

REVISION WORKSHEET

MULTIPLE CHOICE QUESTIONS

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ONE MARK QUESTIONS

1- The branch of science that deals with the different forms of energy, e.g. light and sound

- (a) Chemistry
- (b) Physics
- (c) Biology

2- The scientist who formulated the Periodic Table

- (a) John Dalton
- (b) Daniell Rutherford
- (c) Dmitri Mendeleev

3- The inter-molecular force is maximum in

- (a) solids
- (b) ~~solids~~ gases
- (c) liquids
- (d) none of the above

4- Rapid conversion of water into steam is an example of

- (a) evaporation
- (b) freezing
- (c) melting
- (d) vapourization

5- The temperature at which a liquid gets converted into its vapour state is called its

- (a) melting point (c) dew point
(b) boiling point (d) freezing point

6- Predecessors to the modern Chemist who created the Philosopher's stone

- (a) Botanists
(b) Alchemists
(c) Physicists

7- What is an element?

(a) A substance that is made up of one type of atom and can't be reduced to simpler substances.

(b) A substance made of two or more different atoms chemically bonded to one another. They can only be destroyed by chemical processes.

(c) A material containing two or more elements or compounds that in close contact and are mixed in any proportion. They can be separated by physical means.

8- A metallic apparatus which supports the wire gauze.

- a) A tripod stand
- b) Retort Stand
- c) Test tube stand

9- A long glass apparatus closed at one end used for collecting gases.

- a) Measuring cylinder
- b) Gas jar
- c) Beehive shelf

10- A modern apparatus with an air regulator, used for heating purposes.

- a) Spirit lamp
- b) Bunsen burner
- c) Electric stove

• Fill in the blanks:

11- From the elements nitrogen, chlorine, bromine, the element present in the atmosphere is nitrogen.

12- An element is a pure substance which cannot be broken down by physical or chemical methods.

- 13- Evaporation takes place at high temperature
- 14- Freezing process is just reversed of melting
- 15- Sublimation is a process that involves direct conversion of solid into its vapour on heating.

2 Mark Questions

16- Preservatives are added to food or beverages. Explain why?

Ans - Preservatives are added to food or beverages because of the following reasons:

- Prevent decomposition of by bacteria or microbes.
- Reduce Risk of foodborne infections.
- Preserve nutritional quality of food.

17- Alchemy was considered a pseudo science. Give reason?

Ans - Towards the end of the 17th century the scientific process involving modern chemistry started paving paths and alchemy today is considered a pseudo science and chemistry regains its rightful position as a serious scientific field.

98- What happens to water if-

(a) It is kept in a deep freezer

(b) It is heated

Explain the phenomenon of change of state of water.

Ans- a) When water is kept in a deep freezer, it gets frozen and changed into ice (0°)

Water $\xrightarrow{\text{deep freezer}}$ Ice

b) When water is heated, it changes into steam or water vapour (100°C)

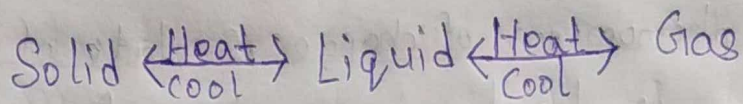
Water $\xrightarrow{\text{heating}}$ Steam

Phenomenon of change of state of matter:

Water is a liquid under room temperature, but, when it is kept in a deep freezer, it changes into ice at 0°C and when ice is kept at a room, it again changes to liquid water.

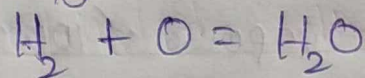
Similarly, water on heating changes into steam at 100°C , which on cooling changes back into liquid water. So, this signifies

that water can be in any state, but its chemical composition does not change.



19) State two characteristics of water which prove that it is a compound.

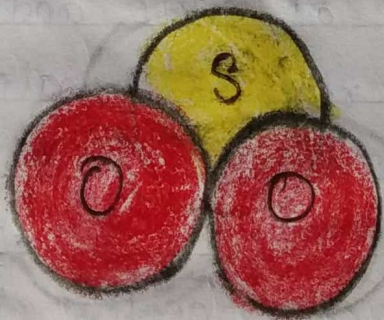
(a) Elements are combined in a specific ratio, 2 atoms of Hydrogen and 1 atom of oxygen makes water.



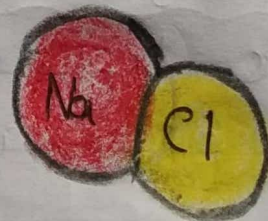
(b) The properties of water are different from that of oxygen and hydrogen.

20) Show diagrammatic representation of Sulphur dioxide molecule and sodium chloride molecule.

Ans -



SO_2 - Sulphur dioxide



NaCl - Sodium chloride

3 MARK QUESTIONS

21. Differentiate between the terms - food preservatives and food processing with appropriate examples.

State the contributions of

- (a) Dmitri Mendeleev
- (b) Antoine Lavoisier
- (c) John Dalton.

Ans -

Food preservatives

- Food preservatives are substances or chemicals that are added to food or beverages. The purpose is to prevent bacterial, reduce infection, and preserve nutritional quality of food.
- Some preservatives are:
 - Sodium benzoate
 - Sodium meta-bisulphate
 - Salicylic acid

Food processing

- Food processing is the transformation of agricultural products into food in one form of food into other forms.
- Food Items:
 - Jams, pickles, drinks
 - Meat products
 - Beverages

(a) Dmitri Mendeleev

- Formulated the periodic table of elements
- She also predicted some of the unknown quantities.
- She also formulated of law of periodic table.

(b) Antoine Lavoisier

- He named the elements carbon, hydrogen and oxygen.
- He established that water is a compound and helped to continue the transformation of chemistry from a qualitative science to a quantitative one.

(c) John Dalton

- John Dalton proposed a atomic theory (known as 'Dalton's Atomic theory').
- He discussed in this theory that matter which are invisible (atoms) and cannot be created or destroyed.

22. Explain the term compounds. Give the example of a compound containing:

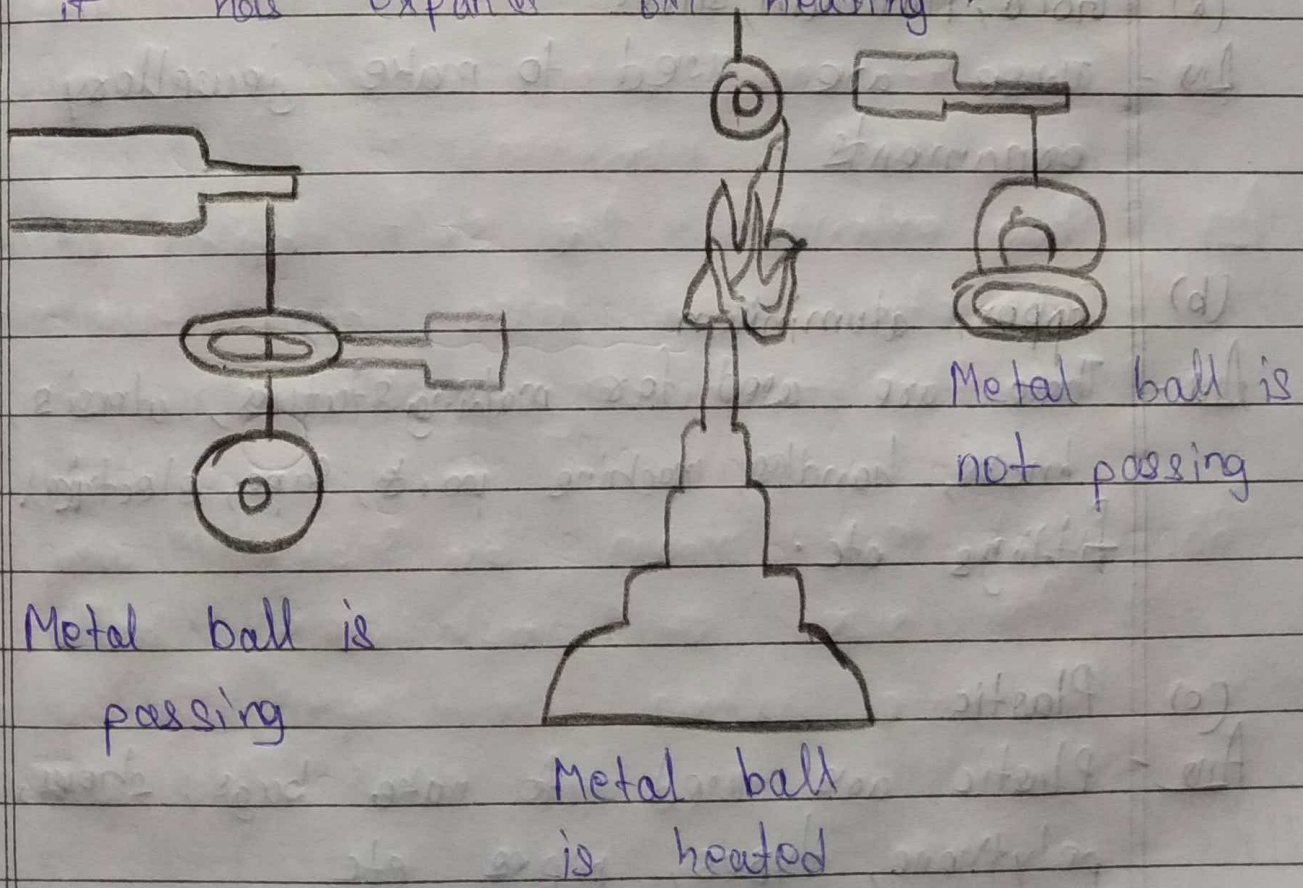
(a) hydrogen and oxygen = Water (H_2O)

- (b) carbon and oxygen - Carbon dioxide (CO_2)
- (c) Nitrogen and oxygen - Nitrogen dioxide (NO_2)
- (d) Calcium and Oxygen - Calcium oxide (CaO)

23. With the help of a simple diagram how would you show that - solids expands on heating.

Ans - A simple ball which is of metal and a ring apparatus. Here the metal ball can go through the ring.

Now, the ball is heated for some time. After the heating, the ball cannot pass through the ring because it has expanded on heating.



24. All medicines must be taken under proper doctors supervision and in the correct dose. Give reason.

Ans - All medicine must be taken under proper doctors supervision and in the proper dose because some medicines has side effect and can harm us.
Ex - If paracetamol is taken in high dose, it can cause high fever.

25. Write the uses of following ~~elements~~ and compounds.

(a) Gold, Platinum, silver

Ans - These are used to make jewellery and ornaments.

(b) Copper, aluminium

Ans - These are used for making statues, utensils, door knobs, handles, machine parts, taps, electrical fittings etc.

(c) Plastic

Ans - Plastic are used to make bags, shoes, polythene, tyres, pipes etc.

26- Give reason why:

(a) Wet clothes dry more quickly on a warm day than on a cold humid day.
Explain.

Ans - Wet clothes dry quickly on a warm day than on a cold humid day because the temperature and the evaporation is high. The sun do the process with the help of evaporation; when wet clothes water converted into water vapour; it goes up.

(b) Water in a dish evaporates faster than in a bottle. Give reason.

Ans - We know that in a exposed surface, the evaporation is more. So, dish is more exposed surface, so evaporation will be more and water will evaporate faster.

(c) Are volatile ~~and~~ liquids such as alcohol and spirit stored in tightly closed bottles?

Ans - As alcohol and spirit can evaporate easily, so they are stored in tightly closed bottles.

27. Give reason:

(a) A philosopher's stone is not exactly a stone.

Ans - It is so because a philosopher's stone is a wax like liquid which would turn into gold.

(b) Food processing is an important procedure for obtaining marketable food products.

Ans - It involves physical or chemical processes, to transform or change the raw ingredients in food into easy usable forms of food available in markets.

~~Raw materials~~

(c) Cosmetics may contain preservatives, as one of their ingredients?

Ans - They extend the shelf life of a cosmetic and also can prevent the growth of microorganisms.

28. What do you mean by sublimation? Why does the size of naphthalene balls decrease when left open? Describe an experiment to demonstrate the process of sublimation?

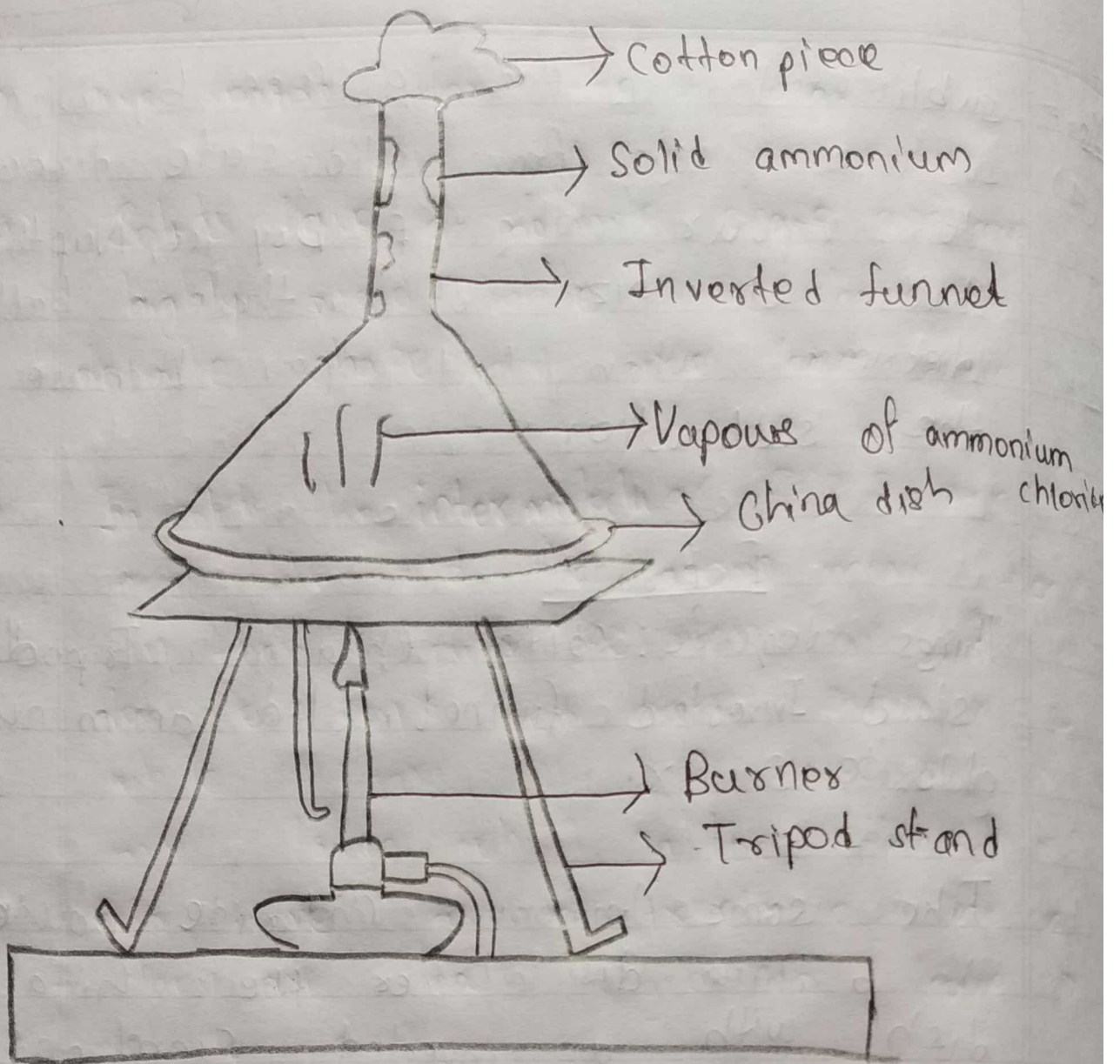
Ans - Sublimation is the process by which a substance changes from solid state directly to vapour state. Ex - Dry ice, Naphthalene balls etc. Size of naphthalene balls decrease when left open because of the sublimation.

Experiment

Things require: Cotton, China dish, Tripod stand, Inverted funnel, Solid ammonium chloride, Bunsen.

Take some Ammonium chloride powder in a china dish. Cover the China dish with an inverted funnel and put a cotton-plug in the end of the funnel so that vapours do not escape. Setup the apparatus as shown.

Heat the dish with the bunsen. Solid ammonium chloride changes into vapours. Which when coming in contact with walls of funnel get cooled and change to solid and get deposited there.



Q9 Tabulate a comparative chart - to differentiate between elements, compounds and mixtures. Differentiate them with reference to

- (a) the term
- (b) existence
- (c) properties

| | Elements | Compounds | Mixtures |
|------------|---|---|---|
| The term | It is the basic unit of matter which is a pure substance and cannot be broken down. | It is a pure substance made by a combination of two or more elements. | It is an impure substance made of a combination of two or more elements or compounds or both. |
| Existence | They can exist independently. | The elements are combined in a fixed ratio. | The elements and compounds are mixed in any ratio. |
| Properties | They have a definite set of properties. | The elements of a compound does not retain their property. | The components of a mixture retain their properties. |

30. Give reasons for the following:

(a) Solids have a definite shape and are highly rigid while gases have no definite shape and are least rigid.

Ans - In solids, the intermolecular spaces are negligible and the atoms move about in their own position which gives solids a definite shape and makes them rigid. While in gases, the intermolecular spaces are large which allows the atoms to move around freely and hence, they are least rigid and have no definite shape.

(b) Sugar can be distinguished from talcum powder using water.

Ans - Sugar can be dissolved in water but talcum does not dissolve.

(c) Water on freezing turns into ice.

Ans - Water has a fixed melting and boiling point.