

**28** An electromagnetic wave is incident normally on a diffraction grating.

A second-order maximum is produced at an angle of  $30^\circ$  to a normal to the grating.

The grating has 5000 lines per cm.

What is the wavelength of the wave?

- A**  $2.5 \times 10^{-7}$  m
- B**  $5.0 \times 10^{-7}$  m
- C**  $1.0 \times 10^{-6}$  m
- D**  $5.0 \times 10^{-5}$  m

**29** R is a point near to charge X as shown