CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2012 series

0625 PHYSICS

0625/53

Paper 5 (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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2						Syllabu	Syllabus	Paper			
				10	GCSE -	- Octob	er/Nove	mber 2012		0625		53
1	(a)	(i) a	ınd (i i	i) l _o an	d l_1 clea	arly in c	m/mm <u>aı</u>	<u>nd</u> l₁>l₀				[1]
		(iii)	Corr	ect value	for e ₁ f	rom 1(a	a)(i) & 1(a)(ii)				[1]
		(iv)		ect calcu g/cm or (ı				[1] [1]
	(b)	(i) Appropriate method (can be written and/or in diagram) e.g. measure half width of mass either side of 40 cm/mark centre of mass						mass	[1]			
		(ii),	(iii) a	and (iv)	$l_2 > l_3$	and e ₂	calculate	ed				[1]
		(v)		ithin rang 3 signific) (no ecf)				[1] [1]
	(c)	Any two from: rule bends mass not exactly at 40 cm mass may slip end of rule may slip hook not directly above 0 cm spring extension not uniform/owtte proportional limit exceeded mass irregular/C of G not at centre/owtte any other valid cause of inaccuracy							[2] [Total: 10]			
2	(a)	Units <u>all</u> correct (symbols or words) t values inserted (0, 60,120,180, 240) θ for white card increasing θ for black card increasing at greater rate than θ for white card					[1] [1] [1]					
	(b)	(i)	<u>Both</u>	tempera	iture ch	anges o	correct					[1]
			with	supportir	ng com	oarative	comme			k')		[1]
		(iii)	<u>Figu</u>		table si	upportin	g correc	'Yes' but all t statement	,			[1]

	Page 3		Mark Scheme	Syllabus	Paper
			IGCSE – October/November 2012	0625	53
	(c)	same dis same (ty same are same thi good cor same sta	from: pe of) lamp/same brightness stance/same height pe of) thermometer ea of card ckness of card ntact between card and thermometer (owtte) art temperature/allow thermometer to cool		[1]
		power ou different respond different different rate of ris	ate matching explanation: utput may not be the same (owtte) intensity of radiation (owtte) differently/different heat capacity surface area to absorb radiant heat (owtte) rate of conduction (owtte) se different at different temperatures starts at different times		[1] [Total: 10]
					[10tal: 10]
3	(a)		symbol for voltmeter ed in parallel with lamp		[1] [1]
	(b)	A cı R	nits all correct (symbols or words) Il p.d.s < 7.0 V <u>and</u> to at least 1 d.p. urrents all < 1.00 A <u>and</u> to at least 2 d.p. calculations correct consistent 2 or 3 significant figures in <i>R</i> column		[1] [1] [1] [1]
	(d)	R figures	nt matches results (expect 'No') cquoted appropriately and matching statement of <u>brightness related to temperature</u>		[1] [1] [1] [Total: 10]

	Page 4		Mark Scheme	Syllabus	Paper	
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4	(a) and ((a) and (b) Values of ν in metres To 3 significant figures Correct values for $\frac{1}{\nu}$ (consistent with ν values in table)				
	(c) Axe Plot Wel Thir	[1] [1] [1] [1]				
	(d) (i) a	ınd (ii)	$\it p$ and $\it q$ values recorded and matching graph		[1]	
	(e) (i) and (ii) f within range 13.0 to 17.0 (or equivalent m/mm) 2 or 3 significant figures and appropriate unit				[1] [1]	
					[Total: 10]	