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		Register No.

SECOND SEMESTER (CUFYUGP) DEGREE EXAMINATION APRIL 2025

(BCA)

BCA2CJ102 / BCA2MN101 - Statistical Foundation for Computer Applications

2024 Admission onwards

Maximum Time : 2 Hours | **Maximum Marks :70**

Section A

All Questions can be answered. Each Question carries 3 marks (Ceiling : 24 Marks)

1	Define primary and secondary data.
2	Find the geometric mean of 2, 3, 4
3	Calculate mean : 5, 23, 45, 50, 92, 40, 52, 16
4	State the principle of least squares.
5	What do you mean by regression?
6	Define point estimation.
7	Give classical definition of probability.
8	What is sample space? Write the sample space when two coins are tosses.
9	Define Poisson distribution.
10	Given the p.m.f of a random variable $f(x) = kx, x = 1,2,3,4,5$. Find the value of k.

Section B

All Questions can be answered. Each Question carries 6 marks (Ceiling : 36 Marks)

11 Find Quartile deviation for the following data

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of Students	2	4	5	9	10	5	15

12 Calculate variance for the following data

Marks	:	0-20	20-40	40-60	60-80	80-100
No. of students	:	10	15	30	35	10

13 Find rank correlation for the following data

X	50	60	70	65	80	85	90	92
Y	60	70	75	63	80	82	86	90

14 Given the following data

	X	Y
Arithmetic Mean	36	85
Standard Deviation	11	8

Correlation coefficient between X and Y = 0.66

(i) Find the two regression equations

(ii) Estimate the value of x when y = 75

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15	The probability that A solves a problem is $\frac{2}{5}$ and the probability that B solves it is $\frac{3}{8}$. If they try independently, find the probability that (i) both solve the problem (ii) none solves the problem.
16	A card is drawn from a pack of 52 cards. What is the probability that it is a (a)Face card, (b) Ace, (c) Red king, (d) Club or heart, (e) Spade queen
17	4 dice are thrown 162 times. The occurrence of '2 or 3' is considered a success. In how many throws, do you expect (i) exactly 2 success (ii) at least 1 success.
18	Define Normal distribution and state its properties.
	Section C
	Answer any ONE .Each Question carries 10 marks (1x10=10 Marks)
19	There are 2 urns containing 5 white and 4 black balls and the other containing 6 white and 5 black balls. One urn is chosen at random and one ball is drawn. If it is white, what is the probability that the urn selected is the first?
20	The scores in a test follow the normal law with mean 55 and S.D 12. Find the percentage of students scoring (i) above 75 (ii) between 65 and 75 (iii) between 48 and 70 (iv) below 40