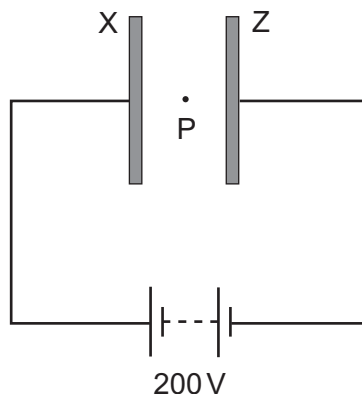


- 31** Two large parallel plates X and Z are placed 5.0 mm apart and connected as shown to the terminals of a 200 volt d.c. supply.



A small oil drop at P carries one excess electron.

What is the magnitude of the electrostatic force acting on the oil drop due to the electric field between the plates?

- A** $6.4 \times 10^{-15} \text{ N}$
- B** $6.4 \times 10^{-18} \text{ N}$
- C** $1.6 \times 10^{-19} \text{ N}$
- D** $4.0 \times 10^{-24} \text{ N}$