

Physics

Advanced

PAPER 3: General and Practical Principles in Physics

Tuesday 17 June 2025 – Morning

Time: 2 hours 30 minutes

Diagram Booklet

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INSTRUCTIONS

There may be spare copies of some diagrams.

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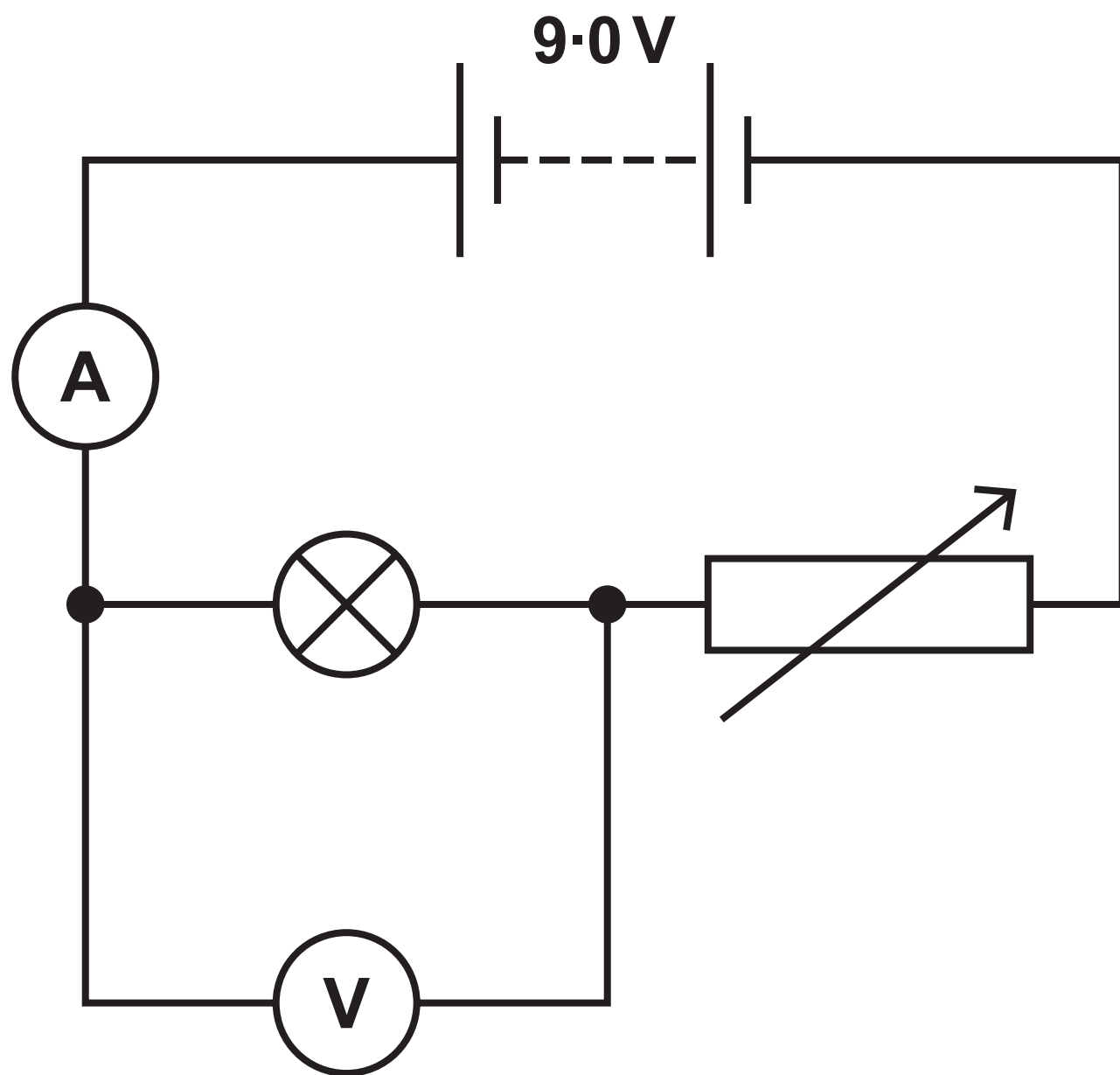
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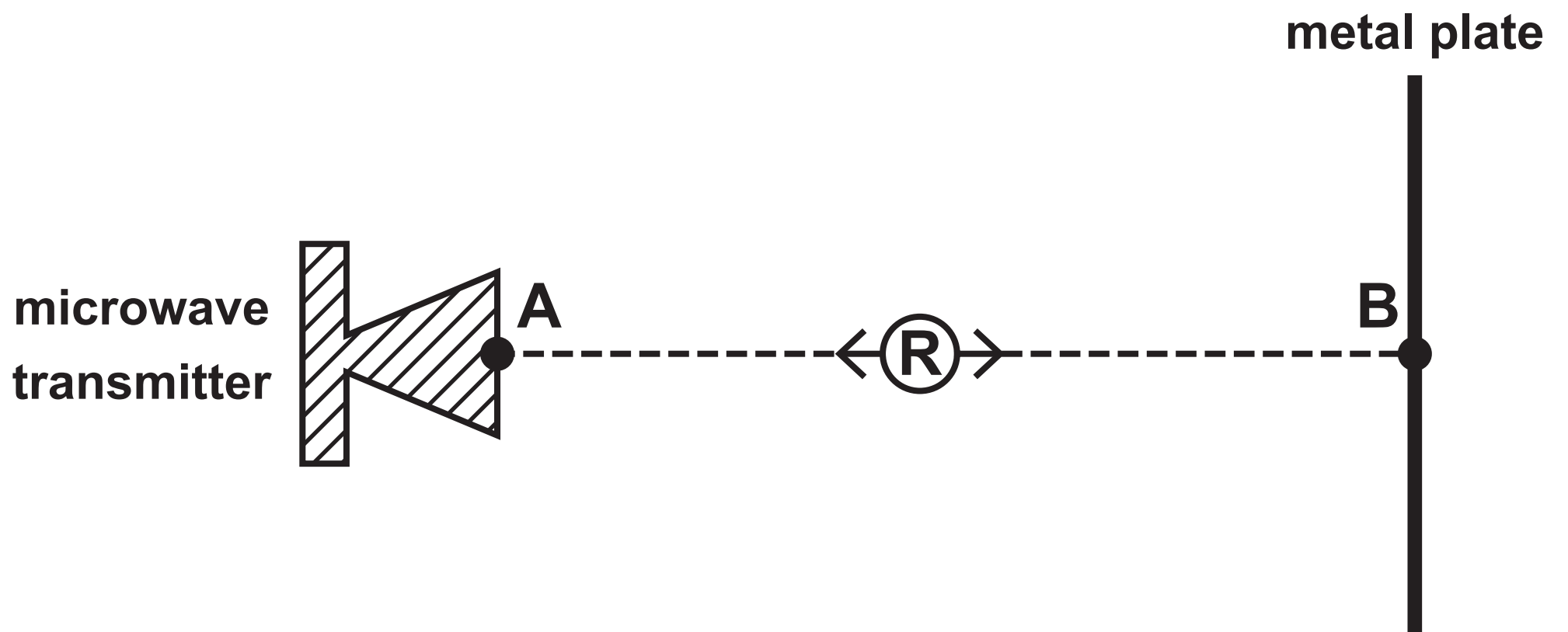
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Question 1(a)



Question 2



Question 3

DIAGRAM 1

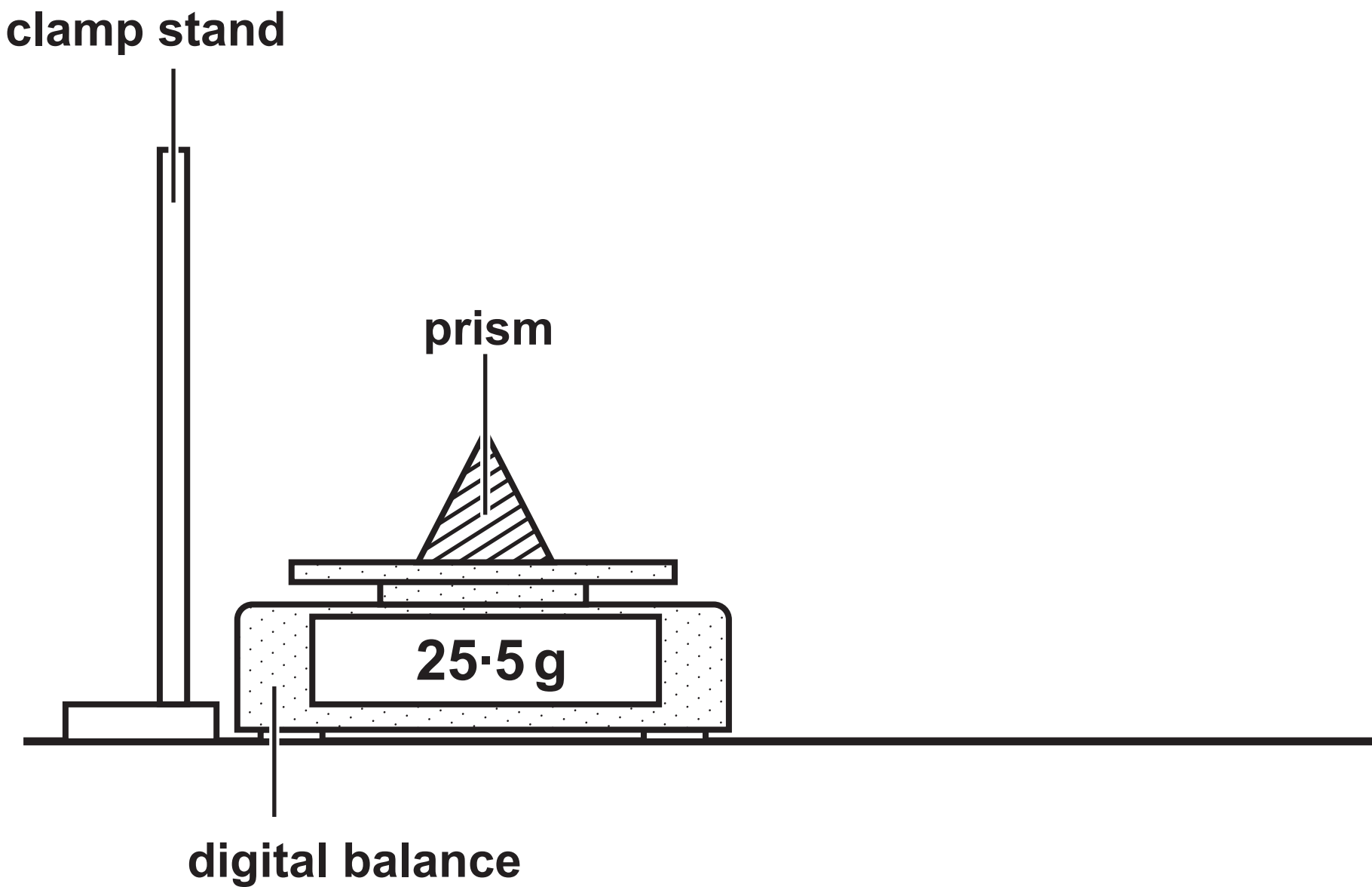
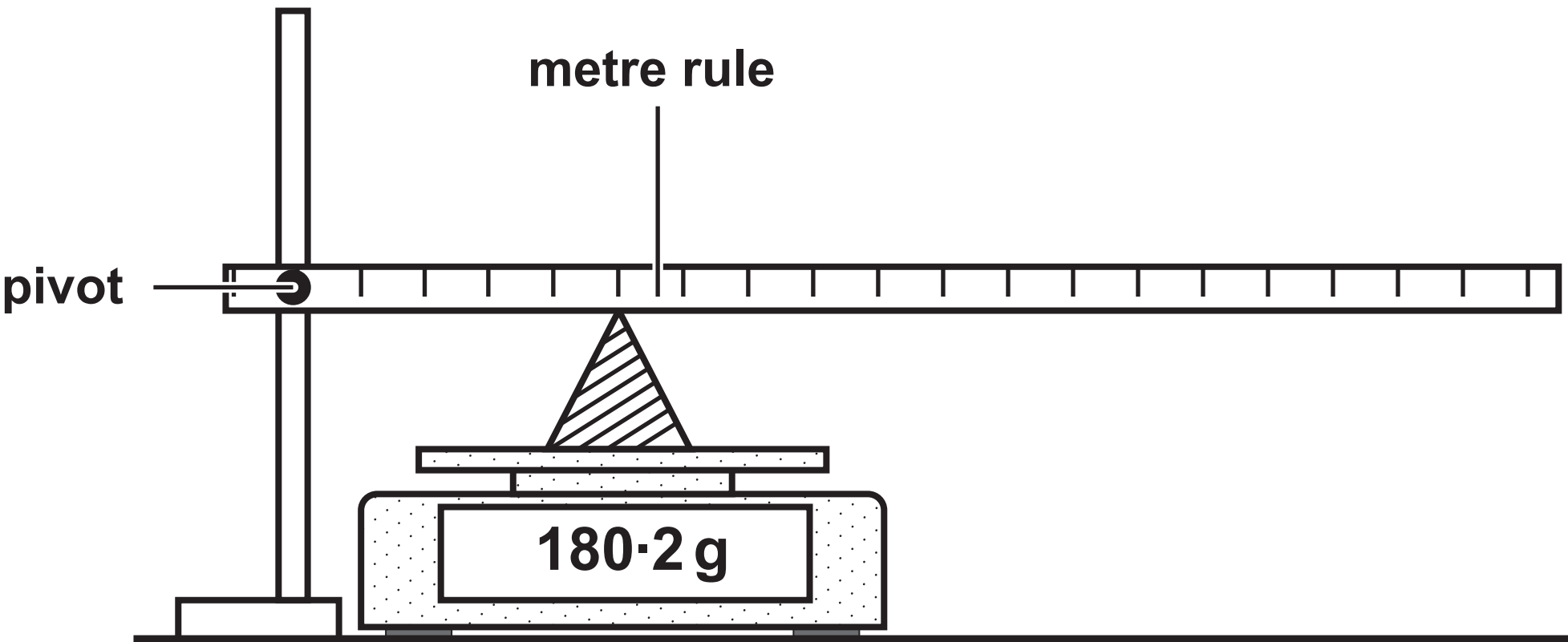


DIAGRAM 2



Question 4(a)(i)

DIAGRAM 1

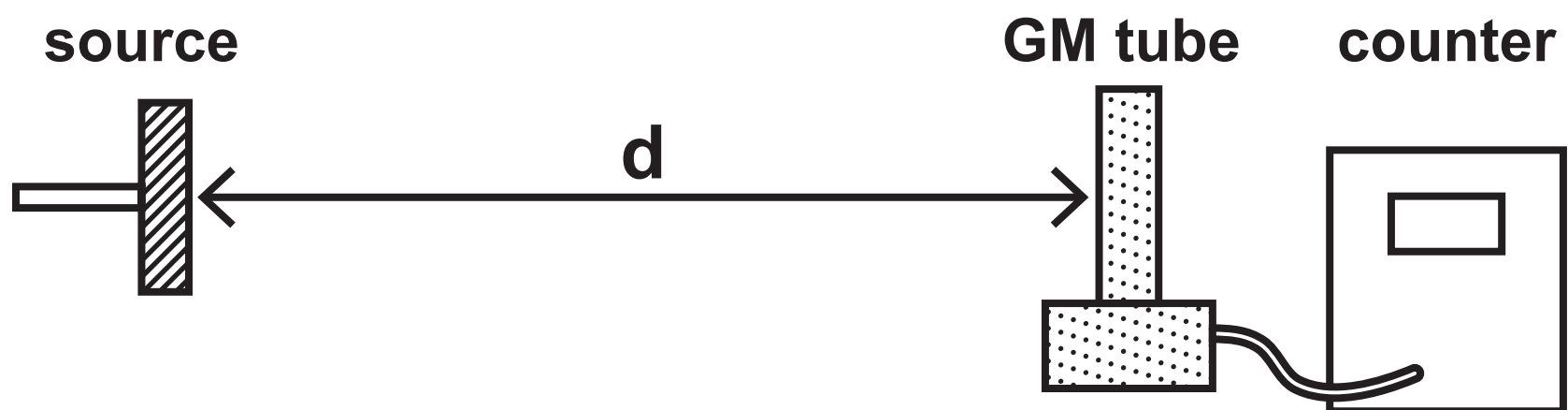
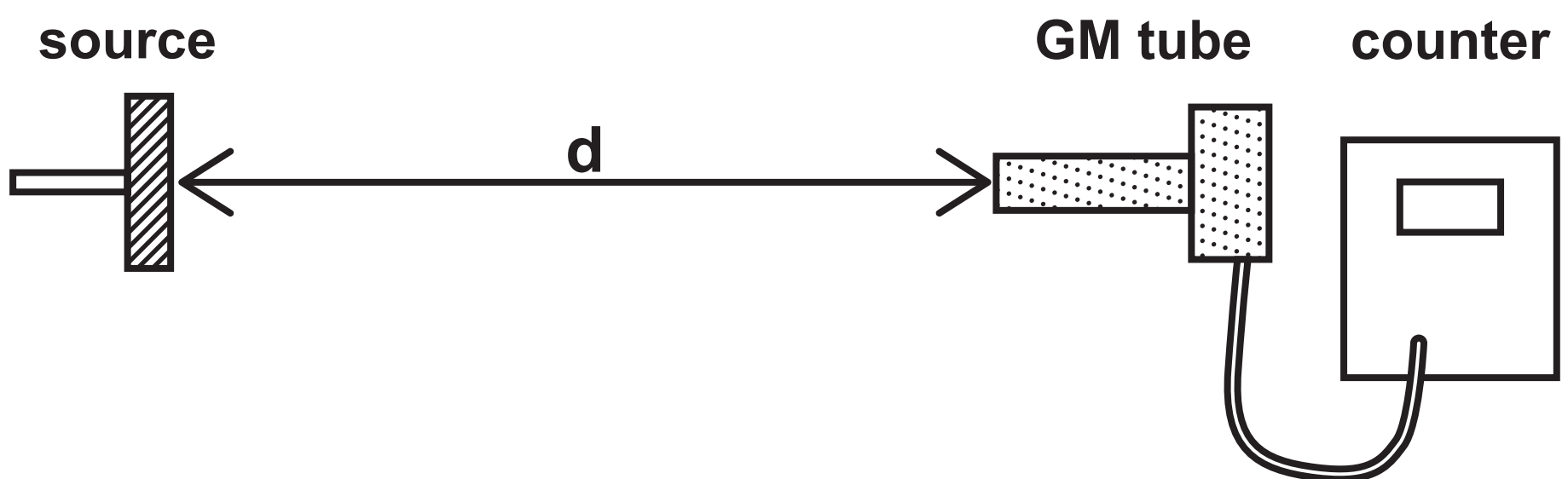
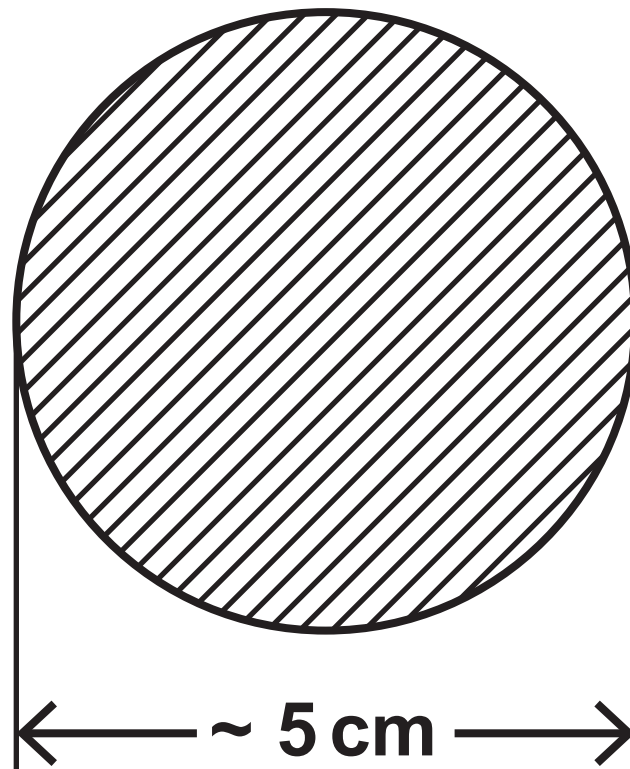


DIAGRAM 2

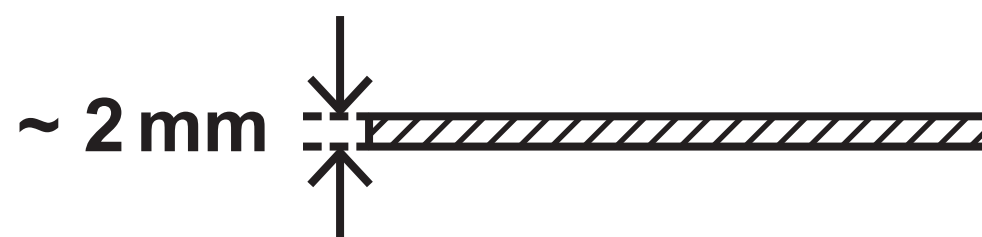


Question 7

View of disc from above



Side view of disc

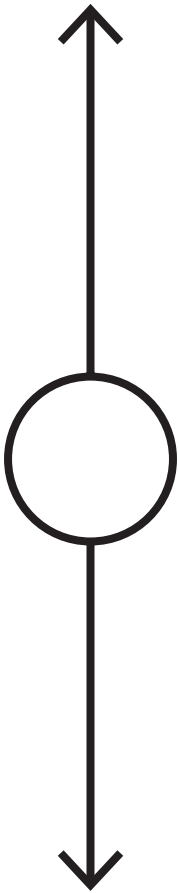


Question 8(a)

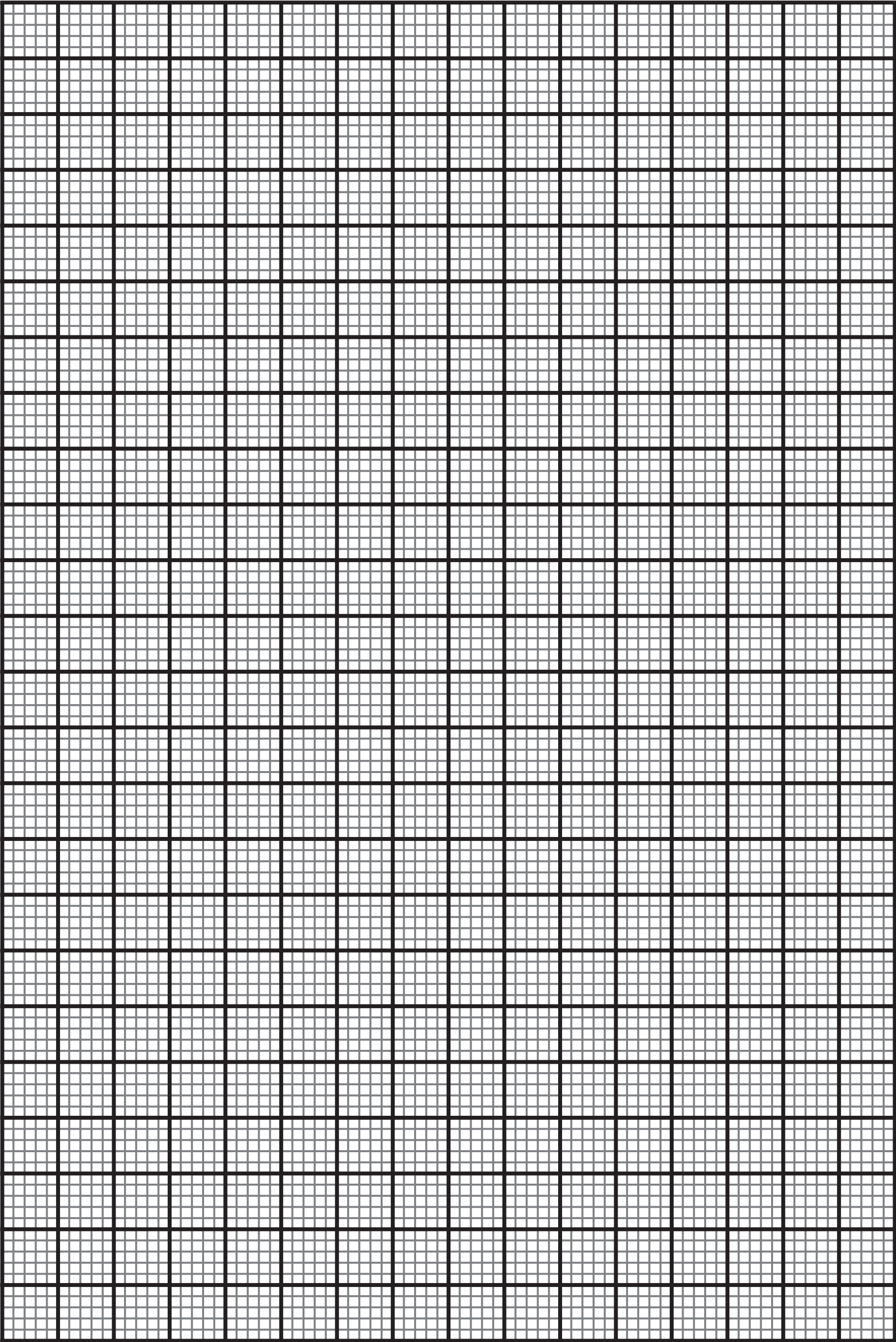
air bubble
moving
upwards
through the
chocolate



upthrust



drag



Question 9

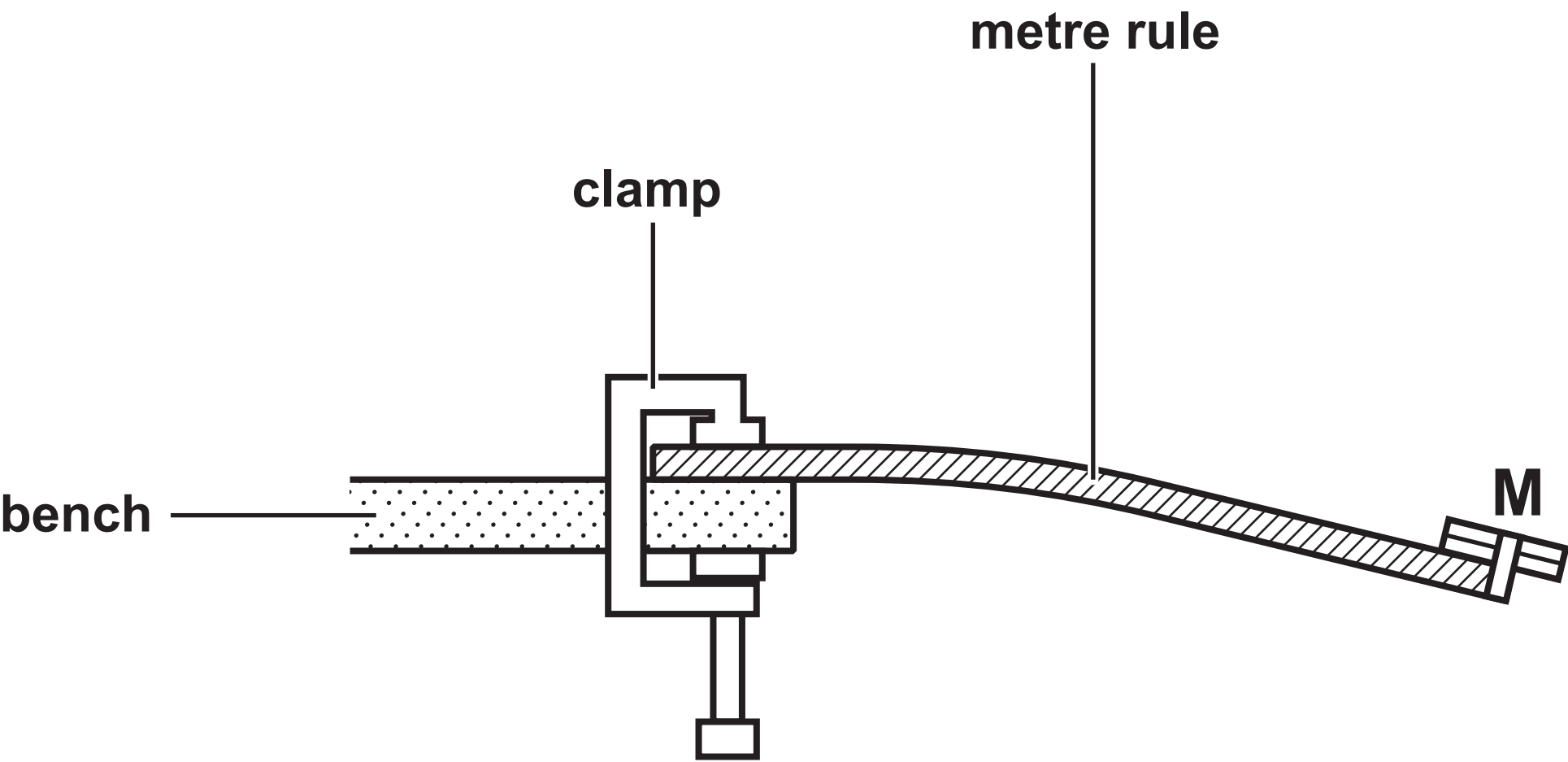


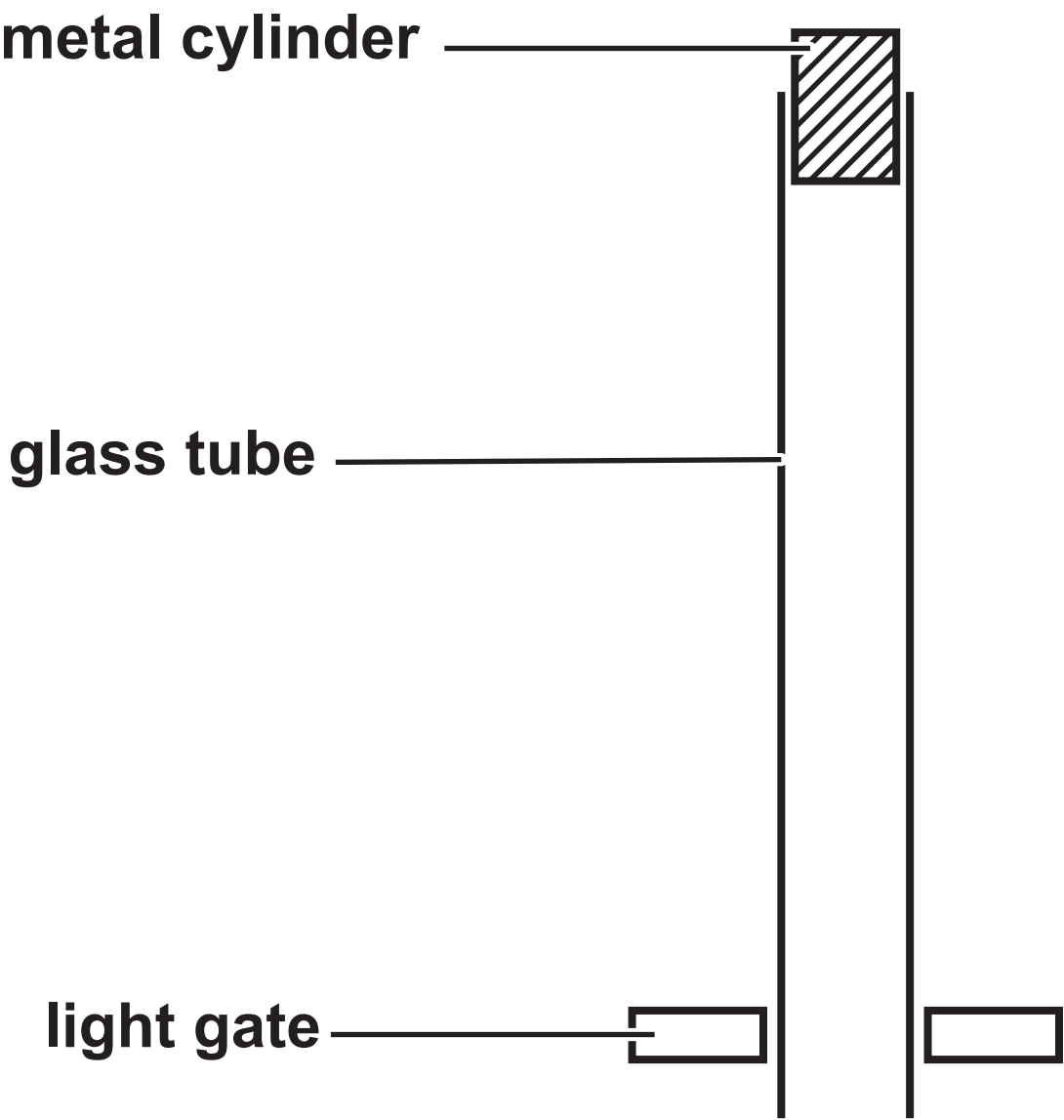
TABLE 1

		Time for 5 oscillations			
	Young modulus	L / m	t ₁ / s	t ₂ / s	t ₃ / s
Metre rule	E ₁	0·95	14·69	14·64	14·76
Half-metre rule	E ₂	0·45	5·33	5·40	5·24

TABLE 2

Type of wood	Cedar	Spruce	Pine
Young modulus / GPa	7·7	9·6	10·1

Question 12



Question 12(a)

t_1 / ms	t_2 / ms	t_3 / ms	t_4 / ms
7.85	7.81	7.79	7.80

Question 8(b)(ii) – Spare copy

