

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

NOVEMBER 2002

INTERNATIONAL GCSE

MARK SCHEME
MAXIMUM MARK : 40
SYLLABUS/COMPONENT : 0620/5 CHEMISTRY (PRACTICAL)



Question Number	Question (including any Source Details)																								
	<p>Results obtained for Q1.</p> <table border="1"><thead><tr><th>Experiment</th><th>Metal</th><th>Temp / °C. initial</th><th>max</th></tr></thead><tbody><tr><td>1</td><td>zinc</td><td>19</td><td>22</td></tr><tr><td>2</td><td>iron</td><td>19</td><td>21 21</td></tr><tr><td>3</td><td>magnesium</td><td>19</td><td>82</td></tr><tr><td>4</td><td>copper</td><td>19</td><td>19</td></tr></tbody></table> <p>Experiment 5.</p> <table border="1"><tbody><tr><td>Initial temp (substance)</td><td>21°C</td></tr><tr><td>Max temp reached</td><td>40°C</td></tr></tbody></table>	Experiment	Metal	Temp / °C. initial	max	1	zinc	19	22	2	iron	19	21 21	3	magnesium	19	82	4	copper	19	19	Initial temp (substance)	21°C	Max temp reached	40°C
Experiment	Metal	Temp / °C. initial	max																						
1	zinc	19	22																						
2	iron	19	21 21																						
3	magnesium	19	82																						
4	copper	19	19																						
Initial temp (substance)	21°C																								
Max temp reached	40°C																								

Question Number	Mark Scheme Details	Mark
1	<p>Table of results. of supervisor's results.</p> <p>All initial temperatures recorded (2)</p> <p>All maximum temperatures recorded (2)</p> <p>Observations</p> <p>zinc few bubbles / slow reaction (1)</p> <p>iron few bubbles / slow reaction (1)</p> <p>magnesium violent / rapid (1) reaction, bubbles (1) / heat (1) mark 3</p> <p>copper no reaction (1)</p> <p>(a) (i) magnesium (1)</p> <p>(ii) largest temperature rise (1)</p> <p>most violent reaction (1)</p> <p>(iii) hydrogen (1)</p>	<p>10</p> <p>1</p> <p>2</p> <p>1</p>

Question Number	Mark Scheme Details	
1	Experiment 5	
	Table of results. of supervisor's	
	Initial temperature recorded (1)	
	Maximum temperature recorded of supervisor's (1)	2
	observations.	
	solution becomes paler (1), red / brown / dark	
	/ lighter blue, black.	
ppt /	deposit / solid (1), fizz / bubbles (1)	3
(b)	temperature rises / goes up (1)	1
(c)	displacement / redox (1)	1
(d)	copper least	
	iron	
	zinc	
	magnesium most (1)	1
	Total - total	22

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2(a)	(i) <u>F</u> colorless (1) <u>not</u> clear / transparent description of smell (1)	2
	(ii) <u>G</u> colorless if no smell (1)	1
(b)	(i) iodine dissolves (1) ^{pink / violet} purple (1) solution	2
	(ii) iodine dissolves (1) ^{yellow / orange / brown} reddish (1) solution	2
	Mixtures combined give two layers (1) or similar	1
(c)	(i) catches fire / ignites (1) yellow / blue flame (1)	2
	(ii) extinguishes splint (1) does not burn	1
(d)	yellow (1) precipitate (1)	2
(e)	yellow (1) precipitate (1)	2
(f)	organic (1), hydrocarbon (1), alkane (1) max 2	2
(g)	iodide / I ⁻ (1)	1
	Sub total	18
	Total for paper	40