

19-2021
MAY
H.W

* HOMEWORK QUESTION:

1. Explain how gases can be liquified?

The process by which gases can be liquified is known as condensation or liquefaction. When a gas is cooled because of cooling, the energy of particles decreases and their movement becomes slow. The gaps between the particles decrease causing an increase in the force of attraction between them. This is how gases can be liquified.

2. What is sublimation?

A process in which solid directly changes into gas is known as sublimation.

3. Give reasons:

(a) liquids and gases flow but solids do not?

In case of liquid and gases, the intermolecular space are larger than solids and the molecules are able to move about freely. But in solids the intermolecular spaces are very ~~small~~ small and thus solid don't flow but liquid and gases do.

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

Air expands when heated and contracts when it is cooled. When air is blown into the bottle through the sides, by keeping the bottle inverted, the pressure inside the bottle will increase and will push the egg and excess air out of the 'mouth of the bottle'.

(c) The odour of scent spreads in the room.

This is because the molecules of the scent diffuse with the molecules of air.

(d) We can walk through air.

As because the intermolecular force of attraction between the molecules of air is very less and they have ~~very~~ large intermolecular spacing, ~~so~~ we can walk through air.

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

As liquid can flow, when we keep it in any container it takes the shape of the container. This is why liquid has 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.

This is because: As sugar is soluble in water, the sugar particles are adjusted between the water molecules.

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

This is because the molecules of gas have large intermolecular spacing and very less intermolecular force of attraction, they flow all around the area provided to them.

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

This is because the molecules of the ink diffuse with the molecules of the water making it red in colour.