Reg. No. : ....

Name : ....

Fourth Semester B.Com. LL.B. (Five Year Integrated) Degree Examination, April 2022

Paper III : BUSINESS STATISTICS

Time : 3 Hours   Max. Marks : 80

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

1. Define correlation.

2. What is Probable Error?

3. Define regression.

4. Define index numbers.

5. What is consumer price index?

6. Define secular trend.

7. What do you mean by exclusive events?

(5 × 2 = 10 Marks)

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

1. Explain the types of correlation.

2. Explain the assumptions of regression :

3. Find r if
    $b_{yx} = -0.2, b_{xy} = -0.7$.

4. Statistics Canada results show that the number of farms in Canada dropped from 276548 in 1996, to an estimated 246923 in 2001. What is the index for the number of farms in 2001 based on the number in 1996?

5. Explain the importance of time series analysis.

<div align="right">(4 × 4 = 16 Marks)</div>

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

1. Following are data on price and supply of a commodity. Find the correlation between price and supply and comment on the degree of correlation between them.

$$X: \quad 22 \quad 26 \quad 29 \quad 30 \quad 31 \quad 33 \quad 34 \quad 35$$
$$Y: \quad 19 \quad 21 \quad 22 \quad 29 \quad 27 \quad 24 \quad 27 \quad 31$$

2. Explain the components of time series.

3. What is the probability of getting 3 red balls in a draw of 36 balls from a bag containing 5 red balls and 46 black balls?

4. Explain the addition and multiplication theorems of probability.

5. What are the functions of statistics?

<div align="right">(4 × 6 = 24 Marks)</div>

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

1. The of ranking 10 beauty contestants by two judges X and Y are given below. Calculate Spearman's Rank correlation coefficient.

Contestant :	A	B	C	D	E	F	G	H	I	J
Judge A :	1	6	3	9	5	2	7	10	8	4
Judge B :	6	8	3	2	7	10	5	9	4	1