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Cambridge International General Certificate of Secondary Education

CHEMISTRY

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Paper 6 Alternative to Practical

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MARK SCHEME

Maximum Mark: 40

Published

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

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)	<i>change to the experiments</i> use burette / pipette use insulation / lid use a new cup / dry the cup	1
	<i>explanation (to match change)</i> 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	<i>max [6]:</i> 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