	DEHRADUN INSTITUTE OF TECHNOLOGY		LABORATORY MANUAL
	PRACTICAL INSTRUCTION SHEET		
	EXPERIMENT TITLE : Verification of Superposition Theorem		
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DEPTT. : ELECTRICAL ENGINEERING	LABORATORY : ELECTRICAL ENGINEERING LAB		SEMESTER : I

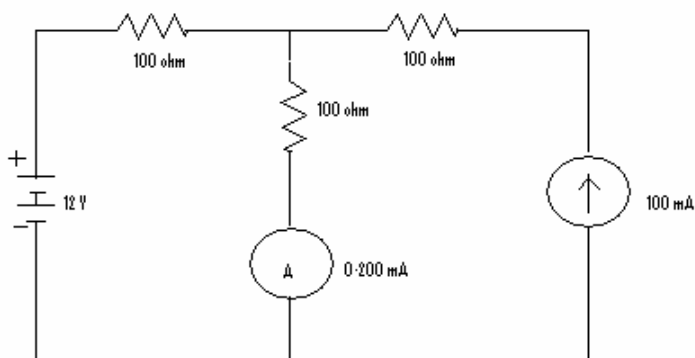
AIM: To verify the principal of superposition theorem.

APPARATOUS REQUIRED: A dc voltage source of 12 volt, a current source of 100 Ma. a dc voltmeter (0-12v), a dc ammeter (0-200mA), three resistance of 100 ohms each, connecting wires.

THEOREY: This theorem states that in a linear network containing several sources (including dependent sources), the overall response (loop current or node voltage) at any point in the network equals the sum of response of each individual source taken separately with all other sources inactive i.e replaced by their inertial impedance.


PROCEDURE:

1. Connect the components according to the figure.



2. Take the readings of ammeter.
3. Make the current source inoperative by open circuit its terminals and note down the ammeter reading due to response of voltage source.
4. Make the voltage source inoperative by short circuit its terminals and note down the ammeter reading due to response of current source.

PREPEARD BY :- R. K. Tiwari	APPROVED BY :- Mr. Gagan Singh
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OBSERVATION:

Ammeter reading when both sources are active $I =$

Ammeter reading when only voltage sources is active $I_1 =$

Ammeter reading when only current sources is active $I_2 =$

CALCULATION:

$$I = I_1 + I_2$$

RESULT: The sum of I_1 & I_2 is found to be equal to I . Hence superposition theorem is verified.

PRECAUTION:

1. All connection should be tight.
2. Before connecting the instruments check their zero setting.

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