CBSE TEST PAPER-01

SCIENCE & TECHNOLOGY (Class-10)

Chapter 12 : Electricity

1. What is mean by saying that the "potential difference between two points is 1 volt". (1 mark)
2. Define electric power. What is its S.I. units? (1 mark)
3. A wire of resistivity p is stretched to twice its length. What is new resistivity? (1 mark)
4. Define the unit "ohm". (1 mark)
5. Name a device that helps to maintain a potential difference across a conductor. (1 mark)
6. Define resistivity. Write the S.I. unit of resistivity. (1 mark)
7. Will current flow more easily through a thick wire or thin wire of the same material when connected to the same sources? Why? (2 marks)
8. A wire of resistance 10 Ω is drawn out so that its length is thrice its original length. Calculate its new resistance (resistivity and density of the wire remain unchanged). (2 marks)
9. Define resistivity and state its S.I. unit. Does it its value vary with temperature. (2 marks)
10. What are the factors on which the resistance of a conductor depends? Give the corresponding relation. (2 marks)
11. What is voltmeter? How is it connected in a circuit? (2 marks)
12. Three resistance R_1, R_2 an R_3 are connected in parallel. Find their equivalent resistance (resultant resistance). (3 marks)
13. What is electric current? What do you understand by the conventional direction of the flow of current? How is the unit ampere defined? (3 marks)
14. (a) Name two factors on which the electric energy consumed by an electrical appliance depends.
    (b) In which of the following cases more electrical energy is consumed per hour?
    (i) A current of 1 ampere passed through a resistance of 300 ohms.
    (ii) A current of 2 amperes passed through a resistance of 100 ohms. (3 marks)
15. (a) What is meant by 'Electric Resistance' of a conductor?
    (b) 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:
    (i)resistance change? (ii) resistivity change? (3 marks)
16. Three resistances R_1, R_2 and R_3 are joined in series. Find their equivalent resistance. (3 marks)
17. State ohm's law. Describe an experiment with a neat labelled circuit diagram to verify ohm's law. (5 marks)