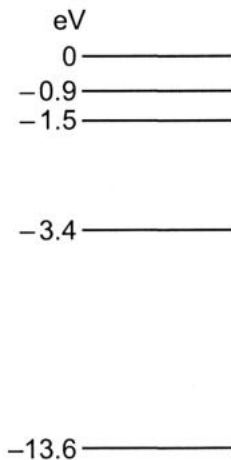


37 The diagram shows five energy levels of the hydrogen atom, labelled in the unit of electron-volt.



Which statement is correct?

- A An atom in the level -3.4 eV can change levels by emitting photons of energy 1.9 eV, 2.5 eV, 3.4 eV and 10.2 eV.
- B An atom in the level -3.4 eV can emit a photon of wavelength 650 nm to arrive in the level -1.5 eV.
- C An electron with energy 10.2 eV colliding with an atom in level -13.6 eV can move it to the level -3.4 eV by losing all of its kinetic energy.
- D Most hydrogen atoms will be found in the level with zero energy.

38 Which statement about the energy bands in an ideal intrinsic semiconductor is correct?