



GCSE

Science A (4461)

Specification A

PHY1AP, PH1ASF & PH1ASH

Mark Scheme

2009 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 candidates' responses.

Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

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GCSE
SCIENCE A (4461)/PHYSICS (4451)
Objective Test Answer Key
PHY1AP (Energy and Electricity)
November 2009
Foundation Tier

Question	Key			
One	A	conductors	4	
	B	convectors	3	
	C	radiators	2	
	D	reflectors	1	
Two	A	toaster	4	
	B	fan	2	
	C	lamp	3	
	D	radio	1	
Three	A	Kettle A	4	
	B	Kettle B	3	
	C	Kettle C	2	
	D	Kettle D	1	
Four	A	A step-up transformer increases the voltage.	4	
	B	Steam drives a turbine.	2	
	C	The generator produces electricity.	3	
	D	Water is heated to produce steam.	1	
Five	A	0.6	4	
	B	140	2	
	C	200	3	
	D	300	1	
	A	B	C	D
Six	4	2	4	1
Seven	3	2	4	2
Eight	4	2	3	4
Nine	4	3	1	1

GCSE
SCIENCE A (4461)/PHYSICS (4451)
Objective Test Answer Key
PHY1AP (Energy and Electricity)
November 2009
Higher Tier

Question	Key			
One	A	0.6	4	
	B	140	2	
	C	200	3	
	D	300	1	
Two	A	chemical	2	
	B	electrical	3	
	C	kinetic	1	
	D	light	4	
	A	B	C	D
Three	4	2	3	4
Four	4	3	1	1
Five	2	4	4	3
Six	1	4	4	2
Seven	1	3	3	4
Eight	1	3	2	3
Nine	1	1	2	4

Unit : PHY1AP PHYSICS UNIT 1A

Centre :

Candidate Number :

UCI :

Series : BG09

Candidate Name :

19-NOV-09

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	0.6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	140	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	200	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	300	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	chemical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	electrical	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	kinetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	light	<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	conductors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	convectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	radiators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	reflectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	Toaster	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	Fan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	Lamp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	Radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

QUESTION FOUR		1	2	3	4
4A	A step-up transformer increases the voltage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4B	Steam drives a turbine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4C	The generator produces electricity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4D	Water is heated to produce steam.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FIVE		1	2	3	4
5A	0.6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5B	140	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5C	200	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5D	300	<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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