HOLIDAY HOMEWORK

CHEMISTRY

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Date 15/10/21

I. 1 mark questions:

MCQ

1. The branch of science that deals with the different forms of energy eg. light and sound.

ans) A: Chemistry.

2. The scientist who formulated the periodic table.

ans) B: Daniel Rutherford.

3. The inter-molecular force is maximum in.

ans) A. Solids

4. The temperature at which a liquid gets converted into its vapour state is called its

ans) B: Boiling point.

5. Rapid conversion of water into steam is an example of

ans) A: B. Evaporation.

6. ~~Priests~~ Predicesors to the modern Chemists who created the philosopher's stone.

ans) B: Alchemists.

7. What is an element

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

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

ans) B: Gas Jar.

9. A metallic apparatus which supports the wire gauze

ans) A: A tripod stand.

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

ans) B: Bunsen burner

Fill in the blanks

11. From the elements Nitrogen, Chlorine, browmine, 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 direction conversion of solid into its Vapour on heating.

II 2 mark questions.

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

ans. Preservatives are added to food or beverages to keep them for a long time. If they are not given the food will smell bad and rot.

17. Alchemy was considered a pseudoscience. Give reason.

ans. Alchemy was considered a pseudo science because it lacked a common language for its concepts and processes and was different from science.

18. What happens to water if

a) It kept in a deep freezer.

ans. If it is kept in a deep freezer, it will become ice. The phenomenon here is freezing. The freezing of liquid occurs when it is kept in a place whose temperature is 0°c.

b) It is heated.

ans. If it is heated, it will evaporate and become vapour. The phenomenon here is evaporation. The evaporation occurs when heated at a place whose temperature is 100°c.

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

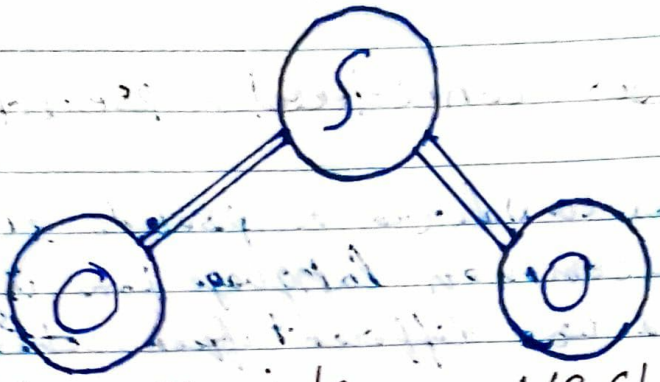
ans * Water is a compound made up of two elements Hydrogen and Oxygen.

* Its formula is H_2O.

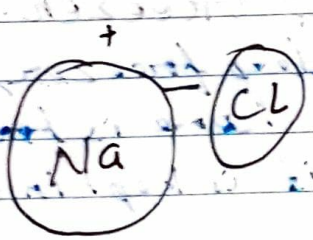
~~III 3 mark questions~~

20. Show a diagram of sulfur dioxide molecule and sodium chloride molecule.

Ans. Sulphur dioxide - ~~Na~~ ~~NaCl~~ ~~SO~~ SO_2



Sodium Chloride - NaCl



III 3 mark questions

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

* State the contributions of
(a) Dimitri Mendeleev (b) Antonie Lavoisier
(c) John Dalton - towards the development of

Chemistry

Food preservatives	Food processing
Food preservatives are that are used for keeping food for a long time in the refrigerator and outside. If the preservatives will be not added to food, it will rot and smell bad. Eg - Salt, sugar, Benzoates, etc.	Food processing is the transformation of raw food materials by physical or chemical means into palatable food products that can be easily prepared and served to the consumers. Eg - Cheese, tinned vegetables, bread, jam, jelly, butter etc.

a) Dimitri Mendeleev - Periodic law and table of elements

b) Antoine Lavoisier - Named the elements carbon, hydrogen and oxygen and explained the role of oxygen.

c) John Dalton - towards the development of Chemistry - atom.

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

(a) Hydrogen and oxygen
(b) Carbon and oxygen
(c) Nitrogen and oxygen
(d) calcium and oxygen

ans. Compounds are substances that contains more than one element in same quantity.

The compounds that contain :-

a) Hydrogen and oxygen — Water (H_2O)

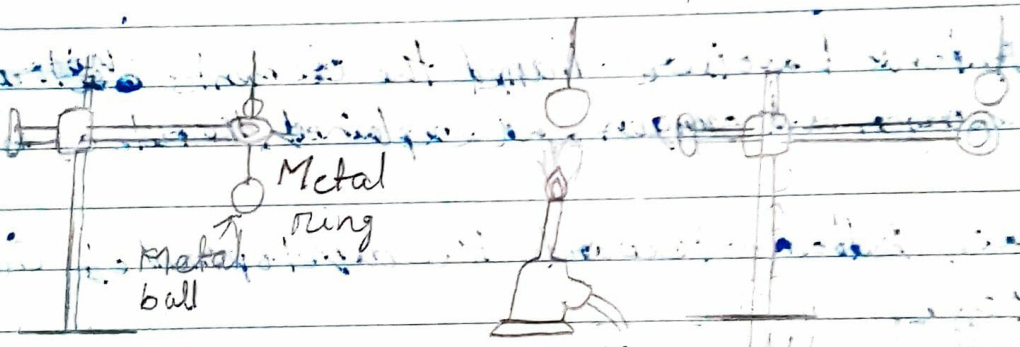
b) Carbon and oxygen — Carbon dioxide (CO_2)

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 solid expand on heating.

ans. ~~All medicines must be~~



The metal ball can pass through the ring.

Metal ball is being heated.

After heating the metal ball cannot pass through the ring.

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

ans All medicines must be taken under proper doctor supervision and in correct dose because if they are taken under these conditions, it will work properly. If the medicines ~~with~~ dose will be more or less

or the wrong medicines we will take, it will harm our body and we will be sick.

25. Write the uses of the following elements and compou

a) Gold, platinum, silver - The metals Gold, Platinum and Silver are used for making jewellery and ornaments like bangles, necklaces, wristlets, earrings, etc.

b) Copper, aluminium - Copper and aluminium are used as utensils like cooker, pan, etc.

c) Plastic - Plastic is widely used over the world. Plastic is used to make bags, raincoats, toys, unbreakable cookwares, etc.

26. Give reasons why.

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

Ans: Wet clothes get direct sunlight that evaporates the water quickly but on a cold humid day the sunlight doesn't fall directly so the water will not evaporate quickly.

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

Ans: Water in a dish evaporates quickly because it has a wide opening, but in the bottle it has a small opening, so the water in the bottle evaporates slowly.

After one week, you will see that the camphor tablet is not there.

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

a) The term
b) Existence
c) Properties

ans.

	Element	Compound	mixture
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 of 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 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 do not retain their properties	The components of a mixture do retain their properties.

30. Give reasons for the following:

a) Solids have a definite shape and are highly rigid whereas gases have to definite shape and are least rigid

ans. Solids have a definite shape and are highly rigid because they have very strong intermolecular force of attraction than gases.

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

ans. Sugar can be distinguished from talcum powder using water because solubility in water. Sugar can be dissolved in water whereas talcum will not dissolve in water and forms sediment.

c) Water on freezing turns into ice.

ans. Water on freezing turns into ice because the water molecules combine together when they are kept extremely in a cold places.