

Metals are malleable means they can be beaten into sheets.

Chemistry holiday homework  
worksheet

16/10/2021

1. One mark

MCQ

1. Chemistry

2. Dmitri Mendeleev

3. Solids

4. Evaporation

5. Boiling point

6. Alchemists

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

8. Tripod stand
9. Gas jar
10. Bunsen burner

Fill in the blanks:

11. Nitrogen
12. chemical
13. high
14. solidification
15. Sublimation

2 mark questions

16. Preservatives are added to food or beverages to:-
  - Prevent it from spoilage
  - to keep the food fresh for a longer period of time

17. Towards the end of 17<sup>th</sup> century, the scientific processes involving modern chemistry started paving paths. Alchemy today is considered a pseudo science and chemistry regains its rightful position as a serious scientific field.

18. (a) If water is kept in a deep freezer, its state is changed to solid.

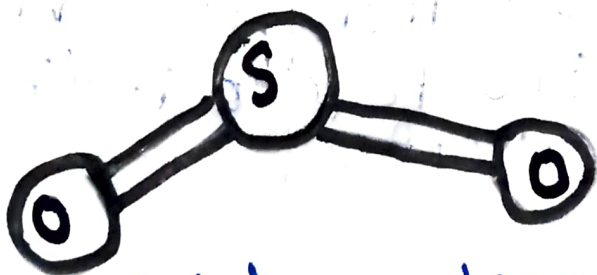
(b) If water is heated, it would change to vapour state.

~~18~~

19. • Water is made up of two elements hydrogen and oxygen.

• Water is represented by a molecular formula  $H_2O$ .

20.



Sulphur dioxide



Sodium chloride

## 3 mark question

21. Food processing is the transformation of raw food materials by physical or chemical means into marketable food products which can be consumed by the customers. Ex- cheese, tinned vegetables, jam, jelly, soft drinks etc.

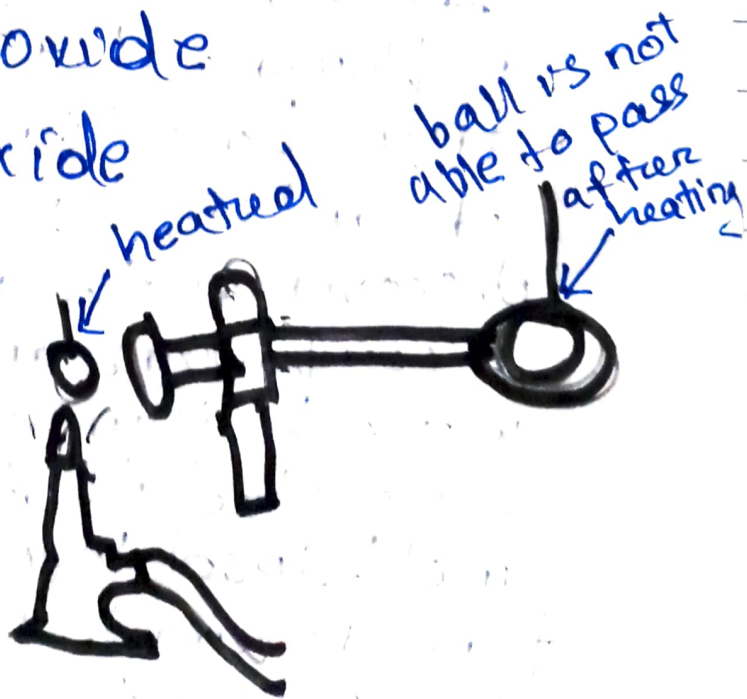
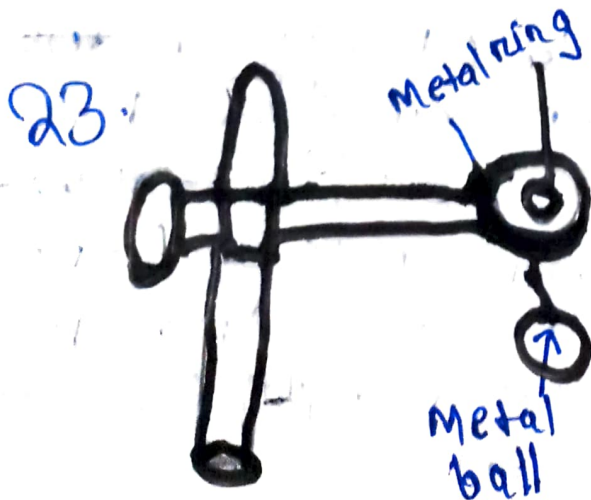
(a) Dmitri Mendeleev was a Russian chemist and physicist, best known of his discovery of "periodic Law". In 1869 and formulation of periodic table of elements.

(b) Antoine Antonie Lavoisier was French nobleman. He revolutionized chemistry. Lavoisier named the elements of carbon, hydrogen and oxygen and discovered the role of oxygen and in combustion and respiration for which he is most noted. He established that water is a compound and helped to continue the transformation of chemistry from a qualitative science to quantitative science.

(c) John Dalton proved that matter consists of small indivisible particles called atoms. For this, he proposed the atomic theory which was later called "Dalton's Atomic Theory".

22. Compounds are substances formed by the chemical combination of two or more elements in a definite proportion by mass.

- (a) Water
- (b) Carbon dioxide
- (c) Nitrogen dioxide
- (d) Calcium oxide



24. All medicines must be taken under proper ~~doctors~~ doctors supervision and in the correct dose because some medicines have side effects. ~~as~~ aspirin not taken under proper dose can lead to stomach ulcers. Similarly paracetamol if taken in high dose may cause liver problems.

25. (a) Gold, platinum and silver are used to make jewellery and ornaments.  
(b) Copper and aluminium are good conductors of heat and electricity. They can be drawn into wires and beaten into sheets.

(c) Plastic is a nonconductor used as an insulator. There are different types of plastic materials used for making bags, shoes, balls, bats, tyres, hats, pipes, unbreakable utensils, non-stick cookware.

Q6. (A) Clothes dry more quickly on a warm day than on a cold day because the rate of evaporation is directly proportional to temperature. Higher the rate of evaporation on the hot day compared to cold days.

(B) Rate of evaporation is more when the area of the exposed surface is more. As area exposed in a dish is more, evaporation is also more.

~~(C) Rate of evaporation depends on the nature of the liquid. The more volatile liquids like alcohol and spirit evaporate easily, hence they are tightly closed bottles~~

## Q7. Important Notes

(a) Preservatives used in cosmetics to prevent contamination during formulation, transport, storage, or consumer use.

Q6. (b) Evaporation is a surface phenomenon i.e. more the exposed surface area more is rate of evaporation. The water in a dish evaporates faster than in a bottle because the surface area of the dish is larger.

Q7

a. Philosopher's stone is a legendary substance capable of turning inexpensive metals like lead or mercury into gold or silver. It was not a stone, ~~po~~ but a powder or reagent.

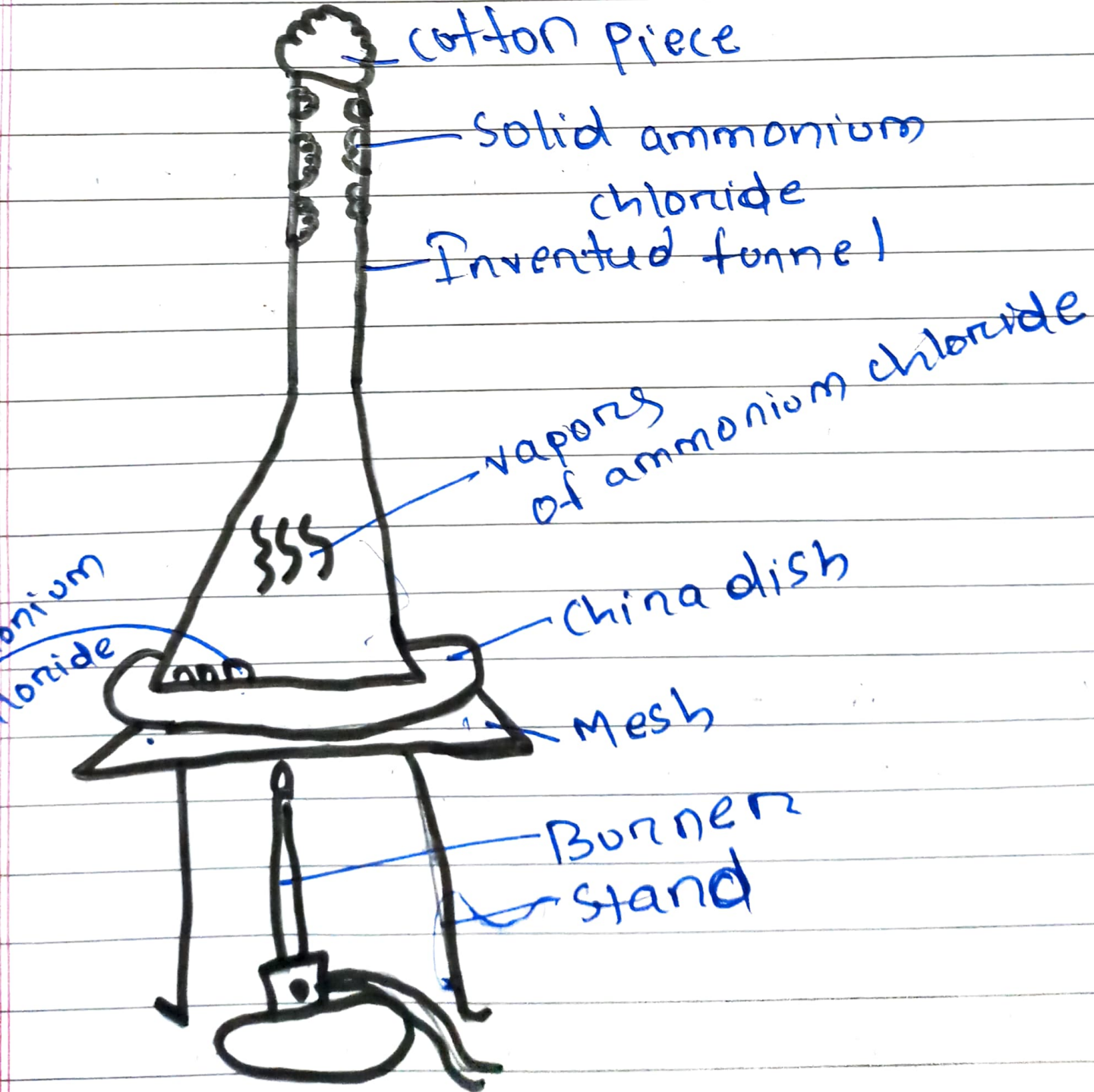


Q No 21

(b) Food processing is an important procedure for obtaining marketable food products. Food processing involves physical or chemical means-processes, to transform or change the raw ingredients in food into easily usable forms of food available in markets.

28. Sublimation is the conversion of solid substances into its gaseous form without undergoing liquid substance. Size of naphthalene balls decrease when left open because of sublimation.

Experiment: Take some ammonium chloride powder in a china dish. Cover the china dish with an inverted funnel and put a cotton plug in end of the funnel so that vapours do not ~~escape~~ escape. Set up the apparatus as shown. Heat the dish with the burner. Solid ammonium chloride changes into vapour. This experiment shows the process of sublimation.



29	Term	Existence	Properties
<u>Elements</u>	Elements are pure substances made of only one kind of atom. Ex - Iron, Sulphur.	Atoms are present on their own. e.g. Iron and Sulphur exist on their own as elements.	Elements have a definite set of properties. Elements are
<u>Compounds</u>	Compounds are substances formed by the chemical combination of two or more atoms.	Components in a compound are present in a definite proportion. Iron and Sulphur are chemically combined.	classified into metals or non-metals each with its own properties.
<u>Mixtures</u>	Mixtures are impure substances made up of two or more elements or compounds.	Components in a mixture are present in any proportion. Iron and Sulphur are mixed in any ratio in the mixture of iron and sulphur.	Compounds have a definite set of

properties.

Elements of a compound do not retain their original properties.

Mixtures - Mixtures do not have a definite set of properties. Components of a mixture retain their original properties.

30. (a) 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 as both have different solubility in water. Sugar is completely soluble in water whereas talcum powder is insoluble in water and forms sediment when added to water.

(c) Water on freezing turns into ice due to solidification. The particles lose energy and their movement becomes slow. They then come closer, decreasing the intermolecular space and increasing the intermolecular force of attraction.