

**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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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 $\frac{1}{2}$ 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 ($^{\circ}\text{C}$) [1]

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

Table:

t in s, θ in $^{\circ}\text{C}$	[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 $^{\circ}\text{C}$	[1]

(c) θ_h 100–65 ($^{\circ}\text{C}$) [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]