Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CHEMISTRY **0620/51**

Paper 5 Practical Test **May/June 2017**

MARK SCHEME

Maximum Mark: 40

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.

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Question	Answer	Marks
1(b)	initial and final readings completed correctly	**1**
	differences completed correctly	**1**
	all readings to 1 d.p.	**1**
	results comparable to the Supervisor's results	**1**
1(c)	red / brown / amber / orange	**1**
1(d)	(becomes) yellow / orange / paler	**1**
1(e)	yellow to blue / black	**1**
1(f)(i)	solution **C** is more concentrated	**1**
	a greater volume of thiosulfate was needed	**1**
1(f)(ii)	ratio of the candidate's differences from the table in **(b)**	**1**
1(g)	1.5 × value from table in **(b)** for Experiment 2	**1**
	unit: cm^3	**1**
1(h)(i)	2 sources of error, e.g.: • using a measuring cylinder to measure solution **C** / solution **D** • only carrying out the experiments once • going past the end-point	**2**
1(h)(ii)	2 meaningful improvements **related to (h)(i)**: • use a pipette / burette • repeat the experiment • improvement linked to going past the end-point	**2**

Question	Answer	Marks
2(a)	green	**1**
2(b)	any 2 from: • turns black • condensation / drops of liquid formed • moves / jumps around	**2**
2(c)(i)	any 3 from: • blue (solution) • bubbles / fizz • limewater • milky	**3**
2(c)(ii)	blue	**1**
	precipitate	**1**
	(with excess) deep / royal blue solution / clear / precipitate dissolves	**1**
2(d)	blue-green	**1**

Question	Answer	Marks
2(e)	copper / Cu^{2+}	1
	carbonate / CO_3^{2-}	1
2(f)	white	1
2(g)(i)	no reaction / no change	1
2(g)(ii)	yellow precipitate	1
2(h)	lilac	1
2(i)	potassium / K^+	1
	iodide / I^-	1

Question	Answer	Marks
3(a)	(red) litmus turns blue	1
3(b)(i)	heat / boil the mixture	1
	condense the vapour	1
3(b)(ii)	filter / decant	1
	wash residue (with water)	1
	dry	1