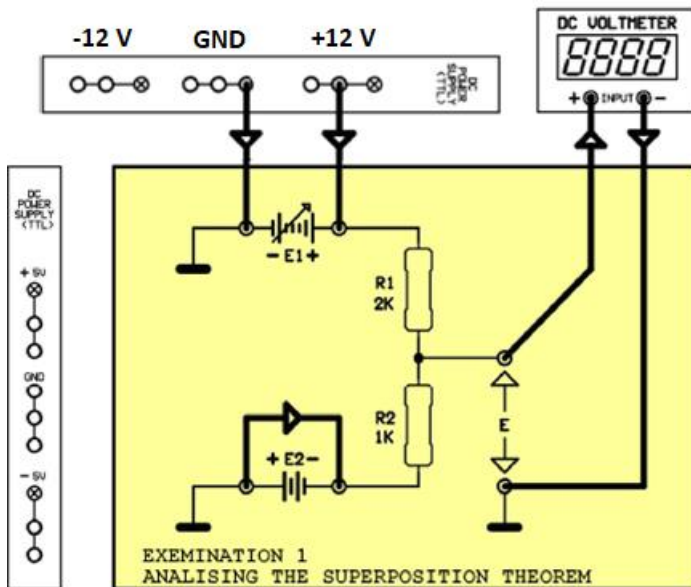


EXPERIMENT: 8 THE SUPERPOSITION THEOREM

EXPERIMENTAL PROCEDURE:

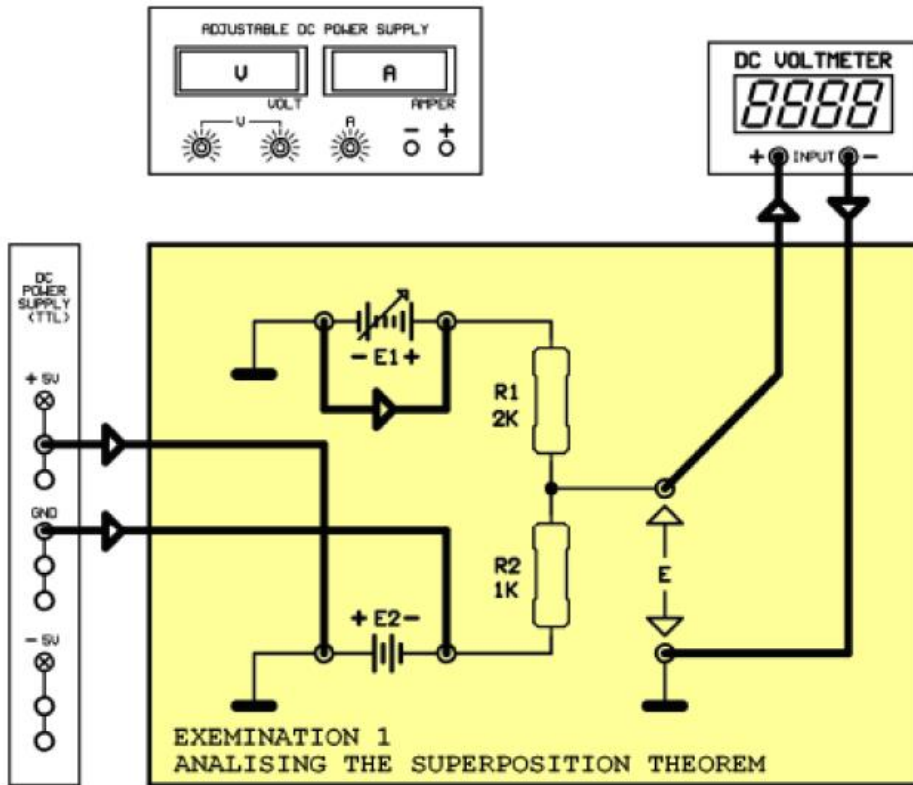
Connect the Y-0016/004 module to its place. Use 12 V power supply voltage to for E1. Make the circuit connection as in Figure 5.5 (short circuit E2) so that you can see the effect of E1 only on the circuit. Give energy to the circuit.



1- As the voltage seen in the voltmeter is created by E1, it is the E1A voltage. Read and note this voltage.

2- Mathematically determine the E1A voltage. Compare the voltages that you calculated and measured.

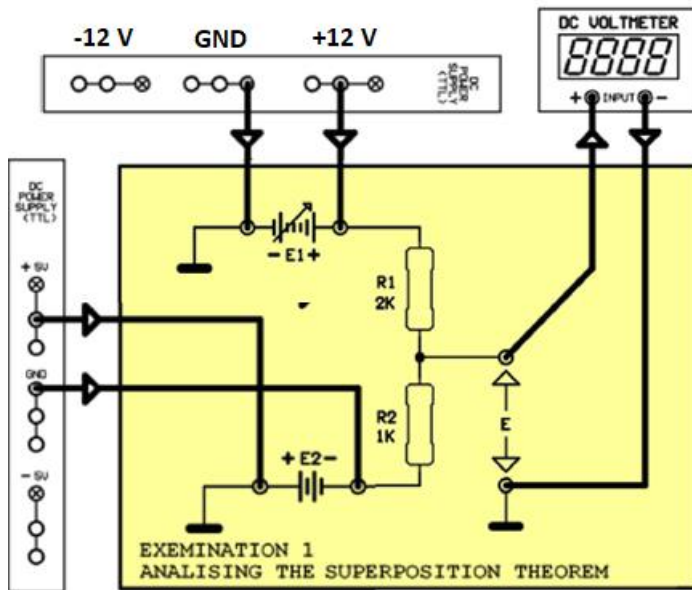
3- Make the circuit connection as in Figure 5.6 so that you can see the effect of E2 only on the circuit.



4- As the voltage seen in the voltmeter is created by E2, it is the E2A voltage. Read and note this voltage.

5- Mathematically determine the E2A voltage. Compare the voltages that you calculated and measured.

6- Connect the circuit as in Figure 5.7 in order to see the effects of both the sources on the circuit.



7- The voltage seen on the voltmeter is called the **superposition voltage (EP)**. Read and note this voltage.

8- Mathematically calculate the superposition voltage. Compare the voltage that you calculated and the one you measured.