MHT CET 2026

Memory-Based Question Papers with Solutions

Physics · Chemistry · Mathematics (PCM)

May 12 · May 13 · May 14, 2026 · Shift 1 & Shift 2

Compiled from student reports | shiksha.com/engineering/mht-cet-exam

Date	Shift	Questions collected	Difficulty
May 12, 2026	Shift 1	**7 questions**	**Moderate**
May 12, 2026	Shift 2	**6 questions**	**Moderate**
May 13, 2026	Shift 1	**6 questions**	**Moderate**
May 13, 2026	Shift 2	**7 questions**	**Moderate–Tough**
May 14, 2026	Shift 1	**6 questions**	**Moderate**
May 14, 2026	Shift 2	**5 questions**	**Moderate**

Note: These questions are memory-based, reported by students after the exam. Answers are provided where confirmed by students. Some questions may have partial text due to memory recall limitations.

May 12, 2026 | PCM Shift 1

Mathematics · Physics · Chemistry · 7 questions collected

Moderate

Q01	If sin x cos x = 1/4, then the general solution is: A) nπ/2 + (–1)■ π/12 B) nπ/2 + π/4 C) nπ ± π/6 D) nπ/2 + (–1)■ π/6	**✓ Option A**
Q02	If n ∈ Z, then the expression 2■/(1–i)²■ + (1+i)²■/2■ is equal to: A) 2(–1)■ B) 0 C) 2 D) 2■	**✓ Option A**
Q03	If A = [sin α, –cos α; cos α, sin α] and α ∈ (π/2, 3π/2). If A + A■ = I, then α = A) 2π/3 B) 5π/6 C) π/3 D) 4π/3	**✓ Option B**
Q04	If n is an odd natural number and I■ = ∫■¹ e■(x–1)■ dx, then I■ + nI■■■ is equal to: A) 1 B) –1 C) e D) 0	**✓ Option A**
Q05	The value of ∫■■ √((4–x)/(4+x)) dx is: A) 4(π–2) B) 2(π–2) C) 4(π+2) D) 2(π+2)	*Not reported*

Q06	The ratio in which the plane r■·(î – 2■ + 3k■) = 17 divides the line segment joining (–1, 4, 7) and (3, –5, 8): A) 3:10 B) 10:3 C) 5:2 D) 2:5	✓ 1:4 (Note: all options incorrect)
Q07	The parametric equations of the circle x² + y² – 4x – 6y – 12 = 0: A) x = 2 + 5cosθ, y = 3 + 5sinθ B) x = –2 + 5cosθ, y = –3 + 5sinθ C) x = 2 + 25cosθ, y = 3 + 25sinθ D) x = 5 + 2cosθ, y = 5 + 3sinθ	✓ Option A

May 12, 2026 | PCM Shift 2

Mathematics · Physics · Chemistry · 6 questions collected

Moderate

Q01	If Rolle's theorem holds for f(x) = x³ + bx² + ax + 5 on [1, 3] with c = 2 + 1/√3, then the values of a and b are: A) –11, 6 B) –11, –6 C) 11, 6 D) 11, –6	✓ Option D
Q02	If A = [3, –5; 4, –7] and A■¹ = [7, –5; 4, a], then the value of a: A) 3 B) –3 C) 7 D) –7	*Not reported*
Q03	If sin■θ + cos■θ = 5/8 and 0 < θ < π/2, then sin 2θ is: A) √3/2 B) 1/2 C) 1/√2 D) 1	✓ Option A
Q04	The area of the region bounded by the parabola y² = 4x – 2 and the line y = 2x – 1 (in sq. units): A) 1/3 B) 2/3 C) 1/6 D) 5/6	✓ Option A
Q05	A special coin is tossed 4 times. Two faces marked with numbers 5 and 3. Find P(sum of numbers > 17): A) 11/16 B) 5/16 C) 1/16 D) 3/16	*Not reported*
Q06	For the hyperbola 16x² – 3y² – 32x + 12y – 44 = 0, identify the correct statement: A) Length of transverse axis = 4√3 B) Centre is (–1, 2) C) Eccentricity = √19/3 D) Length of conjugate axis = 4	✓ Option C

May 13, 2026 | Shift 1

Mathematics · Physics · Chemistry · 6 questions collected

Moderate

Q01	∫ (x² + 1)/(x + 1)² dx = A) x – 2 log|x+1| – 2/(x+1) + C B) x + 2 log|x+1| + 2/(x+1) + C C) x – log|x+1| + 1/(x+1) + C D) x²/(x+1) + C	*Not reported*
Q02	If I■ = ∫■■■¹ x[x] dx = 18, then n = A) 4 B) 3 C) 5 D) 6	✓ Option A
Q03	If angle between unit vectors û and v■ is π/6, and adjacent sides of parallelogram are ■ = 2û + 3v■ and b■ = û – v■, then its area: 1. 2.5 sq. units 2. 5 sq. units 3. 5/2 sq. units 4. 16√3 sq. units	✓ Option 3 (5/2 sq. units)
Q04	If sin■¹(x/5) + csc■¹(5/4) = π/2, then x = 1. 3 2. 4 3. 5 4. 2	✓ Option 1 (x = 3)
Q05	Maximize Z = 7x – 6y subject to 0 ≤ x ≤ 4 and 0 ≤ y ≤ 3: A) 18 B) 17 C) 28 D) 1	*Not reported*
Q06	If x = √(2^(tan■¹t)) and y = √(2^(cot■¹t)), then dy/dx = 1. y/x 2. –y/x 3. x/y 4. –x/y	✓ Option 2 (–y/x)

May 13, 2026 | Shift 2

Mathematics · Physics · Chemistry · 7 questions collected

Moderate–Tough

Q01	Evaluate: lim(x→0) [1 – cos(1 – cos x)] / x■ 1. 1/2 2. 1/6 3. 1/10 4. 1/8	✓ Option 4 (1/8)
Q02	M is the foot of perpendicular drawn from A(4, 3, 2) on line joining B(2, 4, 1) and C(4, 5, 3). The coordinates of M are:	*Not reported*
Q03	Approximate value of sin■¹(0.51) is [Given π = 3.1416, 2/√3 = 1.15]:	*Not reported*
Q04	Evaluate the integral: ∫ (4x + 5)/(2x + 1) dx	*Not reported*
Q05	If ∫■■■ F(x)dx = 4 and ∫■■ (5 – F(x))dx = 7, then ∫■■² F(x)dx is:	*Not reported*
Q06	A tangent touches the circle x² + y² = 5 at (1, –2) and also touches x² + y² – px + 6y + k = 0 at (1, –2). Find k/p:	*Not reported*
Q07	Differential equation of parabolas with latus rectum 4a, axis parallel to x-axis: 2a(d²y/dx²) + (dy/dx)■ = 0. Find k:	*Not reported*

May 14, 2026 | Shift 1

Mathematics · Physics · Chemistry · 6 questions collected

Moderate

Q01	Find the area bounded by the curves $y^2 = 9x$ and $x^2 = 9y$.	*Not reported*
Q02	Find the angle between vectors $\vec{u} = \vec{a} + 2\vec{b}$ and $\vec{v} = 2\vec{a} + \vec{b}$, where $\vec{a}$ and $\vec{b}$ are unit vectors and the angle between them is θ.	*Not reported*
Q03	Evaluate: $2\sin^{-1}(3/5) + \tan^{-1}(1/5) + \tan^{-1}(1/7)$	*Not reported*
Q04	If $x = 25/(3 - 4i)$, find the value of $2x^3 - 11x^2 + 44x + 27$.	*Not reported*
Q05	Find the distance between the point $2\hat{i} + \vec{} - k\vec{}$ and the plane $\vec{r}\cdot(\hat{i} - 2\vec{} + 4k\vec{}) = 9$.	*Not reported*
Q06	The truth value of logic statements p, q, r are TT and F respectively. If * and # are symbolic logical connectives such that $(p\#r) \rightarrow (\neg q\#s)$ is False and $(\neg p*q) \rightarrow (\neg q\#r)$ is True, then * and # are respectively: a) $\wedge, \vee$ b) $\rightarrow, \vee$ c) $\vee, \wedge$ d) $\wedge, \rightarrow$	✓ **Option A ($\wedge, \vee$)**

May 14, 2026 | Shift 2

Mathematics · Physics · Chemistry · 5 questions collected

Moderate

Q01	Evaluate the integral: $\int x^3\sin(\tan^{-1}(x^2)) / (1 - x\vec{}) \, dx$	*Not reported*
Q02	In a $\vec{}ABC$, if $\angle C = 2\pi/3$, then the value of $\cos^2A + \cos^2B - \cos A \cos B$ is:	*Not reported*
Q03	Find the number of solutions for the equation $\cos 2x = \cos x$ in the interval $[0, 2\pi]$.	*Not reported*
Q04	If $\lim_{x\to\infty} [x^2/(x+1) - (ax + b)] = 2$, find the values of a and b.	*Not reported*
Q05	Find f(x) such that $\int\sqrt{}(1 + \sec x) \, dx = 2\sin^{-1}f(x) + c$.	*Not reported*

Topic frequency — 3 days analysis (May 12–14)

Topic / Chapter	Frequency	Question types seen
Integration (Definite + Indefinite)	**Very High**	Reduction formula, substitution, definite integral = value
Trigonometry	**Very High**	General solution, inverse trig, sin/cos identities
Vectors & 3D Geometry	**High**	Area of parallelogram, dot product, distance from plane
Coordinate Geometry (Conics)	**High**	Parametric equations, hyperbola properties, circle
Differential Calculus	**High**	Rolle's theorem, implicit differentiation, dy/dx
Linear Programming (LPP)	**Medium**	Maximize/minimize Z with constraints
Matrices & Determinants	**Medium**	Inverse matrix, value of elements
Complex Numbers	**Medium**	Expressions with i, complex algebra
Probability	**Medium**	Coin toss, conditional probability

Mathematical Logic	**Low**	Truth values, connectives (AND/OR/→)

Integration and Trigonometry appear in every shift across all 3 days — highest priority for upcoming shifts. Vectors, Conics, and Differential Calculus are consistently tested. LPP and Logic questions are straightforward and high-scoring.

Useful resources on Shiksha.com — all working links

Resource	What you'll find	Link
MHT CET 2026 exam page	Dates, syllabus, admit card, results	shiksha.com/engineering/mht-cet-exam
MHT CET marks vs percentile	Score to percentile conversion table	shiksha.com/engineering/articles/mht-cet-marks-vs-percentile-blogId-50925
MHT CET cutoff 2026	Round-wise, category-wise closing percentiles	shiksha.com/engineering/mht-cet-exam-cutoff
PCM question paper 2026	All shift papers & analysis Session 1	shiksha.com/engineering/articles/mht-cet-pcm-question-paper-2026-session-1-blogId-226851
Toughest shift analysis	Shift-wise difficulty comparison	shiksha.com/engineering/articles/toughest-shift-of-mht-cet-2026-pcm-session-1-blogId-226809
100 marks in MHT CET percentile	Expected percentile for 100 marks	shiksha.com/engineering/articles/100-marks-in-mht-cet-percentile-blogId-218018
90 marks in MHT CET percentile	Expected percentile for 90 marks	shiksha.com/engineering/articles/90-marks-in-mht-cet-percentile-blogId-228649
MHT CET college predictor	Enter percentile → get college list	shiksha.com/engineering/mht-cet-college-predictor
Official CET Cell portal	Result, answer key, counselling	cetcell.mahacet.org

MHT CET marks vs percentile 2026

Know where your score stands · COEP, VJTI, ICT cutoffs

>> shiksha.com/engineering/articles/mht-cet-marks-vs-percentile-blogId-50925

MHT CET college predictor 2026

Enter percentile → get personalised college list

>> shiksha.com/engineering/mht-cet-college-predictor

DISCLAIMER: All questions in this document are memory-based, collected from student reports after the MHT CET 2026 exam. Answers are provided where reported and verified by Shiksha.com experts. Some questions may be incomplete due to memory recall. This is not official CET Cell data. For official answer key, visit cetcell.mahacet.org.

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