

Candidate's name..... Student No.....

School.....Signature.....

545/1
CHEMISTRY
Paper 1
(Theory)
2¼ hours
Jul/Aug. 2026



USTAA MOCK EXAMINATIONS BOARD

Uganda Certificate of Education

INSTRUCTIONS TO CANDIDATES

This paper consists of two sections; A and B.

It has six examination items.

Section A has two compulsory items. Responses to section A must be written in the spaces provided.

Section B has two parts; I and II. Respond to one item from each part.

Responses to Section B must be written in the answer booklet(s) provided.

*Respond to **four** items in all.*

Responses to each item in Section B should start on a fresh page.

Any additional item(s) answered will not be scored

For Examiners use only

Item No.	Basis Code	Weighted Score	Scorers' Initials
1	T		
	D		
	E		
2	C		
	X		
	I		
___(3/4)	P		
	S		
	B		
___(5/6)	N		
	M		
	Be		
Total Weighted Score			

SECTION A

Item 1

Hellena, living in an area where they use bore hole water, slid, fell and her white shirt became dirty. She decided to use a detergent to clean her shirt. The shirt remained with some brown spots yet she had rinsed it several times.

Task: As a chemistry learner;

a). (i) Point out the problem Hellena made when choosing the product.

(ii) Help Hellena understand how the product works.

b). Advice Hellena on the challenges associated with the long-term use of the product.

d). Evaluate the product

Item 2

A group of Learners at S.T NOA GIRLS were faced with a unique solid substance, Z, which they suspected to be an element. 0.3g of the element could burn in air to form 0.5g of the solid product. One of them picked interest in what could be the chemical formula of the oxide of the element. However, he did not know how to determine the formula. When they contacted the

laboratory technician, he gave them the atomic number and mass number of Z as 12 and 24 respectively, and the symbolic representation of Oxygen as O.

Task: As a student of chemistry help the learners to;

(a) Understand the nature of substance Z

(b) Determine the formula of the Oxide of Z

(c) Know the environmental consequences of the element

SECTION B

PART I

Item 3

People of Kalangala have got limited supply of soap yet they grow a lot of palm oil plants. They have knowledge about the manufacture of soap but they have a limited supply of sodium hydroxide which is a raw material for the manufacture of soap. An organization wants to set up a sodium hydroxide manufacturing factory in the area but they have little knowledge about the process and its impact on the environment. The organization chairperson has contacted you to give advice on how to manufacture sodium hydroxide and its impact to the people and the environment.

Task:

Prepare a write up you will use upon invitation.

Item 4

Biogas is one of the modern fuel sources used by many Ugandans now days in the name of minimizing environmental pollution. As a result, the government has contracted a foreign investor to set up a bio gas product plant to meet the increased demand of the gas. However, the community members are worried about the effects of the plant to their well-being. The LC1 chairperson has approached you for guidance before he meets the residents.



Task:

As a chemistry student prepare a leaflet of message to advise the community members.

PART II

Item 5

“Residents of Kampala are facing severe health risks due to poor air quality,” was a headline in one of the recent editions of the New Vision new paper. With the city’s reputation tarnished and residents’ health hanging in the balance, urgent action to raise awareness and clean the natural resource is needed, the paper continued to state. The Kampala Capital City Authority (KCCA) is getting ready to improve the situation following the alarming revelation. As a student of Chemistry who has learned about air as a natural resource.

Task:

Write an article KCCA would use in response to the paper to sensitize the community of Kampala.

Item 6

Uganda’s forests are under pressure from illegal logging, agricultural expansion, and urban growth. Despite government attempts to advocate for sustainable forest management, these efforts have failed due to citizens’ lack of awareness regarding the benefits and consequences.



Task:

Use your chemistry knowledge to create awareness on the matter.

END