**EXPERIMENT 8**

**GALVANOMETER - 2**

**Day & Date:**

AIM

To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of given range and verify the same.

THEORY

A galvanometer can be converted into a voltmeter of desired range by connecting a suitable high resistance R in series with the galvanometer. Let G is the resistance of the galvanometer which gives full scale deflection when Ig current flows through it. Let V is the range of the voltmeter, the series resistance R required for the conversion is given by,.

CIRCUIT DIAGRAM:

OBSERVATIONS:

Given resistance of the galvanometer, G = ohm

Given value of the figure of merit of the galvanometer, K = Amp/division

Total number of divisions on either side of the zero of the galvanometer, n = divisions

Current for full scale deflection, Ig = nK = amp.

Range of conversion of the converted voltmeter, V = volt

Value of the required series resistance, = = ohm

Least count of the converted voltmeter = 𝑉𝑛 = volts

Least count of the standard voltmeter = volts



**Results:**

**The value of required high resistance to be connected in series with the galvanometer to convert it into voltmeter in the given range = **

**The value of the current for full scale deflection, Ig = Amp**

**Hence, conversion of the given galvanometer into voltmeter of the given range is verified**