PAPER SOLUTION

From Meerut

JEE MAIN 2026

JAN	SHIFT
23	1st

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JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. A rectangle is formed by lines $x = 0, y = 0, x = 3, y = 4$. A line perpendicular to $3x + 4y + 6 = 0$ divides the rectangle into two equal parts, then the distance of the line from $\left(-1, \frac{3}{2}\right)$ is

A. 2

B. 17/10

C. 6/5

D. 8/5

(Ans : B)

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#Q. Let $A = \{-2, -1, 0, 1, 2, 3, 4\}$ and R be a relation R, such that $R = \{(x, y): (2x + y) \leq -2, x \in A, y \in A\}$.

Let / = number of elements in R

m = minimum number of elements to be added in R to make it reflexive.

n = minimum number of elements to be added in R to make it symmetric,

then $(l + m + n)$ is

A 10

B 17

C 11

D 14

(Ans : B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Number of 4 letters words with or without meaning formed from the letters of the word PQRSSSTTUVV?

A 1232

B 1400

C 1422

D 1162

(Ans : C)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The value of $\frac{{}^{100}C_{50}}{51} + \frac{{}^{100}C_{51}}{52} + \cdots + \frac{{}^{100}C_{100}}{101}$ is

A $\frac{2^{100}}{100}$

B $\frac{2^{101}}{101}$

C $\frac{2^{100}}{101}$

D $\frac{2^{101}}{100}$

(Ans : C)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The number of solutions of $13\cos 2\theta + 8\cos\theta - 3\sqrt{3} = 0$ if $\theta \in [-3\pi, 2\pi]$ is

A 5

B 0

C 3

D 4

(Ans : A)

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#Q. For given vectors $\vec{a} = -\hat{i} + \hat{j} + 2\hat{k}$ and $\vec{b} = 2\hat{i} - \hat{j} + \hat{k}$ where $\vec{c} = \vec{a} \times \vec{b}$ and $\vec{d} = \vec{c} \times \vec{b}$. Then the value of $(\vec{a} - \vec{b}) \cdot \vec{d}$ is

A -35

B 53

C -52

D 25

(Ans : A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Find $\int_{\frac{\pi}{24}}^{\frac{5\pi}{24}} \frac{dx}{1+(\tan 2x)^{1/3}}$

A $\frac{\pi}{24}$

B $\frac{\pi}{12}$

C $\frac{\pi}{6}$

D $\frac{\pi}{48}$

(Ans : B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The line $y = x + 1$ intersects the ellipse $\frac{x^2}{2} + \frac{y^2}{1} = 1$ at A and B. Find the angle subtended by segment AB and centre of ellipse is

A $\frac{\pi}{2} + \tan^{-1}\left(\frac{1}{4}\right)$

B $\frac{\pi}{2} - \tan^{-1}\left(\frac{1}{4}\right)$

C $\frac{\pi}{2} + 2\tan^{-1}\left(\frac{1}{4}\right)$

D $\frac{\pi}{4} + \tan^{-1}\left(\frac{1}{4}\right)$

(Ans : A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The area (in square units) bounded by the curve $f(x)$= Max $\{sin\, x, cos\, x\}$ x-axis between x = 0 and $x = \frac{3\pi}{2}$ is Then, the value of $A + A^2$ is

(Ans : 12)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If coefficients of x, x^2 and x^3 are in arithmetic progression of the binomial expansion of $\left(1+x^2\right)^2\ (1+x)^n, n \in N$. Then sum of all values of n is

A 7

B 9

C 8

D 10

(Ans : B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. The mean and variance of the 8 observations $-10, -7, -1, x, y, 16, 2, 9$ are $\frac{7}{2}$ and $\frac{293}{4}$ respectively. Then, the mean of $x, y, x + y + 1, |x - y|$ is

(Ans : 11)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. Let $f(x) = \int \frac{e^x(2-x^2)}{\sqrt{1+x}(1-x)^{\frac{3}{2}}}dx$, with $f(0) = 0$, then $f\left(\frac{1}{2}\right)$ is

A $\sqrt{2e} + 1$

B $\sqrt{2e} - 1$

C $\sqrt{3e} + 1$

D $\sqrt{3e} - 1$

(Ans : D)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If A is matrix of order 3 and $x = |3\text{adj}(A^2) \cdot \text{adj}(2A)|$ and $|A| = 6$ and $x = 2^n \cdot 3^m$, then $m + n$ is

(A) 21

(B) 25

(C) 27

(D) 19

(Ans : A)

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#Q. Let the domain of $f(x) = \log_3\left(\log_5\left(\log_7(9x - x^2 - 13)\right)\right)$ is (m, n). Let $\frac{n}{3}$ and $\frac{3m}{8}$ be eccentricity and length of latus rectum of hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ respectively, then the value of $\left(\frac{a+b^2}{a-b^2}\right)$ is equal to

A 7

B 9

C 3

D 13

(Ans : A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If point B and C lies on line $\frac{x}{1} = \frac{1-y}{-2} = \frac{z-2}{3}$ and point A is $(1,6,3)$. If $BC = 10$. Then, the area of $\triangle ABC$ is

A $2\sqrt{13}$

B $5\sqrt{13}$

C $6\sqrt{13}$

D $4\sqrt{13}$

(Ans : B)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. $3 \leq |2z - (3 + 3i)| \leq 7$. **Then find minimum value of** $\left|z + \frac{1}{2}(5 + 3i)\right|$.

A 3/2

B 7/2

C 0

D 5

(Ans : A)

JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. $x^4dy + (4x^3y + 2\sin x)dx = 0, y\left(\frac{\pi}{2}\right) = 0.$ **Find** $y\left(\frac{\pi}{3}\right) \times \pi^4.$

A 79

B 81

C 80

D 18

(Ans : B)