

CUET 2026 May 29 Shift 2 Physics

Question Paper (Memory-Based)

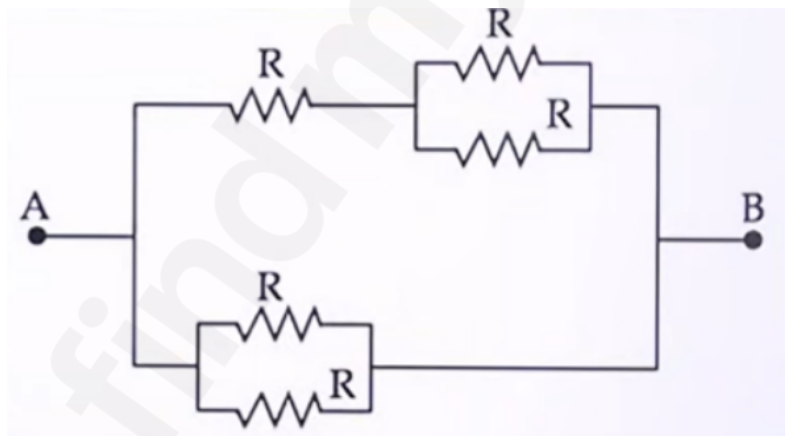
Conducted by National Testing Agency (NTA)



General Instructions

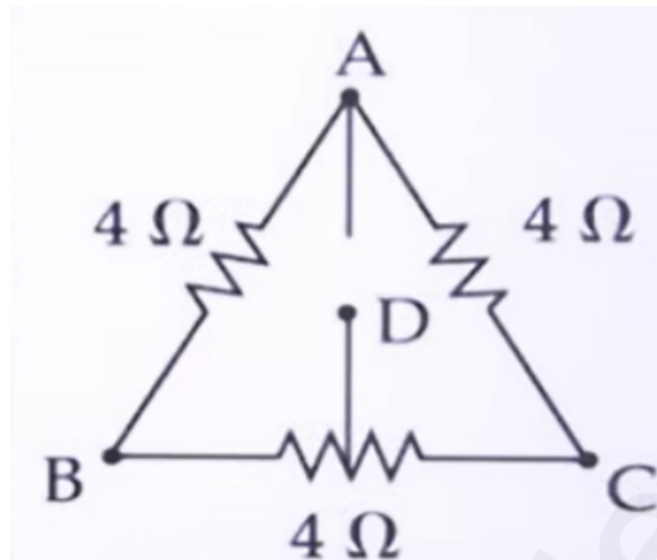
- (i) The examination will be conducted in Computer-Based Test (CBT) mode.
- (ii) Each question carries +5 marks for correct answer and -1 mark for wrong answer.
- (iii) The total number of questions are 50.
- (iv) Duration of the exam is 1 hour (60 minutes).

1. Five resistors, each of resistance R , are connected between points A and B as shown in the figure. The equivalent resistance between A and B is:



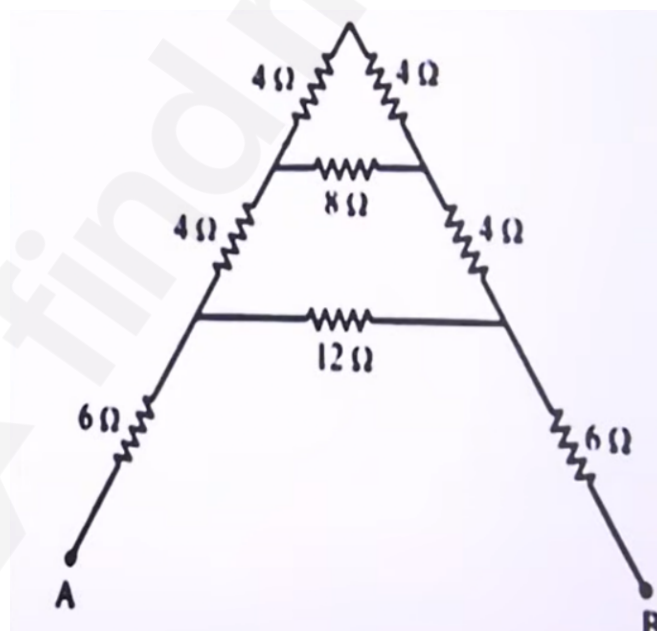
- (A) $\frac{3R}{8}$
- (B) $5R$
- (C) $\frac{8R}{3}$
- (D) $2R$

2. In the figure shown, three resistors of 4Ω are connected. If point D divides the resistor between B and C into two equal parts, then the equivalent resistance between points A and D is:



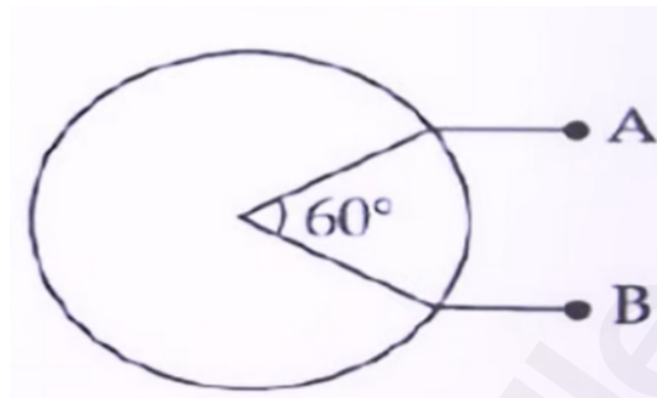
- (A) $12\ \Omega$
 (B) $6\ \Omega$
 (C) $3\ \Omega$
 (D) $\frac{1}{3}\ \Omega$

3. For the given mixed combination of resistors, calculate the total resistance between points A and B.



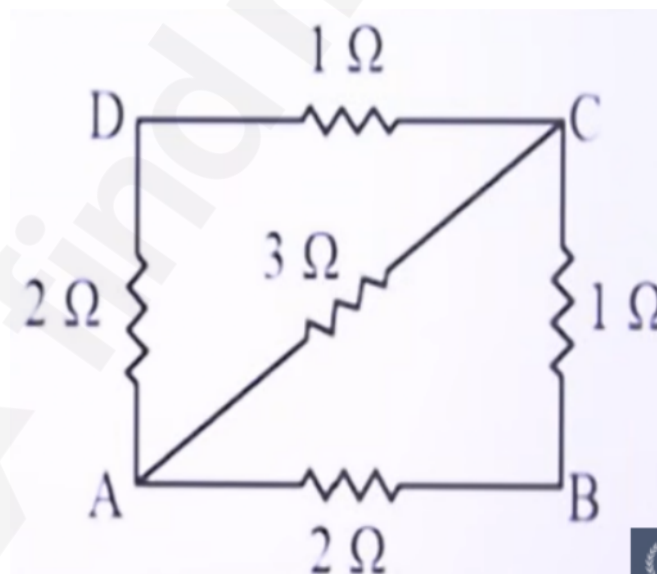
- (A) $9\ \Omega$
 (B) $18\ \Omega$
 (C) $4\ \Omega$
 (D) $14\ \Omega$

4. A wire of uniform cross-sectional area and resistivity has total resistance $36\ \Omega$ and is bent into a circle as shown in the figure. The equivalent resistance between points A and B is:



- (A) $6\ \Omega$
- (B) $5\ \Omega$
- (C) $30\ \Omega$
- (D) $42\ \Omega$

5. The equivalent resistance of the following combination of resistances between A and C is:



- (A) $36\ \Omega$
- (B) $1\ \Omega$
- (C) $27\ \Omega$
- (D) $3\ \Omega$

6. A straight wire of mass 200 g and length 1.5 m carries a current of 2 A. It is suspended in mid-air by a uniform horizontal magnetic field B . The magnitude of B is ($g = 10 \text{ m s}^{-2}$):

- (A) 2 T
- (B) 1.5 T
- (C) 0.55 T
- (D) 0.67 T

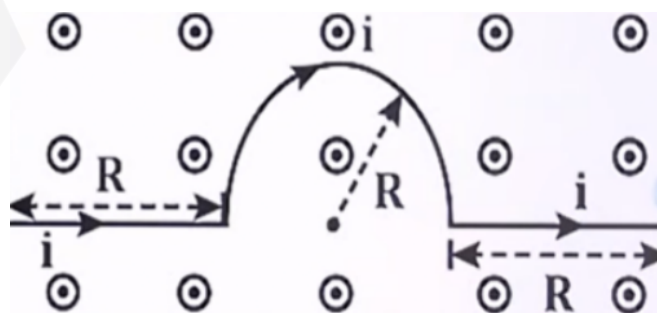
7. A straight wire of mass 500 g and length 7 m carries a current of 1.4 A. It is suspended in mid-air by a uniform horizontal magnetic field B perpendicular to the length of the wire. The magnitude of the magnetic field is:

- (A) 3.5 T
- (B) 0.7 T
- (C) 0.5 T
- (D) 2.5 T

8. If a straight wire of length 175 cm and mass 250 g is suspended freely in a uniform horizontal magnetic field of 0.7 T, then the current flowing through the wire is:

- (A) 20 A
- (B) 0.02 A
- (C) 2 A
- (D) 0.2 A

9. A wire carrying current i , bent as shown in the figure, is placed in a uniform magnetic field B directed normally out of the plane of the figure. The force on the wire is:



- (A) $4BiR$, directed vertically downward

- (B) $3BiR$, directed vertically upward
 - (C) $Bi(2R + \pi R)$, directed vertically downward
 - (D) $2BiR$, from P to Q
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10. The most exotic diamagnetic materials are superconductors. They exhibit perfect diamagnetism and perfect conductivity. The values of magnetic susceptibility (χ) and relative permeability (μ_r) for such materials are:

- (A) $\chi = 1, \mu_r = 0$
 - (B) $\chi = -1, \mu_r = 0$
 - (C) $\chi = 0, \mu_r = 1$
 - (D) $\chi = -1, \mu_r = 1$
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