

Chapter :- **Current Electricity**

Assignment 2

Class 12

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|  **CLASS : XIITH SUBJECT : PHYSICS** **DATE : DPP NO. : 2** |

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| **Topic :- Current Electricity**  |

1. Which of the following set up can be used to verify the Ohm’s law?

 a) b)

*V*

 c) d)

*V*

2. The resistance of a galvanometer is and it requires for full deflection. The value of the shunt resistance required to convert it into an ammeter of is

 a) b) c) d)

3. The resistivity of a potentiometer wire is and its area of cross-section is If current is flowing through the wire, the potential gradient will be

 a) b) c) d)

4. In the circuit shown here, the readings of the ammeter and voltmeter are 

 a)

 b)

 c)

 d)

5. A thermocouple of negligible resistance produces an .m.f. of in the linear range of temperature. A galvanometer of resistance whose sensitivity is is employed with the thermocouple. The smallest value of temperature difference that can be detected by the system will be

 a) b) c) d)

6. The resistance across and in the figure.

*C*

*A*

*B*

*r*

*r*

*r*

*r*

*r*

*r*

 *P*

*Q*

 a) b) c) d)

7. When a current flows through a wire, the drift velocity of the electrons is When current flows through another wire of the same material having double the length and double the area of cross-section, the drift velocity of the electrons will be

 a) b) c) d)

8. A wire is broken in four equal parts. A packet is formed by keeping the four wires together. The resistance of the packet in comparison to the resistance of the wire will be

 a) Equal b) One fourth c) One eight d)

9. In an electroplating experiment, of silver is deposited when of current flows for The amount (in ) of silver deposited by of current for will be

 a) b) c) d)

10. Which of the following relation is wrong?

 a) 1 ampere ×1 ohm=1 volt b) 1 watt ×1 sec=1 joule

 c) 1 newton per coulomb =1 volt per metre d) 1 columb ×1 volt=1 watt

11. To convert a range of resistance into a galvanometer of range, the resistance to be connected as shunt is

 a) b) c) d)

12. The effective resistance between points and is

*A*

10Ω

10Ω

10Ω

10Ω

*B*

10Ω

 a) b)

 c) d) None of the above three values

13. If the total emf in a thermocouple is a parabolic function expressed as which of the following relation does not hold good?

 a) Neutral temperature b) Temperature of inversion,

 c) Thermoelectric power d)

14. The plot represents the flow of current through a wire at three different times.

 

 The ratio of charges flowing through the wire at different times is

 a) 2 : 1 : 2 b) 1 : 3 : 3 c) 1 : 1 : 1 d) 2 : 3 : 4

15. When the resistance of is connected at the ends of a battery, its potential difference decreases from to The internal resistance of the battery is

 a) b) c) d)

16. A cylindrical metal wire of length and cross sectional area has resistance conductance conductivity and resistivity Which one of the following expressions for is valid

 a) b) c) d)

17. The heat developed in an electric wire of resistance by a current for a time is

 a) b) c) d)

18. In the circuit of adjoining figure the current though resistor will be

 

 a) b) c) d)

19. An electric bulb is designed to draw power at voltage If the voltage is it draws a power Then

 a) b) c) d)

20. When two resistances and are connected in series and parallel with line power consumed will be and respectively. Then the ratio of power consumed by to that consumed by will be

 a) 1 :1 b) 1 :2 c) 2 :1 d) 1 :4