



**Third Semester B.Com.(BCLS) Degree Examination,
August/September 2021**

(CBCS – Semester Scheme)

Commerce

**Paper 3.6 – QUANTITATIVE ANALYSIS FOR
BUSINESS DECISIONS – II**

Time : 3 Hours]

[Max. Marks : 70

Instruction to Candidates : Answer should be written in English only.

SECTION – A

1. Answer any **FIVE** sub-questions. Each question carries **2** marks : **(5 × 2 = 10)**
- What is the meaning of negative correlation?
 - State the techniques of sampling.
 - Write the meaning of extrapolation.
 - State the uses of time series.
 - What is meant by Probability?
 - Write any two demerits of Rank correlation coefficient.
 - Write the two Regression Equations.

SECTION – B

Answer any **THREE** questions. Each question carries **6** marks : **(3 × 6 = 18)**

2. If $\bar{X} = 47$; $\bar{Y} = 96$; $\sigma_x = 2.828$; $\sigma_y = 8.366$; $r = 0.845$, construct the two regression equations.
3. Briefly explain the essentials of a good sample.
4. Marks assigned by two judges in a beauty competition are as follows :

Judge X :	98	12	78	44	57	28	10	90	36	82
Judge Y :	76	12	60	82	66	25	34	92	86	49

Calculate Rank Correlation Coefficient.

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5. One card is drawn from a standard pack of 52. What is the probability that it is :
- (a) Red
 - (b) Queen and
 - (c) The ace of club

6. Interpolate the exports made in 2017 from the following using Binomial Expansion method :

Year :	2014	2015	2016	2017	2018	2019
Exports (₹ in Lakhs) :	42	46	58	-	66	70

SECTION - C

Answer any **THREE** questions. Each question carries **14** marks : **(3 × 14 = 42)**

7. From the following data calculate Karl Pearson's correlation coefficient and interpret the results :

Average Sales

(₹ in lakhs) : 60 75 82 96 62 92 90 83

Average Profits

(₹ in thousands) : 21 24 28 29 19 30 33 32

8. The following are the annual demand for a product :

Year :	2013	2014	2015	2016	2017	2018	2019
Demand (in tons) :	80	70	95	105	65	75	90

- (a) Fit a straight line trend to the above figures using the method of least squares.
 - (b) Estimate the demand for the year 2021.
 - (c) Plot the actual and trend values on a graph sheet.
9. Estimate the sugar production for the years 2015 and 2017 from the following data :

Year :	2012	2013	2014	2015	2016	2017	2018
Sugar production (in '000 tons) :	15	18	22	-	33	-	44

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10. Using Newton's Advancing Difference Method estimate the premium payable at the age of 36.

Age in years :	20	25	30	35	40
Premium (₹) :	301	353	398	455	510

11. From the following data :

(a) Construct two regression equations.

(b) Estimate the value of Y when $X = 120$ and the value of X when $Y = 50$.

X : 80 96 104 136 144

Y : 40 48 56 72 104