UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2006 question paper

0625 PHYSICS

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

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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 grade thresholds for various grades are published in the report on the examination for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses.

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International Examinations

1 (a) 4.1 (cm) [1]

(b) (i) 4.9 (cm) [1]
both in correct unit [1]

(ii) 7.83(4) (ecf) [1]
cm^3 [1]

(c) (i) 7/7.0/7.1/7.2/7.3/7.4/7.5
(ecf: less than V by up to 10% with equivalent sf) [1]

(ii) correct d value (0.84 – 0.90, no ecf) [1]
1/2/3 sf and g/cm^3 [1]

[Total: 8]

2 (a) cm; s; s [1]

(b) 1.835; 1.787; 1.753; 1.706; 1.672 (accept 3 sf) [1]
consistent sf (3/4) [1]

(c) Axes suitable (plots occupy at least ½ grid)
and labelled, false origin as instructed [1]
Plots correct to ½ small sq (–1 each error) [2]
Well judged best fit line [1]
line suitably thin [1]

(d) No and not a straight line through the origin [1]

(e) greater accuracy (wtte) [1]

[Total: 10]

3 (a) (i) normal correct (by eye) (single, thin line) [1]

(ii) AG = 11.5 cm ($\pm$ 0.1) [1]

(iii) i = $26^o/27^o/28^o$ (ignore unit) [1]

(b) (i) CD pin separation $\geq$ 5 cm [1]

(ii) bases [1]
pins may not be vertical [1]

[Total: 6]

4 (a) 28^{o}C value [1]
unit [1]

(b) B [1]
smaller temp drop [1]
(OR neither, insignificant difference)

(c) any suitable insulator [1]

(d) Any 3 from
initial temp
volume of water
size/shape of beaker
room temp/draughts/simultaneous timings
material of beaker
beakers on same surface [3]

[Total: 8]

5 (a) correct symbols for ammeter and voltmeter [1]
correct symbols for variable resistor, lamp and resistor [1]
circuit correct [1]

(b) ammeter will show current/voltmeter shows reading [1]

(c) variable resistor [1]

(d) **(i)** low current/increase R of variable resistor/
lower voltage/add another lamp [1]

(ii) switch off between readings [1]

(e) A, more resistance in circuit [1]

[Total: 8]