



**GCSE**

**Science A (4461)**

*Specification A*

**PHY1BP, PH1BSF & PH1BSH**

**Mark Scheme**

*2009 Examination – March Series*

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](http://www.aqa.org.uk)

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

Question	<b>Key</b>			
One	<b>A</b>	infra red	<b>4</b>	
	<b>B</b>	visible light	<b>1</b>	
	<b>C</b>	ultraviolet	<b>3</b>	
	<b>D</b>	X-rays	<b>2</b>	
Two	<b>A</b>	alpha	<b>2</b>	
	<b>B</b>	beta	<b>3</b>	
	<b>C</b>	electron	<b>4</b>	
	<b>D</b>	gamma	<b>1</b>	
Three	<b>A</b>	conclusion	<b>4</b>	
	<b>B</b>	control variable	<b>2</b>	
	<b>C</b>	prediction	<b>1</b>	
	<b>D</b>	independent variable	<b>3</b>	
Four	<b>A</b>	electrons	<b>1</b>	
	<b>B</b>	neutrons	<b>4</b>	
	<b>C</b>	nuclei	<b>3</b>	
	<b>D</b>	protons	<b>2</b>	
Five	<b>A</b>	3	<b>4</b>	
	<b>B</b>	10	<b>1</b>	
	<b>C</b>	12	<b>2</b>	
	<b>D</b>	60	<b>3</b>	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Six	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>
Seven	<b>4</b>	<b>2</b>	<b>2</b>	<b>4</b>
Eight	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>
Nine	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>

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

Question	<b>Key</b>			
One	<b>A</b>	3	4	
	<b>B</b>	10	1	
	<b>C</b>	12	2	
	<b>D</b>	60	3	
Two	<b>A</b>	alpha particles	4	
	<b>B</b>	beta particles	2	
	<b>C</b>	gamma rays	3	
	<b>D</b>	alpha, beta and gamma radiation	1	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Three	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>
Four	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>
Five	<b>4</b>	<b>2</b>	<b>3</b>	<b>3</b>
Six	<b>3</b>	<b>4</b>	<b>4</b>	<b>3</b>
Seven	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>
Eight	<b>1</b>	<b>4</b>	<b>2</b>	<b>2</b>
Nine	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>