

**Candidate's name:** .....

**Signature:** ..... **stream:** .....

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CHEMISTRY  
Paper 1, 2024  
2 hours.

## **NEW LOWER SECONDARY SCHOOL CURRICULUM**

### **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.*

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

*Any additional item(s) answered will not be scored.*

## SECTION A

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

**Item 1.**

One of the SDGs (Sustainable Development Goals) by 2030 in Uganda is access to clean water. Previously the government embarked on distributing water points in different villages that lacked access to clean water. Some villages received pumped water by solars, boreholes and in others the government decided to renovate their wells. Complaints have arisen from different villages that received the water points. The villagers claim that, grey spots are always left on their clothes after washing, even if they rinse them several times. They have also complained about the increase in the amount of the cleansing material they use for washing their clothes.

### Task:

As a chemistry leaner:

- a) help the villagers benefiting from the programme understand the problem they made when choosing the cleansing material for washing.

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- b) Also explain to the community how the chosen cleansing material works during the washing process.

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c) Advise the villagers on the challenges associated to long term use of the cleansing material they use.

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**Item 2.**

Mr. Okulet a science teacher has just earned his salary including arrears for the previous three months. He plans to construct a good permanent house but without affecting the environment. There are various building materials of different quality and properties on market. However, he does not know the quality of materials to use.



Mr. Okulet being a science teacher is aware that choosing quality materials depends on nature of the material and has come to you for advice.

**Task:**

Use your knowledge of chemistry to:

- (a) explain:
- (i) categories of materials.

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## SECTION B

### Part I

Answer **one** item from this part.

#### Item 3.

Sodium hydroxide commonly known as lye or caustic soda is an inorganic compound that is mostly used by the chemical industries to manufacture a wide range of products like soaps, paper, dyes, petroleum products among others. This has increased its demand from the local manufacturing industries in the country. Therefore, to ensure that is readily available and at a cheaper cost, the government of Uganda has decided to set up a sodium hydroxide manufacturing plant in your village. However, the local community is concerned about its environmental effects and how the process of production will occur.



Your chemistry has selected to sensitize the local community about the production process.

#### Task

Prepare a presentation you will deliver during the meeting with the local people.

#### Item 4.

Ethanol is a renewable fuel made from various plant materials collectively known as biomass. Due to a wide spread of conjunctivitis commonly known as red eye disease in the country today, there is an increased of demand for ethanol to make hand sanitizers to reduce on the spread of the disease. The government supply for ethanol is not enough and it has encouraged the local people to manufacture ethanol with minimal environmental impact and sell it to the government.



However, your family members have no idea on how the process of production can be carried out and yet they would wish to make some money.

#### Task.

As a chemistry student, prepare a write up that you will use to educate your family members during the get together family dinner.

## Part II

Answer **one** item from this part.

### Item 5.

Uganda is landlocked country which covers an area of approximately 242034 square kilometers with a population of about 45 million people. Uganda has substantial natural resources including forests, lakes and rivers, oil reserves, rocks and small mineral deposits such as copper, limestone and gold. Due to the increasing population and human activities these resources are being over exploited which has led to environmental degradation.



The environment club in your school is planning to create awareness to the people around your school community through a sensitization workshop organized by the village L.C 1.

#### Task.

As a student of chemistry, prepare a presentation you will deliver during the workshop upon invitation.

### Item 6.

Stone quarrying is one of the key extractive economic activity in Buntaba village in mukono district, supplying the bulk of stone of varying aggregates to the construction industry. People of this village have for a long time practiced other activities like charcoal burning and animal husbandry, yet the village is over populated. The village started experiencing changes in the climate, soil erosion, poor air quality and the little water available is undrinkable. The locals are now wondering why all these are happening and some have started attributing it to witchcraft.



The area member of parliament has organized a sensitization workshop to explain to the locals the existing situation. The theme of the workshop is “**BE PART OF THE SOLUTION NOT THE POLLUTION**”.

#### Task.

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

**END.**