

Answer the following questions in one sentence each

1. What is matter? Ans: Anything that occupies space, has mass and can be perceived through our senses is called matter.

2. Give the different states of matter. Ans: There are five different states of matter: solid, liquid, gas, plasma and Bose-Einstein condensate)

3. What is a liquid? Ans: A substance, which does not have a definite shape, but has a definite volume, is called a liquid. Eg. Water, Mercury, etc

4. What is a gas? Ans: A substance which has neither a definite shape nor a definite volume is called a gas..

5. What is a solid? Ans: A substance, which has a definite shape and volume, is called a solid. Eg. Book, wall, rock, etc.

6. What is crystal lattice? Ans: The atoms in a crystal are arranged in a regular repeating pattern called as crystal lattice.

7. What is condensation? Ans: Condensation is the formation of liquid drops from vapour.

8. What happens when kerosene and water are mixed? Ans: When kerosene and water are mixed, kerosene forms the upper layer as it has less density than water.

9. Why does ice float on water? Ans: Ice floats on water because density of ice is less than density of water

10. What is density?

Ans: Density is the ratio of mass to volume. Density (d) = Mass (m) /Volume (v).

11. How are gases liquefied? Ans: Gases are liquefied by lowering their temperature below a particular temperature and by applying high pressure.

12. What is melting point of a solid? Ans: The temperature at which a solid gets converted into a liquid is called the melting point of the solid.

13. What is melting? Ans: The process by which a solid gets converted into the liquid state at a fixed temperature is called melting.

14. What is freezing point of a liquid? Ans: The temperature at which a liquid gets converted into a solid is called the freezing point of the liquid.

15. Give the formula for conversion of temperature in degree Fahrenheit to degree Celsius.

Ans: The formula for conversion of temperature in degree Fahrenheit to degree Celsius is:

$$(F - 32) \times \frac{5}{9} = C.$$

16. What is evaporation? Ans: Evaporation is the process by which a liquid gets converted into the gaseous form at any temperature below its boiling point.

17. State the factors, which affect rate of evaporation of liquid.

Ans: Surface area, temperature, humidity, wind speed, etc. are the factors which affect the rate of evaporation of liquid.

18. What is rigidity? Ans: The property of the solids to maintain their volume and shape when subjected to external forces is known as rigidity

19. Which process creates clouds and is essential for snow and rain formation? Ans:

Condensation is the process, which creates clouds and is essential for snow and rain formation

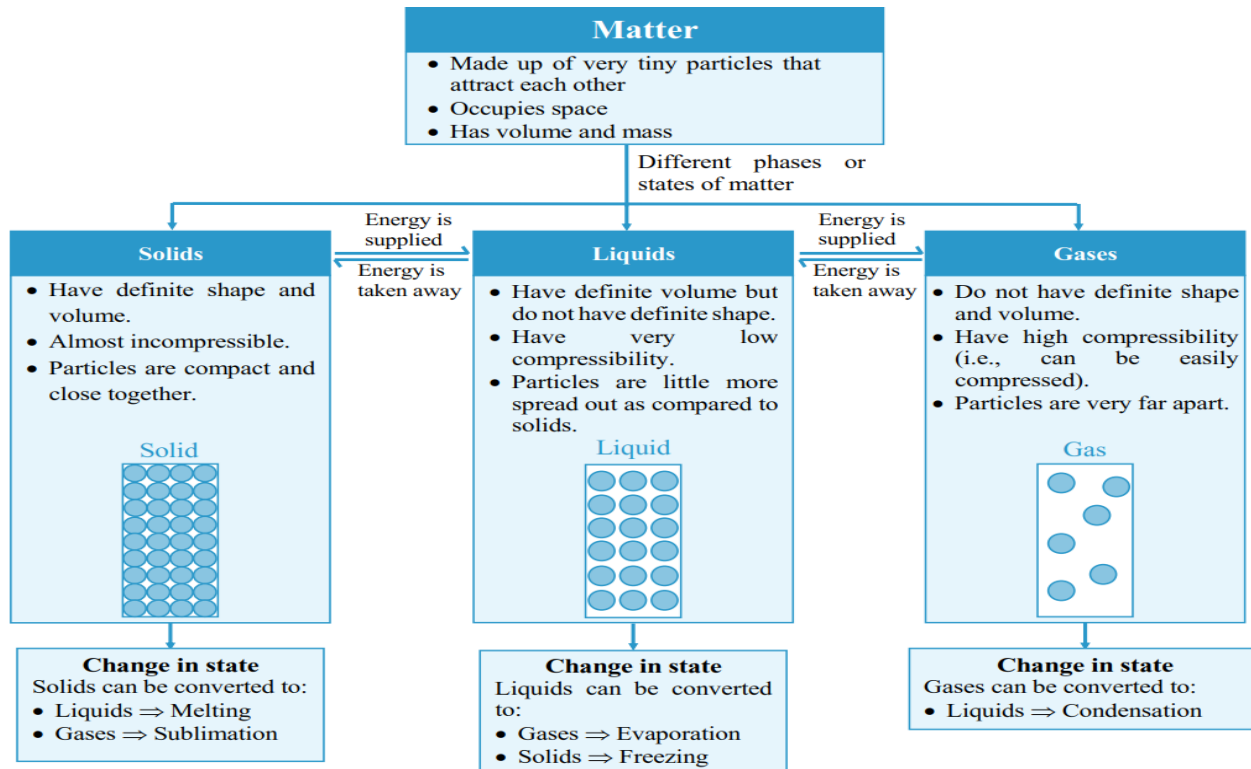
Rewrite the following statements by selecting the correct option

1. _____ is a physical quantity, which expresses the amount of matter in a body.
(A) Mass (B) Density (C) Volume (D) Temperature
2. The space inside a container that is occupied by matter is its _____.
(A) Density (B) mass (C) volume (D) shape
3. _____ is the ratio of mass of a substance to its volume.
(A) Viscosity (B) Fluidity (C) Density (D) Elasticity
4. Solids are usually _____ since their particles are closely packed together.
(A) Soft (B) spongy (C) compressible (D) hard
5. A rubber band is a good example of solids being _____.
(A) Elastic (B) rigid (C) hard (D) strong
6. Liquids do not have a definite _____. (A) Volume (B) shape (C) density (D) mass
7. The phase or state of matter can change when the _____ of the substance changes.
(A) Temperature (B) mass (C) weight (D) amount
8. _____ is the fifth state of matter.
(A) Liquid (B) Bose-Einstein condensate (C) Gas (D) Plasma
9. The _____ of a liquid is the temperature at which the liquid is converted into solid.
(A) Freezing point (B) melting point (C) boiling point (D) evaporation
10. Melting point of glucose is _____.
(A) 100 oC (B) 218.4 oC (C) 150 oC (D) 110 oC
11. Water freezes at _____. (A) 101 oF (B) 32 oF (C) 212 oF (D) 202 oF
12. _____ is the process by which liquid is converted into gaseous form at any temperature below its boiling point. (A) Melting (B) Evaporation (C) Freezing (D) Condensation
13. _____ is the formation of liquid drops from vapour.
(A) Evaporation (B) Condensation (C) Boiling (D) Melting
14. _____ is a process in which solids go directly into gaseous state without going through the liquid state. (A) Evaporation (B) Sublimation (C) Boiling (D) Melting
15. The outer side of the container of a solar cooker is painted _____.
(A) Blue (B) black (C) white (D) red

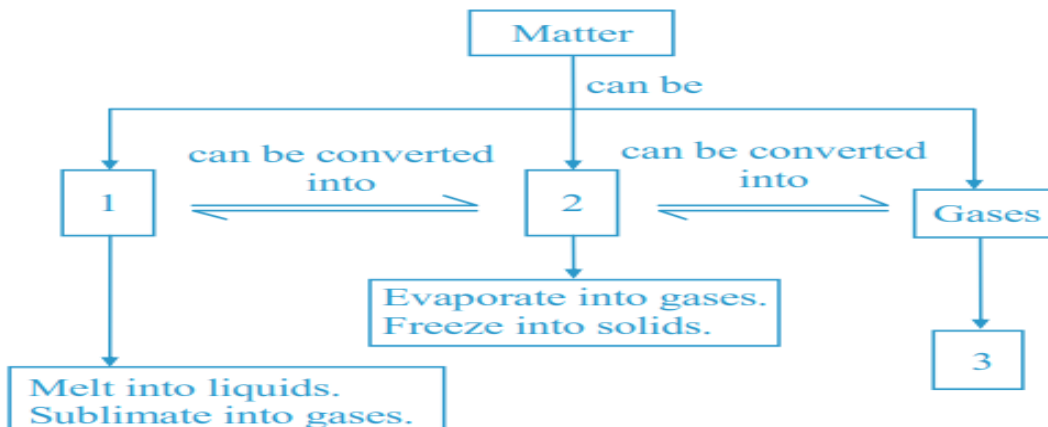
State whether the following statements are true or false. If false, rewrite the correct statement.

1. Two objects can occupy the same space at the same time.
2. When kerosene and water are mixed together, water will form the upper layer.
3. The particles of a solid cannot move much.
4. Some liquids flow easily as compared to other liquids.
5. More viscous liquids flow easily.
6. Liquids do not have a definite volume.
7. Gases cannot be compressed easily.
8. It is easier to walk through water than air.
9. Water freezes at 100 °C.
10. The absorption of energy from the surrounding reduces the temperature of the surrounding.
11. The rate of evaporation is not affected by change in humidity.

1. False: Two objects cannot occupy the same space at the same time.
2. False: When kerosene and water are mixed together, kerosene will form the upper layer.
3. True 4. True 5. False: Less viscous liquids flow easily.
6. False: Liquids have a definite volume. 7. False: Gases can be compressed easily.
8. False: It is easier to walk through air than water. 9. False: Water freezes at zero °C.
10. True 11. False: The rate of evaporation is affected by change in humidity (i.e., it decreases with increase in humidity).



Complete the following chart:

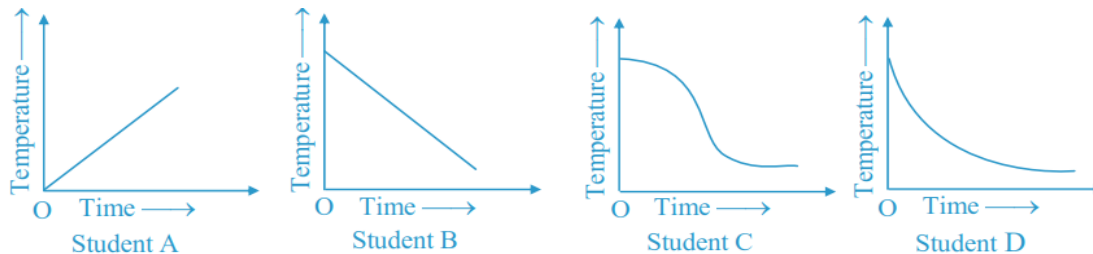


Fill in the Blanks

- The _____ of an object gives an indication of the amount of matter that an object contains.
- _____ is made up of very tiny particles.
- Matter has _____ and _____.
- We usually find matter in _____, _____ and _____ forms.
- The particles in a solid are bound to each other by a _____.
- Particles of a solid cannot move much. This is one of the _____ characteristics of solids.
- Liquefied Petroleum Gas (LPG) cylinders are used at home and _____ cylinders are used in vehicles.
- _____ spread out to fill the container.
- _____ can be easily compressed.
- On heating, solids get converted to _____ and _____ get converted to gases.
- _____ describes a physical state of matter.
- Our body temperature is measured in a unit called the _____.
- _____ is the process, which creates clouds.
- _____ and _____ are sublimatory substances.
- Out of sand and iodine, iodine is a _____ substance.
- _____ enters the object and warms it.

Experiment 1: To measure the temperature of hot water as it cools and plot a time-temperature graph

- When a sample of hot water is cooled slowly to room temperature, the temperature of the sample _____.
(A) Increases (B) decreases (C) remains constant (D) either increases or decreases
- Under which condition will the hot water cool faster?
(A) When it is kept in open space. (B) When it is kept in a thermos flask.
(C) When it is kept inside a refrigerator. (D) When it is kept near a burning stove.
- Four students plot the time – temperature graphs of hot water as it cools to room temperature. These graphs are given below:
The correct graph is plotted by _____.
(A) Student A (B) Student B (C) Student C (D) Student D



Experiment 2: To separate the components of a given mixture of sand, common salt and ammonium chloride (or camphor)

1. The components of the mixture of common salt and ammonium chloride can be separated

By _____.

(A) Sublimation (B) filtration (C) cooling (D) crystallization

2. When a mixture of sand, camphor and common salt is heated, camphor _____.

(A) Condenses to a liquid (B) melts to a liquid (C) sublimates to a gas (D) remains as it is

3. on adding water to a mixture of sand and common salt, _____.

(A) Both sand and common salt dissolve in water (B) sand remains as it is but common salt dissolves in water

(C) Common salt remains, as it is but sand dissolves in water

(D) both sand and common salt remain insoluble in water

Experiment 3 : To determine the melting point of ice and the boiling point of water

1. The melting point of ice is _____.

(A) 10°C (B) 0°C (C) 32°C (D) 100°C

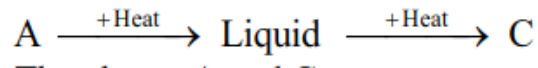
2. The boiling point of water is _____.

(A) 32°C (B) 80°C (C) 100°C (D) 150°C

3. The process by which a solid is converted into a liquid at a fixed temperature is called _____.

(A) melting (B) evaporation (C) boiling (D) condensation

4. The following phase changes will be observed when ice is heated until it gets converted to steam:



The phases A and C are _____ respectively.

(A) Solid and liquid (B) solid and gas (C) gas and solid (D) liquid and gas