

SECTION – A

2 x 5 = 10

1. Define electric current?
2. What is Nichrome? State its one property?
3. What is meant by electromagnetic induction? State an important application of electromagnetic induction?
4. Define some of the sources of magnetic fields.
5. List some of the source of magnetic fields.

SECTION – B

3 X 5 = 15

6. What is a fuel? What are the characteristics of a good fuel?
7. What is a solenoid? Draw a sketch to show the magnetic field lines produced by a current carrying solenoid. Describe it briefly.
8. An electric oven of 2kw power rating is operated in a domestic electric circuit (220V) that has a current rating of 5A. What result do you expect? Explain.
9. What is the SI unit of resistance? Explain how ohm's law can be used to define the unit of resistance?
10. Show how you would connect three resistance, each of resistance 6Ω , so that the combination has a resistance of (i) 2Ω (ii) 9Ω

SECTION – C

5 X 5 = 25

11. With the help of a diagram, derive the formula for the equivalent resistance of three resistance connected in parallel.
12. Describe the construction and working of an electric generator with the help of a labeled diagram.
13. Draw a labeled sketch to show the domestic electric wiring from an electric pole to a room. Also describe its briefly.
14. Explain how, wind energy can be used to generate electricity.
15. Describe the construction and working of a biogas plant with the help of a labeled diagram.