Chapter 1 - Matter

A. Objective Questions

1. Write true or false for each statement

(a) The temperature of a substance remains unaffected during its change of state.

Solution: True.

(b) Ice melts at 100°C.

Solution: False.

(c) Water at 100°C has more heat than the steam at 100°C.

Solution: False.

(d) Evaporation of a liquid causes cooling.

Solution: True.

(e) Water evaporates only at 100°C.

Solution: False.

(f) Boiling takes place at all temperatures.

Solution: False.

(g) Evaporation takes place over the entire mass of the liquid.

Solution: False.

(h) The process of a gas converting directly into gas is called vaporisation.

Solution: False.

(i) At high altitudes, water boils above100°C.

Solution: False.

(j) The melting point of ice is 0°C.

Solution: True.

2. Fill in the blanks

(a) Evaporation takes place at **all** temperature.

(b) **Freezing** process is just the reverse of melting.

(c) **Sublimation** is a process that involves the direct conversion of a solid into its vapour on heating.

(d) The temperature at which a solid convert into a liquid is called it's **melting point**.

(e) The smallest unit of matter that exists freely in nature is called **molecule.**

(f) Molecules of a substance are always in a state of **motion,** and so they possess **kinetic energy**.

(g) Intermolecular space is maximum in **gases** less in **liquids** and the least in **solids.**

(h) The intermolecular force of attraction is maximum in **solids**, less in **liquids** and the least in **gases**.

3. Match the following:

Column A	**Column B**
(a) Molecules	(i) water boils
(b) 100°C	(ii) evaporation
(c) 0°C	(iii) changes from solid to gas
(d) At all temperatures	(iv) matter

(e) Camphor (v) water freezes

Solution:

Column A	**Column B**
(a) Molecules	(iv) matter
(b) 100°C	(i) water boils
(c) 0°C	(v) water freezes
(d) At all temperatures	(ii) evaporation
(e) Camphor	(iii) changes from solid to gas

4. Select the correct alternative

(a) The inter-molecular force is maximum in

1. Solids
2. Gases
3. Liquids
4. none of the above

Solution: 1. Solids

(b) The inter-molecular space is maximum in

1. liquids
2. solids
3. gases
4. none of the above

Solution: 3. Gases

(c) The molecules can move freely anywhere in

1. gases

2. liquids

3. solids

4. none of the above

Solution: 1. Gases

(d) The molecules move only within the boundary of

1. liquids

2. gases

3. solids

4. none of the above

Solution: 1. Liquids

(e) The temperature at which a liquid gets converted into its vapour state is called its

1. melting point

2 .boiling point

3. dewpoint

4. Freezing point.

Solution: 2. Boiling point

(f) Rapid conversion of water into steam is an example of

1. evaporation

2. freezing

3. melting

4. vapourization

Solution: 4. Vapourization

(g) Evaporation takes place from the

1. surface of liquid

2. throughout the liquid

3. mid-portion of the liquid

4 bottom of liquid.

Solution: 1. surface of liquid

(h) Boiling takes place from the

1. the surface of the liquid

2. throughout the liquid

3. mid-portion of liquid

4. none of the above.

Solution: 2. throughout the liquid