



Class 10 Science | Electricity

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A charge of 120 C passes a point in 60 s. Current is:

A. 7200 A B. 60 A C. 2 A D. 0.5 A

2. Moving 6 C charge through a potential difference of 12 V requires work:

A. 72 J B. 2 J C. 18 J D. 0.5 J

3. A resistor carries 0.5 A at 6 V. Its resistance is:

A. 6.5 Ω B. 3 Ω C. 12 Ω D. 0.083 Ω

4. For an ohmic conductor at constant temperature, doubling voltage makes current:

A. Unchanged B. Four times C. Double D. Half

5. The resistance of a uniform wire is proportional to its:

A. Cross-sectional area B. Square of area
C. Current always D. Length

6. A wire is doubled in length without changing area or material. Resistance becomes:

A. $R/4$ B. $R/2$ C. $2R$ D. $4R$

7. A wire is stretched to twice its length with volume unchanged. Resistance becomes:

A. $R/2$ B. $R/4$ C. $4R$ D. $2R$

8. Two resistors 4 Ω and 6 Ω connected in series have equivalent resistance:

A. 24 Ω B. 2 Ω C. 2.4 Ω D. 10 Ω

9. Resistors 6 Ω and 3 Ω in parallel have equivalent resistance:

A. 9 Ω B. 2 Ω C. 18 Ω D. 3 Ω

10. In a parallel arrangement, each branch has the same:

A. Power necessarily
B. Resistance necessarily
C. Potential difference
D. Current necessarily

11. A 12 V battery across 3 Ω produces power:

A. 48 W B. 144 W C. 36 W D. 4 W

12. An appliance rated 1000 W runs for 2 h. Electrical energy used is:

A. 0.5 kWh B. 2000 kWh C. 2 kWh D. 1002 kWh

13. Heat generated in 5 Ω by 2 A in 10 s is:

A. 20 J B. 100 J C. 50 J D. 200 J

14. An ammeter is connected:

A. In series with the measured branch
B. In parallel across the battery only
C. Across a resistor like a voltmeter
D. Without a complete circuit

15. A voltmeter measuring a resistor's voltage is connected:

A. In parallel across the resistor
B. Across an open switch only
C. In series only
D. In place of the battery

ANSWER KEY — check after completing all 15 questions

1.C 2.A 3.C 4.C 5.D 6.C 7.C 8.D 9.B 10.C 11.A 12.C 13.D 14.A 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper