

**4** In an electron diffraction experiment, electrons are accelerated by a potential difference between a hot filament and an anode. The electron beam produced strikes a sample of crystalline material causing a diffraction pattern.

Which of the following would cause the angle of diffraction to increase?

- ☐ **A** decreasing the distance between the filament and the anode
- ☐ **B** decreasing the potential difference
- ☐ **C** increasing the filament temperature
- ☐ **D** using a crystalline material with a larger lattice spacing

**(Total for Question 4 = 1 mark)**