

Reg. No. :

Name :

**Fourth Semester B.Com. LL.B. (Five Year Integrated) Degree Examination,
March 2026**

Paper III : BUSINESS STATISTICS

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

I. Explain any **five** of the following. Each question carries **2** marks.

1. Define statistics.
2. What is sampling?
3. What is range?
4. What is linear regression?
5. What is an index number?
6. What is CPI?
7. What is standard deviation?

(5 × 2 = 10 Marks)

II. Answer any **four** of the following in not more than **120** words. Each question carries **4** marks.

8. What are the functions of statistics?
9. What are the applications of correlation in business?

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10. What is the regression equation?
11. What are the importance of index numbers?
12. The correlation between the marks in physics and chemistry by a group of students is 0.8. If the sum of the squares of the difference in ranks is given to be 33, find the number of students in the group.

(4 × 4 = 16 Marks)

III. Answer any **four** of the following in not more than **150** words. Each question carries **6** marks.

13. Differentiate between census and sampling.
14. Distinguish between correlation and regression.
15. Calculate Coefficient of correlation from the following information
 $n = 12$, $\sum x = 35$, $\sum y = 60$, $\sum x^2 = 148$, $\sum y^2 = 450$, $\sum xy = 105$.
16. The regression equation of y on x is $x + 3y - 88 = 0$ and that of regression equation of x on y is $2x + y - 71 = 0$. Find Mean values of x and y .
17. A nursery contains 39 plants. The following plants were chosen at random, and their heights were recorded in cm : 38, 51, 46, 79, and 57. Calculate their heights' standard deviation.

(4 × 6 = 24 Marks)

IV. Answer any **three** of the following. Each question carries **10** marks.

18. From the following data, compute Pearson's correlation coefficient :

Price :	10	12	14	15	19
Demand (Qty) :	40	41	48	60	50

19. From the data related to prices and quantities consumed for 2022 and 2024.

Commodity	2022		2024	
	Price	Quantity	Price	Quantity
Rice	5	15	7	12
Wheat	4	5	6	4
Sugar	7	4	9	3
Tea	52	2	55	2

Construct price index numbers by

- Laspeyre's Method
 - Pasche's Method
 - Bowly's Method
 - Fisher's Method
20. Construct an index number for 2024 taking 2023 as base from the following data.

Commodity	Price in 2023 (Rs.)	Price in 2024 (Rs.)
A	50	60
B	40	80
C	70	110
D	90	70
E	50	40

21. Calculate the 5-yearly moving averages from the following data :

Year :	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
No. of students :	705	685	703	687	705	689	715	685	725	730

(3 × 10 = 30 Marks)