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Matric Number: 19/ENG05/024

Department: Mechatronics Engineering

Course Code: ENG 221

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1. Using Newton's law of motion, $F=ma$ where the force at which the electron was shot horizontally, m_e mass of the electron, a acceleration of electron that's 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 off.

The direction of the acceleration of the electron will vary due to the fact that the field at which this electron is moving 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, q , 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 and magnetic field. It is a measure of the quantity of charge passing any point of the wire per unit of time.