

Question number	Answer	Notes	Marks
8 (a)	A (background radiation)		1
(b)	<p>Any TWO of</p> <p>1. Range / penetration of alpha radiation is low;</p> <p>2. Radon (is a gas so) particles /atoms mobile OR americium (solid so) particles / atoms stay in place;</p> <p>3. Radon can be inhaled / damage internal tissue OR radiation from americium stays within smoke detector / absorbed by the plastic;</p>	<p>WTTE throughout this part</p> <p>ACCEPT 'cannot penetrate skin' / 'travel a few cm in air'</p> <p>ACCEPT 'all around us', 'more likely to come into contact', ACCEPT 'contained', 'stays in detector'</p> <p>ACCEPT 'can be breathed in', 'can get inside body', 'can damage (internal) cells /organs' ACCEPT 'high up', 'far from people'</p>	2
(c) (i)	A (86)		1
(ii)	B (134)		1
(d) (i)	Bq / becquerel(s);	<p>ACCEPT approximate / phonetic spellings of becquerel / Becquerel / bekerel REJECT B, BQ, bQ, bq</p>	1