



GCSE

Science A (4461)

Specification A

PHY1BP, PH1BSF & PH1BSH

Mark Scheme

2009 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 candidates' responses.

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

Copyright © 2009 AQA and its licensors. All rights reserved.

COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

GCSE
SCIENCE A (4461)/PHYSICS (4451)
Objective Test Answer Key
PHY1BP (Radiation and the Universe)
June 2009
Foundation Tier

Question	Key			
One	A	infra red	2	
	B	microwaves	3	
	C	radio waves	4	
	D	visible light	1	
Two	A	electron	2	
	B	neutron	4	
	C	nucleus	3	
	D	proton	1	
Three	A	wearing thick, insulating gloves	4	
	B	leaving the room	1	
	C	looking through blackened glass	3	
	D	using sun cream	2	
Four	A	8	4	
	B	12	3	
	C	30	2	
	D	60	1	
Five	A	microwaves	3	
	B	X-rays	1	
	C	visible light	2	
	D	radio waves	4	
	A	B	C	D
Six	2	2	1	2
Seven	3	1	1	1
Eight	4	2	4	3
Nine	1	1	3	4

GCSE
SCIENCE A (4461)/PHYSICS (4451)
Objective Test Answer Key
PHY1BP (Radiation and the Universe)
June 2009
Higher Tier

Question	<i>Key</i>			
One	A	microwaves	3	
	B	X-rays	1	
	C	visible light	2	
	D	radio waves	4	
Two	A	alpha only	1	
	B	beta only	2	
	C	gamma only	3	
	D	alpha and gamma	4	
	A	B	C	D
Three	4	2	4	3
Four	1	1	3	4
Five	2	3	4	3
Six	3	4	2	2
Seven	4	1	3	4
Eight	4	1	1	2
Nine	2	3	3	4

Unit : PHY1BP PHYSICS UNIT 1B

Centre :

Candidate Number :

UCI :

Series : 6M09

Candidate Name :

22-JUN-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 microwaves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
1B X-rays	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
1C visible light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
1D radio waves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.

QUESTION TWO

	1	2	3	4	
2A alpha only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
2B beta only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
2C gamma only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	.
2D alpha and gamma	<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"/>

For AQA Office Use Only

2239



2239

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	infra red	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1B	microwaves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1C	radio waves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1D	visible light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION TWO		1	2	3	4
2A	electron	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2B	neutron	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2C	nucleus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2D	proton	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION THREE		1	2	3	4
3A	wearing thick, insulating gloves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3B	leaving the room	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3C	looking through blackened glass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3D	using sun cream	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FOUR		1	2	3	4
4A	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4B	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4C	30	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4D	60	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

QUESTION FIVE		1	2	3	4
5A	microwaves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5B	X-rays	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5C	visible light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5D	radio waves	<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"/>

For AQA Office Use Only

2239



2239