Centre Number	Candidate Number

Candidate Name _____

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.

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

[Turn over

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 $M = \frac{x}{y}$ x 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 $c = 4.2\ \text{J}/(\text{g}\,^\circ\text{C})$

(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 $I = \frac{V_{AB}}{R}$

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**

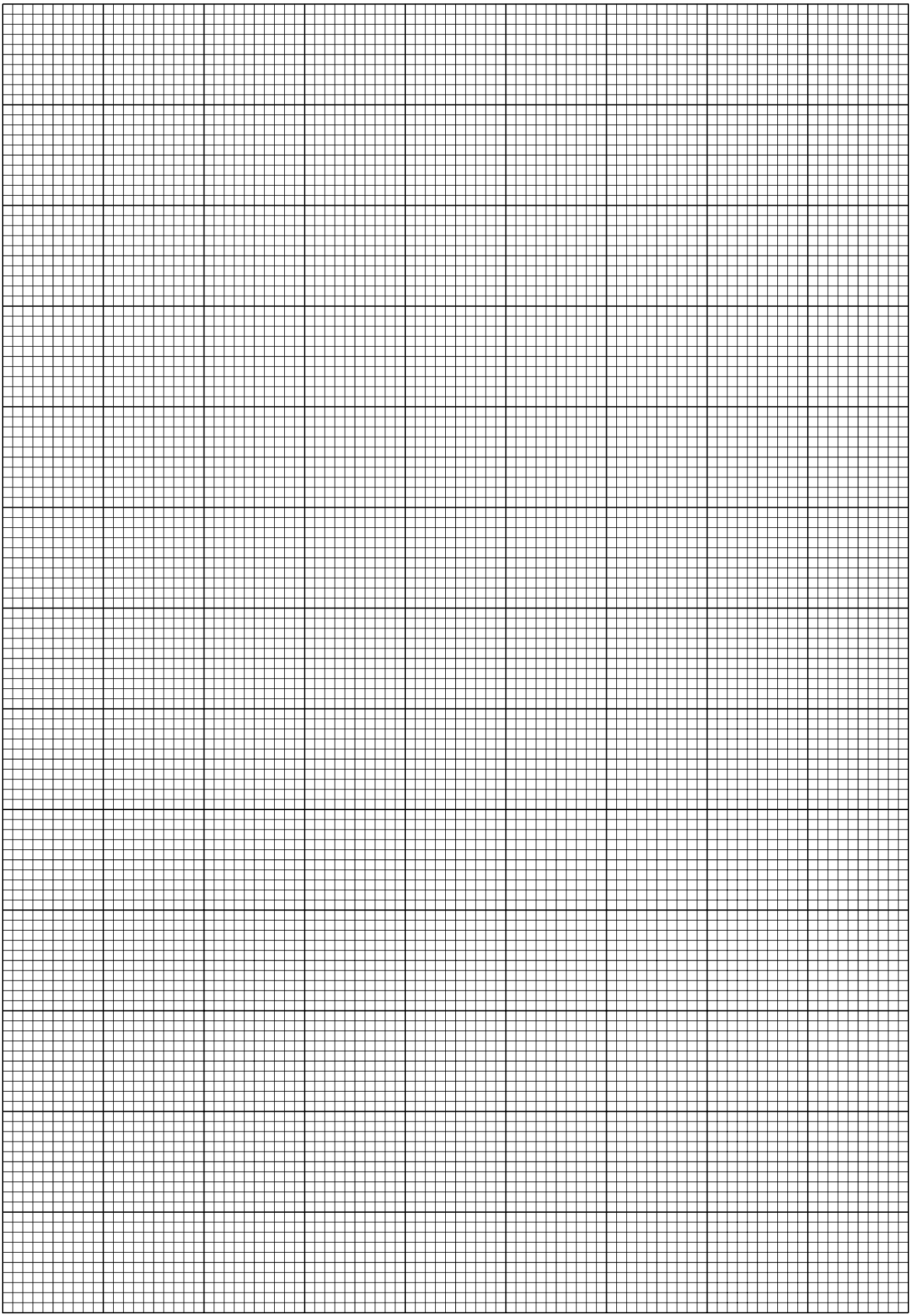
[Turn over

(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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