

Question number	Answer	Notes	Marks
3 (a)	<p>one mark for each correct line;; -1 for each additional line</p> <p>Part of reactor</p> <p>Function</p> <pre> graph LR subgraph Part_of_reactor CR[control rod] M[moderator] end subgraph Function R1[releases neutrons] R2[cools neutrons] R3[slows neutrons] R4[absorbs neutrons] end CR --- R4 M --- R3 </pre>		2
(b)	<p>any four from:</p> <p>MP1. a <u>nucleus</u> absorbs a <u>neutron</u>;</p> <p>MP2. unstable nucleus formed/eq;</p> <p>MP3. <u>nucleus</u> splits;</p> <p>MP4. (two or more) neutrons released;</p> <p>MP5. (two) daughter nuclei formed;</p> <p>MP6. energy released;</p>	<p>allow neutron { hits/strikes/collides with } nucleus ignore references to speed of neutron neutron is shot at nucleus allow unstable isotope, unstable atom metastable isotope ignore unbalanced must be clear that it is the nucleus that is splitting</p> <p>allow three daughter nuclei ignore cells, atoms, isotopes for nuclei allow idea of gamma radiation emitted</p>	4

Total for Question 3 = 6 marks