

MATTER

1. Explain how gases can be liquefied?

Ans- When the gas is cooled because on cooling, the energy of particles decreases and their movement becomes slow. The space between the particles decrease and the force of attraction between them increases, so the gases are liquefied.

2. What is sublimation? Give examples.

Ans- The conversion of a sublimable substance into of a solid substance into its vapour state without undergoing liquid state on heating is called sublimation. Example- dry ice, iodine, camphor.

3. a) When air is blown into the bottle by keeping bottle inverted the air pressure inside the bottle will increase and will push the egg and excess air out of the mouth of the bottle.

b) A gas fills up the space available to

Ans- Intermolecular force of attraction least and intermolecular spaces are large, hence gases can fill up the space available to them.

c) The odour of scent ~~spra~~ spreads in a room.

Ans- Scent fumes (molecules) being a gas fill the spaces between air molecules and ~~the~~ the molecules of air fill the spaces between scent molecules due to diffusion, fumes spread into a room.

OR

Due to inter-mixing of scent molecules and air molecules, scent fumes spread into the room.

Q) We can walk through air.

Ans) - The molecules of air are far apart i.e. large gaps and we can walk through air easily.

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

Ans- The molecules of liquids are loosely packed and intermolecular force of attraction is small but number of molecules in it remain the same. Hence liquids have 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.

Ans- When a teaspoon of sugar is added to half a glass of water and stirred, the water level in the glass remains unchanged because the sugar ~~part~~ particles are adjusted between the water molecules as inter-molecular gaps are more in liquids.

g) When an empty gas jar is inverted over a gas jar containing a coloured

gas, the gas also spreads into the empty jar.

Ans- ~~When~~ This is because Gases can diffuse or flow in all directions.

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

Ans- When we put a drop of red ink in a glass of water, its particles diffuse with particles of water slowly but continuously and the turns red.