**Name………………………………………………………………**

**545/1**

**CHEMISTRY (Theory)**

**April/2024**

**2 HRS**

**Uganda Certificate of Education**

**End of term 1 2024 S4**

**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.

**SECTION A**

Item 1

Frank a student at Kisindi SDA secondary school is a plastic collector, he also collects charcoal dust , animal droppings, egg shells and plant materials he uses to make charcoal briquettes that he shells for income. He also sells the collected plastic bottle and bags to the recycling industries from which he also attain income for his survival.

a) help Frank know how important he is to the environment. ( 5 scores)

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b) As an official from NEMA write brief notes to be presented to the public in village meetings including other ways of protecting the environment from harmful effects of polymers. ( 5 scores)

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Item 2

Mr Deo is achief producer of alcohol ( ethanol) in Kyakasengejjo LC 1 using available local raw materials. She sells this alcohol so as to acquire school dues for her children. Some visitors are interested in the procedures he uses to produce ethanol. But Okello doesn't know English. He has called you. Help him

a) to tell them the raw materials he uses

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b) how he uses the materials to get the product

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C) explain to them the effects of alcoholism

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**SECTION B**

Part 1

Item 3

Carbon dioxide on large scale is being used as a freezer in fish preservation and as a preservative in carbonated drinks like sodas and hence highly needed in large quantities for it's use. Hence it's highly demanded on the world market therefore the government plans to set up a carbon dioxide plant with minimal environmental impact. However, the science club members in your school would like to know how the process of production will be carried out.

Task:

As chemistry student, make a write up you will use during the presentation. (20 scores)

Item 4.

Deogratias, a soap engineer was advised to make soap for Ugandans at a low cost. He was assigned to access all the Ugandan butchery clubs and all the business men engaged in the salt process at Lake Katwe in Uganda. This man was freely provided with potassium hydroxide by the government of Uganda.

Task:

As a chemistry student,

(a)Describe briefly how the engineer is likely to manufacture soap for the Ugandans and state the chemical name of soap he is likely to make for the Ugandans.

(b) Describe briefly how the product works while washing using it

Part 2Item 5

. During city council meeting held on 18/3/2023, the city council come up with a bi - law of waste management which is to be implemented through burning of wastes, disposal of plastic in bushes a way from the city, washing of vehicles in swamps a way from the city, and re allocation of industries a way from the city. How ever the opinion leaders are indisagreement with the bi law.

Task.

As a chemistry student explain why the opinion leaders are disagreeing with the bi low.

Item 6.

In order to prepare a delicious meal for their castomers, a hotel chief cheff with a recommendation flyer showing amount of salt which should always be added to various meals. He recommended that 100cm of meat source requires 0.2 moles of salt, the same volume of bean source requires 0.25 moles, also the same volume of chicken source requires 0.01 moles. The hotel normally prepares 5 litre of each source per day. In the absence of the chief cheff, the cheffs normally find it to interpret the flyer.

Task

As a chemistry student , came up with the simplest form which can easily be interpreted.

End