UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper

for the guidance of teachers

0625 PHYSICS

0625/06   Paper 6 (Alternative to Practical), maximum raw mark 40

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Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – May/June 2009	0625	06

1 **(a)** d 2.5 (cm) [1]
x 14.5 (cm) [1]
diagram showing blocks correctly placed across the ends [1]
rule position (or distance) shown correctly [1]

(b) **(i)** V_e 71.1 - 71.2 (cm^3) ecf allowed [1]

(ii) measuring cylinder reading 56 (cm^3) [1]

(iii) ρ 2.05–2.08 (or 2.1) ecf allowed [1]
g/cm^3 <u>and</u> 2 or 3 significant figures [1]

[Total: 8]

2 **(a)** 87 (^{o}C) [1]

(b) s, ^{o}C, ^{o}C [1]

(c) **A** ecf allowed [1]
justified by reference to readings (up to 90s) with comparison of drops in temperatures (with numbers) given (ecf allowed) [1]

(d) Any two from:
starting temperature
room temperature
carry out at same time
same thermometer (words to that effect)
same position of thermometers
same time intervals [2]

[Total: 6]

3 **(a)** R values 0.553, 1.55, 2.74, 3.74, 4.92
(2,3,4 or more significant figures) [1]
Consistent 3 or consistent 4 significant figures for final four entries [1]

(b) Graph:
Axes labelled and scales suitable (must include origin) [1]
Plots correct to ½ square (–1 each error or omission) [2]
Well judged str. line taking account of all points and reaching an axis [1]
Thin line [1]

(c) Statement proportional (wtte) or as x increases, R increases [1]
Justification straight line through origin [1]

(d) Clear indication of method on graph [1]
Correct value to ½ square [1]

(e) low current/switch off between readings
or add (variable) resistor/lamp
or reduce voltage/power [1]

[Total: 12]

4 (a) 4.0 (cm) [1]
6.0 (cm) [1]

(b) 20, 30 ecf allowed [1]
f values 11.88 (11.9), 12.00 (12.0) [1]
f consistent 3 or more significant figures [1]

(c) average f 11.9, 11.94, 11.95, 12.0, 12 (cm) ecf allowed [1]
2/3 significant figures [1]

(h) Any two from
use of darkened room
slowly moving lens back and forth to get good image
clamp rule or place on bench
avoid parallax action given
object/lens/screen perpendicular to bench
object and lens same height from bench
repeats [2]

[Total: 9]

5 (a) Q correct position with suitable number(s) [1]
Rule correctly tilted, and on bench (or arrow to indicate) [1]

(b) Any two from:
Readings taken at either side/diameter of cylinder
Position of mid point found
Mark position of centre [2]

(c) 34.5 <u>cm</u> [1]

[Total: 5]