Question number	Answer	Notes	Marks
5 (a)	substitution into $v^2 = u^2 + 2as$; rearrangement; evaluation; e.g. $75^2 = (0^2 +) 2 \times 4.1 \times s$ s = 5 625 / 8.2 (s =) 690 (m)	allow alternative method of finding the time taken and then using **average** speed = distance/time 1371-1372 = 2 marks allow 686, 685.9756…	3
(b) (i)	any two from: MP1. idea of radiation that is always present / present everywhere; MP2. idea of no 'obvious' source; MP3. any valid source of background radiation given e.g. radon/rocks/cosmic rays/medical or military activity/the Sun etc.;		2
(ii)	any three from: MP1. idea that excessive exposure time can be harmful/increases risk; MP2. idea that dosage is higher (at maximum height); MP3. idea that increased risk of cancer; MP4. idea that there is less atmosphere to absorb cosmic radiation; MP5. cosmic rays/radiation is increased;	allow cell mutation for cancer	3

(Total for Question 5 = 8 marks)