7 **(a)** State what is meant by the *de Broglie wavelength*.

For Examiner's Use

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..... [2]

(b) An electron is accelerated in a vacuum from rest through a potential difference of 850V.

(i) Show that the final momentum of the electron is 1.6×10^{-23} Ns.

[2]

(ii) Calculate the de Broglie wavelength of this electron.

wavelength = ... m [2]

(c) Describe an experiment to demonstrate the wave nature of electrons.
You may draw a diagram if you wish.

For Examiner's Use

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