

What would you conclude from this imaginary demonstration.

ans - a) If @ sugar is added to pebbles taken in a plastic beaker we will see that the sugar will occupy space between the pebbles particles will get adjusted between ~~their~~ gaps between the pebbles.

b) If sand is added to glass ball taken in a beaker we will observe that the sand particles will get adjusted in the gaps between the glass ball.

He
29.9.21

Q. Explain How gases ^{can be} liquefied?

ans. When gases cool down, the energy of particles decreases, the gaps between the particles decrease and the force of attraction increase between the particles ~~as~~ as a result gases can be liquefied.

Q. What is sublimation? ^{state}

ans. The process in which the solids ^{state} directly converts to gaseous ^{state} without passing ~~through~~ through the liquid state is called sublimation. Ex- Moth balls

3. Give reasons:

a) Liquids can flow but solids do not?

ans- In solids the molecules are closely packed and have a strong force of attraction, there is negligible intermolecular space, they vibrate on their mean position but in liquids the molecules are not so closely packed, the force of attraction is less in liquid than compared to solid, the intermolecular space is larger in liquids. So for that reason solids can not flow but liquid can.

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

ans- When air is blown inside the bottle, this air creates high pressure inside the bottle and the egg is kicked out of the bottle.

c) The odour of scent spreads in a room.

ans- The odour of scent spreads in a room very fastly because the intermolecular space is very large in gas as a result the force of attraction between the gas is negligible, so that the gases can diffuse with the air and the odour of scent spreads in the room.

d) We can walk through the air.

ans- The intermolecular ^{space} ~~force~~ is ~~very~~ large in gases as a result the intermolecular force of attraction is ~~or~~ negligible in gas. So for that reason we can walk through air.

e) Liquids have definite volume but not definite shape

ans- The molecules of liquid are not very closely packed. They do not attract each other as compared to solids, the intermolecular space is larger and the force of attraction is less than solids. They can move freely within the boundary of the container. Thus, liquids have definite volume but not 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- The liquids have intermolecular space in which the particles of sugar get adjusted. As a result the level of the water remains same.

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 an empty gas jar is inverted over

a gas jar containing a coloured gas, the gas also spreads into the empty jar because the inter molecular force of attraction between the molecules of gas is very low i.e. negligible. For that reason they can ~~slowly~~ easily spread very easily. So when the empty gas jar is inverted over the gas jar containing coloured gas the gas spread into the empty gas jar.

n) A red ink drop added to small amount of water in a glass turns the water red in some time.
ans- When a red ink drop is added to small amount of water in a glass turns the water red in some time because the particles of red ink diffuse with particles of water slowly. As a result the water change in red colour.

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