**Department of Physics & NANOTECHNOLOGY**

**SRM IST, KaTTANKULATHUR**

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**Name of the student: Reg. No:**

**Semester: Branch & Section :**

**Subject Code: 21PYB102J**

**Subject Title: Physics: Semiconductor Physics & Computational Methods**

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| --- | --- | --- | --- | --- | --- |
| **S. No** | **Title of the Experiment** | **CO** | **PO** | **Marks** | **Signature** |
| 1 | Determination of Hall coefficient and carrier type for a semi-conducting material | 4,6 | 1,2,4 |  |  |
| 2 | Band gap determination using post office box | 2,6 | 1,2,4 |  |  |
| 3 | Resistivity determination for a semiconductor wafer using four probe method | 4,6 | 1,2,4 |  |  |
| 4 | To study V-I characteristics of a light-LDR | 2,6 | 1,2,4 |  |  |
| 5 | Study of V-I and V-R characteristics of a solar cell & Efficiency of solar cell | 3,6 | 1,2,4 |  |  |
| 6 | Characteristic of pn junction diode under forward & reverse bias | 2,6 | 1,2,4 |  |  |
| 7 | To study illumination and v-i characteristics of a photocell | 2,6 | 1,2,4 |  |  |
| 8 | Determination of lattice parameters using powder XRD | 2,6 | 1,2,4 |  |  |
| 9 | Determination of electron and hole mobility versus doping concentration using GNU Octave | 3,6 | 1,2,4 |  |  |
| 10 | Plotting and interpretation of I-V characteristics of Diode GNU Octave | 5,6 | 1,2,4 |  |  |