# Experiment # 7

Complex Circuit Analysis using PSPICE

**Objectives:**

To verify all basic laws of circuits and systems on complex circuit using PSPICE and to do comprehensive analysis from observations.

**Rubrics of lab**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LAB REPORT ASSESSMENT** | | | | | |
| **Criteria** | **Excellent** | **Average** | | **Nill** | **Marks Obtained** |
| 1. **Objectives of Lab** | All objectives of lab are properly covered  [Marks 0.5] | Objectives of lab are partially covered  [Marks 0.25] | | Objectives of lab are not shown  [Marks 0] |  |
| 1. **Kirchoff’s Voltage Law, Kirchoff’s Current Law, Ohm’s Law.**   **(Statement, Mathematical Expression, Circuit Diagram)** | Correct KVL, KCL and Ohm’s Law statement and mathematical expression is written. Circuit diagram shown is correct and properly labeled  [Marks 1] | | KCL statement or mathematical expression or circuit diagram is missing or circuit diagram is not properly labeled  [Marks 0.5] | |  |
| 1. **PSPICE**   **Simulator** | Brief introduction of PSPICE simulator  [Marks 1] | | Brief introduction of PSPICE simulator  Is not shown  [Marks 0] | |  |
| 1. **Procedure** | All experimental steps are shown in detail  [Marks 1.5] | Some of the experimental steps are missing  [Marks 1] | | Experimental steps are missing  [Marks 0] |  |
| 1. **Observations & Calculations** 2. **Verification of KCL** 3. **Verification of KVL** 4. **Verification of Ohm’s Law** | All experimental results are completely shown in form of table for all given laws.  [Marks 3] | Experimental results are partially shown and some of the observations are missing  [Marks 1.5] | | No experimental results are shown  [Marks 0] |  |
| 1. **Analysis** 2. **Analysis about KVL** 3. **Analysis about KCL** 4. **Analysis about Ohm’s Law** | Analysis and discussion about all experimental results are shown  [Marks 3] | Analysis and discussion about experimental results are partially shown  [Marks 1.5] | | Analysis is not shown  [Marks 0] |  |
| Total Marks Obtained:\_\_\_\_\_\_\_\_\_\_  Instructor Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | |
|  | | | | | |