

Candidate's Name: Sign:

545/1

CHEMISTRY

THEORY

Paper 1

2025



THE SYNDICATE ASSESSMENT BOARD (TSAB)

Uganda Certificate of Lower Secondary Education

CHEMISTRY THEORY

PAPER 1

Instruction of Candidates.

- This paper consists of two sections A and B
- It has a total of six examination items
- Section. A has two Compulsory Items
- Section has two parts I and II. Answer one item in each part.
- Answer four items in all.
- Answer to all items must be written in space provided.
- Any additional item answered will not be scored.

SECTION A (COMPULSORY)

ITEM.1

Makula was visiting her grandmother in the village when she developed a body ache. Her grandmother picked some leaves from various plants which she squeezed and gave her. Makula was hesitant at first and insisted on going to a health centre but when she took the liquid concoction, she felt significantly better.

Tasks

As a chemistry learner:

a). Help Makula's grandmother to understand the product she gave to her granddaughter.

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b). Explain to Makula why she felt better after she took the concoction.

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C). Advise Makula and her grandmother about the problems associated with the use of the product.

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d). Help Makula's grandmother understand why her choice was more preferable.

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ITEM.2

James, a young researcher, Investigate gaseous hydro carbons from industrial waste combustion near a petroleum refinery .He analyses a gas X, found to contain 83% carbon and 17% hydrogen by mass, To identify it's molecular structure, He examines its composition. Reactivity and environmental impact, aiming to determine its potential applications and hazards but still remain unable to reach the goal.

Task.

As a learner of Chemistry, help James to understand.

- a). Categories of the components found in **X**.

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- b).The properties of the gaseous components that makes it useful.

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- c). If 2.6g of **X** occupy a volume of 1.12dm³ at S.T.P. Determine its molecular formula

[illegible]

- d). Explain the impact of **X** on the environment.

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SECTION B

Part 1 (select one item from this section)

ITEM.3

In some districts of Uganda, like Hoima district, farmers experience very low crop yields due to coarse soil, leading to persistent famine in the area. Ammonium sulphate is one of the effective fertilizers used to improve crop yields. The ministry of Agriculture and Animal husbandry has entrusted an investor to establish an ammonium sulphate production plant in Hoima district to provide the fertilizer at a lower cost. The community would like to understand the production process and how it is carried out.

Task.

As a chemistry student, create a write-up to present to community members.

ITEM.4

Okudi wants to establish a soap less detergent factory in his locality but it requires input from someone with chemistry knowledge. You have been chosen to give guidance to Okudi regarding the process, side effects and benefits of the process to society.



Sunlight Detergent Original...

Task.

As a chemistry learner, write a message to guide Okudi.

Part II (select one item from this section)

ITEM.5

Urbanization and Industrialization have caused fresh water bodies to suffer from severe pollution.

The Ugandan government aims to create public awareness regarding the natural resource through various initiatives.

Support Material



One of the Initiatives is to involve students with good knowledge of chemistry in radio talk show.

Task.

Write the presentation you can use.

ITEM.6

Recently, Oil deposits were discovered in albertine region (western Uganda).A Chinese Investor has been contracted by the government to extract the Oil but the people around are scared of the outcomes. You have been invited by the LC 5 chairman of that area to attend one of their meetings, and you are the only person who has some knowledge about natural e resources, so the chairman has requested you to give a talk about the issue.



Task : As a chemistry Learner,

Make a write up of your speech.