

535/2  
PHYSICS  
PAPER 2  
July/August 2024  
2 hours



## WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

PHYSICS

Paper 2

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*

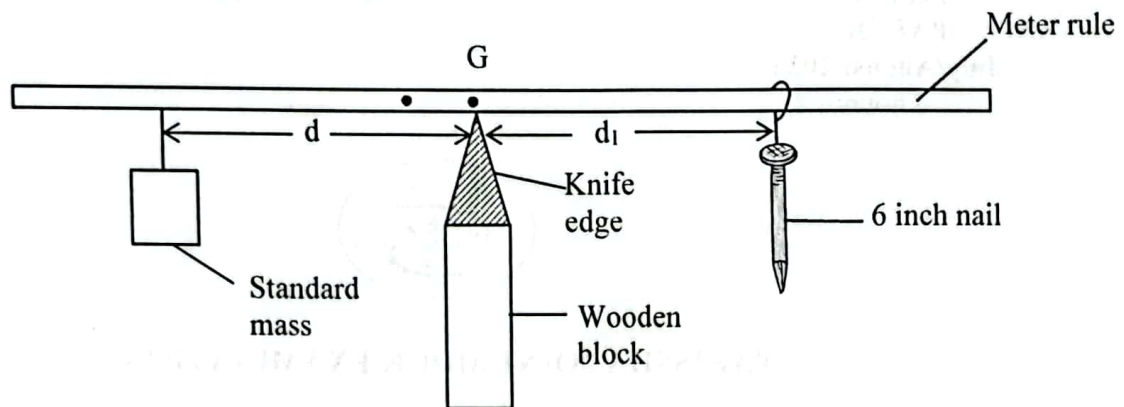
*Candidates are **not** allowed to start working with the apparatus for the **first quarter of an hour**. This time is to enable candidates; read the items thoroughly, check for the apparatus they will need and plan appropriately.*

*A graph paper will be provided.*

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

**Item 1**

A businessman who deals in nails has to weigh the nails in kilograms but has a faulty weighing scale. A customer wanted to buy only 20 six-inch nails but complained about the mass of the nails being sold not meeting the recommended standard set by UNBS of 30.0 g to 40.0 g. The businessman did not know how to determine the mass of the nails and approached you.



You may use the setup above or use a different one.

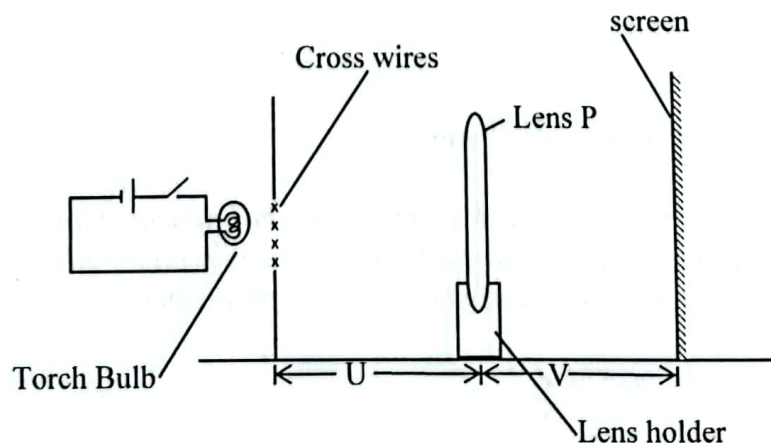
**Task:**

As a student of physics, use scientific investigation to help the businessman determine the mass of the 20 nails and how much the customer should pay if he charges Ush.5500 per kilogram.

**Hint:**  $M_N = \left(\frac{M}{S}\right)$

**Item 2:**

While setting up a projector, the lens fell and got broken. According to the specifications written on the projector, it can use a lens of focal length 8.0 cm -12.0 cm. A lens P was brought to replace the broken one but the operator was not sure if it had the same power.

**Task :**

As a student of physics, carry out a scientific investigation to determine the focal length of the lens provided and advise on whether the lens can be used in the projector.

**Hint:**  $\frac{U}{V} = \left(\frac{1}{f}\right) U$

**END**