**5** **(a)** Explain why the electric potential near an isolated proton is positive.

.....

.....

.....

.....

..... [3]

**(c)** The proton and the electron in a hydrogen atom are separated by a distance of $5.3 \times 10^{-11}$ m.

Calculate the electric potential energy of the proton and the electron.

electric potential energy = ..... J [2]

[Total: 9]