

Question number	Answer	Notes	Marks
7 (a)	coil of wire; current in the wire; iron core;	current may be inferred from diagram	3
(b)	down;	allow force arrow drawn pointing down on diagram	1
(c) (i)	time taken; for {activity / number of (radioactive) nuclei / amount of isotope / count rate} to halve;	allow atoms for nuclei	2
(ii)	any two from: MP1. radiation unlikely to penetrate out of walls; MP2. (more than) two half-lives have passed; MP3. amount of barium-133 remaining is less (than 25%); MP4. visitors exposed to radiation for very short time;	allow idea that activity / amount of radiation is (much) less than before	2

Total for Question 7 = 8 marks