Observation Table:

- **To compare resistance (of the given two wires):**

S.N.	left gap	right gap	Balanced length l (cm)	$100 - l$ (cm)	Ratio $\frac{X_1}{X_2}$ (X_1 in left gap) $\frac{X_1}{X_2} = \frac{l}{100-l}$	Ratio $\frac{X_1}{X_2}$ (X_1 in right gap) $\frac{X_1}{X_2} = \frac{100-l}{l}$	Mean ratio $\frac{X_1}{X_2}$
1.	Wire 1	Wire 2				-	
2.	Wire 1	Wire 2				-	
3.	Wire 1	Wire 2				-	
4.	Wire 2	Wire 1			-		
5.	Wire 2	Wire 1			-		
6.	Wire 2	Wire 1			-		

CALCULATIONS:

From above table, the mean ratio of resistance of the two given wires, $\frac{X_1}{X_2} = \ldots\ldots$.

PERCENTAGE ERROR:

Standard value of ratio of resistance of given two wires, $\frac{X_1}{X_2} = \ldots\ldots\ldots$ (from relation, $\frac{X_1}{X_2} = \frac{L_1}{L_2}$)

Observed value of ratio of resistance of given two wires, $\frac{X_1}{X_2} = \ldots\ldots\ldots$ (from table)

$$\text{Therefore, \% } error = \left|\frac{Standard\ value - observed\ value}{standard\ value}\right| \times 100\%$$

$$= \ldots\ldots\ldots$$

$$= \ldots\ldots\ldots\ \%$$

RESULT:

The ratio of resistance of the two given wires has been found to be …. …. ... with … …. error.

CONCLUSION:

Thus, the resistance of given two wire is compared by using meter bridge.

SOURCES OF ERROR:

1. Error may be due to loose connection of the circuit.
2. Error may be due to inaccurate measurement of null point.
3. Error may be due to resistance of connecting wires.
4. Error may be due to non-uniform thickness of experimental wires.
5. Error may be due to change in resistance of wire with change in temperature.
6. Error may be due to carelessness of experimenter.