CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0620 CHEMISTRY

0620/51 Paper 5 (Practical), maximum raw mark 40

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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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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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Question	Answer	Marks	Additional Guidance
1(a)	initial temperature box completed; other temperature boxes completed; trend in temperatures is comparable to Supervisor's results;	3	Temperatures should increase to a maximum then decrease
1(b)	initial temperature box completed; other temperature boxes completed; trend in temperatures is comparable to Supervisor's results;	3	Temperatures should increase to a maximum then decrease
1(c)	all 18 points plotted within half a small square = 3 marks 17 points plotted within half a small square = 2 marks 16 points plotted within half a small square = 1 mark; best fit smooth line / intersecting straight lines; labels;	5	
1(d)	value read from graph; indication clearly shown;	2	
1(e)	exothermic;	1	
1(f)	to remove traces of acid A / clean; to remove water;	2	
1(g)(i)	experiment 2 / acid B;	1	
1(g)(ii)	acid B is stronger / dibasic / has a lower pH / more acidic;	1	**I** more reactive / more concentrated
1(h)	heat losses / using a measuring cylinder / thermometer / cup not washed; insulate / use burette / digital thermometer / new cup;	2	**I** repeat and average

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Question	Answer	Marks	Additional Guidance
2(a)	white (crystals);	1	**A** colourless **R** precipitate
2(b)	melts / liquefies / bubbles / dissolves; steam / condensation / drops of liquid; pH 7–14;	3	**A** reference to smell **I** sublimation **A** colour: green / blue / purple **I** ammonia
2(c)	white; precipitate; dissolves / clears; pungent gas; pH paper green / blue / purple, pH>7;	5	
2(d)	white; precipitate;	2	
2(e)	no reaction / no change / no precipitate / nothing;	1	
2(f)	white; precipitate;	2	
2(g)	alkaline gas / ammonia; hydrated / water;	2	
2(h)	not a halide / not a named halide;	1	
2(i)	ammonium / NH_4^+ ; aluminium / Al^{3+} ; sulfate / SO_4^{2-} ;	3	

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