Cambridge IGCSE™

PHYSICS **0625/61**

Paper 6 Alternative to Practical **October/November 2025**

MARK SCHEME

Maximum Mark: 40

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Question	Answer	Marks
	Put SEEN on page 12.	
1(a)	40(.0)	**1**
	given to nearest 0.1 cm	**1**
1(b)(i)	*W* = 1.075 / 1.08 / 1.1	**1**
	W given to 2 or 3 significant figures	**1**
1(b)(ii)	New *W* given to same number of significant figures as in **(i)**	**1**
1(c)	Statement to match results	**1**
	Explanation with (*W* values quoted and) matching statement and results	**1**
1(d)	A diagram clearly showing a suitable approach e.g. edges of object Q symmetrically either side of 90.0 cm mark. Or wording describing the method.	**1**
1(e)	Repeat and average OR Move the load back and forth / slowly (to establish the range within which the balance point resides or until best balance).	**1**
1(f)	3 mm OR 0.3 cm	**1**
	Correct working shown	**1**

Question	Answer	Marks
2(a)	0.32	**1**
2(b)(i)	2.5	**1**
2(b)(ii)	7.81	**1**
2(b)(iii)	cm, V, Ω	**1**
2(c)	Graph: Axes correctly labelled and right way round	**1**
	Suitable scales 15 1.25 40 3.44 60 4.38 80 6.56 100 7.81 or ecf	**1**
	All plots correct to ½ small square	**1**
	Good line judgement, thin, continuous line	**1**
2(d)	Method clearly shown Candidate's R_{75} correctly read to ½ small square R_{75} in range 5.6 – 6.4	**1** **1** **1**

Question	Answer	Marks
3(a)	Normal at 90°	1
	2 cm (± 2 mm) from A	1
3(b)	Incident ray at 30° ± 2° to left of normal	1
	P_1 P_2 separation at least 5.0 cm	1
3(c)	Single, neat line through P_3 and P_4 and continued to meet normal	1
	r 32° ± 1°	1
3(d)(i)	Third box only ticked	1
3(d)(ii)	Two from: 1 Draw thin lines / use sharp pencil 2 Ensure pins are vertical / view bases of pins 3 Use thin pins	2
3(e)	At least 3 extra values (all < 90°) given	1
	Range to spread over at least 30°	1

Question		Answer	Marks
4	**MP1**	**APPARATUS**: A suitable timer AND a thermometer (so same initial temp.)	**1**
	MP2	**MEASURE** time taken to heat water to boiling point	**1**
	MP3	**INVESTIGATION:** Repeat a correct investigation for other heaters	**1**
	MP4	**TWO VARIABLES TO KEEP CONSTANT:** Initial temperature of water	**1**
	MP5	Volume / mass / amount of water	**1**
	MP6	**TABLE** with clear columns for heater and time with unit.	**1**
	MP7	**CONCLUSION:** Construct a bar chart with heater against heating time OR compare times for each heater to see if / how / whether the heater affects the time (to reach b.p.). OR see if the differences are significant / large / beyond experimental accuracy or wtte.	**1**