Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/62**

Paper 6 Alternative to Practical **October/November 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 International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2017 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

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

Question	Answer	Marks
1(a)	water	**1**
1(b)(i)	arrow under mineral wool **AND** arrow under magnesium ribbon	**1**
1(b)(ii)	boiling tube	**1**
1(c)	use sandpaper / glass paper / steel wool	**1**
1(d)(i)	gas syringe / measuring cylinder over a trough of water	**1**
	labelled	**1**
1(d)(ii)	'pops'	**1**
1(e)	**large** amount of energy released / **high** temperature reached	**1**

Question	Answer	Marks
2(a)	initial and final temperature boxes completed: 21, 21, 21, 32, 37, 48 all readings correct = [2] 4 or 5 readings correct = [1]	**2**
2(b)	initial and final temperature boxes completed: 23, 23, 23, 23, 20, 18, 16, 12 all readings correct = [2] 6 or 7 readings correct = [1]	**2**
2(c)	all points plotted	**2**
	two straight lines of best fit drawn with a ruler	**1**
	both graphs appropriately labelled	**1**
2(d)(i)	value from graph	**1**
	shown clearly	**1**

Question	Answer	Marks
2(d)(ii)	value from graph	**1**
	shown clearly	**1**
2(e)	exothermic	**1**
2(f)	*change to the experiments* use burette / pipette use insulation / lid use a new cup / dry the cup	**1**
	explanation (to match change) more accurate (than measuring cylinder) reduce heat losses remove water left from the previous experiment	**1**
2(g)	repeat experiments	**1**
2(h)	lower temperatures measured / smaller temperature changes	**1**
	changed is halved / more water (to heat)	**1**

Question	Answer	Marks
3(a)	white (crystals)	**1**
3(b)	bubbles / fizz	**1**
	limewater	**1**
	(turns) milky	**1**
3(c)	carbon dioxide	**1**
3(d)	yellow	**1**
3(e)	non-transition metal / Group II metal / barium / calcium / magnesium	**1**
3(e)	chloride	**1**

Question	Answer	Marks
4	*max [6]:* **M1** weigh specified number of nail(s) / specified number of nails **M2** immerse in same volume **M3** samples of tap water and distilled water (in two test-tubes) **M4** for suitable time **M5** dry (in oven) **M6** reweigh nails **M7** compare / conclusion	**6**