

535/2
PHYSICS
Paper 2
(Practical)
July/Aug. 2026
2 hours



KAGADI JOINT MOCK EXAMINATIONS CONSULT

Uganda Certificate of Education

PHYSICS

Paper 2
(Practical)

2 hours

INSTRUCTIONS TO CANDIDATES:

*This paper consists of **two** examination items.*

*Respond to **one** item only.*

*Any additional item responded to, will **not** be scored.*

*You are **not** allowed to start working with the apparatus for the first **15** minutes.*

This time is to enable you read the items thoroughly, checking whether you have all the apparatus needed for the investigations and plan appropriately.

*Responses to the item **must** be written in the answer booklet(s) provided.*

Indicate the item number you are responding to, clearly at the top of the page.

Graph paper will be provided.

Mathematical tables and silent non — programmable calculators may be used.

Item 1

A businessman dealing in laboratory apparatus plans to import 500 high-quality pendulum bobs. Each pendulum bob is expected to have a mass ranging from 25g to 35g inclusive. The shipping company transporting the goods charges a shipping fee of US \$125 per kilogram of imported goods. However, the businessman is unable to estimate the total shipping cost of the pendulum bobs he wants to import in Uganda shillings (UGX).

To help solve this challenge, the businessman has provided you with a sample pendulum bob similar to those he intends to import and requested you to determine the likely total shipping cost for all the pendulum bobs.

Task:

As a physics student, design and carry out a scientific investigation that will enable you to address the challenge the businessman is facing.

Hint:

- 1 \$ = UGX 3700

In your investigation, include; the aim, variables (independent, dependent and controlled), hypothesis, procedure, possible sources of errors, precautions to the stated errors, data presentation (at least 5 data sets), data analysis (using a graph), and advice or recommendation.

Item 2

During second term holiday, you visited your uncle who owns a small retail shop in a nearby town. While welcoming you, he explained that a team of Quality Assurance officers from the district headquarters have been moving around the area collecting dry cells suspected to be of substandard quality. According to the officers, an authentic dry cell should have an internal resistance between 0.5Ω and 1.5Ω inclusive.

Your uncle became worried because he could not tell whether the dry cells he sells meet the required standard. Knowing that you study Physics, he has provided you with a sample of the dry cells in his shop to help him determine if it is authentic.

Task:

Using your physics knowledge, design and carry out a scientific investigation on the dry cell that will help clear your uncle's worry.

Hint:

In your investigation, include; the aim, variables (independent, dependent and controlled), hypothesis, procedure, possible sources of errors, precautions to the stated errors, data presentation (at least 5 data sets), data analysis (using a graph), and advice or recommendation.