	Centre Number	Number
Candidate Name		

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Joint Examination for the School Certificate and General Certificate of Education Ordinary Level

5054/3 **PHYSICS**

PAPER 3 Practical Test ANSWER BOOKLET

OCTOBER/NOVEMBER SESSION 2002

2 hours

TIME 2 hours

INSTRUCTIONS TO CANDIDATES

Write your name, Centre number and candidate number in the spaces at the top of this page. Answer all questions.

Write your answers in the spaces provided in this answer booklet.

FOR EXAMINER'S USE		
1		
2		
3		
4		
TOTAL		

This answer booklet consists of 7 printed pages and 1 blank page.

Section A

- 1 (a) record of the position of the centre of mass of the metre rule
 - (b) record of the measurements used to determine x and y

calculation of x and y

(c) calculation of M using $M = \frac{x}{y} \times 100$ grams

- (d) (i) record of l
 - (ii) record of w
 - (iii) record of t
- (e) (i) calculation of V using V = lwt
 - (ii) calculation of ρ using $\rho = M/V$

2 (a) record of θ_1

record of V_1

- **(b)** record of θ_2
- (c) record of V_2
- (d) (i) record of $m_{\rm W}$
 - (ii) record of m_{\parallel}
- (e) calculation of L using $m_1L + m_1c\theta_2 = m_Wc(\theta_1 \theta_2)$ where $c = 4.2 \, \text{J/(g °C)}$

(f) statement of precautions taken to ensure that your value of L was as precise as possible

3 (a) diagram of the circuit that has been set up for you

- (b) (i) record of V_{AB}
 - (ii) record of $V_{\rm BC}$
 - (iii) record of $V_{\rm AC}$
- (c) calculation of I using $I = \frac{V_{AB}}{R}$ where $R = 1000 \,\Omega$
- (d) record of $V_{\rm AB}$

record of $V_{\rm BC}$

record of $V_{\rm AC}$

(e) explanation of how your observations indicate that the resistance of the LDR increases when covered

Section B

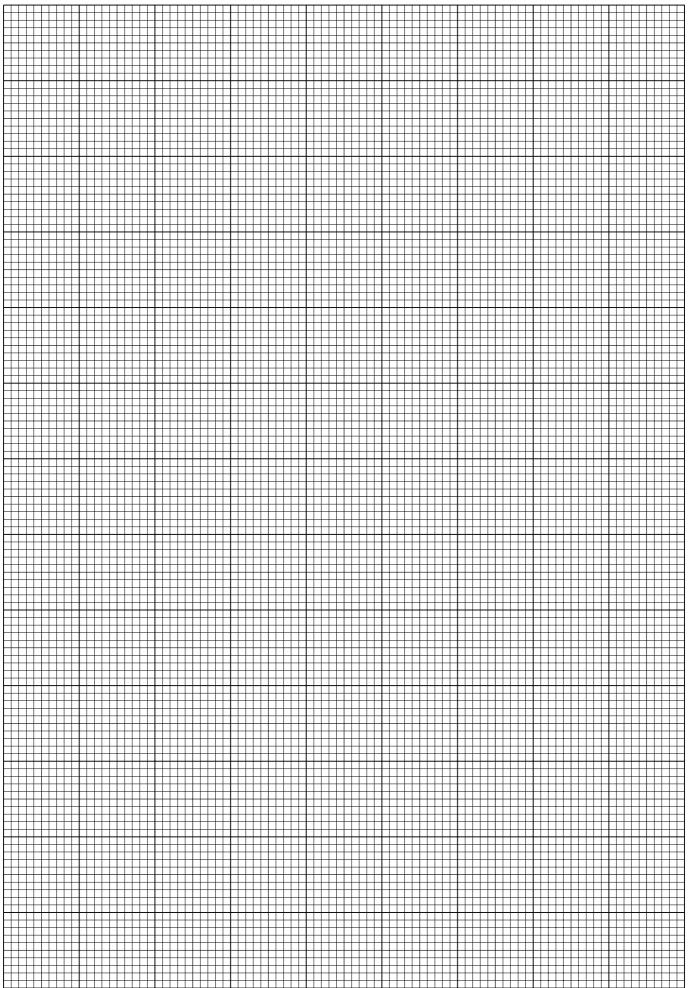
4

A ______B

(b) (c) and **(d)** table of values of i, r, $\sin i$ and $\sin r$

i/°	r/°	sin i	sin r

- (e) using the grid on page 7, plot a graph of $\sin i$ against $\sin r$
- (f) determination of G



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