

NEET CURRENT ELECTRICITY — WHEATSTONE BRIDGE AND METRE BRIDGE — PYQS

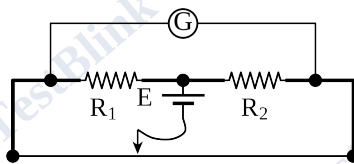
Max. Marks: 64

Questions: 16

Section A (MCQ) — 16 questions

- Q.1** In a metre bridge experiment (see figure), the positions of the cell, E, and galvanometer, G, are interchanged. We shall observe in the galvanometer:

[NEET (UG) 2026]



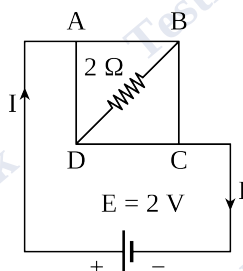
- (1) Only the right-sided deflection
- (2) Only the left-sided deflection
- (3) There will be no deflection irrespective of the position of the jockey
- (4) Both right-sided and left-sided deflection and at balance point, no deflection

Scan or tap for the full solution



- Q.2** A uniform metallic wire having resistance $4\ \Omega$ is bent to form a square loop (ABCD) (see figure). A resistance of $2\ \Omega$ is connected between points B and D and a battery of 2 V is connected across points A and C as shown in the figure. Now the value of current (I) is :

[NEET (UG) 2026]



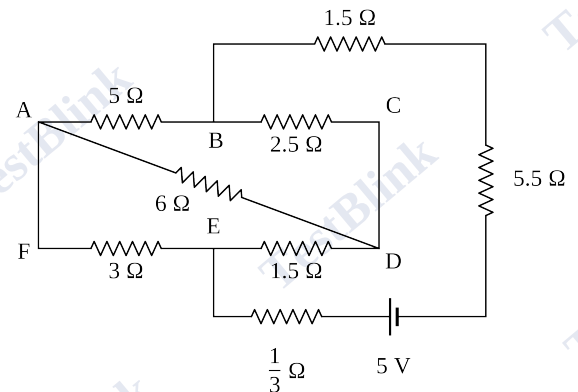
- (1) 4 A
- (2) 4.5 A
- (3) 8 A
- (4) 2 A

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- Q.3** The current passing through the battery in the given circuit, is:

[NEET (UG) 2025]



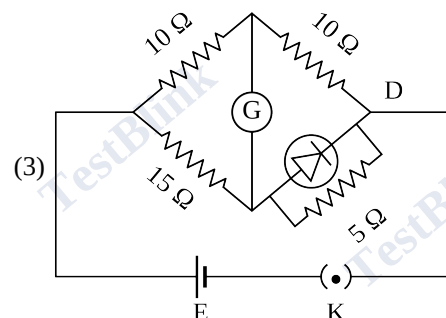
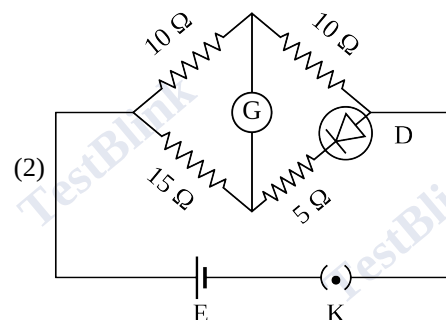
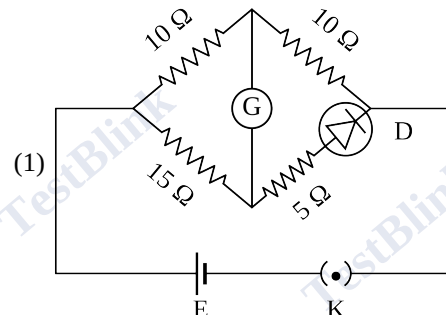
- (1) 2.5 A
- (2) 1.5 A
- (3) 2.0 A
- (4) 0.5 A

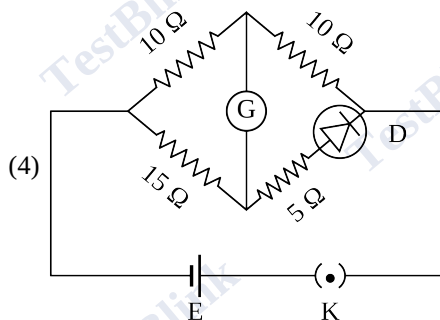
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- Q.4** Choose the correct circuit which can achieve the bridge balance.

[NEET (UG) 2024]

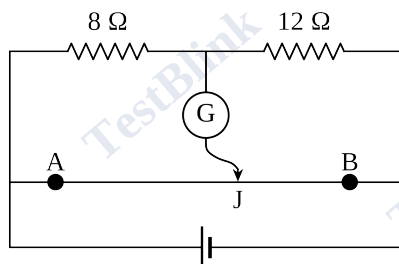




Scan or tap for the full solution



- Q.5** The given circuit shows a uniform straight wire AB of 40 cm length fixed at both ends. In order to get zero reading in the galvanometer G, the free end of J is to be placed from B at: [RE-NEET (UG) 2024]



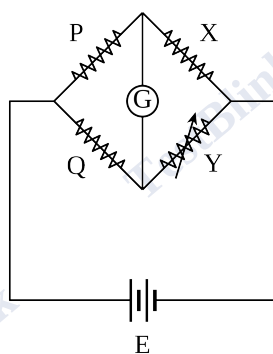
- (1) 32 cm (2) 8 cm (3) 16 cm (4) 24 cm

Scan or tap for the full solution



- Q.6** A wheatstone bridge is used to determine the value of unknown resistance X by adjusting the variable resistance Y as shown in the figure. For the most precise measurement of X, the resistance P and Q

[NEET (UG) 2022]



- (1) Should be approximately equal to $2X$
 (2) Should be approximately equal and are small
 (3) Should be very large and unequal
 (4) Do not play any significant role

Scan or tap for the full solution



- Q.7** A resistance wire connected in the left gap of a metre bridge balances a $10\ \Omega$ resistance in the right gap at a point which divides the bridge wire in the ratio 3:2. If the length of the resistance wire is 1.5 m, then the length of $1\ \Omega$ of the resistance wire is: [NEET (UG) 2020]

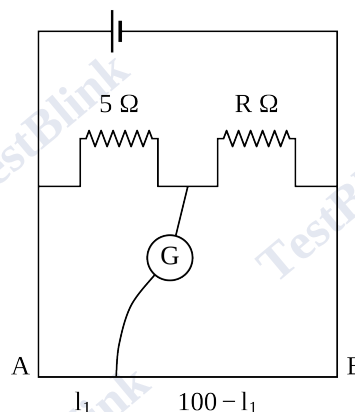
- (1) 1.0×10^{-1} m (2) 1.5×10^{-1} m
 (3) 1.5×10^{-2} m (4) 1.0×10^{-2} m

Scan or tap for the full solution



- Q.8** The resistances in the two arms of the meter bridge are $5\ \Omega$ and $R\ \Omega$ respectively. When the resistance R is shunted with an equal resistance, the new balance point is at $1.6 l_1$. The resistance R is

[AIPMT 2014]



- (1) $10\ \Omega$ (2) $15\ \Omega$ (3) $20\ \Omega$ (4) $25\ \Omega$

Scan or tap for the full solution



- Q.9** The resistances of the four arms P, Q, R and S in a Wheatstone's bridge are 10 ohm, 30 ohm, 30 ohm and 90 ohm, respectively. The e.m.f. and internal resistance of the cell are 7 volt and 5 ohm respectively. If the galvanometer resistance is 50 ohm, the current drawn from the cell will be

[NEET 2013]

- (1) 0.1 A (2) 2.0 A (3) 1.0 A (4) 0.2 A

Scan or tap for the full solution



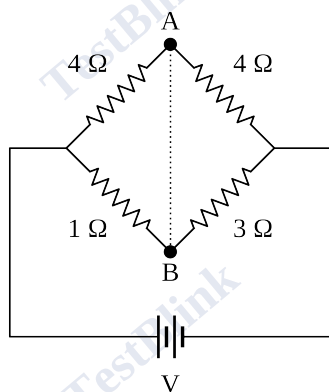
- Q.10** Three resistances, P, Q, R each of $2\ \Omega$ and an unknown resistance S form the four arms of a Wheatstone bridge circuit. When a resistance of $6\ \Omega$ is connected in parallel to S the bridge gets balanced. What is the value of S? [AIPMT 2007]

- (1) $3\ \Omega$ (2) $6\ \Omega$ (3) $1\ \Omega$ (4) $2\ \Omega$

Scan or tap for the full solution



- Q.11** In the circuit shown, if a conducting wire is connected between points A and B, the current in this wire will [AIPMT 2006]

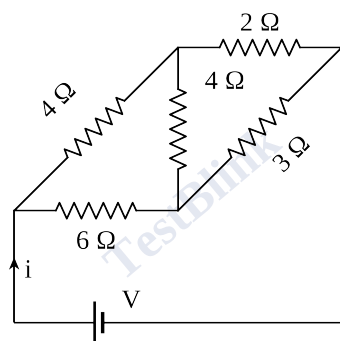


- (1) flow from B to A
 (2) flow from A to B
 (3) flow in the direction which will be decided by the value of V
 (4) be zero

Scan or tap for the full solution



- Q.12** For the network shown in the figure the value of the current i is [AIPMT 2005]

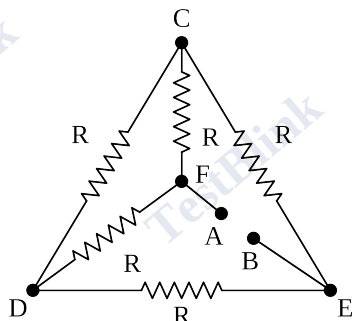


- (1) $\frac{9V}{35}$ (2) $\frac{18V}{5}$ (3) $\frac{5V}{9}$ (4) $\frac{5V}{18}$

Scan or tap for the full solution



- Q.13** Five equal resistances each of resistance R are connected as shown in the figure. A battery of V volts is connected between A and B. The current flowing in AFCEB will be [AIPMT 2004]



- (1) $\frac{3V}{R}$ (2) $\frac{V}{R}$ (3) $\frac{V}{2R}$ (4) $\frac{2V}{R}$

Scan or tap for the full solution



- Q.14** In a Wheatstone's bridge all the four arms have equal resistance R . If the resistance of the galvanometer arm is also R , the equivalent resistance of the combination as seen by the battery is [AIPMT 2003]

- (1) $R/4$ (2) $R/2$ (3) R (4) $2R$

Scan or tap for the full solution



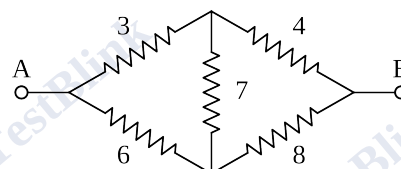
- Q.15** The resistance of each arm of the Wheatstone's bridge is 10 ohm . A resistance of 10 ohm is connected in series with a galvanometer then the equivalent resistance across the battery will be [AIPMT 2001]

- (1) 10 ohm (2) 15 ohm (3) 20 ohm (4) 40 ohm

Scan or tap for the full solution



- Q.16** The net resistance of the circuit between A and B is [AIPMT 2000]



- (1) $\frac{8}{3}\Omega$ (2) $\frac{14}{3}\Omega$ (3) $\frac{16}{3}\Omega$ (4) $\frac{22}{3}\Omega$

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	4	4	1	4	2	1	2	4	1	1
Ques.	12	13	14	15	16						
Ans.	4	3	3	1	2						