UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper

for the guidance of teachers

0625 PHYSICS

0625/51 Paper 51 (Practical), maximum raw mark 40

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1 **(a)** l_A value 20 – 100 mm [1]
l value greater than l_A and correct calculation of e_A [1]
clear, suitable marks (must indicate a reproducible length) [1]

(b) l_B value 20 – 100 mm [1]
l and e_B recorded [1]

(c) values of l recorded and correct e values [1]
e_{av} correct <u>method</u> [1]

(d) statement matches readings [1]
justification matches statement and by reference to results [1]

(e) any one of:
avoidance of parallax error explained
use of horizontal aid
measuring to same point each time
repeats
wait for springs to stop moving [1]

[Total: 10]

2 **(a)** temperatures decreasing [1]
evidence of temperatures to 1°C [1]

(b) T_1 correct [1]
T_2 correct [1]
unit °C [1]

(c) graph:
y-axis labelled [1]
plots occupying at least half of grid [1]
all plots correct to ½ square [1]
well judged line [1]
thin line [1]

[Total: 10]

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3 **(a)** correct symbol [1]
correct position [1]

(b) table:
correct l values [1]
V values all < 2.5 V and to at least 1 d.p. [1]
V values decreasing [1]
V/l values correct [1]
unit V/m [1]

(c) statement matches readings (Expect NO) [1]
justification matches statement and by reference to results [1]
i.e. V/l not constant, V increases as l decreases or wtte.

(d) any one of:
check for zero error
avoidance of parallax error when reading l
switch off between readings
repeats

[Total: 10]

4 ray trace:
all lines present, thin, neat and in correct areas [1]
normal drawn [1]
GJ at 30° to normal (by eye) [1]
second mirror position 10° from first [1]
P_1P_2 distance at least 5 cm [1]

(i) r_1 correct to ± 2° [1]

(n) r_2 correct to ± 2° [1]
α and $(2\theta - \alpha)$ correct (ignore – sign) [1]

(o) statement matches result (Expect YES) [1]
justification matches statement and by reference to result [1]

[Total: 10]

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