Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/51**

Paper 5 Practical Test **October/November 2016**

MARK SCHEME

Maximum Mark: 40

Published

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Question	Answer	Marks
1(a)	table of results for Experiment 1 initial and other temperature boxes completed correctly and results comparable to supervisor's and Experiment 1 maximum greater than Experiment 2 maximum	**1** **1**
1(b)	table of results for Experiment 2 initial and other temperature boxes completed correctly and comparable to supervisor's and temperatures stop rising	**1** **1**
1(c)	all points correctly plotted best-fit smooth line graphs labels	**2** **1** **1**
1(d)	value from graph shown clearly	**1** **1**
1(e)	phenolphthalein / litmus / suitable named indicator	**1**
1(f)	Experiment 1 solution **N** is a stronger acid / has a higher pH	**1** **1**
1(g)	measured results / temperature changes / results would be smaller **OR** larger / double volume needed to reach same temperature changes	**1**
1(h)	polystyrene is an insulator / copper is a (good) conductor	**1**
1(i)	source of error: heat losses / using a measuring cylinder improvement: lag / insulate / use burette;	**1** **1**

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Question	Answer	Mark
2(a)	white crystals	**1**
2(b)(i)	melts / liquefies / dissolves / bubbles condensation / drops of liquid cobalt(II) chloride paper turns colourless / light pink	**1** **1** **1**
2(b)(ii)	no change / colour	**1**
2(c)(i)	white precipitate dissolves / clears	**1** **1** **1**
2(c)(ii)	white precipitate	**1**
2(c)(iii)	no reaction / no change	**1**
2(c)(iv)	white precipitate	**1** **1**
2(d)	not a transition element (cation)	**1**
2(e)	hydrated / contains water	**1**
2(f)	it is **not** any named metal that gives a positive flame test	**1**
2(g)	aluminium sulfate	**1** **1**

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Question	Answer	Mark
3	**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**

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