Distinguishing Two Photon Emission Records

Scoring guide · one credit per question · review written work against each rubric

Distinguishing Two Photon Emission Records

Question 1

Choice (1)

R shows the nucleus losing energy as it emits a photon. In S the electron loses energy, while the nucleus is unchanged.

Question 2

The number of protons and neutrons stays the same. Their sum gives mass number, and the proton count gives atomic number. The change is in energy.

Question 3

A photon carries away energy without removing a proton or a neutron. The unchanged counts are consistent with nuclear energy decreasing by photon emission.

Question 4

S is the counterexample. Its electron energy decreases and the nuclear energy stays the same, so the photon is associated with the electron transition.