

CLASS- VII

CHAPTER- 1

SUBJECT- CHEMISTRY

TEACHER- MOHINISHA THAKUR

Good morning to all the students!

Students this lesson is for class-VII for the subject of chemistry, Topic:- 'States Of Matter' which is covered in chapter-1 'Matter and its composition' starting on page no-7 of your text-book titled- 'concepts chemistry by Selina Publication' and is being submitted to you on 15th April, 2024.

15, April, 2024

All students may now please open page no-7 of your notebook in front of you.

If all students are ready then let us start with this chapter. All students may now please listen carefully.

States Of Matter

We have studied that the molecules have spaces between them and there is also a force of attraction between them. Now based on these two characteristics i.e., the intermolecular force of attraction and intermolecular spaces, the matter can be categorised as solid, liquid and a gas.

(P.T.O)

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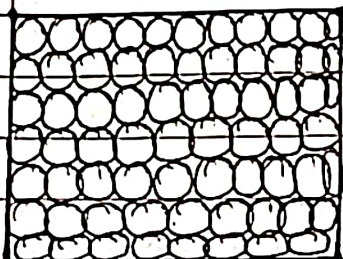
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SOLID :-

Look around yourself, you can see books, pen, chair, door, plate etc. They all have a fixed shape and occupy a fixed space. You cannot change their shape by applying a force. They are all solids.



- The molecules are closely packed.
- Intermolecular force is very strong.
- Intermolecular space is negligible.

The molecules do not move freely but they vibrate about their mean position. The solids are rigid and cannot be compressed.

LIQUID :-

Water, oil, milk etc are liquids, they have a definite volume but no definite shape.

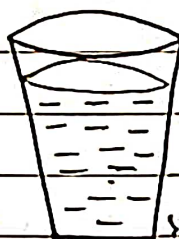
Take 500 ml of water in a jug then pour it in a bottle,



Jug



Bottle



Glass

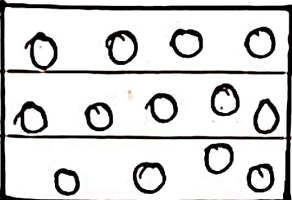
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Water takes the shape of container but the volume is same (500ml).



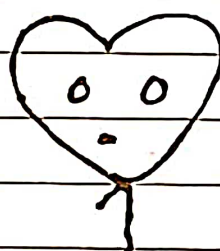
→ The molecules are not very tightly packed.

→ Molecules have some space between them.

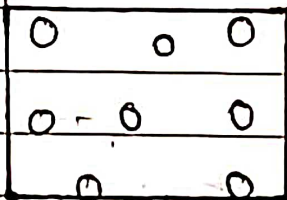
→ Intermolecular force of attraction is weak and the molecules are free to move within the container.

GAS :-

A gas has neither a definite shape nor a definite volume. Hydrogen, oxygen, air, carbon dioxide etc are examples of gases. They take the shape of container and can occupy the whole space available. Fill air into some balloons.



Air takes the shape of balloon.



→ The molecules have large spaces between them

→ The intermolecular force of attraction is very weak and the molecules can move freely in all the directions.

This is the reason why fragrance of a perfume spreads in the whole room. If there is a foul smell in room, you open the doors and windows.

(P.T.O)

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The molecules producing smell move out and get mixed in the air.

Gases can be compressed because there is large space between the molecules. Gases and liquids can flow therefore they are called fluids.

The Questions are :-

Q1:- Name the three states of matter.

Q2:- In which state the force of attraction between the molecules are strong?

Q3:- Give two examples of gases.

Students, now pause this audio for three minutes and write the answers in your chemistry notebook.

I hope you all have written the answers by now let us check the answers now.

Ans1:- Solid, liquid and Gas.

Ans2:- Solid state.

Ans3:- Oxygen, Hydrogen