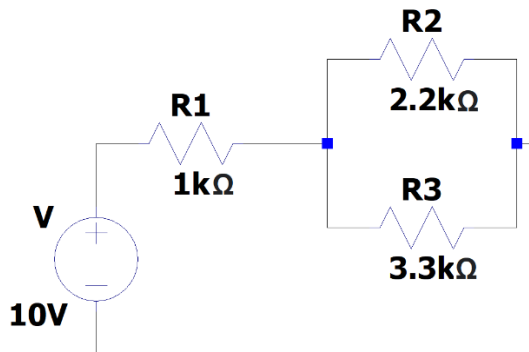


Ex.No.1	VERIFICATION OF KIRCHHOFF'S LAWS
Date:	

AIM:

To verify (i) kirchhoff's current law (ii) kirchhoff's voltage law for the following circuit



(i) KIRCHHOFF'S CURRENT LAW:

APPARATUS REQUIRED:

S.No	Name of the apparatus	Range	Quantity
1	RPS	(0-30)V	1
2	Resistor	1 kΩ, 2.2kΩ, 3.3kΩ	3
3	Ammeter	(0-20)mA	1
4	Ammeter	(0-10)mA	2
5	Bread board	-----	1
6.	Connecting wires	-----	As required

THEORY:

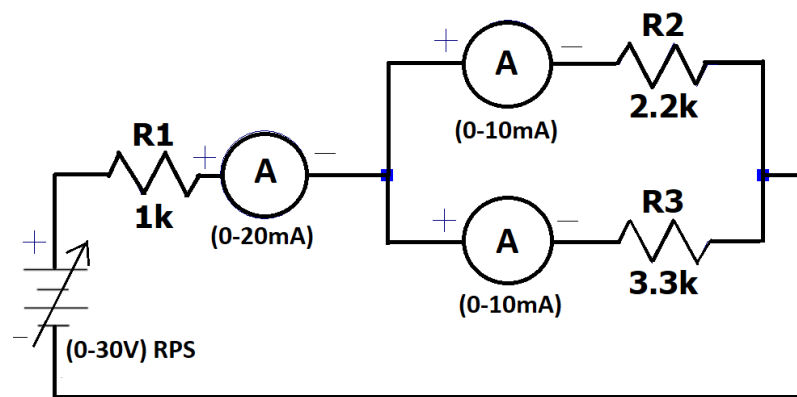
At a node/junction

Sum of incoming currents = Sum of outgoing currents

PROCEDURE:

1. Connections are made as per the circuit diagram.
2. Check your connections before switch on the supply.
3. Vary the regulated supply.
4. Measure the current using ammeter.
5. Note the readings in the tabulation.
6. Compare the observation reading to theoretical value.

CIRCUIT DIAGRAM FOR PRACTICAL MEASUREMENT:



Tabulation:

Voltage	Total current I(mA)		I 1(mA)		I 2(mA)	
	Theoretical	Practical	Theoretical	Practical	Theoretical	Practical
10						
15						
20						

ii) KIRCHHOFF'S VOLTAGE LAW:

APPARATUS REQUIRED:

S.No	Name of the apparatus	Range	Quantity
1	RPS	(0-30)V	1
2	Resistor	1K Ω , 2.2K Ω , 3.3K Ω	Each 1
3	Voltmeter	(0-20)V	3
4	Bread board	-----	1
5	Connecting wires	-----	As required

THEORY:

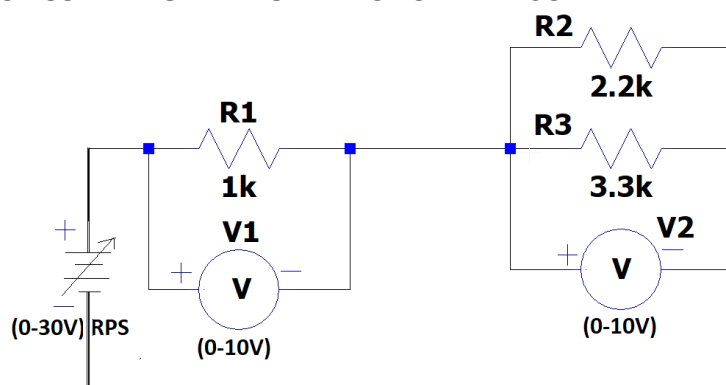
kirchhoff's voltage law

The algebraic sum of the voltage around any closed path is zero.

PROCEDURE:

1. Connections are made as per the circuit diagram.
2. Check your connections before switch on the supply.
3. Vary the regulated supply.
4. Measure the voltage using voltmeter.
5. Note the readings in the tabulation.
6. Compare the observation reading to theoretical value.

CIRCUIT DIAGRAM FOR PRACTICAL MEASUREMENT:



TABULATION:

Total Voltage	V1 Volts		V2 Volts	
	Theoretical	Practical	Theoretical	Practical
10				
15				
20				

THEORETICAL CALCULATIONS

RESULT:

Thus the kirchhoff's current law and voltage law were verified.