CUET PG 2026 Statistics Question Paper(Memory Based)

| **Time Allowed :**1 Hour 30 Mins | **Maximum Marks :**300 | **Total Questions :**75 |

General Instructions

Read the following instructions very carefully and strictly follow them:

- Answers to this Paper must be written on the paper provided separately.

- You will not be allowed to write during the first 15 minutes

- This time is to be spent in reading the question paper.

- The time given at the head of this Paper is the time allowed for writing the answers,

- The paper has four Sections.

- Section A is compulsory - All questions in Section A must be answered.

- You must attempt one question from each of the Sections B, C and D and one other question from any Section of your choice.

1. If $P(A) = 0.4$, $P(B) = 0.5$, and A and B are independent events, what is the value of $P(A \cup B)$?
(A) 0.60
(B) 0.65
(C) 0.70
(D) 0.75

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2. For a Poisson distribution where the mean is 4, what is the value of the third central moment?
(A) 4
(B) 8
(C) 16
(D) 64

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3. Which property of an estimator is satisfied if its expected value equals the population parameter?
(A) Consistency
(B) Efficiency
(C) Unbiasedness
(D) Sufficiency

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4. If a matrix A has eigenvalues 2 and 3, what are the eigenvalues of the matrix A^2?

(A) $2, 3$
(B) $4, 9$
(C) $5, 6$
(D) $8, 27$

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5. In a Normal distribution, what percentage of data falls within two standard deviations of the mean?

(A) 68%
(B) 95%
(C) 99.7%
(D) 90%

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6. What is the rank of a 3×3 identity matrix added to a 3×3 null matrix?

(A) 0
(B) 1
(C) 2
(D) 3

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7. In Simple Random Sampling Without Replacement (SRSWOR), what is the probability of selecting a specific unit at the second draw?

(A) $\dfrac{1}{N}$
(B) $\dfrac{1}{N-1}$
(C) $\dfrac{2}{N}$
(D) $\dfrac{1}{N^2}$

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8. If the correlation coefficient between X and Y is 0.8, what is the coefficient of determination?

(A) 0.64
(B) 0.80
(C) 0.16
(D) 1.60

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9. A bag contains 5 red and 7 blue balls. If two balls are drawn at random, what is the probability that both are red?

(A) $\dfrac{5}{66}$

(B) $\dfrac{10}{66}$

(C) $\dfrac{5}{33}$

(D) $\dfrac{25}{66}$

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10. Which test is most appropriate for testing the significance of the difference between two small sample means?

(A) Z-test

(B) t-test

(C) Chi-square test

(D) F-test

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11. If the null hypothesis H_0 is rejected when it is actually true, what type of error has been committed?

(A) Type I Error

(B) Type II Error

(C) Sampling Error

(D) Standard Error

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12. What is the value of the integral $\displaystyle\int_{-\infty}^{\infty} e^{-x^2}\, dx$?

(A) $\sqrt{\pi}$

(B) π

(C) 1

(D) $\dfrac{\sqrt{\pi}}{2}$

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13. In a negatively skewed distribution, what is the correct relationship between the Mean, Median, and Mode?

(A) Mean > Median > Mode

(B) Mean < Median < Mode

(C) Mean = Median = Mode

(D) Mode < Median < Mean

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14. Find the limit of $\left(1 + \frac{1}{n}\right)^n$ as $n \to \infty$.

(A) 1

(B) e

(C) 0

(D) 2

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15. What is the degree of freedom for a Chi-square test used in a 3×4 contingency table?

(A) 6

(B) 8

(C) 9

(D) 12