Lab 1 Class Assignment

Name:

ID:

**Experiment 1**

Table 1:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Resistance using colour coding** | | | | | **Resistance using DMM** | **% Error** |
| **Band 1** | **Band 2** | **Band 3** | **Band 4** | **Resistance ± tol** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Table 2:

|  |  |  |  |
| --- | --- | --- | --- |
| **3.3 KΩ**  **Voltage** | **Experimental readings** | | |
| **Current,**  **I** | **Voltage,**  **I R** | **Power,** I2R |
| 2 | 0.60 | 1.98 | 1.18 |
| 4 | 1.23 | 4.05 | 4.99 |
| 6 | 1.92 | 6.33 | 12.16 |
| 8 | 2.61 | 8.61 | 22.48 |
| 10 | 3.20 | 10.50 | 33.80 |

Table 3

|  |  |  |  |
| --- | --- | --- | --- |
| **5.6 KΩ**  **Voltage** | **Experimental readings** | | |
| **Current,**  **I** | **Voltage,**  **I R** | **Power,** I2R |
| 2 | 0.30 | 1.68 | 0.50 |
| 4 | 0.78 | 4.36 | 3.40 |
| 6 | 1.05 | 5.88 | 6.17 |
| 8 | 1.42 | 7.95 | 11.29 |
| 10 | 1.81 | 10.13 | 18.34 |

**Experiment 2**

Table 1:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Resistance using colour coding** | | | | | **Resistance using DMM** | **% Error** |
| **Band 1** | **Band 2** | **Band 3** | **Band 4** | **Resistance ± tol** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Table 2:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Experimental readings** | | | | **Theoretical values** | | | |
| **VS** | **VR1** | **VR2** | **VR3** | **VS** | **VR1** | **VR2** | **VR3** |
| 15.00V | 3.64V | 5.184V | 6.617V | 15.00V | 3.64V | 5.184V | 6.167V |
| **% Error** | | | | | | | |
| **VS** | | **VR1** | | **VR2** | | **VR3** | |
| 0% | | 0% | | 0% | | 0% | |

Table 3:

|  |  |  |
| --- | --- | --- |
| **Potential rise VS** |  | **Are the voltage rises and drops equal?** |
| **Potential drops**  **(VR1 + VR1 + VR3)** | 15.00 | The voltage rises and drops equally |

Table 4

|  |  |  |  |
| --- | --- | --- | --- |
| **Experimental readings** | | **Theoretical values** | |
| **Vab** | **Req** | **Vab** | **Req** |
| 11.36 | 13.600 | 11.36 | 13.600 |
| % Error | | | |
| **Vab** | | **Req** | |
| 0% | | 0% | |