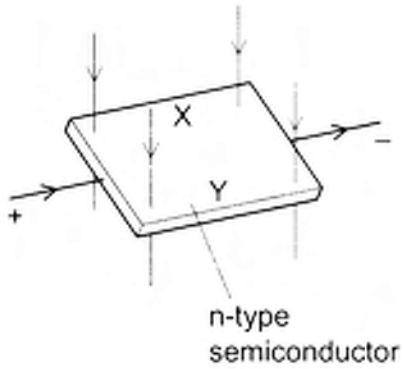
**38** A thin slab of n-type semiconductor is connected at its ends to a battery causing a current through it.




A uniform magnetic field is applied vertically downwards over the surface of the slab causing an electric field between sides X and Y of the slab.

Which row correctly describes the majority carriers of the electric current in the slab and the direction of the induced electric field?

| | majority carriers | electric field direction |
|---|---|---|
| **A** | conduction electrons | from X to Y |
| **B** | conduction electrons | from Y to X |
| **C** | holes | from X to Y |
| **D** | holes | from Y to X |