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Candidate's signature:
Date:

232 / 3 PHYSICS PAPER 3 JULY / AUGUST (PRACTICAL) 2 ^{1/2}HOURS

LOWER YATTA DISTRICT JOINT EVALUATION EXAM- 2011

Kenya Certificate of Secondary Education (K.C.S.E)

232 / 3 PHYSICS PAPER 3 (PRACTICAL) 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Answer <u>ALL</u> the questions in the spaces provided in the question paper.
- You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper carefully before commencing your work.
- Marks are given for a clear record of the observations actually made, for their suitability and accuracy and the use made of them.
- Candidates are advised to record their observations as soon as they are made.
- Mathematical table and electronic calculators **may be** used.

Question	Maximum Score	Candidates Score
1	20	
2	20	
Total		

FOR EXAMINER'S USE ONLY

This paper consists of 7 printed pages.

Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.

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Turn Over

QUESTION 1 (20 MARKS)

a) Determine the volume V of one of the masses using the apparatus provided

(3 Marks)

Record V =

b) i) Determine the center of gravity G of the metre rule and record it.

G =(1Mark)

Arrange the apparatus as shown in the diagram below such that X=50mm from the pivot with 100g mass completely immersed in liquid L hang the other 100g mass from the metre rule and adjust its position until the system is in equilibrium as shown in the diagram.



Repeat the procedure above with the following values of X and fill the table.

NB: During each experiment, ensure that the position of the pivot does not change. (3Marks)

X (mm)	50	100	150	200	250	300
Y (mm)						

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iv) Determine the slope S of the graph.

v) The slope S is given by the equation S = -- where W_X is the apparent Weight of the mass in liquid L and W_Y is the actual weight. Calculate the value of W_X and the upthrust U. (3 Marks)

vi) Hence determine the density of the liquid L

(3 Marks)

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b) Disconnect the voltmeter and connect the circuit as shown in the figure below.



c) Adjust the length L of the wire to 0.1m, close the switch k, and read the value of current and record in the table below.

Length L(m)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	
Current I (A)								4 Marks
-(A ⁻¹)								2Marks

d) Repeat the procedure in (c) above for the value of lengths of L given in the table above.

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e) Calculate the values of – and record in the table.



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232/3 Physics Paper 3 (3Marks)

ALSWERS g) Determine the gradient of the graph

ad ad por por pree to be h) i) Measure the diameter of the wire in three points used.

$\mathbf{d}_1 = \dots \dots \dots \mathbf{d}_2 = \dots$	d ₃ =	=
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=	=	(1 Mark)
		(

Determine the cross section area, A of the wire (1 Mark) ii)

From the equation -=-+i)

Determine

i) the value of K (2 Marks)

ii) the value of Q (1 Mark)

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