Semi-Candidate’s Name: .........................................................................Signature: …….....................

# 545/1

**CHEMISTRY**

# Paper 1

**2024**

# 2 hours

DIVINE SECONDARY SCHOOL KITALA

Uganda Certificate of lower Education

MID TERM-II EXAMS 2024

# S.3 CHEMISTRY

Paper 1

# 2 hours

**INSTRUCTIONS TO CANDIDATES:**

This paper consists of two sections; A and B.

It has six examination items. Section A has two compulsory items. Section B has two Parts; I and II. Answer one item from each part. Answer four items in all.

Answers to Section A must be written in the spaces provided while those of Section B must be written on the answer booklet(s) provided.

Any additional item(s) answered will not be scored

ITEM 1

Section A

Attempt ***all*** items in this section

Iron is a very useful mineral element in our environment. when extracted from its ores, metallurgists use it to manufacture many useful materials such as bells, nails, iron sheets, iron bars doors and windows. All these products are the most used in our community most especially on construction sites.

Task:

As a chemistry learner:

1. Categorise the mineral element.

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1. In a simple write up, explain what makes the element suitable for making all those named products.

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1. It is said that products manufactured using that mineral element, have limitations. Write a short message explaining the limitations of using such products and how they can be minimised.

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ITEM 2

1. Advise the community on the use of the products.

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Evas was in a conversation with her young brother and suddenly her brother talked of where the rain comes from, her brother thinks that rain is sent by God to us, a concept which seems to be right since rain is not made by man. Evas told her brother that he is right though using knowledge of chemistry we can further explain how rain comes to be formed since it is recyclable.

Task:

As a chemistry student;

1. write a short message helping Evas to give a precise explanation to her brother.

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1. Further explain how the recycling process is affected by human activities.

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SECTION B

Part I

Attempt any ***ONE*** item from this part

ITEM 3

Your young brother bought ice from the shop, on reaching home, mum sent him to the Centre to buy sugar and he forgot his ice on the veranda, which is directly heated by the sun. On returning, he found out that all the ice had turned to liquid and flowed, after some time he noticed that the veranda he did not mop was dry and he wondered how it came about.

# Task:

As a chemistry student, write a message explaining to him what caused the changes he saw using your knowledge of the kinetic theory of matter

ITEM 4

At the annual art exhibition held at a certain school, young art students proudly displayed their creations. Among the vibrant paintings and sculptures, a group of students caught everyone’s attention as they could create stunning portraits using simple pencils. One curious parent approached the art teacher, Mr. Ssenjokyo Moses. “How do these pencils work to produce nice drawings and make drawing seem effortless.” Mr. Ssenjokyo “let me introduce you to the chemistry behind it”

# Task:

As a chemistry student, write a message the art teacher can use to respond to the parent.

# Part II

Attempt any ***ONE*** item from this part

ITEM 5

Recently petroleum was discovered in Uganda. However, before it reaches our gas stations and homes, it must undergo a crucial process refining. The community members have a misconception that refining is a waste of time and this is due to lack of knowledge. The ministry responsible for natural resources has organized a work shop where it has invited all the people. It is intended to educate the community members about petroleum refining and also emphasize how informed citizens can benefit from this remarkable discovery

# Task:

As a chemistry student, write a presentation the ministry can use to educate the community members.

ITEM 6

A chemical engineer is to design a storage tank for a highly corrosive chemical, sulphuric acid. The tank will be exposed to air and water. The engineer is on the task of choosing the most suitable material for the tank’s construction. He has materials made from aluminum, copper, zinc and stainless steel.

# Task:

As a chemistry student, make a write-up advising the engineer on what material he is to use to construct the tank

End

***N.B; Cry but cry silently !!!***