**Basic Electrical and Electronics Engineering**

**Experiment No. : 02**

***Mesh and Nodal Analysis***

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| **Aim:** | To determine mesh currents and nodal voltages in the given circuit. |
| **Apparatus:** | Online simulation tools (Suggested Tinkercad) |
| **Theortical Analysis:** | ***Fig. 1(a) Mesh Analysis***  ***Theoretical Calculations:*** |
| ***Fig. 1(b) Nodal Analysis***  ***Theoretical Calculations:*** |

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| **Table** | **Mesh currents** | **Theoretical Values** | **Observation Values** |
| i1 (A) | 336 mA | 336 mA |
| i2 (A) | 9.09 mA | 9.09 mA |

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| **Table** | **Nodal voltages** | **Theoretical Values** | **Observation Values** |
| Va (V) | 4 V | 4 V |
| Vb (V) | 4 V | 4 V |

**Conclusion:**

1. We used Mesh analysis to find the values of current .
2. We used Nodal analysis to find the values of voltages .
3. For calculating the practical values ; we used an online simulation tool called Tinkercad
4. The Practical and Theoretical values when measured were found to be equal.

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