



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY

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Paper 5 Practical Test

March 2017

MARK SCHEME

Maximum Mark: 40

Published

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

Question	Answer	Marks
1(b)	initial and final readings completed correctly	1
	differences completed correctly	1
	all readings to 1 decimal place	1
	results comparable to the Supervisor's results	1
1(c)	blue to colourless	1
1(d)	neutralisation	1
1(e)(i)	solution O	1
	greater volume of acid was used in the titration	1
1(e)(ii)	five times as concentrated	1
1(f)	half volume / value from table for Experiment 2	1
	unit: cm ³	1
1(g)	effect on volume: no effect	1
	reason: temperature would only affect the rate	1
1(h)(i)	use a pipette / burette	1
1(h)(ii)	repeat experiments (and compare / average)	1

Question	Answer	Marks
1(i)	M1 fair test to equal volumes of each sodium hydroxide solution / solutions O and P add an equal volume / measured volumes of aqueous calcium chloride	1
	M2 dependent variable measured measure mass / height of precipitate formed / volume of calcium chloride used	1
	M3 conclusion the more concentrated sodium hydroxide solution would form the most precipitate (mass / height) / would require a smaller volume of calcium chloride	1

Question	Answer	Marks
2(a)	<u>white</u> (wet) (crystals)	1
2(b)(i)	white	1
	precipitate	1
2(b)(ii)	precipitate dissolves / clears / is soluble	1
2(c)(i)	white	1
	precipitate	1
2(c)(ii)	precipitate dissolves	1
2(d)	cream precipitate	1
2(e)	zinc	1
	bromide	1
2(f)	yellow	1
2(g)	no reaction / no change / precipitate	1

Question	Answer	Marks
2(h)	yellow	1
	precipitate	1
2(i)	sodium	1
	iodide	1

Question	Answer	Marks
3(a)	any 4 from: M1 measure initial temperature of (solid) ammonium chloride / barium hydroxide M2 add barium hydroxide / ammonium chloride / other solid AND mix / stir M3 use a thermometer M4 measure the temperature of the mixture / final temperature M5 temperature decreases / test-tube feels cold	4
3(b)	M1 add (aqueous) sodium hydroxide (and warm)	1
	M2 gas produced turns (red) litmus blue	1