

Candidate's name:Signature

School: Personal No.....

545/1

CHEMISTRY

Paper 1

Jul/Aug. 2025

2 Hours



SENIOR EDUCATION CONSULTANTS (SEC) JOINT MOCK EXAMINATIONS, 2025

Uganda Certificate of Education

CHEMISTRY

Paper 1

2 hours

INSTRUCTIONS TO CANDIDATES:

- This paper consists of 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 in the answer booklets (sheets) provided.
- Any additional item(s) will not be scored.
- Use where necessary ($Ca=40$, $N=14$, $O=16$, $H=1$, $P=31$, $S=32$)

Turn Over 1

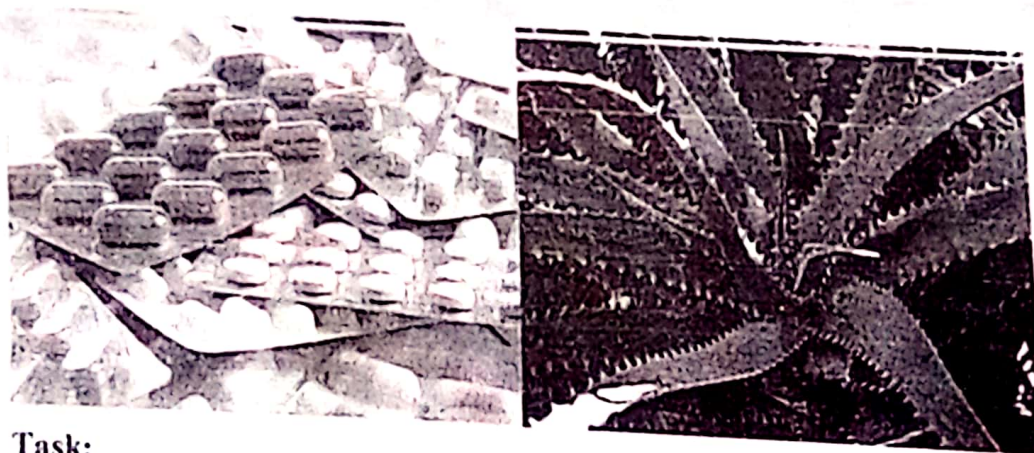
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SECTION A

Answer all items from this section in the spaces provided

Item 1

After announcing jobs for road construction works in Wakiso district, Aggrey a former hawker and his friend Justus applied and were both deployed in works department. They particularly dealt in excavation and digging of trenches which they did for three days. The days that followed, the youths did not report for work as they complained of severe general muscle pains that couldn't allow them carry on with the work. Aggrey visited a nearby pharmacy and bought a certain medicinal drug and his condition became well and reported back for work after the second day of resting. His friend Justus went to a bush around, picked some plant leaves and roots, made a concoction using his extracts with water, he drank some and the other he bathed with it, but the situation wasn't changing even after two days of committed usage.



Task;

Using the competence of chemistry, you have acquired

- Explain the categories of the drug products used by Aggrey and Justus

(6 scores)

b) Help Aggrey and Justus understand how the effective product works

(2 scores)

:

c) Advise Aggrey and Justus on the dangers associated with long term use of the product.

(3 scores)

Item 2

Adams, a commercial sugar cane out-grower for Kinyara sugar factory is complaining of low productivity levels from his cane plantation in recent years. He complains that his cane takes long to mature up, the plants themselves are stunted and that the average weight per cane is unusually low. This has affected his earning as he has many workers and services to pay for. He has sought guidance from his friend, an agricultural officer in the district of Masindi who has informed him that the soil has run out of an essential mineral element called nitrogen and has referred him to fertilizing products such as Calcium ammonium nitrate (CAN); $\text{Ca}(\text{NO}_3)_2 \cdot \text{NH}_4\text{NO}_3$,

Ammonium phosphate; $(\text{NH}_4)_3\text{PO}_4$, Ammonium sulphate; $(\text{NH}_4)_2\text{SO}_4$ for increased productivity in the next cutting.



Task

As a learner of chemistry

- a) Explain the category of the fertilizing products.

(3 scores)

- b) Help Adams to choose the best of the three recommended products, that best addresses his challenge.

(Ca = 40, N = 14, O = 16 H = 1, P = 31, S = 32)

(5 scores)

- c) Advise Adams on the choice of the fertilizing products.

(3 scores)

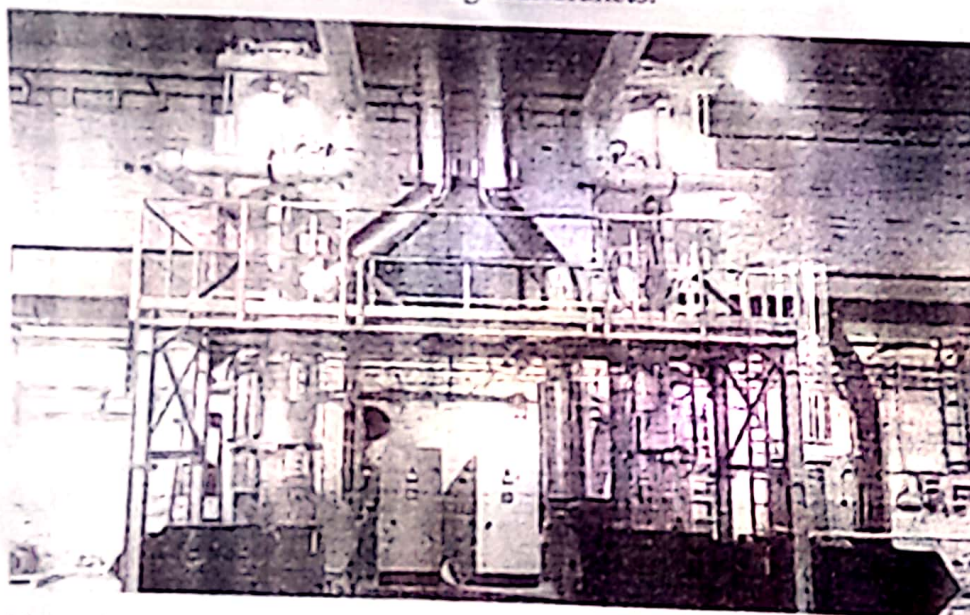
SECTION B

Part I

Answer one item from this part

Item 3

Uganda as a country, through Kiira Motors Corporation started assembling both large and medium size motor vehicles, all of which require aluminium for their body building. Formerly, the company has been relying on imported aluminium but a common aluminium ore has been discovered in western districts of the country; Ntungamo, Rukungiri, Bushenyi and Kasese. The government of Uganda has cleared a foreign investor to set up aluminium extraction plant to supply Kiira motors with materials, first in Ntungamo. People in the surrounding areas are concerned about how this will be done and the effect this process might have to their environment as they are known agriculturalists.



Your chemistry teacher has chosen you to sensitize other learners in districts where this discovery has been made.

Task

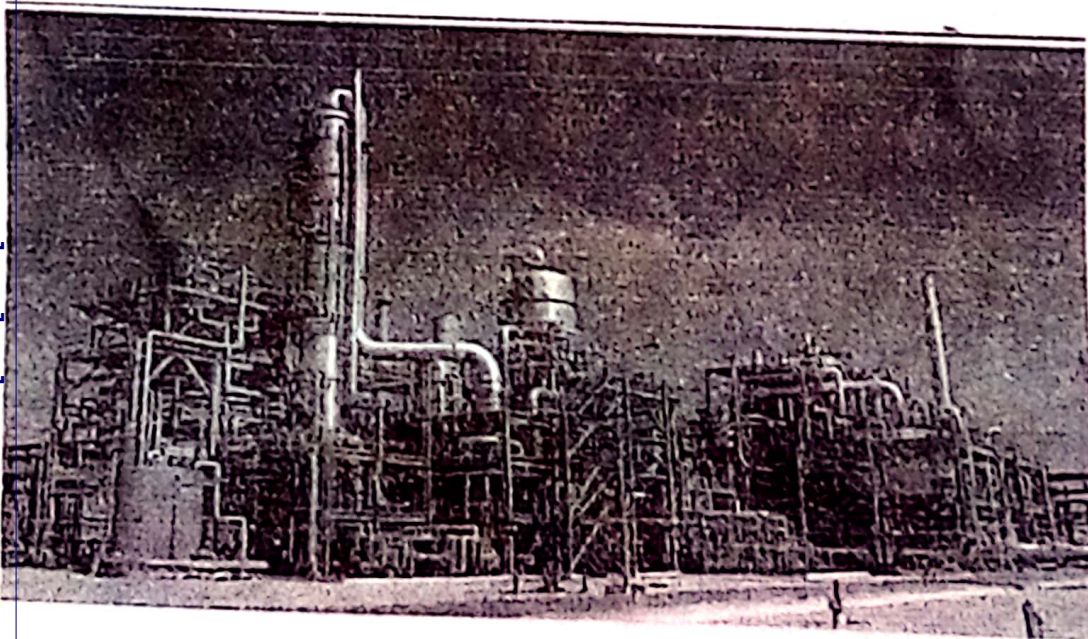
Downloaded from www.mtutoronline.com, you can download more new curriculum pastpapers
Prepare a presentation you will make to them.

(18 scores)

Item 4

Kenya has been the chief supplier of sodium hydroxide commonly known as caustic soda to soap and detergent manufacturing companies in Uganda.

There is a new plan to bring this on the local market. The state minister of finance or investment and privatization has contracted an investor to set up a sodium hydroxide manufacturing plant near Lake Katwe in Kasese district. The community is concerned about how this will be done and what effect this will have on their environment.



Your teacher has asked you to brief other students about this process.

Task

Write your message to the rest of the students. (18 scores)

Part II

Answer one item from this section

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Item 5

Following the discovery of petroleum in Lake Kyoga, the government plans to build a new oil refinery to exploit the natural resource in the Kyoga basin, vegetation has been cleared and deep pits have been dug to assemble tools. However, there is need to educate the local residents about the natural resource, its environmental impacts and importance first. Your teacher has chosen you to write a sensitization message to the people.



Task

Write a sensitization message to the people

(18 scores)

Item 6

There has been growing concerns about the quality of air in regions of Kampala. Research has indicated that it has caused serious health risks. The ministry of works and transport together with Kampala Capital City Authority are devising urgent actions to raise awareness and clean air.

That have organized a campaign titled "CLEAN AIR, A RESPONSIBILITY FOR ALL"



Task

Write a sensitization message you will deliver to the people (18 scores)

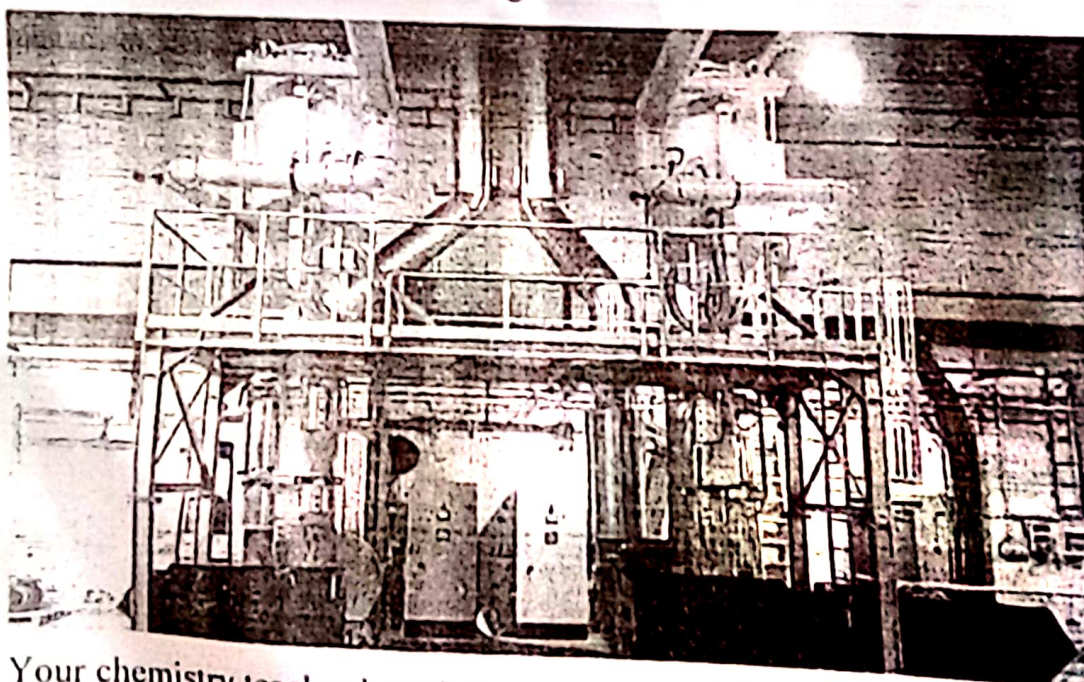
SECTION B

Part I

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Task

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