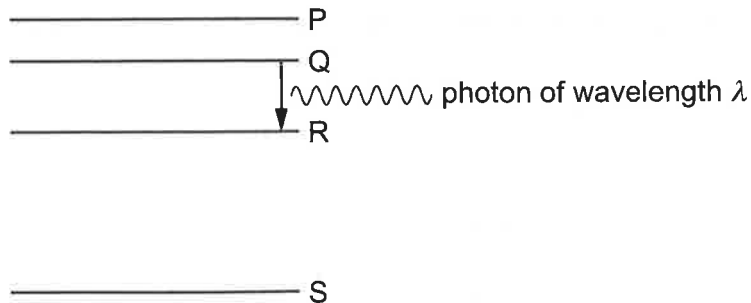


- 29 The diagram shows four electron energy levels of an atom in a gas. The levels are labelled P, Q, R and S.



When an electron moves from level Q to R, it emits a photon of wavelength  $\lambda$ .

How many electron transitions between the energy levels will produce a photon with a wavelength smaller than  $\lambda$ ?

A 2

B 3

C 4

D 5

- 30 Photoelectric emission occurs from a certain metal when light of wavelength less than or equal to