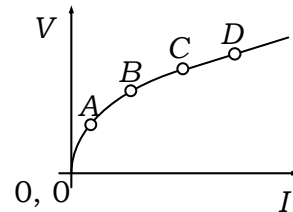
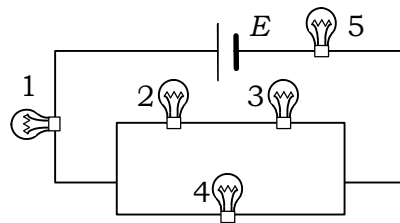


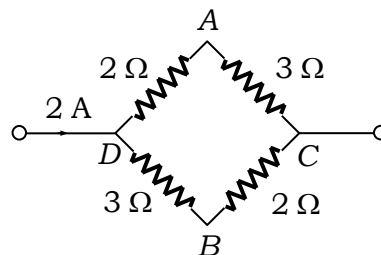
7. A piece of wire of resistance 4 ohm is bent through 180° at its mid-point and the two halves are twisted together. Then the resistance is
 A) 8 ohm
 B) 1 ohm
 C) 2 ohm
 D) 5 ohm
8. Variation of current passing through a conductor as the voltage applied across its ends is varied as shown in figure. If the resistance is determined at the points A, B, C and D. We will find that resistance at



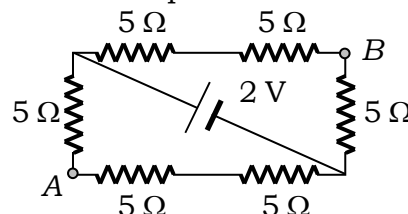
- A) C and D are equal
 B) B is higher than at A
 C) C is higher than at B
 D) A is lower than at B
9. In the figure shown, all the bulbs are identical which bulb(s), light(s) most brightly



- A) 1 only
 B) 4 only
 C) 2 and 3
 D) 1 and 5
10. A current of 2 A flows in a system of conductors shown in figure. The potential difference $V_A - V_B$ will be

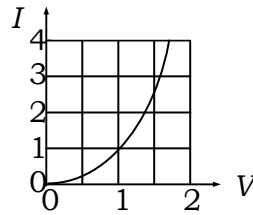


- A) +2 V
 B) +1 V
 C) -1 V
 D) -2 V
11. The potential difference between the points A and B in figure will be

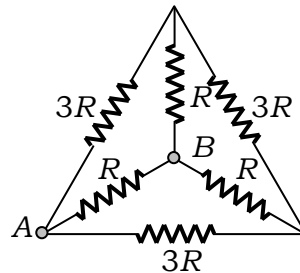


- A) $\frac{2}{3}$ V
 B) $\frac{8}{9}$ V
 C) $\frac{4}{3}$ V
 D) 2 V

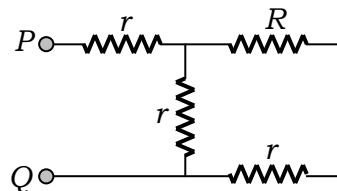
39. A cell of emf 1.5 V and internal resistance 0.5Ω is connected to a (non-linear) conductor whose $V-I$ graph is as shown. Then the terminal voltage of the cell is



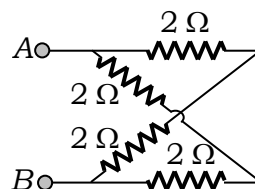
- A) 0.75 V
B) 1.0 V
C) 1.25 V
D) 1.5 V
40. Six resistances are connected as shown in figure. The effective resistance between points A and B is



- A) R
B) $R/2$
C) $R/3$
D) $2R/3$
41. In the circuit shown, the resistance between the terminals P and Q is R . Then the value of r must be

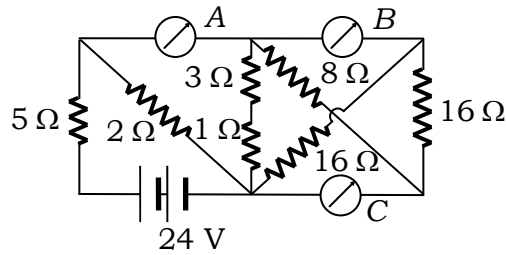


- A) R
B) $\sqrt{3}R$
C) $R/\sqrt{3}$
D) $R/\sqrt{2}$
42. The equivalent resistance between terminals a and b in figure is

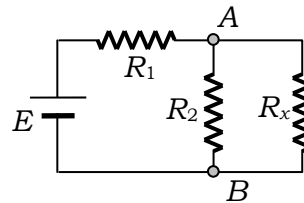


- A) $\frac{1}{2} \Omega$
B) 1Ω
C) 2Ω
D) 8Ω

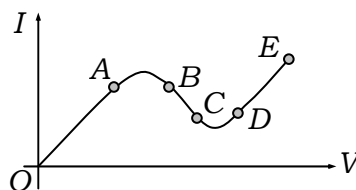
43. In the circuit shown, the three ammeters A , B and C have negligible resistances. Then the reading of the ammeter A is



- A) 0.5 A
 B) 0.75 A
 C) 1.00 A
 D) 2.00 A
44. In the figure the voltage source of emf E provides a constant voltage and has negligible internal resistance. Then if $R_1 = 20\ \Omega$ and $R_2 = 30\ \Omega$, the value of resistance R_x is such that the power generated in it is practically independent of small variations of its value. Then R_x is

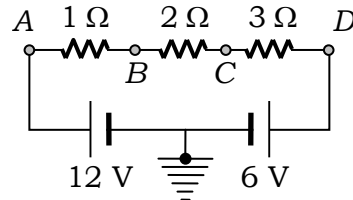


- A) 6 Ω
 B) 12 Ω
 C) 18 Ω
 D) 30 Ω
45. In an electric circuit of complex nature when a current gets divided in accordance with Kirchhoff's law into a number of branches, the heating effect is
- A) maximum
 B) minimum
 C) infinite
 D) zero
46. The current voltage relationship for a device is shown by the curve, as shown in figure. Then the part BC of the curve corresponds to

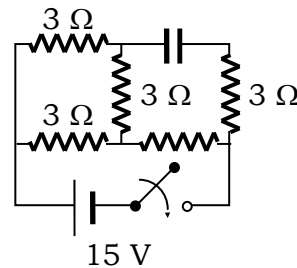


- A) zero resistance
 B) non zero positive resistance
 C) negative resistance
 D) infinite resistance
47. A lead wire and an iron wire are connected in parallel. Their respective specific resistances are in the ratio 49 : 24. The former carries 80% more current than the latter and the latter is 47% longer than the former. Then the ratio of their cross-sectional area is
- A) 0.4
 B) 2.5
 C) 0.8
 D) 1.25

48. Two wires A and B are connected in series at 0°C and resistance of B is 4 times that of A . The temperature coefficient of resistance of A is 0.004 per $^\circ\text{C}$ and that of the combination is 0.001 per $^\circ\text{C}$. Then the temperature coefficient of resistance of B is (per $^\circ\text{C}$)
- A) 0.001
B) 0.004
C) 0.0025
D) 0.00025
49. In the circuit shown the potentials of the points B , C and D are respectively



- A) 12 V, 10 V, 6 V
B) 11 V, 9 V, 6 V
C) 11 V, 9 V, 0V
D) 12 V, 10 V, 0 V
50. In the circuit shown the battery has emf $E = 15$ V with no internal resistance. Each resistance $R = 3 \Omega$. The potential difference across the capacitor is



- A) zero
B) 9 V
C) 12 V
D) 15 V

Answer To Electricity & Electrical Conduction

01. B)	02. C)	03. D)	04. D)	05. C)	06. C)	07. B)	08. A)	09. D)	10. B)
11. A)	12. B)	13. D)	14. C)	15. A)	16. D)	17. B)	18. C)	19. C)	20. A)
21. C)	22. D)	23. B)	24. B)	25. A)	26. C)	27. D)	28. A)	29. C)	30. C)
31. B)	32. C)	33. A)	34. B)	35. A)	36. B)	37. C)	38. C)	39. B)	40. D)
41. C)	42. C)	43. D)	44. B)	45. B)	46. C)	47. B)	48. D)	49. B)	50. C)