



**GCSE**

**Science A (4461) /  
Chemistry (4421)**

*Specification A*

**CHY1AP, CH1ASF & CH1ASH**

**Mark Scheme**

*2012 Examination – June Series*

**The blank answer sheet for this component can be found at the end of this document.**

This component is an objective test for which the following list indicates the correct answers used in marking the students' responses.

Further copies of this Mark Scheme are available to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

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**GCSE****SCIENCE A (4461)/CHEMISTRY (4421)**

## Objective Test Answer Key

**CHY1AP (Products from Rocks)**

June 2012

Foundation Tier

Question	Key			
One	A	aluminium	3	
	B	copper	2	
	C	iron	4	
	D	sodium	1	
Two	A	0	2	
	B	6	3	
	C	12	4	
	D	-90	1	
Three	A	the nucleus	2	
	B	a bond	4	
	C	an electron	3	
	D	an element	1	
Four	A	bronze for 'copper' coins	1	
	B	bronze for statues	4	
	C	cupronickel for 'silver' coins	2	
	D	brass for ornaments	3	
Five	A	carbon dioxide	2	
	B	copper	3	
	C	copper oxide	1	
	D	water	4	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Six	3	2	4	4
Seven	3	2	1	1
Eight	2	1	4	2
Nine	3	4	2	3

**GCSE****SCIENCE A (4461)/CHEMISTRY (4421)**

## Objective Test Answer Key

**CHY1AP (Products from Rocks)**

June 2012

Higher Tier

<b>Question</b>	<b>Key</b>			
One	<b>A</b>	carbon dioxide		<b>2</b>
	<b>B</b>	copper		<b>3</b>
	<b>C</b>	copper oxide		<b>1</b>
	<b>D</b>	water		<b>4</b>
Two	<b>A</b>	it is probably the softest substance		<b>1</b>
	<b>B</b>	it is the alloy that contains only two metals		<b>2</b>
	<b>C</b>	it is an alloy that contains only one metal		<b>3</b>
	<b>D</b>	it contains the largest number of different elements		<b>4</b>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Three	<b>2</b>	<b>1</b>	<b>4</b>	<b>2</b>
Four	<b>3</b>	<b>4</b>	<b>2</b>	<b>3</b>
Five	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>
Six	<b>3</b>	<b>2</b>	<b>2</b>	<b>3</b>
Seven	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>
Eight	<b>2</b>	<b>2</b>	<b>4</b>	<b>3</b>
Nine	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>

Unit : CHY1AP CHEMISTRY UNIT 1A

Centre :

Candidate Number :

UCI :

Series : 6M12

Candidate Name :

22-JUN-12

For completion by the Examination Invigilator. Please fill this circle if the candidate is absent:

## HIGHER TIER

Instructions on how to complete this answer sheet are given on the question paper. Please make sure you follow them carefully.

Questions ONE to NINE Choose one response 1 - 4 for each of the parts A - D

QUESTION ONE		1	2	3	4
1A	carbon dioxide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	copper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	copper oxide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	it is probably the softest substance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	it is the alloy that contains only two metals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	it is an alloy that contains only one metal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	it contains the largest number of different elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION THREE		1	2	3	4
3A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FOUR		1	2	3	4
4A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FIVE		1	2	3	4
5A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION SIX		1	2	3	4
6A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION SEVEN		1	2	3	4
7A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION EIGHT		1	2	3	4
8A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION NINE		1	2	3	4
9A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9D	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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# FOUNDATION TIER

Instructions on how to complete this answer sheet are given on the question paper. Please make sure you follow them carefully.

Questions ONE to NINE Choose one response 1 - 4 for each of the parts A - D

QUESTION ONE		1	2	3	4
1A	aluminium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	copper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	iron	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	sodium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	-90	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION THREE		1	2	3	4
3A	the nucleus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3B	a bond	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3C	an electron	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3D	an element	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FOUR		1	2	3	4
4A	bronze for 'copper' coins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4B	bronze for statues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4C	cupronickel for 'silver' coins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4D	brass for ornaments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FIVE		1	2	3	4
5A	carbon dioxide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5B	copper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5C	copper oxide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5D	water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION SIX		1	2	3	4
6A		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6B		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6C		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6D		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION SEVEN		1	2	3	4
7A		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7B		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7C		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7D		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION EIGHT		1	2	3	4
8A		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8B		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8C		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8D		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION NINE		1	2	3	4
9A		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9B		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9C		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9D		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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