Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/63**

Paper 6 Alternative to Practical **October/November 2016**

MARK SCHEME

Maximum Mark: 40

Published

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Question	Answer	Mark
1(a)	(clamp / retort) stand trough	**1** **1**
1(b)	to absorb / hold / keep / soak up / contain the paraffin oil	**1**
1(c)	**M1** bromine (aqueous / in cyclohexane) **M2** turns colourless / decolourised	**1** **1**
1(d)	to prevent suck back (of water)	**1**

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Question	Answer	Mark
2(a)	table of results for Experiment 1 temperature boxes completed correctly 20, 20, 20, 25, 28, 31, 33, 34, 35, 36, 36	**2**
2(b)	table of results for Experiment 2 temperature boxes completed correctly 22, 22, 22, 71, 76, 75, 72, 70, 67, 65, 64	**2**
2(c)	all points correctly plotted ± half a small square smooth line graphs labelled	**2** **1** **1**
2(d)(i)	working shown clearly as construction lines or cross value from graph (29–30 °C ± 0.5 °C)	**1** **1**
2(d)(ii)	value from graph (72 s) –60 s	**1** **1**
2(e)	room temperature or initial temperature from table (20–22 °C) reaction has finished / stopped	**1** **1**
2(f)	more readings / points / data smoother curve / better or more accurate graph	**1** **1**
2(g)	polystyrene is an insulator / copper is a (good) conductor reduced heat losses	**1** **1**

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Question	Answer	Mark
3(a)(i)	pH 1–3	**1**
3(a)(ii)	effervescence / fizzing / bubbling / solid disappears / dissolves lighted splint 'pops'	**1** **1** **1**
3(a)(iii)	effervescence / fizzing / bubbling / solid disappears / dissolves limewater milky	**1** **1** **1**
3(a)(iv)	white precipitate	**1**
3(b)	calcium / Ca^{2+} hydroxide / OH^-	**1** **1**

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Question	Answer	Mark
4	**silica** filter (the cleaner) wash the residue dry the residue **water** heat (the filtrate / cleaner) condense the vapour **sodium carbonate** heat to dryness / no liquid left (then solid) sodium carbonate is left **OR** heat until saturated then cool to crystallise / leave to crystallise	**6**

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