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**CHEMISTRY**

**0620/62**

Paper 6 Alternative to Practical

**October/November 2017**

MARK SCHEME

Maximum Mark: 40

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**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 <b>AND</b> 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)	<b>large</b> amount of energy released / <b>high</b> 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

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

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