#### UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

# MARK SCHEME for the June 2005 question paper

#### 0625 PHYSICS

0625/05

Paper 5 (Practical Test), maximum mark 40

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the *Report on the Examination*.

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

CIE is publishing the mark schemes for the June 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



### Grade thresholds for Syllabus 0625 (Physics) in the June 2005 examination.

	maximum	minimum mark required for grade:			
	mark available	А	С	E	F
Component 5	40	33	26	20	15

The threshold (minimum mark) for B is set halfway between those for Grades A and C. The threshold (minimum mark) for D is set halfway between those for Grades C and E. The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A\* does not exist at the level of an individual component.

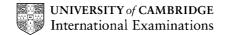
## **IGCSE**

# MARK SCHEME

**MAXIMUM MARK: 40** 

**SYLLABUS/COMPONENT: 0625/05** 

PHYSICS Practical Test



Page 1	Mark Scheme	Syllabus	Paper
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1	(a)	(i)	record of room temp (sensible value)	[1]
		(ii)	- (v) $\theta$ in °C, $V$ in cm <sup>3</sup> 6 sets of readings with correct $V$ 0, 20, 40, 60, 80, 100 Temps decreasing	[1] [1] [1]
		(vi)	y axis labelled y axis suitable (e.g. not '3' scale) and plots occupy more than $\frac{1}{2}$ grid all plots correct (-1 each error) (better than $\frac{1}{2}$ sq) well judged best fit line	[1] [1] [2] [1]
	(b)		a sensible comment about heat loss to the surroundings	[1]
			[Total:	10]
2	(a) ·	- (f)	$l$ values 50, 75, 100 $I$ in A, $V$ in V, $R$ in $\Omega$ , $l$ in cm or m all $I$ to 1 dp or better all $V$ to 1 dp or better all $R$ values correct consistent 2 or 3 sf for $R$ AC $R$ value 2 x AB = AD $(\pm 1\Omega)$ AD $R$ value 2 x AC = AB + AD $(\pm 1\Omega)$	[1] [1] [1] [1] [1] [1] [1]
	(g)		> AD 2 x AC ( <u>+</u> 1Ω)	[1] [1]
			[Total:	
3	(a) ·	· (e)	3 complete sets average correct correct <i>T</i> values from average <i>t</i> correct <i>T/m</i> values consistent 2 or 3 sf for <i>T/m T/m</i> in s/g	[1] [1] [1] [1] [1]
	(f)		No T/m not constant	[1] [1]
	(g)		time 10 oscillations then divide by 10 or two t values divide by 2  [Total:	[1] [1] 10]

Page 2	Mark Scheme	Syllabus	Paper
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4	(a) <sub>-</sub> (l)	Traces	
•	(a) - (I)	3 traces, blocks correct positions neat lines all present	[1] [1]
		all <i>r</i> less than <i>I</i> and correct side of normal all emergent rays in approx correct positions (i.e. opposite side	[ <b>1]</b> e
		of normal to incident ray and approx parallel to incident ray) For Block Position 1:	[1]
		WX distance at least 5 cm and W on EF	[1]
		YZ distance at least 5 cm	[1]
	(i) - (n)	first <i>r</i> value within <u>+</u> 2° of trace	[1]
		three $r$ values equal to each other $\pm 2^{\circ}$	[1]
		all <i>r</i> values 18° - 22°	[1]
	(m)	r is constant/no effect	[1]
			[Total: 10]