

**535/2**  
**PHYSICS**  
**Paper 2**  
**2024**  
2 hours



**WAKISO – KAMPALA TEACHERS' ASSOCIATION (WAKATA)**  
**WAKATA PRE-MOCK EXAMINATIONS 2024**

**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, 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:

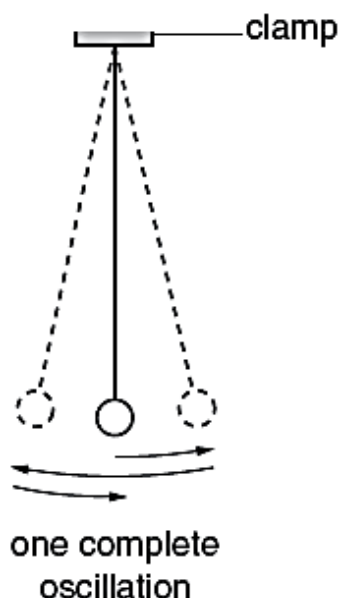
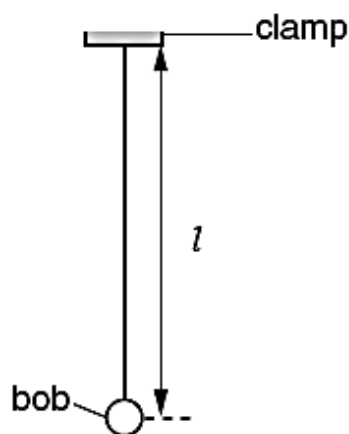
In a rural community, a group of students is tasked with designing a makeshift swing for children in the neighborhood. To ensure the safety and stability of the swing, the students want to determine the strength of the strings they will use. They decide to conduct experiments using simple pendulums made from various lengths of string, aiming to understand how the length of the string affects its swinging motion.

### Task:

As a member of the student group, your task is to investigate the strength of string for the makeshift swing using simple pendulum experiments. Vary the length of the string in each pendulum and measure the time it takes for each pendulum to complete one swing. Analyze your data to determine how the length of the string influences the swinging motion and stability of the pendulum. Use your findings to select the most suitable string length for the swing to ensure the safety and enjoyment of the children in the community.

**Hint:** Other experimental set ups may be used.

✓



✓ Other experimental set ups may be used.

## Item 2:

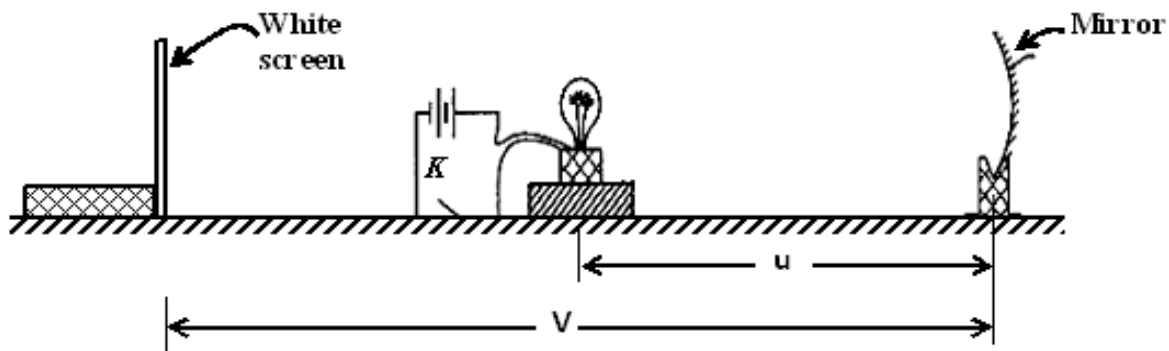
Tom, a high school student, is conducting an experiment to investigate the focal length of a concave mirror and its effect on the formation of images. He sets up a simple optical bench with a concave mirror and an illuminated object to observe the images formed at different distances from the mirror.

### Task:

As a student of physics, carry out a scientific investigation to help Tom to determine the focal length of concave mirror provided.

**Hint:** Other experimental set ups may be used.

✓



✓ Other experimental set ups may be used.