

- (vii). When element R of Group I combines with element F of Group VI, the formula of compound formed is:
 A. R_2F B. F_2R C. Rf_2 D. RF ()
- (viii). The apparatus which used to measure a fixed volume of 25cm^3 in the laboratory.
 A. Measuring cylinder B. Beaker C. Burette D. Pipette ()
- (ix). The electronic configuration of sulphur is :
 A. 2:8:6 B. 2:8 C. 2:7 D. 2:8:5 ()
- (x). When oxygen combines with metals they:
 A. form properties B. Water C. Rust D. form metallic oxides ()
- i) The process of coating iron or steel with zinc is known as:
 A) Zinc painting B) Allowing
 C) Tin plating D) Galvanization
- ii) A table spoonful of sugar was dissolved in a glass of water and the mixture was shaken, the mixture formed is called _____ mixture.
 A) Heterogeneous B) Immiscible
 C) Suspension D) Homogenous
- iii) The apparatus used for grinding granular chemicals in the laboratory includes:
 A) Crucible and watch glass B) Mortar and pestle
 C) Pestle and watch glass D) Mortar and spatula
- iv) One of the following gases produces sound with a glowing splint.
 A) Oxygen B) Hydrogen
 C) Nitrogen D) Halogen
- v) Most syrup bottles are labeled “ shake well before use”, This means the syrups are:
 A) Suspension B) Solution
 C) Filtrates D) Residues
- vi) The appropriate extinguisher used to put off fire caused by electricity is:
 A) Carbon dioxide extinguisher B) Water extinguisher
 C) Wet chemical extinguisher D) Dry air extinguisher
- vii) How many number of shells in sodium ion?
 A) 1 B) 2
 C) 3 D) 4
- viii) Why is water termed as universal solvent?
 A) It is neither acidic nor basic
 B) It occurs naturally in all the three states of matter
 C) It dissolves more substances than any other liquid.
 D) Dissolves both organic and inorganic solutions.
- ix) The mass number of an atom is determined by:
 A) Protons and electrons B) Electrons and neutrons
 C) Protons only D) Protons and neutrons

- x) Technicians prefer to use Non-luminous flame in welding because:
- A) It is bright and non-sooty B) It is light and non-sooty
 C) It is very hot and large D) It is very hot and non-sooty

2 (a). Match each item in List A with a correct response in List B by writing its letter below the number of the corresponding item in the table provided.

LIST A			LIST B	
(i). Is a row in the periodic table			A. The modern periodic law	
(ii). Is a vertical column in the periodic table.			B. Mendeleef periodic law	
(iii) Is the recurrence of similar properties when elements are arranged according to their atomic number.			C. Period	
(iv). The properties of elements are a periodic function of their atomic number.			D. periodicity	
(v). the collective name of the Group VII is called..			E. Table	
			F. Group	
			G. Halogen	
			H. Noble gas	
(I)	(II)	(III)	(IV)	(V)

LIST A	LIST B
i) A method of separating ethanol and water	A) Chromatography
ii) A method of separating iodine and sand	B) Decantation
iii) A method used to get cooking oil from seeds.	C) Simple distillation
iv) A method used to obtain salt from sea water	D) Evaporation
v) A method used to separate kerosene from water.	E) Layer separation
	F) Solvent extraction
	G) Fractional distillation
	H) Sublimation

LIST A	i	Ii	iii	iv	v
LIST B					

- (b). Filling in the blanks with the correct answer.
- (i).Involves covering of iron with zinc layer by dipping in molten zinc.
 - (ii). A fire will start or continue if three factors are satisfied:,and.....
 - (iii)..... is a substance which cannot be split into two or more simpler substance by any chemical means.
 - (iv). Matter is made up of very tiny particles called
 - (v). An apparatus used for grinding and crushing substances is called.....

b) Fill in the blanks

- i) Atoms of the same element with different number of neutrons are called ____
- ii) A bond formed by moving electrons from one atom to another is called ____
- iii) _____ is a metal which is liquid at room temperature.
- iv) A gas that extinguishes a glowing splint is _____.
- v) A metal which is part of the salt we are using in our meals is _____

SECTION B QUESTIONS

Answer All question in this section.

3. (a) Define the term matter.

(b) Mention three state of matter

(c). Write the names of the processes of changing of matter from one state to another:

- (i). Liquid to Gas is.....
- (ii) Solid to Liquid is
- (iii) Gas to Liquid is
- (iv) Liquid to Solid is
- (v) Solid to Gas is

4 (a) Define the following terms

- (i)Compound .
- (ii)Mixture
- (iii) Elements

(b). Write the symbols for the following elements

- (i). Silver
- (ii) Copper

(iii). Gold

(iv). Iron

(c). Give four difference between muddy water and carbon dioxide

5.(a). Draw a well labeled diagram of oxygen preparation in the laboratory by using Hydrogen peroxide and manganese (iv) oxides. And label any five part.

(b).What are the chemical test of oxygen.

(c). States any four (4) chemical properties of oxygen:

(d).List four (4) uses of oxygen gas in our daily life.

6 (a). Define the following terms:

(i)Empirical formula

(ii). Molecular formula

(b). A certain compound has a molecular mass of 60g and has the following percentage composition by weight: carbon 40%, hydrogen 6.67% and oxygen 53.3%.

(i)Calculate the Empirical formula of the compound:

(ii). Determine its molecular formula

(c). Write the chemical formula for each of the following compound

(i). Sodium chloride

(ii) Aluminium oxide

(iii). Calcium carbonate

(iv). Sodium hydrogen carbonate

7.(a) Give the meaning of:the following;

(i).Radical

(ii).Valence

(iii).Oxidation number

(b) With one example name any two types of bonding and show how bond formed between them:

(c). Find the oxidation state of the underlined element in the following compounds:

(i). $\text{H}_2\underline{\text{S}}\text{O}_4$

(ii). $\text{Na}_3\underline{\text{P}}\text{O}_4$

(iii). $\underline{\text{S}}\text{O}_4^{2-}$

8. (a). Calculate the molar mass of the following compound:

(i). Na_2SO_4

(ii). CuSO_4

(b) Find the percentage composition of blanketed element in the compound:

(i). C_2H_6 (C)

(ii). NH_4Cl (N).

(c). Give the IUPAC system name of the following chemical compound:

(i). H_2O_2

(II). $CUSO_4$

(III). H_2O

(d). Explain the meaning of:

(i).Renewable material

(ii)Non-renewable material

(iii).Energy

9.(a) Name five apparatus used during the preparation of hydrogen gas in the school laboratory

(b). States any four uses of hydrogen gas:

(c). What are the test of hydrogen gas

10.(a). Give the different between solution and suspension (Three point)

(b). Write four characteristics of a good fuels:

(c). Explain three Dalton's Atomic theory:

11. a) Define the following terms:

i) Fuel

ii) Kinetic Energy

b) Give two examples of:

i) Solid fuel _____, _____

ii) Gas fuel _____, _____

iii) Liquid fuel _____, _____

c) Outline five (05) characteristics of a good fuel

12. a) i) What is Chemistry?

ii) Write down any four importance of studying Chemistry.

b) Draw and write the meaning of the following chemical symbols

i) Harmful

ii) Toxic

iii) Oxidant

iv) Corrosive

v) Flammable

13. When zinc granules and sulphuric acid are reacted, a gas Z is produced.

- a) Name gas Z. _____
- b) Name the method used to collect the gas. _____
- c) Why is it possible to collect the gas by the method said in (b) above?
- d) What is the chemical test for gas Z? _____
- e) List down any three physical properties of gas Z.
- f) List down any one chemical property of gas Z.
- g) State any two uses of gas Z.

14. a) Define the following terms:

- i) Compound _____
 - ii) Mixture _____
- b) i) Is Air a compound or a mixture? _____
- ii) Give three reasons to support your answer in b(i) above.
- c) What are the differences between mixture and compound? Give four differences.

15. a) Define the following terms:

- i) Empirical formula _____
 - ii) Molecular formula _____
- b) An Organic compound contains 26.7% Carbon, 2.2% Hydrogen and 71.1% Oxygen. If its relative molecular mass is 0 determine its:
- i) Empirical formula ii) Molecular Formula

16. a) Write the formula of the following radicals:

- i) Sulphate ion _____
- ii) Nitrate ion _____
- iii) Hydrogen carbonate ion _____
- iv) Hydroxide ion _____
- v) Carbonate ion _____

b) Name the following compounds

- i) ZnCl_2 _____
- ii) CuSO_4 _____
- iii) Cu_2O _____
- iv) FeCl_3 _____
- v) FeCl_2 _____

17. a) Define the following terms

- i) Valency _
- ii) Oxidation state

b) Find the Oxidation states of the underlined elements in the following compounds

- i) MgO ii) Cr₂O₇ iii) CO₂ iv) KMnO₄ v) NO₂ vi) KClO₃
vii) SO₂₋₄ viii) SO₂

18. a) Draw a well labeled diagram showing the apparatus arrangement for the preparation of Oxygen in the laboratory from Hydrogen peroxide.

b) Write balanced chemical equation for the above reaction.

c) Name the catalyst used in this process.

19. (a) (i) How many electrons and protons are present in oxygen element and aluminium element?

(ii) Write the electronic configuration of chlorine.

(b) Use the elements with chemical symbols P, S and CL to answer the following questions.

(i) Which element is the most electronegative?

(ii) Mention the least electronegative element.

(iii) Which element has largest atomic structure?

(c) Write the chemical symbols of the following elements.

(i) Iron _____ (ii) Lead _____ (iii) Copper _____

20.(a) Mention three ways that can be used in purifying water at home.

(b) What is observed when?

(i) Anhydrous copper (II) sulphate become in conduct with water.

(ii) Sugar is dissolved in water.

(c) Mention four economic uses of water.

(d) List down three forms of kinetic energy.

(e) List down three forms of potential energy.

~ALL THE BEST~

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