Chapter#15

Electrical Measuring Instruments

Moving Coil Galvanometer

measurement of small currents

Construction:

The essential parts of a moving coil galvanometer are

- A flat coil of thin enamel insulated wire (usually rectangular)
- A U-shaped permanent magnet with cylindrical concave pole-pieces.
- A soft iron cylinder
- A scalar lamp and scale arrangement

Working:

When a current pass through the galvanometer coil, it

Let current I1 flows through R1 & R2 and I2 through R3 & R4

potential of point B = potential of point D

Therefore,

$$V_{AB} = V_{AD}$$

But V = IR

Wheatstone Bridge

on as shown in figure is called Wheatstone bridge

I_1R_1 I_2R_3

equation (i) by equation (ii)

Working:

2000

1987

(44 volts)

across its terminals.

A galvanometer of resistance of 50 ohm

with a voltage of 2.5 volts, and

Q.4. (d) An ammeter gives full scale deflection with a current of

A galvanometer having resistance

a resistance of 100 ohms

A difference of pote

ance should be connected in series to increase the

scale deflection. Calculate the shunt

ance to read from 0-5A. What is the valu

(24950 Ω)

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shunt of 0.05 ohm is conn