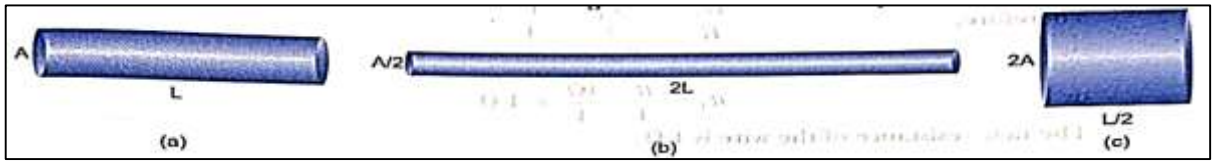
SAREEN'S CLASSES ELECTRICITY TEST – 2 MM = 30 Ph. 9711189465/66

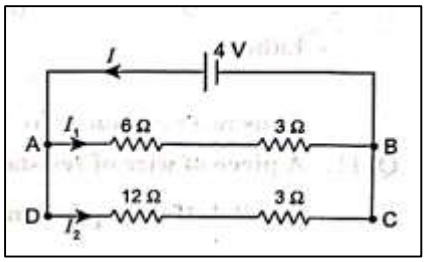
Q1) A current of 5 A is flowing through a resistor of 15 Ω. Calculate the potential difference between the ends of the resistor. (2)

Q2) Figure (a), (b) and (c) show three cylindrical copper conductors along with their face areas and length. Which of the conductors will have highest resistance and why? (2)

Q3) Resistance of a metal wire of length 1 m is 26 Ω at 20^0C. if the diameter of the wire is 0.3 mm, what will be the resistivity of the metal at that temperature? (2)



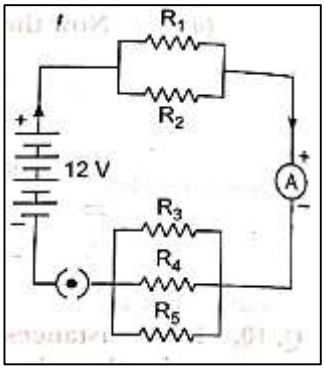
Q4) A 4 Ω resistance wire is doubled on it. Calculate the new resistance of the wire. (3)



Q5) For the circuit shown in the given diagram: what is the value of (i) current through 6 Ω resistor? (ii) potential difference across 12 Ω resistor? (3)

Q6) A piece of wire of resistance R is cut into five equal parts. These parts are then connected in parallel. If the equivalent resistance of this combination is R then find the ratio $\frac{R}{R'}$. (2)

Q7) If in the figure R_1 = 10 Ω, R_2 = 40 Ω, R_3 = 30 Ω, R_4 = 20 Ω, R_5 = 60 Ω, and a 12 V battery is connected to the arrangement, calculate (i) the total resistance in the circuit and (ii) the total current flowing in the circuit. (3)



Q8) What is the commercial unit of electrical energy? Represent it in terms of joules. (2)

Q9) Two resistance of 4 Ω and 6 Ω are connected in parallel. The combination is connected across a 6 volt battery of negligible resistance. Calculate (i) the power supplied by the battery (ii) the power dissipated in each resistor. (3)

Q10) An electric bulb is rated 220 V and 100 W. calculate the power consumed when it is operated on 110 V. (2)

Q11) Two conducting wires of the same material and of equal length and equal diameters are first connected in series and then in parallel in a circuit across the same potential difference. Find the ratio of heat produced in series and parallel combination. (3)

Q12) A heater coil is rated 100 W, 200 V. if it is cut into two identical parts. Both parts are connected together in parallel to the same source of 200 V. calculate the energy liberated per second in the new combination. (3)

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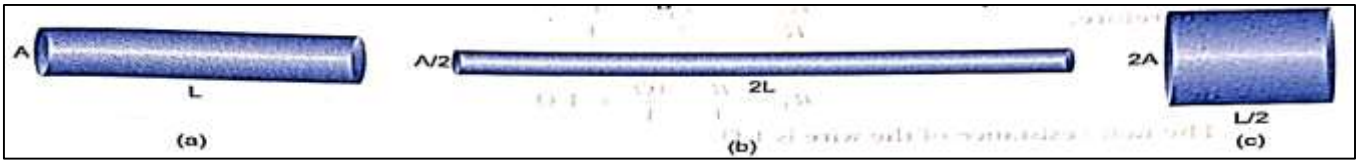

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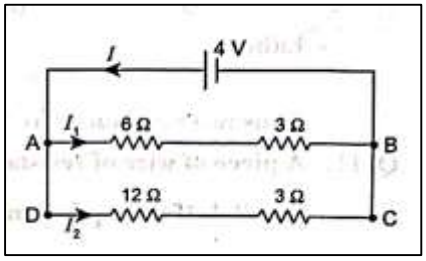

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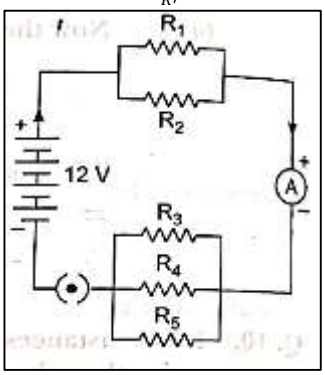

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