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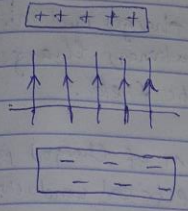
Computer Engineering

1)



Since the electron is negatively charged, and unlike charges attracts so that it will move to the ~~electron~~ direction of the positive terminal of the electric field. The electron will be acted upon by a force that will be directed opposite to the electric field i.e force is downward direction.

Newton's 2nd Law, force = mass x acceleration

$F = qe$ $\quad F = m \times a$

$F = eE$ $\quad f = ma$

$eE = ma$

$a = e \times E/m$

Since the electric field is uniform, therefore the magnitude and direction of the electric field will be constant. The force will be constant and the magnitude of the acceleration will be constant while the direction of the acceleration will be downard

2) Electric field: It is an electric property associated with each point in space when charge is present in any form. The magnitude and direction of the electric field are expressed by the value of E, called electric field strength or electric field intensity or simply the electric field. Knowledge of the value of the electric field at a point, without any specific knowledge of what produced the field, is all that is needed to determine what will happen to electric charges close to that particular point.

2b) Magnetic field: A charge that is moving in a magnetic field experiences a force perpendicular to its own velocity and to the magnetic field. Magnetic fields are produced by moving electric charges and intrinsic magnetic moments of elementary particles. A stationary charged particle does not interact with a static magnetic field.

2b) Electric current: An electric current is a stream of charged particles such as electrons or ~~ions~~ ions moving through an electrical conductor or space. ~~If a~~ Current can be caused by the flow of electron, ions or other charged particles