**20EC21P1 – ELECTRONIC DEVICES LAB**

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| **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:** | 40  60  100 |

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| **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 | |

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