
KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

MOI GIRLS ELDORET HIGH SCHOOL

232/1

PHYSICS

PAPER 3

SCHOOLS NET KENYA

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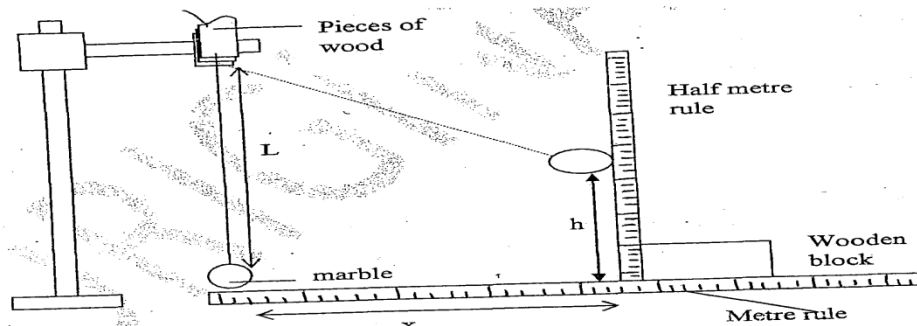
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**MOI GIRLS ELDORET KCSE TRIAL
AND PRACTICE EXAM 2016
Paper 3 (Practical)**

1. You are provided with;
- (a) A Marble with a piece of the thread attached.
 - (b) Two wooden blocks.
 - (c) Clamp, stand + boss
 - (d) Metre rule.
 - (e) ½ metre rule supported on a wooden block.
 - (f) 2 pieces of cello tape.
 - (g) Stop watch.

Procedure:

- (I) Fix the thread between the wooden blocks and fasten in the clamp. Adjust the thread so that the length, L, shown in the figure below is 50cm.
- (II) Fix the metre rule horizontally to the bench using the cello tape provided.



- (III) Adjust the clamp so that the marble is next to the end of the metre rule as shown above.
- (IV) Displace the marble by a horizontal distance X20cm and measure the corresponding vertical displacement h=_____ cm. (1mark)
- (V) Repeat the experiment to find h for each of the following values of X and complete the table.

X cm	h(cm)	X ² cm ²	X ² /h cm
20			
25			
30			
35			
40			
45			

(6mks)

- (VI) plot a graph X²/h against h.
(give the grid/draw grid)
- (VII) Determine the slope of the graph. (2mks)
- (VIII) From the graph find the value of X²/h when h=0 (2mks)
- (IX) With the metre rule and half-metre removed — Displace the marble through a horizontal distance of about 10cm and let it to swing freely, Time 20 oscillations.
Time for 20 oscillations _____ (1mk)

- (X) Determine periodic time, T
 Periodic time, T = _____ (1 mk)
- (XI) Calculate the value of P from the following equations. (4mks)

$$T = 2\pi\sqrt{p/g} \quad g = 10\text{m/s}^2$$

2. You are provided with the following apparatus

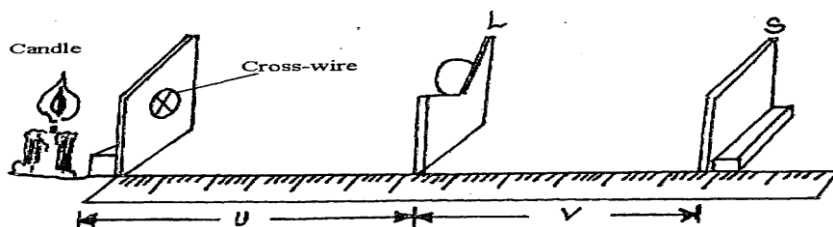
- A metre rule
- A log of plasticine
- Bi convex lens
- A candle
- A lens holder
- Across wire mounted on a cardboard
- A white screen

(a) Determine the focal length of the lens using a distance object.

F = (1mk)

(b) Briefly explain the method you have used above. (2mks)

(c) Set up the apparatus as shown



(d) Starting with $u=30\text{cm}$, vary the position of the screen S until a sharp image of the cross wire is observed on the screen. Measure and record the value of the image distance v .

(e) Repeat the experiment above for other values of u 35cm, 40cm, 50cm, and 55cm

U (cm)	30	35	40	45	50	55
V (cm)						
$M = \frac{v}{u}$						

(f) Plot a graph of M against v (5marks)

(g) Determine the slope of the graph (2mks)

$$M = \frac{v}{f} - 1$$

(h) The equation of the graph is given by

Use the graph to obtain the value of f (2mks)