

**PRESIDENT'S OFFICE  
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT  
MWANZA CITY COUNCIL  
(BUTIMBA, MKUYUNI AND NYEGEZI) WARDS JOINT**

**FORM TWO MOCK- EXAMINATION**

**032**

**CHEMISTRY**

**TIME 2:30 HRS**

**Thursday 20<sup>th</sup> May, 2021 am**

**INSTRUCTIONS**

1. This paper consists of section A and B
2. Answer all questions in section in the space provided
3. The following constants may be used  
Atomic masses: H=1, C=12, O=16, N=14, S=32, Ca=40

**SECTION A (20MARKS)**

**ANSWER ALL QUESTIONS IN THIS SECTION**

1. For each of the items (i) – (x), choose the correct answer from the given alternatives and write its letter in the box provided.
  - (i). Which statement gives clear meaning of chemistry
    - A. The study of matter in relation to energy
    - B. The study of nature and properties of matter
    - C. The study of matter and arrangement of particles
    - D. The study of matter and chemical reactions
  - (ii). The mass number of an atom is determined by:  
A. protons and neutrons B. protons and electrons C. Neutrons and electrons D. protons alone
  - (iii). Which of the following is a metal?  
A. Water B. chlorine C. Sodium D. Nitrogen
  - (iv). Air entering the Bunsen burner barrel can be controlled by:  
A. Metal ring B. Air hole C. metal jet D. Air ring
  - (v). How many atoms are there in water molecules? A. two B. three C. Four D. five
  - (vi). Which neutral atom has the same number of electrons as  $Mg^{2+}$ ?  
A. magnesium B. sodium C. Neon D. Argon
  - (vii). The appropriate extinguisher used to put off fire caused by cooking oil is:-  
A. water extinguisher B. Carbon C. Wet chemical extinguisher D. Dry air extinguisher
  - (viii). A non-luminous flame is obtained if the air hole is-----  
A. Fully opened B. partially opened C. closed D. half opened
  - (ix). Which gas is the least abundant gas in the air? A. nitrogen B. Oxygen C. Neon D. Carbondioxide
  - (x). The process which produces energy in form of heat and light is called A. Decomposition B. Combustion C. Distillation D. Sublimation
2. (a) Match each item in list A with a correct response in list B by writings its letter below the number in the corresponding item number in the table provided

List A	List B
(i). A solvent which dissolves most substances to form solutions	A. Solid B. Solution
(ii). A substance that has no definite shape or size	C. Water D. Sugar
(iii). A substance that has a fixed shape and volume	E. Milk F. Gas
(iv). Homogenous mixture of two or more substances	G. Liquid H. air

- (b) Fill in the blank spaces by using the appropriate terms
- \_\_\_\_\_ is a measure of the power of an element to combine with another
  - \_\_\_\_\_ is a number of electrons a particular element has lost ,gained or shared on forming a compound
  - A type of bond involves the transfer of electron from a metal to non –metal atom \_\_\_\_\_
  - Grinding chalk into powder involves changing state of \_\_\_\_\_
  - \_\_\_\_\_ alters the rate of a chemical reaction without itself undergoing any chemical change

**SECTION 'B' (80MARKS)**  
**ANSWER ALL QUESTIONS IN THIS SECTION**

3. (a) State one use of the each of the items in (i)-(v) in administering first Aid

s/n	Item	Use
(i).	Soap	
(ii).	Bandage	
(iii)	Sterile gauze	
(iv)	Iodine tincture	
(v).	Petroleum jelly	

- (b) Give one function of each of the following apparatus in the laboratory chemistry

- Spatula.....
- Gas jar.....
- Beaker .....
- Motor and pestle.....
- Wire gauze.....

4. (a) By giving one reason, explain the following fact

- During laboratory preparation of oxygen gas ,little manganese dioxide is added to hydrogen peroxide.....
- Fish can obtain oxygen for respiration although spend their lives in water.....
- Oxygen gas can be used for welding activities although it does not burn.....

- (b) which property enables the use of hydrogen gas in

- Filling weather balloon .....
- Production of oxy-hydrogen flame???

- (c) Give two domestic use of oxygen gas.....

5. (a) Give three chemical tests for water and show the results obtained in each

- Differentiate water treatment from water purification
- Why drinking water should be treated and purified? Give two reasons
- How can drinking water be treated or purified

6. The position of the elements A,B,C,D,F and G are shown in the part of the periodic table below. The letters are not the usual symbols of the elements.

I	II	III	IV	V	VI	VII	VIII
			E	F	A		
C		D				B	G

Use the letters to answer the following questions

- Write the electron arrangement of atom A,B,C,D,E and F
- State the number of electrons, protons and neutrons in the outermost shell of an atom of D ,C, and G
- Which is the most reactive metal?
- State the type of the bond formed between elements

(i) C and B

(ii) E and A

(e) Give any four difference between the bond formed in (d) (i) and (ii) above

7. (a) Write the names and formulae of the two chemicals that can be used in preparation of oxygen gas

(i).....

(iii).....

(b)(i) State an appropriate method of collecting oxygen gas based on solubility and density of the gas in water.....

(ii) how can oxygen gas be tested??.....

(c) list four uses of oxygen gas?

8. (a) Explain what you understand by the word fuel?

(b) Name the state of matter under which of the following fuel belongs

(i). Kerosene (ii) Charcoal (iii) Biogas

(c) Give two reasons to explain why non luminous flame is normally used as a source of heat in the laboratory

9. A certain compound contains 15.8% of carbon and 84.2% of sulphur by mass. If the molar mass of the compound is 76. Calculate its molecular formula

Stage	Carbon	Sulphur

10. (a) Define the following terms used in chemistry

(i) Isotopy (ii) Isotopes

(b) Naturally, Chlorine exist as  $_{17}^{35}\text{Cl}$  (75%) and  $_{17}^{37}\text{Cl}$  (25%). Calculate the relative atomic mass of Chlorine.

ALL THE BEST