Centre Number	Candidate Number

Candidate Name _____

CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Ordinary Level

PHYSICS 5054/3

PAPER 3 Practical Test

ANSWER BOOKLET

MAY/JUNE 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

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Section A

1 **(b)** **(i)** record of F

(ii) record of h_1

record of h_2

(iii) record of l

(c) **(i)** explanation of how you ensured that AB was horizontal

(ii) explanation of how the heights h_1 and h_2 were measured accurately

(d) calculation of θ using $\sin\theta = \dfrac{h_2 - h_1}{l}$

(e) scale diagram using 1 cm = 1 N

value of T……..N

2 **(a)** record of m_B

determination of m_W

(b) record of θ_1

(c) record of θ_2

(d) calculation of Q, using $Q = m_W c_W(\theta_2 - \theta_1) + m_B c_B(\theta_2 - \theta_1)$

where $c_W = 4.2\,\text{J/(g °C)}$ and $c_B = 0.67\,\text{J/(g °C)}$

(e) calculation of power, using power = energy / time

(f) statement of one assumption made in your calculations

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3 **(b)** **(i)** record of V_{AB}

(ii) record of V_{BC}

(iii) record of V_{AC}

(c) comment on the results obtained in **(b)**

(d) record of I

(e) calculation of the resistances of R_1 and R_2 using resistance = $\frac{\text{voltage}}{\text{current}}$

Section B

4 **(a)** record of h_O

(b) (iii) explanation of how you would demonstrate experimentally that the image is inverted

(c) **(i)** record of v

(ii) record of h_I

(d) calculation of m using $m = \frac{h_I}{h_O}$

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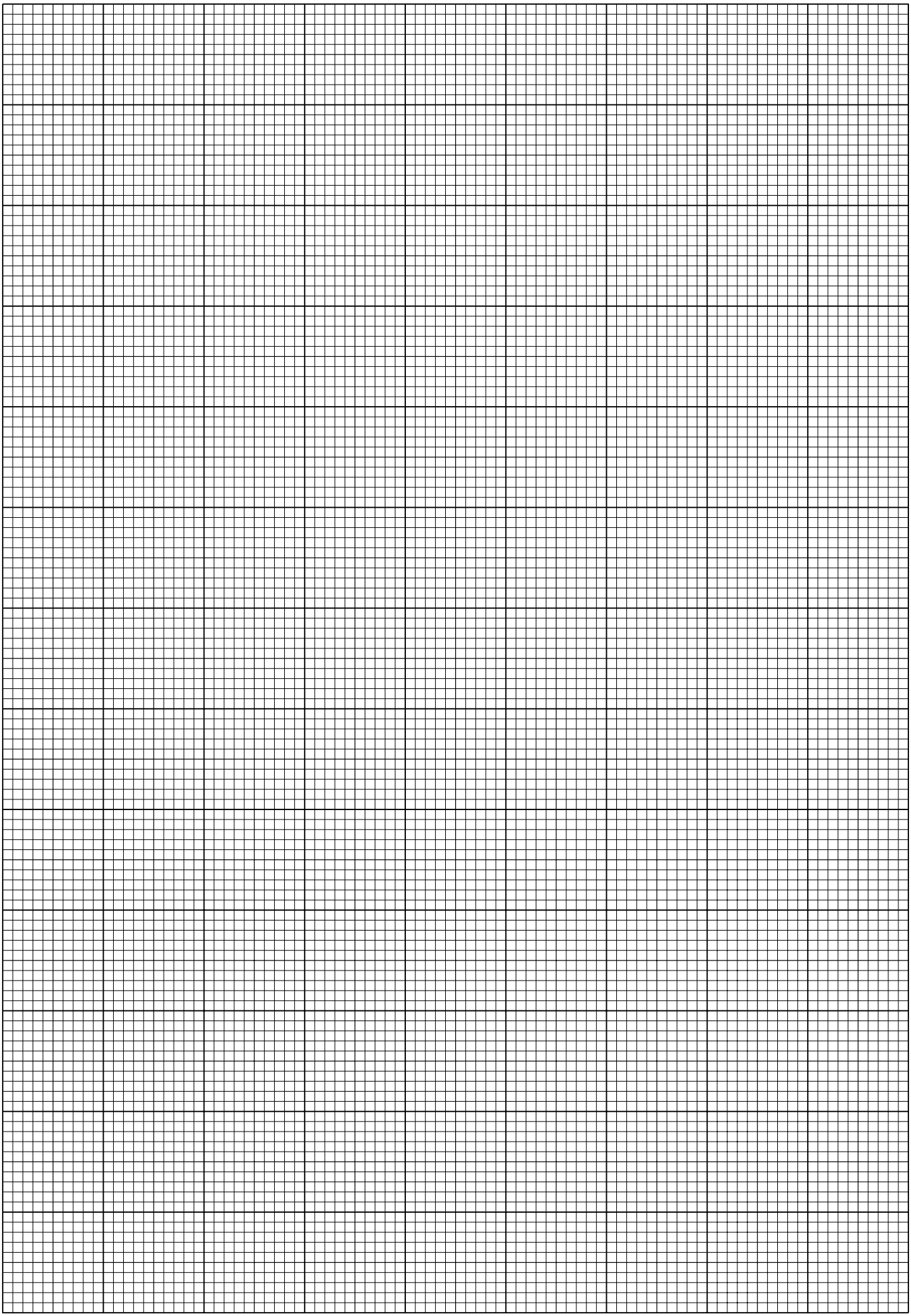
(e) table of values of v, h_I and m

(f) using the grid on page 7, plot a graph of m against v/cm

(g) calculation of G

(h) calculation of f using $f = 1/G$



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