Markmanuel Agbogiba Markbare Winner
19/ENG06/035
Mechanical Engineering
ENG 221: Basic Electrical Engineering

1. Newton's second law of motions states that the acceleration of an object as produced by a net force is directly proportional to the magnitude of the object ($\vec{F_{net}} = \vec{ma}$).

As the electrons enter the field there will be a vertical downward force acting on it reason being that electric field is directed upward $F = ma$

Magnitude of force is given as $F = Gq$

$a = Gq/m$

2. Electric field and electric current with respect to charges

Electric field is a region ~~around a charge in which a~~ around which an electrically charged particles are in felt. In a case where the test charge is +ve (positive) ~~the direction of~~ the electric force and electric field will be in the same direction. But in a case where the test charge is -ve (negative) the direction will be opposite. An electric field is not a single vector quantity but an infinite set of vector quantities, associated with each point in space this is called a vector field. A magnetic field is a vector field which describes the influence on a moving electric charges and electric currents. Electric current ~~is given as~~ can be mathematically expressed as

$$I = Qt$$