UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 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 May/June 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)** **(i)** cm, cm, g [1]

(ii) 49.66 (or 49.7), 49.50 (or 49.5), 50.05 (or 50.0) [1]
consistent significant figures (3 or 4) [1]

(b) clear explanation/diagram [1]

(c) correct method [1]
value 49.7 (ignore a fourth significant figure)
and allow ecf from **(ii)** [1]

(d) d = 1.8 (cm), t = 1.2 (cm) [1]
V = 3.05 (cm^3) (ecf) [1]
ρ = 16.3 unit g/cm^3, 2/3 significant figures (ecf) [1]

[Total: 9]

2 Table:

(a) Units V, A, Ω (symbol/word) [1]
R values 1.11, 2.19, 5.05, 9.55 [1]
Consistent 2 or consistent 3 sig fig for R [1]

(b) **(i)** Yes (if within 10%) No (if not) [M1]
Circuit 1 and circuit 2 compared [A1]

(ii) limit current (so temperature not increased)
OR switch off between readings
OR check for zero error
OR Repeats
OR Parallax error explained
OR Tapping meter [1]

[Total: 6]

3 Graph:
Temperature axis labelled θ/°C [1]
Suitable scales (plots occupy at least ½ grid) [1]
Plots correct to nearest ½ square (–1 each error) [2]
Lines well judged curves [1]
Lines thin [1]

(b) Statement:
larger surface area increases rate of cooling [1]
Justification:
Correct reference to gradients of lines or readings [1]

[Total: 8]

4 Trace:

(a) all lines present, thin, neat and in correct area [1]
normal at 90° (by eye)
and EF at 30° to normal (by eye) [1]
line KJ to at least beyond P_4 [1]

(b) (i) *a* = 12–13 (mm) no ecf [1]

(ii) *b* = 40 (mm) no ecf [1]
a and *b* both with appropriate unit [1]

(c) (i) & (ii) *c* recorded and *d* = 44 (mm) [1]

(iii) correct calculation of *n*, value 1.43 (ecf) [1]
2/3 significant figures with no unit [1]

[Total: 9]

5 (a) (i) triangle method used
(whether or not shown on graph) [1]
Triangle using more than half line
and position indicated on graph [1]
Expect *G* = 4.00–4.35 (but allow correct working
from points read from beyond 1.0 on x axis) [1]
Expect *g* = 9.07–9.87 (ecf from G) [1]

(ii) greater accuracy/average value [1]

(b) (i) amplitude [1]
length [1]
(other possible correct responses shape/size of bob
and number of swings)

(ii) does not affect time [1]

[Total: 8]