CBSE TEST PAPER-03

SCIENCE & TECHNOLOGY (Class-10)

Chapter 12 : Electricity

1. What is meant by saying that the potential difference between two points is 1V? (1mark)
2. On what factors does the resistance of a conductor depend? (1mark)
3. What determines the rate at which energy is delivered by a current? (1mark)
4. An electric motor takes 5 A from a 220 V line. Determine the power of the motor and the energy consumed in 2 h. (1 mark)
5. What is the S.I. unit of electric potential? (2 marks)
6. What is meant by the statement, potential difference between points A and B in an electric field is 1 volt? (2 marks)
7. Define the term electrostatic potential? What is the S.I. unit for it? (2 marks)
8. What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series? (2 marks)
9. Why nichrome elements is commonly used in household appliances. (2 marks)
10. Ten bulbs are connected in a series to a power supply line. Ten identical bulbs are connected in parallel circuit to an identical power supply line.
    (a) Which circuit would have the highest voltage across each bulb?
    (b) In which circuit would the bulbs be brighten? (2 marks)
11. Why are coils of electric toasters and electric iron are made of an-alloy rather than a put metal? (2marks)
12. Draw a diagram of a circuit consisting of a battery of three cell of 2 V each, a 5 Ω resistor, an 8 Ω resistor, and a 12 Ω resistor, and a plug key, all connected in series. (2 marks)
13. Why does the cord of an electric heater not glow while the heating element does? (2 marks)
14. (i) What is meant by "Electric Resistance" of a conductor?
    (ii) A wire of length L and resistance R is stretched so that its length is doubled and the area of cross-section is halved. How will its (a) resistance change? (b) Resistivity change? (3 marks)
15. In a household 5 tube lights of 40 W each are used for 5 hour and an electric press of 500 W for 4 hours every day. Calculate the total electrical energy consumed by the tube lights and press in a month of 30 days. (3 marks)

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