

- Ans.** (a) Water at 25°C is present in the liquid state.
- (b) At 0 °C, water can exist as both solid and liquid. At this temperature, after getting the heat equal to the latent heat of fusion, the solid form of water i.e., ice starts changing into its liquid form i.e., water.
- (c) At 100 °C, water can exist as both liquid and gas. At this temperature, after getting the heat equal to the latent heat of vaporization, water starts changing from its liquid state to its gaseous state, i.e., water vapours.

6. Give two reasons to justify—

- (a) Water at room temperature is a liquid.
- (b) An iron almirah is a solid at room temperature.

Ans. (a) At room temperature (25 °C), water is a liquid because its freezing point is 0°C and boiling point is 100°C.

(b) An iron almirah is a solid at room temperature (25 °C) because-

- (i) It has a definite shape and volumes like a solid at room temperature.
- (ii) It is rigid as solid at room temperature.

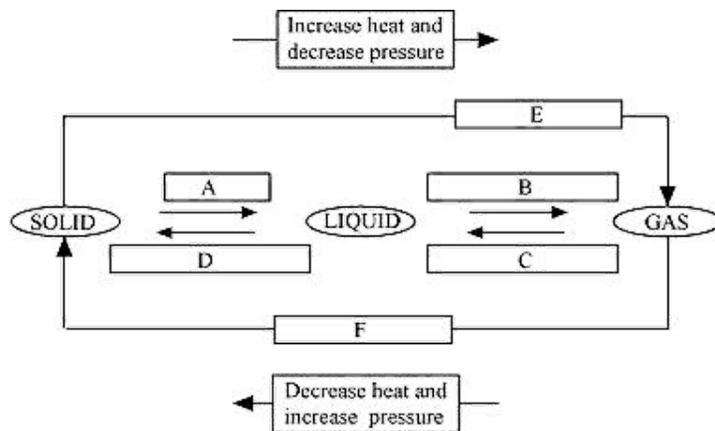
7. Why is ice at 273 K more effective in cooling than water at the same temperature?

Ans. Ice at 273 K has less energy than water (although both are at the same temperature). Water possesses the additional latent heat of fusion. Hence, at 273 K, ice is more effective in cooling than water.

8. What produces more severe burns, boiling water or steam?

Ans. Steam has more energy than boiling water. It possesses the additional latent heat of vaporization. Therefore, burns produced by steam are more severe than those produced by boiling water.

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



Ans.

