**Experiment 1 – To Study and Verify Maximum Power Transfer Theorem**

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| **Domain** | **Mechanical, Electrical, Chemical, Civil** |
| **Course** | **Numerical Methods** |
| **Topic** | **Roots of Equation** |

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| **Learning Objectives** | **Cognitive level** | **Task** | **Assessment questions** |
| Maximum power across the Alternating circuit | **Level 3 - Apply** | **Find the maximum power across the circuit given:**  **C:\Users\HP\Pictures\Screenshots\Screenshot (191).png** | **The maximum power across the circuit is(in Watt) :**   1. **30** 2. **31** 3. **32** 4. **33** |
| Find out thevenin’s resistance and thevenin’s voltage | **Level 4 - Analyze** | 1. **Find the Equivalent resistance**   **C:\Users\HP\Pictures\Screenshots\Screenshot (193).png** | The Equivalent resistance (RL) of circuit is: A  3000 B  6000 |
| 1. **Find the Thevenin’s voltage and calculating maximum power**   **C:\Users\HP\Pictures\Screenshots\Screenshot (196).png** | The Thevenin’s voltage and maximum power is : A  Vth = -3 & P = - 3mW. B   Vth = 3 & P = 3mW C  Vth = 9 & P = 6mW  D  Vth = 6 & P = -6mW |
| **Find the Maximum power of the given Solar PV cell:** | **Level 5 - Evaluate** | **Maximum power of solar PV cell:**  **C:\Users\HP\Pictures\Screenshots\Screenshot (199).png** | The maximum power of the given solar PV cell is(given Diode Ids = 8A, Vt = 4V, Maximum exponent for linear continuation = 20 and R = 2 ohm) :  A  P = 0.8W. B  P = 0.75W C  P = 0.6W  D  P = 0.9W |
| Calculate the Maximum power of the given circuit | **Level 6 - Create** | Calculate the Maximum power of the given circuit  C:\Users\HP\Pictures\Screenshots\Screenshot (202).png | The value of the maximum power  of the circuit is:  : A  550mW B  625mW C  750mW  D  1000mW |