UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2008 question paper

0625 PHYSICS

0625/05 Paper 5 (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.

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1 **(b)** clear explanation/diagram

(d) $a + b = 38 – 42$ cm [1]
$b > a$ [1]
both in m, cm or mm, with unit [1]

(e) *W* correct calculation (ecf) [1]

(f) new *a* and *b* values, both less than 50 cm [1]
$a + b = 28 – 32$ (cm) [1]
two *W* values same to within 10% [1]

(g) correct method [1]
2/3 significant figures and unit N [1]

[Total: 10]

2 Table:
Units V, A, Ω (symbol/word) [1]
All *V* to at least 1 dp, less than 3 V [1]
All I to at least 2 dp, less than 1 A [1]
R values correct (ecf) [1]
Consistent 2 or consistent 3 sig fig for *R* [1]
Circuit 1 I value greatest [1]
Circuit 3 I value < circuit 2 I value [1]

(b) **(i)** Yes (if within 10%) No (if not) [M1]
One ninth value calculated and compared [A1]

(ii) temperature change/zero error in meter/
Lamps unlikely to have same resistance [1]

[Total: 10]

3 **(a)** Table:
container A complete temp records descending 1
container B complete temp records descending 1
temps to nearest 1 °C or better 1

(b) Graph:
Temperature axis labelled θ/°C 1
Suitable scale (plots occupy at least ½ grid) 1
Plots correct to nearest ½ square 1
Lines well judged curves 1
Lines thin 1

(c) Statement:
larger surface area increases rate of cooling/
no significant effect (depending on readings)
Justification:
Correct reference to gradients of lines 1

[Total: 10]

4 Trace:
all lines present, thin, neat and in correct areas [1]
normal drawn [1]
EF at 30° to normal (by eye) [1]
P_3P_4 distances at least 5 cm [1]
KJ at least 5 cm [1]

(h) *a* correct to 2mm [1]

(j) *b* correct to 2mm [1]

(l) *c* and *d* recorded,
a and *b* both in mm, cm or m with unit [1]

(m) correct calculation of *n*, value 1.3–1.7 [1]
2/3 significant figures with no unit [1]

[Total: 10]