# Indian Institute of Information Technology, Allahabad

## ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

### Course Name: Electrical Engineering

### EXPERIMENT NO: 4

**Objective:**

    a) To implement and verify super position theorem.

**Materials/ Component Required :**

Bread board, Digital Multi meter, Resistance, DC Power supply, Connecting Wires

**Theory:**

The superposition theorem states that for a linear system the response (voltage or current) in any branch of a bilateral linear circuit having more than one independent (voltage or current) source equals the algebraic sum of the responses caused by each independent (voltage or current) source.

**Circuit Diagram:**
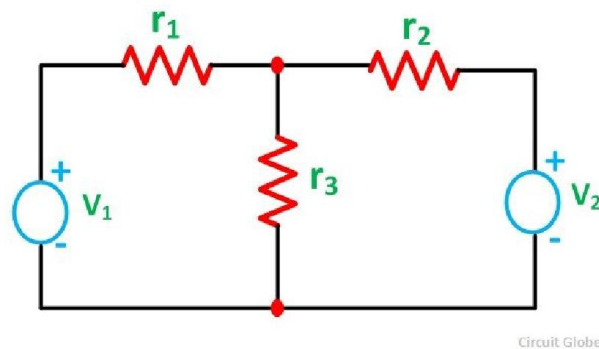


**Observation Table:**

    Response across, $r_3$

**Calculation:**

**Result:**

**Precautions:**

a) Connections should be verified before clicking run button.
b) The resistance to be chosen should be in K ohm range.
c) Best performance is being obtained within 50Hz to 1Mhz.