

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the November 2004 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 November 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.

Grade thresholds taken for Syllabus 0625 (Physics) in the November 2004 examination.

	maximum mark available	minimum mark required for grade:			
		A	C	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.

November 2004

INTERNATIONAL GCSE

<p>MARK SCHEME</p>
<p>MAXIMUM MARK: 40</p>
<p>SYLLABUS/COMPONENT: 0625/05</p> <p>PHYSICS</p> <p>Practical Test</p>

Page 1	Mark Scheme	Syllabus
	IGCSE – November 2004	0625

1	Units	1
	7 sets of readings	1
	decreasing temps with increasing distance	1
	evidence of θ to 1°C	1
	Graph:	
	θ axis labelled with suitable scale	
	(plots in at least 4 large squares)	1
	7 plots to nearest $\frac{1}{2}$ sq	1
	line judgement	1
	line thickness	1
	room temp (sensible from graph)	1
	explanation (referring to graph)	
	(if previous mark scored)	1
	TOTAL	10
2	sensible d value with correct unit	1
	clear diagram (blocks parallel)	1
	3 correct 1 (60 + r, 40 + r, 20 + r)	1
	3 different t recorded	1
	first T value correct	1
	2/3 sf in T	1
	$\frac{T^2}{l}$ correct	1
	$\frac{T^2}{l}$ all same to 1 sf	1
	all $\frac{T^2}{l}$ 0.039 – 0.041	1
	conclusion – constant	
	within limits of experimental error	1
	TOTAL	10

Page 2	Mark Scheme	Syllabus
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3	units for x , V , I and R (m , V , A , Ω)	1
	3 sets of readings	1
	all V to at least 1 dp	1
	correct R value (second)	1
	all R to 2/3 sf	1
	second R /first R 1.4 – 1.6	1
	R increasing	1
	R increases with x	1
	justified from results	1
	R value first $R \times 0.4$	1
	TOTAL	10

4	Ray Trace:	
	neat, thin lines	1
	all rays present	1
	$i = 30^\circ (\pm 2^\circ)$	1
	$YZ > 5 \text{ cm}$	1
	JK parallel to block (by eye)	1
	r correct to $\pm 2^\circ$	1
	$r < i$	1
	y and x correct to $\pm 1 \text{ mm}$	1
	both units correct ($^\circ$ and cm/mm)	1
	$y = x$ to 0.5 cm	1
	TOTAL	10