Q.1 In a balanced Wheatstone bridge, current in the galvanometer is zero. It remains zero when

(1) The emf is increased

(2) All resistance are increased by 10 Ω

(3) All resistance are made five times

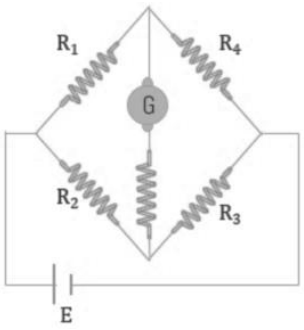
(4) The battery and the galvanometer are interchanged

(A) Only (1) is correct

(B)(1),(2) and (3) are correct

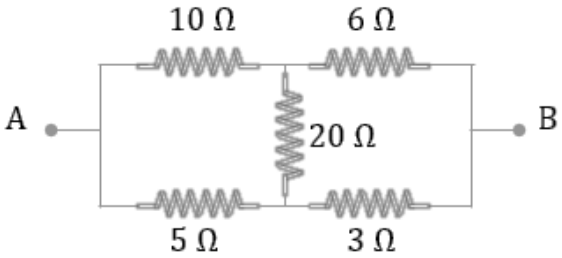
(C) (1), (3) and (4) are correct

(D)(1) and (3) are correct



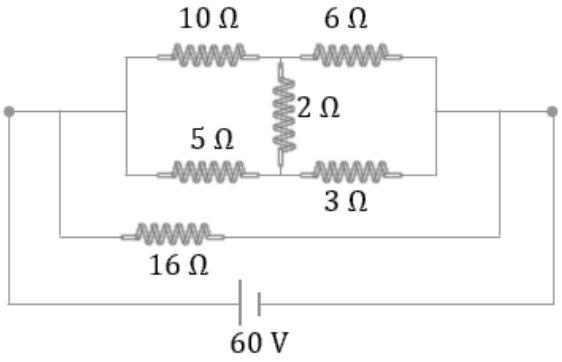
Q.2 Find equivalent resistance of the circuit between the terminal A and B

(A)$\frac{4}{3}$ Ω **(B)**$\frac{8}{3}$ Ω **(C)** $\frac{16}{3}$ Ω **(D)**$\frac{32}{3}$ Ω



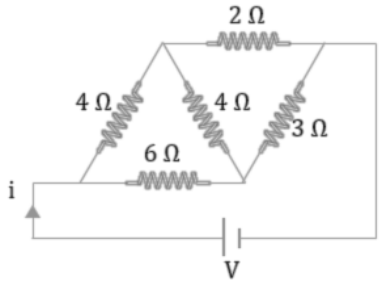
Q.3 Find equivalent resistance of the circuit

(A)1 Ω **(B)**4 Ω **(C)** 2 Ω **(D)**8 Ω



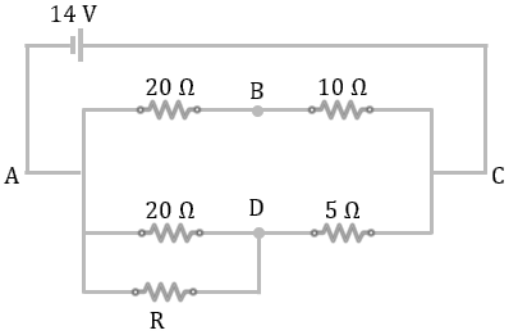
Q.4 For the network shown in the figure, the value of the current i is

(A)$\frac{9V}{35}$ **(B)**$\frac{5V}{18}$ **(C)** $\frac{5V}{9}$ **(D)**$\frac{5V}{9}$



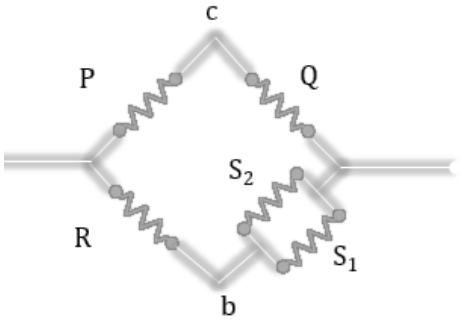
Q.5 What resistor should be connected in parallel with the 20 Ω resistor in branch ADC in the circuit shown in figure, so that potential difference between B and D may be zero?

(A)20 Ω **(B)**10 Ω **(C)**5 Ω **(D)**15 Ω



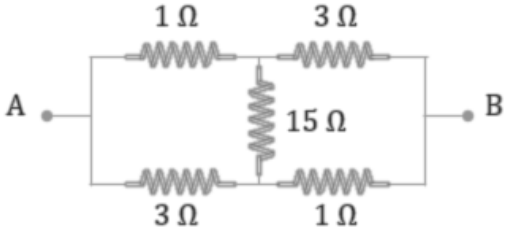
Q.6 In a circuit, three resistanceP,Q and R are connected in the three arms and the fourth arm is formed by two resistance S1 and S2 connected in parallel. The condition for which the circuit will become a balanced Wheatstone bridge is

(A) $\frac{P}{Q}=\frac{R(S_1+S_2)}{2S_1S_2}$ **(B)** $\frac{P}{Q}=\frac{R}{S_1+S_2}$ **(C)** $\frac{P}{Q}=\frac{2R}{S_1+S_2}$ **(D)** $\frac{P}{Q}=\frac{R(S_1+S_2)}{S_1S_2}$



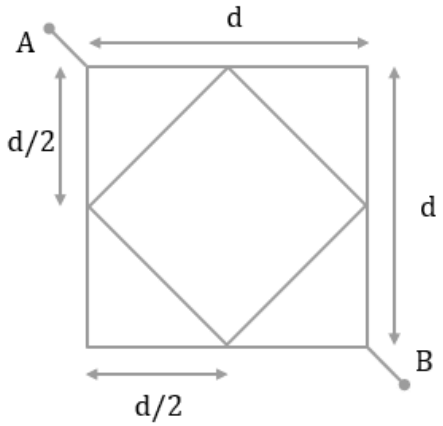
Q.7 The equivalent resistance between A and B will be :

(A) $\frac{25}{7}$ Ω **(B)** $\frac{33}{7}$ Ω **(C)** $\frac{25}{17}$ Ω **(D)**4 Ω



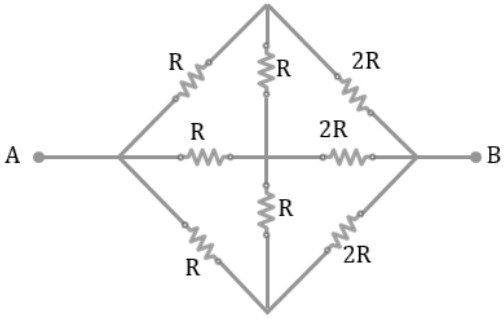
Q.8 The wire has linear resistance p (inΩ/m). The resistance between points A and B if the side of the big square is d.

(A) $\frac{pd}{\sqrt{2}}$ **(B)** $\sqrt{2}pd$ **(C)** $2pd$ **(D)** $3pd$



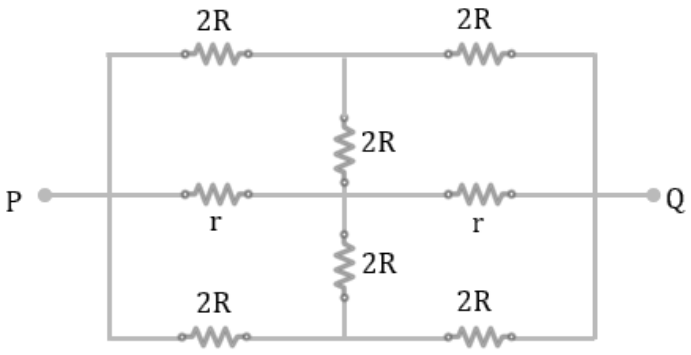
Q.9 Find the equivalent resistance between A and B.

(A) $2R$ **(B)** $3R$ **(C)** R **(D)** $\frac{R}{2}$



Q.10 The effective resistance between points P and Q of the electrical circuit shown in the figure is:

(A) $\frac{2Rr}{R+r}$ **(B)** $2r + 4R$ **(C)** $\frac{8R(R+r)}{3R+r}$ **(D)** $\frac{5}{2}R + 2r$



ANSWER KEY

Q.	1	2	3	4	5	6	7	8	9	10
Sol.	(C)	(C)	(B)	(B)	(A)	(D)	(B)	(A)	(C)	(A)