.(B) : A combustion reaction requires oxygen always.

- A. Both A and B are true
- B. Both A and B are false
- C. 'A' is true but 'B' is false
- D. 'A' is false but 'B' is true

Answer:

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699. Assertion (A) : Unsaturated organic compounds undergo substitution reactions. Reason (R) : Unsaturated organic compounds contain $=$ or \equiv bonds.

- A. Both 'A' and R' are true and 'R' is the correct explanation of 'A

B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'.

C. 'A' is true but 'R' is false

D. A is false but R' is true

Answer:

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700. P : Particles in a true solution are less than 1 nm in diameter.

Q: Particles in a colloidal solution are greater than 1 nm but lesser than 1000 nm in diameter.

A. P is true

B. q is true

C. A and B

D. P and q are false

Answer:

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701. Assertion (A): Fats are sold in state at room temperature.

Reason (R): Fats contains saturated fatty acids.

A. Both 'A' and 'R' are true and 'R' is the correct explanation of

'A'

B. Both 'A' and 'R' are true but 'R' does not the correct

explanation of 'A'

C. 'A' is true but 'R' is false

D. A is false but R is true

Answer:



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702. Alkanes are also known as

- A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'
- B. Both 'A' and 'R' are true but 'R' does not the correct explanation of 'A'
- C. 'A' is true but 'R is false
- D. A is false but R is true

Answer:



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703. Predict a substance which can be used as a good conductor and also as a lubricant.

- A. Graphite
- B. Diamond
- C. Graphene
- D. Nanotubes

Answer:

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704. What is the product when carbon undergoes combustion reaction?

- A. CH_4

B. CO_2

C. C_2H_5OH

D. Above all

Answer:



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705. What will happen if soap solution Add to dirty grease ?

A. It forms micelle

B. It forms acetic acid

C. It forms methanol

D. If forms esters

Answer:



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706. Assertion (A) : Micelles present in water will attracts each other. Reason (R) : Micelles exhibits ion – ion attraction in water.

- A. A and R are true
- B. A and R are false
- C. A is true but R is false
- D. A is false but R is true

Answer:

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707. There is a substance 'P', it has a sweet odour. The 'P' may be

- A. Ethanoic acid

B. Ehanol

C. Sodium bicarbonate

D. Ethyl acetate

Answer:



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708. + $O_2 \rightarrow CO_2$ + heat.

A. Sulphur

B. Helium

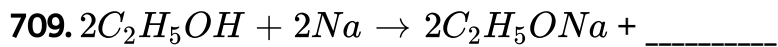
C. Carbon

D. Chlorine

Answer:



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A. CO_2

B. H_2

C. O_2

D. CH_4

Answer:



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710. Grease + soap $\xrightarrow{\text{water}}$

A. Ethanol

B. Micelle

C. Oil

D. Ester

Answer:

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711. CH_4 : Substitution Reaction:: C_2H_2 :

A. Oxidation reaction

B. Reduction reaction

C. Addition reaction

D. Fermentation

Answer:

 [Watch Video Solution](#)

712. Which of the following is formed when ethyl alcohol is treated with Con H_2SO_4 at $170^\circ C$?

- A. Ethanal
- B. Ethene
- C. Ethane
- D. Ethanol

Answer:

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713. The product that is formed by dehydration of ethanol in conc. Sulphuric acid is

- A. Ethane

B. Methane

C. Ethane

D. Ethyne

Answer:



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714. _____ reacts with sodium metal to produce hydrogen gas.

A. Alcohol

B. Aldehyde

C. Ester

D. Ketone

Answer:



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715. When ethanoic acid is heated with Ethanol and conc. _____ compound formed is ethyl ethanoate.

A. HCL

B. HNO_3

C. H_2SO_4

D. CH_3COOH

Answer:

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716. An organic compound 'X' with a molecular formula C_2H_6O undergoes oxidation with alkaline $KMnO_4$ and forms the

compound 'Y', that has molecular formula $C_2H_4O_2$. Identify "X" and "Y".

- A. Acetic acid, ethyl alcohol
- B. Acetic' acid, ethyl acetate
- C. Ethyl alcohol, acetic acid
- D. Ethyl alcohol, ethyl acetate

Answer:



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717. A few drops of ethanoic acid were added to solid sodium carbonate. The possible results of the reactions are

- A. A hissing sound was evolved
- B. Brown fumes evolved

- C. Brisk effervescence occurred
- D. A pungent smelling gas evolved

Answer:

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718. If 2ml of acetic acid was added slowly in drops to 5ml of water then we will notice

- A. The acid forms a separate layer on
- B. Water forms a separate layer on top of acid
- C. Formation of clear and homogeneous solution
- D. Formation of a pink and clear solution

Answer:

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719. Which one is required to prepare vinegar ?

- A. Ethyl acetate
- B. Ethanoic acid
- C. Ehanol
- D. Ethen

Answer:



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720. Take Ethanol in a test tube add metallic sodium to it. If you test the liberated gas with a burning, sprint

- A. Will put off

B. Will put off with a pop sound

C. Will light very bright

D. Will give fumes

Answer:



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721. $C_6 = 1s^2 2s^2 2p^6$ and the given element i) C has 6 electrons, 6 protons and 6 neutrons ii) C is a metal iii) C can form 6 covalent bonds

A. is true

B. (ii) is true

C. (ii) and (iii) are true

D. All are true

Answer:

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722. The carbon can form:

- i) All single bonds
- ii) One double and two single bonds
- iii) One single and one triple bond

A. is true

B. (ii) is true

C. (ii) and (iii) are true

D. All are true

Answer:

 [Watch Video Solution](#)

723. CH_4 has _____ bonds.

- A. Four sp-s
- B. Four $sp^2 - s$
- C. Four $sp^3 - s$
- D. Four sp – sp

Answer:

 [Watch Video Solution](#)

724. Name the bonds in the given molecules i) CH_4 ii) C_2H_4 iii)

C_2H_2

- A. I -single, ii -double, iii -triple
- B. I -triple, ii – double, iii – single

C. i-double,ii-triple, iii-single

D. All are single bonds

Answer:

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725. i) CH_4, C_3H_5, C_3H_6 , ii) $CH_3OH, C_2H_5OH, C_3H_8OH$ iii)

$C_8H_{16}, C_9H_{18}, C_{10}H_{20}$, Which of the above is a homologous

series ?

A. (i)

B. (ii)

C. (iii)

D. (ii) and (iii)

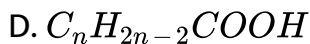
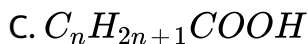
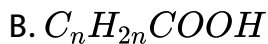
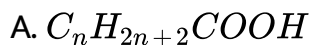
Answer:



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726. What is the general formula for the homologous series,

$CH_3COOH, C_2H_5COOH, C_3H_7COOH$ _____



Answer:



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727. Cyclo butane, the primary prefix is

A. Cyclo

B. but

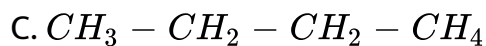
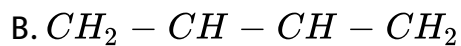
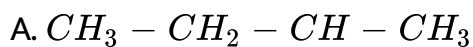
C. an

D. E

Answer:

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728. Which of the following is an incorrect structure ?



D. Above all

Answer:

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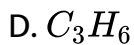
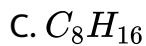
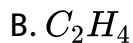
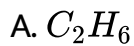
729. Which of the following is not a compound of C, H and O?

- A. Alcohol
- B. Aldehyde
- C. Ether
- D. Amine

Answer:

 [Watch Video Solution](#)

730. Which of the following is not an alkene?

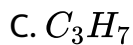
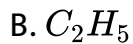


Answer:



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731. Which of the following is not belongs to C_nH_{2n+1}



D. None

Answer:

 [Watch Video Solution](#)

732. Which of the following is not a saturated hydrocarbon?

- A. Hexane
- B. Benzene
- C. Butane
- D. Isobutane

Answer:

 [Watch Video Solution](#)

733. Which of the following is not a amorphous form of carbon ?

- A. Soap
- B. Fullerence
- C. Diamond
- D. Graphite

Answer:

 [Watch Video Solution](#)

734. Which of the following is alkane?

- A. C_4H_{10}
- B. C_4H_8
- C. C_4H_6
- D. C_6H_6

Answer:

 [Watch Video Solution](#)

735. Which of the following has a foot-ball like structure?

- A. Diamond
- B. Nanotubes
- C. Buckminsterfullerenes
- D. All the above

Answer:

 [Watch Video Solution](#)

736. Which of the following is closed chain hydrocarbon?

- A. Butane
- B. Pentane
- C. Cyclo pentane
- D. Neo pentane

Answer:

 [Watch Video Solution](#)

737. The isomer of n-butane is

- A. 2-methyl propane
- B. 2-methyl butane
- C. 2 – butene
- D. 3 -methyl butane

Answer:

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738. What are the characteristics of homologous series ?

- A. have one general formula
- B. Have similar functional group
- C. Similar chemical properties
- D. All the above

Answer:

 [Watch Video Solution](#)

739. Which of the following is not a amorphous form of carbon ?

A. Coal

B. Coke

C. C_{60}

D. Gas carbon

Answer:



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740. In which of the following molecule $sp^2 - sp^2$ σ bond is present ?

A. 1. C_2H_2

B. 2. C_2H_4

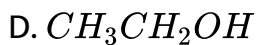
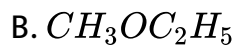
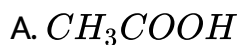
C. 3. C_2H_6

D. 4. C_2H_8

Answer:

 [Watch Video Solution](#)

741. Which of the following is ester?



Answer:

 [Watch Video Solution](#)

742. Wohler Friedrich is appreciable because, he prepared _____ in lab

- A. Nanotubes
- B. Organle urea
- C. Bucky balls
- D. Ester

Answer:

 [Watch Video Solution](#)

743. Graphite is appreciable because it used to making of

- A. Organie urea
- B. Nanotubes

C. Conductors

D. Papers

Answer:

 [Watch Video Solution](#)

744. This reaction helps us in cooking

A. Combustion

B. Oxidation

C. Esterification

D. Saponification

Answer:

 [Watch Video Solution](#)

745. Drunken drive related to

A. Alcohol

B. Ester

C. Acid

D. Ketone

Answer:



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746. Esters are appreciable because they have

A. Aromatic smell

B. Gold colour

C. Light weight

D. Above all

Answer:

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747. Hydrocarbons are appreciable because they are used as

A. Oxidizing agents

B. Conductors

C. Fuels

D. Catalysts

Answer:

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748. Assertion (A): Graphite is used as lubricant and as the lead in pencils.

Reason (R) : Graphite has a sp hybridization.

- A. 1. Both 'A' and "R" are true and 'R' is the correct explanation of 'A'
- B. 2. Both 'A' and R' are true but 'R' does not the correct explanation of 'A'
- C. 3. 'A' is true but 'R' is false
- D. 4. A' is false but 'R' is true

Answer:



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749. Why do sometimes cooking vessels get blackened on a gas or kerosene stove?

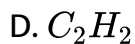
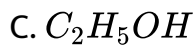
- A. Insufficient fuel
- B. Insufficient air
- C. Insufficient ignition
- D. Above all

Answer:

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750. Cooking gas contains

- A. C_4H_{10}
- B. CH_4



Answer:

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751. Micelles are found in

A. Tea

B. Soap water

C. Alcohol

D. Venegar

Answer:

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752. Vinegar _____

- A. Ethanoic acid
- B. Preservative
- C. Sour is taste
- D. Above all

Answer:

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753. Ripped fruits contain

- A. Butane
- B. Alcohol
- C. Ester

D. Above all

Answer:

 [Watch Video Solution](#)

754. Alcoholic drinks contain

A. Ester

B. Soap

C. Ethanol

D. Venegar

Answer:

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755. Which of the following is better cooking ?

- A. 1. Vegetable oils
- B. 2. Animal fat oils
- C. 3. Hydrogenated oils
- D. 4. Vanaspathi

Answer:



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756. Scientists inserted bio molecules into _____ to inject them into a single cell

- A. Graphite
- B. Graphene

C. Nanotube

D. Bucky balls

Answer:

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757. Pencil lead is

A. 1. Graphite

B. 2. Graphene

C. 3. Nanotube

D. 4. Bucky balls

Answer:

 [Watch Video Solution](#)

758. Which of the following give aromatic smell ?

A. Alcohol

B. Ester

C. Acid

D. Vinegar

Answer:



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