Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

PHYSICS **0625/52**

Paper 5 Practical **October/November 2017**

MARK SCHEME

Maximum Mark: 40

Published

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This document consists of **5** printed pages.

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[Turn over

Question	Answer	Marks
1(a)	correct use of set-square <u>AND</u> vertical ruler	1
1(b)(i)	t_1 = 29.5 ± 2.5 (s)	1
1(b)(ii)	correct T_1 from candidate's value of t_1	1
	unit s seen at least once in **(i)** or **(ii)**	1
1(c)(i)	t_2 = 27.7 ± 2.5 (s)	1
1(c)(ii)	$T_2 < T_1$ and to 2 or 3 significant figures	1
1(d)	statement to match readings	1
	justification to include the idea of within (or beyond e.c.f) the limits of experimental accuracy e.g. (very) close / almost equal / the same	1
1(e)	final box ticked	1
1(f)	4 or 5 correct (fewer than 4 correct = 0 marks)	1
	From top box to bottom box V, V, V, V, P, P all correct (= full marks)	1

Question	Answer	Marks
2(a)	realistic room temperature	**1**
2(b)	realistic hot water temperature	**1**
	mixture temperature between hot and room	**1**
	temperature fall correct AND °C seen at least once and not contradicted	**1**
2(c)	to make sure that the temperature is the same throughout	**1**
2(d)	realistic new temperatures	**1**
2(e)	realistic new temperatures	**1**
2(f)	room temperature seen and correct conclusion	**1**
2(g)	heat loss (to surroundings) / time delays in transferring the water or did not wait for thermometer readings to stabilise	**1**
2(h)	insulation	**1**
2(i)	same starting temperature / same room temperature	**1**

Question	Answer	Marks
3(a)(i),(ii)	correct u values 20(.0), 22(.0), 25(.0), 30(.0), 35(.0)	1
	v values decreasing and all > 22.0 cm	1
	consistent 2 or consistent 3 significant figures for v	1
3(b)	graph:	
	axes correctly labelled and not reversed	1
	suitable scales	1
	all plots correct to ½ small square	1
	good best-fit curve judgement, thin, continuous line	1
3(c)(i)	2 points and straight line correct	1
3(c)(ii)	u_1 and v_1 read correctly to ½ small square	1
3(c)(iii)	correct calculation of f from candidate's values	1
	f value rounding to 14–16 cm	1

Question	Answer	Marks
4	**method:** **MP1** measure length of band	1
	MP2 hang load, measure new length	1
	MP3 repeat with different thicknesses/widths	1
	control variable: **MP4** use same (original) length of band each time	1
	table: **MP5** table with columns for thickness, (load) and length / extension with units	1

	conclusion:
	MP6 plot a graph of extension / length against thickness (for the same load)
	           OR load against extension / length for different thicknesses
	           OR comparison via a table e.g. compare extensions / lengths
	           of different thicknesses for the same load
		1

	one additional point:
	MP7 use same load / same range of loads
	           use at least 5 thicknesses / take at least 5 different readings to plot a
	           graph
	           show how to measure extension e.g. $l - l_0$
	           use same type / material of rubber band
		1