

CANDIDATE'S NAME:.....

SIGNATURE:

Random No.						Personal No.		

(Do not write your School/Centre Name or Number anywhere in this booklet.)



545/1

CHEMISTRY

Paper 1

July/August, 2024

2 hours

ACHOLI SECONDARY SCHOOLS EXAMINATIONS COMMITTEE

Uganda Certificate of Education

Joint Mock Examinations, 2024

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.

For Examiner's Use Only					
1	2	3	4	5	6

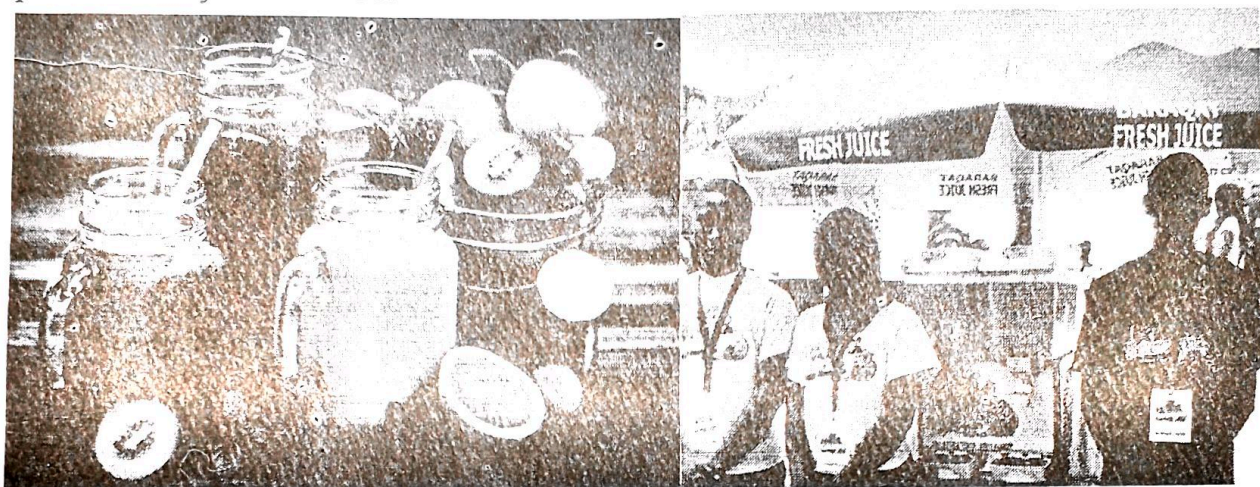
SECTION A

Answer all items from this section in the spaces provided.

Item 1.

Senior four Students from **Brilliant High School**, Gulu who are in an Entrepreneurship group, are increasingly losing customers who are always complaining that their hand made fruit juices get spoilt easily.

In order to cater for the customers' complaints, these students want to add ingredient products to their fruit juice but they lack knowledge of what extract ingredient products they should use.

**Task:**

As a chemistry learner;

(a) (i) explain the categories of ingredient products they should use.

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(ii) explain to these students how the ingredient products work.

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(b) Explain the dangers associated with the long-term use of the ingredient products.

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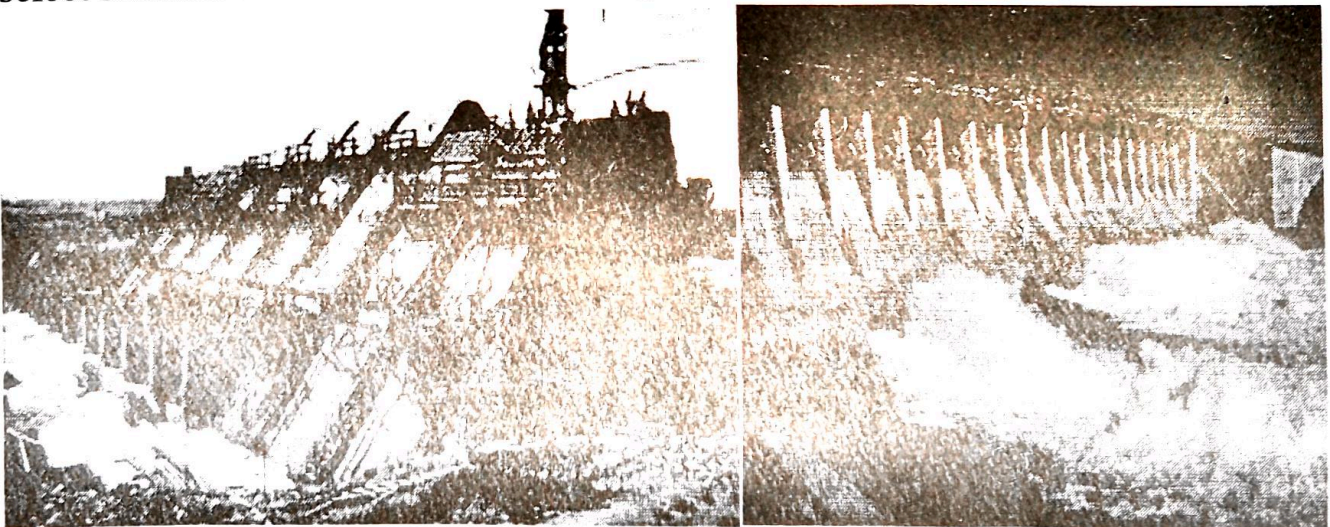
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Item 2.

The government of Uganda wants to construct a new strong dam in Aruu falls along River Aswa in order to increase on hydroelectric power production in Pader district. It has hired a Chinese dam construction company to execute this exercise using different building materials on market that have minimal impact to the environment. The Chief Engineer of the company has promised the government that he would select suitable materials to be used basing on their qualities and properties.



Task:

Use your chemistry knowledge to;

(a) Explain:

(i) the categories of materials to be used.

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(ii) the suitability of the materials to be used.

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(b) Advise the Chief Engineer about the impacts of the materials to the environment.

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SECTION B

Part I

Answer one item from this part in the answer booklet(s) provided.

Item 3

Ammonia is used on a large scale for the manufacture of laundry detergent for removing temporary hardness, it's used in large scale refrigeration plant and in the production of Nitrogenous fertilizers which are highly needed by the farmers. In an attempt to continue supporting the country's agricultural sector among other sectors, the government is seeking to ensure a steady availability of ammonia and thus has hired an investor to set up an ammonia production plant with minimal environmental impact in Pabo town.

However, the community in Pabo would like to know how the production process will be carried out and how will they benefit from this plant.

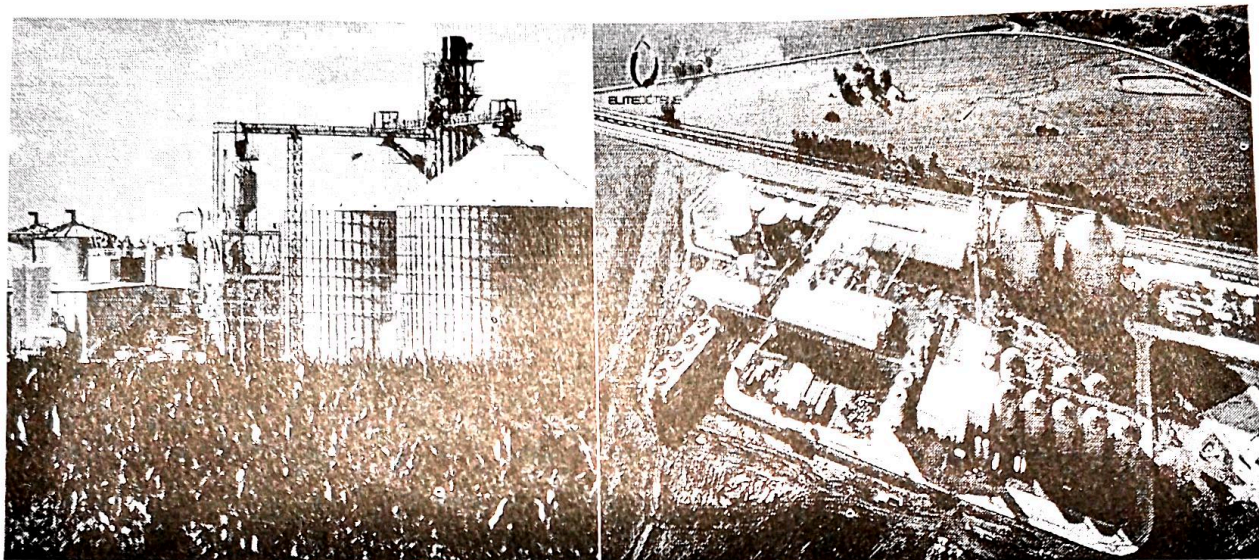
Task:

As a chemistry student, make a write up you will use during the presentation.

Item 4.

Ethanol is a major component in sanitizers' production. Following an increased demand for hand sanitizers countrywide due to Corona virus and Red eyes recently in the country. The government has hired a local investor to set up an ethanol

brewing plant in Kitgum industrial area to make more ethanol to be used in sanitizers. The Kitgum Municipal Council would like to know the production process and how the plant will impact on the environment of their town.



Task:

Make a write up you will deliver to Kitgum Municipal Council answering their concerns.

Part II

*Answer **one** item from this part in the answer booklet(s) provided.*

Item 5.

Charcoal is a fuel used in most homes throughout the country. The Uganda parliamentary caucus environment is however always against the business basing on how charcoal is made and its effects on the environment. This has attracted attention of officials of **National Environment Management Authority (NEMA)**, one of the government Agency. The officials are planning to create an awareness to the people of the country through sensitization workshops organized in different districts in Northern Uganda.

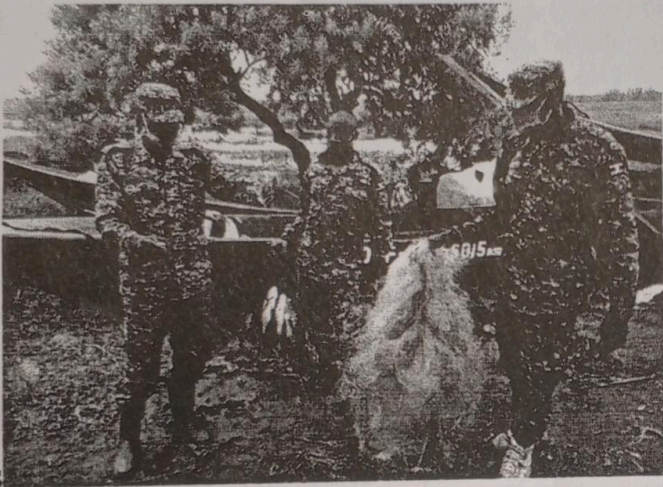
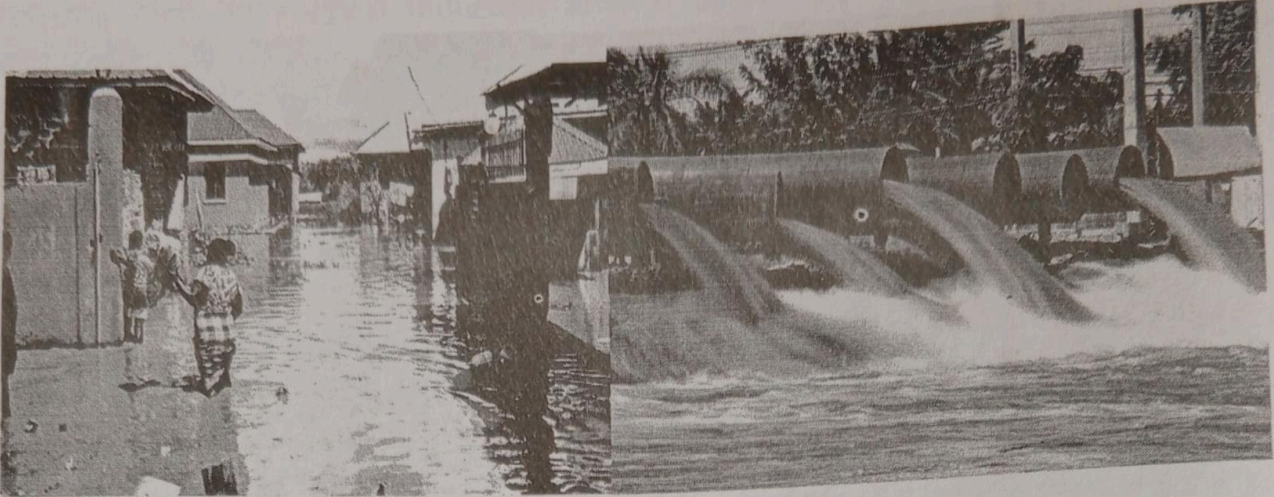
**Task:**

As a chemistry learner, prepare a short presentation you will deliver during the workshop upon invitation.

Item 6.

Fresh water bodies like lakes and rivers have been heavily encroached on as a result of increasing Uganda's population. Many people have cleared all the vegetation around the lakes to set up buildings and beaches. Many industries are dumping their waste products in these water bodies. Fishermen are on the other hand using poor method of fishing ending up killing other species in the water. On this year's **World Environment Day**, the science club in your school wishes to raise public awareness among the entire student's community on the matter. The science club at your school has selected you to give a presentation on that day following the theme "**SAVE OUR WATER BODIES**"

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Task:
Make a write up you will use upon the invitation.

END.