

### **GCSE**

## **Science A (4461)**

Specification A

PHY1AP, PH1ASF & PH1ASH

### **Mark Scheme**

2010 Examination - March 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) March 2010

**Foundation Tier** 

Question				Key			
	Α	conduction		4			
0:	В	convection		3			
One	С	insulation		2			
	D	radiation		1			
	Α	heat (therma	I energy	<b>'</b> )	1		
Two	В	light			3		
1 WO	С	movement (k	inetic er	nergy)	4		
	D	sound			2		
	Α	electric kettle		2			
Three	В	electric oven		4			
	С	electric show	er	1			
	D	flat-screen te	levision	3			
		=				•	
	A	Electricity is				4	
Four	В	Fission of ura				1	
	С	The heat is u				2	
	D	The turbine of	drives a	generate	or.	3	
	Α	0.25	4				
	В	60	3				
Five	C	100	1				
	D	240	2				
		Α		В		С	D
Six		3		4		2	1
Seven		1		4		2	1
Eight		3		3		1	2
Nine		2		2		2	4

### GCSE SCIENCE A (4461)/PHYSICS (4451)

Objective Test Answer Key

# PHY1AP (Energy and Electricity) March 2010

Higher Tier

Question					Key		
	Α	0.25	4				
One	В	60	3				
Offe	С	100	1				
	D	240	2				
	Α	computer m	onitor	1			
Two	В	loudspeake	r	3			
TWO	С	microphone		2			
	D	solar cell		4			
		Α		В		С	D
Three		3		3		1	2
Four		2		2		2	4
Five		3		2		2	4
Six		4		4		4	3
Seven		4		4		2	1
Eight		3		3		2	2
Nine		1		4		4	1



Unit: PHY1AP PHYSICS UNIT 1A

Centre:

**Candidate Number:** 

**Candidate Name:** 

UCI:

Series: 3G10

03-MAR-10

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

#### 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	0.25		0	0	0	0	•
1B	60		0	0	0	0	•
1C	100		0	0	0	0	•
1D	240		0	0	0	0	].
		QUESTION TWO	1	2	3	4	)
2A	computer monitor	QUESTION TWO	1	<b>2</b>	<b>3</b>	4	
2A 2B	computer monitor	QUESTION TWO	<b>1</b>	<b>2</b>	<b>3</b>	•	
	·	QUESTION TWO		0	3 0 0	0	

	QUES1		THR	EE	-
	1	2	3	4	***********
3A	0	0	0	0	-
3B	0	0	0	0	***************************************
3C	0	0	. 0	0	
3D	0	0	0	0	

	QUES	TION	SIX		1
	1	2	3	4	
6A	0	0	0	0	The state of the s
6B	0	0	0	0	The second second
6C	0	0	0	0	
6D	0	0	0	0	

	QUEST	ION F	OUR	:
	1	2	3	4
4A	0	0	$\circ$	0
4B	0	0	0	0
4C	0	0	0	Ö
4D	0	0	0	0,

	QUES'	TION	SEVE	EN 🗋
	1	2	3	4
7A	0	0	0	0
7B		0	0	0
7C	0	0	0	0
7D	0	0	0	

	QUES1	ΓΙΟΝ	NINE	
	1	2	3	4
9A	0	0	0	0
9B	0	0	0	0
9C	0	0	0	0
9D	0	0	0	0

	QUEST	TION	FIVE	
	1	2	3	4
5A	0	0	0	0
5B	0	0	0	01
5C	0	0	0	0 ,
5D	0	0	0	0 )

	QUEST	ION E	EIGH	Г
	1	2	3	4
8A	0	0	0	0
8B	0	0	0	0
8C	0	0	0	0
8D	0	0	$\circ$	0 ,

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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

OUESTION ONE	4	2	2	4
conduction	0	0	ं	0
convection	0	0	0	0
	_			0
				0
	1	_	_	4
				0
	0	0	0	0
	0	0	0	0
sound	0	0	0	0
QUESTION THREE	1	2	3	4
electric kettle	0	0	0	0
electric oven	0	0	0	0
electric shower	0	0	0	0
flat-screen television	0	Ō	0	0
QUESTION FOUR	1	2	3	4
Electricity is produced.	0	0	0	0
Fission of uranium produces heat.	0	0	0	0
The heat is used to produce steam.	0	0	0	0
The turbine drives a generator.	0	0	0	0
QUESTION FIVE	1	2	3	4
0.25	0	0	0	0
60	0	0	0	0
100	0	0	0	0
100			$\sim$	
	convection insulation  adiation  QUESTION TWO heat (thermal energy) light movement (kinetic energy) sound  QUESTION THREE electric kettle electric oven electric shower flat-screen television  QUESTION FOUR Electricity is produced. Fission of uranium produces heat. The heat is used to produce steam. The turbine drives a generator.  QUESTION FIVE 0.25 60	conduction convection insulation radiation  QUESTION TWO heat (thermal energy) light movement (kinetic energy) sound  QUESTION THREE electric kettle electric oven electric shower flat-screen television  QUESTION FOUR Electricity is produced. Fission of uranium produces heat. The heat is used to produce steam. The turbine drives a generator.  QUESTION FIVE 1 0.25 60 400	conduction convection insulation radiation  QUESTION TWO 1 2 heat (thermal energy) light movement (kinetic energy) sound  QUESTION THREE electric kettle electric oven electric shower flat-screen television  QUESTION FOUR 1 2 Electricity is produced. Fission of uranium produces heat. The heat is used to produce steam. The turbine drives a generator.  QUESTION FIVE 0.25 60 QUESTION FIVE 1 2 0.25 60 CUESTION FIVE 1 2 0.25 60 CUESTION FIVE 0.25	conduction         0         0           convection         0         0           insulation         0         0           radiation         1         2         3           heat (thermal energy)         0         0         0           light         0         0         0         0           sound         0         0         0         0         0           electric kettle         0

	QUES.	TION	SIX	
	1	2	3	4
6A	0	0	0	0
6B	0	0	0	0
6C	0	0	0	0
6D	0	0	0	0

QUESTION SEVEN					
	1	2	3	4	
7A	0	0	O	0	
7B	0	0	0	0	
7C	0	0	0	0	
7D	0	0	0	Ō	

	QUESTION EIGHT				
	1	2	3	4	
A8	0	0	0	0	
8B	0	0	0	0	
8C	0	0	0	0	
8D	0 9	0	0	0	

	QUEST	ION	NINE	
	1	2	3	4
9A	0	0	0	0
9B	0	0	0	0
9C	0	0	0	0
9D	0	0	0	0

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