

14/05/21

Assignment-1  
Chemistry

1. Ans. The five basic elements of which matter is made up of are air, earth, fire, sky and water.
2. Ans. Matter is anything that has mass, occupies space and can be perceived by our senses. For example water, sugar, gold, milk etc. are matter.
3. Ans. An atom is the smallest possible unit of matter that exhibits all the properties of that matter. Atoms usually do not have independent existence, therefore they combine with one another to form another particle called molecule.
4. Ans. Characteristics of particles of matter are :-
  - \* Particles of matter have space between them. This space is called interparticular or intermolecular space.
  - \* Particles of matter are always in random motion.
  - \* Particles of matter attract each other.
5. Ans. \* Solid has a definite shape and a definite volume".  
The particles are tightly packed in solids. The intermolecular force of attraction is very strong and intermolecular space is almost negligible.
  - \* Liquid has a definite volume but no definite shape. The particles in a liquid are less tightly packed than solids. The intermolecular force of attraction is weaker and intermolecular spaces are larger.
  - \* A Gas has neither a definite shape nor a definite volume. The intermolecular force of attraction is very weak and the space between them is very large.

6) Ans. The process of changing the state of an object from solid to gaseous state or gaseous to solid state without passing through liquid state. Two materials that sublime are Naphthalene balls and dry ice.

7) Ans. Interconversion of states of matter means that the matter converts or interchange its physical state without disturbing its chemical properties on providing physical conditions such as temperature and pressure. Temperature and pressure are the two factors caused the interconversion.

8) Ans. Fluids are the liquid states of matter in which they can flow easily. For example water, milk, drink etc.

9) Ans. (a) - Condensation

(b) - Sublimation

(c) - Fluid

10) a) Ans. When the sugar dissolves into individual molecules, the sugar and water molecules can get much closer together, further decreasing the total volume.

b. Sponge has a minute holes in which air is fill and when we pressed it the air released and it is easily compressed.

11) Ans. Take half glass of water. Dip a spoon in it. What do you observe? The water level rises, indicating the spoon occupies space. Now remove the spoon, water comes down to its original level. Now add a spoon of sugar to it and stir well. The sugar disappears but the level of water in the glass doesn't rise that means the volume of water has not increased. Because the sugar particles being smaller get adjusted between the water molecules and has intermolecular space between them.



-Water level Rises



Sugar Particles



Sugar Solution

Water level remains Same.



12. Take a wooden block, Try to break it by applying force on it. The block doesn't break. The block is made up of particles which do not separate easily.

\* Take a chalk piece, apply some force on it and it breaks up into two pieces.

\* Take some water in a table spoon and throw it up. What do you observe? Falling droplets of water are spherical in shape.

Why are they spherical? Because water molecules hold each other. Hence it is proved that particles of matter attract each other.

13. Mass is a measure of the amount of matter in an object. Weight is the force of attraction of the body.

14. Intermolecular force of attraction means attraction between the particles of solid, liquid and gas. In solids the particles are tightly packed, therefore the force of attraction is higher.

But in gases particles move freely here and there, therefore the force of attraction is very very less.

15. L.P.G stands for liquid petroleum gas. It is used for cooking at homes filled in cylinder and also used in vehicles.