

**PRESIDENT'S OFFICE**  
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**  
**FORM TWO OPENING TEST**  
**CHEMISTRY**

**Time:2:30 Hours**

**January 2024**

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**Instructions**

1. This paper consist of section A, B and C with a total **often(10)**questions
2. Answer all questions in the space provided
3. Section A and C carry **fifteen (15)** Marks each and section B carries **seventy (70)** Marks
4. All communication devices and any unauthorized materials are **NOT** allowed in the examination room
5. All answers must be in blue or black ink **EXCEPT** diagrams which must be in pencil

<b>FOR EXAMINERS USE ONLY</b>		
<b>QUESTION NUMBER</b>	<b>SCORE</b>	<b>EXAMINER'S INITIALS</b>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
<b>TOTAL</b>		
<b>CHECKER'S INITIALS</b>		

## SECTION A (15 MARKS)

Answer ALL questions

1. Write down the letter of the most correct Responses for each of the following questions.
- If a Bunsen flame produces most soot which is the correct conclusion.
    - The air hole is closed
    - The burner gas jet is big ( )
    - The air hole fully opened
    - The gas supply is poor
  - The state of matter are:-
    - Element ,Gas, and Mixture
    - Liquid, Moisture and Element ( )
    - Water ,moisture and solid
    - Gas, liquid and solid
  - Juma applied the knowledge of scientific procedures in solving his daily problems. One of the stages of scientific procedure is experimentation. In scientific procedures experiments used to test which from the choices given?
    - Data
    - Problems( )
    - Hypothesis
    - Observation
  - The substance that can burn your skin is best described as
    - Flammable
    - Corrosive ( )
    - Explosive
    - Toxic
  - Which of the following sets of apparatus suitable for measuring volume of solution s
    - Burette, pipette, and beaker
    - Burette , pipette, and conical flask
    - Measuring cylinder, burette and pipette ( )
    - Burette, flat bottomed flask and pipette
  - Flammable chemicals are the ones which can
    - Catch fire easily
    - Explode easily
    - Poison you ( )
    - Burn skin
  - \_\_\_\_\_ are conditions or factors that can change in an experiment
    - Hypothesis
    - Variables ( )
    - Problems
    - Conclusion
  - A branch of chemistry which deals with studies and uses of instruments and methods which used to separate, identify, and quantify, chemical species in matter?
    - Inorganic chemistry
    - Analytical chemistry ( )
    - Instrumental chemistry
    - biochemistry
  - Which branch of chemistry deals with the studies of carbon and its compound?
    - In organic chemistry
    - Organic chemistry ( )
    - Biochemistry
    - Analytical chemistry

- x) Why is loose or floppy clothing not allowed in the laboratory?
- It will help move fast
  - It will get wet when water splashes
  - It may catch fire or cause one to fall ( )
  - It causes poor ventilation in the body

**ANSWER**

I	II	III	IV	V	VI	VII	VIII	IX	X

2.

LIST A	LIST B
i) A process of separating a mixture of sodium chloride and ammonium chloride. ii) A method used to separate kerosene and water iii) A method by which salt and water can be separated iv) A method used to get solvent from a solution mixture v) A method by which coloured substances are separated and identified	A. sublimation B. Boiling C. Chromatography D. Distillation E. Evaporation F. Filtration G. Layer separation H. Decantation

**ANSWER**

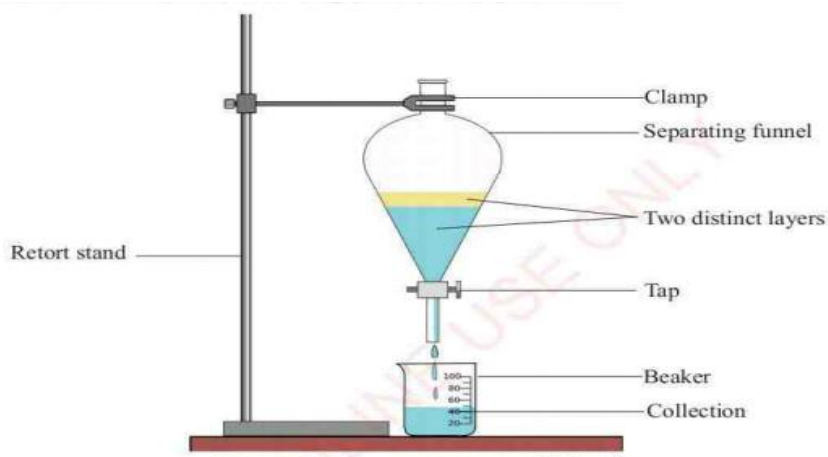
I	II	III	IV	V

**SECTION B (70 Marks)**

Answer **ALL** questions

3) What are considered to be the main distinctions between a chemical compound and a mixture? **(5points)** Explain why the liquid obtained by mixing sodium chloride with water is not regarded as a chemical compound.

4) A former student from UBN secondary school prepares an experimental set up **A** as follows. Then they pour water into a beaker followed by addition of kerosene to obtain a mixture **X**. Then they pour the mixture **X** in an experimental set up **A**. Apply the knowledge you obtain from chemistry lessons to answer the questions that follow



(a) Identify the experimental set up A

(b) Identify the mixture X

(c) What is a aim of the demonstrated Experiment

(d) Which liquid you drain first? Give reason

5) (a) Explain why there is an increase in weight when iron get rust.

(b) Mention ways in which the burning in air of magnesium and rusting of iron differ  
**(4points)**

6) (a) A form one student from UBN OPEN SCHOOL reads a statement from a certain book that, “if the clothes worn by your friend catch fire, cover them with a fire blanket” Why a fire Blanket is to be used in that case?

(b) Explain the Effect of rust in your environment.

(c) You are given the components of air in the table bellow. Answer the question below follo.

GAS	APPROXIMATE PERCENTAGE(%)
Nitrogen	78
Oxygen	21
Noble gas	0.94
Carbon dioxide	0.03
Water vapour	0.4

What does percentage indicate?

7) With the aid of well labelled diagram explain how Bunsen burner work

8) (a) Once Mr Msaki open a container which contain hot soup in the room, people in different parts of the room notice the smell of the soup. You as a form one student explain by using kinetic theory of matter how this happens.

(b) Water vapour is a matter? Explain your answer

(c) Why does the wax of the candle melt after few seconds when the candle is ignited?  
Explain











9) There are various types of solutions. The solute and solvent can be in any state of Matter. The table below shows mixture of different solutes and solvents in different state to form solutions. Fill the table by giving common examples

solute	solvent	Examples
solid	gas	
solid	liquid	
solid	solid	
liquid	Gas	
liquid	liquid	
liquid	solid	
gas	gas	
gas	liquid	
gas	solid	

### SECTION C (15 Marks)

Answer question **number ten (10)** in this section

10) use tick and cross to fill the table

Fire extinguishers					
Classes of fires					
 A					
 B					
 C					
 D					
 E					

## **KWA MAHITAJI YA**

**01. MITIHANI YA KILA MWEZI (MONTHLY TEST) KWA MASOMO YOTE NA VIDATO VYOTE**

**02. SERIES ZA O-LEVEL KWA MASOMO YOTE NA VIDATO VYOTE**

**03. MITIHANI YA KIDATO CHA TANO NA SITA (ADVANCED SERIES) KWA COMBINATION ZOTE**

## **OFA OFA**

**U.B.N COOPERATION TUNATOA OFA MAALUM YA KUJIUNGA NA GROUP LETU LA “U.B.N COOPERATION” KWA WAKUU WA SHULE NA WATAALUMA KWA TSH 50,000/= KWA KIDATO KIMOJA AMBAPO UTAPATA MITIHANI YA KILA MWEZI (MONTHLY TEST) KWA MASOMO YOTE NDANI YA MIEZI SITA. OFA HII NI KWA KIDATO CHA PILI NA CHA NNE TUU. ITAANZA (MWEZI JANUARI – JUNE) MWISHO WA KUJIUNGA NA OFA HII NI TAREHE**

**05/01/2024**

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