535/2
PHYSICS
PRACTICAL
PAPER 2
JULY/AUG 2024
2 HOURS

ASSHU ANKOLE JOINT MOCK EXAMINATIONS

UGANDA LOWER CERTIFICATE OF EDUCATION

PHYSICS PRACTICAL

535/2

TIME 2 HOURS

INSTRUCTIONS TO ITEM TAKERS

- *This Paper consists of* ***two*** *Items.*
- *Item takers are supposed to choose only one Item.*
- *Responses should be written in the Answer Sheets provided.*

Item 1

After dressing up preparing for church, a girl with her mother admired themselves in a plane mirror. In the process, the mother told her daughter that she had heard that the distance from the girl to the plane mirror is the same distance from the mirror to the image of the girl.

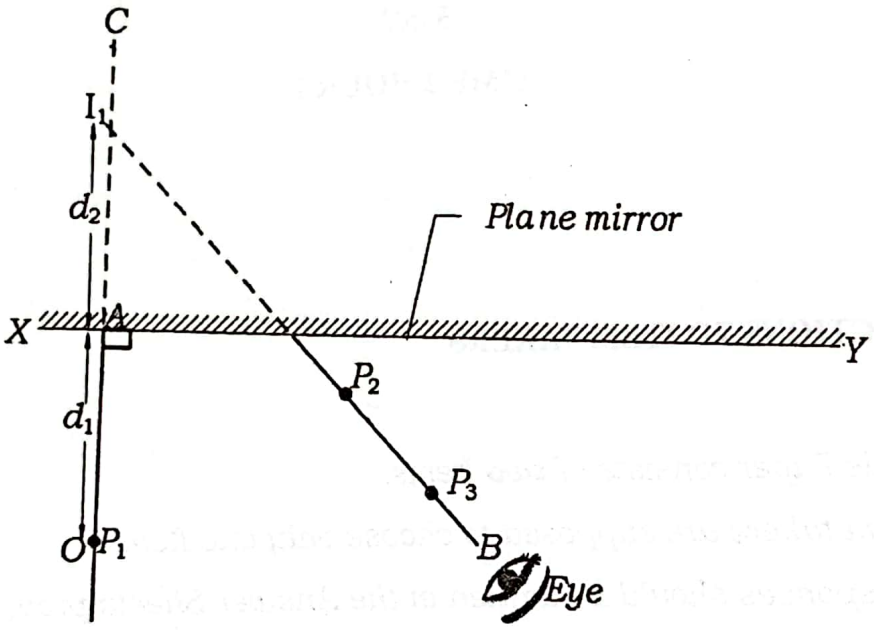
The girl could not believe it. They contacted a Salon Attendant to assist them prove what the mother had told her, but the girl was not fully convinced.

Task.

As a Learner of Physics, who has studied light, carry out a Scientific Investigation to prove to the girl so that she accepts what the mother told her.

Hint:

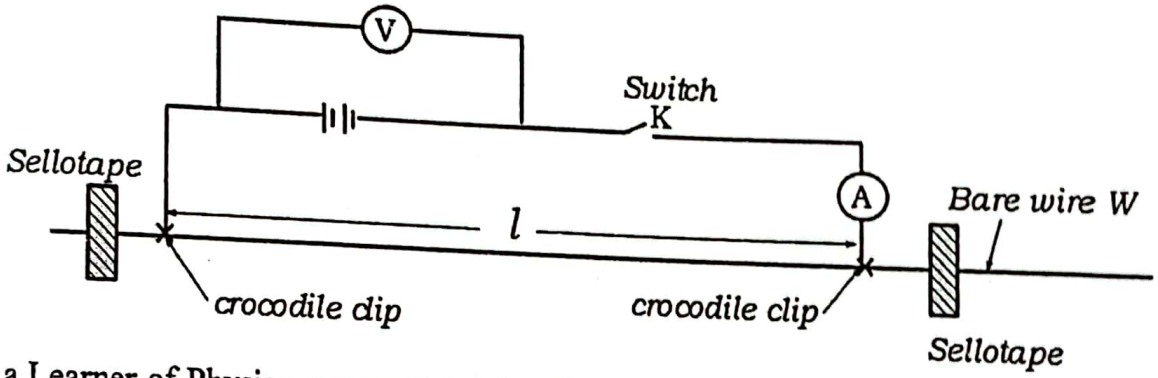
Laws of reflection of light and characteristics of images formed in a plane mirror may be useful.



Item 2

A man was watching news at his home when his Television (TV) suddenly went off. However, the Lights in the Living Room were still on. On trying to find out what had happened to his Television (TV), he discovered that the Extension Cable had stopped working. He then rushed to an Electrician to help him check the extension cable and repair it. When the electrician opened the plug, he observed that it's the fuse that had melted. He then decided to replace the melted wire with a relatively long copper wire, since it was the only wire available. To his surprise, the extension cable worked but its dial light was dim. When he reduced the length of copper wire and fixed it back in the fuse, the dim light became brighter and the cable worked perfectly well. This made the man curious and wanted to know the relationship between length of wire and the amount of current flowing in the extension cable. He asked the Electrician about it, who told him that the length of the wire affects the resistance of the wire and the flow of current. However, the Electrician could not explain much.

Experimental set up.



As a Learner of Physics, carry out a Scientific Investigation that would help the man understand better what happened.

Hint;

Use $\frac{V}{I} = \rho\, l$. Where l is the length of wire, ρ is a constant, V is potential difference and I is current.

End