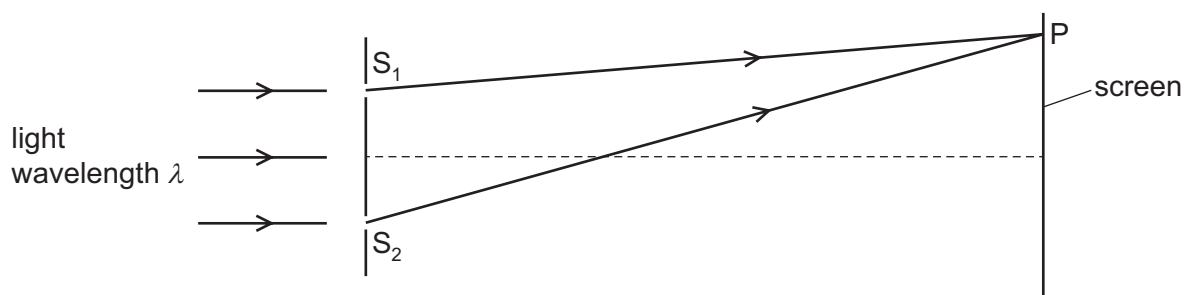


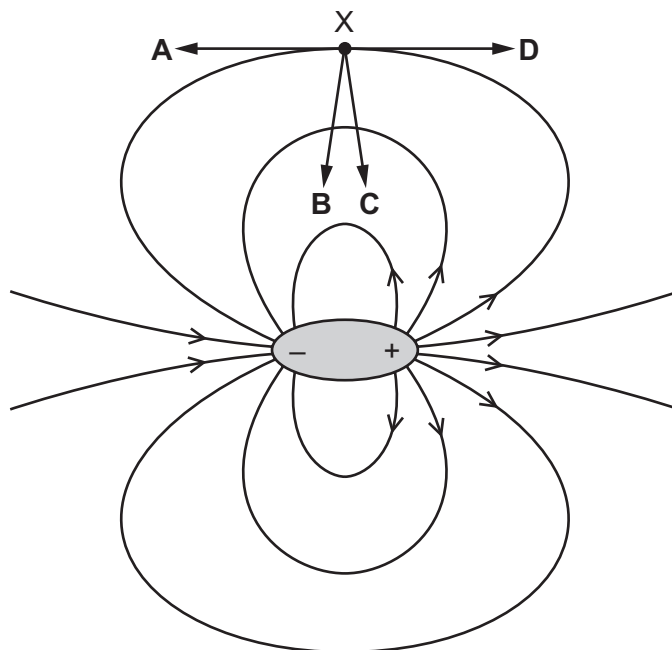
- 28 Monochromatic light of wavelength  $\lambda$  is incident on two narrow slits  $S_1$  and  $S_2$ , a small distance apart. A series of bright and dark fringes are observed on a screen a long distance away from the slits.



The  $n$ th **dark** fringe from the central bright fringe is observed at point P on the screen.

Which equation is correct for all positive values of  $n$ ?

- A  $S_2P - S_1P = \frac{n\lambda}{2}$
- B  $S_2P - S_1P = n\lambda$
- C  $S_2P - S_1P = (n - \frac{1}{2})\lambda$
- D  $S_2P - S_1P = (n + \frac{1}{2})\lambda$
- 29 A dipole is a pair of charges of equal magnitude, one negative and one positive. The electric field of a dipole is shown below.



In which direction does the force act on an electron when at point X?