## PHYSICS

Paper 5 Practical Test
May/June 2003
1 hour 15 minutes

## ANSWER BOOKLET

## READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen in the spaces provided on this Answer Booklet.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
All of your answers should be written in this Answer Booklet: scrap paper must not be used.
Answer all questions.
Graph paper is provided in this Answer Booklet. Additional sheets of graph paper should be used only if it is necessary to do so.
At the end of the examination, fasten any additional answer paper used securely to this Answer Booklet.

If you have been given a label, look at the details. If any details are incorrect or missing, please fill in your correct details in the space given at the top of this page.

Stick your personal label here, if provided.

| For Examiner's Use |  |
| :---: | :---: |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| TOTAL |  |

This document consists of 7 printed pages and 1 blank page.

1 (a) - (c)

| time / | $T_{\mathrm{A}} /$ | $T_{\mathrm{B}} /$ |
| ---: | :--- | ---: |
| 0 |  |  |
| 30 |  |  |
| 60 |  |  |
| 90 |  |  |
| 120 |  |  |
| 150 |  |  |
| 180 |  |  |
| 210 |  |  |
| 240 |  |  |
| 270 |  |  |
| 300 |  |  |

(e) Statement of which thermometer heated up more quickly

Justification $\qquad$
$\qquad$
$\qquad$
(d)


2 (a) Record of $d$
(b) Diagram
(c) Calculation of $r$
$\qquad$
(d) Record of $h$
(e) Calculation of $V$ using the equation $V=\pi r^{2} h$

$$
V=
$$

(f) Record of readings taken and calculation to find the circumference $c$

$$
c=
$$

(g) Calculation of $V$ using the equation $V=\frac{c^{2} h}{4 \pi}$.

$$
V=.
$$

(h) Calculation of $A$

$$
A=
$$

(i) Estimate of $v$

$$
\begin{equation*}
\mathrm{v}= \tag{1}
\end{equation*}
$$

(j) Calculation of $G$ using the equation $G=A-v$

$$
\begin{equation*}
G=. \tag{1}
\end{equation*}
$$

3 (a) - (f)

| circuit | $I /$ | V/ | $R /$ |
| :--- | :--- | :--- | :--- |
| series |  |  |  |
| parallel |  |  |  |

(g) Calculation of the ratio
resistance of lamps in series resistance of lamps in parallel
ratio $=$
(h) Circuit diagram

4 (a) - (f)

(g) Record of $x$ $x=$
(h) Record of $y$
$y=$
[2]
(i) Calculation of the ratio $\frac{x}{y}$

$$
\begin{equation*}
\frac{x}{y}= \tag{4}
\end{equation*}
$$

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