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

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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**

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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**

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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**

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