EEE Digital Assignment

Mesh Current Analysis and Nodal Voltage Analysis

Name: Om Ashish Mishra

Registration Number: 16BCE0789

Slot: L10+L11

Batch: 10(B-Tech Computer Science (Core))

Mesh Current Analysis and Nodal Voltage Analysis

AIM:

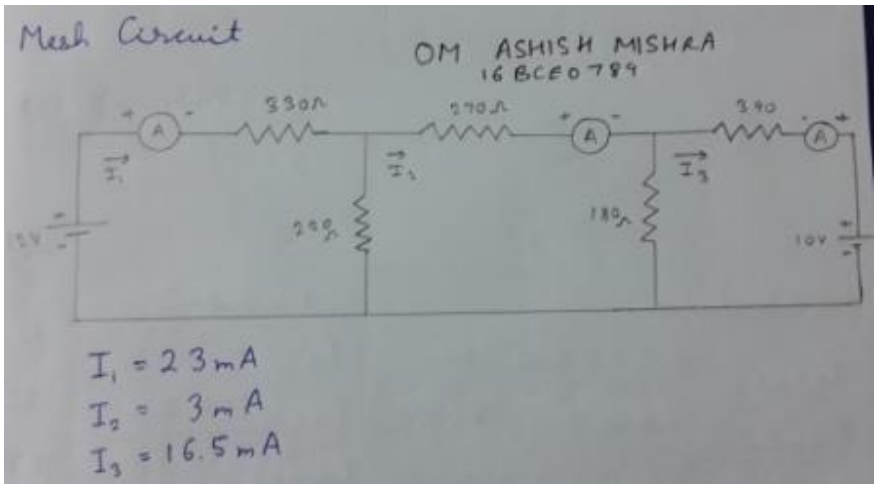
Find the loop and branch currents using mesh current analysis and verify practically for the circuit given below

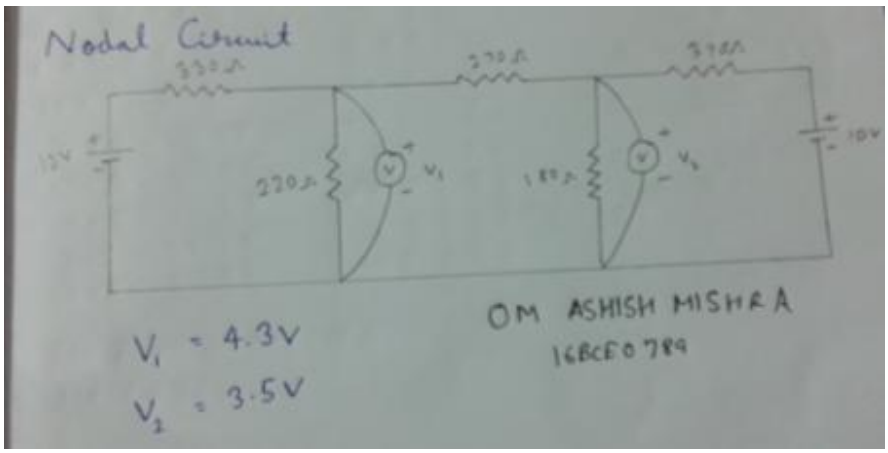
Find the Nodal voltages and branch currents using nodal voltage analysis and verify practically for the circuit given below

APPARATUS REQUIRED:

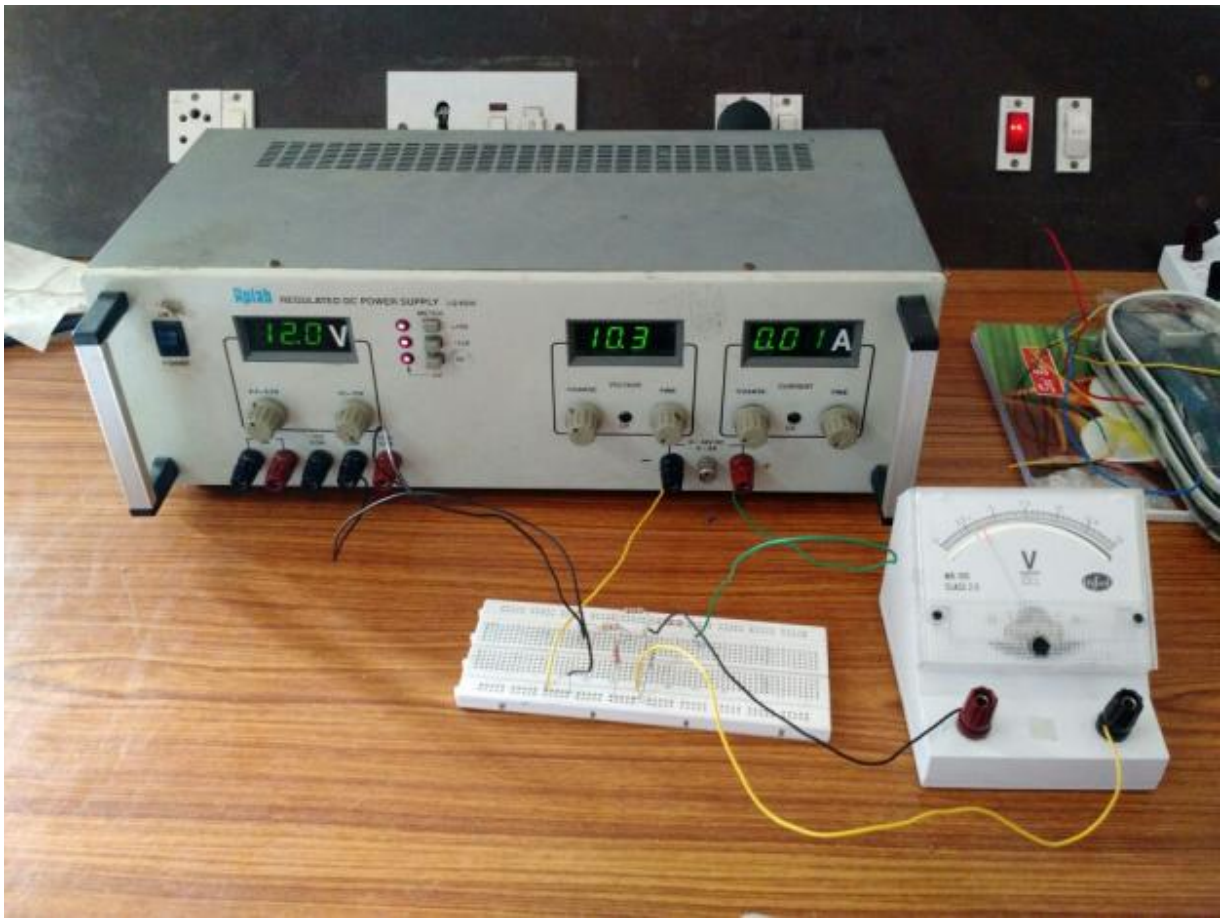
- Connecting wires
- Resistance of 330Ω,270Ω,390Ω,220Ω,180Ω
- Voltage supply of 10V, 12V
- Grounding 0V

CIRCUIT DIAGRAMS:





PICTURE OF BREADBOARD CONNECTION:



MANUAL CALCULATION(S) / ROUGH WORK:

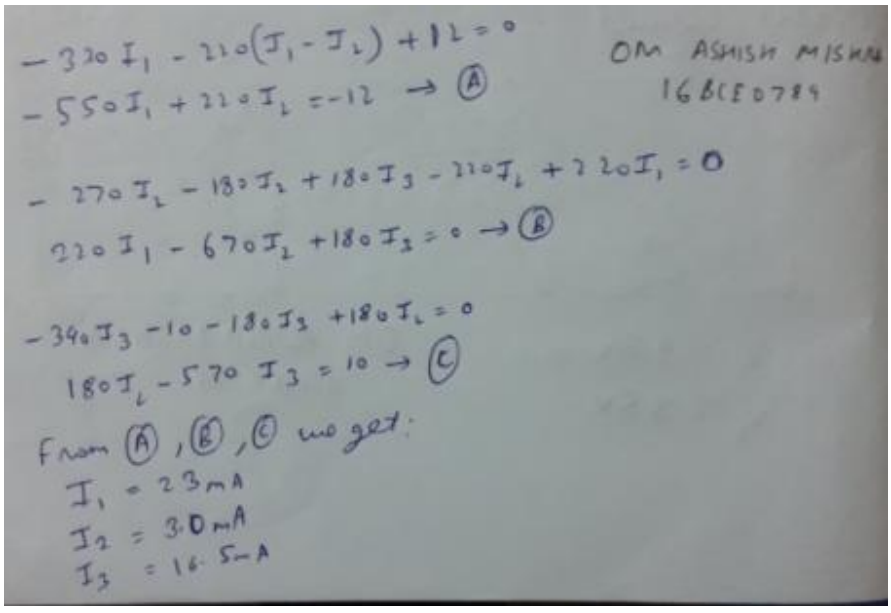


fig: Mess Analysis

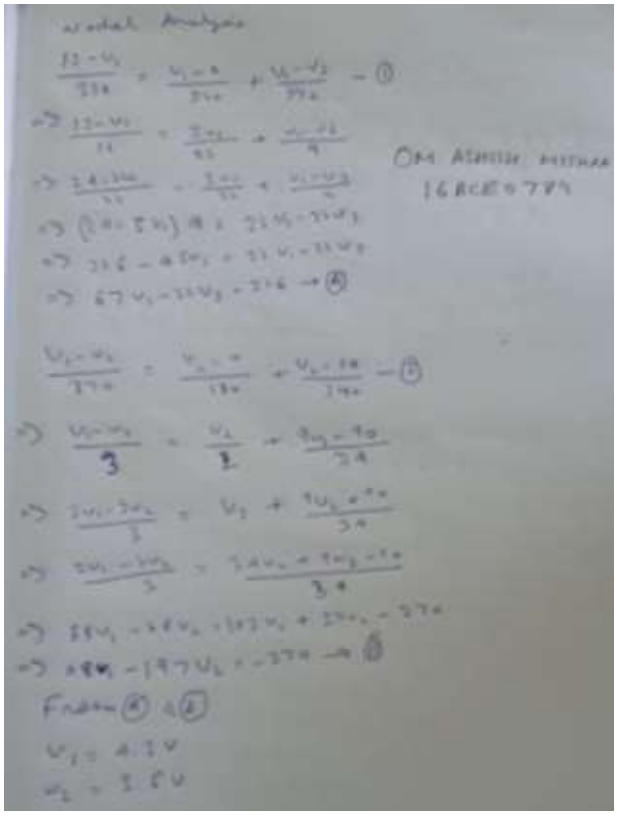


Fig: Nodal Analysis

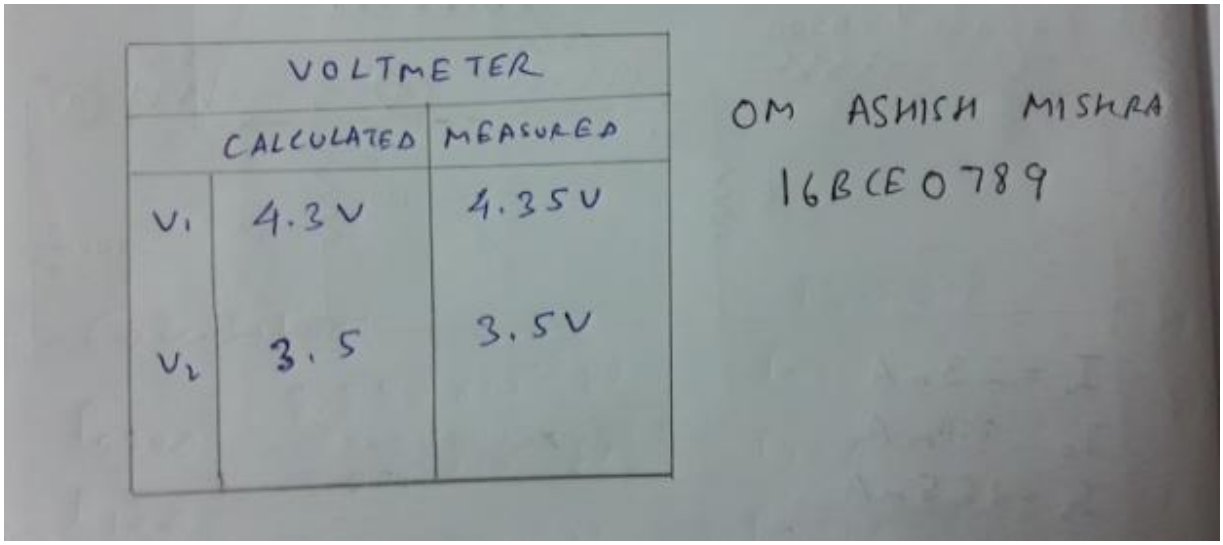
GRAPH:

No graph is done for this experiment.

TABULATIONS:

	AMMETER	
	CALCULATED	MEASURED
I_1	23mA	23.5mA
I_2	3 mA	3.1 mA
I_3	16.5mA	17 mA

OM ASHISH MISHRA
16BCE0789



VOLTMETER		
	CALCULATED	MEASURED
V_1	4.3V	4.35V
V_2	3.5	3.5V

OM ASHISH MISHRA
16BCE0789

INFERENCE / RESULT:

Through this experiment we verified the Kirchhoff's law (current and voltage law).