

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
KYERWA DISTRICT COUNCIL
031/2 PHYSICS 2A FORM FOUR JOINT MID TERM TEST- APRIL 2023.

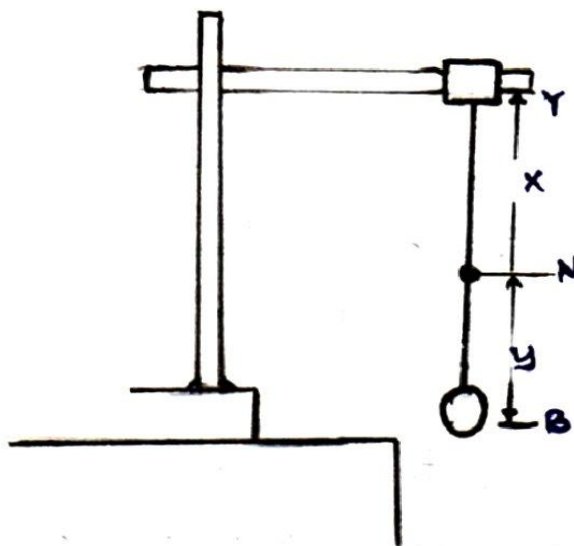
TIME 2.30 HOURS.

INSTRUCTIONS.

1. *This paper consists of two questions.*
2. *Answer all questions.*
3. *Each question carries 25 marks.*
4. *Non-programmable calculators may be used .*
5. *Cellular phones and any unauthorized materials are not allowed in the examination room*
6. *Write your examination number on every page of your answer booklets.*

1. The aim of this experiment is to determine the acceleration due to gravity g of pendulum bob B.

- a) Tie a thread to a given pendulum bob .Make a knot at a short distance from the bob.This distance should be of the order of 10 cm.



- b) The distance between the knot N and point of suspension is denoted by X as indicated in the figure above .Measure the distance $X = 10\text{cm}$.Displace the pendulum bob through a small amplitude of vibration.Find the time t for 30 oscillation and hence determine the periodic time t for one oscillation repeat this process for value of

X = 30 cm , 50 cm , 70 cm and 90 cm .Tablet the value of X ,T and T² the periodic time
T is related to X by the equation $T = 2\pi\sqrt{x/bg}$

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