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

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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.

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

(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) 1
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]