Question number	Answer		Mark
14(a)	• The speed of the muon is very close to the speed of light	1	**(5)**
	• Calculate distance travelled at 0.994 c in the average lifetime (without relativistic effects) = 656 m **Or** Calculate the time to travel 1600 m at 0.994c = 5.4 x 10^{-6} s	1	
	• Comparative comment about calculated value and situation if no relativistic effects	1	
	• Comment about lifetime linked to relativistic effects **Or** Comment about time of flight linked to relativistic effects	1 1	
	• Reason why most reach the ground	1	
14(b)	• Muons are leptons **Or** Muons are fundamental/elementary particles	1	**(2)**
	• but mesons are made of quarks **Or** mesons are made of quark-antiquark	1	
	Total for Question 14		**7**