

**Candidate's Name:** .....

**Signature:** .....

**545/1**

**CHEMISTRY**

**JUNE-2024**

2 hours

**CHEMISTRY DEPARTMENT**  
**UGANDA CERTIFICATE OF EDUCATION**  
**CHEMISTRY**  
**PAPER 1**  
**2 HOURS**

Instructions.

- *This paper consists of two 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 spaces provided while those of section B must be written on answer sheets provided.*
- *Any additional items answered will not be scored.*

## ***SECTION-A***

*Answer **all** the items from this section.*

### **Item 1.**

As a high school student, Emily spends long hours studying with little of her remaining leisure time spent on television, which often leaves her with severe headaches and neck pain. She always uses herbal supplements recommended by her mother claiming they are natural and effective. However, even after long term usage, her pain persists and this leaves her uncomfortable.

### **Task.**

As a chemistry learner:

a. Point out the problem Emily makes when choosing a product. (02 scores)

---

---

---

b. Help Emily know the function of the product. (01 score)

---

---

---

---

c. Advise her on the challenges associated with the long-term use of the product. (03 scores)

---

---

---

---

---

d. Take Emily through full assessment of the products. (02 scores)

**Item 2.**

Isaac, a chemistry student at Luweero SS was assigned a project by his teacher to appreciate the diversity of properties of period 3 elements in the periodic table. While researching, he collected data on melting points of these elements which he failed to analyze and interpret well.

***Table 1 below shows the results obtained by Isaac.***

Element	Symbol	Atomic number	Melting point (°ca)
Sodium	Na	11	371
Magnesium	Mg	12	922
Aluminium	Al	13	933
Silicon	Si	14	1683
Phosphorous	P	15	317
Sulphur	S	16	392
Chlorine	Cl	17	172
Argon	Ar	18	84

***Table 1***

However, he presented the results to you to help him through further analysis.

**Task.**

As a chemistry learner:

a. Explain the categories of the substances. (03 scores)

---

---

---

---

b. Help Isaac interpret and analyze his results. (06 scores)

---

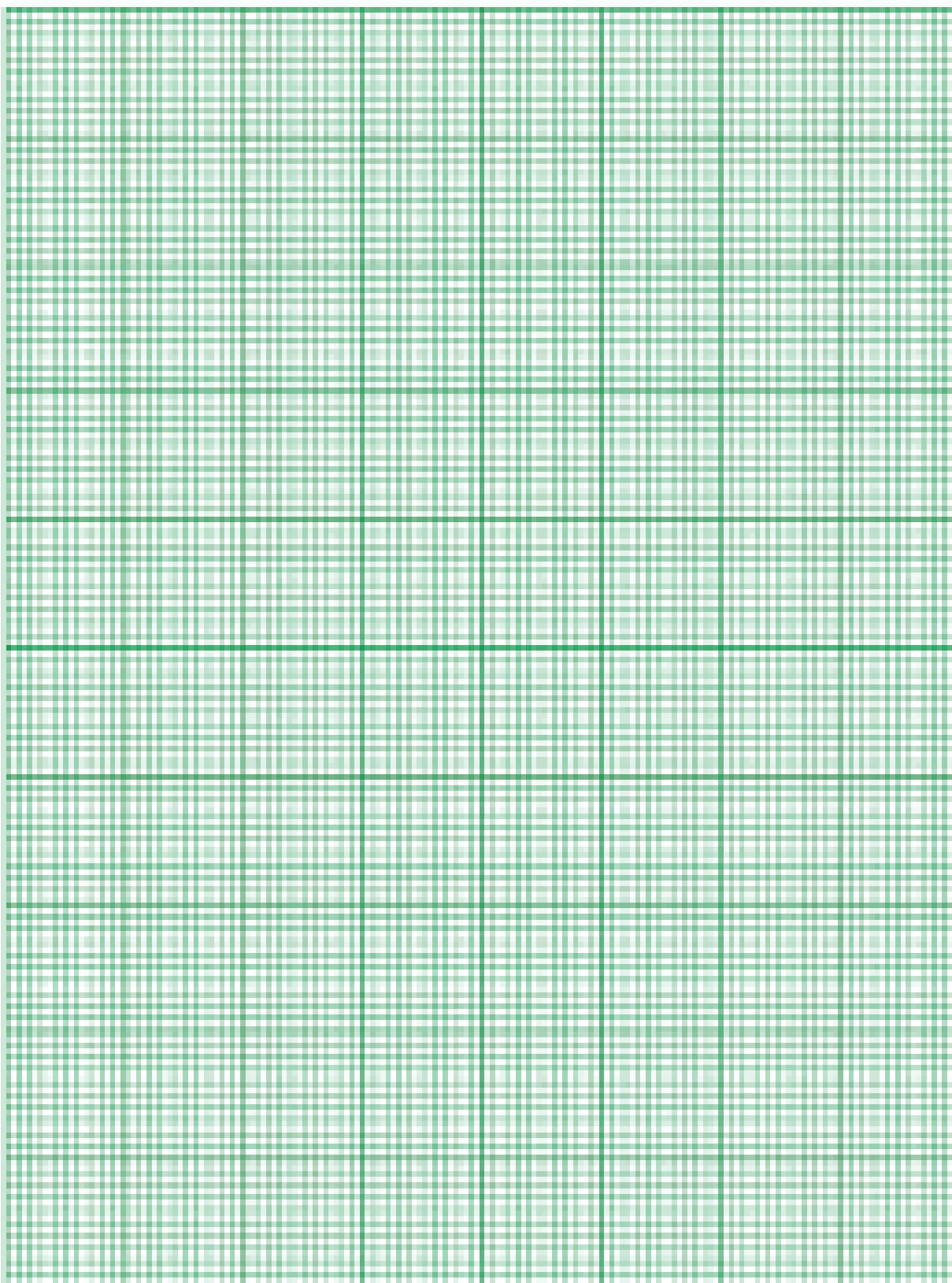
---

---

---

---

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



www.ksars.org

## SECTION-B

### Part 1

*Answer one item from this section*

#### Item 3.

Gomba is one of the leading cattle rearing districts in Uganda. The area Member of parliament has noticed over-dependence on fire-wood and charcoal as a source of fuel leading to increased deforestation with adverse climatic change. The area MP is suggesting for a shift in the source of fuel to bio-gas but many members seem ignorant about it, worried of its environmental impacts and say it of importance to them.



The member of parliament is organizing a sensitization meeting with locals in which you're going to be part of the sensitization team.

#### Task:

As a chemistry learner, prepare a presentation that is going to be used upon the meeting.

#### Item 4.

In the town of Kihande in Masindi district Uganda, the government has decided to set up an ammonium sulfate fertilizer plant. This decision is driven by the need to reduce dependency on imported fertilizers which come with high taxes. However, the community members in Kihande are opposed to the establishment of the fertilizer plant. The residents have a deep connection to their land, which they use for subsistence farming and other community activities. Their opposition stems from a lack of information and trust in the government's plans.



To address the community's concerns, the Ministry of Agriculture is organizing a workshop aimed at educating the residents about the benefits of the fertilizer plant and addressing their fears.

#### Task:

As a Chemistry learner, prepare a report that the ministry should use when addressing to the community members. (11 scores)

#### Part II

*Answer one item from this section*

#### Item 5

Kisoro, a picturesque village nestled among rocky hills in southwestern Uganda, has long depended on stone quarrying as a primary source of livelihood. The rugged terrain, rich in stone deposits, provided ample opportunities for the villagers to earn a



living by extracting and selling stone. However, the extensive quarrying activities have led to seasonal changes and water Shortage, air quality and health issues, water Contamination.



Recognizing the severity of these issues, the government of Uganda has stepped in to provide assistance and create Community Awareness Programs About the issues.

**Task:**

As a chemistry learner, prepare a simple write-up that the government should base on when addressing to the residents. **(11 scores)**

**Item 6.**

Modernization has attracted an increased demand for land; for industrialization and settlement, which has led to destruction of natural resources. This attracted the attention from the National Environment and Management Authority (NEMA).

The officials are planning to create awareness to the people of country through sensitization workshops organized in different district communities' country wide.

**Task:**

As a chemistry student, prepare a short presentation that will be used during the workshops.

(11 scores)

**END.**