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

0625/63

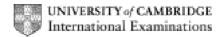
Paper 63 (Practical), maximum raw mark 40

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.

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| | Pa | ge 2 | Mark Scheme: Teachers' version | Syllabus | Paper |
|---|-----|---|---|-------------|--------------------------|
| | | | IGCSE – May/June 2010 | 0625 | 63 |
| 1 | (a) | table: 1/d value 0.0331, (consister | | [1] [1] | |
| | (b) | plots all owell judg | elled uitable, plots occupying at least half grid correct to $\frac{1}{2}$ square (ecf) – take centre of plot if large led line thin line ($\leq \frac{1}{2}$ square) of plots > $\frac{1}{2}$ square) | € | [1] [1] [1] [1] |
| | (c) | triangle <u>r</u> (triangle) | [1] [1] | | |
| | (d) | | 3 (NO ecf) gnificant figures and unit g | | [1] [1] |
| | | | | | [Total: 10] |
| 2 | (a) | (NOT de | n °C (either in words or mixture of symbols and word grees/centigrade) , 60, 90, 120, 150, 180 | ds) | [1] [1] |
| | (b) | both tem | perature falls correct (ignore unit or lack of unit) 26, | 30 | [1] |
| | (c) | • | | t' or 'it') | [1] [1] |
| | (d) | stir/s sam cons sam avoi (NO | from: e starting temperature same thermometer position e interval time stant room temperature/carry out at same time e volume/amount/mass of water d draughts or wtte T reference to container, insulation, precaution) ra answers: -1 if incorrect, ignore if neutral) | | [2] |
| | | | | | [Total: 7] |

| Page | | ge 3 | Mark Scheme: Teachers' version | Syllabus | Paper |
|------|-----|--|--|----------|--------------------------|
| | | | IGCSE – May/June 2010 | 0625 | 63 |
| 3 | (a) | diagram: correct s (lamp – c voltmete lamps in | [1] [1] [1] | | |
| | (b) | Correct F | (any in symbols, words or a mixture) R values 6.13, 6.00, 3.11 ent 2 or 3 significant figures | | [1] [1] [1] |
| | (c) | justificati | nt matches readings (expect NO) ion matches statement eference to <u>resistance results</u> (don't need numbers) | | [1] [1] [Total: 8] |
| 4 | (a) | normal la | abelled (allow N N' on end or N, N' alone) | | [1] |
| | (b) | P ₁ P ₂ dist | tance at least 3 cm | | [1] |
| | (c) | θ correct $(\theta - 2i)$ c | drawn neatly and correctly t to ±1° 60 correct 0 (ecf) (ignore sign) least once in (c) and not contradicted | | [1] [1] [1] [1] |
| | (d) | 2° (ignor | re unit and sign) | | [1] |
| | (e) | expect Y NO only justificati | nt matches results (ecf) 'ES if 0 and 2, if 'too different' or wtte in justification ion matches statement and by reference to results most/nearly the same or within expt accuracy) | | [1] [1] [Total: 9] |

| Page 4 | Mark Scheme: Teachers' version | Syllabus | Paper |
|--------|--------------------------------|----------|-------|
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(a) x = 3.9 and y = 5.4 (any answer correct when rounded to 2 sf) both with correct unit [1] m = 1.38 no unit, 2 or 3 significant figures (allow x for unit) or correct calculation from correct x and y [1]

(b) any two from:

clamp rule or place on bench
use area away from direct sunlight/dark room/bright object
ensure object and lens same height (from bench)
mark on lens holder (accept on lens)
screen and lens perpendicular to bench/aligned/in straight line/on principle axis
move lens slowly (backwards and forwards)
repeats
avoid parallax (or wtte) with action given

(c) scale drawn on paper on screen/graph paper on screen/ mark on screen (then) measure/clamp ruler on scale/ use translucent screen and measure from other side

[Total: 6]

2

[1]