CUET 2026 May 22 Shift 2 Physics

Question Paper (Memory-Based)

Conducted by National Testing Agency (NTA)

1. A long solenoid has 1000 turns per meter and carries a current of $2A$. The magnetic field inside the solenoid is:

$$(\mu_0 = 4\pi \times 10^{-7}\, TmA^{-1})$$

(A) $8\pi \times 10^{-4}\, T$

(B) $4\pi \times 10^{-4}\, T$

(C) $2\pi \times 10^{-4}\, T$

(D) $16\pi \times 10^{-4}\, T$

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2. In a series LCR circuit, resonance occurs when:

(A) $X_L > X_C$

(B) $X_C > X_L$

(C) $X_L = X_C$

(D) $R = 0$

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3. A semiconductor diode is forward biased. The depletion layer width will:

(A) Increase

(B) Become zero immediately

(C) Decrease

(D) Remain unchanged

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4. The drift velocity of electrons in a conductor increases when:

(A) Temperature increases only

(B) Electric field increases

(C) Length of conductor increases

(D) Area of cross-section increases

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5. The magnetic field at the center of a circular coil carrying current is directly proportional to:

(A) Radius of coil

(B) Square of radius

(C) Current through coil

(D) Resistance of wire

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6. A charged particle enters perpendicular to a uniform magnetic field. The path followed by the particle is:

(A) Straight line

(B) Parabolic

(C) Circular

(D) Elliptical

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7. In an AC circuit, the average value of alternating current over one complete cycle is:

(A) Maximum

(B) Minimum

(C) Infinite

(D) Zero

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8. The forbidden energy gap in conductors is approximately:

(A) $0\,eV$

(B) $1\,eV$

(C) $5\,eV$

(D) $10\,eV$

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9. The self inductance of a coil depends upon:

(A) Number of turns only

(B) Magnetic permeability of core only

(C) Geometry of coil and medium

(D) Current flowing through coil

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10. The efficiency of an ideal transformer is:

(A) 25%

(B) 50%

(C) 75%

(D) 100%

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