CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2013 series

0625 PHYSICS

0625/62

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 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 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2		Mark Scheme Sylla		Paper		
			IGCSE – October/November 2013	0625	62		
1	(a) (i)	3.1 c	cm (31 mm), unit required		[1		
		S	c.f. (a) o.		[1 [1 [1		
		(c) statement matches results (expect NO) justification using idea of within or beyond limits of experimental accuracy (
			ine / constant gradient the origin		[1 [1		
	(e) has	s <u>no</u> e	ffect		[1		
					[Total: 9		
					•		
2	(a) 78	°C c.a	a.o. unit needed		[1		
	(b)(c)		thermometer readings correct 69, 61 ect differences 9, 17 allow e.c.f.		[1 [1		
	(d) ord	der ma	atches results (expect D, B, C, A) allow e.c.f.		[1		
	init vol	om tem ial (ho ume /	nperature (or other environmental condition) ot) water / starting temperature (accept initial temper mass / amount / level of (hot) water	rature)			
			pe / thickness / material / size / volume of beaker ays during operations		[2		
	(f) sar	me <u>tim</u>	ne of cooling for each experiment		[1		
					[Total: 7		
3	(a) (i)	0.30	A c.a.o. unit needed (accept 0.3 A)		[1		
	(ii)		e: (accept 0.4) (e.c.f. (a)(i)) accept any significant figures > 1 and	recurring decimal	[1 [1		

	Page 3		Mark Scheme	Syllabus	Paper
			IGCSE – October/November 2013	0625	62
	(b)	suitable s all plots of good line	rectly labelled scales (x axis 2 cm = 0.2 m/0.25 m) correct to ½ small square e judgement inuous line, carefully plotted points not large 'blobs'		[1] [1] [1] [1]
	(c)		to ½ square – must see evidence on graph paper no / incorrect unit, ignore significant figures		[1]
	(d)	9.5 to 10	$0.5~(\Omega)$ ignore significant figures		[1]
					[Total: 10]
4	(a)	(i)(ii)	u = 25(mm), v = 42(mm)		[1]
		(iii)(iv)	$uv = 1050 \text{(mm}^2)$, $u + v = 67 \text{(mm)}$ allow e.c.f.		[1]
		(v) $f_1 = \frac{1}{2}$	15.7(mm) 2 or 3 significant figures only allow e.c.f.		[1]
	(b)	(i)(ii)	$uv = 1050 (\text{mm}^2), u + v = 67 (\text{mm}), \text{ c.a.o.}$		
		(iii) f ₂ =	15.7(mm) accept any significant figures		[1]
	(c)	justificati	nt matches results (expect YES) on in terms of within or beyond limits of experinal alues are <u>equal</u> without mention of experimental acc		[1] (o.w.t.t.e.) [1]
	(d)	mark pos place me ensure o lens / obj repeat (a	from: arkened room / brighter lamp / no other lights sition of centre of lens on holder etre rule on bench (or clamp in position) abject and (centre of) lens are same height (from the ject / screen vertical/perpendicular to bench and average) as slowly (backwards and forwards when focusing)	bench)	[2]
	(e)	image dr	rawn inverted		[1]
		-			[Total: 9]
					[

F	Page 4	Mark Scheme	Syllabus	Paper
		IGCSE – October/November 2013	0625	62
5 (a	a) (i) <i>x</i> =	7. <u>0</u> cm / 70 mm unit needed, accept 6.95 to 7. <u>0</u> cm		[1]
	(ii) <i>y</i> =	3.3 cm / 33 mm unit needed, c.a.o., accept 3.30 cm		[1]
(b	o) (i) 6.5	(N) ignore unit		[1]
	` '	8 N/cm² (0.0028 N/mm², 2800 N/m² or Pa) e.c.f. t needed, ignore significant figures		[1]
(c	any one from: outline is larger than block / thickness of pencil line zero error on forcemeter precision with which the ruler can be read precision of forcemeter / large gaps on scale block not of uniform thickness/length			[1]

[Total: 5]