

CUET 2026 May 12 Shift 2 Physics

Question Paper (Memory-Based) PDF

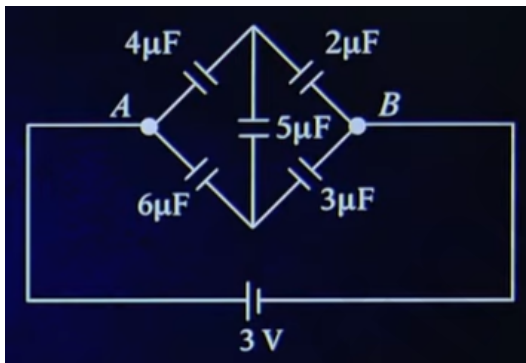
Conducted by National Testing Agency (NTA)



General Instructions

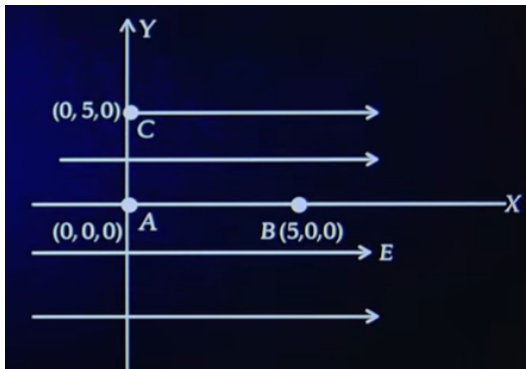
- (i) The examination will be conducted in Computer-Based Test (CBT) mode.
- (ii) Each question carries +5 marks for correct answer and -1 mark for wrong answer.
- (iii) The total number of questions are 50.
- (iv) Duration of the exam is 1 hour (60 minutes).

1. A network of five capacitors is shown in the figure. The total charge stored in the network connected between A and B is:



- (A) $8 \mu\text{C}$
- (B) $10 \mu\text{C}$
- (C) 9 mC
- (D) 10 mC

2. In a certain region, a uniform electric field exists in the positive x-direction. Let $V_A =$ potential at $(0, 0, 0) \text{ cm}$, $V_B =$ potential at $(5, 0, 0) \text{ cm}$ and $V_C =$ potential at $(0, 5, 0) \text{ cm}$. The correct relationship between them is:



- (A) $V_A < V_C$ and $V_A = V_B$
- (B) $V_A = V_C$ and $V_A > V_B$
- (C) $V_A > V_C$ and $V_A = V_B$
- (D) $V_A = V_C$ and $V_A < V_B$

3. A negatively charged object A is repelled by another charged object B. However, an object C is attracted to object B. Which of the following is the most probable for the charge of object C?

- (A) neutral or negatively charged
- (B) negatively charged only
- (C) neutral or positively charged
- (D) positively charged only

4. Two-point charges, $q_1 = 36 \mu\text{C}$ and $q_2 = -9 \mu\text{C}$ are placed at a distance of 30 cm. What distance from q_1 , where the net electric field is zero, will be:

- (A) 10 cm
- (B) 20 cm
- (C) 60 cm
- (D) 30 cm

5. An infinitely long line charge distribution produces a field of $9 \times 10^4 \text{ NC}^{-1}$ at a distance of 2 cm. The linear charge density of the distribution is:

- (A) $0.01 \mu\text{C m}^{-1}$
 - (B) $0.1 \mu\text{C m}^{-1}$
 - (C) $1 \mu\text{C m}^{-1}$
 - (D) $2 \mu\text{C m}^{-1}$
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6. A body of 20 g and $+50 \mu\text{C}$ charge is suspended from the ceiling by a string. If a horizontal electric field of 10 kV/m is applied, the angle between the string and vertical direction is: (Take $g = 10 \text{ N/kg}$)

- (A) $\tan^{-1}(2.50)$
 - (B) $\tan^{-1}(3.00)$
 - (C) $\tan^{-1}(3.50)$
 - (D) $\sin^{-1}(2.50)$
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7. The transfer of integral number of _____ is one of the evidence of quantisation of electric charge. Fill in the blank with the correct answer from the options given below.

- (A) photons
 - (B) nuclei
 - (C) electrons
 - (D) neutron
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8. When a slab of insulating material 4 mm thick is introduced between the plates of a parallel plate capacitor of separation 4 mm, it is found that the distance between the plates has to be increased by 3.2 mm to restore the capacity to its original value. The dielectric constant of the material is _____. Fill in the blank with the correct answer from the options given below.

- (A) 2
 - (B) 5
 - (C) 3
 - (D) 7
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9. A copper ball of density 8.0 g/cc and 1 cm in diameter is immersed in oil of density 0.8 g/cc . The charge on the ball if it remains just suspended in oil in an electric field of intensity $600\pi \text{ V/m}$ acting in the upward direction is _____. Fill in the blank with the correct answer from the options given below. (Take $g = 10 \text{ m/s}^2$)

- (A) $2 \times 10^{-6} \text{ C}$
 - (B) $2 \times 10^{-5} \text{ C}$
 - (C) $1 \times 10^{-5} \text{ C}$
 - (D) $1 \times 10^{-6} \text{ C}$
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10. For an electric dipole in a non-uniform electric field with dipole moment parallel to direction of the field, the force F and torque τ on the dipole respectively are _____. Fill in the blank with the correct answer from the options given below.

- (A) $F = 0, \tau = 0$
 - (B) $F \neq 0, \tau = 0$
 - (C) $F = 0, \tau \neq 0$
 - (D) $F \neq 0, \tau \neq 0$
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