UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2008 question paper

0625 PHYSICS

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

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International Examinations

Page 2	Mark Scheme	Syllabus	Paper
	IGCSE – October/November 2008	0625	6

1 **(a)** view perpendicular to (or straight in front of rule)/use of set square [1]

(b) **(i)** correct e_1 value 3.1 and correct e_2 value 2.4 [1]
e in cm [1]

(c) density 4.43 (ecf) [1]
2/3 significant figures [1]
g/cm^3 [1]

(d) e_2 greater [1]
ρ greater (or identical to e_2 answer) (ecf) [1]

[Total: 8]

2 Diagram: correct symbols for ammeter and voltmeter [1]
correct symbols for resistor [1]
correct circuit arrangement [1]

Table: units V, A (symbol/word) [1]

(c) Prediction 1 Yes – close enough (or words to that effect)
OR No – not close enough (or words to that effect) [1]
Prediction 2 Yes – approximately half (or words to that effect) [1]

Resistance at connections
Internal resistance of source/other sensible suggestion [1]

[Total: 7]

3 Table
θ in °C, V in cm^3 [1]
correct V 0, 20, 40, 60, 80, 100 [1]

Graph: axes labelled with symbol and unit [1]
axes suitable (e.g. not '3' scale) and plots occupy more than ½ grid [1]
all plots correct (better than ½ sq) [1]
well judged, thin best fit line [1]

(c) 1. sensible comment about heat loss to the surroundings, e.g. use of insulation/lid [1]
2. sensible comment about adding water in a regulated, timed flow (including smaller volumes/set time intervals/shorter intervals [1]

[Total: 8]

Page 3	Mark Scheme	Syllabus	Paper
	IGCSE – October/November 2008	0625	6

4 **(a)** f = 14.9(4), or 15 [1]
correct unit for f [1]

(b) **(i)** x_s = 5.0(cm) and y_s = 5.2(cm) [1]

(ii) factor of ×6 [1]
y = 31.2(cm) (ecf) [1]

(iii) 15.29, 15.3, 15 (ecf) [1]

(iv) correct method [1]
2 or 3 significant figures and correct unit [1]
average f 15.1 (correct answer only) [1]

(c) inverted image [1]

[Total: 10]

5 **(a)** 0.7 N [1]
6 cm^3 [1]
1.4 s [1]
4.0 N/cm^2 [1]

(b) **(i)** minimum current/turn down power supply/increase resistance [1]
switch off between readings/carry out without delay [1]

(ii) variable resistor/rheostat [1]

[Total: 7]