

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

NOVEMBER 2002

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK : 60

SYLLABUS/COMPONENT : 0625/5

**PHYSICS
(PRACTICAL)**



UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

| Page 1 | Mark Scheme | Syllabus | Paper |
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| | | |
|----|--------------------------------------|----------|
| 1. | x and y both < 40 cm | 1 |
| | either to nrst mm | 1 |
| | (x + y) 39 – 41 cm | 1 |
| | correct unit, either/both | 1 |
| | m correct | 1 |
| | unit | 1 |
| | Diagram good, neat/clear description | 2 |
| | (OR adequate) | 1) |
| | x and y both sensible (< 40 cm) | 1 |
| | (x + y) 39 – 41 cm | 1 |
| | m correct | 1 |
| | Average m method | 1 |
| | unit | 1 |
| | 2/3 sf | 1 |
| | within 5 g of each other | 1 |
| | | TOTAL 15 |

| | | |
|----|---|----------|
| 2. | 0 – 300 s temps present and decreasing | 1 |
| | 330 – 450 temps present and higher than t = 300 s | 1 |
| | evidence of better than 1°C | 1 |
| | all to better than 1°C | 1 |
| | heats up faster than cools | 1 |
| | example drop given with time | 1 |
| | example rise given with time | 1 |
| | Graph | |
| | Temp scale at least ½ | 1 |
| | Labelled | 1 |
| | Plot at t = 0 s present | 1 |
| | 10 more plots | 1 |
| | plots – check 2 most off line (-1 each error) | 2 |
| | (do not award if < 6 plots) | |
| | line: shape | 1 |
| | thickness | 1 |
| | | TOTAL 15 |

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| | | | |
|----|---|---|---|
| 3. | V, I ₁ and I ₂ sensible | 1 | |
| | unit for V and I (at least once) | 1 | |
| | at least 1 or 2 dp (both) | 1 | |
| | ratio correct | 1 | |
| | 2/3 sf | 1 | |
| | no unit | 1 | |
| | R ₁ and R ₂ correct | 1 | |
| | Unit either/both | 1 | |
| | Ratio correct | 1 | |
| | 2/3 sf and no unit | 1 | |
| | the same | 1 | |
| | corresponds with results | 1 | |
| | Circuit | | |
| | Symbols cell & resistor | | |
| | Resistor, variable, voltmeter | | |
| | Resistor fixed (-1 each error) | 2 | |
| | Voltmeter and variable resistor in correct positions in correct circuit | | 1 |

TOTAL 15

| | | | |
|----|--|---|--|
| 4. | u and v present | 1 | |
| | unit for either/both | 1 | |
| | u + v = 79 – 81 cm | 1 | |
| | Evidence of better than 0.5 cm (in u, v, x or y) | 1 | |
| | H value | 1 | |
| | x and y present | 1 | |
| | unit for either/both (same as u and v) | 1 | |
| | h value | 1 | |
| | correct arith for ratios u/v and y/x | 1 | |
| | both to 2/3 sf | 1 | |
| | no units | 1 | |
| | u/v = y/x within 10% | 1 | |
| | correct H/h, 2/3 sf, no unit | 1 | |
| | precaution stated | 1 | |
| | explained | 1 | |

TOTAL 15