

- 6 Two horizontal metal plates are situated 1.2 cm apart, as illustrated in Fig. 6.1.

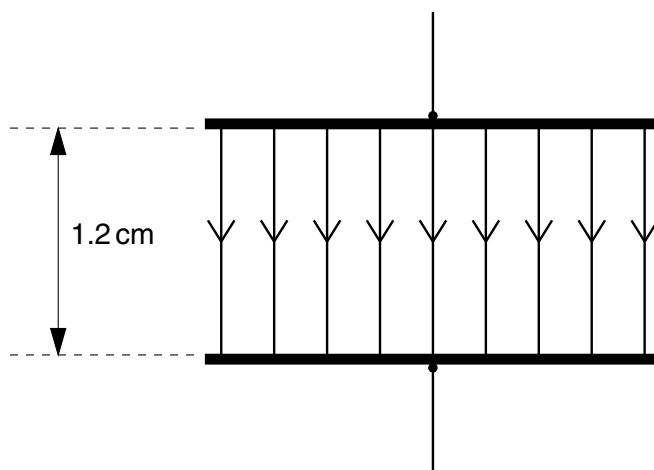


Fig. 6.1

The electric field between the plates is found to be  $3.0 \times 10^4 \text{ N C}^{-1}$  in the downward direction.

- (a) (i) On Fig. 6.1, mark with a + the plate which is at the more positive potential.  
(ii) Calculate the potential difference between the plates.

potential difference = ..... V [3]

- (b) Determine the acceleration of an electron between the plates, assuming there is a vacuum between them.

acceleration = .....  $\text{m s}^{-2}$  [3]