

1) Write down five properties of solid, liquid and gases.

a) Solid

- The molecules in solid are very tightly packed having negligible.
- They have the strongest intermolecular force of attraction.
- The molecules have very small vibration about their mean position.
- They are generally hard and rigid.
- They have fixed shape and volume at a given temperature.

b) Liquid

- Molecules are less tightly packed.
- The intermolecular force of attraction is less than that of solids.
- The molecules here can move from one place to another.
- Do not have any particular shape of their own.

### c) Gases

- The force of attraction <sup>between the molecules</sup> is ~~less than that~~ ~~of solid~~ is the least.
- The intermolecular space is the most.
- Neither has a definite shape nor volume.
- The molecules move independently.
- The worst conductors of heat.

2) Describe the molecular model for a liquid. How does it explain that a liquid has no definite shape, but has a definite volume?

Here the molecules are less tightly packed as compared to solids and also there is less force of intermolecular attraction. The intermolecular distance is greater than that in the solids.

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3) Distinguish between the three state of matter.  
(On their basis of molecular ~~models~~ models)

### Solids:-

- Here the molecules are very tightly packed and there is no or very less intermolecular space and there is high intermolecular force of cohesion.
- The molecule don't ~~have~~ move about their mean position and thus solid have a definite shape and volume.

### Liquids:-

- Here the molecules are less tightly packed as compared to solids and less force of intermolecular attraction.
- The intermolecular distance is greater than that in the solids. (That's why they don't have definite shape)

### Gases

- Here the molecules are far apart from each other.
- The molecules as are are not bound by ~~the~~ and strong force move about freely