

Name.....stream.....

535/2

Physics

(Practical)

2hrs



Apex Examination Council

UGANDA CERTIFICATE OF EDUCATION

Pre-Registration Examination 2025

S.4 PHYSICS 535/2

Paper 2

2 hours

INSTRUCTIONS

- The 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 candidates; read the item thoroughly, check for the apparatus they need and plan appropriately.

Answers to the item **must** be written in the answer booklets provided.

Graph paper is provided.

Mathematical tables and silent non programmable calculators maybe used.

ITEM 1

An industry packs tea leaves whose mass lies between 15g to 25g inclusive. For a long time customers have been complaining that the pack of tea leaves they buy is under weight. The industry is now in fear of losing customers and the manager of the industry thinks that it could be the packing machine that has a fault. A sample of the tea pack is taken to the laboratory for proof and unfortunately the weighing machine was spoilt. If mass Q provided is the estimate of the mass of the sample of the pack of tea leaves;

Task:

Carry out a scientific investigation using the knowledge of physics on how you can help the manager solve the problem.

ITEM 2

An optician suddenly dropped his hand lens which was made of a piece of glass of refractive index lying between 1.20 and 1.80 inclusive and broke in pieces. He could not continue with his research, but he had some lenses that appeared to have the similar properties as that of the hand lens. He says that it is risky to use another lens only if it had refractive index which lie in the same range.

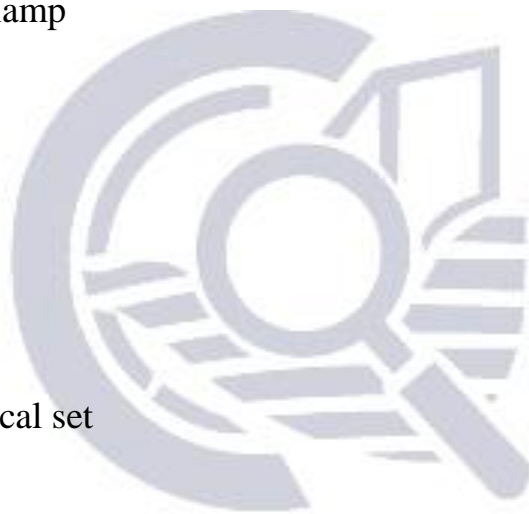
Task:

Carryout a scientific study on how you can help the optician determine the recommended lens for his research.

END

Confidential for physics practical

- 1 metre rule
- 3 pieces of threads about 30cm long
- 1 (50g) mass
- 1 (20g) mass labelled Q
- 1 retort stand with a clamp
- 1 soft board
- 4 thumb pins
- 4 optical pins
- 1 plain sheet of paper
- 1 glass block
- 1 complete mathematical set



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