535/3
PHYSICS
(PRACTICAL**)**
Paper 3
12 August 2024
2 hours

ENTEBBE JOINT EXAMINATION BUREAU

Uganda Lower Secondary Certificate of Education

PHYSICS

Paper 3

PRACTICAL

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 you; 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

On an Island, inhabitants use size D dry cells to run their torches. The used dry cells are often damped at the shores and finally slide into the water body which is very harmful to aquatic life. A researcher came to the Island to buy the used dry cells of mass 75.0g – 90.0g each. A son to one of the inhabitants had gathered a sackful of used size D dry cells but was not sure how much he would earn from the sale of the dry cells.

Task:

As a student of Physics, carry out a scientific investigation to help the boy determine how much he will earn from a sack of 800 used size D dry cells.

Hint;

The trader offers UGX.5 per gram of such dry cells.

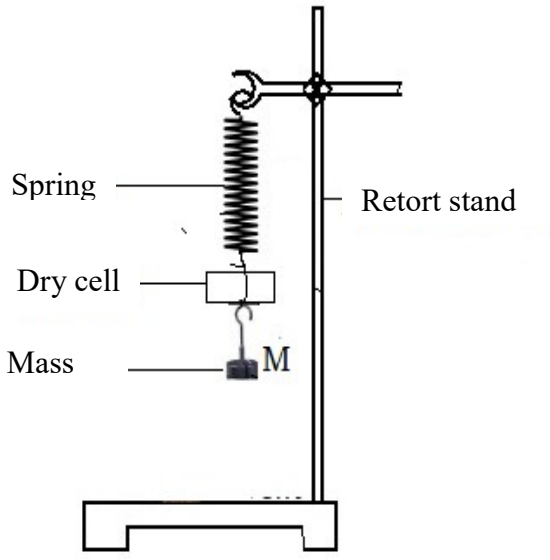
$T^2 = \lambda M + \lambda M_0$

Where $\boldsymbol{M_o}$ *–Mass of the dry cell*

T –Period of oscillation,

$\lambda - is\ the\ constant\ of\ the\ material\ of\ the\ spring$

M- known mass.



Item 2

A student complained of difficulties in seeing nearby objects clearly. The student visited a hospital, and the physician recommended that he uses spectacles with a lens of focal length 10.0cm. The student visited a pharmacy and presented the physician's prescription of the suitable spectacles. However, the spectacles lacked specifications.

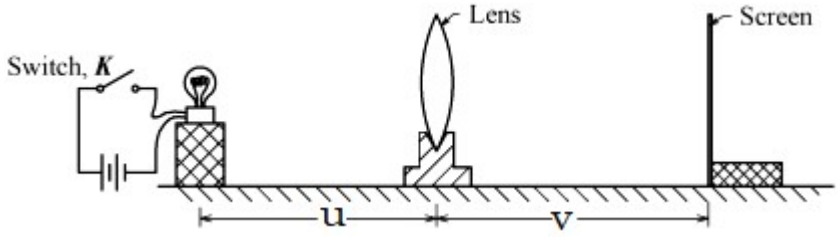
Task:

You have been provided with a specimen lens of the same make as the one in the spectacles the student bought. Carry out a scientific investigation on the lens to verify whether the student bought spectacles in line with the doctor's prescriptions.

Hint:

$$\frac{U}{V} = \frac{U}{f} - 1$$

Where U-Object distance, V-Image distance, f-focal length



Other experimental set ups may be used.

END