

Reg. No. :

Name :

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

Paper III – BUSINESS STATISTICS

(2013-2019 Admission)

Time : 3 Hours

Max. Marks : 80

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

1. Define standard deviation.
2. What do you mean by qualitative classification?
3. What is linear and non-linear correlation?
4. What do you mean by conditional probability?
5. If two regression coefficients are -0.8 and -0.6 , what would be the value of the co-efficient of correlation?
6. What are Index number?
7. What are the random fluctuations?

(5 × 2 = 10 Marks)

II. Answer any **four** of the following. Each question carries **4** marks.

8. What are the qualities of a good average?
9. What are the uses of regression analysis?
10. Explain the uses of index numbers.

P.T.O.

11. Explain the addition and multiplication rule of probability.
12. In a class of 50 students 10 have failed and their average of marks is 2.5. The total marks secured by the entire class were 281. Find the average marks of those who have passed.

(4 × 4 = 16 Marks)

III. Answer any **four** of the following. Each question carries **6** marks.

13. Explain the problems in the construction of Index numbers.
14. Explain the functions of Statistics.
15. The mean of a frequency distribution of 100 families is known to be 50. Find the missing frequencies.

Expenditure :	0-20	20-40	40-60	60-80	80-100
No. of families :	14	—	27	—	15

16. Compute coefficient of Quartile Deviation from the following data.

Marks :	10	20	30	40	50	60
No. of Students	4	7	15	8	7	2

17. The mean and standard deviation of a set of 100 observations were worked out as 40 and 5 respectively by a computers which by mistake took the value 50 in place of 40 for one observation. Find the correct mean and variance.

(4 × 6 = 24 Marks)

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

18. Compute Spearman's rank correlation for the following observation.

Candidate :	1	2	3	4	5	6	7	8
Judge X :	20	22	28	23	30	30	23	24
Judge Y :	28	24	24	25	26	27	32	30

19. Fit a straight line trend for the following series estimate the value for 2012.

Years :	2001	2002	2003	2004	2005	2006	2007
Production of Steel (in tonnes) :	60	72	75	65	80	85	95

20. Given A, B, C are independent events. $P(A) = 0.3$, $P(B) = 0.2$ and $P(C) = 0.4$. Find the probability for
- (a) all occurring
 - (b) none occurring
 - (c) atleast one occurring
 - (d) exactly one occurring

21. The following data relate to marks in advanced accounts and Business statistics in a university.

Mean marks in advanced accounts : 30

Mean marks in business statistics : 5

Standard deviation of marks in advanced accounts : 10

Standard deviation of marks in business statistics : 7

Coefficient of correlation between the marks of
Advanced accounts and business statistics : 0.8

Form the two regression lines and calculate the expected marks in advanced accounts if the marks secured by a student in business statistics are 40.

(3 × 10 = 30 Marks)