# THE PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

#### **HEKIMA SECONDARY SCHOOL**

## FORM TWO TERMINAL II EXAMINATIONS MAY 2024 CHEMISTRY

NAME TIME 2:30 HRS

#### Instructions

- 1. This paper Consist of sections A, B and C with total of 10 questions
- 2. Answer all questions in both sections
- 3. All writings should be in blue/black ink
- 4. All diagrams should be drawn in pencil
- 5. Write your assessment number at the top right corner

### **SECTION A (15Marks)**

- 1. For each of the items (i)-(x), choose the correct answer from among the given alternative and write its letter in the box provide.
- 1. Choose the correct answer among the given alternatives and write its letter in your exercise book.
  - (i). Mr. Baraka asked to explain why welders prefer the use of non-luminous flame for their work but he failed to do so. As educated student why do you think they prefer it.
    - A. It is available

- B. It is easy to transport
- C. Produce very hot flame
- D. Can be made by kerosene.
- (ii). One day, Paula got an accident of hot water and failed to identify the name given to burns caused by hot liquids or vapor. According to your understanding, what is the name of it from the following alternatives?
  - A. Injuries
- B. Scars

- C. Scalds
- D.Wounds

- (iii). A person at home can apply chemistry in:
- A. weighing cassava and maize flour B. weeding flowers in a garden
- C. cooking food in a kitchen
- D. dusting the floor in a house.
- (iv). Factors in an experiment that can be manipulated to get desired results are called;
  - A. Controlled variables
  - B. Manipulated variable
  - C. Dependent variables
  - D. Independent variables.
- (v). Which of the following are the two process involved during distillation?
  - A. Evaporation and sublimation
  - B. Evaporation and condensation
  - C. Decantation and evaporation
  - D. Evaporation and crystallization

- (vi). Which of the following substances occupies the shape of the container? A. Solid B. Particle C. Liquid D. Crystal.
- (vii). Why do you think that hydrogen is not a constituent of air?
  - A. Because of being highly flammable
  - B. Because of being a reducing agent
  - C. Because of being very light
  - D. Because of being very reactive/
- (viii). Your friend, Sia wants to buy camera which is fragile instrument. In order for it to last for long period of time, how can he prevent rusting?

A. By using silica gel

B. using ethanol

C. By galvanization

- D. By using oil;
- (ix). The most common industrial method of preparing oxygen;
  - A. Electrolysis of copper sulphate
  - B. Decomposition of hydrogen peroxide
  - C. Electrolysis of bases
  - D. Fractional distillation of liquefied air.
- (x). ..... is an apparatus used to measure a fixed volume of liquids in the laboratory?
  - A. Test tube
- B. Beaker
- C. Pipette
- D. Measuring cylinder

#### Answers

I	ii	Iii	Iv	v	vi	Vii	viii	ix	X

2. Match each item in list A with correct response in list B by writing the letter of the correct response below the corresponding item number in the table provided

	List A	List B
(i)	A condition in which the body system is unable to	A. Bruises
	take enough blood to the vital organs.	B. Fainting
(ii)	A skin injury caused by hard hit.	C. Suffocation
(iii)	Sudden loss of consciousness caused by lack of	D. Chocking
	sufficient blood and oxygen to the brain.	E. Shock
(iv)	Blockage of the upper part of the airways by food,	F. Burns
	drink or other objects.	G. Poisoning
(v)	A condition in which the lungs are not getting	H. Burns
	enough oxygen causing difficulty in breathing.	I. Bleeding

## **SECTION B: (70MARKS)**

3.	(a) Mrs.	Msema kweli was	addressing	the villagers	about us	e of water	for economi	.C
	values. V	What 4 values will	she tell the v	villagers				

i. \_\_\_\_\_\_i

ii
iii
iv
(b) Is an air a mixture or a compound? Give 4 reasons
i)
ii)
·::·)
iii)
iv)
<u> </u>
4. (a) The colour of $CrO^{2-}$ is valley, and that of $CrO^{2-}$ is around. Calculate the
(a) The colour of $CrO_{4(aq)}^{2-}$ is yellow and that of $Cr_2O_{7(aq)}^{2-}$ is orange. Calculate the
oxidation number of Cr in both of these radicals.
b) Give one (1) reason to support the following statements:
i) A luminous flame is said to be safer and less likely to cause accident in the
aboratory.
ii) Chemicals which are not correctly labelled should not be used in the
aboratory.
iii) The components of a mixture of water and cooking oil are separated using
ayer separation method.

b)State the four modifica	tion of Dalton`s atomic theory	
	etronic configuration for the ato	
(i) <sub>4</sub> Be	(ii)14Si	
6 (alDiatinguish the	ollowing aubataneas	
	ollowing substances. The from heterogeneous mixture	·.
(-)		
(-)	re from heterogeneous mixture	
i. Homogenous mixtu	re from heterogeneous mixture	
i. Homogenous mixtu	re from heterogeneous mixture	
i. Homogenous mixtu	ole liquids.	
i. Homogenous mixtu  ii.Miscible from immisci  iii. Saturated from uns	ole liquids.	

	7. (a)Asha want to select a good fuel for domestic uses in her home what things should she considered? (Mention six (6)
	ii
	iii
	iv.
	v
	vi.
	(b)Classify the following fuel either primary or secondary fuel.  (i) Coke  (ii)Crude oil
	(iii)Kerosene
	(iv)Natural gas
8.	(a)What properties of hydrogen gas that made it to be used in the following?  i. As a fuel
	ii. To fill weather
	balloons
	iii. Manufacture of hydrochloric acid
	iv. iv. Manufacture of margarine
	(b) ) Environmental pollution in most of rural areas in Tanzania is caused by using charcoal and firewood as a fuel. What will be the two alternative source of energy, they supposed to use for environmental conservation? (give reason for each)  i
	(c) Why fossil fuels are referred to as non-renewable energy resources? (Give two reasons) i ii
9.	(a)You are provided with the following atoms, for each fill the information below:- (i) $^{35.5}$ Cl
	protons =
	Neutrons=
	Electrons=

(ii) <sup>1</sup> H
protons =
Neutrons=
Electrons=
(b) Define the following
i.Atom
ii.Energy
iii.Atomicnumber
iv.Isotopes
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SECTION C (15 MARKS)
10(a)
i. What do you understand by the word "Relative atomic mass"?
ii). Carbon has main isotopes, 126 C and 146 C with relative abundances 98.89%
and 1.11% respectively. Calculate the relative atomic mass of Carbon.
b) i. Draw a diagram of laboratory preparation of oxygen gas from hydrogen
peroxide and manganese IV oxide

(ii) Write the word equation for the reaction above (a)i

<ul><li>c) Answer the following questions with reference to the first 20 elements of table</li><li>i. Give the chemical symbol of element having:</li></ul>	of the periodic
a) The smallest atomic size	
ii.Identify the element which are:	
<ul><li>a) Metals having three shells of electrons each</li><li>b) Metals having 1 electron in the valence shell</li><li>c) Noble gases</li></ul>	_ - -