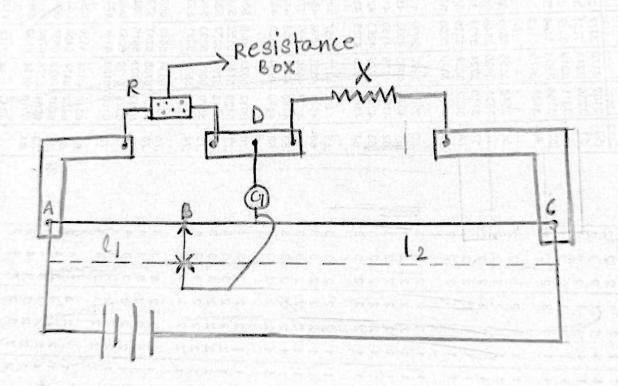
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S. No.	Name of the Experiment	Page No.	Date of Experiment	Date of Submission	Re
No. •	Resistance measurement		28-4-2022		
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	Date
Expt. No	CONTROL OF THE REPORT OF THE PROPERTY OF THE P
	RESISTANCE MEASUREMENT
dim of e	speriment: To determine the resistance of a ginen wive using a meter bridge.
	as: of meter bridge, lectanche cell, key, resistance box, galvanometer, jockey, connecting wires, sand paper and wire of unknown resistance.
Theory:	When the meter bridge is balanced, the resistance, X of the experimental wire is given by
	X = R 100 - L
where	R= resistance introduced from the resistance box L= length of wire between A and B(see fig.)
Exercis Hint	21: Verify the laws of resistances in series and parallel : (i) Connect resistance of, in gap (ii) and repeat the above ent to determine of,
(ii) Remi	re on and connect on 2 in gap (ii). Repeat the above experiment mine on 2.
Connect	et is and it, in socies with each other, as shown fig. this combination in gaplii) and repeat the above experiment
to deter	nine the combined resistance Rs.
	et or, and or, in parallel with each other as shown in
tig. co	neet this combination in gap (ii) and repeat The
abon	experiment to determine the combined resistance of
l,=-	$l_2 = 15.5$ cm
	Teacher's Signature



3. 0.7 $0.6.5$ 0.7 $0.6.5$ 0.7 $0.6.5$ 0.7 $0.6.5$ 0.7 0.8 0.8 0.9 0.8 0.8 0.9	Exp	pt. No					Page No. 2
No. (i) (ii) $L_1(cm)$ L 1. 0.2 11 11.2 11.1 1.6018 2. 0.5 27.3 27.5 27.4 1.3450 3. 0.7 26.5 26.7 26.6 1.9315 Mean $M_1 = 1.6261$ 8 1. 0.2 21.8 21.9 21.9 0.7132 2. 0.5 39.2 39.3 39.3 0.7122 3. 0.7 39.7 39.8 39.8 1.0587 Mean $M_2 = 0.8480$ 84 1. 0.2 34.6 34.7 34.7 0.3763 2. 0.5 19 19.1 19.1 2.1178 3. 0.7 16.5 16.6 16.6 3.5168 Mean $R_3 = 2.0036$ 84 1. 0.2 66.87 66.9 66.9 0.0989 1. 0.2 66.87 66.9 66.9 0.0989 2. 0.5 42 42.1 42.1 0.6061 3. 0.7 45.1 45.2 45.2 0.8486 Mean $R_p = 0.5178$ 84		SI	R (ohm)	6,6	um)	Mean	n 100-l
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1. 0.2 34.6 34.7 34.7 0.3763 2. 0.5 19 19.1 19.1 2.1178 3. 0.7 16.5 16.6 16.6 3.5168 Mean Rs = 2.0036 of 66.9 0.0989 2. 0.5 42 42.1 42.1 0.6061 3. 0.7 45.1 45.2 45.2 0.8486 Mean Rp = 0.5178 december 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				1120 124		Mean 912 =	0.8480 oh
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1. 0.2 66.87 66.9 66.9 0.0989 P 2. 0.5 42 42.1 42.1 0.6061 3. 0.7 45.1 45.2 45.2 0.8486 Mean Rp = 0.5178 d						Mean Rs =	2.0036 ohn
P 2. 0.5 42 42.1 42.1 0.6061 3. 0.7 45.1 45.2 45.2 0.8486 Mean Rp: 0.5178 d		1.	0.2	66.87	66.9	66.9	
3. 0.7 45.1 45.2 45.2 0.8486 Mean Rp = 0.5178 of	36	2.	0.5		42.1	HE SEEK HAR DESIGNATION OF THE SECTION OF	0.6061
Mean Rp = 0:5178 of	1	3.	0.7		45.2	Particular to the second of	0.8486
							0.5178 Ah
Verification: from the above observation it can be observed the (i) Rs= 91, +91, ≥ (1.6261+0.8480) => 2.4741 ≈ 2.0036		3.		45.1		45.2 Mean Rp=	0.8486
			(ii) Rp =		≈ 0.5	67 347237	
This verify the law of resistance in socies. (ii) Rp = 11, 12 \times 0.567 347237 91. + 112	-		This nerifie	The same of the sa	us of res	istance in pu	mallel.
Jhis verifies the law of resistance in parallel.	+						
$y_1 + y_2$							

	Date
Expt. No.	Page No3
Exercise 2: Determine the ginen wire	specific revistance of the meeterial of
Hint: Resistance X of a	wire is given by
X	$= \int \frac{1}{a}$
where , f = resistivity &	r specific resistance of the material
l= length of wir a= area of vross-	
H= radius of who	(L
$\int_{a}^{b} f = \frac{xa}{t}$	or $p = X \cdot \frac{\pi x^2}{l}$
i) Connect the given wire in abone.	gaplii) and determine x as explained
(ii) cut the wire from the torninals and find its	points where it emerges out of the length with the help of a meter ro
jii) find the diameter of the w three or four places of be determined in two	points where it emerges out of the length with the help of a meter now rive, with help of a screw gauge out each place the diameter should mutually perpendicular directions.
(ii) Kength of wire	l = cm
(iii) Diameter of the wive	
Pitch of screw	(with sorew gauge) gauge (P) = 0.05 cm L.C. of Teacher's Signature
week. July	Teacher's Signature

Date Expt. No. Page No. 4 No of 1. C. S. P F.C. S.R No. 07 Total(d) n= d/2 Mean OS.R(INF) P.S.R rotation(N) XLC (cm) NXP(CM) PSR+CSR (CM) (F) (1) 068. 0.02 48 0.05 0-07 0.035 4.2 28 0.014 0.05 0.064 0.032 0.015 43 26 3. 0.065 0.0326 0.034 0.05 26 0.019 47 0:05 0.069 0.0345 4. 26 6. 0.05 0.075 0.025 0.0375 Radius of the wire or = D = 0.034 cm Calculations: P1 = X2 xx2 = 1.6261 x 3.14 x (0.0343) P1 = 1.907 × 10 - 4 ohm meter. $f_2 = \times_2 \frac{\pi \pi^2}{12} = 0.8460 \times 3.14 \times (0.0343)^2$ 12 = 2.021×10-4 ohm meter. = 0.5243 x 104 = 0.4948 × 104