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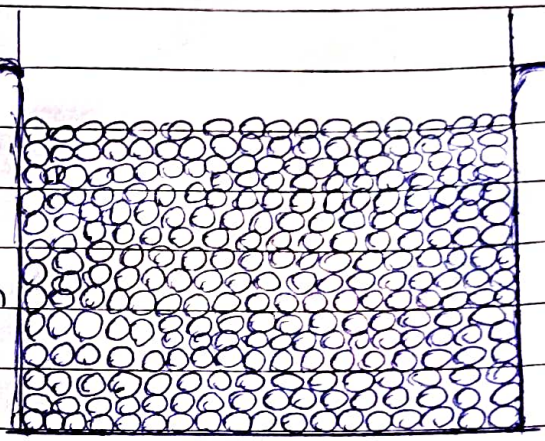
H.W

Q1 Explain the molecular model of solids, Liquids and gas.

Q2 Distinguish between properties of solid, Liquid and gases.

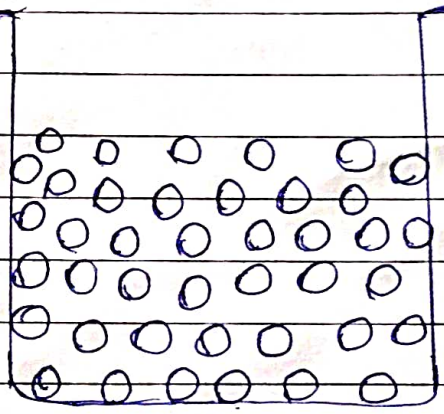
Q3 Define Brownian movement and cohesive force.

Answers



Q1 In solids, molecules are very tightly packed that is no there is no very less intermolecular space and there is high intermolecular force of attraction (force of choesion). The molecules do not move about their mean position & thus solids have definite shape and volume.

Liquid- In liquid, molecules are loosely packed and are not fixed the molecules can move over one another, with in the boundry of the liquid. Thus a liquid has a definite volume but not definite shape.



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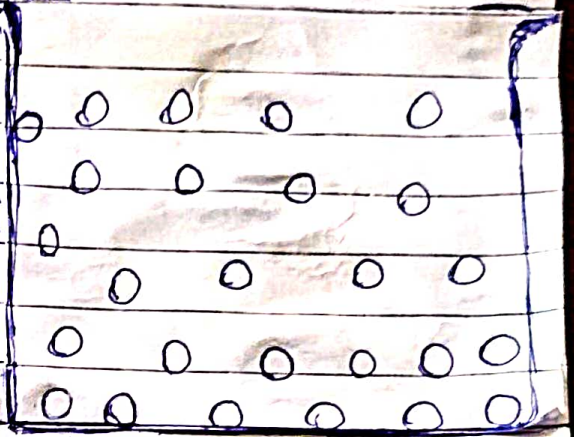
Inter molecular space in a liquid is greater than that in solid. So they are more compressible.

Gas- In Gases molecules are lie much farther apart than they lie in a liquid or solid. Thus, the density of gases is very low. In gases the molecules are not rigid, the intermolecular spacing is more than that in liquids and solids, the intermolecular force are the weakest and the molecules are free to move anywhere in space. So a gas has neither a definite volume nor a definite shape.



Q2.

Properties	Solids	Liquids	Gases
1. MASS	Definite	Definite	Definite
2. Shape	Definite	Accuires the shape of the container	Acquires the shape of the container
3. Volume	Definite	Definite	Indefinite acquires the volume available

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	Properties	Solid	liquid	gases
4.	compresibility	Not Compresibility	Negligibly Compressible	Highly Compressible
5.	Fluidity	Not possible	Can flow	Can flow
6.	Rigidity	Highly rigid	Less rigid	Not rigid
7.	Diffusion	slow	fast	Very fast
8.	Number of free surface	Any number of free surface	Only one free surface	None
9.	Packing of molecules	Very closely Packed.	less closely Packed	least closely packed
10	~~ver~~Intermolecular space	strongest	slightly weaker than in solids	Negligible
11	Expansion on heating	Low	More than solids	More than liquids
12	Motion of constituent molecules	only vibrate on either side of their mean positions	Move in all directions but within the boundary of the liquid	Move in a random manner in all space available
13	Pressure	Only at based downwards	At all points in all directions inside of the boundary of the liquid	On the walls of the container

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Properties	Solids	Liquids	Gases
14 Viscosity	NO	More viscous	Least viscous
15 Surface tension	NO	Due to cohesive force tends to occupy minimum surface area	NO

Q3 Brownian movement: The zig-zag motion of particles suspended in a medium is called Brownian movement.

Choesive force: The force of attraction between particles of the same substance is called choesive force.

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