Worksheet

Solids, Liquids & Gases

MCQs

Question 1: The mixture of salt and water is called
(a) solute
(b) solvent
(c) solution
(d) matter

Answer :

Correct Answer is Option C.
The solute is the substance which is dissolved by the solvent. For example, in a solution of salt and water, water is the solvent and salt is the solute. Solutions are formed because the molecules of the solute are attracted to the molecules of the solvent.

Question 2: Which of these has a fixed shape and volume?
(a) Solid
(b) Liquid
(c) Gas
(d) All of these

Answer :

Correct Answer is Option A.
Solids have fixed shape and volume.

Question 3: Which of the following is not always true for matter?
(a) Has weight
(b) Takes up space
(c) Can be seen
(d) Is made up of molecules

Answer :

Correct Answer is Option C.

Any material can be seen if the molecules are dense or large but if the molecules are scattered like in gaseous state one cannot see it so every matter can be seen as a false statement.

Question 4: The distance between the molecules of which of these is the highest?
(a) Solid
(b) Liquid
(c) Gas
(d) Same in all of these

Answer :

Correct Answer is Option C.
The distance between the molecules of Gas is high compared with liquid and solid.

True & False

Question 5:

- Ice cube melts into water in freezing. **(False)**
- Insoluble substances can be seperated from liquid by sedimentation only. **(False)**
- Both solids and liquids have definite shapes. **(False)**
- In evaporation process, a liquid change into solid. **(False)**

Fill in the blanks

Question 6:

- Intermolecular space is least in case of **Solids.**
- Liquids do not have definite **Shape.**
- Sand is **Insoluble** in water.

Match the following

Question 7:

1. Change of solid state into liquid	**a. Condensation**
2. Sugar in lemonade	**b. Solute**
3. Change of liquid state into solid	**c. Melting**
4. Change of vapour into liquid	**d. Evaporation**
5. Conversation of liquid into vapour	**e. Freezing**

Answer :

Change of solid state into liquid - Melting
The process of a solid becoming a liquid is called melting (an older term that you may see sometimes is fusion).

Sugar in lemonade - solute
In lemonade, water is called the solvent. Sugar and lemon juice are solutes. A solute is matter that dissolves in a solvent. The solvent is often a liquid, such as water.

Change of liquid state into solid - Freezing
Freezing occurs when a liquid is cooled and turns to a solid. Eventually the particles in a liquid stop moving about and settle into a stable arrangement, forming a solid.

Change of vapour into liquid - condensation
Condensation of a vapour to form a liquid or a solid is the reverse of vaporization, and in the process heat must be transferred from the condensing vapour to the surroundings.

Conversation of liquid into vapour - Evaporation
Vaporization, conversion of a substance from the liquid or solid phase into the gaseous (vapour) phase. If conditions allow the formation of vapour bubbles within a liquid, the vaporization process is called boiling.

Answer the following questions in brief.

Question 8: What do you understand by the term freezing?

Answer : Freezing is a phase transition where a liquid turns into a solid when its temperature is lowered below its freezing point. In accordance with the internationally established definition, freezing means the solidification phase change of a liquid or the liquid content of a substance, usually due to cooling.

Question 9: What is matter?

Answer : Matter is anything that has weight and takes up space. All the living things such as birds, animals and plants, and all the non-living things such as chairs, tables, balls, air and water are matter. All these things have their own weight and take up space.

Question 10: What is condensation?

Answer : Condensation is the process by which water vapor (water in its gas form) turns into liquid. It happens when molecules of water vapor cool and collect together as liquid water. Water vapor can be found on the outside of cold glasses, the warm side of windows, and in the clouds up in the air.

Question 11: Define the following:

Answer : (a) Solution

A solution is a homogeneous mixture of two or more components in which the particle size is smaller than 1 nm. Common examples of solutions are the sugar in water and salt in water solutions, soda water, etc.

(b) Solvent

A solvent is a molecule that has the ability to dissolve other molecules, known as solutes. A solvent can be solid, liquid or gas. The molecules of the solvent work to put the solute molecules apart.

(c) Solute

A substance that is dissolved in a solution is called a solute. In fluid solutions, the amount of solvent present is greater than the amount of solute. One best example of solute in our day-to-day activity is salt and water.

Question 12: Write any two properties of solids.

Answer :

- A solid has a definite shape and volume.
- Solids in general have higher density.
- In solids, intermolecular forces are strong.
- Diffusion of a solid into another solid is extremely slow.