**19EC21P1 – ELECTRONIC DEVICES LAB**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Category:** | Program Core | **Credits:** | 1.5 |
| **Course Type:** | Practical | **Lecture-Tutorial- Practice:** | 0 - 0 - 3 |
| **Prerequisite:** | Basic Electrical Sciences and Electronic Devices | **Sessional Evaluation:****External Evaluation :****Total Marks:** | 4060100 |

|  |  |
| --- | --- |
| **Course****Objectives** | Students undergoing this course are expected to understand: |
| 1. The behaviour of various semiconductor devices.
2. The V-I characteristics of various semiconductor devices.
 |
| **Course Outcomes** | Upon successful completion of the course, the students will be able to: |
| CO1 | Analyse the electronic circuits experimentally. |
| CO2 | Verify the V-I characteristics of various semiconductor devices experimentally. |
| CO3 | Analyse& Calculate the cut-in voltage and forward resistance of P-N Junction diode practically. |
| CO4 | Examine the performance of JFET and UJT. |
| CO5 | Understand the performance LED and DIAC |
| CO6 | Inspect the input and output characteristics of BJT. |
| **Course****Content** | Minimum of **TEN** experiments to be completed out of the following:**LIST OF EXPERIMENTS**1. P-N Junction Diode Characteristics(Si Diode)
2. Zener Diode Characteristics
3. Bi-Polar Junction Transistor Characteristics (CE Configuration)
4. Junction Field Effect Transistor Characteristics
5. Uni-Junction Transistor Characteristics
6. Light Dependent Resistor Characteristics
7. Photo Transistor Characteristics
8. Thermistor Characteristics
9. LED Characteristics
10. DIAC Characteristics
11. SCR Characteristics
12. Solar Cell Characteristics
 |

|  |
| --- |
| Contribution of Course Outcomes towards achievement of Program Outcomes  |
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 |  3 | 3 | 2 | 2 | 1 | - | - | 2 | - | - | - | 2 | 3 | 3 |
| CO2 | 3 | 3 | 2 | 2 | 1 | - | - | 2 | - | - | - | 2 | 3 | 3 |
| CO3 | 3 | 3 | 3 |  1 |  1 |  - |  - |  2 |  - |  - |  - |  2 |  3 |  3 |
| CO4 | 3 | 3 | 2 | 2 | 1 | - | - | 2 | - | - | 2 | 2 | 3 | 3 |
| CO5 | 3 | 3 | 2 | 2 | 1 | - | - | 2 | - | - | 2 | 2 | 3 | 3 |
| CO6 | 3 | 3 | 2 | 2 | 1 | - | - | 2 | - | - | 1 | 2 | 3 | 3 |