

Question number	Answer	Notes	Marks
6 (a) (i)	rocks / radon (gas) / space / cosmic / Sun / medical sources / from carbon atoms in living things	REJECT named radiation e.g. gamma	1
(ii)	Any three from Remove source / with no source present; measure background / count; repeat / find mean / average value; subtract (background value) from experimental values (with source);	ACCEPT take readings (of background) / read background	Max 3
(b) (i)	GRAPH S A P P L	Orientation unimportant Quantity and unit on both axes Single smooth curve	5
(ii)	value consistent with graph (should be 0.9 – 1.4 minutes)		1
(c)	(gamma) can be detected outside the body /can pass through; half life related to use – long enough to get around the body (for use as tracer); half life related to patient safety - falls to low levels soon after use;	Ignore ionising ability Reject “cause less damage” without reference to activity or time	3