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| **Course Name:** | **Elements of Electrical and Electronics Engineering Laboratory** | **Semester:** | **I/II** |
| **Date of Performance:** | **/ /20--** | **Batch No:** |  |
| **Student Name:** |  | **Roll No:** |  |
| **Faculty Sign & Date:** |  | **Grade/Marks:** | **/ 20** |

**Experiment No: 3**

**Title:** **Thevenin’s Theorem & Norton’s Theorem**

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| **Aim and Objective of the Experiment:** |
| * To Verify for Thevenin’s Theorem for the circuit * To Verify Norton Theorem for the Circuit. |

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| **COs to be achieved:** |
| **CO1:** Analyze resistive networks excited by DC sources using various network theorems. |

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| **Circuit Diagram:** |
| **Task 1: Circuit Diagram to measure RTH/RN:**  **Task 2: Circuit Diagram to measure VTH:**  **Task 3: Circuit Diagram to measure ISC:** |

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| **Stepwise-Procedure:** |
| **Thevenin’s Theorem:**  1. Connect the circuit as shown in the circuit diagram.  2. Set 10V and measure open circuit voltage VTh across load terminals A and B.  3. Replace all voltage sources by Short circuit and measure RTh across terminals A and B as per the circuit diagram shown in the figure.  4. Draw Thevenin’s equivalent circuit and determine the value of load current from it.  5. Verify the results theoretically.  **Norton’s Theorem:**  1. Connect the circuit as shown in the circuit diagram.  2. Set the voltages 10V  3. Remove the load resistance and measure the short circuit current ISC through A and B terminals.  4. Replace all the voltage sources by Short circuit and measure RTh across terminals A and B as per the circuit diagram shown in the figure.  5. Draw Norton’s equivalent circuit and determine the value of load current.  6. Verify the results theoretically |
| **Calculations:** |

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| **Observation Table:** |
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| **Draw Thevenin’s Equivalent circuit**  **Draw Norton’s Equivalent circuit** |

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| **Conclusion:** |
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| **Signature of faculty in-charge with Date:** |