

Marks
3

- Describe how one of the following pieces of experimental evidence contributed to the development of quantum mechanics.

photoelectric effect OR *visible spectrum of hydrogen*

4

- K-shell x-ray emission ($2p \rightarrow 1s$) from an unknown element is of the same wavelength as the shortest x-rays observed as *Bremsstrahlung* when electrons are accelerated by 52.9 keV into a copper target. What is the name of the unknown element?

ANSWER: