

Candidate's Name: Signature:

545/1

Chemistry

Paper 1

2 hours



STUDY SPHERE EXAMINATION BOARD

Uganda Certificate of Education

CHEMISTRY

Paper 1

2 hours

INSTRUCTIONS:

1. This paper consists of two sections; A and B. it has six examination items.
2. Section A has two compulsory items.
3. Section B has two parts; I and II. Answer one item from each part.
4. Answer four items in all.
5. Answers to section A must be written in the spaces provided while those in section B must be written on the answer booklet(s) provided.
6. Any additional item(s) answered will not be scored.

FOR EXAMINER'S USE ONLY			
SECTION	ITEM	SCORE(S)	EXAMINER'S SIGNATURE
A	1		
	2		
	3		
B	4		
	5		
	6		
TOTAL			

SECTION A

Answer all the items in this section in the space provided.

Item 1

Mr. Karim, is a citizen of Kampala who has just completed the construction of his residence house. When he was talking with his friends he explained that 'he used different building materials of different quality and properties.

Task:

Using your knowledge of chemistry explain:

- i. The categories of materials he used in construction,

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- ii. The suitability of the materials used in construction.

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- iii. The choice of the material used in construction.

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- iv. Explain the challenges associated with the materials used in construction.

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Item 2

Peter, living in an area where they used bore hole water, slid, fell and his white shirt became dirty. He decided to use a white bar soap to clean his shirt. The shirt remained with some brown spots yet he had rinsed it several times.

Task:

As a student of chemistry:

- a. Point out the problem Peter made when cleaning choosing a product.

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- b. Help Peter understand how the product works.

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- c. Advice Peter on the challenges associated with the long time use of the product.

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SECTION B

Attempt one item from each part

Part I

Item 3

In a public address by the President, he expressed his happiness after the discovery of magnetite in one of the districts. However his worry is there has been not yet a course at the university on how to extract the metal from its ore. You have been appointed to lead a team that will extract the ore as well the metal.

Task:

Record down your presentation.

Item 4

Kyakabugahya village is one of the ignorant areas in Kagadi district; it has been facing problems of rusting the past seven months. In research on how to combat the problem of rusting, the residents suggested the use of electroplating to overcome rusting, confusion has arisen since the villagers are ignorant and do not know how to use the method.

Task:

Write a well explained solution to the village's problem given that that land surveyors' discovered copper (II) sulphate in the village.

Part II

Item 5

Ssekitoleko is a student of ABCD high school; he collects plastic materials, charcoal dust, animal droppings and plant materials to make charcoal briquettes that he sells for income. He also sells the collected plastic bottles and bags to the recycling industries from which he also gets income for survival.

Task:

- a. Help Ssekitoleko know how important he is to the environment.
- b. As an official from NEMA, write brief notes to be presented to the public village meeting including other ways of protecting the environment from the harmful effects of polymers.

Item 6

Charcoal burning and selling is one of the a thriving business that many people have joined today because of the rich forest cover present in the homeland areas.

However, it is well known that cutting down trees for charcoal burning is a bad practice; people sell charcoal at good prices and have supported their families from the profits obtained.

Task:

As a student of chemistry, prepare a report to share with the people in the community about other carbon-based fuels they can resort to other than charcoal. In your report also talk about the dangers of deforestation.

END