

Ans-

The force of attraction that holds the molecules together is known as inter-molecular force of attraction.

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Important Notes:-

~~The electrons~~ Due to electrostatic force between the nucleus and the electrons, the electrons revolve around the nucleus.

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EXERCISE - II

① Name the smallest particles from which matter is made up of.

Ans - The smallest particles from which matter is made up is atoms.

⑧ Give reasons:

- a) Liquids and gases flow but solids do not.
- b) A gas fills up the space available to it.
- c) The odour of scent spreads in a room.

d) We can walk through air.

e) Liquids have a definite volume but no definite shape.

f) When a teaspoon of sugar is added to half a glass of water and stirred, the water level in the glass remains unchanged.

g) When an empty glass jar is inverted over a gas jar containing a coloured gas, the gas also spreads into the empty jar.

h) A red ink drop added to a small amount of water in a glass turns the water red in some time.

Ans- a) The molecules of liquids and gases are far apart, i.e., ~~they~~ have more gaps, inter-molecular attraction force is very less as compared to solids. ~~Hence, liquids and gases can flow but solid cannot~~ whereas in solids, molecules are ~~less~~ closely packed and inter-molecular force of attraction is very strong. Hence, liquids and gases can flow, but solids do not flow.

b) In gases, the inter-molecular force of attraction is the least and the inter-molecular space is very large. Hence, a gas fills up the space available to it.

Molecules of

c) Scent or fumes, being gases, fill the spaces between the air molecules and the molecules of air fill the spaces between scent molecules.

Due to this inter-mixing of scent molecules and air molecules, the odour of scent spreads in a room.

d) The molecules of air have high inter-molecular ~~spacing~~ spacing between them.
This is why we can walk through air.

e) The molecules ^{of} liquid are loosely packed and have lesser inter-molecular ^{attraction} ~~forces~~ ~~that~~ than that of solid.

Hence, liquids have a definite volume but no definite ~~of~~ shape.

f) The sugar ~~molecules~~ ^{particles}, when added to water, adjust between the water molecules as there is ^{more} ~~less~~ inter-molecular space between them.

This is why, when a teaspoon of sugar is added to half a glass of water and stirred, the water level in the glass remains unchanged.

g) When an empty gas jar is inverted over a gas jar containing a coloured gas, the gas also spreads into the empty jar ~~too~~ because, gases can flow in all directions and ~~spread~~ ^{fills} the space available to it.

h) If we put a small amount of red ink ^{in water}, the water will turn red in colour after some time. This is because the particles of ink ~~mix~~ (diffuses) with the particles of water slowly and continuously and turns the water red in colour.

⑨ Define:

a) Cohesive force - The force of attraction between particles of the same substance is called cohesive force.

b) ~~Diffusion~~ Diffusion - The phenomenon of intermingling of particles of one substance with another substance is called diffusion.

of Brownian movement - The ~~motion~~ zig-zag motion of particles suspended in a medium is called the ~~Bo~~ Brownian movement.