UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2009 question paper for the guidance of teachers

0625 PHYSICS

0625/05 Paper 5 (Practical Test), maximum raw mark 40

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UNIVERSITY of CAMBRIDGE
International Examinations

1 (a)–(e)

Table:
correct *d* values 10, 20, 30, 40, 50 [1]
t values present [1]
T values correct [1]
T values in range 1.4–2.1 [1]

Graph:
axes labelled [1]
scales suitable, plots occupying at least half grid [1]
plots all correct to ½ square [1]
well judged line [1]
thin line, 5 neat plots [1]

(g) Statement NO and not through origin/negative gradient/*x* increases, T^2 decreases/wtte [1]

[Total: 10]

2 (a) (i) θ_h 100 – 65 (°C) [1]

(iii), **(iv)**, **(b)** & **(d) (i)**, **(ii)**

Table:
t in s, θ in °C [1]
correct *t* values 30, 60, 90, 120, 150, 180 [1]
position **A** temperatures decreasing [1]
position **B** temperatures decreasing [1]
evidence of temperatures to 1 °C [1]

(c) θ_h 100–65 (°C) [1]

(e) statement matches readings and justified by reference to readings [1]

(f) any two from:
same starting temperature/temperature of hot water
constant room temperature/keep away from draughts/out of direct sunlight
same time intervals [2]

[Total: 10]

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3 (a)–(f)

Table:
V, *A*, *Ω* [1]
first row of table: *V* to at least 1 dp (1–2.5) and I to at least 2 dp and < 1A [1]
second row of table: *V* and I present, I different from above and not zero [1]
correct *R* value (first row) [1]

(g) *y* correct ratio (series/parallel) [1]
y correct arithmetic [1]
2/3 significant figures and no unit [1]

(h) correct symbols and circuit (ignore power source symbol) [1]
voltmeter position correct [1]
control current/voltage/resistance/speed of motor [1]

[Total: 10]

4 (c) *f* 14–16 (cm) [1]
unit to match number [1]

(d) more than one value shown [1]
correct method of finding average shown [1]
d value 4–6 cm [1]

(e) sensible *t* value [1]

(f) correct method of using blocks (more than half lens enclosed) [1]
rule shown touching blocks [1]

(g) (i) *f* value correct (with or without unit) [1]

(ii) explanation that matches results (expect 'No, too far out to be explained by experimental inaccuracy' (wtte)) [1]

[Total: 10]

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