



CHEMISTRY

BOOKS - NAVNEET PUBLICATION

CARBON: AN IMPORTANT ELEMENT

Examples

1. What are the different types of muscles?



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2. What remains behind on complete combustion of any organic compound?



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3. What type of element is carbon? Give some information about it?



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4. How are the compounds formed?



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Exercise

1. Fill in the blank:

Fullerence is anof carbon.



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2. Fill in the blank:

.....is the main element in cellular DNA and

RNA.



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3. Fill in the blank:

The charcoal is anform of carbon.



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4. Fill in the blank:

Diamond is.....conductor of electricity.



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5. Graphite is a



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6. Choose the correct alternative and write it along with its allotted alphabet :

..... is a good conductor of electricity.



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7. Fill in the blank:

Charcoal is.....and therefore it has low density.



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8. Fill in the blank:

Fullerene are used as a.....in water purification.



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9. Fill in the blank:

In the earth's crust carbon is present to the extent of approximately.....in the form of carbonate, coal, petroleum.



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10. The aliphatic unsaturated hydrocarbons containing at least one carbon-carbon triple bond are called as_____.



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11. Fill in the blank:

.....is the main element in cellular DNA and RNA.



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12. Choose the correct alternative and write it along with its allotted alphabet:

What is the property of oxides of non-metals?

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: A



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13. Choose the correct alternative and write it along with its allotted alphabet:

What is the comparison of CO_2 in terms of heaviness with air?

- A. Lighter than air
- B. Heavy as equal to air
- C. Heavier than air
- D. It is not fixed

Answer: C



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14. Choose the correct alternative and write it along with its allotted alphabet:

Which acid is formed when CO_2 dissolves in water?

- A. Carbonic acid
- B. Hydrochloric acid
- C. Acetic acid
- D. Lactic acid

Answer: A



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15. Choose the correct alternative and write it along with its allotted alphabet:

Which of the following has pH 7?

A. Oxygen

B. Hydrogen

C. Nitrogen

D. Carbon dioxide

Answer: D



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16. Choose the correct alternative and write it along with its allotted alphabet:

Which are the gases formed in a biogas plant?

A. CO , CH_4

B. CH_4 , CO_2

C. CO_2 , O_2

D. N_2 , S_2

Answer: B



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17. Choose the correct alternative and write it along with its allotted alphabet:

.....is used to extinguish fires



Answer: A



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18. Choose the correct alternative and write it along with its allotted alphabet:

When diamond is heated at $800^{\circ}C$ in the presence of oxygen.....is given out.



Answer: A



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19. Choose the correct alternative and write it along with its allotted alphabet:

Methane burns with aflame.

A. yellow

B. lilac

C. blue

D. green

Answer: C



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20. select the proper option and complete the statement:

(single, all, double, ionic, carbon, give and take, hydrogen, multiple bond, share, organic, covalent)

A carbon atom forms a.....bond with other atoms. In this bond the two atoms.....electrons.



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21. select the proper option and complete the statement:

(single, all, double, ionic, carbon, give and take, hydrogen, multiple bond, share, organic, covalent)

All the carbon bonds in a saturated hydrocarbonelectron.



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22. select the proper option and complete the statement:

(single, all, double, ionic, carbon, give and take, hydrogen, multiple bond, share, organic, covalent)

At least one carbon bond in an unsaturated hydrocarbon is.....



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23. select the proper option and complete the statement:

(single, all, double, ionic, carbon, give and take, hydrogen, multiple bond, share, organic,

covalent)

.....is the essential element in all the organic compounds.



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24. select the proper option and complete the statement:

(single, all, double, ionic, carbon, give and take, hydrogen, multiple bond, share, organic, covalent)

The element hydrogen is present in.....compound.



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25. State whether the following statements are True or False:

All plant and animal products contain carbon as their main constituent.



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26. State whether the following statements are True or False:

Sulphur is a naturally occurring allotropic element.



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27. State whether the following statements are True or False:

The graphite is a non-crystalline form of carbon.





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28. State whether the following statements are True or False:

Fulereces were named after the architect Richard Buckminster Fuller.



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29. State whether the following statements are True or False:

The graphite found in nature is a bad conductor of heat and electricity.



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30. State whether the following statements are True or False:

Charcoal is porous, therefore, it has low density.



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31. State whether the following statements are

True or False:

Plants make their own food by using oxygen.



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32. State whether the following statements

are True or False:

Methane is a natural fuel.



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33. State whether the following statements are True or False:

Methane has two carbon atoms and four hydrogen atoms.



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34. State whether the following statements are True or False:

Carbon dioxide is heavier than air.



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35. State whether the following statement are

True or False:

Diamond is the softest natural substance.



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36. State whether the following statements

are True or False:

Methane occurs in natural gas to the extent of

47 % .



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37. State whether the following statements are

True or False:

Methane is used for the production of organic compound such as acetylene.



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38. State whether the following statements

are True or False:

Our life is dependent on carbon compounds.



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39. Find the off one out and give the reason:

Sugar, paper, cotton, sodium chloride



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40. Find the off one out and give the reason:

Anthracite, charcoal, bituminous coal, peat



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41. Find the off one out and give the reason:

Carbon, silicon, sulphur, phosphorus



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42. Find the off one out and give the reason:

coke, diamond, graphite, fullerene



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43. Find the odd one out and give the reason:

Ethane, ethene, ethyne, propene



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44. Find the odd one out and give the reason:

Methane, ethane, ethene, propane



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45. Match the columns:

(1) Column I	Column II
(1) Fullerene	(a) Na_2CO_3
(2) Graphite	(b) Cutting metals
	(c) Hexagonal arrangements of atoms
	(d) C_{60}



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46. Match the columns:

(2) Column I	Column II
(1) Methane	(a) Amorphous form of carbon
(2) Anthracite	(b) Carbon dioxide
	(c) Marsh gas
	(d) 95 % carbon



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47. Match the columns:

(4) Column I	Column II
(1) Propane	(a) Four C – H bonds
(2) Ethene	(b) Triple bond
	(c) Single bond
	(d) Double bond



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48. Answer the question

State the occurrence of carbon.



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49. Answer the question

In which compound forms does carbon occurs?



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50. Answer the question

Classify carbon.



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51. Answer the question

Explain the properties of carbon.



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52. Answer the question

What is meant by allotrope?



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53. State whether the following statements are True or False:

Sulphur is a naturally occurring allotropic element.



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54. Answer the question

Name the hardest allotrope of carbon.



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55. Answer the question

Which allotrope of carbon is used to cut glass?



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56. Answer the question

State the shape of graphite crystal.



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57. Answer the question

Which allotrope of carbon is used in ornaments?



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58. Answer the question

Which allotrope of carbon is used to make electrodes?



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59. Answer the question

In how many forms does carbon exhibit allotropy? Explain with suitable examples.



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60. Answer the question

State two physical properties of crystalline form of carbon.



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61. Answer the question

Write any two physical properties of diamond.



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62. Give the uses of diamond.



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63. Give the properties of graphite.



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64. Give the uses of graphite.



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65. Answer the question

Write any two properties of fullerene.



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66. Answer the question

Write any two uses of fullerene?



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67. Answer the question

How did coal form in nature?



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68. Answer the question

State the type of coal with the percentage of carbon in it.



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69. Answer the question

Name the hardest form of coal.



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70. Answer the question

How is charcoal made?



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71. Give the uses of Coke.



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72. Answer the question

Write two physical properties of charcoal.



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73. Answer the following questions: Why are carbon and its compounds used as fuels for most application?



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74. Answer the question

What are the various sources of carbon dioxide?



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75. Answer the question

How is carbon dioxide gas produced in the laboratory?



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76. Answer the question

Write the physical properties of carbon dioxide.



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77. Give the uses of Carbon dioxide.



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78. Which of the following is used in fire extinguishers ?



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79. Answer the question

Which gas is used to produce aerated cold beverages?



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80. Answer the question

Write the reaction that takes place while extinguishing fire.



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81. Answer the question

How will you verify the peroperties of carbon dioxide?



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82. What are saturated hydrocarbons? Give examples.



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83. Answer the question

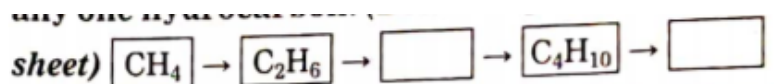
Name the first compound of hydrocarbon.



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84. Answer the question

Complete the following sequence of hydrocarbons and explain the chemical bond of any one hydrocarbon.



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85. What are unsaturated hydrocarbons? Give examples.



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86. Answer the following questions :

Classify into saturated and unsaturated hydrocarbons :

Methane

Ethane

Ethene

Ethyne

Propene

Propyne

Butane

Cyclohexene

Cyclopentane

Heptane.



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87. Answer the following questions :

What is meant by a covalent bond?



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88. Give the properites of covalent compounds.



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89. Answer the question

Write the molecular formula of methane.



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90. Answer the question

How many atoms of carbon and hydrogen are present in the molecule of methane?



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91. Answer the question

How is methane gas prepared in the laboratory?



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92. Answer the question

What are the various sources of methane?



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93. Answer the question

State the properties of methane.



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94. Give the uses of methane.



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95. Graphite diamond and fullerece are the polymorphic forms of _____.



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96. Methane is also called as..... .



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97. Explain the following:

Petrol, diesel, coal are fossil fuels.



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98. Explain the following:

Uses of various allotropes of carbon.



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99. Explain the following:

Use of CO_2 in fire extinguisher.



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100. Practical uses of CO_2 .



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101. Give Scientific reasons: Graphite is a good conductor of electricity.



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102. Give scientific reasons:

Graphite is not used in ornaments.



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103. Limewater turns milky when CO_2 is passed through it.



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104. Give scientific reasons:

Diamonds are used in rock drilling machines.



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105. Give scientific reasons:

Coke produces more heat than coal.



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106. Give scientific reasons:

Biogas is an eco-friendly fuel.



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107. Give scientific reasons:

Carbon dioxide is used in fire extinguishers.



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108. Give scientific reasons:

Methane is used as fuel.



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109. Give the scientific reasons:

The valency of carbon is 4.



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110. Use your brain power

Is the density CO_2 more or less than that of air?



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111. Distingusih between crystalline and amorphous solids.



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112. Distinguish between Diamond and Graphite.



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113. Describe the following chemical reactions giving their balanced equations:

Carbon dioxide is passed through a solution of sodium carbonate.



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114. Explain the following reactions with the help of balanced equations:

Carbon dioxide reacts with Water



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115. Explain the following reaction giving their balanced chemical equations:

Carbon dioxide gas is passed through lime water.



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116. Give balanced equation

Methane burnt in air



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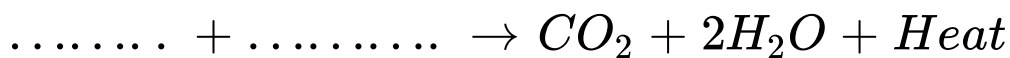
117. Describe the following chemical reactions giving their balanced equations:

Methane reacts with chloride in the presence of uv light at the temperature $250^{\circ}C - 400^{\circ}C$.



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118. Complete the following chemical reactions:





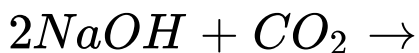
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119. Complete the following chemical reactions:



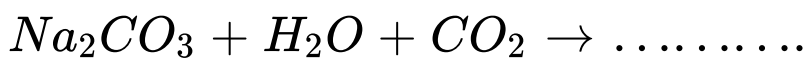
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120. Complete the following chemical reactions:



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121. Complete the following chemical reactions:



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