PAPER SOLUTION

From Meerut

JEE MAIN 2026

JAN	SHIFT
22	2nd

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JEE MAIN 2026 LIVE PAPER DISCUSSION

#Q. If complex numbers $Z_1, Z_2, \ldots Z_n$ satisfy the equation $4Z^2 + \bar{Z} = 0$, then $\sum_{i=1}^{n} |Z_i|^2$ is equal to

A 3/16

B 3/64

C 9/64

D 1/16

(Ans : A)

#Q. Let α, β be the roots of quadratic equation $12x^2 - 20x + 3\lambda = 0, \lambda \in z$. If $1/2 \leq |\beta - \alpha| \leq 3/2$ then the sum of all possible valued of λ is

(Ans : 3)

#Q. The number of elements in the relation $R = \{(x, y): 4x^2 + y^2 < 52, x, y \in z\}$ is

(Ans : 77)

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#Q. Area eclosed by $4x^2 + y^2 \leq 8$ and $y^2 \leq 4x$ (in square unit) is

A $(\pi + \frac{4}{3})$ sq. unit

B $(\pi - \frac{4}{3})$ sq. unit

C $(\pi + \frac{2}{3})$ sq. unit

D $(\pi - \frac{2}{3})$ sq. unit

(Ans : C)

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#Q. Mean deviation about median for k, 2k, 3k,….., 1000k is 500, then the value of k^2 is

A 4

B 9

C 16

D 1

(Ans : A)

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#Q. $x - ny + z = 6$

$x - (n-2)y + (n+1)z = 8$

$(n-1)y + z = 1$

Let n = number on the dies when rolled randomly then P (that system equation has unique solution) = $\frac{k}{6}$, then sum of value of k and all possible value of n is

A 22

B 21

C 20

D 24

(Ans : D)

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#Q. If $\lim_{x\to 0}\frac{e^{(a-1)x}+2\cos bx+(c-2)e^{-x}}{x\cos x-\log_e(1+x)}=2$, **then** $a^2+b^2+c^2$ **is equal to?**

(Ans : 7)

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#Q. If $P(10,2\sqrt{15})$ lies on hyperbola $\frac{x^2}{a^2}-\frac{y^2}{b^2}=1$ and length of latus rectum $=8$, then the square of area of ΔPS_1S_2 is [were $S_1 \& S_2$ are the foci of the hyperbola]

(A) 2700

(B) 2400

(C) 1750

(D) 3600

(Ans : A)

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#Q. If a, b, c are in A.P where $a+b+c=1$ and $a, 2b, c$ are in G.P., then the value of $9\left(a^2+b^2+c^2\right)$ is equal to

A 3

B -3

C 4

D -4

(Ans : B)

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#Q. If $\int_0^{64}\left(x^{\frac{1}{3}}+[x^{1/3}]\right)dx=\alpha$ and $\int_0^{\frac{\pi}{2}}\frac{\sin^2 x}{\sin^6 x+\cos^6 x}dx=\pi\beta$, then the value of $\alpha\beta^2$ is

A 87

B 77

C 67

D 57

(Ans : A)

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#Q. If $\cos(\alpha+\beta)=-\frac{1}{10}$ and $\sin(\alpha-\beta)=\frac{3}{8}$, where $0<\alpha<\frac{\pi}{3}$ and $0<\beta<\frac{\pi}{4}$, if $\tan 2\alpha=\frac{3(1-r\sqrt{55})}{\sqrt{11}(s+\sqrt{5})}$ and $r,s\in N$, then r^2+s is

(Ans : 20)