# CUET 2026 May 31 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. Two charges $+4\,\mu C$ and $+9\,\mu C$ are separated by a distance of $3\,m$ in vacuum. The electrostatic force between them is** $(k = 9 \times 10^9\, N m^2 C^{-2})$

(A) $0.018\,N$

(B) $0.036\,N$

(C) $0.054\,N$

(D) $0.072\,N$

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**2. Given below are two statements:**

**Assertion (A):** In a pure inductive AC circuit, current lags voltage by 90°.

**Reason (R):** An inductor opposes the change in current flowing through it.

Choose the correct answer from the options given below:

(A) Both A and R are true and R is the correct explanation of A

(B) Both A and R are true but R is not the correct explanation of A

(C) A is true but R is false

(D) A is false but R is true

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**3. A resistor of resistance $20\,\Omega$ is connected across a $10\,V$ battery. The current flowing through the resistor is**

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(A) $0.2A$

(B) $0.5A$

(C) $2A$

(D) $5A$

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**4. Match the semiconductor devices in Column I with their functions in Column II.**

| Column I | | Column II | |
|---|---|---|---|
| $(A)$ | LED | $(I)$ | Voltage Regulation |
| $(B)$ | Zener Diode | $(II)$ | Light Emission |
| $(C)$ | Photodiode | $(III)$ | Light Detection |
| $(D)$ | Solar Cell | $(IV)$ | Converts Solar Energy into Electrical Energy |

Choose the correct answer from the options given below:

(A) A-II, B-I, C-III, D-IV

(B) A-I, B-II, C-IV, D-III

(C) A-III, B-I, C-II, D-IV

(D) A-II, B-IV, C-I, D-III

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**5. The energy of an electron in the first Bohr orbit of hydrogen atom is $-13.6\,eV$. The energy of the electron in the third orbit is**

(A) $-1.51\,eV$

(B) $-3.4\,eV$

(C) $-13.6\,eV$

(D) $-0.85\,eV$

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**6. Given below are two statements:**

**Assertion (A):** Electromagnetic waves can travel through vacuum.

**Reason (R):** Electromagnetic waves consist of oscillating electric and magnetic fields.

Choose the correct answer from the options given below:

(A) Both A and R are true and R is the correct explanation of A

(B) Both A and R are true but R is not the correct explanation of A

(C) A is true but R is false

(D) A is false but R is true

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**7. A convex lens has a focal length of $20\,cm$. An object is placed $30\,cm$ from the lens. The image distance is**

(A) $60\,cm$

(B) $30\,cm$

(C) $20\,cm$

(D) $15\,cm$

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**8. Match the following electromagnetic waves with their applications.**

| **Column I** | | **Column II** | |
|---|---|---|---|
| $(A)$ | Gamma Rays | $(I)$ | Radar Communication |
| $(B)$ | X-rays | $(II)$ | Cancer Treatment |
| $(C)$ | Microwaves | $(III)$ | Medical Imaging |
| $(D)$ | Radio Waves | $(IV)$ | Broadcasting |

Choose the correct answer from the options given below:

(A) A-II, B-III, C-I, D-IV

(B) A-I, B-II, C-IV, D-III

(C) A-II, B-IV, C-I, D-III

(D) A-III, B-II, C-IV, D-I

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**9. A photon of wavelength $500\,nm$ is incident on a metal surface. The energy of the photon is approximately** $(h = 6.63 \times 10^{-34}\,Js,\ c = 3 \times 10^{8}\,m/s)$

(A) $1.99 \times 10^{-19}\,J$

(B) $3.98 \times 10^{-19}\,J$

(C) $5.97 \times 10^{-19}\,J$

(D) $7.96 \times 10^{-19}\,J$

**10. Given below are two statements:**

**Assertion (A):** In a nuclear reactor, control rods are used to control the rate of fission reaction.

**Reason (R):** Control rods absorb excess neutrons produced during fission.

Choose the correct answer from the options given below:

(A) Both A and R are true and R is the correct explanation of A

(B) Both A and R are true but R is not the correct explanation of A

(C) A is true but R is false

(D) A is false but R is true

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