

NWOKORIE PASCAL CHIRANUBI

18/11/2020

19/RNG051043

MECHATRONICS ENGINEERING

1) Using Newton's Second law of motion  $\Rightarrow F = ma$ , where  $F$  is the force at which the electron was shot horizontally,  $m$  = mass of the electron;  $a$  = acceleration of electron that is moving in the uniform field. The magnitude of the acceleration of the electron that was shot horizontally, in a uniform field is the force  $F$  at which was used to shoot it. The direction of the acceleration of the electron will vary due to the fact that the field at which the electron is moving is not specified and since it is not specified it will be assumed to be moving straight in the uniform field.

2) Electric field is a region in space where an electric charge ~~experiences~~ experiences an electric force ( $F$ )

$$\vec{E} = \frac{\vec{F}}{q}$$

Magnetic field is a vector field that describes the magnetic influence that causes a force to act upon electric charges, electric current and magnetized materials

Electric current is the movement of electrons in a circuit, electric field & magnetic field.