

545/1
CHEMISTRY
Paper 1
Nov. /Dec. 2024
2 Hours



SESEMAT MUKONO REGION

S.3 End of Year Assessment

CHEMISTRY

Paper 1
Theory

2 Hours

INSTRUCTIONS TO S.3 LEARNERS

- This paper consists of **two** sections **A** and **B**.
- Section **A** has **two** compulsory items. Use only spaces provided to write your responses.
- Section **B** has **two** parts, **I** and **II**. Answer **one** item from **each** part.
- Answer **four** items in total.
- Begin each item for section **B** on a fresh page.
- You may use appropriate illustrations and diagrams where necessary in your responses.

For Item Scorer's Use Only				
Section A		Section B		Total
1	2	Item	Item	

SECTION A

Item 1.

To ensure quality hygiene and cleanliness among the population, a number of industries in Uganda manufacture detergents. Some common brands include: Omo, Ariel, White star, Bull and Sunlight. Market research indicates that most users prefer powdered form of the detergents to the bar form.

Task:

Using your knowledge of chemistry;

- (a) With a reason and an example, categorize the cleaning products manufactured by the industries.

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- (b) Explain how the products enhance cleanliness.

[illegible]

- (c) Advise the population on the challenges associated with the use of the products.

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(d) Evaluate the products manufactured by the industries.

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Item 2.

A student who was doing personal revision in the library came across a drawing with letters, Z, Q, R, X, T and W, which represented elements though are not the usual symbols of the elements. This greatly puzzled him and needed assistance.

	II					VII	
Z				Q			
	R						
						X	
T						W	

Task:

- a) As a learner of chemistry assist the student to know;
- i) the category of elements Z, T and R. Give a reason for your answer.

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- ii) the term given to elements X and W and the trend in their reactivity.

- b) Assist the student to know the conditions required for elements T and R to react with water.

Conditions - cold water / steam. ✓ Heated Hot R with steam. (S)

Both react with cold water

- T reacts violently with cold water, R reacts slowly with cold water

- Hot R reacts readily with steam, T reacts readily with steam. ✓

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c) Suggest one use of an element in the same category like elements X and W so that he can appreciate the importance of chemistry in society.

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(d) State any one impact of Element Q on the environment and its mitigation.

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SECTION B

PART I

(Select only ONE item from this part)

Item 3.

A new biofuel production company, Green Energy Uganda (GEU), has secured a contract to supply ten million gallons of ethanol per year to a major oil refinery in western Uganda. The refinery will blend the ethanol with gasoline to produce a cleaner burning fuel that meets the country's strict environmental regulations. GEU wants to buy ethanol from the local community, however the community does not know how ethanol is produced. They also do not know the benefits and the dangers of the production process.

Task:

Make a write up that can be used to sensitize the people in this community.

Item 4.

In a classroom activity, senior three students of your school are presented with the learning aids as shown below.

"Biogas for Sustainable development"



Task:

As a learner of chemistry, prepare a written presentation that will make the given statement relevant to your classmates.

SECTION B

PART II

(Select only ONE item from this part)

Item 5.

United Nations Environment Program (UNEP) has observed that Climate change, pollution, and rapid urbanization have severely depleted the world's breathable air supply. The once-abundant resource is now scarce, particularly in densely populated cities.

Task:

As a learner of chemistry, make a write up that can be used to clarify the above observation to the school community.

Item 6.

Lake Victoria, Uganda's largest freshwater lake and a vital source of water, fish and livelihood for millions, is facing severe water pollution threats. The communities around the lake are wondering why the poor water quality. The District Natural Resources Officer has planned to educate the communities around the lake about the causes of the poor water quality.

Task:

Write a sensitization message that District Natural Resources Officer can use.

END