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ELECTRICAL AND ELECTRONICS ENGINEERING

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1. From Newton’s second law of motion, the magnitude of acceleration is directly proportional to the net force acting on a body and it’s in the same direction as the force. When an electron enters a field, there is a vertical downward force acting on it. Therefore the direction of ’a’ is downward just the way force F is directed.
2. An electric field is a region around a charge where another charge can experience electric force. When a charged particle with charge ‘q’ at a point is acted upon by an electric force F, the electric field at that point is defined as E=F/q.
3. An electric current is a stream of charged particles such as electrons or ions moving through an electrical conductor. The moving charged particles are called charge carriers.
4. A magnetic field is defined as the force a charged particle experiences moving in this field. The magnitude of this force is proportional to the amount of the charge q, the speed of the charged particle v , and the magnitude of the applied magnetic field. F= q[E+(v\*B)].