*A Project Report*

*ECE 1002 (Fundamental of Electrical and Electronics*

*Engineering )*

*Submitted by*

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| **S.NO.** | **ASSESSMENT TITLE** |
| **1.** | Color code of resistors and verification of series and parallel combinations of R C . |
| **2.** | To Verify the Ohms Law . |
| **3.** | To Verify the KCL and KVL . |
| **4.** | To Verify the Voltage and Current Division Principle . |
| **5.** | To Verify the voltage current power relations for star – delta connected loads . |
| **6.** | To Calculate the Two – Port network parameters . |
| **7.** | To study the characteristics of Semiconductor diodes transistors . |
| **8.** | To design and simulation of various rectifier circuits . |
| **9.** | To design and implementation of MOSFET voltage amplifier . |
| **10.** | To Verify Thevenin’s theorem . |

**EXPERIMENT NO. : 1**

**Objectives:**

1.To learn Resistor colour code

2.To determine the stated value of a resistor by interpreting the colour code indicated on the resistor.

3.To verify series and parallel combination of R, C using voltage and current division rule.

**Software Used :** NI Multisim

**Theory :**

**a) Resistor Colour code :**

**1 .** Hold a resistor in your hand . The section with more number of band should be

on left side . After the gap, on right side should be one/two band indicating tolerance or temperature co-efficient .

**2 .** Write on paper in capital letters i.e. , BOGY(GAP)YS, the Colour starting from

left to right .

**3.** Replace the colors with numbers that will be the value of resistor

resistance i.e., 035×104±3% .Cross verification can be done using digital multi-

meter .

**b) Series and parallel combination of R and C**

**1 .** Pick three resistors rated at R1=1kΩ , R2=2kΩ , and R3=3kΩ . Measure their values in the using multimeter .

**2 .** Construct , one at a time , arrangements shown in Fig 2(a) and Fig.2(b) on bread board . Set the supply to 20V .

**3 .** For each arrangement , measure the indicated variables .

**4 .** Repeat the same experiment with three different value of C . Use

a function generator as AC power supply . Measure the RMS value of voltage and

current, using multimeter. To verify series and parallel connection of C and note

down absolute value of reading .

**Circuit diagram(s) :** Resistor comes in 4, 5 or 6-bands. A 6-band resistor is shown in Fig. 1.