

27 Which electromagnetic wave would cause the most significant diffraction effect for an atomic lattice of spacing around 10^{-10} m?

- A** infra-red
- B** microwave
- C** ultraviolet
- D** X-ray

28 An electron is in an electric field of strength $5 \times 10^4 \text{ V m}^{-1}$. The field is the only influence on the electron.

The mass and charge of an electron are known.

Which quantity can be calculated without any more information?

- A** the force on the electron
- B** the momentum of the electron
- C** the kinetic energy of the electron
- D** the speed of the electron

Space for working