

Name.....Stream.....

545/1

CHEMISTRY.

Paper 1.

NOV /2025.

2 hours

CHEMISTRY DEPARTMENT
New Lower Secondary Chemistry Examination
Senior three
Paper 1
2 hours

INSTRUCTIONS:

- This paper consists of two sections A and B. It has six examination items.
- Section A has one 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 provided answer sheets.
- Any additional item(s) answered will not be scored

Where necessary use, Na = 23, Cl = 35.5, 1 mole of gas occupies 22.4 dm³ at s.t.p

SECTION A

Answer all items in this section in the spaces provided.

Item 1.

Dorah and Brendah recently relocated to a rocky area. One day, both went to wash their clothes around a nearby well. Dorah used detergent **R** and Brendah used detergent **Q**. Two days later, Dorah realised that her white clothes had some dirty marks yet she rinsed them with water several times. Brendah, on the other hand, never had such complaints.

Dorah is now desperately seeking for further information on her situation. You have been contacted for help.

Task

As a Chemistry learner;

- (a) identify the category of the products, **R** and **Q** used by the two ladies.

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Item 2.

A chemical and material manufacturing industry plans to utilize the properties of some elements of the periodic table below with high industrial value for their applications while ensuring their environmental consideration.

| | I | II | III | IV | V | VI | VII | VIII |
|----------|-----------|----|-----------|----|---|----------|-----------|------|
| Period 2 | | | | | | | | |
| Period 3 | Na | | Al | | | S | Cl | |
| Period 4 | | | | | | | | |

He needs to produce sodium chloride. A preliminary experiment will be carried out to know the volume of chlorine at s.t.p required to completely react with sodium to produce 117.6 g of sodium chloride. This will help to know the efficiency of the planned production line. You have been consulted you for guidance.



Task: As a Chemistry student,

- (a) explain the category of the substances in the table.

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- (b) Suggest the suitability of the group (III) element to its application in life.

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(c) Calculate the volume of chlorine required.

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(d) Advise on the environmental impact associated with use of either group (III) or (VI) substance in the table.

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SECTION B
PART I

Attempt any one item from this part.

Item 3.

Following the outbreak of Covid-19, the cost for sanitizer increased suddenly and community members could not afford. Medical personnel was invited and advised them to use a cheaper alternative of using locally made ethanol from bananas since sanitizer contains mainly ethanol.



The challenge is that the community members do not know how to produce ethanol locally and the dangers of the production process on the environment and how the community members will benefit.

Task:

As a Chemistry learner, make a write-up your team will use during presentation.

Item 4.

In Western Uganda, There is a precious discovery of petroleum in Lake Albert but the people are ignorant about the production and use of the discovery. Some technical people have tried to extract the petroleum from its deposit but none knows the next step of refining to obtain the products final products.



The ministry of energy has entrusted you to address the people on how the next step proceeds, dangers of the process on the environment and benefits of the process to the community.

Task.

Write a write up presentation you will use during the presentation.

PART II

Attempt any *one* item from this part.

Item 5

Studies and surveys in and around Jinja District by NEMA found that air quality is generally poor. This is due to rapid urbanisation which has caused increased gas emissions from motor vehicles and industries. The locals seem not concerned about this situation. This is because many have not known the long-term consequences of the gas emissions.



The District Environmental club (DEC) to which you are a member of, has got concerned about this development. Therefore, the DEC is planning to create awareness to the people through sensitisation workshops organised in different villages within the district.

You have been chosen as one of the key speakers

Task

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

Item 6

Akello, a re-known businesswoman in Gulu district wants to expand her sources of income by investing in stone quarrying. This is because of the many on-going construction works in the district that require stones as one of the materials. However, she does not know the negative impact of the activity she is yet to invest in.



She is also seeking advice, on what could be the other benefits of her activity to the society.

Task

As a Chemistry learner, write a message to guide Akello.

END

“FOR I KNOW THE PLANS I HAVE FOR YOU” DECLARES THE LORD