

535/3  
PHYSICS  
Paper 3  
(Practical)  
Oct./Nov. 2024  
2 hours



UGANDA NATIONAL EXAMINATIONS BOARD

Uganda Certificate of Education

PHYSICS

Paper 3  
(Practical)

2 hours

**INSTRUCTIONS TO CANDIDATES:**

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

*Answer only **one** item.*

*Any additional item answered will **not** be scored.*

*You are not allowed to start working with the apparatus for the first quarter of an hour. This time is to enable you; read the items thoroughly, check for the apparatus you need and plan appropriately.*

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

*Graph paper is provided.*

*Mathematical tables and silent non-programmable calculators may be used.*



### Item 1.

Your brother wants to equip the Physics laboratory of his school with concave mirrors. He wishes to buy concave mirrors of focal lengths between 9.0 cm and 11.0 cm inclusive. Your brother has received samples of concave mirrors from a supplier who claims that they are of the required range of focal lengths. However, your brother wants to confirm the supplier's claims before buying the concave mirrors but lacks the knowledge.

You have been provided with the sample of the concave mirror that was delivered to your brother.

#### Task

Determine whether or not your brother should buy the concave mirrors.

### Item 2.

During school project work, you came up with an idea of making your own dry cell, whose quality is **comparable** to that of the dry cells on the open market. Through research, you found out that the quality of a dry cell is affected by its internal resistance.

The dry cells on the market are of e.m.f 1.5 V. However, their internal resistances are not indicated. You wish to determine the internal resistance of one of these cells, so that you use it as a standard when making yours.

Your teacher has provided you with a sample of a new dry cell on the market.

#### Task

Determine the internal resistance you will base on when making your cell.