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**CHEMISTRY**

**0620/51**

Paper 5 Practical Test

**May/June 2016**

MARK SCHEME

Maximum Mark: 40

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**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.

Cambridge will not enter into discussions about these mark schemes.

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### Abbreviations used in the Mark Scheme

- ; separates marking points
- / separates alternatives within a marking point
- **OR** gives alternative marking point
- **R** reject
- **I** ignore mark as if this material was not present
- **A** accept (a less than ideal answer which should be marked correct)
- **COND** indicates mark is conditional on previous marking point
- owtte or words to that effect (accept other ways of expressing the same idea)
- max indicates the maximum number of marks that can be awarded
- ecf credit a correct statement that follows a previous wrong response
- ( ) the word / phrase in brackets is not required, but sets the context
- ora or reverse argument

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
1(a)	<b>M1</b> initial and final readings completed correctly; <b>M2</b> all readings to 1 decimal place; <b>M3</b> differences completed correctly; <b>M4</b> both results comparable to supervisor's;	<b>4</b> 1 1 1 1
1(b)	initial, final readings and difference completed correctly; both results comparable to supervisor's;	<b>2</b> 1 1
1(c)	blue to colourless;	<b>1</b>
1(d)	bubbles/fizzing/effervescence;	<b>1</b>
1(e)	Experiment 2;	<b>1</b>
1(f)	use a pipette/burette;	<b>1</b>
1(g)	<b>M1</b> effect on results: none; <b>M2</b> reason: no change in concentration;	<b>2</b> 1 1
1(h)(i)	2:1;	<b>1</b>
1(h)(ii)	acid <b>B</b> is double the concentration of acid <b>A</b> ora/ acid <b>B</b> is more concentrated ora;	<b>1</b>
1(i)	<b>M1</b> appropriate named method that would work; <b>M2</b> reagents; <b>M3</b> result;	<b>2</b> 1 1 1
1(j)	named protective clothing, e.g. goggles/gloves/lab coat;	<b>1</b>

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
2(a)(i)	pH 7;	<b>1</b>
2(a)(ii)	cream; precipitate;	<b>2</b> 1 1
2(b)	yellow;	<b>1</b>
2(c)	sodium; bromide;	<b>2</b> 1 1
2(d)(i)	green;	<b>1</b>
2(d)(ii)	<u>green</u> ; precipitate; with excess, (green) solution clears / precipitate dissolves;	<b>2</b> 1 1 1
2(d)(iii)	grey-green precipitate; insoluble;	<b>2</b> 1 1
2(d)(iv)	white; precipitate;	<b>2</b> 1 1
2(e)	chromium; chloride;	<b>2</b> 1 1

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
3	any 6 from: <ul style="list-style-type: none"> <li>• weigh calcium;</li> <li>• heat / burn;</li> <li>• with lid / cover;</li> <li>• allow air to enter / lift lid;</li> <li>• cool;</li> <li>• reweigh calcium oxide;</li> <li>• reheat to constant mass;</li> <li>• calculate / find the difference;</li> </ul>	6