(Pages : 3) P – 4896

Reg. No. : .....

Name : .....

Fourth Semester B.Com LL.B (Five Year Integrated) Degree Examination, February 2023

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 Statistics. Write any two uses of statistics.
2. Distinguish between linear and non-linear correlation.
3. What is (a) Permutation (b) combination?
4. Define Regression Analysis.
5. What are Index numbers?
6. What is secular trend?
7. What is Standard deviation?

(5 × 2 = 10 Marks)

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

1. Distinguish between primary data and secondary data
2. Calculate median from the following data

Marks	10-25	25-40	40-55	55-70	70-85	85-100
Frequency	6	20	44	26	3	1

P.T.O.

3. Distinguish between correlation and regression.

4. Explain the theorems of probability.

5. What are the parts of a table?

(4 × 4 = 16 Marks)

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

1. Calculate Karl Pearson's co-efficient of correlation from the following data

Wages	100	101	102	102	100	99	97	98	96	95
Cost of Living	98	99	99	97	95	92	95	94	90	91

2. You are given the following data.

Measures	X	Y
Average	36	85
Standard deviation	11	8
Co-efficient of Correlation	0.66	

(a) Find the two regression equations

(b) Estimate the value of X when Y = 75

3. In how many ways, can a committee of 3 women and 4 men be chosen from 8 women and 7 men?

4. What are the components of time series?

5. Explain the uses of index numbers.

(4 × 6 = 24 Marks)

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

1. A card is drawn from a pack of cards. What is the chance that it is:

(a) A King or a Jack

(b) A Club or an Ace

(c) A Queen or a Number 10

(d) A Diamond or a Red card

2. Construct an index number for the year 2021 using 2020 as base year under

(a) Paasche's method

(b) Fisher's method

Commodity	2020		2021	
	Price	Quantity	Price	Quantity
Rice	5	50	10	40
Wheat	10	10	9	2
Sugar	12	5	5	2

3. Calculate trend values from the following data using the method of least square

Year	2012	2013	2014	2015	2016	2017
Production	7	9	12	15	18	23

4. Calculate standard deviation from the following data

14 22 9 15 20 17 12 11

(3 × 10 = 30 Marks)