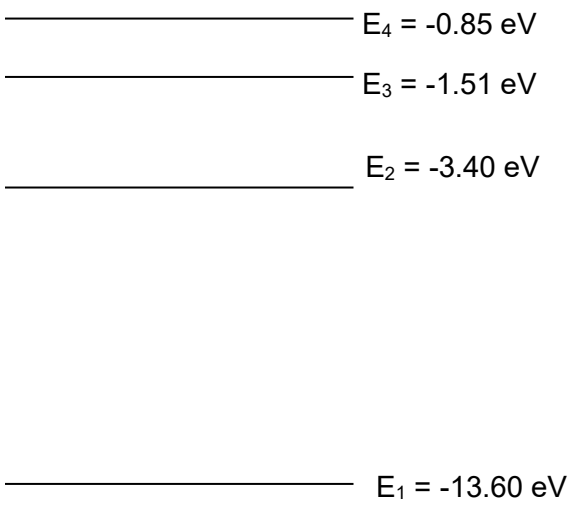
**30** The diagram shows some of the energy levels (not drawn to scale) of hydrogen atom. Four photons of wavelength 7.5 nm, 8.0 nm, 11.4 nm and 74.6 nm, strike a sample containing these hydrogen atoms in their ground state.




What is the maximum speed of the ejected electron?

**A** $1.04 \times 10^6$ m $s^{-1}$

**B** $2.36 \times 10^6$ m $s^{-1}$

**C** $7.31 \times 10^6$ m $s^{-1}$

**D** $7.61 \times 10^6$ m $s^{-1}$