BCO-312

Sl.No. :

Total No. of Pages : 3

Third Year B.Com. Degree Examination, Oct./Nov. - 2025

(SLM Scheme)

BUSINESS STATISTICS AND QUANTITATIVE TECHNIQUES

Time : 3 Hours **Max. Marks : 80**

Instruction : All Sections are compulsory.

SECTION - A

Answer any Four Questions. Each Question carries 5 Marks. [4 × 5 = 20]

Q1) If the interest is compounded annually, find the compound interest on ₹2,000 for 3 years at 10% pa.

Q2) Four cards are drawn at random from a pack of 52 cards. Find the probability that,

a) All are Diamonds

b) There are two black and two red cards.

Q3) Write a note on different types of skewness.

Q4) Define Regression. Discuss its significance.

Q5) What are the problems in the construction of Index numbers?

Q6) Distinguish between correlation and regression.

SECTION - B

Answer any Three Questions. Each Question carries 10 Marks. [3 × 10 = 30]

Q7) Calculate mean and standard deviation from the following information

X	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Y	20	26	44	60	101	109	84	66	10

Q8) If $A = \begin{pmatrix} 5 & 3 & 10 \\ 9 & 4 & 5 \\ 2 & 7 & 8 \end{pmatrix}$ $B = \begin{pmatrix} 8 & 9 & 5 \\ 3 & 2 & 6 \\ 4 & 5 & 9 \end{pmatrix}$

Find a) A^1+B

b) $3A+5B$

Q9) A = {1,2,4,5}

B = {2,3,5,6}

C = {4,5,6,7}

Prove that,

(a) $(A \cup B) \cap C = (A \cap B) \cup (A \cap C)$

(b) $(A-B) \cup C = (A \cup C) - (B \cap C)$

Q10) Briefly explain the techniques of measures of central tendency.

Q11) What are the methods of interpolation and extrapolation.

SECTION - C

Answer any Two Questions. Each Question carries 15 Marks. **[2 × 15 = 30]**

Q12) Explain the different methods of data collection with examples.

Q13) What is time series? Explain the methods and components of time series.

Q14) Construct with the help of the table below, fisher's ideal Index.

Commodity	2023		2024	
	Price(₹)	Quantity (kg)	Price(₹)	Quantity (kg)
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

Also prove from the above data that the Factor Reversal and Time Reversal test are satisfied by Fisher's ideal formula.

Q15) Compute the standard deviation and mean deviation from the following:

Class (x)	Frequency (y)
0-10	8
10-20	12
20-30	17
30-40	14
40-50	9
50-60	7
60-70	4

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