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Ch-3  
Matter

Date \_\_\_\_\_  
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① Explain how gases can be liquefied.  
and is given pressure.

Ans- When a gas is cooled, ~~the~~ the energy of its particles decreases and their movement becomes slow.

So, the gap between its particles will decrease while the force of attraction between them increases.

And, as a result, they will change into liquid state.

In this way, gases can be liquefied.

② ~~Give reasons~~ what is sublimation give examples.

Ans- The process by which, on heating, ~~the~~ a substance changes from solid state to its gaseous state without undergoing its liquid state is called sublimation.

Ex: → Naphthalene balls directly turn into vapour

→ Iodine.

→ Dry ice

→ Camphor.

③ Give ~~examples~~ reasons:

↳ liquids and gases flow but solids do not.

Ans- The molecules in liquids and gases are far apart from each other, i.e., they have greater inter-molecular space and weaker inter-molecular force of attraction than that of solids. Whereas, solids have very less or negligible intermolecular space and the strongest inter-molecular force of attraction. Hence, liquids and gases can flow but solids do not flow.

Q Why is an egg kicked out of a bottle when air is blown inside the bottle.

Ans- When we invert a bottle and blow air into it through the side opening, high pressure is created inside the bottle which kicks the egg out of the bottle.

Q The odour of scent spreads in a room.

Molecules of scent fumes, being gases, take up the spaces between the air molecules and the air molecules, in turn, take up the spaces between the molecules of scent fumes, due to diffusion.

That is why odour of scent spreads in a room.

d) we can walk through air.

Ans- The molecules of air have high inter-molecular spacing. Thus, we can walk through air.

e) liquids have definite volume but no definite shape.

Ans- The molecules of liquid are <sup>loosely</sup> ~~loosely~~ packed and have lesser inter-molecular attraction than that of solid.

Hence, liquids have a definite ~~shape~~ 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.

The sugar particles when added to water, adjust between the ~~molecules~~ water molecules as there is most intermolecular 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 glass gas jar is inverted over a gas jar containing a coloured gas, the gas also spreads into the empty jar.

Ans- When an empty gas jar is inverted over a gas jar containing a coloured gas, because gases can flow in all directions and fills the space available to it.

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

Ans- If we put a small amount of red ink in water, the water will turn red in some time. This is because the particles of ink mix (diffuse) with the particles of water slowly and continuously and turn the water red in colour.