## 2002 HIGHER SCHOOL CERTIFICATE EXAMINATION Chemistry

Section I – Part B (continued)

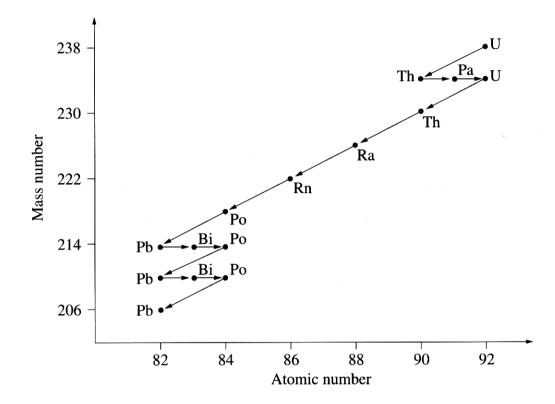
Question 19 (5 marks)		Marks
(a)	Describe the conditions under which a nucleus is unstable.	2
	a neideus une become unstable d'il is	
	too heavy, has a atomic no greater than 83 (Birmuth), its proton to	
	noutron ratio puts it outside a stable	
	vation, or has too much energy.	

Question 19 continues on page 14

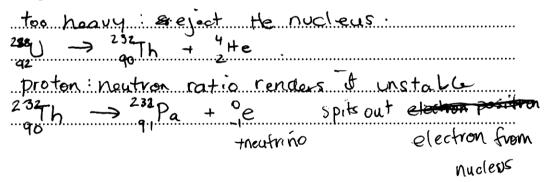
## Question 19 (continued)

(b) The following is a flow diagram showing the sequence of products released during the decay of uranium.

3



Use examples from the flow diagram to describe processes by which an unstable isotope undergoes radioactive decay.



**End of Question 19**