

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

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) $15\ km/s$
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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) $E = \frac{1}{2}mv^2$
 - (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
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