

Candidate's Name:

Signature:

545/1

CHEMISTRY

Paper 1

July/August 2024

2 hours



ERETA EDUCATION CONSULTS LTD

JOINT MOCK EXAMINATIONS 2024

Uganda Certificate of Education

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.

For examiner's use only							
ITEM	1	2	3	4	5	6	TOTAL
SCORE							

SECTION A

Answer **all** the items from this section.

ITEM 1

The residents of kawuku village are faced with a challenge of dirty marks being left on their fabrics when they wash them using the locally available detergents. They are frustrated, do not understand the cause and what to do. However, they have heard of other detergents made by large scale chemical processing industries on the market that work better but they need more advice on this.



One of the residents has sought your assistance, confident that you can use your knowledge of chemistry to provide help.

Task:

As a chemistry learner;

- (a) Help the residents understand the categories of products on the market.

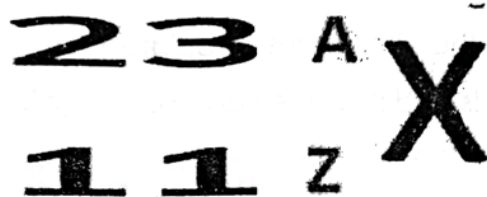
- (b) Explain to the resident how the products work.

- (c) Advise the resident on the challenges associated with use of the different products and how they can be mitigated.

- (d) Help the residents make a comparison of the different products on the market.

ITEM 2

A team of scientists found a strange substance, calling it element X. Subsequently, they successfully determined its atomic number and mass number but couldn't put it on the periodic table because there was no full discussion from other scientists yet, on what it does and how it affects the environment



You are required to contribute and help in placing it on the periodic table

TASK;

Write down what would be your contribution in relation to:

(a) Behaviour of X

(b) Significance of X

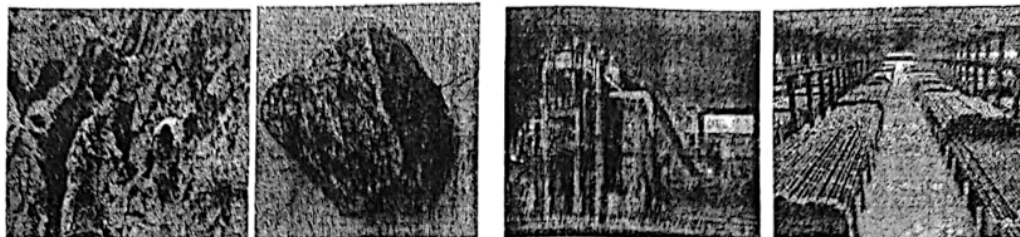
(c) Possible effects of X when in the environment

SECTION B

Part I; Answer one item from this part.

ITEM 3

Significant iron deposits were located in one of the hills in Uganda. An investor was contacted by government to setup an iron and steel rolling factory to tap into the opportunity. However, the residents seem not to understand how iron can be obtained from its natural sources and consequently its benefits and are resisting the project fearing the associated environmental impacts.



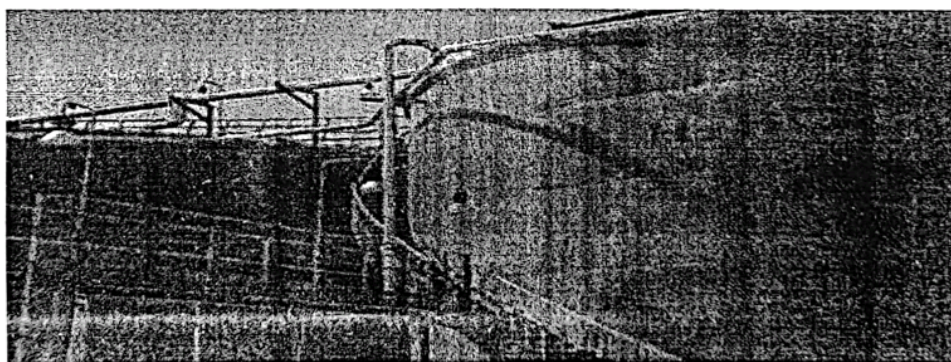
As a **senior four** candidate with the knowledge of chemistry, you have been contacted to create awareness to the members confident that you can provide the necessary information.

TASK

Write a presentation you will use upon meeting them.

ITEM 4

Sulphuric acid is used in the manufacture of paint. Due to the increased demand of paint countrywide, the government is seeking to ensure that there is a steady supply of sulphuric acid to be used to manufacture the needed paint. The government has hired an investor to set up a sulphuric acid manufacturing plant in kitoogo.



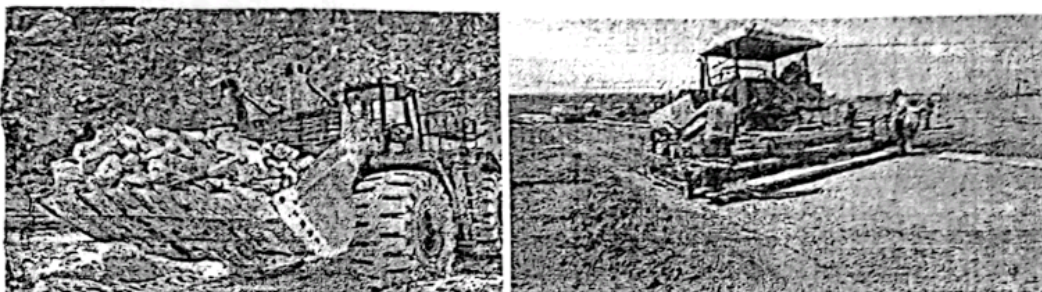
The locals of kitoogo town are concerned about how the production process will be conducted, its environmental effects and how they will benefit from the project.

TASK

Prepare a presentation you will make answering concerns of the locals.

Part II; Answer one item from this part.

In Uganda, there are many mineral reserves and rocks. Due to the rapid population growth, their exploitation is causing proportional environmental degradation. The government through media houses wants to make public awareness on the matter.



Your school has been chosen to lead the environmental conservation campaign in your district. You have been chosen to present on one of the radio talk shows trusting your chemistry knowledge

TASK

As a chemistry student, prepare a short presentation you will deliver during the talk show

ITEM 6

People of Bigombe village in Jinja district for the last three years have been practicing charcoal burning in the forests and swamp reclamation. This is done in an effort to carry out animal husbandry, crop husbandry and also have land for settlement. Recently the National Environment Management Authority (NEMA) has given an

order to stop all the practices taking place so as to avoid the negative impact on the environment.



A sensitization workshop is to be organized to explain the existing situation in the village. The theme of the work shop is **MY ENVIRONMENT MY RESPONSIBILITY.**

TASK

As chemistry student, write a message you will deliver upon invitation.

END