

**SA ✨ EXAMINATIONS**  
**CHEM 2025**

**Item 1:**

A laboratory attendant at Kiyala High School was tasked with restocking the laboratory. They found three unlabeled solutions, A, B, and C. To identify them, they used red cabbage extract as an indicator and recorded the following results:

Solution	Effect on red cabbage extract
Solution A	The purple color of the red cabbage extract turned pink.
Solution B	The purple color of the red cabbage extract turned green.
Solution C	No color change.

**Task;**

(a) As a student of chemistry;

(i) Identify the nature of the solutions and provide an example for each.

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(ii) Suggest the properties of solution A.

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(b) What are some of the applications of solution B?

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## Item 2

Mr. Kato has noticed that many of the corrugated iron roofs in the village are rusting and deteriorating quickly. He's concerned about the safety and longevity of the roofs, especially during the rainy season.

The following roof samples were provided.

**Sample 1:** A piece of shiny, relatively new corrugated iron sheet.

**Sample 2:** A piece of heavily rusted corrugated iron sheet.

**Sample 3:** A piece of a different roofing material, which has stayed for over years but still shinning.



### **Task;**

- a) Suggest the category of the component of roof samples suggesting the best sample with reasons.

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- b) Cite out the properties of the suggested best sample in a above.

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- c) Guide Mr. Kato on the applications of Alloys in everyday life.

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### Item 3

Mama Zawadi has noticed a growing problem with discarded plastic water bottles in her village. These bottles litter the streets, clog drainage systems, and harm livestock. She brings this issue to the Village Council and asks for solutions. You have been invited to give information about plastics.



#### **Task;**

As a learner of chemistry;

Identify the category of polymers commonly used to make plastic water bottles.

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Evaluate the suitability of the type of polymer used for making plastic water bottles.

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Point out the Impact of the Material on the Environment.

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