Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/52**

Paper 5 Practical Test **March 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.

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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)	white (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**