

Name.....signature.....

Candidates personal number.....

545/1

CHEMISTRY

PAPER 1

June-2025

2 hours

UGANDA CERTIFICATE OF EDUCATION

PRE-MOCK EXAMINATION

CHEMISTRY 1

DURATION: 2 HOURS

Instruction to candidates

- This paper consists of **two** sections **A** and **B**
- Section **A** has **two compulsory** items and choose any **two** items from **section B**
- Attempt at last **one** item from each part of **section B**. write your responses on answer sheets provided
- All responses to **section A** items must be written in spaces provided.

SECTION A

Attempt all items in this section

Item 1

On 13th June 2025 Israel launched a missile attack targeting a heavy nuclear plant of Iran. The plant plays a vital role for Iranians especially acting as their main source of energy for production of electricity which involves the splitting of unstable radioactive nuclide such as Uranium according to the equation below



The international nuclear agencies of Iran are concerned about the consequences of the plant to the people in that area if it explodes. You have been invited as the senior Nuclear Reactor Operator (NRO) to enlighten the news reporters about the operation of the plant.

Task

As a learner of chemistry

- a) Explain

- i) the category of the process involves in the plant

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- ii) how the process is used to produce energy in the nuclear reactor.

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- b) advise them on the challenges associated with a long-term use of the process and how it can be mitigated.

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- c) compare the processes which can involve in the production energy.

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Item 2

Mamma Jovia has a small-scale business where she sales fruits like tomatoes, yellow bananas among others. Her fruits take a long period of time to ripen and end up making loses on daily basis. She has got some advises from a friend that she can apply Ethene to accelerate the ripening of fruits. However, the lady is concerned about the nature and impacts of the ethene on the health of her customers and the environment. She has called you for a help since you have enough knowledge about the product recommended.

Task

As a chemistry learner

- a) explain

- i) the homologous series to which the product belongs

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ii) the properties of the product

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b) state other use of the product

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c) Educate her on the impacts of the continuous application of the product on the environment and how it can be solved.

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SECTION B

Part 1 (attempt one item from this part)

Item 3

Due to increased demand of refined oils like petrol to be used as fuel for running the engines of vehicles and production of plastics in industries. The government has cleared an investor to set up a crude oil purification plant in the area of Moroto. The locals in that area are highly concerned on how the process of production will be conducted, its impact to the environment and how will they benefit from the plant. The chairperson LC 1 has organized a meeting where you have been invited as the specialist from the government to settle the concerns of the locals.

Task

As a learner of chemistry, make a short message you deliver during the meeting.

Item 4.

Toyota multinational automotive company is well known in production of car bodies, engines and wheels for vehicles in Jinja city. This has increased a demand for Aluminium since it is used as a material for making the products. This has interested a local investor to set up Aluminium manufacturing plant in Jinja city and he has been granted by the government officials. The residents have failed to agree with the idea of the investor claiming that the plant will highly impact the environment during the production process, how the process will be conducted and whether they will benefit from it. You have been chosen on behalf of the investor to attend the village meeting organized by LC1 chairperson.

Task

As a learner of chemistry, make a write-up you will deliver during the meeting.

Part II (attempt one item from this part)

Item 5.

Bio gas has become the most favorite source of fuel for many Ugandans replacing traditional fuels like charcoal and fire wood at home. Some people especially elders have negative thoughts about the use of bio gas and have requested the National Environmental Authority (NEMA) through their leader to sensitize the community

about the nature, environmental impacts and importance of the bio gas. You have been appointed as the main spokesperson from NEMA to attend a hot meeting organized by the elder leader of the community.

Task

As a chemistry learner write a message you will deliver during the meeting.

Item 6

Irundu village in Namayingo district is a rocky area gifted with some minerals like gold. The locals carry out mining and stony quarrying as their main economic activities. This has captured the attention of the National Environmental Management Authority (NEMA) because the natural resource has been highly exploited. You have been selected as a senior Environmental protection officer from NEMA to educate the villagers about the nature of the natural resource, impacts of exploiting it and its relevance in the environment. You are required to attend the meeting organized by the LC1 chairperson of the area with a theme **“MY ENVIRONMENT MY RESPONSIBILITY”**.

Task

As a chemistry learner, make a write-up you will deliver during the meeting.