UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2006 question paper

0625 PHYSICS

0625/06 Paper 6, maximum raw mark 40

These mark schemes are published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do 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*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

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

CIE is publishing the mark schemes for the May/June 2006 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 1	Mark Scheme	Syllabus	Paper
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1 **(a)** **(i)** 1.6 (cm) 16 (mm) **[1]**

(ii) 0.16 (cm) 1.6 (mm) **[1]**
both in cm (or mm) **[1]**

(b) **(i)** l = 5.8 cm and w = 6.0 cm (58 mm, 60 mm) **[1]**

(ii) V = 5.568 (or 5.57) **[1]**
V in cm^3 (or mm^3) **[1]**

(c) d = 0.233 (2/3 sf) **[1]**
d in g/cm^3 (or g/mm^3) **[1]**

(d) V_a = 7/8/9/10 cm^3 **[1]**

TOTAL 9

2 **(a)** correct ammeter and voltmeter symbols **[1]**
correct power source, variable resistor and lamp symbols **[1]**
correct circuit **[1]**

(b) **(i)** A; V; Ω **[1]**

(ii) 5.8 or 5.79 or 5.792; 2.9 or 2.89 or 2.889 **[1]**
consistent 2/3 sf **[1]**

TOTAL 6

3 **(a)** All lines present and neat, a = 1.5 cm **[1]**

(iv) b = 4.3 cm **[1]**

(iv) FI = 4.3 cm (or cand's a value) **[1]**

(v) IJ meets NN' at right angle (by eye) **[1]**

(vi) c correct to $\pm$ 1 mm, 2.1 cm **[1]**

(vii) n calculation correct **[1]**
2/3 sf and no unit (1.4) **[1]**

(b) repeats and averages **[1]**
greater pin spacing **[1]**

TOTAL 9

4 **(a)** **(i)** 24(°C) **[1]**

(ii) 6(°C); 4(°C) (ecf) **[1]**

(b) Heat lost to surroundings **[1]**
round flame/to gauze/tripod **[1]**

(c) Variable resistor **[1]**

TOTAL 5

5 **(a)** description / diagram showing 2 equal heights from bench **[1]**

(b) 1.11(1); 1.18(1.176); 1.25(0); 1.33(3); 1.43(1.428) **[1]**

(c) **(i)** Axes suitable and labelled, false origin as instructed **[1]**
Plots correct to ½ small sq **[1]**

(ii) Well judged best fit line **[1]**
line suitably thin **[1]**

(iii) triangle method seen **[1]**
More than ½ line used **[1]**
Gradient value correct **[1]**

(d) Correct W value using cand's G **[1]**
2/3 sf and in N **[1]**

TOTAL 11