

Chemistry

Section I – Part B (continued)

Marks

Question 19 (5 marks)

- (a) Describe the conditions under which a nucleus is unstable.

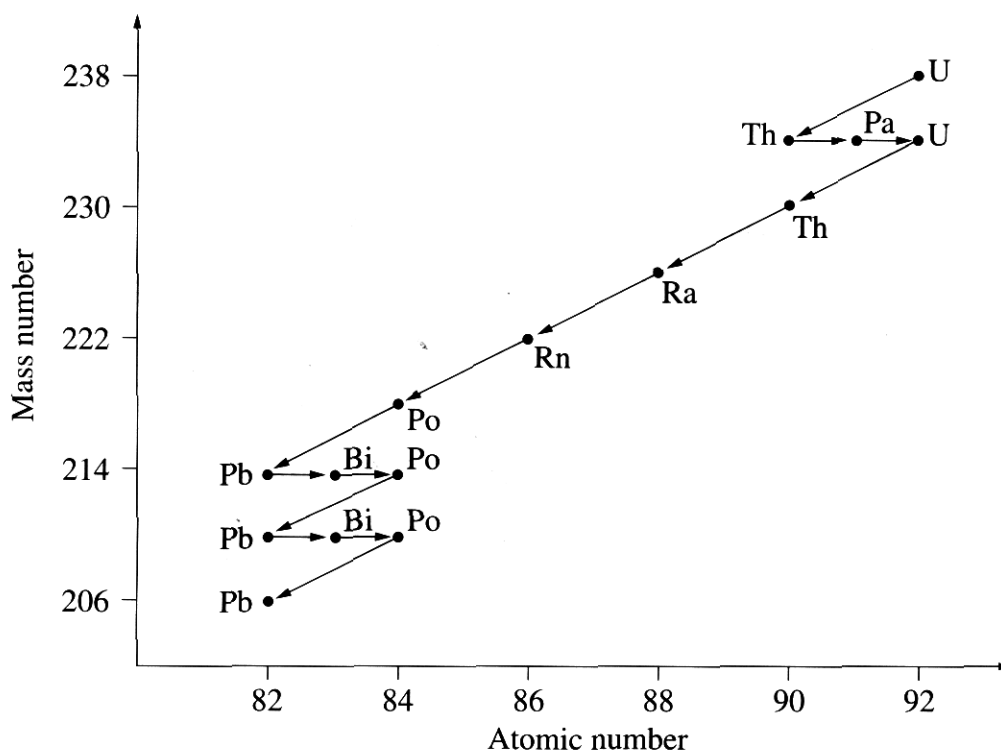
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At high energy levels a nucleus may become unstable as its particles may have a kinetic energy level sufficient enough to break the particles forming the nucleus apart.

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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.

An unstable isotope undergoes radioactive decay in this flow diagram by beta decay that is that a proton and neutron are lost from the element causing it to decrease its mass and decay to form another element.

End of Question 19

