

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper

for the guidance of teachers

0625 PHYSICS

0625/61 Paper 6 (Alternative to Practical), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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UNIVERSITY of CAMBRIDGE International Examinations

Pa		ge 2	Mark Scheme: Teachers' version	Syllabus	Paper		
			IGCSE – May/June 2010	0625	61		
1	(a)	.,	29 (mm) and l = 31 (mm) (allow 2.9 <u>cm</u> , 3.1 <u>cm</u>) = 14 (mm) and $e_{\rm B}$ = 15 (mm) (ecf) (ignore minus sign	ns)	[1] [1]		
	(b)	(i) both	n <i>l</i> correct to (21.5 – 22) and 24		[1]		
		(ii) (6.5	– 7) and 8 (ecf) (ignore minus signs)		[1]		
		(iii) e _{av} =	= 7.5 (c.a.o.)		[1]		
	(c)	justificat	nt matches readings (expect YES) ion matches statement and by reference to results within limits of experimental accuracy, wtte)	(<u>too</u> dif	(ecf NO) [1] ferent, wtte) [1]		
	(d)	use of h	of: ce of parallax error explained orizontal aid ng to same point each time				
		•	springs to stop moving		[1]		
					[Total: 8]		
2	(a)	(i) T ₁ c	orrect 18		[1]		
		(ii) T₂c unit	orrect 4 °C (either position and not contradicted)		[1] [1]		
	(b)	all plots	belled cupying at least half of grid on suitable scale correct to ½ square ged single, smooth curve line, not 'point-to-point'		[1] [1] [1] [1] [1]		
	(c)	(i) T ₂ <	T_1 (wtte)		[1]		
		(ii) dec	reasing gradient (wtte)		[1]		
					[Total: 10]		

Pa		ge 3	Mark Scheme: Teachers' version	Syllabus	Paper
			IGCSE – May/June 2010	0625	61
3	(a)	correct s correct p			[1] [1]
	(b)		es correct 8.35, 3.58, 2.08, 1.39, 1.00 nt 2 or 3 significant figures		[1] [1] [1]
	(c)	justificati	nt matches readings (expect NO) on matches statement and by reference to results constant, as <i>l</i> increases <i>V</i> decreases		[1] [1]
	(d)	avoidanc	of: r zero error ce of parallax error explained f between readings		[1] [Total: 8]
4	(a)	(i) pins	at least 5 cm apart		[1]
		(ii) <i>i</i> = 3	0		[1]
		(iii) <i>r</i> ₁ =	31		[1]
	(b)	(i) & (ii) !	ooth lines correct area		[1]
			r_2 correct to $\pm 1^\circ$ with unit difference = 1 or -1 (c.a.o.)		[1] [1]
	(c)		atement matches result (expect YES) stification matches statement and by reference to result xpect within limits of experimental accuracy, wtte)		(ecf NO) [1]
				(<u>too</u> dif	ferent, wtte) [1]

[Total: 8]

Page 4		Mark Scheme: Teachers' version	Syllabus	Paper
		IGCSE – May/June 2010	0625	61
(a)	colu	ımn 1: <i>d</i> , m (or in words)		[1
(4)		imms 2 and 3: t, T (or in words)		-
				[1
	colu	ımns 2 and 3: s, s (or in words)		[1]
(b)	b) accuracy/reducing uncertainty/sensible comment on reaction time			
(c)	(i)	at least <u>three</u> correct values entered in table 1.66, 1.52, 1.40, 1.28, 1.17 (at least 2 significant figu	res) c.a.o	[1
		statement matches result (expect NO) <u>AND</u> justification matches statement and by reference to r (expect decreasing, not equal, not constant, different		
		allow ecf from (i)	, onanging, wito)	[1
				[Total: 6]