

Answer on Question 62223, Physics, Other

Question:

9) The law that states that the volume of a gas is directly proportional to its temperature in kelvins if the pressure and the number of particles is constant is

- a) Bose's law
- b) Kelvin's law
- c) Boyle's law
- d) Charles's law

Answer:

Charles's law states that the volume of the gas is directly proportional to its temperature in kelvins if the pressure and the number of particles is constant. Therefore, the correct answer is d).

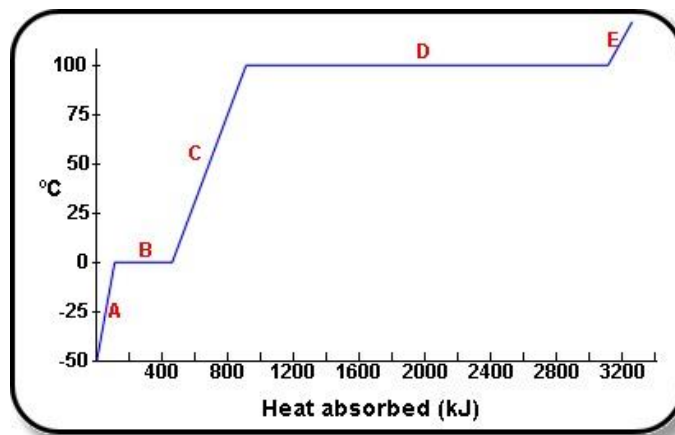
10) If you move a substance from one container to another and its volume changes, the substance is a

- a) solid
- b) liquid
- c) gas
- d) both b and c

Answer:

Since gases have no definite volume or shape, they can spread out and change their volume to fill up whatever container in which they are contain. Thus, the correct answer is c).

11) Use the graph below to answer the question:



What phase(s) of matter are present in section "D" of the above graph?

- a) solid
- b) liquid
- c) gas
- d) both b and c

Answer:

As we can see from the graph, during section "D" occurs the absorption of latent heat of vaporization to change the phase from the liquid (water) at 100°C to the gas (vapor) at 100°C. Therefore, in section "D" of the above graph two phases of matter are present: liquid and gas. Thus, the correct answer is d).