

1. What is the physical state of matter at 25°C?

- A. Gas B. Liquid
C. Solid D. Plasma (B)

Explanation: Water at 25°C exists in liquid state as this is above its melting point and below its boiling point.

2. Which process changes a solid directly into a gas?

- A. Condensation B. Sublimation
C. Melting D. Evaporation (B)

Explanation: Sublimation is the process where a solid changes directly into gas without passing through the liquid state.

3. What is the SI unit of temperature?

- A. Celsius B. Fahrenheit
C. Kelvin D. Pascal (C)

Explanation: The SI unit of temperature is Kelvin (K), which is used in scientific measurements.

4. Which state of matter has the least force of attraction between particles?

- A. Solid B. Liquid
C. Gas D. Plasma (C)

Explanation: Gases have the weakest intermolecular forces, allowing particles to move freely.

5. Which factor does NOT increase the rate of evaporation?

- A. Increase in surface area
B. Increase in wind speed
C. Increase in humidity
D. Increase in temperature (C)

Explanation: High humidity reduces the rate of evaporation because the air already contains more water vapour.

6. Which term describes the heat required to convert 1 kg of solid into liquid at its melting point?

- A. Specific heat
B. Latent heat of fusion
C. Boiling point
D. Latent heat of vaporization (B)

Explanation: Latent heat of fusion is the heat energy required to change 1 kg of solid into liquid at its melting point.

7. What happens to the temperature during melting of ice?

- A. It increases continuously B. It decreases
C. It remains constant D. It becomes zero (C)

Explanation: During melting, temperature remains constant as heat is used to overcome the forces of attraction.

8. What is the temperature of water in Kelvin when it is boiling?

- A. 273 K B. 300 K
C. 373 K D. 473 K (C)

Explanation: Water boils at 100°C, which is equal to 373 K.

9. Which state of matter has a definite volume but no definite shape?

- A. Solid B. Liquid
C. Gas D. Plasma (B)

Explanation: Liquids have a fixed volume but take the shape of the container.

10. Why does camphor disappear without leaving any residue?

- A. It melts B. It dissolves
C. It evaporates D. It sublimates (D)

Explanation: Camphor changes directly from solid to gas through sublimation.