Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/63**

Paper 6 Alternative to Practical **May/June 2017**

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.

Cambridge will not enter into discussions about these mark schemes.

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This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

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

Question	Answer	Marks
1(a)(i)	(delivery) tube	**1**
1(a)(iii)	arrow beneath the tube containing the mixture of alcohols	**1**
1(b)	to cool	**1**
	the gas into a liquid	**1**
1(c)	to measure the temperature of the vapour / temperature of liquid would not be constant	**1**
1(d)	**E** shown on the test-tube in water bath	**1**
1(e)(i)	lighted splint ignites the liquid / test for water, e.g. add anhydrous copper(II) sulfate gives a negative result	**1**
1(e)(ii)	melting / boiling point determination	**1**

Question	Answer	Marks
2(a)	all volume boxes completed correctly: 0, 13, 25, 38, 48, 59, 70, 79, 88, 96	**3**
2(b)	origin plotted	**1**
	other points correctly plotted	**1**
	two smooth lines	**1**
	labelled	**1**
2(c)	Experiment 1	**1**
	more concentrated / stronger acid / the acid has a lower pH	**1**

Question	Answer	Marks
2(d)	volume of gas at 30 s	1
	correct calculation of rate	1
	unit: cm^3 / s **OR** $cm^3 s^{-1}$	1
2(e)	all the magnesium will have reacted	1
2(f)	faster reaction / increased rate	1
	magnesium powder has a higher surface area	1
2(g)	advantage: easy to use / quick	1
	disadvantage: not accurate	1
2(h)	use of burette / pipette / gas syringe / weighed amount of magnesium / repeat experiment (and average) / clean the magnesium / remove oxide layer	1

Question	Answer	Marks
3(a)	chlorine	1
3(b)(i)	iron(III)	1
	hydroxide	1
3(b)(ii)	green	1
	precipitate	1
3(c)	oxygen	1
3(d)	catalyst	1
	transition element compound / manganese oxide	1

Question	Answer	Marks
4	any 6 from: • crush lumps • pestle and mortar • weigh cassiterite • heat / reduce • with carbon / CO / more reactive metal, e.g. Zn • weigh tin • (mass of tin / initial mass) × 100 (%)	**6**