

## CUET PG 2025 MATHEMATICS Question Paper

1. Given the function  $f = \frac{x'}{\sqrt{x^2+y^2}}$ , find the value of  $f$ .

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2. Evaluate  $(90 + 87 + 89 + 67) \pmod{11}$ :

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3. Evaluate the double integral  $\int_0^\infty \int_0^\pi x e^{-\pi^2/2} dx dy$ .

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4. Let  $|G| = p^2$ . Which of the following represents the structure of the group  $G$ ?

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5. Given the function  $f = x^2 + xy^2 + y^4$ , find its partial derivatives.

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6. Simplify the expression  $\sqrt{4n^2 + n - 2n}$ .

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7. Evaluate the following triple integral:

$$\int \int \int (x^2 + y^2 + z^2) dV$$

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**8. Given that  $m > n$ , which of the following represents the dimensions of the matrices  $P$  and  $Q$ ?**

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**9. Evaluate the expression  $|x| + |x - 1| + |x + 1|$ :**

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**10. Rank  $(T) = \text{Rank}(T^2)$**

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**11.  $1 - \frac{1}{2^p} + \frac{1}{3^p} - \dots$**

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**12.  $\int_0^1 \int_0^1 \int_0^1 |x| + |y| + |z| \, dV = 0$**

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**13.  $\oint \mathbf{F} \cdot d\mathbf{r}$  from Gauss's Divergence Theorem (GDT)**

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