



CHEMISTRY

BOOKS - ICSE

MATTER

Check Your Progress Write True Or False Correct The False Statements

1. The amount of space occupied by matter is called its volume.

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2. Solids have a definite volume and a definite shape.

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3. Liquids can flow better than gases.

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4. In gases, the intermolecular space is the largest.

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Exercises Tick The Most Appropriate Answer

1. The intermolecular forces are maximum in case of

- A. solids
- B. liquids
- C. gases
- D. both a and c

Answer:



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2. The intermolecular space is minimum in

A. solids

B. liquids

C. gases

D. none of these

Answer:



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3. Fluidity is maximum in

A. solids

B. liquids

C. gases

D. all of these

Answer:



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4. Gases

A. cannot be compressed easily.

B. occupy the entire space of the container.

C. have a definite shape.

D. cannot flow.

Answer:



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5. When heat is supplied to a sample of matter, it may show

- A. expansion
- B. change of state.
- C. chemical change.
- D. all of these

Answer:



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Exercises Fill In The Blanks

1. Matter occupies ____ and has ___



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2. A substance can exist in ___ states



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3. Liquids have no definite ____



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4. Brownian motion is almost absent in _____



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5. The change of liquid state into its vapour state at any temperature below its boiling point is called.



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6. The temperature at which a liquid freezes to become a solid is called its ____ point



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7. The change from solid state of vapour state without passing through the liquid state is called



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Exercises Write True Or False Correct The False Statements

1. The force of attraction between the molecules of the same kind is called



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2. The intermolecular force of attraction is the weakest in gases.



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3. Solids can diffuse.

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4. Liquids have no definite ____

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5. Liquids are highly compressible.

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6. The molecules in a gas move about in all directions at a high speed.

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7. Liquids expand much more than gases on heating.



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8. The burning of a candle is a chemical change. Explain.



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Exercises Name The Following

1. Explain the nature of molecules in solids, liquids and gases.



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2. The intermixing of particles of different substances on their own



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3. Change of a solid to a liquid



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4. Change of a liquid to a gas



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5. Change of a solid to a gas



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Exercises Answer The Following In Short

1. Define matter.



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2. What do you understand by the term 'intermolecular space'?



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3. Why do solids lack the property of diffusion?



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4. What is interconversion of states of matter?



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5. Define the following:

a. Fusion, b. Fusion point, c. Solidification, d. Solidification point e. vaporization f. boiling point g. Liquefactions, h. Liquefaction, point (i) Deposition.



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6. What is a chemical change ? Give two examples of chemical change.

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Exercises Answer The Following In Detail

1. Write the general properties of solids.

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2. Write the general properties of liquids.

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3. Describe an experiment to prove that solids expands on heating and contract on cooling.

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4. Describe an experiment to show that air expands on heating.

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5. State difference between boiling and evaporation.

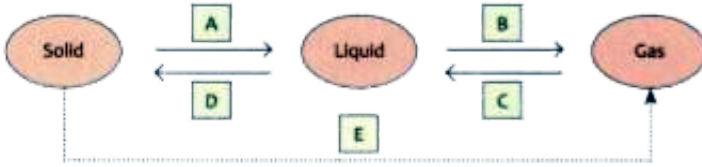
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6. The burning of a candle is a chemical change. Explain.

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Exercises Name A B C D And E In The Following Diagram Showing Changes In The State Of Matter

1. Complete the following reaction



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Think And Answer

1. Electricity is not considered matter. Why?

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2. We cannot move our fingers through a solid wall. Do you agree? Give reason.

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3. We can hold liquids in our hands. True or false? Explain.

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4. Explain the following:

Gases have no definite shape nor a definite volume of their own.

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5. Why are liquids and gases called fluids?

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6. Give reason for the following observations.

(a) Naphthalene balls disappear with time without leaving any solid.

(b) We can get the smell of perfume sitting several metres away.

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7. Gases expand much more than solids or liquids on heating. Why?

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Exercise I

1. Define matter.

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2. What are the two main types of matter? Give two examples for each type?

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3. Differentiate between living and non-living matter.

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4. Select natural and man made matter from the following list:

Wood, plastic, silk, medicines, detergents, coal, water, ceramic, cotton, glass, nylon, fr

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Exercise II

1. Name the particles which matter is made up of

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2. What are molecules?

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3. Give one difference between atoms and molecules.

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4. Define:

(a) Intermolecular force of attraction

(b) Intermolecular space

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5. Name the three states of matter, giving two examples of each.

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6. What are fluids? Give two examples.

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7. Classify the following into solids, liquids and gases.

Oxygen, milk, common salt, wax, stone, L.P.G, carbon dioxide, sugar, mercury, coal, blood, butter, coconut oil, kerosene.



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8. Define:

(a) Cohesive force

(b) Diffusion

(c) Brownian movement



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9. Why is an egg kicked out of a bottle when air is blown inside the bottle?



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1. State the three effects of heat on matter.

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2. (a) Define: interconversion of states of matter.

(b) What are the two conditions for the interconversion of states of matter?

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3. Define the following:

a. Fusion, b. Fusion point, c. Solidification, d. Solidification point e. vaporization f. boiling point g. Liquefactions, h. Liquefaction, point (i) Deposition.

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4. Differentiate between:

(a) Solidification and condensation

(b) Melting and boiling

(c) Gas and vapour

(d) Miscible and immiscible liquids

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5. How is interconversion of states of matter different from a chemical reaction ?

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6. How does a liquid change into its gaseous state? Explain.

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7. Water cycle is an example of interconversion of states of water. Explain.

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8. What happens to a metal ball when it is heated? What does this show?

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9. Why does a candle become smaller on burning with time?

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Objective Type Questions Fill In The Blanks

1. Water is matter because it has..... And occupies....

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2. Any matter which has a definite..... but no definite shape is called a.....

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3. Andcan flow.

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4. The molecules are at a greater distance in.....as compared to liquids.

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5. Water boils at

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6. The physical state of a substance, which has neither fixed volume nor fixed shape is a.....

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Objective Type Questions True Or False

1. Only water can exist in three different states

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2. If the container in which a gas is collected has an opening, the gas will flow out and spread itself indefinitely.

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3. Solids have the largest intermolecular space.

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4. There is no difference between evaporation and boiling

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5. All solids, on heating, first change to liquid and then to the gaseous state.

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6. The intermolecular force of attraction is the weakest in gases.

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7. A gas has no free surface.

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8. For each of the following statements, say whether it describes a solid, a liquid or a gas.

(a) Particles move about very quickly but do not leave the surface.

(b) Particles are quite close together.

(c) Particles are far apart and move in all directions.



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9. Match the following:

Match the following :

Column A

Column B

- | | |
|--------------------------|--|
| (a) Solids | (i) Can flow in all directions. |
| (b) Sublimation | (ii) The temperature at which a liquid changes into its gaseous state. |
| (c) Boiling point | (iii) Can have any number of free surfaces. |
| (d) Gases | (iv) Gaps between particles. |
| (e) Intermolecular space | (v) Change of state directly from solid to gas. |



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10. Name the phenomenon which causes the following changes:

- (a) Formation of water vapour from water.
- (b) Disappearance of camphor when exposed to air.

(c) Conversion of ice into water.

(d) Conversion of water into steam.

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11. Give two examples for each of the following:

(a) Substance which sublime

(b) Substances which do not change their state.

(c) Substances which are rigid and not compressible.

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Objective Type Questions Multiple Choice Questions

1. Which one is a kind of matter?

A. light

B. petroleum

C. sound

D. heat

Answer:



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2. The state of matter which has no definite shape or volume is called

A. solid

B. liquid

C. gas

D. water

Answer:



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3. There are large intermolecular gaps in

- A. water
- B. iron ball
- C. common salt
- D. air

Answer:



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4. All kinds of matter

- A. occupy space and have a definite mass
- B. have mass and a definite shape
- C. can change their states
- D. have a definite volume

Answer:



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5. A kind of matter which can sublime is

- A. water
- B. plastic
- C. milk
- D. iodine

Answer:



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6. A substance which can change its state

- A. wood

B. oxygen

C. paper

D. cloth

Answer:



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7. The process by which a solid changes into a liquids is called

A. freezing

B. melting

C. condensation

D. evaporation

Answer:



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1. Which is the most abundant compound on earth ?

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2. What are the states in which water is present in nature ?

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3. Is water lost when it is used ?

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4. What is the source of groundwater ?

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5. Mention three roles played by water inside the body of a living being .

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6. Name a biochemical reaction in which water takes part.

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7. What is solvent ?

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8. What do you mean by a saturated solution ?

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9. How would you define polluted water ?





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10. What is potable water ?



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11. Any three water-borne diseases



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12. Name the steps taken to purify water in a municipal water - treatment plant .



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[Exercise Long Answer Questions](#)

1. How would you prepare a saturated solution ?



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2. Why is water called a universal solvent ? How is this useful ?



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3. Describe three important uses of water .



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4. Draw a simple diagram to show the sedimentation and filtration of water - supply units .



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5. Give three causes of water pollution. Suggest how it can be checked .



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6. Define Water conservation



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Exercise Objective Questions Choose The Correct Options

1. Which of the following is true ?

- A. Water covers one fourth of the earth's surface .
- B. Water is a compound of hydrogen and oxygen
- C. Groundwater is affected by rainwater .
- D. Water is a poor solvent .

Answer:



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2. How are the germs in water killed ?

- A. By sedimentation
- B. By filtering
- C. By boiling
- D. By treating with alum

Answer:



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3. Which of the following is a water borne disease ?

- A. Diptheria

B. Tetnus

C. Hepatitis

D. Malaria

Answer:

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Exercise Objective Questions

1. Match columns A and B

A

- (i) Solute
- (ii) Solvent
- (iii) Stirring and heating
- (iv) Saturated solution
- (v) Solution in water

B

- (a) a solution that cannot dissolve any more solute
- (b) aqueous solution
- (c) recovered from a solution by the evaporation of the solvent
- (d) recovered from a solution by distillation
- (e) help dissolve a solute

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1.of the earth's surface is covered by water . (Half/Three fourths).



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2.is too salty to be used directly. (Sea water/Rain water).



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3. A solution is a.....mixture. (heterogeneous / homogeneous).



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4.helps the formation of a solution . (Heating/Cooling)



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5. Sedimentation is followed by.....in water -supply units .
(chlorination/filtration).

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Exercise Objective Questions Write T For True And F For False For The Following Statements

1. Water is a universal solvent'. Comment

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2. A saturated solution can take up any amount of the solute.

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3. Pollutants are mostly produced by natural processes.



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4. One should never drink polluted water .



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5. Chlorine can kill germs of polluted water.



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