



**GCSE**

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

*Specification A*

**CHY1AP, CH1ASF & CH1ASH**

**Mark Scheme**

*2011 Examination – November 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)**

**November 2011**

Foundation Tier

Question	Key			
One	<b>A</b>	hard		<b>3</b>
	<b>B</b>	resistant to corrosion		<b>4</b>
	<b>C</b>	easily shaped		<b>2</b>
	<b>D</b>	brittle		<b>1</b>
Two	<b>A</b>	Chalcocite		<b>2</b>
	<b>B</b>	Chalcopyrite		<b>1</b>
	<b>C</b>	Cuprite		<b>3</b>
	<b>D</b>	Malachite		<b>4</b>
Three	<b>A</b>	a bond		<b>3</b>
	<b>B</b>	an electron		<b>2</b>
	<b>C</b>	a molecule		<b>4</b>
	<b>D</b>	a nucleus		<b>1</b>
Four	<b>A</b>	Methane		<b>2</b>
	<b>B</b>	Ethane		<b>4</b>
	<b>C</b>	Propane		<b>1</b>
	<b>D</b>	Butane		<b>3</b>
Five	<b>A</b>	Carbon dioxide		<b>2</b>
	<b>B</b>	Methane and hot air		<b>3</b>
	<b>C</b>	Limestone		<b>1</b>
	<b>D</b>	Quicklime		<b>4</b>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Six	<b>4</b>	<b>2</b>	<b>2</b>	<b>4</b>
Seven	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>
Eight	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>
Nine	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>

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

Objective Test Answer Key

**CHY1AP (Products from Rocks)**

**November 2011**

Higher Tier

Question	Key			
One	<b>A</b>	Carbon dioxide		<b>2</b>
	<b>B</b>	Methane and hot air		<b>3</b>
	<b>C</b>	Limestone		<b>1</b>
	<b>D</b>	Quicklime		<b>4</b>
Two	<b>A</b>	Hydrocarbons turn to vapour		<b>1</b>
	<b>B</b>	Hydrocarbons cool		<b>3</b>
	<b>C</b>	Hydrocarbons with low boiling points		<b>2</b>
	<b>D</b>	Hydrocarbons condense to form liquids		<b>4</b>
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Three	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>
Four	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>
Five	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>
Six	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>
Seven	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>
Eight	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
Nine	<b>2</b>	<b>3</b>	<b>1</b>	<b>4</b>

The AQA UMS Conversion Calculator can be found at the following web address:

<http://www.aqa.org.uk/umsconversion>

## Unit : CHY1AP CHEMISTRY UNIT 1A

Centre :

Candidate Number :

UCI :

Series : BG11

Candidate Name :

15-NOV-11

*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	Methane and hot air	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	Limestone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	Quicklime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	Hydrocarbons turn to vapour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	Hydrocarbons cool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	Hydrocarbons with low boiling points	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	Hydrocarbons condense to form liquids	<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"/>
3B		<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"/>
3D		<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"/>
4B		<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"/>
4D		<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"/>
5B		<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"/>
5D		<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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# 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	hard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	resistant to corrosion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	easily shaped	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	brittle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	Chalcocite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	Chalcopyrite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	Cuprite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	Malachite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

QUESTION FOUR		1	2	3	4
4A	Methane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4B	Ethane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4C	Propane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4D	Butane	<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	Methane and hot air	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5C	Limestone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5D	Quicklime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

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

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

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