

27 What is an example of the diffraction of a wave?

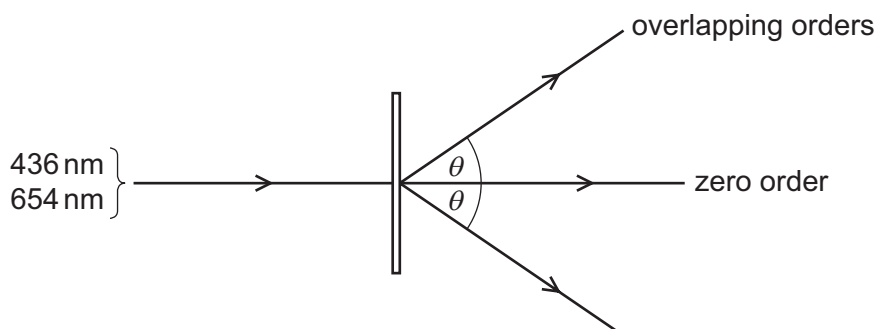
- A laser light travelling along an optic fibre
- B light waves forming images on a cinema screen
- C microwaves passing the edge of a metal plate
- D sound waves diverging as they pass through air

28 When the light from two lamps falls on a screen, no interference pattern can be obtained.

Why is this?

- A The lamps are not point sources.
- B The lamps emit light of different amplitudes.
- C The light from the lamps is not coherent.
- D The light from the lamps is white.

29 A beam of light consists of two wavelengths of 436 nm and 654 nm. A diffraction grating of  $5.00 \times 10^5 \text{ lines m}^{-1}$  produces a diffraction pattern in which the second order of one of these wavelengths occurs at the same angle  $\theta$  as the third order of the other wavelength.



What is the angle  $\theta$ ?

- A  $19.1^\circ$       B  $25.8^\circ$       C  $40.8^\circ$       D  $78.8^\circ$

30 Which diagram shows the electric field lines surrounding an isolated negative point charge?

