1. Which of the given is the SI Unit of Electric Current?
A. Ohm
B. Ampere
C. Volt
D. Faraday

2. The instrument used for measuring electric current is:
A. Ammeter
B. Galvanometer
C. Voltmeter
D. Potentiometer

3. The amount of work done in joules, when one unit electric charge moves from one point to another point in an electric circuit is called:
A. Electric current
B. Electric resistance
C. Electric conductance
D. Potential difference

4. The relation between potential difference (V) and current (I) is:
A. V α I2
B. V α 1/I
C. V2 α I
D. V α I

5. A battery of 12V is connected in series with resistors of 0.2 ohm, 0.3 ohm, 0.4 ohm, 0.5 ohm and 12 ohm. How much current would flow through the 0.3 ohm resistor?
A. 0.895A
B. 1.11A
C. 0.5A
D. None of these

6. On which of the given resistance does not depend:
A. Length of conductor
B. Area of cross-section
C. Temperature
D. Density

7. There is wire of length I and cross section A. Which of the given have least resistance?
A. Length doubled, Area halved
B. Length tripled, Area doubled
C. Length halved, Area doubled
D. The original wire

8. A resistor of length l is connected to a battery and current l is given through it. If it is divided into 3 parts by length. And all having the same cross sectional area are connected in series with the same battery, the current flowing through them will be?
A. l/3
B. 3l
C. I
D. 3l/2

9. If the current flowing through a fixed resistor is halved, the heat produced in it will become:
A. Double
B. Half
C. One-fourth
D. Four times

10. An electric heater is rated at 2 Kw. Electrical energy costs Rs 4 per k Wh. What is the cost of using the heater for 3 hours?
A. Rs. 12
B. Rs. 24
C. Rs. 36
D. Rs. 48

11. An electric fuse works on the:
A. Chemical effect of current
B. Magnetic effect of current
C. Lighting effect of current
D. Heating effect of current

12. The resistivity of copper metal depends on only one of the following factors. This factor is:
A. Length
B. Thickness
C. Temperature
D. Area of cross-section

13. When a 4 Ω resistor is connected across the terminals of a 12 V battery, the number of coulombs passing through the resistor per second is:
A. 0.3
B. 3
C. 4
D. 12

14. A wire of resistance R_1 is cut into five equal pieces. These five pieces of wire are then connected in parallel. If the resultant resistance of this combination be R_2, then the ratio R_1/ R_2 is:

(a) 1/25 (b) 1/5

(c) 5 (d) 25

15. A battery of 10 volt carries 20,000 C of charge through a resistance of 20 Ω. The work done in 10 seconds is

(a) $2 \times 10_3$ joule (b) 2×10^5joule

(c) 2×10^4 joule (d) 2×10^2 joule

16. a cooler of 1500 W, 200 volt and a fan of 500 W, 200 volt are to be used from a household supply. The rating of fuse to be used is

(a) 2.5 A (b) 5.0 A

(c) 7.5 A (d) 10 A

17.1 kWh = …….. J

(a) 3.6×10^{-6} J (b) 13.6×10^6 J

(c) 3.6×10^6 J (d) 13.6×10^{-6} J

18. The resistance of a conductor is 27Ω. If it is cut into three equal parts and connected in parallel, then its total resistance is

(a) 6Ω b) 3Ω

(c) 9Ω (d) 27Ω

19. On which of the following no plus and minus sign is marked

(a) a battery (b) a resistor

(c) An ammeter (d) voltmeter