Dt-29-9-21

# CHEMISTRY
## Matter

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Q1) Explain how gases can be liquefied?

Ans Gases can be liquefied by the process of condensation or liquefaction. When a gas is cooling the energy of particles decreases and their movement become slow. The gap between particles decreases and the forces of attraction of particles increases as a result the gas change to liquid form.

Q2) What is sublimation? Give example.

Ans ~~The change of solid~~
Some substances directly change from the solid state to the gaseous state and vice-versa without passing through the liquid state. The conversion of a solid substance into its vapour on heating is called sublimation. Ex: Naphthalene balls, camphor etc.

$$\text{Solid} \underset{\text{cooling}}{\overset{\text{heating}}{\rightleftharpoons}} \text{Vapour}$$

Q3) Give reasons:

a) Liquids and gases flow but solids do not?

Ans In liquids and gases the molecules are not very closely packed. The intermolecular space are larger and the attraction between the molecules are very slow but in solid molecules are closely packed and the attraction between them are very strong. So, liquid and gases flow but solid do not.

c) The odour of scent spreads in a room.

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

b) Why is an egg kicked out of a bottle when air is blown inside the bottle ?.

Ans When we invert the bottle and blow air into the bottle throw the side opening. It creates high pressure inside the bottles and the egg is kicked out of the bottles.

d) We can walk through air.

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

e) Liquids have definite volume but no definite shape.

Ans The molecules of liquids are loosely packed and inter-molecular 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 teaspon 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 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 This is because gases can diffuse or flow in all directions.

h) A red ink drop added to 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 continuosly and the water turns red.