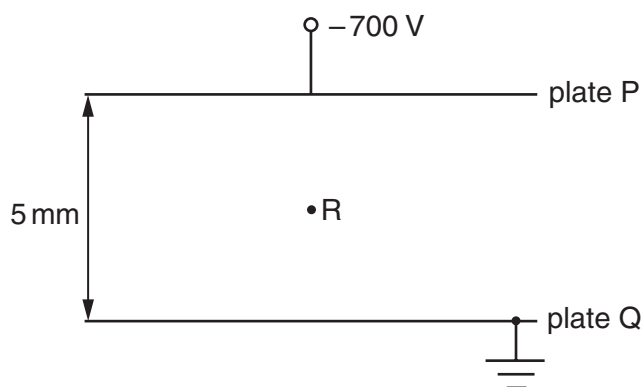


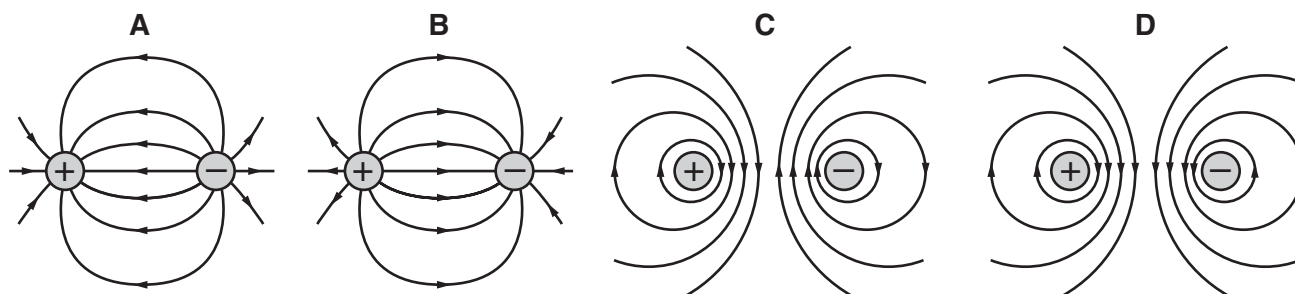
- 36 The diagram shows two metal plates P and Q between which there is a potential difference of 700 V. Plate Q is earthed.



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

- A  $1.4 \times 10^2 \text{ NC}^{-1}$  from P towards Q  
 B  $1.4 \times 10^2 \text{ NC}^{-1}$  from Q towards P  
 C  $1.4 \times 10^5 \text{ NC}^{-1}$  from P towards Q  
 D  $1.4 \times 10^5 \text{ NC}^{-1}$  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