Candidates' Name: ……..……..……..……..

Signature: ……..…….....……

Random No.					Personal No.		

(Do not write your school / Center name or Number anywhere on this booklet)

535/2
PHYSICS
Paper 2
July / Aug 2024
2 HOURS

KAMTEC EXAMINATIONS BOARD

Uganda Certificate Of Education
PHYSICS
Paper 2
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

This paper consists of two examination items.

Answer **one** *item in all.*

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

Candidates are **not** *allowed to start working with the apparatus for the* **first quarter of an hour**. *This time is to enable candidates; read the items thoroughly, checking for the apparatus they will need and plan appropriately.*

A graph paper will be provided.

Mathematical tables and silent non-programmable calculators may be used

FOR EXAMINER'S USE ONLY

ITEM	SCORE(S)	EXAMINER'S SIGNATURE
1		
2		

 TURN OVER

Item 1

A certain school was organizing a tour to Namulonge research station. The only students required were the S.4 candidates. While in the station, the students were to measure the heights of the seedlings to be transplanted amongst other items.
It was therefore recommended that each student moves with a metre rule not exceeding 180 g. However, the laboratory technician was not around to ascertain if the meter rule **R** presented to you qualified to be taken and there was no instrument to directly give its specification.

Task:

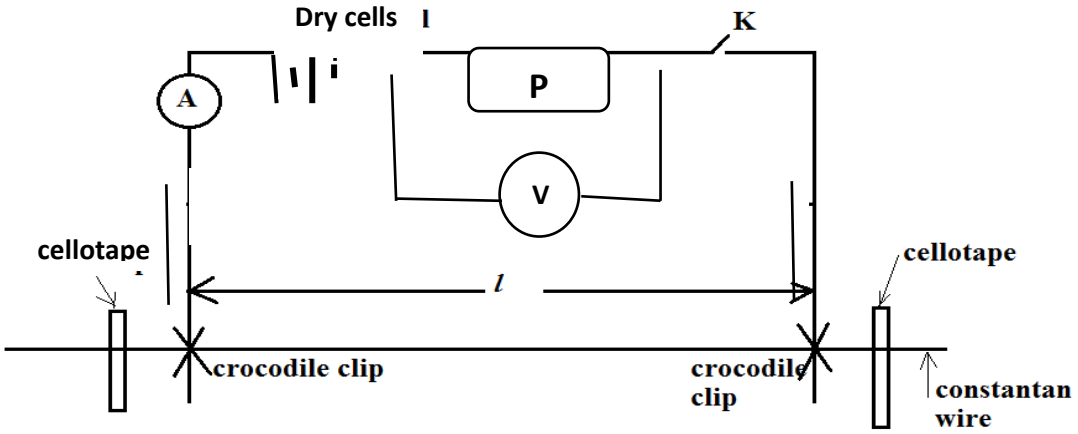
Help to solve this problem and make your report to be presented to Namulonge research station reception desk.

Note: The principle of moments applies.

Item 2

A certain school had 200 students in S.4 who were going to do a Physics mock examination. Each student was to be provided with a standard resistor of 2 ohms. The laboratory technician was not available to purchase the resistors. This worried the school director and decided to send his driver to buy the resistors from the lab-equip selling shops. The driver failed to get the resistors because they were out of stock. One of the shop attendants advised the driver to buy a constantan wire and use it to make his own resistors of the same specification. The driver bought a constantan wire of length 2000 cm expensively but did not know how to make such resistors and also how many shifts were possible from such a length of the wire for all the students to do such an electricity item.

Experimental set-up.



Task:

As a learner of Physics carry out a scientific investigation to solve this problem using the sample wire provided and advise accordingly.

Note: **Other experimental set-ups may apply.**

END