



CHEMISTRY

BOOKS - MBD

MATTER IN OUR SURROUNDINGS

Example

1. What is matter?



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2. Give reason for the following observation:

The smell of hot sizzling food reaches you several metres away, but to get the smell from cold food you have to go close.



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3. A diver is able to cut through water in a swimming pool, which property of matter does this observation show.



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4. What are the characteristics of the particles of matter?



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5. The mass per unit volume of a substance is called density.(density=mass/volume). Arrange the following in order of increasing density - air, exhaust from chimneys, honey water, chalk, cotton and iron,



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6. Tabulate the difference in the characteristics of states of matter.



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7. Comment upon which of the following are matter: rigidity, fluidity, filling a gas container, shape, kinetic energy and density.



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8. Give reason : A gas fills completely the vessel in which it is kept.



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9. Give reason : a gas exerts pressure on the walls of the container.



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10. Give reason : A wooden table should to be called a solid.



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11. Give a reason : We can easily move our hand in air but to do the same in solid block of wood we need a Karate expert.



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12. Liquids generally have lower density as compared to solids. But you must have observed that ice floats on water. Find out why?



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13. Convert the following temperature to celsius scale: 300 K ?



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14. Convert the following temperature to celsius scale: 573 K ?



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15. What is the physical state of water at: $250^{\circ}C$?



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16. What is the physical state of water at:
 $100^{\circ}C$?



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17. For any substance, Why does the temperature remain constant during the change of state?



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18. Suggest a method to liquefy atmospheric gases.



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19. Why does a desert cooler cool better on a hot dry day ?



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20. How does the water kept in an earthen pot (matka) become cool during summer ?



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21. Why does our palm feel cold when we put some acetone or petrol or perfume on it?



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22. Why are we able to sip hot tea or milk faster from saucer rather than a cup ?



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23. What type of clothes should we wear in summer ?



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24. Convert the following temperature to the Celsius scale : 293 K



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25. Convert the following temperature to the Celsius scale :470 K



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26. Convert the following temperatures to the

Kelvin scale : $25^{\circ} C$



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27. Convert the following temperatures to the

Kelvin scale : $1373^{\circ} C$



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28. Give reason for the following observations:

Naphthalene balls disappear with time without leaving any solid.



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29. Give reason for the following observations

: We can get the smell of perfume sitting several metres away.



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30. Arrange the following substances in increasing order of forces of attraction between the particles— water, sugar, oxygen.



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31. What is the physical state of water at :
 $25^{\circ}C$



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32. What is the physical state of water at : $0^{\circ}C$



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33. What is the physical state of water at :
 $100^{\circ}C$



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34. Give two reasons to justify that :Water at room temperature is a liquid.



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35. Give two reasons to justify that :An iron almirah is a solid at room temperature.



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36. Why is ice at 273 K more effective in cooling than water at the same temperature ?

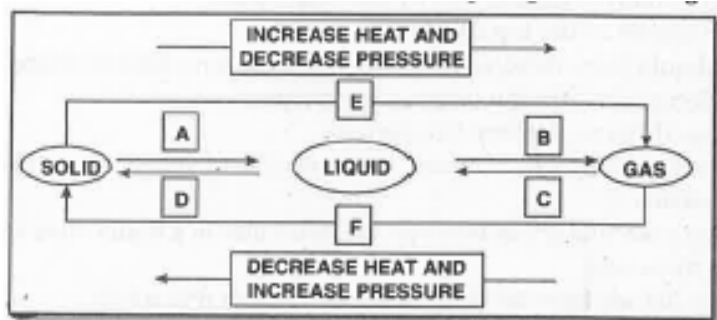


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37. What produces more severe burns : boiling water or steam ?

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38. Name A, B, C, D, E and F in the following diagram showing state change



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39. Give important characteristics of solid state.



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40. Give important characteristics of the liquid state.



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41. Give important characteristics of gas.



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42. Give the main postulates of kinetic theory of matter.



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43. Distinguish between solids, liquids and gases.



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44. How will you explain the three states of matter on the basis of Kinetic Model ?



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45. Define the terms given below and answer the questions associated with them. Sublimation: Which of the following substances sublime ? Ice, mercury, dry ice, iodine.



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46. Define the terms given below and answer the questions associated with them. Solid: Why do not solids diffuse in one another?



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47. Define the terms given below and answer the questions associated with them. Liquid: Why do liquids flow?



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48. Define the terms given below and answer the questions associated with them. Freezing point: What is the freezing point of water?



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49. Define the terms given below and answer the questions associated with them. Gas :Why are gases compressible and show diffusion ?



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50. What are the necessary conditions for a substance to be a solid?



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51. What are the necessary conditions for a substance to be a Liquid ?



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52. What are the necessary conditions for a substance to be a Gas?



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53. What are the two new states of matter in addition to solid, liquid and gases states ?



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54. Heat, light, shadow, love, radio waves are not considered as matter, why ?



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55. Solids have definite shapes and volumes, why ?



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56. Why is sponge solid although it can be compressed ?



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57. Rubber band can change its shape, is it a solid ?



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58. Indicate which of the following don't constitute matter ? Car, truck, heat, light, sound, TV waves, radio waves, cement, love, hate, cotton cloth, rock.



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59. What happens when the vacant spaces between the particles of a liquid decreases ? How is this possible ?



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60. Why do we observe water droplets on the outer surface of a glass containing ice cold water ?



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61. Why should we wear cotton clothes in summer ?



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62. Name the change of state during the following changes :Drying of wet clothes.



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63. Name the change of state during the following changes :Melting of wax when kept in sunshine.



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64. Name the change of state during the following changes : Melting of ice.



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65. Name the change of state during the following changes : Formation of cloud.



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66. Name the change of state during the following changes : Naphthalene balls become smaller when kept in air.



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67. State your observations in the following cases : Ammonium chloride is heated in a hard glass test tube.



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68. State your observations in the following cases : Carbon dioxide is compressed to 70 times the atmospheric pressure.



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69. What is the difference between gas and vapour ?



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70. Why does a gas fill the container completely ?



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71. How is the liquid state different from the gaseous state ?



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72. Complete the following statements : The process of liquid changing into solid is called..... .



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73. Complete the following statements : The process of gas changing into liquid called..... .



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74. Complete the following statements : The process of liquid changing into gas is called.....

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75. Complete the following statements : The temperature at which a solid changes into a liquid is called



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76. What are the uses of interconversion of matter ?



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77. Give the important properties on the basis of which the three states of matter can be distinguished.



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78. What is the importance of (a) melting point of solid and (b) boiling point of a liquid ?



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79. Give two differences between boiling and evaporation.



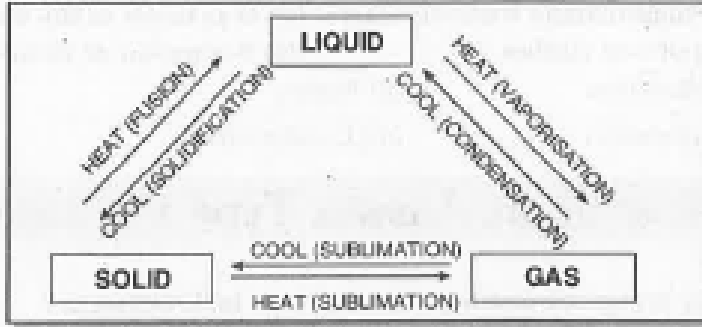
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80. Name five substances which are solids, five substances which are liquids and five substances which are gaseous at room temperature.



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81. Represent interconversion of states by using a figure.



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82. State what is observed when iodine is heated in a test tube

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83. Why do gases have neither a definite shape nor a definite volume ?



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84. Give an experiment to prove that gases are more compressible as compared to liquids.



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85. which phenomenon occurs during the following changes : Size of naphthalene balls decreases



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86. Which phenomenon occurs during the following changes : Wax melts in the sun



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87. Which phenomenon occurs during the following changes : Drying of wet clothes.



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88. Which phenomenon occurs during the following changes : Formation of clouds.



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89. Why do things around our surroundings look different ?



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90. Define matter.



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91. Give five examples of matter.



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92. What are Panch Tatva ?



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93. Name the Panch Tatva ?



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94. How many basic elements were there according to ancient greek philosophers ?



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95. What are the basic elements according to greek philosophers ?



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96. How do modern day scientists classify matter ?



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97. How is matter produced ?



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98. Why does a large volume of water get coloured due to a few crystals of potassium permanganate ?



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99. How small are particles of matter ?





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100. What is in between particles of matter ?



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101. Why do common salt, sugar and dettol dissolve in water?



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102. Why does the smell of lighted incense stick spreads out to a large space ?



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103. Why does common salt dissolve in water ?



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104. How will you check purity of honey ?



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105. What is the effect of temperature on the particles ?



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106. Why are particles of a matter always in motion ?



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107. Define diffusion.



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108. What is the effect of temperature on diffusion ?



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109. What is the effect of pressure on particles of a matter ?



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110. What are the different stages of matter based upon physical states ?



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111. Give three characteristics of solids.



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112. What is the effect of applied force on solids ?



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113. Rubber band can change its shape when stretched ? Is it a solid ?



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114. Sugar, common salt etc. take the shape of containers although these are solids?



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115. Why does a rubber can be compressed ?



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116. What is liquid ?



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117. Due to which property aquatic animals survive in water ?



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118. Name the gas which gets dissolved in water and is necessary for plants.



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119. Which form of matter can diffuse in liquids ?



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120. Liquids show faster diffusion than solids.
Why ?



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121. Out of solids, liquids and gases which show maximum compressibility ?



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122. Which compressed gas is used in automobiles ?



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123. Which gas is used as fuel in houses ?



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124. The smells of perfume and lighted incense stick spread rapidly, why ?



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125. What are the different states of water ?



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126. Give characteristics of solids.



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127. Give characteristics of liquids



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128. Give characteristics of gases.



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129. Give four examples each of solids, liquids and gases.



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130. What is the full form of CNG ?



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131. Why do solids have definite shapes ?



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132. Why does a tyre can be inflated with large volume of air ?



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133. Why don't gases have definite shapes and volumes?



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134. How many states of water are there ?



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135. The temperature at which a solid melts is called..... ?



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136. What is the SI unit of temperature ?



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137. $0^{\circ} C = \dots\dots K.$



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138. How is kelvin temperature changed to centigrade temperature ?



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139. How is centigrade temperature changed in kelvin temperature ?



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140. Define fusion.



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141. What is the boiling point of water ?



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142. Define sublimation.



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143. What is dry ice ?



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144. What is the unit of pressure ?



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145. What is the SI unit of pressure ?



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146. What is normal atmospheric pressure ?



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147. How does a liquid change into vapour without boiling ?



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148. Give one example of evaporation.



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149. Name the process of conversion of liquid into gaseous state without boiling.



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150. Name the factors which increase rate of evaporation ?



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151. Why rate of evaporation increases with the increase in temperature.



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152. Why do clothes dry faster with the increase in speed of wind ?



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153. What is humidity ?



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154. How is evaporation related to humidity ?



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155. Why are clothes spread out for drying ?



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156. How is cooling related to evaporation ?



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157. Why should we wear cotton clothes in summer ?



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158. How are particles present in plasma ?



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159. What is present in florescent tube and neon bulb ?



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160. Why do sun and stars glow ?



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161. Why is plasma produced in stars ?



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162. How is BEC produced ?



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163. Who were awarded Noble Prize for Bose-Einstein Condensate state ?



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164. Which website is used to get information regarding fourth and fifth state of matter ?



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165. The phenomenon occurring during drying of wet clothes is



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166. The intermolecular spaces are..... in solids



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167. A vapour on cooling changes into..... and on further cooling change into.... .



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168. Matter changes from one state to another either by raising the or lowering the.... .



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169. A vapour on cooling changes into..... and on further cooling change into.... .



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170. The intermolecular spaces are in solids and.... in gaseous.



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