		con	
Name			Index No
School		•	Date
Candidate's signature			
	+ree.		
232/3 DUVSLCS	white		
Paper 3	, to the second s		
PRACTICAL	7		
Time 2 ¹ / ₂ HOURS			

~

BURETI DISTRICT JOINT EVALUATION TEST - 2012

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

INSTRUCTIONS TO CANDIDATES

- 1. Write your name and index number in the spaces provided above.
- 2. Sign and write the date of examination in the spaces provided above.
- 3. This paper consists of **TWO** questions: **1** and **2**
- 4. **ALL** working **MUST** be clearly shown
- 5. Mathematical tables and electronic calculators may be used`

FOR EXAMINERS USE ONLY

QUESTION 2

	b	c (i)	c (ii)	c (iii)	Total
Maximum Score	10	5	3	2	20
Candidate's Score					

GRAND TOTAL	CANDIDATE'S SCORE	
	MAXIMUM SCORE	40

This paper consists of 8 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing

Question 1 Part A

- One helical spring
- One 200g mass or two 100g masses
- A stop watch
- Foursimall pieces of wooden blocks

*CS Procedure FOT NOTEA



Fig. 1



(ii) Suspend the ends of the metre rule with spring at 5cm mark from the end so that the metre rule with the pointer is horizontal.

- (iii) Hang 200g on the horizontal metre rule at a length L = 10cm from the spring. Record the extension, e, of the spring in the table below.
- (iv) Displace the mass slightly downwards and release it to oscillate vertically. Time for 10 oscillations and record the results in table 1
- (v) Repeat (iii) and (iv) for other positions of L of the mass
- (vi) Table 1

FOR NOTE Free

¢ C	Length, L (cm)	10	20	30	40	50
*	Extension, e (cm)					
	Time for 10 oscilations (s)					
	Periodic time, T (s)					
	$T^{2}(5^{2})$					

(6mks)

(vii) Plot a graph of $T^2 (y - axis)$ against extension 'e'

(5mks)



	CS. COT	
	(viii) Determine the slope of the graph $2^{2^{2^{2^{2^{2^{2^{2^{2^{2^{2^{2^{2^{2$	(3mks)
	T. WWW	
	······································	
	(ix) Given that $T^2 = 4 \pi^2 e + C$	
e ^c	LCF Determine the value of K	(2mks)
Mote fite		
\$ ^{0[°]}		

Part B

You are provided with the following

- A voltmeter
- An ammeter
- Six connecting wires with crocodile clips
- Two dry cells
- Cell holder
- Resistant wire labelled R, mounted on a carton
- Switch

Proceed as follows

(a) Set up the circuit as shown in figure 2

Figure 2



Close the switch. Read and record the appreter and voltmeter readings V.....V (1mk) (1mk)Ι....Α Determine the resistance of R (b) (2mks) You are provided with the following apparatus - A lens - Eens holder FOT MOTE Free - Candle - Two screens; one with hole having cross-wires

Proceed as follows

- Metre rule

2.





Without changing the distance S move the lens slowly away from cross-wires until a sharp enlarged inverted image is formed on screen position L_1 . Measure the distance U_1 from cross-wires to the lens and record this value in table 2. Keeping distance S, constant move the lens away from cross-wires to a new position L_2 where a small sharp inverted image is formed on the screen. Measure the new object distance U₂ and record in table 2. Determine the displacement d of the lens from L_1 to L_2 (i.e d = $L_2 - L_1$)

By setting the distance S to distances 44, 46, 48, 50 and 52cm as shown in table 2 repeat (b)



			COL	
	(ii)	Determine the slope of the	graph	(3mks)
		St. Co.		
		4 ¹ e		
		a starta		
		J. J		
	ç	,×		
	o (iii)	Given that $S^2 - d^2 = 4fS$, us	e your graph to determ	ine the focal length
	ICST L	of the lens		(2mks)
, e ^l				
¢ ^{\$} *				
MOT				
\$°°				
	•••••			
			• • • • • • • • • • • • • • • • • • • •	••••••

For more Free Kins past pages wight www.freekcespastpages.com

8