



CHEMISTRY

0620/61

Paper 6 Alternative to Practical

October/November 2017

MARK SCHEME

Maximum Mark: 40

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