**Development of Virtual lab :Round 1 (R1) Pedagogy - Template (Worksheet)**

|  |
| --- |
| **Name of Faculty:** Dr. Anurag Chauhan  **Institute:**Rajkiya Engineering College, Banda  **Email ID** (as submitted in the registration form)**:**anurag.chauhan36@gmail.com  **Discipline to which the Lab belongs:**Chemistry  **Name of the Lab:**Basics of Chemistry  **Name of experiment:** Verification Of JJ Thomson Experiment  (only one Experiment per worksheet. for submitting more than one experiments, please fill up another worksheet)**:**  **Kindly Refer these documents before filling the worksheet**   1. **Coursework (MOOC ) on Pedagogy , Storyboard , Lab Manual :** [**http://bit.ly/Vlabs-MOOC**](http://bit.ly/Vlabs-MOOC) 2. **Additional Documentation booklet for reference.** [**http://vlabs.iitb.ac.in/vlabs-dev/document.php**](http://vlabs.iitb.ac.in/vlabs-dev/document.php) 3. **Sample Git Repository. :** |

* 1. **FOCUS AREA: Engineering Chemistry.**
  2. **About the Experiment:** Electron enter the region between the plates with an velocity ‘v’ in the x- direction, both the applied field gives rise to force on the electron.

These force are in the y-direction:

F (electric) = eE

Where, E is the magnitude of the electric field.

And B is the magnitude of magnetic field is opposed to the force on the electric field.

F (magnetic) = evB

If these forces balance, then there will be no deflection of the electron in y-direction, i.e, all the electrons motion will be in the x-direction. If the forces balance, then the total force on the electron will be zero, i.e

F (electric) + F (magnetic) = 0

eE-evB =0

v=E/B

**1.3 Learning Objectives:**

.

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Learning Objective** | **Cognitive Level** | **Action Verb** |
| 1. | Identify the relation between electric field, magnetic field and velocity of the electron. | recall | identify |
| 2. | Describe the methodology to obtain the value y which have independent variables E,M and constant x which depend on the instrument. | Understand | describe |
| 3. | By obtaining the value e/m from previous relationship we get charge to mass ratio is always same. | Evaluate | conclude |

**2. Instructional Strategy**

**2.1 Instructional Strategy:**Expository method

**2.2 Assessment Method:**

**Pre question:**

**Post question:**

**2.3 Description of sections:**