



**Cambridge Assessment International Education**  
Cambridge International General Certificate of Secondary Education

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**CHEMISTRY**

**0620/61**

Paper 6 Alternative to Practical

**October/November 2017**

MARK SCHEME

Maximum Mark: 40

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**Published**

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



Question	Answer	Marks
1(a)	evaporating basin / dish	1
1(b)	zinc oxide	1
1(c)(i)	filtration	1
1(c)(ii)	no filter paper	1
1(d)	heat / boil / evaporate	1
	to crystallising point	1
	cool / leave to stand	1

Question	Answer	Marks
2(a)	average temperatures completed for all five experiments: 18, 31, 41, 53, 63	1
	times completed for all five experiments: 210, 111, 84, 66, 54	1
	all times in seconds	1
2(b)	all five points plotted	3
	smooth line graph	1
2(c)	value from graph for average temperature 72 °C	1
	unit (s)	1
	shown clearly	1
2(d)	line above experimental line	1
2(e)(i)	Experiment 5	1

Question	Answer	Marks
2(e)(ii)	particles move faster / particles have more energy	1
	more (frequent) collisions / greater chance of collisions	1
2(f)(i)	more accurate	1
	comparison to measuring cylinder	1
2(f)(ii)	time shorter / cross disappears faster	1
	depth greater	1

Question	Answer	Marks
3(a)(i)	red-brown	1
	precipitate	1
3(a)(ii)	insoluble / no change	1
3(b)	red-brown precipitate	1
3(c)	(red) litmus paper	1
	turns blue	1
3(d)	ammonia	1
3(e)	lithium	1
	carbonate	1

Question	Answer	Marks
4	<p><i>reaction with acid method</i></p> <p>max [6]: <b>M1</b> fixed volume of acid <b>M2</b> to fixed mass of metal <b>M3</b> measure volume of gas / temperature change <b>M4</b> named apparatus for the measurement <b>M5</b> after time <b>M6</b> repeat with other metals <b>M7</b> compare / conclude</p> <p><i>displacement method</i></p> <p><b>M1</b> add each metal to named tin salt solution <b>M2</b> observe if deposit is formed <b>M3</b> results, e.g. Zn and Fe positive <b>M4</b> repeat with named iron salt <b>M5</b> results, e.g. Zn positive <b>M6</b> conclude</p>	6