MMM. Afrenne Pabers Con

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

0625/61

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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1	(a)	correct 1/d values 0.0222, 0.0294, 0.0370, 0.0444, 0.0518 all to 2 significant figures or all to 3 consistent significant figures	[1] [1]
		graph: axes suitable and labelled all plots correct to ½ small square good line judgement (position) thin line, single, no blobs (quality)	[1] [1] [1] [1]
	(c)	gradient by triangle method using at least ½ candidate's line clear, on graph, how obtained	[1] [1]
	(d)	z value 0.9 – 2.5 2 or 3 significant figures and unit cm given	[1] [1] [Total: 10]
2	(a)	$\theta_{\rm r}$ 26	[1]
	(b)	(i) s and °C in both tables	[1]
		(ii) at least 300s and given to nearest 10s or in mins	[1]
	(c)	Table 2.2 (heating) justified by two temperature differences compared, must see 14 and 44/56 OR 74 to 60 and 25 to 69/81	[1]
	(d)	any two from: same starting temperature constant room temperature/avoid draughts/same place same time intervals same thermometer (wtte) same mass/amount/volume of water same beaker	
		lid always used	[2]
			[Total: 6]

Mark Scheme: Teachers' version IGCSE – October/November 2010

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Syllabus 0625 Paper 61

Page 3		Mark	Scheme: Teachers' version	Syllabus	Paper		
		IGCSE – October/November 2010		0625	61		
(a)	0.3 – 0.31						
(b)	Ω, A 10.1			[1] [1]			
(c)	correct c 10(Ω)	alculation of ([1] [1]			
(d)	resistors voltmete	in parallel r symbol			[1] [1] [1]		
					[Total 8]		
(a)	EF 6 P ₃ P ₄ G la	t line drawn co abelled	orrectly and neat		[1] [1] [1] [1]		
			(ecf) (ecf)		[1] [1]		
(b)	(i) 2 an	d unit (°) pres	ent at least once		[1]		
	refe	rence to 'withi	· · · · · · · · · · · · · · · · · · ·		[1] [1]		
(c)	no conce	ern about pins	being vertical (or wtte)		[1] [Total: 10]		
(a)	mass/vol room ten temperat amount of size/shap temperat		[3]				
	number/mass/size of cubes						
(b)	stopclocl balance:	k:	time mass				
			volume (of water)		[3]		
					[Total 6]		
	(a) (b) (c) (d) (b)	 (a) 0.3 – 0.3 (b) Ω, A 10.1 (c) correct α 10(Ω) (d) diagram: resistors voltmete voltmete voltmete (a) (i) – (iii) EF 6 P₃P₂ G la P₁ a (iv) and (θ – (b) (i) 2 and (ii) yes refer (or α (c) no concert (or α (d) any three mass/vo room tentemperate amount of size/shaptemperate number/a (b) any three stopclock balance: thermore (b) any three stopclock balance: thermore 	 (a) 0.3 – 0.31 (b) Ω, A 10.1 (c) correct calculation of Ω 10(Ω) (d) diagram: resistors in parallel voltmeter symbol voltmeter position (a) (i) – (iii) EF extended corre P₃P₄ line drawn core G labelled P₁ and P₂ at least (iv) and (v) 40 – 42 (θ – 2i) correct (b) (i) 2 and unit (°) pressible (ii) yes (or No, ecf) reference to 'within (or close enough of correct temperature of water amount of stirring size/shape of beaker temperature of ice cub number/mass/size of Ω (b) any three from: stopclock: 	IGCSE – October/November 2010	IGCSE - October/November 2010 0625		