JEE Mains 2026 Session 1

Sri Chaitanya ACADEMY JEE An INFINITY LEARN Initiative

DETAILED LIVE

PAPER SOLUTIONS

21st Jan - Shift 2

Memory based Questions

How was the 21st Jan Shift-1 Paper?

A. Easy - 5

B. Moderate - 4

C. Moderate but Lengthy - 3

D. Difficult – 2

E. Very Difficult - 1

JEE 2026 Session-1 Solutions

21st Jan. Shift–2 Overall Difficulty

Memory based Questions

Sr. No.	Subject(s)	Difficulty Level
1.	PHYSICS	Moderate - Difficult
2.	CHEMISTRY	Moderate
4.	MATHS	Moderate (Lengthy)
	Overall	Moderate

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory based Questions

How was the Maths Paper?

A. Easy - 5

B. Moderate - 4

C. Moderate but Lengthy - 3

D. Difficult – 2

E. Very Difficult - 1

JEE 2026 Session-1 Solutions

21st Jan. Shift–2 Overall Difficulty

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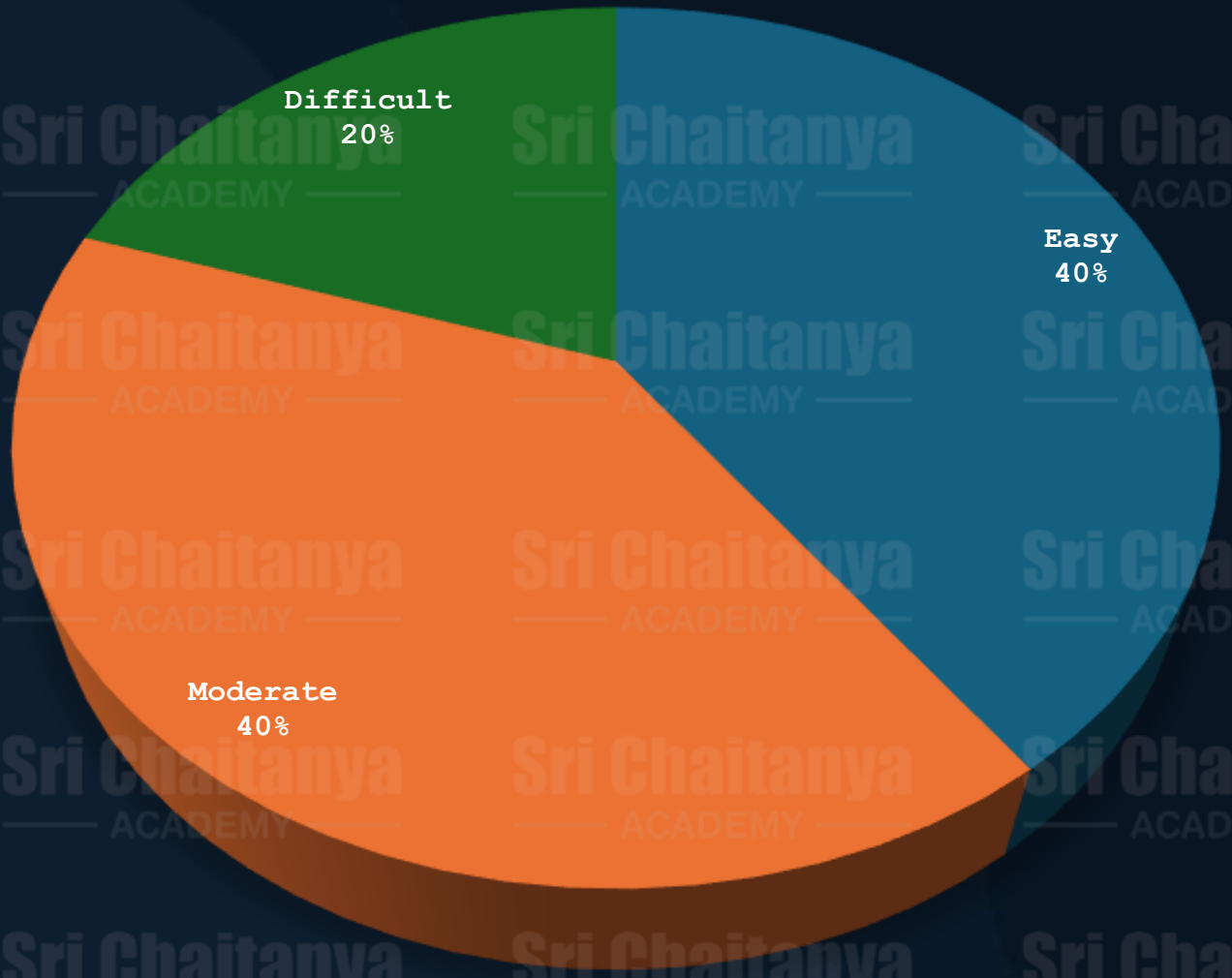
Memory based Questions



JEE 2026
Session-1
Solutions

21st Jan. Shift–2 Maths Analysis

Memory based Questions

Chapter	Weightage	Chapter	Weightage
Sets and Relations	4.4%	Straight Lines and Pair of Straight Lines	3.6%
Logarithm	0.4%	Circle	2.4%
Quadratic Equation and Inequalities	3.2%	Parabola	4%
Sequences and Series	5.2%	Ellipse	3.2%
Binomial Theorem	4.4%	Hyperbola	0.8%
Matrices and Determinants	7.6%	Functions	3.2%
Permutations and Combinations	5.2%	Limits, Continuity and Differentiability	5.2%
Probability	4.8%	Differentiation	0.4%
Vector Algebra	5.6%	Application of Derivatives	2.4%
3D Geometry	6.4%	Indefinite Integrals	2%
Complex Numbers	4%	Definite Integration	4.8%
Statistics	1.6%	Area Under The Curves	4%
Trigonometric Ratio and Identities	1.6%	Differential Equations	5.6%
Inverse Trigonometric Functions	2.8%		

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory based Questions

How was the Physics Paper?

A. Easy - 5

B. Moderate - 4

C. Moderate but Lengthy - 3

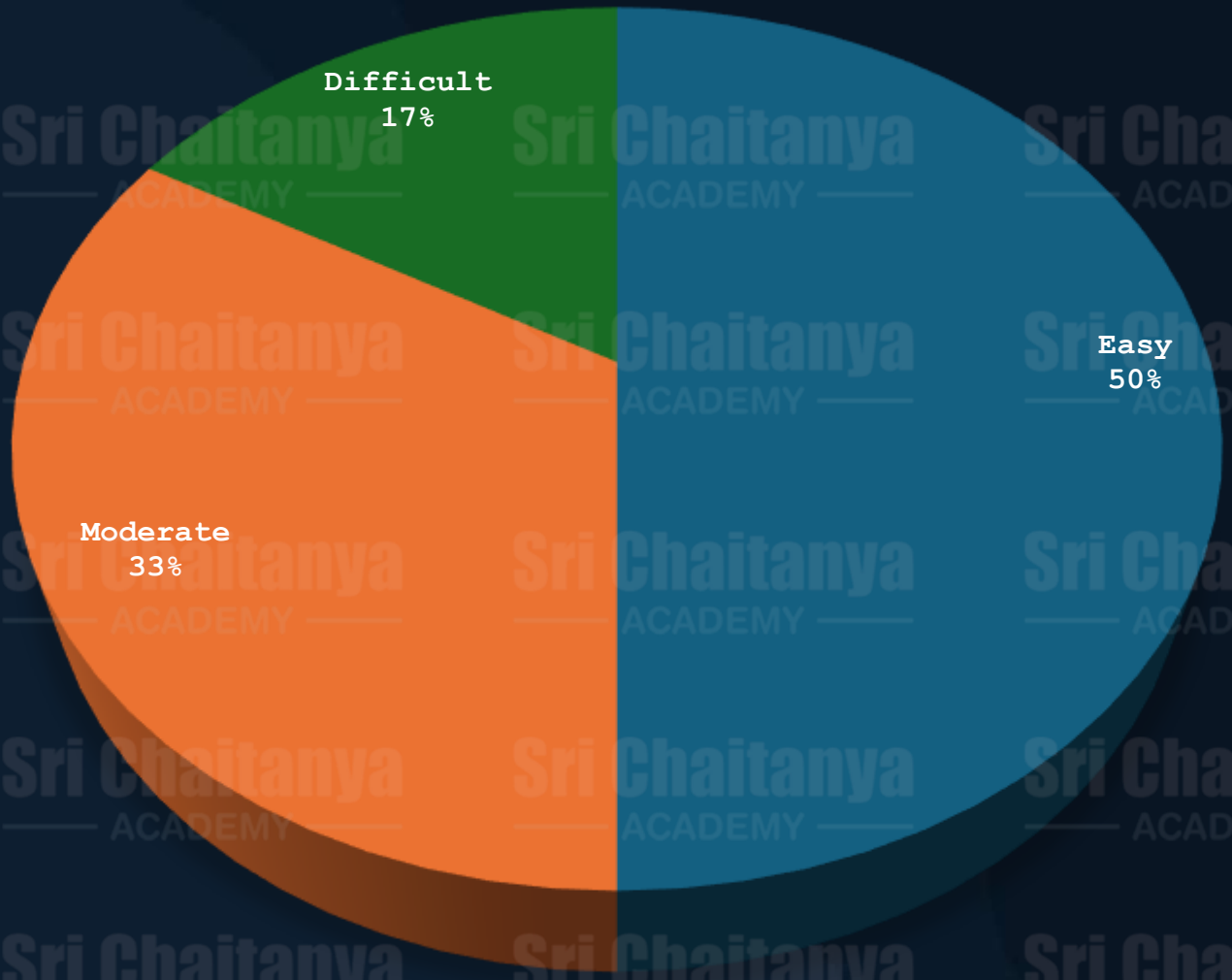
D. Difficult – 2

E. Very Difficult - 1

JEE 2026 Session-1 Solutions

21st Jan. Shift–2 Physics Analysis

Memory based Questions



JEE 2026 Session-1 Solutions

21st Apr. Shift–2 Physics Analysis

Memory based Questions

Chapter	Weightage	Chapter	Weightage
Current Electricity	8%	Semiconductor	3.67%
Heat and Thermodynamics	7.33%	Rotational Motion	3.33%
Properties of Matter	7%	Work Power & Energy	3.17%
Atoms and Nuclei	6.67%	Electromagnetic Induction	2.83%
Units & Measurements	5.50%	Motion in a Straight Line	2.67%
Electrostatics	5.33%	Simple Harmonic Motion	2.50%
Magnetic Effect of Current	5.17%	Electromagnetic Waves	2.50%
Alternating Current	4.33%	Geometrical Optics	2.50%
Laws of Motion	4%	Capacitor	2.33%
Gravitation	4%	Circular Motion	1.83%
Wave Optics	3.83%	Center of Mass and Collision	1.67%
Dual Nature of Radiation	3.83%	Waves	1.50%

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory based Questions

How was the Chemistry Paper?

A. Easy - 5

B. Moderate - 4

C. Moderate but Lengthy - 3

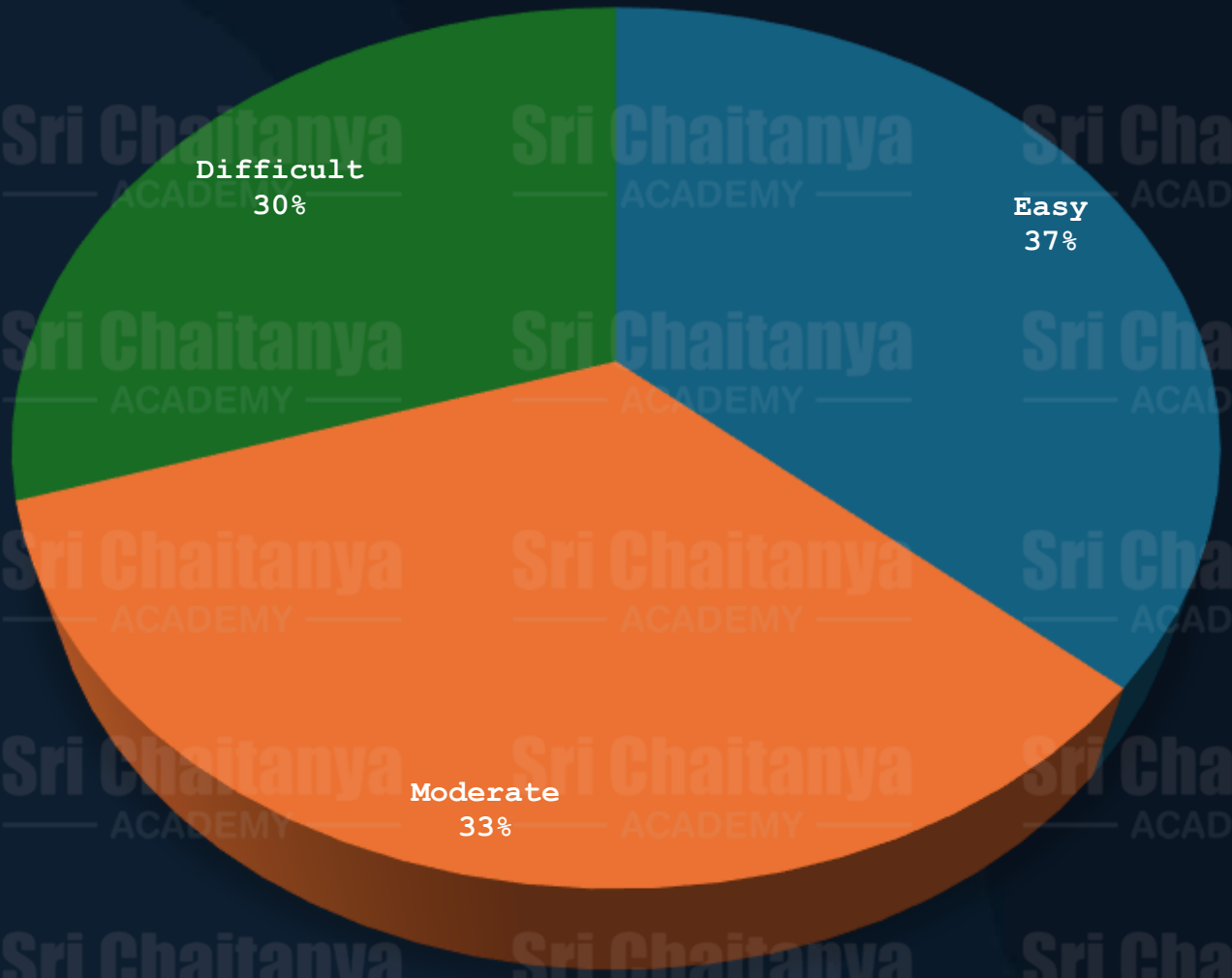
D. Difficult – 2

E. Very Difficult - 1

JEE 2026 Session-1 Solutions

21st Jan. Shift–2 Chemistry Analysis

Memory based Questions



JEE 2026 Session-1 Solutions

21st Jan. Shift–2 Chemistry Analysis

Sri Chaitanya ACADEMY JEE

Memory based Questions

Chapter	Weightage	Chapter	Weightage
Some Basic Concepts of Chemistry	5.2 %	d and f Block Elements	5.2 %
Structure of Atom	4.4 %	Coordination Compounds	7.2 %
Redox Reactions	2.4 %	Salt Analysis	2 %
Chemical Equilibrium	2.4 %	Basics of Organic Chemistry	6.8 %
Ionic Equilibrium	3.2 %	Hydrocarbons	5.2 %
Solutions	3.6 %	Haloalkanes and Haloarenes	4.4 %
Thermodynamics	6.8 %	Alcohols, Phenols and Ethers	2 %
Electrochemistry	5.6 %	Aldehydes, Ketones and Carboxylic Acids	5.6 %
Chemical Kinetics and Nuclear Chemistry	5.2 %	Compounds Containing Nitrogen	5.2 %
Periodic Table & Periodicity	6 %	Biomolecules	4.4 %
Chemical Bonding & Molecular Structure	4 %	Practical Organic Chemistry	1.2 %
p-Block Elements	1.6 %		

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Let $f(x) = x^3 + x^2 f'(1) + 2x f''(2) + f'''(3), x \in R$. Then the value of $f'(5)$ is

A) $\frac{117}{5}$

B) $\frac{62}{5}$

C) $\frac{657}{5}$

D) $\frac{2}{5}$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Let one end of a focal chord of the parabola $y^2 = 16x$ be $(16,16)$. If $P(\alpha, \beta)$ divides this focal chord internally in the ratio $5 : 2$; then the minimum value of $\alpha + \beta$ is equal to:

A) 7
B) 22
C) 5
D) 16

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? The largest $n \in N$, for which 7^n divides 101! is

A) 16
B) 18
C) 19
D) 15

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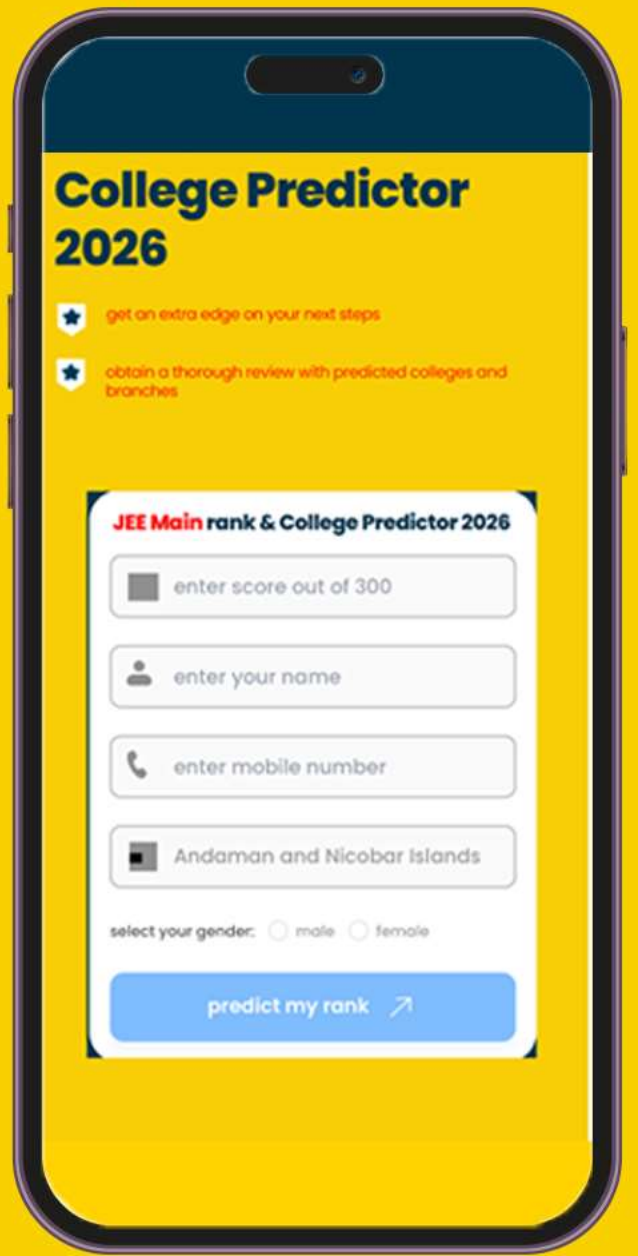

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

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? A battery with emf e and internal resistance's " is connected Across a resistance R . The power consumption are will be max

a. R = r

b. R = 2r

c. $R = \sqrt{2}r$

d. $R = r/2$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

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Keeping the significant figures in view the sum of the physical quantities 5.01m, 153.2m and 0.123m is

a. 205.3m

b. 205m

c. 205.333m

d. 205.33m

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

The energy of an electron an orbit of Bohr's atom is $-4\epsilon_0$ eV where ϵ_0 is ($G \cdot$ state ^{2}) energy. If L is the angular momentum of e in this orbit and h is plank's const then $\frac{2\pi L}{h}$ is...

(A) 5

(B) 6

(c) 2

(d) 4

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

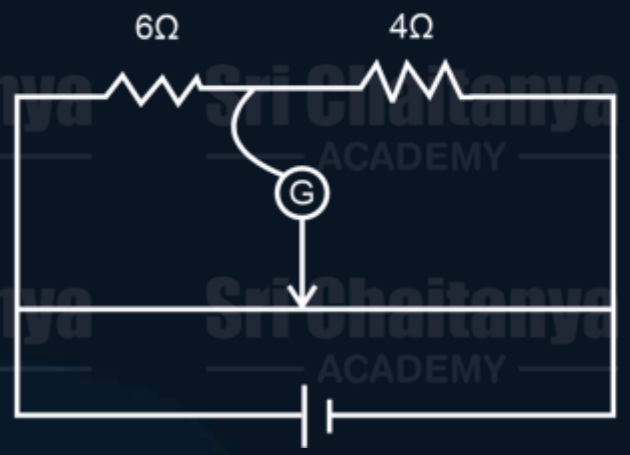
The total length of potentiometer wire AB is som in the arrangement so in the in fig. If 'P' is the point where the galvanometer shows zero reading Then the length Ap is ___ cm.

(A) 15

(B) 20

(C) 30

(D) 25



JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? The Kinetic energy of a simple hormonic oscillating with angular frequency of $176 \mathrm{rad/s}$. The frequency of the simple harmonic oscillator is - Hz $\left(\pi = \frac{22}{7}\right)$

(A) 176

(B) 14

(C) 28

(d) 88

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

The rms speed of oxygen molecules at 47°C is equal to that of hydrogen molecules kept at____°C $\left(\frac{M(0)}{M(h)}=\frac{32}{2}\right)$

(A) -100

(B) -253

(C) -20

(D) -235

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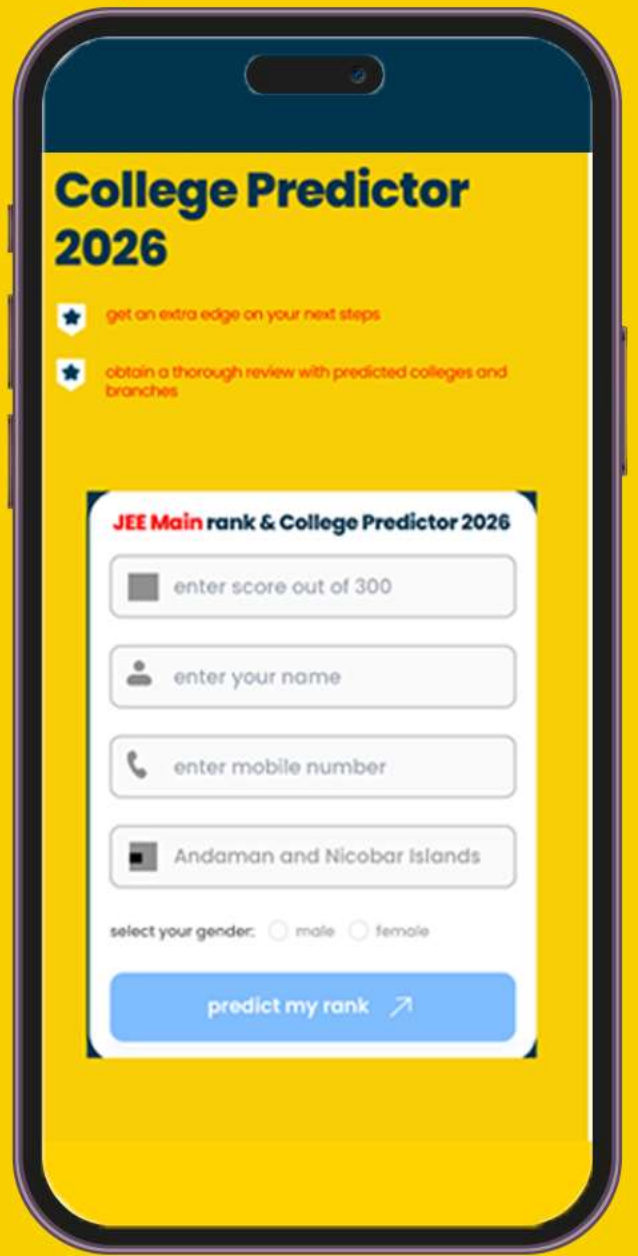

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? 1 g of an organic compound produce 1.49 of $Mg_2P_2O_7$

Determine % of Phosphorous ?

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Correct Nucleophilicity order,

CH_3COO^-, $Ph–O^{\ominus}$, $OH^{\ominus}$, ClO_4^-

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Match the following

Reagent		Reaction	
(A)	H_2, Pd–$BaSO_4$	(i)	Etard Reaction
(B)	$SnCl_2$, HCl	(ii)	Rosenmund Reduction
(C)	CrO_2Cl_2, CS_2	(iii)	Gatterman–Koch Reaction
(D)	CO, HCl Anhyd. $AlCl_3$	(iv)	Stephen Reduction

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Given below are two statements.

Statement I : The correct order for radius is $Al > Mg > Mg^{2+} > Al^{3+}$.

Statement II : Atomic size always, depends on electronegativity. In the light of the above statements, choose the correct option

In the light of the above statements, which is the correct option.

a) Both statement-I and statement-II are correct

b) Both statement-I and statement-II are incorrect

c) Statement-I is correct and statement-II is incorrect

d) Statement-I is incorrect and statement-II is correct

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Following 4 molecules are given and among them, one is optically active. Find the percentage of carbon in that compound :-

a) n-propyl Chloride

b) iso-propyl Chloride

c) iso-butyl Chloride

d) secondary-butyl Chloride

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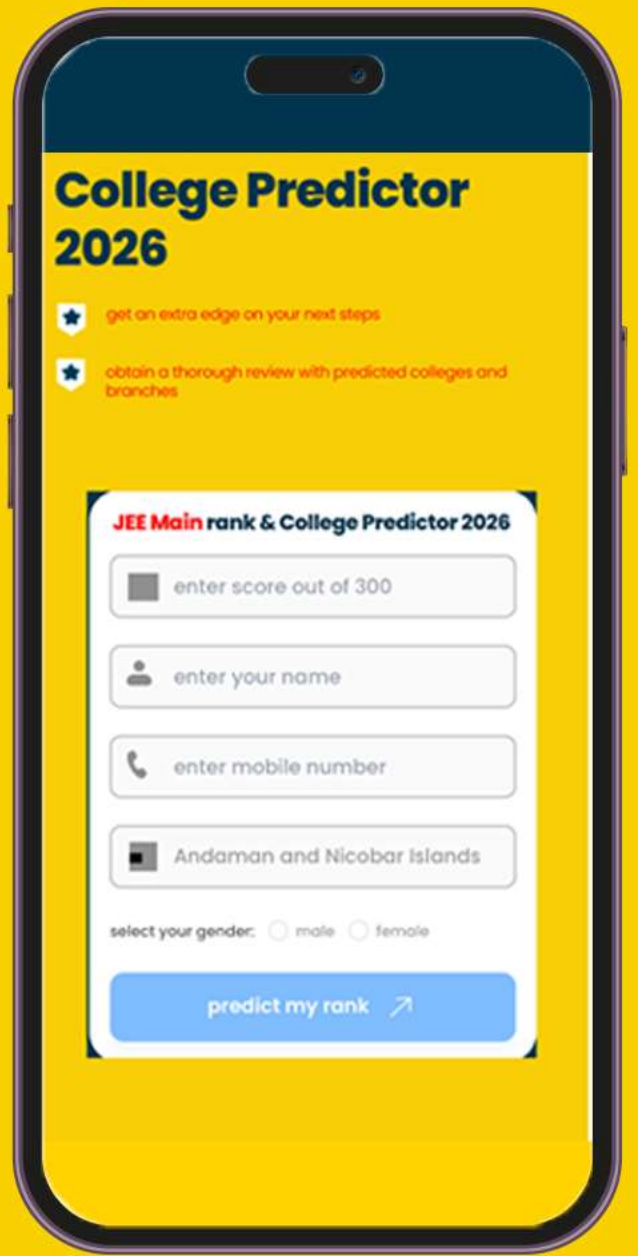

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Let $y^2 = 12x$ be the parabola with its vertex at 0. Let P be a point on the Parabola and A be a point on the x-axis such that $\angle OPA = 90°$. Then the locus of the centroid of such triange OPA is :

A) $y^2 - 2x + 8 = 0$

B) $y^2 - 6x + 4 = 0$

C) $y^2 - 9x + 6 = 0$

D) $y^2 - 4x + 8 = 0$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Let the line L pass through the point $(-3,5,2)$ and make equal angle with the positive coordinate axes. If the distance of L from the point $(-2,r,1)$ is $\sqrt{\frac{14}{3}}$, then the sum of all possible values of r is

A) 16
B) 10
C) 12
D) 6

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Let Z be the compelx number satisfing $|z-5| \leqslant 3$ and having maximum positive arguement, then $34\left|\frac{5z-12}{5iz+16}\right|^2$ is equal to

A) 16
B) 26
C) 12
D) 20

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Let $a_1, \frac{a_2}{2}, \frac{a_3}{2^2}, \ldots \frac{a_{10}}{2^9}$ be a G.P of common ratio $\frac{1}{\sqrt{2}}$.
If $a_1 + a_2 + \cdots + a_{10} = 62$, then a_1 is equal to

A) $\sqrt{2} - 1$
B) $2(2 - \sqrt{2})$
C) $2(\sqrt{2} - 1)$
D) $2 - \sqrt{2}$

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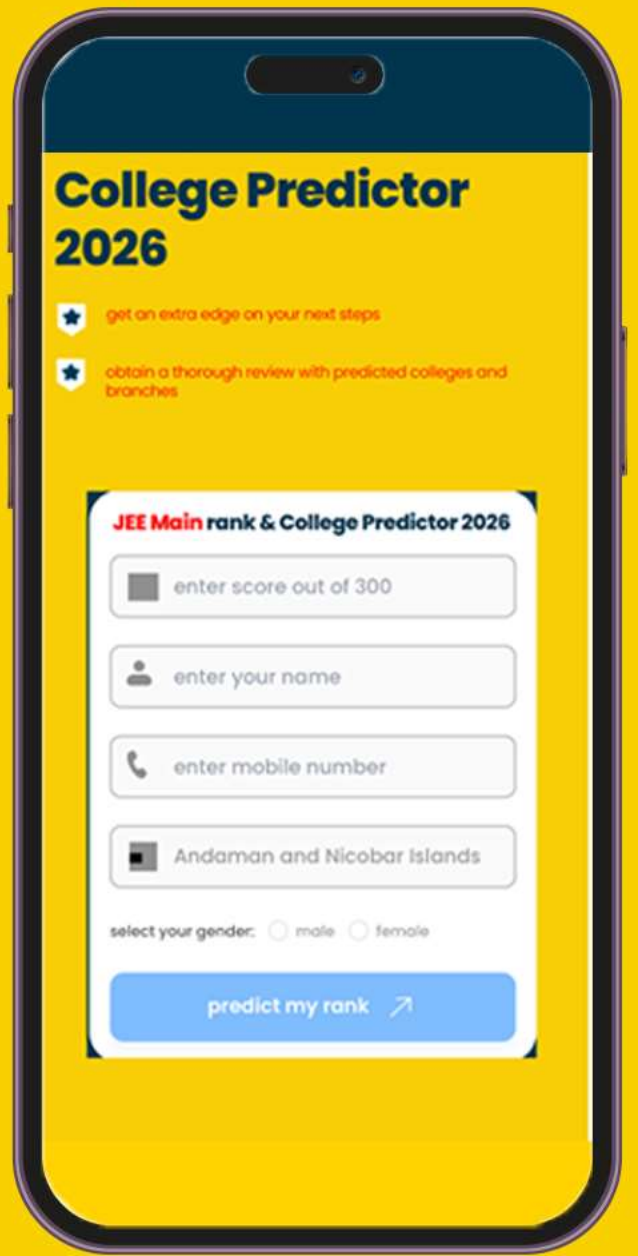

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

As shown in the diagram, when the incident ray is parallel to base of the prism the emergent ray grazes along the second surface.

If refractive Index of material of prism is $\sqrt{2}$, the angle θ of Prism is

(A) 75°

(B) 45°

(c) 90°

(d) 60°

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

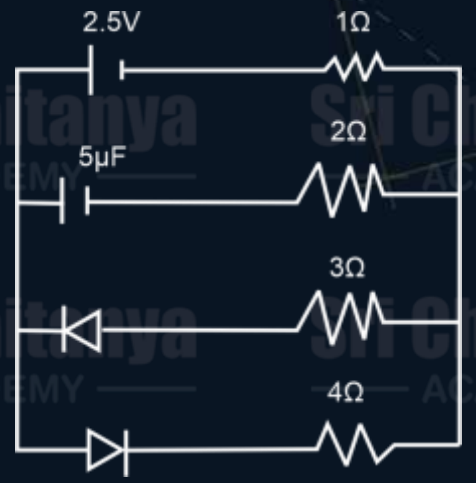
The charge stored by the capacitor c in the given circuit in the steady state is - μC.

(A) 10

(B) 7.5

(C) 12 · 5

(d) 5



JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

If mass of the particle $m = 2$ kg and displacement of Particle varies with the time as $x = \alpha t^3 + \beta t^2 + \gamma t$. then find the workdone in the time interval $t = 2$sec to $t = 3$sec

$(\alpha = 1, \beta = 1, \gamma = 1)$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? The mass, charge and potential applied across a particle are 6×10^{-27} kg, 3×10^{-19}c, and 1.21 V then find the de-brogile wavelength of charged particle is ___

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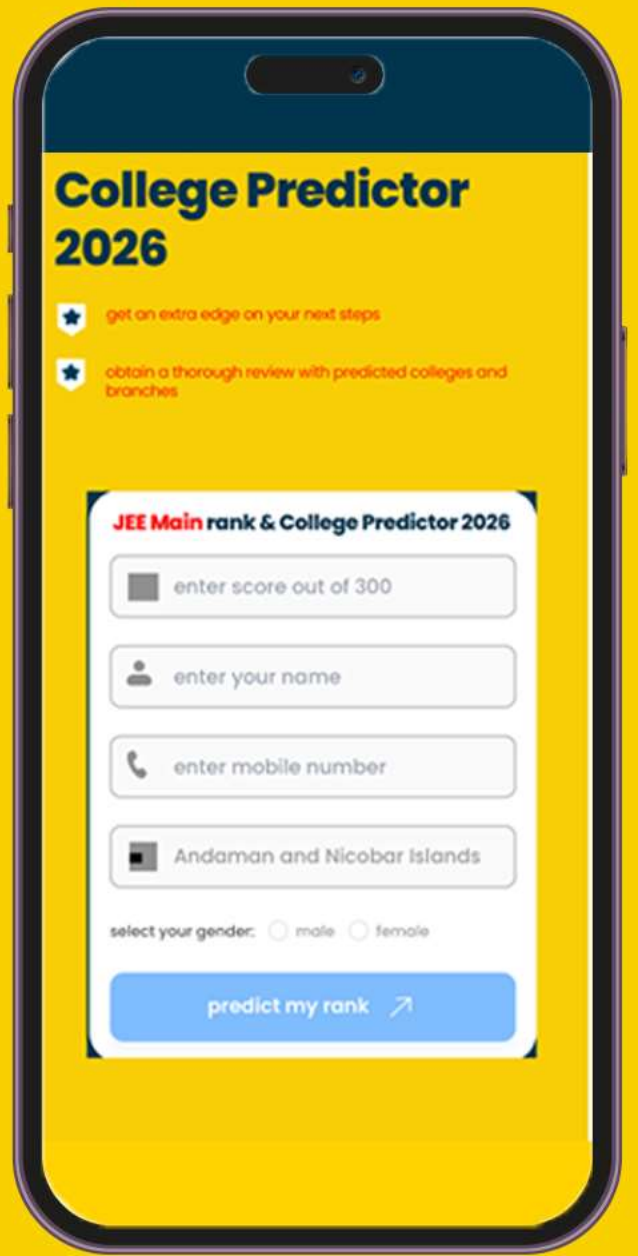

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

?

For Matrices $A = \begin{bmatrix} 3 & -4 \\ 1 & -1 \end{bmatrix}$ and $B = \begin{bmatrix} -29 & 49 \\ -13 & 18 \end{bmatrix}$, if $(A^{15} + B) \cdot \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$, then among the following which one is correct

(A) $x = 11, y = 2$
(B) $x = 5, y = 7$
(C) $x = 18, y = 11$
(D) $x = 16, y = 3$

JEE 2026 Session-1 Solutions

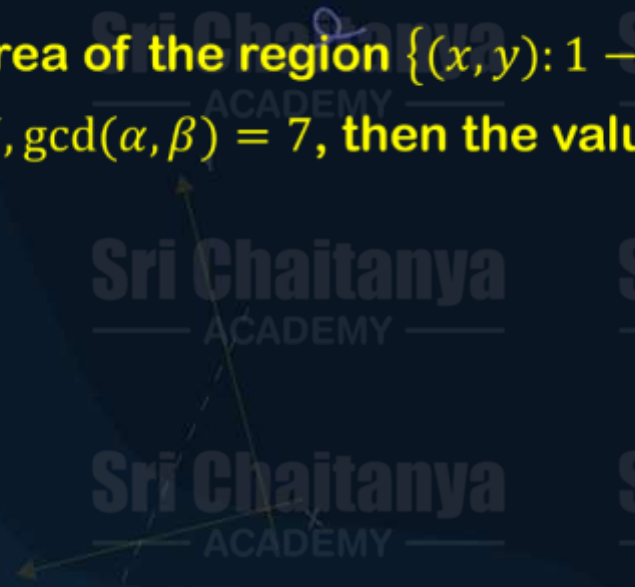
21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? If the area of the region $\{(x, y): 1 - 2x \leq y \leq 4 - x^2, x \geq 0, y \geq 0\}$ is $\frac{\alpha}{\beta}$, $\alpha, \beta, \in N, \gcd(\alpha, \beta) = 7$, then the value of $(\alpha + \beta)$ is

A) 67
B) 73
C) 91
D) 85



JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? If the line $\alpha x + 4y = \sqrt{7}$, where $\alpha \in R$, touches the ellipse $3x^2 + 4y^2 = 1$ at the point P in the first quadrant then one of the focal distance of P is

A) $\frac{1}{\sqrt{3}} - \frac{1}{2\sqrt{11}}$

B) $\frac{1}{\sqrt{3}} + \frac{1}{2\sqrt{5}}$

C) $\frac{1}{\sqrt{3}} - \frac{1}{2\sqrt{5}}$

D) $\frac{1}{\sqrt{3}} + \frac{1}{2\sqrt{7}}$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Maximum of $\left[(\cos^{-1}x)^2 + (\sin^{-1}x)^2\right] = \frac{m}{n}\pi^2, x \in \left[-\frac{\sqrt{3}}{2}, \frac{1}{\sqrt{2}}\right]$.

Then $m + n =$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Let α and β be the roots of the equation $x^2 + 2ax + (3a + 10) = 0$ such that $\alpha < 1 < \beta$. Then the set of all possible values of a is

(A) $\left(-\infty, -\frac{11}{5}\right) \cup (5, \infty)$

(B) $(-\infty, -3)$

(C) $(-\infty, -8) \cup (5, \infty)$

(D) $\left(-\infty, \frac{-11}{5}\right)$

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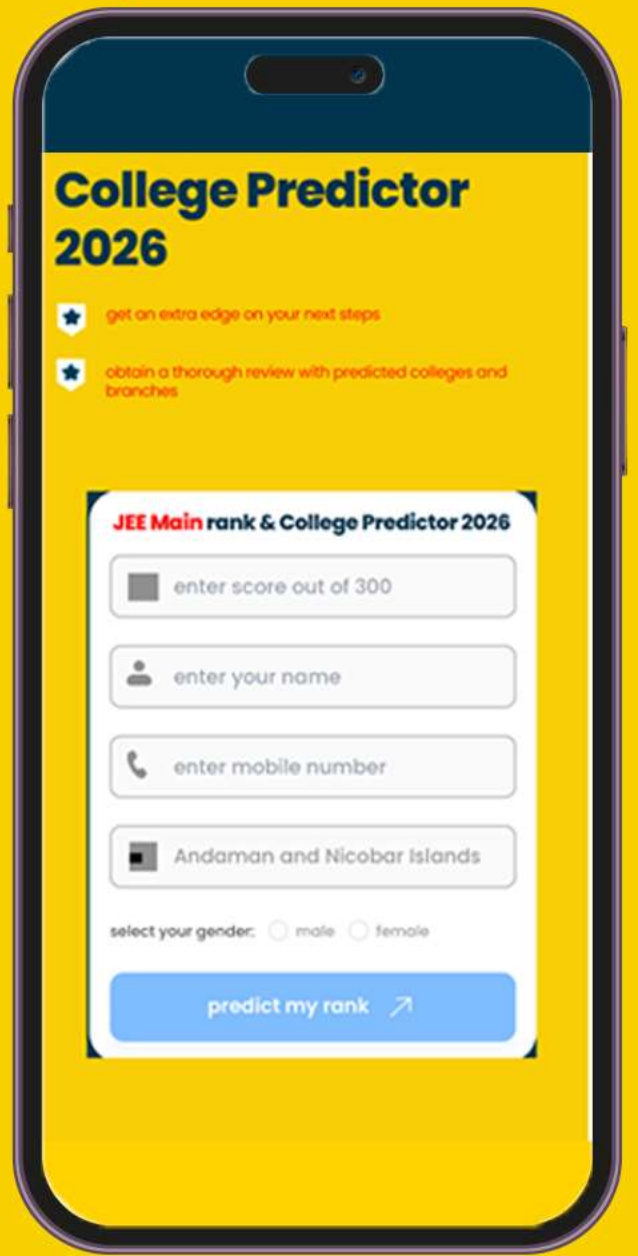

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JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

When $8.74\ \text{g}\ MnO_2$ is treated with HCl, then what will be the weight of $Cl_2(g)$ obtained? Molar mass of $MnO_2 = 87.4\ \text{g/mol}$

a) $7.1\ \text{g}$

b) $17.1\ \text{g}$

c) $14.2\ \text{g}$

d) $3.55\ \text{g}$

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? What is the central atom and oxidation state of the compound formed when $K_2Cr_2O_7$ reacts with H_2SO_4 in the presence of hydrogen peroxide ?

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Number of Bromine atom in the given product,

?

i) Br_2/Fe

ii) Sn/HCl

iii) p^H = Neutral

iv) Bromine water

v) $NaNO_2 + HCl$

vi) CuBr

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Match the list-I with list-II

?

List-I		List-II	
(A)	Cis 2-butene, Trans 2-butene	(P)	Functional Isomer
(B)	Butanoic acid , Isopropyl methanoate	(Q)	Stereoisomer
(C)	1-butene, 2-butene	(R)	Positional Isomer
(D)	n-pentane, isopentane	(S)	Chain Isomer

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

? Match the list-I with list-II

List-I		List-II	
(A)	Cis 2-butene, Trans 2-butene	(P)	Functional Isomer
(B)	Butanoic acid , Isopropyl methanoate	(Q)	Stereoisomer
(C)	1-butene, 2-butene	(R)	Positional Isomer
(D)	n-pentane, isopentane	(S)	Chain Isomer

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Find the product A

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Given below are two statements.

Statement I : The correct order of electron gain enthalpy/s Cl > F >Br > I.

Statement II : $SnCl_6 > SnCl_4, PbCl_4 > PbCl_2, UF_6 > UF_4$, Correct order of Ionic Character.

In the light of the above statements, which is the correct option.

a) Both statement-I and statement-II are correct

b) Both statement-I and statement-II are incorrect

c) Statement-I is correct and statement-II is incorrect

d) Statement-I is incorrect and statement-II is correct

JEE 2026 Session-1 Solutions

21st Jan. Shift–2

Memory Based Questions

Sri Chaitanya ACADEMY JEE

Given below are two statements.

Assertion : In aromatic comp. compound should be cyclic and planar with all C - should be sp^2 with one unhybrid p-orbitals and follow Huckels rules.

Reason : In given compound,  2 carbon is sp^3 & 1 is sp^2.

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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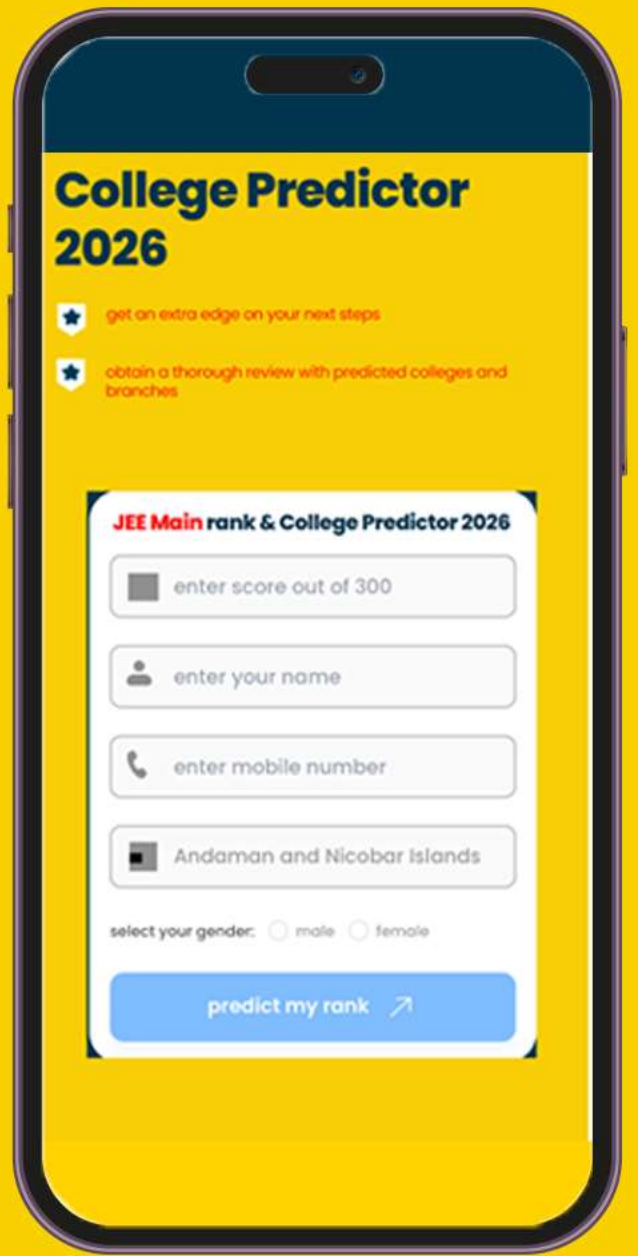

CHECK HERE

Link in description 👇