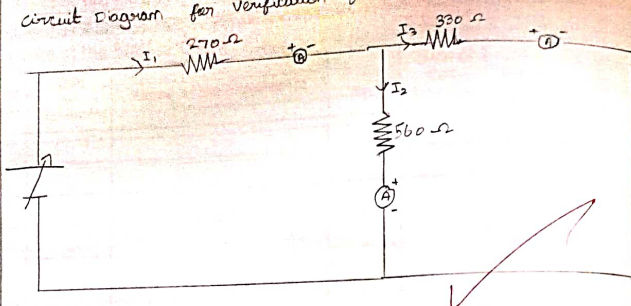


Circuit Diagram for verification of Kirchhoff's current Rule



S.No	V (Volts)	$I_1$ (mA)	$I_2$ (mA)	$I_3$ (mA)	$I_1 = I_2 + I_3$
1	5	10.5	3.88	6.59	10.47
2	7	14.7	5.43	9.22	14.65
3	10	20.9	7.76	13.2	20.96
4	12	26.1	9.32	15.8	25.12
5	15	31.4	11.6	19.8	31.4
6	18	37.7	14.0	23.7	37.7
7	20	41.4	15.5	26.3	41.8

Expt. No. 1

Page No. 3

Expt. Name MEASUREMENT OF CURRENT AND VOLTAGE

Date: 19/07/2023

Verification of Kirchhoff's current and voltage law.

Aim:

To measure the current and voltage.

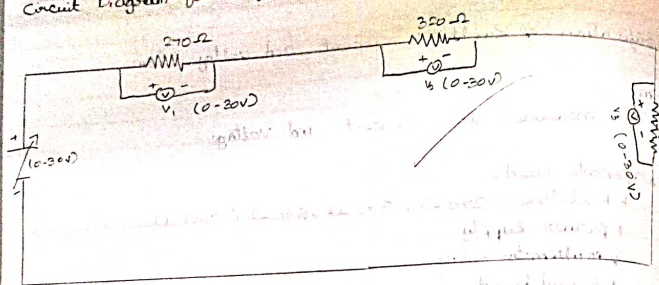
Components used:

- \* Resistors: 270 ohm, 330 ohm, 560 ohm (each 1)
- \* Power supply
- \* Multimeter - 3 nos
- \* Bread board
- \* Connecting wires

Procedure:

- \* Make connections as per circuit diagram
- \* Measure the corresponding values of branch currents  $I_1$ ,  $I_2$ ,  $I_3$  (current law).
- \* Measure the corresponding values of voltages ( $V_1$ ,  $V_2$  and  $V_3$ ) across resistors  $R_1$ ,  $R_2$  and  $R_3$  respectively (voltage law)
- \* Verify the laws.

# Circuit Diagram for Verification of Kirchhoff's Voltage rule



S.No	V (Volts)	V <sub>1</sub> (Volts)	V <sub>2</sub> (Volts)	V <sub>3</sub> (Volts)	V = V <sub>1</sub> + V <sub>2</sub> + V <sub>3</sub> (Volts)
1	5	1.16	1.42	2.41	4.9
2	7	1.63	1.99	3.35	7.0
3	9	2.09	2.58	4.34	8.9
4	13	3.03	3.70	6.26	13.01
5	15	3.49	4.27	7.24	15.0
6	17	3.96	4.84	8.21	17.01
7	20	4.66	5.69	9.66	21.01
8	22	5.12	6.26	10.6	21.98

Expt. No. \_\_\_\_\_

Page No. 5

Expt. Name \_\_\_\_\_

Date : \_\_\_\_\_

Result:

Thus the measurement of voltage and current is done.

30/26/8