

Matter

1. What is Matter?

Ans. Matter is anything that is made up of one kind of particles called Substances and occupies space and has mass and can neither be created nor destroyed and can be perceived by the sense.

2. What are the physical properties of Matter?

Ans. The physical properties of matter are

Color: All matter can be distinguished by their varied- Colors.

Odor: Matter shows variation in odor or smell.

Solubility: Matter may vary in solubility in Water or other solvents.

Melting and Boiling Point: Substances show variation in their melting and boiling point.

3. What are the three states of matter?

Ans. The three main states of matter are

Solid

Liquid

Gases

4. What is Intermolecular Force?

Ans. the molecules in the matter always exert force of attraction on each other. This force is called Intermolecular Force of attraction.

5. What is the relation between Intermolecular Force and Intermolecular Space?

Ans. The force of attraction between the molecules of a given substance is called intermolecular force and the space between these molecules is called intermolecular space. The basic relation between the two is that they are inversely proportional to each other. More is the intermolecular force lesser is the intermolecular space and vice-versa.

6. Write down the difference between Solid, Liquid and Gases with their characteristics.

Characteristics	Solid	Liquid	Gases
Volume	Have a definite volume	Have a definite volume	Have no definite volume
Shape	Have a definite shape	Have no definite shape	Have no definite shape
Compressibility	Have no compressibility	Have slight Compressibility	Have high Compressibility
Diffusion	Have no diffusibility	Have slight diffusibility	Have high diffusibility.
Intermolecular Force	Maximum	Less than solid and greater than Gas	Very less
Intermolecular Attraction	Maximum	Less than solid and greater than Gas	Very less
Movement of particles	About their own position	In continuous motion	In any random direction

7. What are the effects of heat on Solid, Liquid, and Gas?

Ans. When a matter is heated any of the following can happen:

- a. Increase in temperature
- b. Expansion
- c. Change the state
- d. Change in chemical Nature

8. What is Freezing or Solidification?

Ans. Freezing means solidification. It is reversal of melting. The process in which liquid substance changes into solid is called Freezing.

9. What is Freezing Point?

Ans. The temperature at which temperature at which a liquid becomes a solid is called Freezing Point.

Ex: The freezing point of Water is 0°C .

10. What is Melting Point?

Ans. The melting point of a substance is the temperature at which it changes state from solid to liquid.

Ex: The melting point of Water is 0°C .

11. What is Vaporization or Evaporation?

Ans. The process in which liquid substance changes into a gas rapidly on heating, is called boiling.

12. What is Condensation or Liquefaction?

Ans. The process of changing gas to a liquid by cooling, is called Condensation.

13. What is Boiling Point?

Ans. The temperature at which temperature at which a liquid becomes vapor is called Boiling Point.

14. What is Condensation Point?

Ans. Condensation point is a temperature at which gas changes to liquid. Generally, boiling point is same as condensation point. For water boiling point is 100°C . So, condensation point is also 100°C

15. What is Brownian Motion?

Ans. The random Zig-Zag movement of particles suspended in air or water is called Brownian Motion.

In gases due to large intermolecular space the brawnier motion is maximum and in solid due to minimum intermolecular space the browner motion is minimum.

16. What is Diffusion?

Ans. Intermingling of particles of two different substances on their own is called Diffusion.

In solid particles do not diffuse while in gases they are diffuse rapidly.

17. What is Cohesive Force?

Ans. The inter-particle force of attraction between atoms or molecules of the same substance are called Cohesive Force.

The cohesive force is maximum in Solid and negligible in gases.