



**GCSE**

**Science A 4461**

*Physics 4451*

**PHY1B F & H**

**Mark Scheme**

*2007 examination - June series*

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**PHY1B (Radiation and the Universe)**

## Foundation Tier

<b>Question</b>	<b>Key</b>			
One	<b>A</b>	gamma rays	<b>1</b>	
	<b>B</b>	infra red rays	<b>3</b>	
	<b>C</b>	ultraviolet rays	<b>4</b>	
	<b>D</b>	X-rays	<b>2</b>	
Two	<b>A</b>	hat	<b>1</b>	
	<b>B</b>	parasol	<b>3</b>	
	<b>C</b>	sunglasses	<b>4</b>	
	<b>D</b>	sunscreen cream	<b>2</b>	
Three	<b>A</b>	electron	<b>4</b>	
	<b>B</b>	neutron	<b>3</b>	
	<b>C</b>	nucleus	<b>2</b>	
	<b>D</b>	proton	<b>1</b>	
Four	<b>A</b>	It can contain large, very heavy components.	<b>1</b>	
	<b>B</b>	Maintenance is very difficult to carry out.	<b>4</b>	
	<b>C</b>	The quality of data obtained from it is not affected by atmospheric gases.	<b>3</b>	
	<b>D</b>	It cannot be used during the day.	<b>2</b>	
Five	<b>A</b>	gamma radiation	<b>4</b>	
	<b>B</b>	X-ray radiation	<b>3</b>	
	<b>C</b>	alpha radiation	<b>1</b>	
	<b>D</b>	beta radiation	<b>2</b>	
Six	<b>A</b>	storing the waste in mineshafts	<b>2</b>	
	<b>B</b>	storing the waste in metal tanks	<b>3</b>	
	<b>C</b>	dumping the waste at sea	<b>4</b>	
	<b>D</b>	launching the waste into space	<b>1</b>	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Seven	<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>
Eight	<b>1</b>	<b>4</b>	<b>3</b>	<b>1</b>
Nine	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>

**PHY1B (Radiation and the Universe)****Higher Tier**

<b>Question</b>	<b>Key</b>			
One	<b>A</b>	storing the waste in mineshafts	<b>2</b>	
	<b>B</b>	storing the waste in metal tanks	<b>3</b>	
	<b>C</b>	dumping the waste at sea	<b>4</b>	
	<b>D</b>	launching the waste into space	<b>1</b>	
Two	<b>A</b>	alpha ( $\alpha$ )	<b>4</b>	
	<b>B</b>	beta ( $\beta$ )	<b>2</b>	
	<b>C</b>	gamma ( $\gamma$ )	<b>3</b>	
	<b>D</b>	alpha ( $\alpha$ ), beta ( $\beta$ ) and gamma ( $\gamma$ )	<b>1</b>	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Three	<b>1</b>	<b>4</b>	<b>3</b>	<b>1</b>
Four	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>
Five	<b>2</b>	<b>4</b>	<b>4</b>	<b>4</b>
Six	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>
Seven	<b>3</b>	<b>1</b>	<b>1</b>	<b>4</b>
Eight	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>
Nine	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>