



Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

PHYSICS

0625/61

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)	Graph:	
	Axes correctly labelled with quantity and unit and right way round	1
	Suitable scales	1
	All plots correct to $\frac{1}{2}$ small square	1
	Good line judgement, thin, continuous line	1
1(b)	triangle method indicated on <u>graph</u>	1
	triangle at least half of candidate's line	1
1(c)	Correct calculation	1
	2 or 3 significant figures and unit N	1
1(d)	Difficulty in achieving exact balance OR difficulty in judging centre of P OR load easily slips OR top of pivot not a sharp edge	1
1(e)	113	1
1(f)(i)	1.13	1
1(f)(ii)	Statement and explanation to match results. Expect Yes, because values are close, owtte	1

Question	Answer	Marks
2(a)(i)	$I = 0.47(\text{A})$	1
2(b)(i)	V/I 0.025 0.023 0.027 0.026 0.024	1
2(b)(ii)	V/I consistent 2 significant figures or consistent 3 significant figures	1
	V/cm	1
2(c)	Box 1 ticked	1
	Values are close OR values are within the limits of experimental accuracy	1
2(d)	5.1(1)	1
	2 or 3 significant figures	1
	Unit Ω	1
2(e)	Keep current low OR switch off between readings	1
2(f)	Correct symbol	1

Question	Answer	Marks
3(a)	24 (°C)	1
3(b)(i)	s, °C seen and not contradicted	1
3(b)(ii)	Third box ticked to match readings	1
	Pairs of readings 94(°C), 89(°C) and 93 (°C), 87 (°C) quoted. OR differences 5(°C) and 6(°C) quoted	1
	Difference is only 1(°C) OR difference is small. owtte	1
3(c)(i)	Use a black painted beaker (and black painted can)	1
	Use a shiny can (and unpainted beaker)	1
3(c)(ii)	Any two from: Room temperature Volume of water Same starting temperature (of water)	2
3(d)	Perpendicular viewing of the thermometer OR stirring OR thermometer not touching beaker.	1

Question	Answer	Marks
4	MP1 Apparatus: Forcemeter/Newtonmeter or pulley and weights arrangement	1
	MP2 Method: Pull box up slope, measure force and measure distance moved	1
	MP3 Method: Repeat with different masses	1
	MP4 Variable: Angle of slope or height of blocks	1
	MP5 Variable: Distance moved	1
	MP6 Table to include columns for mass and force, both with unit (g or kg for mass and N for force)	1
	MP7 Calculate work done and compare with mass. OR Compare work done with mass (if there is a work done column in the table). OR Plot graph of work done against mass	1