Class X – PHYSICS

ELECTRICITY

1. The values of current (I) flowing in a given resistor for the corresponding values of potential difference (V) are given below:

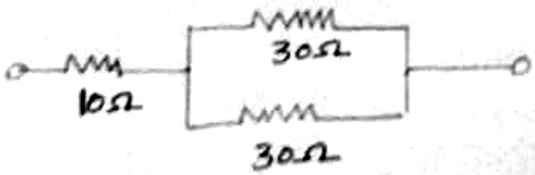
I (Ampere)	0.5	1	1.5	2	2.5	3
V (Volt)	1	2	3	4	5	6

Draw the I V characteristics from this data and verify Ohm's law. Hence calculate the unknown resistance of the given resistor from this.

[Hint: The graph between potential difference and current is called I V characteristics. It will be a straight line. Slope of this graph gives the unknown resistance]

2. Calculate the equivalent resistance of the following circuit diagrams:

(a)



[Hint: For series connection, $R_s = R_1 + R_2 + R_3$

For parallel connection, $\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$]

(b)