



Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

PHYSICS**0625/62**

Paper 6 Alternative to Practical

May/June 2019

MARK SCHEME

Maximum Mark: 40

Published

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This document consists of **7** printed pages.



Question	Answer	Marks
1(a)	centre of mass/gravity not in centre (however expressed)	1
1(b)	graph:	
	axes correctly labelled and right way round	1
	suitable scales starting from (0,0)	1
	all plots correct to less than $\frac{1}{2}$ small square	1
1(c)	good line judgement, thin, continuous line	1
	triangle method used and <u>seen on graph</u>	1
	triangle at least half of distance between extreme plotted points i.e. $\Delta a \geq 10$	1
1(d)	intercept correct to $\frac{1}{2}$ small square – if graph not extrapolated, use the ruler tool	1
1(e)	width 2.5(0) cm / 25 mm with correct unit	1
1(f)	statement to match results	1
	justification to match statement and include idea of within (or beyond) limits of experimental accuracy	1
1(g)	difficulty in achieving exact balance/keeping the pivot in the same position/locating the centre of load (Q)/load(s) slipping/load obscuring readings on rule	1

Question	Answer	Marks
2(a)	22(.0) (°C)	1
2(b)(i)	s, °C seen in both tables	1
2(b)(ii)	third box ticked to match readings	1
2(b)(iii)	quoting temperatures from the table in the same time	1
2(c)	any one from: higher room temperature lower <u>starting</u> /initial temperature insulation	1
2(d)	perpendicular viewing of thermometer/view (reading) at eye level/stir the water/thermometer not touching the sides of the beaker/wait for the temperature to stop <u>rising</u> (initially)	1
2(e)	any two from: room temperature/stated environmental condition <u>starting</u> /initial temperature of the (hot) <u>water</u> volume/mass/amount of water same beaker total time for experiment	2
2(f)	third box ticked	1

Question	Answer	Marks
3(a)	3.6(0) (V) 0.3(0) (A)	1 1
3(b)	12 (Ω)	1
3(c)	8 and unit Ω	1
3(d)(i)	11/11.3/11.29 (Ω)	1
3(d)(ii)	statement to match results justification to match results (with <u>idea</u> of within or beyond limits of experimental accuracy <u>explained</u>)	1 1
3(e)	brightness/intensity of lamp <u>changes</u>	1
3(f)	correct symbols with resistors and lamp in parallel <u>one</u> voltmeter correctly positioned – accept across power supply	1 1
3(g)	variable resistor	1

Question	Answer	Marks
4	Apparatus	1
	MP1 diagram showing object, lens, screen/image in correct order	
	MP2 u and v correctly labelled on diagram	
	Method	1
	MP3 measure/record/calculate u and v and lens thickness t	
	MP4 repeat with a different lens	
	MP5 method of obtaining a sharp image by <u>moving</u> object, lens or screen....	1
	Measuring lens thickness	1
	MP6 use of blocks either side of lens (and measure distance)	
	Table	1
	MP7 table with columns for u , v and t with correct units	