Dr. D. Y. Patil Unitech Society

DR. D. Y. PATIL INSTITUTE OF TECHNOLOGY

(formerly Dr. D. Y. Patil Institute of Engineering and Technology)

Sant Tukaram Nagar, Pimpri, Pune.

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

Electrical Circuit Virtual Lab

Savitribai Phule Pune University

Second Year of E &TC Engineering (2019 Course)

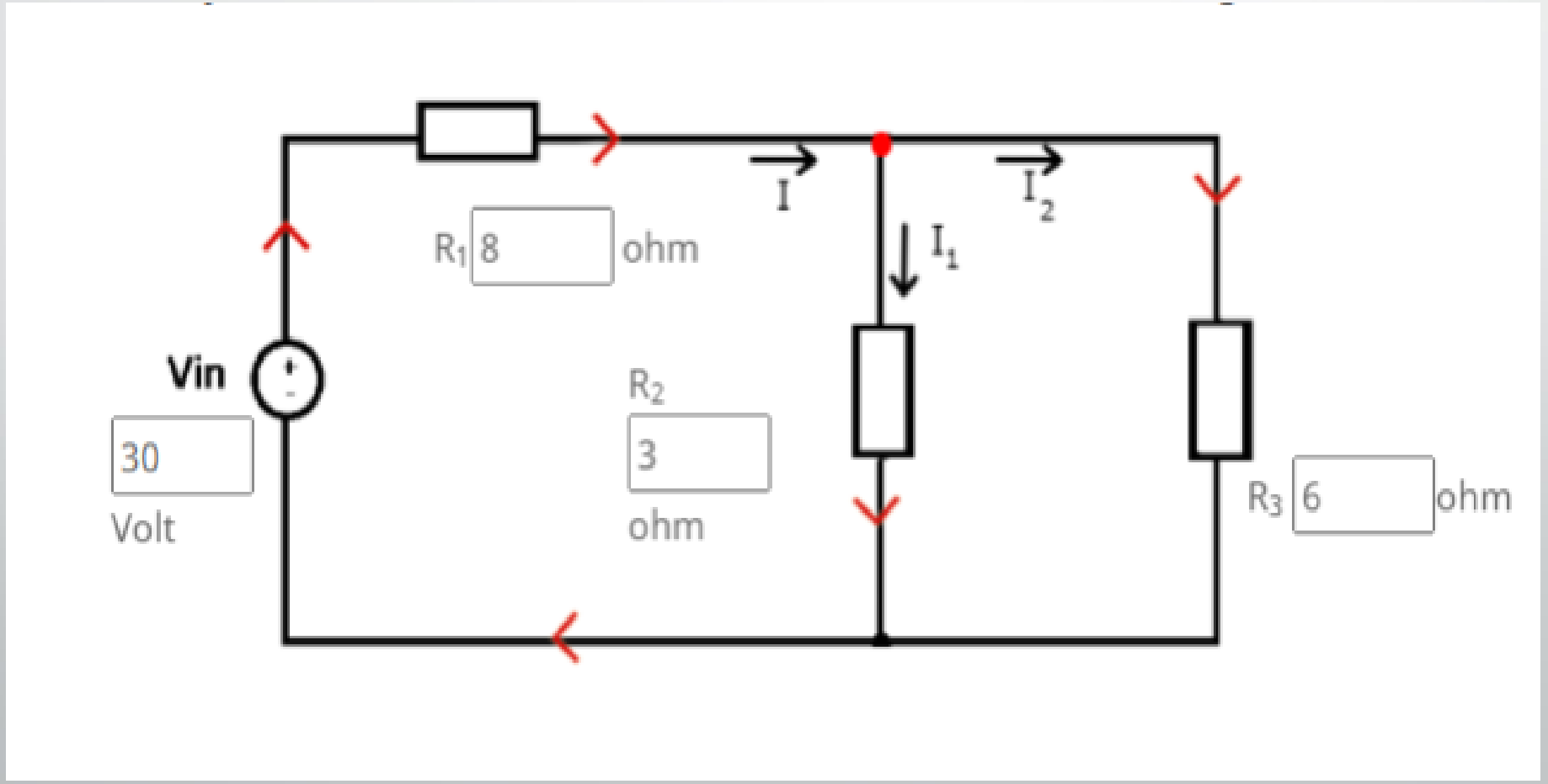
204187: Electrical Circuits Lab

EXPERIMENT 1

To verify Kirchhoff's Laws: Kirchhoff's Current Law, Kirchhoff's Voltage Law

Procedure

1) Set the values of Resistors(R1,R2,R3) and battery (Vin). (range for battery voltage is:1V to 300V and Resistors : 1 ohm to 10k ohm)



2) Put the values in Kirchhoff's equations given. **Solve the equations to find voltage ,current ,power in each resistor.**

Equations:

1) $I_1(R_1+R_2)+R_1I_2 = Vin$
2) $R_3I_2-R_2I_1 = 0$
3) $I=I_1+I_2$
4) $P=V.I$

3) **Put the values which you have calculated** in tabular form as shown.

	Voltage(in volt)	Current(in amp)	Power(in watt)
R1	24	3	72
R2	6	2	12
R3	6	1	6

4) Click on **Verify Voltage ,Verify Current ,Verify Power** buttons to verify your answers.

	Voltage(in volt)	Current(in amp)	Power(in watt)
R1	24	3	72
R2	6	2	12
R3	6	1	6

Verify Voltage | Verify Current | Verify Power

Voltage Verified.

Current Verified.

Power Verified.

5) Click on the **Click here to see answer button** to see correct answers if you want. Answers will be displayed in the table.

Click here to see answer

	Voltage (in volt)	Current(in amp)	Power(in watt)
R1	24.00	3.00	72.00
R2	6.00	2.00	12.00
R3	6.00	1.00	6.00