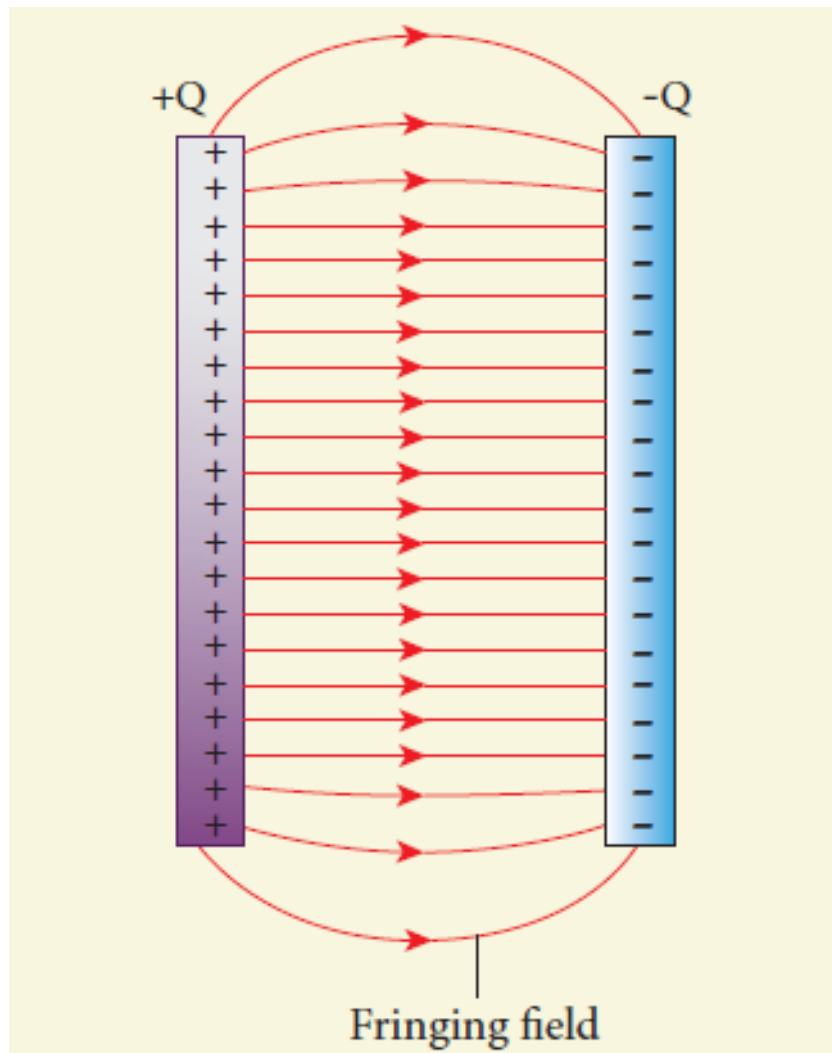# Fringing field

While deriving an expression for capacitance of the parallel plate capacitor, the expression of the electric field for infinite plates is used. But for finite sized plates, the electric field is not strictly uniform between the plates. At both edges, the electric field is bent outwards as shown in the Figure.

Fringing field

This is called "fringing field". However under the condition ($d^2 \ll A$), this effect can be ignored.