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

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, which would have considered the acceptability of alternative answers.

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 October/November 2009 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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]

3 (a)–(f)

Table:
V, *A*, Ω
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]