

Question 1

The behaviour of matter in different states is governed by various physical laws. According to you what are the factors that determine the state of matter?

Solution:

The factors that determine the states of matter can be determined by 2 laws. Charles Law It states that when pressure is kept constant, the volume of an ideal gas (V) is directly proportional to the absolute temperature (T). $V_1/T_1 = V_2/T_2$ Boyle's Law. It states that when the temperature is kept constant, the pressure of the given mass of an ideal gas (P) is inversely proportional to the volume(V). $P_1V_1 = P_2V_2$ If we combine two laws, $P_1V_1/T_1 = P_2V_2/T_2$ So we get to know that pressure, volume and temperature along with mass are the factors which determine the state of matter.