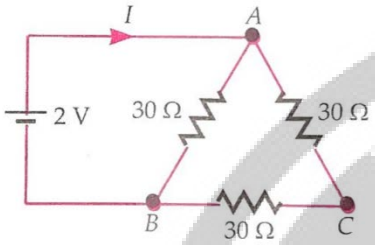
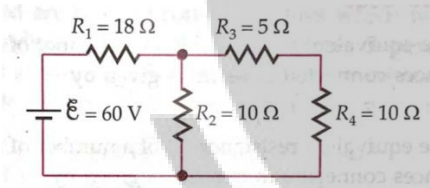
Ch—03 Current Electricity

Daily Practice Problem 04

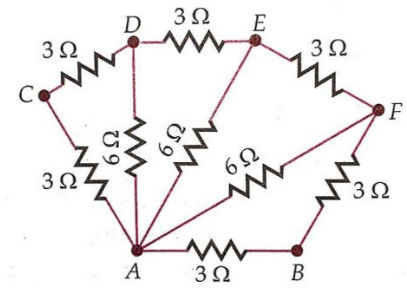
Q1. Find the value of current I in the circuit shown in Fig.



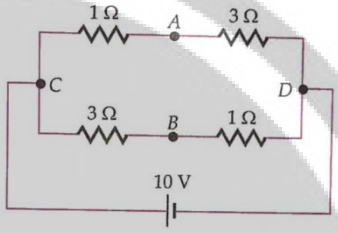
Q2. Determine the voltage drop across the resistor R_1 in the circuit given below with E = 60 V, R_1 =18 Ω, R_2 =10Ω.



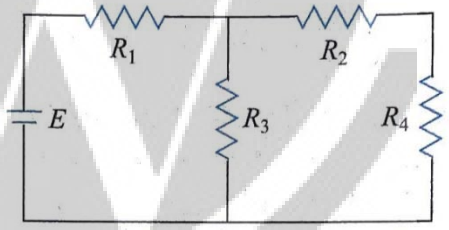
Q3. Find the effective resistance between points A and B for the network shown in Fig



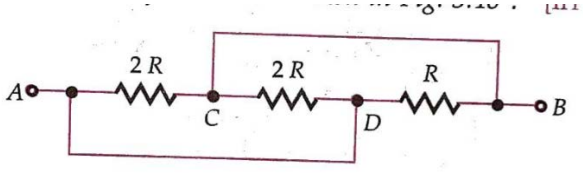
Q4. A battery of emf 10 V is connected to resistances as shown in Fig. Find the potential difference between the points A and B.



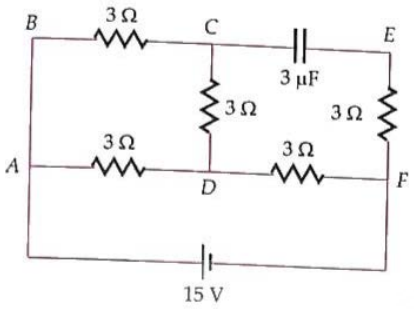
Q5. Determine the voltage drop across the resistor R_1 in the circuit given below with E = 65 V, R_1 = 50 Ω, R_2 = 100 Ω, R_3 = 100 Ω, and R_4= 300 Ω.



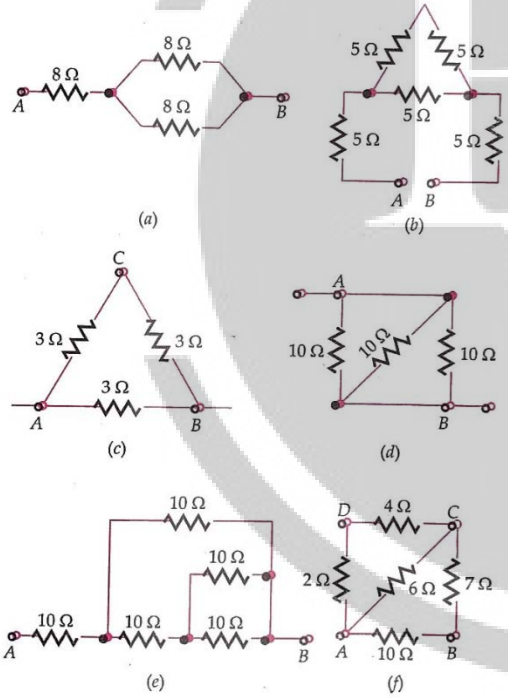
Q6. What is the equivalent resistance between points A and B of the circuit shown in Fig.?



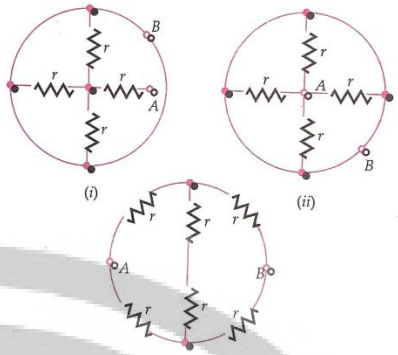
Q7. In the circuit shown in Fig., find the potential difference across the capacitor.



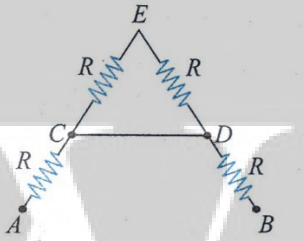
Q8. Calculate the equivalent resistance between points A and B in each of the following networks of resistors:



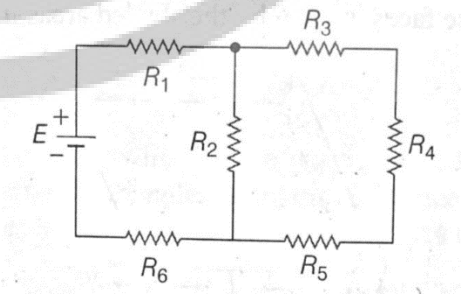
Q9. Find the equivalent resistance of the networks shown in Fig. between the points A and B.



Q10. Four identical resistance each having value R are arranged as shown in figure. Find the equivalent resistance between A and B



Q11. In the figure shown, what is the current (in ampere) drawn from the battery? You are given: $R_1 = 15\ \Omega$, $R_2 = 10\ \Omega$, $R_3 = 20\ \Omega$, $R_4 = 5\ \Omega$, $R_5 = 25\ \Omega$, $R_6 = 30\ \Omega$, E = 15V



(a) 13/24
(b) 7/18
(c) 20/3
(d) 9/32

ANSWERS

1. 0.1 A

2. 45 V

3. 2 Ω

4. 5.0 V

5. 25 *V*

6. R/2

7. 12 V

8. **a.** 12Ω **b**. 40/3 Ω **c.** 2 Ω **d.** 10/3 Ω **e.** 16 Ω **f.** 5 Ω

9. **a**. 4/3 r **b**. r/4 **c**. r

10. 2R

11. d