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

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.

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 discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2008 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

UNIVERSITY of CAMBRIDGE
International Examinations

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]

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]