



CHEMISTRY

BOOKS - NAVNEET PUBLICATION

COMPOSITION OF MATTER

Question Bank

1. What are the various states of matter ?



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2. What is the difference in ice, water and steam ?



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3. What are the smallest particles of matter called?

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4. What are types of matter?

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5. Classify the following matter into three groups. Cold drink, air sherbet, soil, water, wood, cement.

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6. What are the states of matter that you used as criteria for the above classification ?

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7. Rewrite the sentence after filling the blank :

---- have no definite shape, but have a definite volume.

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8. Rewrite the sentence after filling the blank :

---- have neither a definite shape nor a definite volume.

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9. Rewrite the sentence after filling the blank :

The properties of a----are different than those of the constituent elements.

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10. Rewrite the sentence after filling the blank :

The part of matter having uniform composition is called----

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11. Rewrite the sentence after filling the blank :

The heterogeneous mixture of a liquid and a solid is called a--

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12. Rewrite the sentence after filling the blank :

A Colloid is a ----

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13. Rewrite the sentence after filling the blank :

Bronze contains atoms of the elements ----and---- .

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14. Rewrite the sentence after filling the blank :

When all the components of a mixture form one phase, it is called ----

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15. Rewrite the sentence after filling the blank :

---- is mixture of water, lactose, fats and proteins.

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16. Rewrite the sentence after filling the blank :

The intermolecular force is ---- in the gaseous state.

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17. Choose the appropriate option and rewrite the following statement :

The intermolecular force is ---- in the particles of solid.

A. minimum

B. moderate

C. maximum

D. indefinite

Answer: A



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18. Choose the appropriate option and rewrite the following statement :

Solids retain their volume even when external pressure is applied. This property is called ----.

A. plasticity

B. incompressibility

C. fluidity

D. elasticity

Answer: A::C

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19. Choose the appropriate option and rewrite the following statement :

Matter is classified into the types mixture, compound and element, by applying the criterion ----.

A. states of matter

B. phases of matters

C. chemical composition of matter

D. all of these

Answer: A:C

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20. Choose the appropriate option and rewrite the following statement :

Matter that contain two or more constituent substances is called ----.

A. mixture

B. compound

C. element

D. metalloid

Answer:



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21. Choose the appropriate option and rewrite the following statement :

Milk is an example of type of matter called ----.

A. solution

B. homogeneous mixture

C. heterogeneous mixture

D. suspension

Answer:



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22. Choose the appropriate option and rewrite the following statement :

Water, mercury and bromine are similar to each other, because the three are ----.

A. liquids

B. compounds

C. nonmetals

D. elements

Answer: D



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23. Choose the appropriate option and rewrite the following statement :

Valency of carbon is 4 and that of oxygen is 2. From this, we understand that there are ---- chemical bond/bonds between the carbon atom and one oxygen atom in the compound- carbon dioxide.

A. 1

B. 2

C. 3

D. 4

Answer: B



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24. Choose the appropriate option and rewrite the following statement :

When a liquid is poured from one container to another, its shape may change, but its volume ----

- A. increases
- B. decreases
- C. remains the same
- D. none of them

Answer: A



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25. Choose the appropriate option and rewrite the following statement :

The property by which some solids maintain their shape even when subjected to external forces is called ----.

A. elasticity

B. fluidity

C. rigidity

D. plasticity

Answer: D



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26. Choose the appropriate option and rewrite the following statement :

---- is a complex compound.

A. Glucose

B. Blue vitriol

C. Chlorophyll

D. soda

Answer: C



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27. Choose the appropriate option and rewrite the following statement :

---- is a homogeneous mixture.

A. Sand + water

B. Flour + water

C. Salt + water

D. Oil + water

Answer: A



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

Liquids do not have a definite shape.



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

Gases have a definite shape and volume.

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

The crystals of blue vitriol form a single phase.

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31. State whether the following statement are True or False :

Water is a mixture.

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32. State whether the following statement are True or False :

Milk is a colloid.

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

A suspension dose not scatters light.

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

Copper sulphate is a mixture.

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35. State whether the following statement are True or False :

An atom forms as many chemical bonds with other atom as its valency.

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36. State whether the following statement are True or False :

The strength of intermolecular forces is weak in the liquid state.

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37. State whether the following statement are True or False :

All the gases present together constitute a single phase.

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38. Identify the odd term :

Gold, silver, copper, brass.

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39. Identify the odd term :

Hydrogen, hydrogen peroxide, carbon dioxide, water vapour.

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40. Identify the odd term :

Milk, lemon juice, carbon, steel,

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41. Identify the odd term :

Water, mercury, bromine, petrol.

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42. Identify the odd term :

Sugar, salt, baking soda, blue vitriol.

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43. Identify the odd term :

Hydrogen, sodium, potassium, carbon.

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44. Match the column :

(1) Column I	Column II
(1) Potassium dichromate	(a) Complex compound
(2) Cyanocobalamine	(b) Element
(3) Air	(c) Compound
(4) Silver	(d) Mixture

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45. Match the column :

(2) Column I	Column II
(1) Milk	(a) Alloy
(2) Lemonade	(b) Colloid
(3) Sand and water	(c) Solution
(4) Brass	(d) Suspension

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46. Match the column :

(3) Column I	Column II
(1) Sea water	(a) Solid in solid
(2) Vinegar	(b) Solid in liquid
(3) Air	(c) Liquid in liquid
(4) Bronze	(d) Gas in liquid
(5) Chlorinated water	(e) Gas in gas

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47. Answer the following question in one sentence :

Why dose a solid have definite volume ?

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48. Answer the following question in one sentence :

Why dose a liquid have indefnite shape ?



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49. Answer the following question in one sentence :

Why dose a gas have indefinite volume and shape ?



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50. Answer the following question in one sentence :

What can you say about the distance between the neighbouring particles of solid ?



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51. Answer the following question in one sentence :

What can you say about the distance between the constituent particles of gas ?

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52. Answer the following question in one sentence :

State whether the mixture of oil in water is a homogeneous or heterogeneous mixture.

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53. Answer the following question in one sentence :

State whether sea water is a homogeneous or heterogeneous mixture.



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54. Answer the following question in one sentence :

Give two examples of liquid in liquid.



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55. Answer the following question in one sentence :

Give two examples of gas in gas.



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56. Answer the following question in one sentence :

Give two examples of solid in solid.



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57. Answer the following question in one sentence :

Give two examples of gas in liquid.

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58. Answer the following question in one sentence :

Give molecular formulae of (1) potassium chloride (2) sodium sulphide

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59. Answer the following question in one sentence :

State the molecular formula and number of hydrogen atoms

in methane.



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60. Answer the following question in one sentence :

Identify the valency of chlorine in (i) KCl and (ii) CaCl



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61. Answer the following question :

State two principal ways of classifying matter.



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62. Answer the following question :

What are the different states of matter ?

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63. Answer the following question :

Define solid.

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64. Answer the following question :

State any three characteristics of solids.

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65. Answer the following question :

What is meant by rigidity of solids ?

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66. Answer the following question :

What is meant by elasticity of solids ?

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67. Answer the following question :

What is meant by plasticity ?

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68. Answer the following question :

Solids have a high density and negligible compressibility.

Explain.

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69. Answer the following question :

Define liquid.

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70. Answer the following question :

State any three characteristics of liquids.

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71. Answer the following question :

What is meant by fluidity ?

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72. Answer the following question :

Liquids have fluidity and they do not have a definite shape.

Explain.

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73. Answer the following question :

Define gas.

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74. Answer the following question :

State any three characteristics of gases.

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75. Answer the following question :

Gases have neither a definite shape nor a definite volume.

Explain.

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76. Answer the following question :

Why are gases more compressible, than liquids ?

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77. Answer the following question :

What is an element ? Give two examples.

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78. Answer the following question :

Write any two characteristics of an element.

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79. Answer the following question :

What is a compound ? Give two examples.

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80. Answer the following question :

Write any two characteristics of a compound.



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81. Answer the following question :

What is a mixture ? Give two examples.



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82. Answer the following question :

Write any two characteristics of a mixture.



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83. Answer the following question :

Classify the following into elements, compounds and mixtures : Sugar, sodium, nitrogen, sodium carbonate, air, sulphuric acid, mercury, stainless steel, cement, potassium dichromate.

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84. Answer the following question :

Sea water tastes salty due to the dissolved salt. The salinity (the proportion of salts in water) of some water bodies Lonar lake - 7.9 % , Pacific Ocean 3.5 % , Mediterranean sea - 3.8 % , Dead sea - 33.7 % . Explain two characteristics of mixture from the above information.

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85. Answer the following question :

Chemical composition of some matter is given in the following table. Identify the main type of matter from them.

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86. Answer the following question :

Write the composition of the following materials by means of chemical formulae and classify them accordingly.

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87. Answer the following question :

What is meant by an organic compound ? Give two examples.



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88. Answer the following question :

What is meant by an inorganic compound ? Give two examples.



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89. Answer the following question :

What is meant by complex compounds ? Give two examples.



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90. Answer the following question :

Plants synthesize glucose in sunlight with the help of chlorophyll from carbon dioxide and water and give away oxygen. Identify the four compounds in this process and name their types.

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91. Answer the following question :

Classify the following compounds into organic compounds, inorganic compounds and complex compounds. Petrol, common salt, hemoglobin, blue vitriol, cyanocobalamin, cooking gas.

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92. Answer the following question :

What is a phase ?

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93. Answer the following question :

What is a homogeneous mixture ? Give two examples.

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94. Answer the following question :

What is a heterogeneous mixture ? Give two examples.

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95. Answer the following question :

Define solution or What is meant by a solution ? Give two examples.



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96. Answer the following question :

What is meant by a solvent ?



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97. Answer the following question :

Define solvent. Give two examples.



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98. Answer the following question :

What is meant by a solute ?

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99. Answer the following question :

Define solute. Give two examples.

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100. Answer the following question :

Define suspension.

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101. Answer the following question :

What is meant by a suspension ?

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102. Answer the following question :

Define colloid.

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103. Answer the following question :

State the characteristics of a solution.

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104. Answer the following question :

State the characteristics of a suspension.

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105. Answer the following question :

State the characteristics of a colloid.

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106. Answer the following question :

Give two examples of each of the following :

Phase

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107. Answer the following question :

Give two examples of each of the following :

Homogeneous matter

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108. Answer the following question :

Give two examples of each of the following :

Heterogeneous matter

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109. Answer the following question :

Give two examples of each of the following :

Homogeneous mixture



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110. Answer the following question :

Give two examples of each of the following :

Heterogeneous mixture



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111. Answer the following question :

Give two examples of each of the following :

Solution



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112. Answer the following question :

Give two examples of each of the following :

Suspension

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113. Answer the following question :

Give two examples of each of the following :

Colloid

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114. Answer the following question :

State the different types of solutions. Give one example.

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115. Answer the following question :

Classify the following into homogeneous solution and heterogeneous solution:

Soda water, potassium permanganate solution, milk, alcohol in water, ink solution, wheat flour in water.

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116. Answer the following question :

Classify the following into solution suspension and colloids:

Milk, sand in water, lemonade, smoke, oxygen in water.

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117. Answer the following question :

In one sample of brass, the following ingredients were found : copper (70 %) and zinc (30 %). Identify the solvent, solute and solution from these.



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118. Give two examples of :

Liquid element.



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119. Give two examples of :

Gaseous element.



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120. Give two examples of :

Solid element.



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121. Give one example of each

Homogeneous mixture.



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122. Give two examples of :

Colloid



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123. Give two examples of :

Organic compound

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124. Give two examples of :

complex compound.

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125. Give two examples of :

Inorganic compound.

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126. Give two examples of :

Metalloid.



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127. Give two examples of :

Element with valency 1.



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128. Give two examples of :

Element with valency 2.



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129. Write the names and symbols of the constituent elements and identify their valencies from their molecular formula given below:

KCl,

HBr,

MgBr₂, K₂O, NaH, CaCl₂, Cl₄, HI, H₂S, Na₂S, FeS, BaCl₂

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130. What is meant by molecular formula ?

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131. What is meant by valency of elements?

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132. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

C (Valency 4) and Cl (Valency 1)

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133. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

N (Valency 3) and H (Valency 1)

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134. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

C (Valency 4) and) O (Valency 2)

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135. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

Ca (Valency 2) and O (Valency 2)

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136. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

H (Valency 1) and O (Valency 2)

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137. Deduce the molecular formulae of the compound obtained from the following pairs of elements by the cross multiplication method.

Fe (Valency 2) and S (Valency 2)

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138. The valencies of the atom H, O and N are 1, 2 and 3 respectively. The molecular formulae of these gaseous elements are H_2 , O_2 and N_2 respectively. How many chemical bonds are there in each of these molecules ?

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139. Give scientific reasons:

Hydrogen is combustible, oxygen helps combustion, but water helps to extinguish fire.

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140. Give scientific reasons:

The constituent substances of a colloid cannot be separated

by ordinary filtration.



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141. Give scientific reasons:

Lemon sharbat has sweet ,sour and salty taste and it can be poured in a glass.



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142. Give scientific reasons:

A solid matter has the properties of definite shape and volume .



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143. Give scientific reasons: Hydrogen is an element.

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144. Give scientific reasons:

Water is a compound

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145. Give scientific reasons:

Air is a mixture

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146. Give scientific reasons:

A potassium permanganate solution in water is a homogeneous solution in water is a homogeneous mixture, while a mixture of oil and water is a heterogeneous mixture

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147. Give scientific reasons:

Milk is a colloid.

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148. Distinguish between the following :

Solids and Liquids:

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149. Distinguish between the following :

Liquids and Gases:

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150. Distinguish between the following :

Solids and Gases:

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151. Distinguish between the following :

Element and Compound:

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152. Distinguish between the following :

Compound and Mixture:

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153. Distinguish between the following :

Colloids and Suspension:

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154. Complete the following : Complete the table:

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155. Complete the following : Complete the table:



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156. Complete the following : Complete the table:



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