| **Course Name:** | **Elements of Electrical and Electronics Engineering** | **Semester:** | **I** |
| --- | --- | --- | --- |
| **Date of Performance:** | **13/12 / 2022** | **Batch No:** | **C2-2** |
| **Faculty Name:** | **Jyoti Varavedkar** | **Roll No:** | * **16010122122** |
| **Faculty Sign & Date:** |  | **Grade/Marks:** | **/ 25** |

**Experiment No: 9**

**Title:** **Measurement of Power using Two Wattmeter Method**

| **Aim and Objective of the Experiment:** |
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| * To measure the power of three phase power using Two Wattmeter Method |

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

| **Circuit Diagram/ Block Diagram:** |
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| **R1 = 15 ohm, L1=31.85 mH,** |

| **Stepwise-Procedure:** |
| --- |
| 1. 1.Connect the circuit as shown in circuit diagram 2. 2. Increase the load and note down the reading VL,IL,W1 and W2 3. 3. Practically you will obtain total power W=W1+W2 4. 4. Theoretically power is measured by using formula P=√3VLILcosϕ,   using cosϕ=1(unity) for resistive load. |

| **Observation Table:**   | **Sr.no** | **VL V** | **IL A** | **W1 KW** | **W2 KW** | **W= (W1+W2 )KW** | **P = √3VLILCOSϕ KW** | | --- | --- | --- | --- | --- | --- | --- | | 1 | 416.2 | 3.5 | 1000 | 1200 | 2200 | 2523.00 | | **2** | 417.2 | 2.6 | 98 | 980 | 1960 | 1878.74 | | **3** | 417.5 | 1.7 | 800 | 600 | 1400 | 1314.11 | | **4** | 423.2 | 0.8 | 500 | 400 | 900 | 585.71 | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Screenshot of Output: |

| **Conclusion:** |
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| Thus,we learnt how to measure power using two wattmeter method. |

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