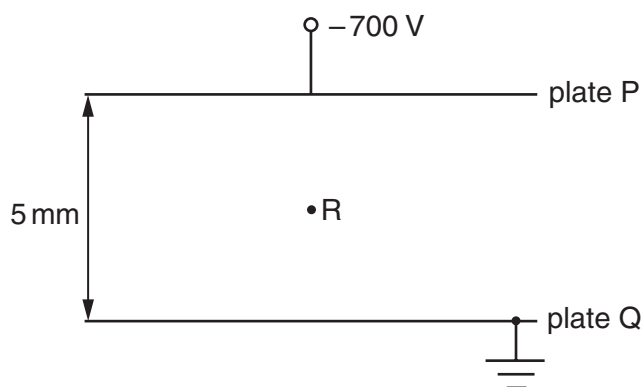


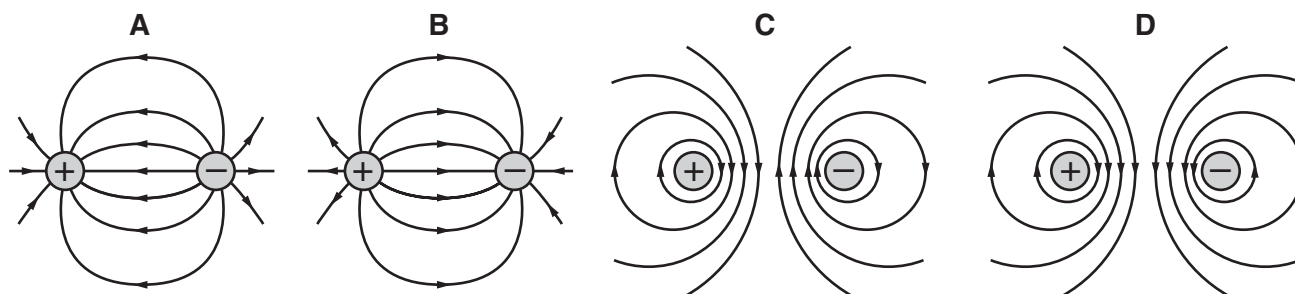
- 36 The diagram shows two metal plates P and Q between which there is a potential difference of 700 V. Plate Q is earthed.



What is the magnitude and direction of the electric field at point R?

- A $1.4 \times 10^2 \text{ N C}^{-1}$ from P towards Q
 B $1.4 \times 10^2 \text{ N C}^{-1}$ from Q towards P
 C $1.4 \times 10^5 \text{ N C}^{-1}$ from P towards Q
 D $1.4 \times 10^5 \text{ N C}^{-1}$ from Q towards P
- 37 A positive charge and a negative charge of equal magnitude are placed a short distance apart.

Which diagram best represents the associated electric field?



- 38 In what way do the atoms of the isotopes $^{12}_6\text{C}$, $^{13}_6\text{C}$ and $^{14}_6\text{C}$ differ?

- A different charge
 B different numbers of electrons
 C different numbers of neutrons
 D different numbers of protons