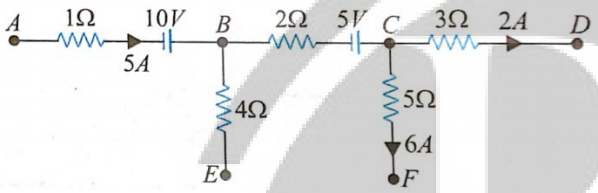
# Ch—03 Current Electricity

## Daily Practice Problem 06

**Q1.** The figure given below is a part of a circuit. Calculate the current through 4Ω resistance and also find the potential difference $V_A$ — $V_D$?

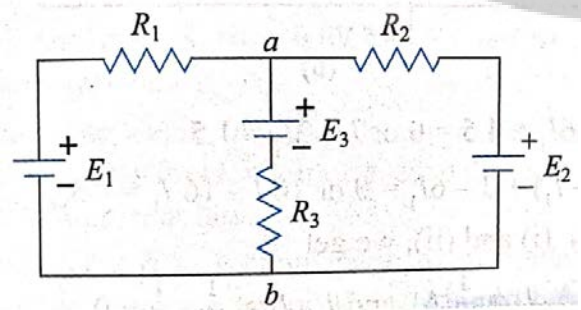



**Q2.** Calculate the current through each resistance in the given circuit (see figure). Also calculate the potential difference between the points a and b.

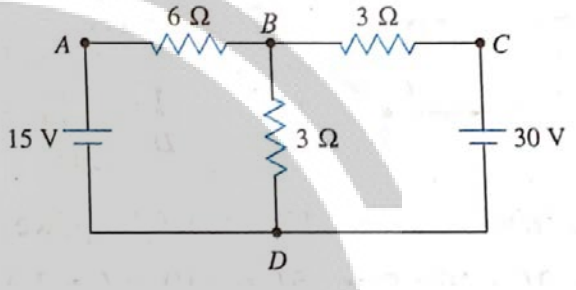
$E_1$, = 6 V, $E_2$= 8V, $E_3$ = 10 V,

$R_1$= 5 Ω, $R_2$ = 10 Ω, $R_3$ = 4 Ω

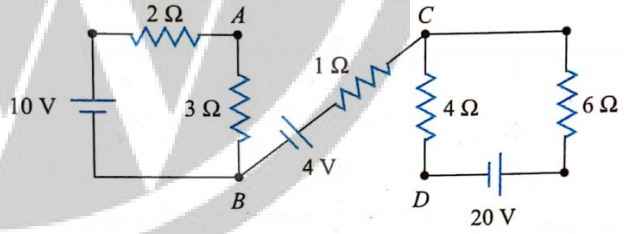
Assume that all the cells have no internal resistance.



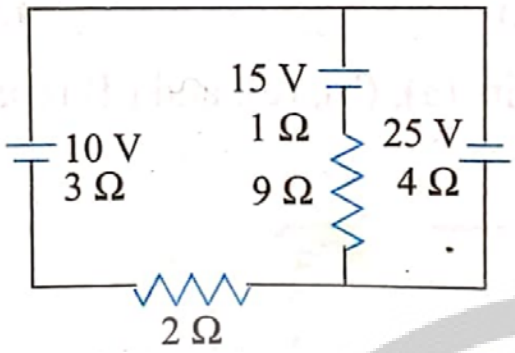

**Q3.** In the circuit shown in figure, find the current through the branch BD.



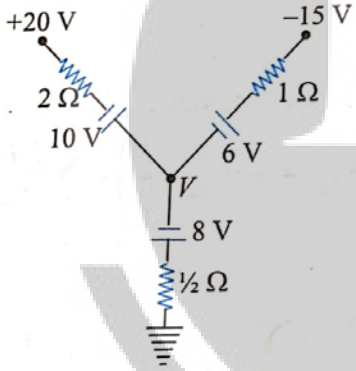

**Q4.** In the circuit shown in figure, determine the voltage drop' between A and D.



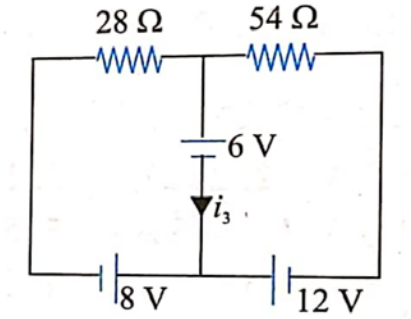
**Q5.** Find the current in each resistor in the circuit as shown in figure.



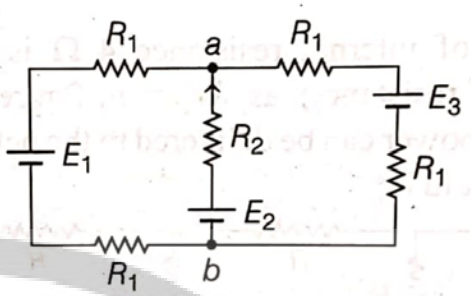

**Q6.** In the network of three cells, find the potential V of their junction.




**Q7.** Consider the circuit shown in figure. The current $i_3$ is equal to




**Q8.** For the circuit shown with $R_1 = 1.0\Omega$, $R_2 = 2.0\,\Omega$, $E_1 = 2$ V and $E_2 = E_3 = 4$ V, the potential difference between the points a and b is approximately (in volt)



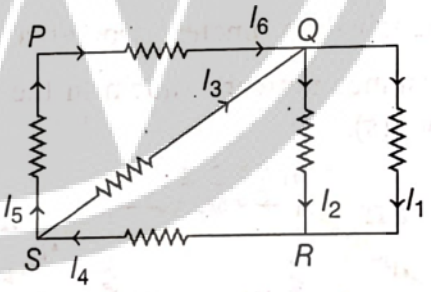

**a.** 2.7

**b.** 2.3

**c.** 3.7

**d.** 3.3

**Q9.** In the given circuit diagram, the currents $I_1 = -0.3$ A, $I_4 = 0.8$ A and $I_5 = 0.4$ A, are flowing as shown. The currents $I_2$, $I_3$ and $I_6$ respectively, are



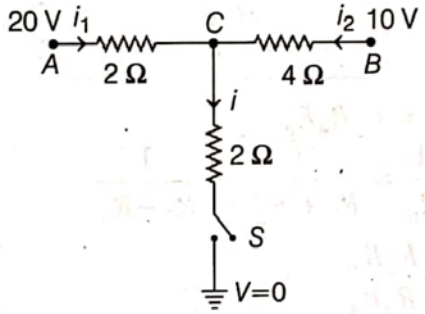

**a.** 1.1 A, 0.4 A, 0.4 A

**b.** 1.1 A, — 0.4 A,0.4A

**c.** 0.4 A, 1.1 A, 0.4A

**d.** — 0.4 A, 0.4 A,1.1A

**Q10.** When the switch S in the circuit shown is closed, then the value of current i will be




**a.** 4A

**b.** 3A

**c.** 2A

**d.** 5A

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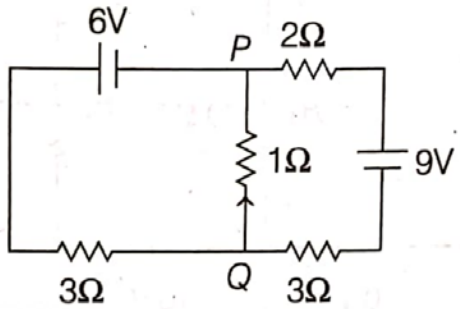
**Q11.** In the circuit shown below, the current in the 1Ω resistor is




**a.** 1.3 A, from P to Q

**b.** 0.13 A, from Q to P

**c.** 0 A

**d.** 0.13 A, from P to Q

## ANSWERS

**1.** 11 V

**2.** $i_1 = \frac{24}{25} A \ towards \ left,$

$i_2 = \frac{1}{55} A \ towards \ right,$

$i_3 = \frac{5}{11} A \ upwards$

$V_a - V_b = \frac{90}{11} V$

**3.** 5 A

**4.** 10 V

**5.** $i_{2\Omega} = 3\ A, \quad i_{9\Omega} = 2\ A$

**6.** $-\frac{44}{7}$

**7.** $-\frac{5}{6} A$

**8.** d

**9.** a

**10.** d

**11.** b