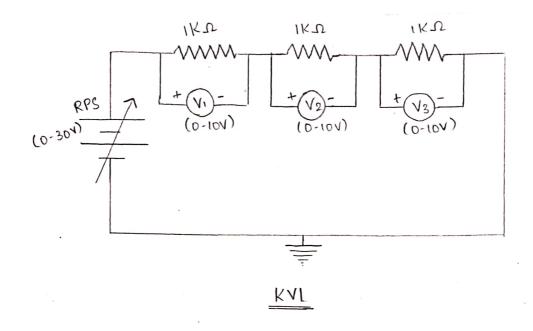
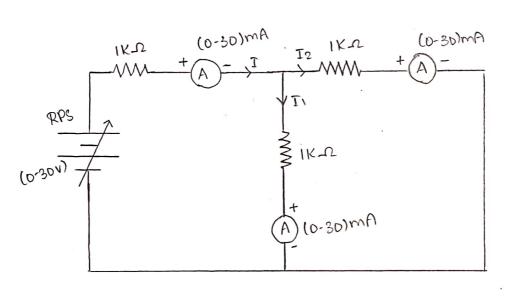
CIRCUIT DIAGRAM :-





KCL

VERIFICATION OF KIRCHOFF'S LAWS.

AIM:

To verify Kirchoff's voltage daw and Kirchoff's current daw both theoretically and ipractically you a given DC circuit.

APPARATUS REQUIRED:

SL·NO	APPARATUS	SPECIFICATION	QUANTITY	
l•§	Regulated Power supply (RPS)	(0-304)	1	
2.	Voltmeter	(0-30V) MC	3 11 (1) 11	
3.	Ammeter	(O-LOMA)MC	3 63	
4.	Resistons	IKT	3	
წ.	Bread board	1 × 2 = 1 ×	r · c	

PROCEDURE:

- 1. Give connections as per the circuit diagram.
- 2. Switch on the supply, vary the RPS (Regulated Power Supply) and set a particular input voltage.

Ami J x C - ST

- 3. Note down the veadings of ammeters and voltmeters and itabulate ithem.
- 4. Vary the RPS for different input voltages and note down the readings of all the meters.
- 5. Reduce the RPS to its minimum value and switch off the supply.

TABULAR COLUMN:

						1	1 1
Vı	V2	V3			I	T2	$=\widehat{\mathbf{I}}_1 + \widehat{\mathbf{I}}_2$
(volk)	(vols)	(vorr)	(vols)	(amps)	(amps)	(amps)	(amps)
			1. 1. (51. 42)	14. 3	01 HJ	b 1	u ju
0.91	0.93		2-74	6.0	3.07	3.07	6.15
					1 , 1 , 1	#33	United
2	1.98	6-63	12.00	2.01	5.99	5.99	11.98
	147	I. 14 TI	1		y at 1		(a) × (1)
3.15	3.21	9.35.	17-7	3.15	8.93	8.96	17.83
	(volk)	2 1.98 0.91 0.93	(volk) (volk) (volk) 2 1.98 6.63	(volk) (volk) (volk) (volk) 0.91 0.93 0.91 2.74 2 1.98 6.63 12.00	(volk) (volk) (volk) (colk) (amps) 2 1.98 6.63 12.00 2.01	(volk) (volk) (volk) (colk) (amps) (amps) 0.91 0.93 0.91 2.74 6.0 3.07 2 1.98 6.63 12.00 2.01 5.99	V1 V2 V3 V=V11V2+V3 1 (amps) (amps) (colls) (volls) (volls) (volls) (amps) (amps) (amps) (amps) (2 1.98 6.63 12.00 2.01 5.99 5.99

CALCULATION:

By ohm's law in and of

$$\hat{I} = \frac{V}{R} = \frac{3}{1.5} = 2 \text{ mA}.$$

$$I_1 = I \times \frac{R_2}{R_1 + R_2} = 2 \times I = 1 \text{ mA}. \text{ Legest formal}$$

$$TQ = T \times R_1 = IMA.$$

$$R_1 + R_2$$

$$R_1 + R_2$$

$$R_2 = R_1 + R_2$$

$$R_3 + R_4$$

$$R_4 + R_4$$

$$R_5 + R_4$$

Practical vousication!

x. V/I ishould be constant (ohm's ilaw)

x. V should be equal to (V1+V2+V3)

x. It should be equal to (I2+I3) the which where any the out the french

with the seading of the time star 5. Return the Riv do die management water on l

higher off Mar withing

6. Using the tabulated values, voily kinchoff's daws practically, and voily it theoretically.

V 7

fort C I

dist.

.

1 (1987)

This strill

Arttut Autotoma mate

9 9 4 1

77 X 9 -1

Theoretical verification:

By Johns daw, VI = 3V

$$I = \frac{V_1}{R} = \frac{3}{3} \times 10^{-3}$$

$$\hat{I} = \frac{V_2}{R} = \frac{5}{3} \times 10^{-3}$$

$$T = \frac{V_3}{R} = \frac{9}{3} \times 10^{-3}$$

In KCL parallel resistance:

Total oresistance: RA + Recy.

HAIRT BY TOUR HI

constitution and the first

19931

 6 2100 0
 6 21100 0

 6 41 0 0
 6 4100 0

 6 41 0 0
 6 4100 0

 7 17
 6 4100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1 100 0

 1 1 100 0
 1 1

. 0 - (cf. · l) ли+ пока + 2 -· 0 ← — - - 2 f ли · , [лог

U= (II eI) UTH + I was + 3-

. 190!

RESULT:

Thus kinehoff's current dem and kinehoff's voltage law are verified practically and wheoretically