

Revision

HHW

Date

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1. The branch of science which deals with the different forms of energy eg light and sound
ans- Chemistry

2. The scientist who formulated the periodic table.
ans- Dr. Dmitri Mendeleev

3. The intermolecular force is maximum in.
ans- Solids.

4. Rapid conversion of water into steam is an example of
an evaporation / evaporationization.

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

6. Predecessors to the modern chemist who created the 'philosopher's stone'.
ans- Alchemists.

7) What is an element?

ans- A substance that is made up of one type of atoms and can't be reduced to simpler substances.

16) A metallic apparatus which supports the tubes wire gauze
A tripod stand

17) A long glass apparatus closed at one end used for
collecting gases

18) Gas jar

19) A modern apparatus with an air regulator, used
for heating purposes and also parallel
Bunsen burner
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 100°C temperature.

14) Freezing process is just the reverse of melting.

15) Sublimation is a process that involves direct conversion
of solid into its vapour on heating.

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

ans: Preservatives are added to food because it prevents

from spoiling and ~~it~~ the food also gets preserved for many days. Some examples of preservatives are benzoic acid, sodium benzoate, sodium metabisulphate etc. It also reduces the risks of food borne infections.

~~16~~

17 Alchemy was considered a pseudoscience. Give reasons.

Ans. Alchemy was considered a pseudoscience because.

1. Alchemy doesn't have any standardized practice.

2. Alchemy was both considered as scientific and spiritual.

3. Alchemist ~~never~~ separated them with water partly based on spiritual ~~and~~ discipline and partly on experiment yield with it.

18. What happens to water if we heat it?

a) If it is kept in a deep freezer.

Ans. The water will freeze and convert from liquid to

solid state as the molecules of water will lose

energy and they will become slower. And the

force of attraction increases as the intermolecular

force decreases. And lastly ^{water} ~~it~~ changes from

liquid to solid state.

b) If it is heated in a pot of boiling water.

Ans. The water gets evaporated when it is heated and

changes into liquid to gas state. As the molecules

of water started ~~gaining~~ gaining energy and the force of attraction ~~becomes~~ ^{decreases} as the intermolecular space get increases. Hence the liquid get converted into gas.

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

ans- Two characteristics of water which prove that it is a compound are:-

- i) Water (H_2O) is made up of two elements Hydrogen and oxygen. When these element chemically combined by a fixed ratio of 1:8 they form water.
- ii) Water (H_2O) cannot ~~be separated by~~ ^{be separated by} physical into its constituent element i.e hydrogen and oxygen by physical means but it can be separated by chemical process called electrolysis.

20. Show diagrammatic representation of sulphur dioxide and sodium chloride molecule.

ans- Sulphur dioxide - SO_2

SO_2



sodium chloride - NaCl



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

<u>Food preservation</u>	<u>Food processing</u>
i) It reduces the risk of food borne infections.	
ii) It prevents the food from spoiling.	
iii) Preserve the nutritional quality of food.	
iv) Ex - salicylic acids, common salt, sugar etc.	

Q1. Differentiate between the terms - food preservatives and food processing with appropriate examples.

Food preservatives	Food processing
Preservatives are used for better pres to stop or slow down the spoilage of food, loss of quality and edibility of food for longer time. Ex - Sodium benzoate, sodium metabisulphate & salicylic acid.	Food processing is the transformation of raw ingredients by physical or chemical means into food, or of food into other forms. Ex - cheese, tinned vegetables, bread, Jam, jelly, butter, snacks, soft drinks etc.

State the contributions of

- a) Dmitri Mendeleev - Dmitri Mendeleev was a Russian chemist who discovered the 'periodic law' in 1869 and formulation of 'Periodic table of elements'.
- b) Antoine Lavoisier - Antoine Lavoisier was a French nobleman who named the elements hydrogen, oxygen and carbon. He discovered the role of oxygen in combustion and respiration for which he is most noted.

John Dalton - John Dalton was a British chemist and physicist. He proved that matter consists of ~~small~~ indivisible small particles called atoms. He proposed "the atomic theory" which is later on known as "Dalton's atomic theory".

22. Explain the term compound

ans - When two elements ^{chemically} combine ~~together~~ together then they form a compound.

ans - Compounds are pure substances formed by the chemical combination of two or more elements in a definite ~~part~~ proportion by mass.

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~~ 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 expand on heating.

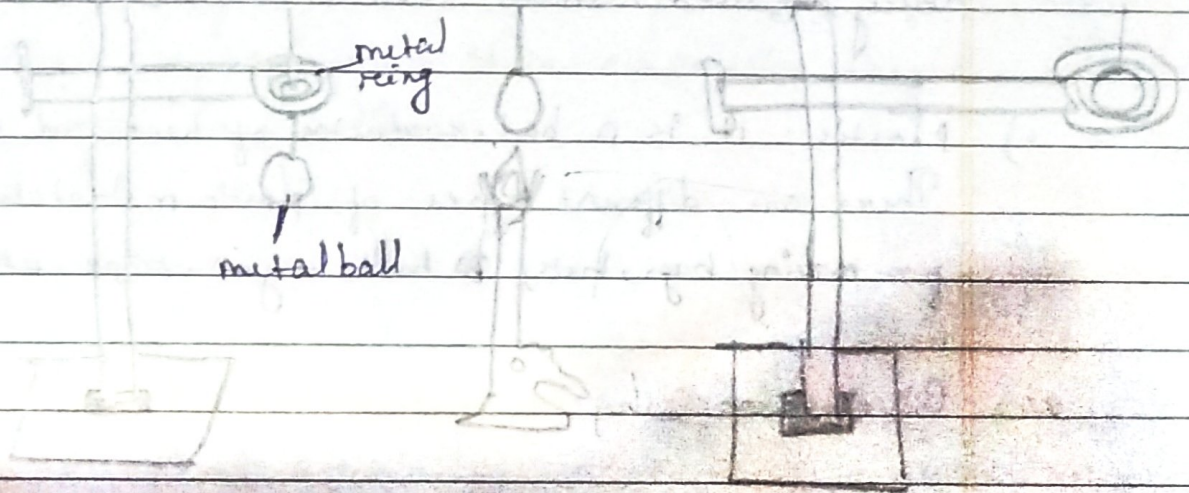
Ans. Solids expand on heating. This is known as thermal expansion of heating.

This can be shown by a simple experiment.

Experiment - Take a metal ball and ~~and~~ a metallic ring. Try to pass ^{the metal ball} through the metallic ^{ring} ~~rod~~. The ball can pass through the metallic ring.

Now, heat the ball for 5 to 6 mins. Now try the ball to pass through the metallic ring. The ball is not able to pass through the metallic ring.

This shows, that solids expands on heating.



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

Ans - All medicines must be taken under proper doctor's supervision and in the correct dose because if the dose will be more in amount it may cause any other disease or side effects and if it will be small in amount it doesn't effect the specific disease.

25. Write the uses of following elements and compounds

a) Gold, platinum and silver. They are lustrous. They are very attractive and shiny. They can also remain in free state and they ~~are~~ do not tarnish in air. So therefore they are used in making ornaments and jewellery.

b) Copper, Aluminium - These are good conductors of heat and electricity. They are malleable. And they are used to make electric wires and utensils.

c) Plastic - It is a bad-conductor of heat and electricity. There are different types of plastic materials used for making bags, bats, balls, toys, pipes etc.

26. Give reason why.

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

ans. The rate of evaporation is directly proportional to temperature. Thus, the rate of evaporation is higher on warm days i.e. hot days than on cold days having low temperatures and clothes dry soon on warm days.

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

ans. Water in a dish evaporates faster than in a

bottle because the surface area is larger in a dish as compared to a bottle. Hence, water in a dish evaporates faster than in a bottle.

c) Why are volatile liquids such as alcohol and spirit stored in tightly closed bottles?

ans. Volatile liquids such as ~~alcohol~~ alcohol and spirit are stored in tightly closed bottles because they evaporate easily. So, to avoid their evaporation they are ~~stored~~ ^{stored} in tight closed bottles.

27) Give reason

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

ans. A philosopher's stone is not actually a stone but a mythical and magical substance not a literal stone but a liquid, wax or powder which on heating with a base metal iron or copper would turn into gold.

b)

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

ans. Food processing is an important procedure for obtaining marketable food products because food processing involves chemical or physical process to ~~to~~ transform the raw ~~material~~ material to edible food products and it

also add some preservatives to preserve the food for longer time.

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

ans. Cosmetics may contain preservatives as one of their ingredients because preservatives are used to prevent spoilage ~~and~~ and growth of harmful bacteria and to preserve the cosmetics for longer days.

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

ans. The process in which solids change directly change into gaseous state without passing through a liquid state is called sublimation. A naphthalene ball size decreases when we left open because due to the sublimation.

~~To show that~~ This can be shown by a simple experiment.

Experiment - Take a naphthalene ball and place it in a cupboard full of clothes. Then observe the naphthalene ball after 1 or 2 months, you will observe that the ~~the~~ size of the ball decreases.

This shows us that the naphthalene ball ~~the~~ size decreases due to sublimation.

29. Tabulate a comparative chart to differentiate between elements, compounds and mixtures. Differentiate them with reference to the ~~the~~ term, existence, properties.

<u>Element</u>	<u>Compound</u>	<u>Mixture</u>
→ They have an independent existence.	→ They have also an independent existence.	→ They are both made up of elements and compound, so they have also an independent existence.
→ Elements are pure substances made up of only one kind of atoms throughout the chemical. It can't be broken down into simpler by chemical or physical means.	→ Compounds are made up of only one kind of ^{molecules} atoms in a definite proportion throughout the ^{by mass} . It can be broken down into simpler substances by chemical process.	→ Two or more substances mixed together in an indefinite proportion is called a mixture.
→ They can't be separated by any physical or chemical process.	→ They can be separated by the chemical process - electrolysis.	→ They can be homogeneous or heterogeneous. They can be separated to elements and compounds.

30. Give reasons for the following.

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

ans: Solids have a definite shape and are highly rigid because the intermolecular force of attraction is high in solid as a result the intermolecular space is low. So for that reason solids have a definite shape and are highly rigid. But the gases have least \Rightarrow intermolecular force of attraction ~~is~~ low as a result the intermolecular space is greater than the force of attraction. So for that reason gases do not have a finite shape and are least rigid.

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

ans: As the sugar is soluble in water but the talcum powder is insoluble in water. So sugar can be distinguished from talcum powder using water.

c) Water on freezing turns into ice.
ans: Water on freezing turns into ice because the molecules of water starts decreasing the energy.

hence the intermolecular force increases as the intermolecular space decreases and the water changes from liquid to solid state (ice)