	Marks
• A medical procedure requires 15.0 mg of ^{111}In. What mass of isotope would be required to be able to use it exactly 4 days later? The half life of ^{111}In is 2.80 days.	**2**
Answer:	
• Write balanced nuclear equations for the following reactions. Positron decay of potassium-40.	**3**
Electron capture by gallium-67.	
Alpha decay of dysprosium-151.	
• Briefly explain the apparent contradiction between the following statements. "Alpha particles are easily stopped by the skin." "The alpha-emitter, radon, is thought to be a significant cause of cancer."	**1**