UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2007 question paper

0625 PHYSICS

0625/05 Paper 5 (Practical Test), 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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International Examinations

1 **(a)–(e)** t in s, θ in °C, and θ_0 (10 – 45) [1]
Complete set of readings, temps decreasing [1]
Evidence of θ to 1°C [1]

(f) **(i)** T_1, T_2 correct arithmetic [1]

(ii) $T_1 > T_2$ [1]

(g) **(i)** reason consistent with results [1]

(ii) Three from:
room temp/draughts, etc.
volume/mass/amount
beaker/insulation/lid/surface
liquid
amount of stirring
(not starting temperature) [3]

(h) lid [1]

[Total: 10]

2 **(a)** h_0 25 – 100 cm with correct unit [1]

(b)–(d) complete table h, d [1]
correct arithmetic for d [1]
all h to nearest mm [1]

(e) Graph:
suitable scale labelled symbol/unit [1]
all plots to nearest ½ sq (–1 each error or omission) [2]
line thin and well judged [1]

(g) calculation of d correct [1]
correct reading from graph to ½ square and to 1dp [1]

[Total: 10]

3 **(a)–(c)** 4 I values, sensible (watch for I x 10) [1]
All I to at least 2 dp [1]
I in A at least once [1]
$I = I_1 + I_2 \pm I_3 + 10\%$ [1]

(d) statement (yes)
reason consistent with readings [1]

(e) variable resistor/extra cell/vary power supply/different number of lamps [1]

(f) sensible V (< 3V), unit and at least 1 dp [1]

(g) correct arithmetic for R [1]
unit and 2/3 sf [1]

(h) $V_a = 0$, $V_b = V$ [1]

[Total: 10]

4 **(f)–(h)** sensible x value (less than h) [1]
sensible h value (typical block: 10 cm) [1]
x to nearest mm [1]
x and h with same unit [1]

correct arithmetic for n [1]

(i)–(j) second different h value [1]

(k) correct method for average n [1]
2/3 sf and no unit [1]
both n values 1.4 – 1.6 [1]

(l) two equal heights from bench
(or other valid method) [1]

[Total: 10]