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

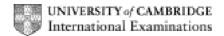
Paper 6 (Alternative to Practical), maximum raw mark 40

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	(iii) V calculation correct (110 – 114(cm³)) or ecf				
		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, θ (symbols	e)	[1]			
	(b) 19 (°C)			[1]		
	· ,	rate of heating greater (wtte) (can be included as part of justification) comparison given of changes in temperature with correct numbers				
	constant 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/'tempersponses, -1 for each <u>additional</u> incorrect (ignore 'neu		[2]		

[Total: 6]

Page 3		Mark Scheme: Teachers' version	Syllabus Pap		
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3 (a)	2 – 2.1 (V)		[1]	
(b)	(i) R in	Ω , V in V (symbols or words)		[1]	
	(ii) <u>10.1</u>	-		[1]	
(c)	graph:	elled and scales suitable (origin included)		[1]	
	all plots (-1 for fir	correct to nearest ½ small square (must be visible) st incorrect plot, -2 for second)		[2]	
		led best fit line/curve good plots on line with one anomaly)		[1]	
	thin (soli	d) line/neat plots to <1/2 square		[1]	
(d)		clearly shown on graph on follows trend of line/curve, can be dotted)			
	(contradictory calculation negates mark) V correct to ½ small square (ignore unit) expect 1.6 V approx				
	(allow ca	andidate value for a 'reasonable' attempt at a line following trend or forced – e.g. to 2 or 0)		[1]	
			[Tot	al: 10]	
4 (a)	(i) <i>m</i> va	alue correct <u>1.8/1.84</u> (2/3 sf) init		[1] [1]	
	(ii) size	= 2.9 – 3.1 cm high			
		3.9 – 4.1 base (diagonal from RH top 48 – 52mm)		[1]	
	recta inve	angle shape(by eye) <u>with wire</u> (seen in any rotation) rted		[1] [1]	
(b)	(b) placed on bench, <u>related to vertical line on block</u>				
	OR <u>clamped</u> immediately above lens (either seen on diagram or in narrative)				
(c)	(c) any two of:				
. ,	use of da	arkened room/bright light (wtte) ens back and forth to spot best image/move lens slov	vly		
		ht (parallax) if explained			
	(allow 'look perpendicularly' but NOT 'eye level') repeats/take averages			[2]	
			тј	otal 8]	

Page 4	Mark Scheme: Teachers' version	Syllabus	Paper
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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]