MARK SCHEME for the October/November 2009 question paper

for the guidance of teachers

0625 PHYSICS

0625/06

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.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2009 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



	Page 2		Mark Scheme: Teachers' version IGCSE – October/November 2009	Syllabus 0625	Paper 06		
1	(a)	(i) d 0.8		0025	00[1]		
•	(a)						
		(ii) x 10.0					
	(b)	(i)–(iii)			[4]		
			e: <i>T</i> 1.0, 0.95, 0.895 (0.90, 0.9), 0.84, 0.775 (0.78) .00, 0.903, 0.801, 0.706, 0.601 (if <i>T</i> correct)		[1] [1]		
	(-)						
	(C)	graph: axes lab			[1]		
		plots all	uitable, plots occupying at least half grid correct to ½ square		[1] [1]		
		well judg thin line,	ed line 5 neat plots		[1] [1]		
	/ N						
	(a)	inverse/r	nt NO and not through origin/ negative gradient/		[4]		
		x increas	ses, T^2 decreases/ wtte		[1]		
					[Total: 10]		
2	(a)	91 (°C)			[1]		
	(h)	<i>t</i> in s, bo			[4]		
	(a)	<i>t</i> in S, DO			[1]		
	(c)	statemer	nt B and justified by reference to readings		[1]		
	(d)	any two	from				
	(u)	same sta	arting temperature/temperature of hot water room temperature/keep away from draughts/out of di	root cuplight			
			ne intervals	lect sumgrit	[2]		
					[Total: 5]		
3	(0)	(\mathbf{o})					
5	(a)-	table: V, A, Ω			[4]		
		V, A, 12 V 1.8 I 0.25			[1] [1]		
		R values	7.20, 3.46(3.5)		[1] [1]		
		CONSISTER	nt significant figures for <i>R</i> (2 or more)		[1]		
	(d)		.49, 0.5 (ecf)		[1]		
		zis signi	ficant figures and no unit		[1]		

IGCSE - October/November 2009 0625 06 (e) (i) correct symbols and circuit (ignore power source symbol) [1] (ii) voltmeter position correct [1] (iii) control current/voltage/resistance/speed of motor [1] (b) more than one value shown of def.speed stocks [1] (c) $t 0.85 \pm 0.05$ (cm) (cm) (or 109 – 131 (mm)) [1] (c) f 10.9 – 13.1 (cm) (or 109 – 131 (mm)) [1] (ii) f 10.9 – 13.1 (cm) or on/brighter object [1] (b) any two from: use of darkened room/brighter object use o		Page 3		Mark Scheme: Teachers' version	Syllabus	Paper
 (ii) voltmeter position correct (iii) control current/voltage/resistance/speed of motor [1] (iii) more than one value shown (1) (iii) more than one value shown (1) (iii) control voltes shown correct unit (iii) diagram showing blocks correctly placed (1) (iii) diagram showing block correctly placed (1) (iii) di				IGCSE – October/November 2009	0625	06
 (iii) control current/voltage/resistance/speed of motor [1] [Total: 10] 4 (a) f14.95 ± 0.05 (cm) unit to match number [1] (b) more than one value shown d 6.5 ± 0.1 (c) f 0.85 ± 0.05 (cm) d and f both with correct unit [1] (c) f 0.85 ± 0.05 (cm) d and f both with correct unit [1] (d) diagram showing blocks correctly placed rule shown correctly touching both blocks [1] (e) f 10.9 - 13.1 (cm) (or 109 - 131 (mm)) no, too far out to be explained by experimental inaccuracy (wtte) [1] 5 (a) lens between object and screen (not mirror) lens at least 2 cm from object and screen metre rule on bench or clamped [1] (b) any two from: use of darkened room/brighter object slowly moving lens back and forth to obtain good image avoid parallax, action given lining up object and lens object and lens at same height from bench/object on principal axis repeats screen/lens perpendicular to bench mark centre of lens position on block 		(e)	(i) c	correct symbols and circuit (ignore power source symbol)		[1]
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						[Total: 5]