#### UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

**International General Certificate of Secondary Education** 

# MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

### 0625 PHYSICS

0625/62

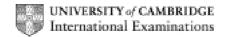
Paper 6 (Alternative to Practical), maximum raw mark 40

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

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Page 2		Mark Scheme: Teachers' version	Syllabus	Paper
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1	(a) a and b	[1]		
	(b) (i) and (	[1]		
	(iii) <i>m</i> c		[1]	
	(c) (i) and (	(ii) at least two values given for $w$ and $t$ more than two values given for $w$ or $t$ correct values for $w$ and $t$ (2.75 – 2.85cm, 0)	).4cm)	[1] [1] [1]
	(iii) V ca		[1]	
		sity to 2 or 3 significant figures $(0.960 - 1.00)$ or $g/cm^3$	ecf	[1] [1]
	(d) centre o		[1]	
				[Total: 10]
2	(a) $t$ in s, $\theta$ (symbol	e)	[1]	
	<b>(b)</b> 19 (°C)			[1]
	` '	neating greater (wtte) (can be included as part of justisson given of changes in temperature with correct nu	•	[1] [1]
	constan carry ou	from: tarting) temperature (wtte) t room temperature/draughts (wtte)/environment/pla it in same time intervals/duration/allow 'time' alone ermometer (wtte)	ce	
		lume of water/location of thermometer/beaker/'temp sponses, -1 for each <u>additional</u> incorrect (ignore 'neu		[2]

[Total: 6]

Page 3		ge 3	Mark Scheme: Teachers' version	Syllabus Pap		
			IGCSE – October/November 2010	0625 62	2	
3	(a)	2 – 2.1	(V)		[1]	
	(b)	(i) Ri	n Ω, $V$ in $V$ (symbols or words)		[1]	
		(ii) <u>10</u>	<u>1</u>		[1]	
	(c)	graph:	belled and scales suitable (origin included)		[1]	
		all plots (-1 for f	correct to nearest ½ small square (must be visible) irst incorrect plot, -2 for second) ged best fit line/curve		[2]	
		(allow 3	ged best in line/curve good plots on line with one anomaly) lid) line/neat plots to <1/2 square		[1] [1]	
		,				
	(d)	(extens (contra V corre (allow o	clearly shown on graph ion follows trend of line/curve, can be dotted) dictory calculation negates mark) ct to ½ small square (ignore unit) expect 1.6 V approx andidate value for a 'reasonable' attempt at a line if clearly wrong trend or forced – e.g. to 2 or 0)		[1] [1]	
				[To	tal: 10]	
4	(a)	. ,	value correct <u>1.8/1.84</u> (2/3 sf) unit		[1] [1]	
		(ii) siz	e = 2.9 – 3.1 cm high 3.9 – 4.1 base			
			(diagonal from RH top 48 – 52mm) tangle shape(by eye) <u>with wire</u> (seen in any rotation) erted		[1] [1] [1]	
	(b)		on bench, related to vertical line on block			
			nped immediately above lens seen on diagram or in narrative)		[1]	
	(c)		darkened room/bright light (wtte)			
		moving lens back and forth to spot best image/move lens slowly marking position of centre of lens on block object & lens same height/all perpendicular to bench/all straight (parallax) if explained				
		(allow '	k iens same neignt/all perpendicular to bench/all straigl ook perpendicularly' but NOT 'eye level') /take averages	п (раганах) п ехріаінес	[2]	
		Topout	, and avoidged	Γ	رما [8] Fotal	
					ı otal 8]	

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#### 5 (a) three from:

mass/amount/volume/level of salt implication of salt particle size (e.g. 'same type of salt') mass/volume/amount/level of water size/shape of beaker amount/rate of stirring NOT ref to temperature/room temperature/type of thermometer

[3]

## **(b)** three from: clock : time

thermometer : temperature balance : mass (NOT weight) measuring cylinder : volume NOT unit without quantity

(but ignore incorrect unit with correct quantity)

[3]

[Total: 6]