Reconstructing Two Paths in a Model Lamp

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

Reconstructing Two Paths in a Model Lamp

Question 1

Choice (2)

The first drop is 5 − 2 = 3 eV. The second drop is 2 − 0 = 2 eV.

Question 2

D gives one 5 eV photon. S gives photons of 3 and 2 eV, totaling 5 eV. Both paths begin and end at the same energy levels.

Question 3

For D it records one 5 eV photon. For S it records one 3 eV photon because 2 eV is below the threshold. The number recorded matches, but the energies differ.

Question 4

The electron emits a 2 eV photon. It is below the 2.5 eV threshold, so the instrument misses it even though the model emits energy.