



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY

0620/61

Paper 6 Alternative to Practical

October/November 2016

MARK SCHEME

Maximum Mark: 40

Published

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This document consists of **5** printed pages.

Page 2	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
1(a)	electrodes	1
1(b)	bubbles / fizz / effervescence	1
1(c)(i)	more hydrogen twice as much hydrogen / half as much oxygen	1 1
1(c)(ii)	water	1
1(d)	<i>lighted splint</i> no effect / brighter light for oxygen 'pops' for hydrogen OR <i>glowing splint</i> relights for oxygen no effect for hydrogen	1 1 1 1

Page 3	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
2(a)	table of results for Experiment 1 all temperature boxes completed correctly 22, 24, 26, 28, 30, 31, 30, 29, 28	2
2(b)	table of results for Experiment 2 initial and other temperature boxes completed correctly 20, 21, 22, 23, 24, 25, 24, 23, 22	2
2(c)	all points correctly plotted best-fit smooth line graphs labels	2 1 1
2(d)	value from graph (27 °C) shown clearly	1 1
2(e)	phenolphthalein / litmus / suitable named indicator	1
2(f)	Experiment 1 / solution N solution N is a stronger acid / has a higher pH	1 1
2(g)	measured results / temperature changes / results would be smaller OR larger / double volume needed to reach same temperature changes	1
2(h)	polystyrene is an insulator / copper is a (good) conductor	1
2(i)	source of error: heat losses / using a measuring cylinder improvement: lag or insulate / use burette	1 1

Page 4	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
3(a)	water present/ hydrated	1
3(b)	no change/ colour	1
3(c)(i)	white precipitate dissolves	1 1 1
3(c)(ii)	white precipitate no change	1 1
3(d)	not a halide	1
3(e)	(aluminium) sulfate	1
3(f)	white (crystals)	1

Page 5	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
4	method adding Agri Lime to acid add weighed amount/known mass of Agri Lime Q to a known volume of acid with a named indicator added to the acid until the indicator changes colour note the mass of Agri Lime Q added repeat with Agri Lime R conclusion, e.g. 'the experiment using the smaller amount of Agri Lime is better' OR method adding acid to Agri Lime use weighed amount/known mass of Agri Lime Q add acid to it gradually / from a burette with a named indicator added to the acid until the indicator changes colour note volume of acid added repeat with Agri Lime R conclusion, e.g. 'the experiment using the larger volume of acid is better'	6