

Practice test
Chapter: 12th
Electricity

Q1: Which of the following terms does not represent electrical power in a circuit?

- (a) I^2R
- (b) IR^2
- (c) VI
- (d) V^2/R

Q2: A current of 8 A is equivalent to:

- (A) 8 W s^{-1}
- (B) 8 V C^{-1}
- (C) 8 J C^{-1}
- (D) 8 C s^{-1}

Q3: Name the instrument used for measuring potential difference.

- (A) Ammeter
- (B) Voltmeter
- (C) Galvanometer
- (D) Electric meter.

Q4: The resistivity of a conductor:

- (A) Increases with increase in its area of cross-section
- (B) Increases with increase in its length
- (C) decreases with increase in its length
- (D) does not depend upon its length or area of cross-section.

Q5: A copper wire has diameter 0.5 mm and resistivity of $1.6 \times 10^{-8} \Omega \text{ m}$. What will be the length of this wire to make its resistance 10 Ω ? How much does the resistance change if the diameter is doubled?

Q6: Which uses more energy, a 250 W TV set in 1 hr, or a 1200 W toaster in 10 minutes?

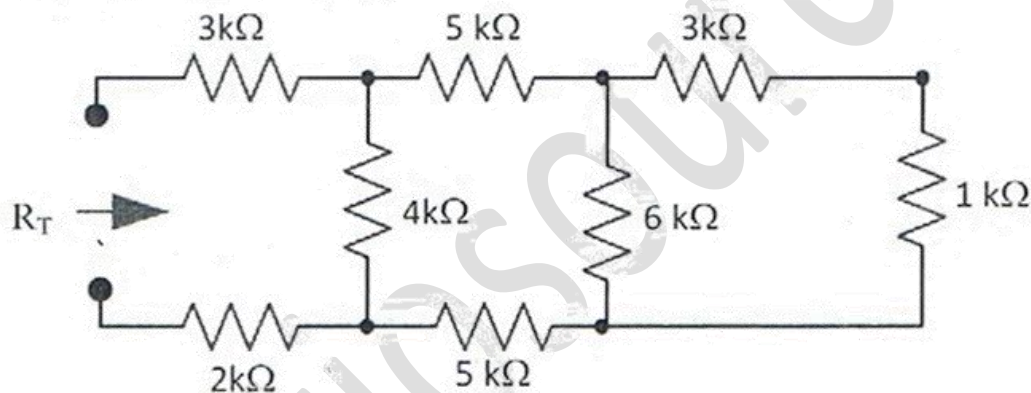
Q7: How many $176\ \Omega$ resistors (in parallel) are required to carry 5 A on a 220 V line?

Q8: Why is the series arrangement not used for domestic circuits?

Q9: Why are copper and aluminium wires usually employed for electricity transmission?

Q10: An electric iron consumes energy at a rate of 840 W when heating is at the maximum rate and 360 W when the heating is at the minimum. The voltage is 220 V. What are the current and the resistance in each case?

Q11: Calculate the equivalent resistance



Q12: Will current flow more easily through a thick wire or a thin wire of the same material, when connected to the same source? Why?