Candidate Name _____

Centre Number [   ]   Candidate Number [   ]

CAMBRIDGE INTERNATIONAL EXAMINATIONS

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

PHYSICS **5054/3**

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 $M = \dfrac{x}{y} \times 100$ 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_W

(ii) record of m_I

(e) calculation of L using $m_I L + m_I c\theta_2 = m_W c(\theta_1 - \theta_2)$

where $c = 4.2\,\text{J}/(\text{g}\,°\text{C})$

(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_{BC}

   (iii) record of V_{AC}

(c) calculation of I using $I = \dfrac{V_{AB}}{R}$

   where $R = 1000\,\Omega$

(d) record of V_{AB}

   record of V_{BC}

   record of V_{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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