



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY

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Paper 5 Practical Test

May/June 2017

MARK SCHEME

Maximum Mark: 40

Published

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This document consists of **4** printed pages.

Question	Answer	Marks
1(a)	volume at time = 0 s completed correctly	1
	all volumes completed and in ascending order	1
1(b)	volume at time = 0 s completed correctly AND all volumes completed and in ascending order	1
	gas volumes increase less quickly at the start of Experiment 2 than at the start of Experiment 1	1
1(c)	all points correctly plotted	2
	two smooth lines	1
	labelled	1
1(d)	Experiment 1	1
	more concentrated/stronger acid/the acid has a lower pH	1
1(e)	volume of gas at 30 s	1
	correct calculation of rate	1
	unit: cm^3/s OR $\text{cm}^3 \text{s}^{-1}$	1
1(f)	all the magnesium will have reacted	1
1(g)	faster reaction/increased rate	1
	magnesium powder has a higher surface area	1

Question	Answer	Marks
1(h)	advantage: easy to use / quick	1
	disadvantage: not accurate	1
1(i)	use of burette / pipette / gas syringe / weighed amount of magnesium / repeat experiment (and average) / clean the magnesium / remove oxide layer	1

Question	Answer	Marks
2(a)	black (powder)	1
2(b)(i)	bleached / white / decolourised	1
2(b)(ii)	brown	1
	precipitate	1
2(c)	chlorine	1
2(d)	any 3 from: <ul style="list-style-type: none"> • turns yellow • bubbles / fizz • red / brown / orange • precipitate 	3
2(e)	yellow / brown	1
	blue / black	1
2(f)	turns colourless	1

Question	Answer	Marks
2(g)	fizz / bubbles	1
	glowing splint	1
	relights	1
2(h)	oxygen	1

Question	Answer	Marks
3	any 6 from: <ul style="list-style-type: none">• crush lumps• pestle and mortar• weigh cassiterite• heat / reduce• with carbon / CO / more reactive metal, e.g. Zn• weigh tin• $(\text{mass of tin} / \text{initial mass}) \times 100 (\%)$	6