535/2
PHYSICS
Paper 2
Jul/Aug 2024
2 hours

JINJA JOINT EXAMINATIONS BOARD

Uganda Certificate of Lower Secondary Education

MOCK EXAMINATIONS - JULY / AUGUST 2024

PHYSICS

Paper 2
Practical

2 hours

INSTRUCTION TO CANDIDATES:

This paper consists of two examination items.

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

Any additional item 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.

Item 1

A trader saw an advert on TV about a certain factory that required a large quantity of rubber bungs.

In his shop, the trader has 500 rubber bungs that are identical with a labelled mass of 100g. However, the trader is not sure whether this is the correct mass of each bung.

He has brought a sample of the bungs to your school's physics laboratory for help.

Task:

As a learner of physics, use the set up below or any other experimental set up to carry out a scientific investigation to determine the mass of the rubber bung. Hence, help the trader to know how much the factory would pay him if all the rubber bungs in his shop were bought.

Hint:

- The factory is offering UGX. 1,000 for every 50g mass of a rubber bung.
- Principle of moments apply.

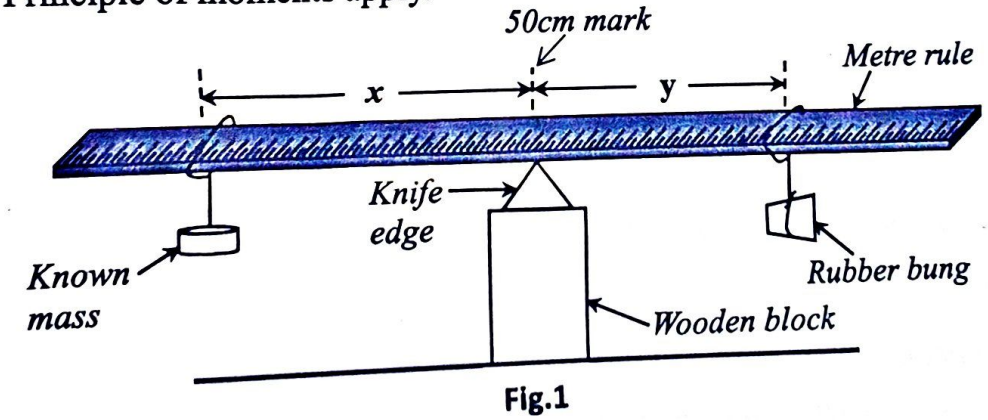

Fig.1

- Other experimental set ups using the provided apparatus may be used other than the set up above.

Item 2

Your school received a donation of science equipment from one of the prominent old boys who is working in China. Among the equipment received were resistors whose resistances were labelled in Chinese language that made it difficult to know their values.

The head of physics department has tasked the laboratory technician to label the values of the resistors for proper stock records.

Task:

You have been provided with one of the resistors labelled R; carry out a scientific investigation to determine the resistance of the resistor.

Hint:

- Ohm's law, **V = IR** applies.

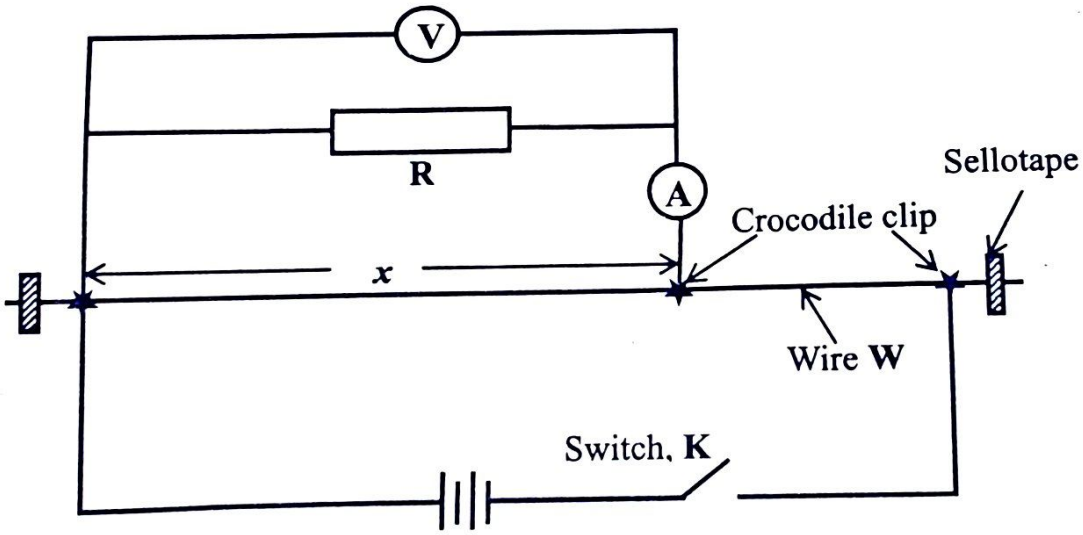

Fig. 2

- Other experimental set ups using the provided apparatus may be used other than the set up above.

 End