MHT CET 2026 April 18 Shift 1

Question Paper (Memory Based)

Conducted by CET Cell, Maharashtra

General Instructions

(i) **Duration:** The total duration of the examination is 3 hours (180 minutes).

(ii) **Total Marks:** The complete paper carries a maximum of 200 marks.

(iii) **Structure:** The paper has 3 Sections:

- **Section A:** 50 Multiple Choice Questions (Physics)
- **Section B:** 50 Multiple Choice Questions (Chemistry)
- **Section C:** 50 Multiple Choice Questions (Mathematics)

(iv) **Compulsory Questions:** All 150 questions are compulsory.

(v) Each question has four options. Only **one** option is correct.

(vi) **Right Answer:** Physics (+1 marks), Chemistry (+1 marks) and Mathematics (+2 marks).

(vii) **Incorrect Answer:** (No Negative marking).

(viii) **Unanswered/Marked for Review:** 0 marks.

1. What is the coordination number of an atom in an FCC unit cell?

(A) 6

(B) 8

(C) 12

(D) 4

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2. Identify the product when Phenol reacts with Bromine water.

(A) *o*-Bromophenol

(B) *m*-Bromophenol

(C) 2, 4, 6-Tribromophenol

(D) Bromobenzene

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3. What is the oxidation state of Phosphorus in H_3PO_4?

(A) +3

(B) +5

(C) +1

(D) −3

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4. Which gas is evolved when Sodium metal reacts with Ethanol?

(A) Oxygen

(B) Nitrogen

(C) Hydrogen

(D) Carbon dioxide

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5. What is the SI unit of molar conductivity?

(A) $S\,cm^{-1}$

(B) $S\,cm^2\,mol^{-1}$

(C) $S\,mol^{-1}$

(D) $S\,cm$

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6. What happens to the resistance of a wire if its radius is halved?

(A) It becomes half

(B) It becomes double

(C) It increases 4 times

(D) It increases 16 times

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7. What is the value of escape velocity on the Earth's surface?

(A) $7.9\,km/s$

(B) $9.8\,km/s$

(C) $11.2\,km/s$

(D) $15\,km/s$

8. In an AC circuit, what is the power factor of a pure resistor?

(A) 0

(B) 0.5

(C) 1

(D) -1

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9. Name the phenomenon that proves the transverse nature of light.

(A) Diffraction

(B) Interference

(C) Polarisation

(D) Reflection

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10. What is the energy of a photon of frequency ν?

(A) $E = mc^2$

(B) $E = h\nu$

(C) $E = \frac{1}{2}m\nu^2$

(D) $E = \frac{h}{\nu}$

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11. Evaluate $\int \log x \, dx$.

(A) $x \log x - x + C$

(B) $\log x + C$

(C) $x \log x + C$

(D) $\frac{\log x}{x} + C$

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12. What is the value of $\sin^{-1}(1/2) + \cos^{-1}(1/2)$?

(A) 0

(B) $\pi/4$

(C) $\pi/2$

(D) π

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13. Find the slope of the normal to the curve $y = 2x^2 + 3\sin x$ at $x = 0$.

(A) 0

(B) $-1/3$

(C) $1/3$

(D) 3

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14. What is the order of the differential equation $\frac{d^2y}{dx^2} + \left(\frac{dy}{dx}\right)^3 = 0$?

(A) 1

(B) 2

(C) 3

(D) 4

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15. What is the probability of an impossible event?

(A) 1

(B) 0.5

(C) 0

(D) -1
