Subject Code : Bc/BS–603

Booklet No. A 172

Date Stamp ....

Bc/BS–603

2025

(6th Semester)

COMMERCE

Paper : BS–603

(Business Statistics)

Full Marks : 70 *Pass Marks* : 45%

Time : 3 hours

(PART : B—DESCRIPTIVE)

(*Marks* : 45)

The figures in the margin indicate full marks for the questions

1. *(a)* Define statistics. Explain the nature and importance of statistics. 2+7=9

Or

(b) What do you mean by diagrammatic presentation? Discuss the different types of diagram. 2+7=9

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2. *(a)* From the following data, calculate median marks : 9

Marks	*f*
10–25	6
25–40	20
40–55	44
55–70	26
70–85	3
85–100	1

Or

(b) Calculate Spearman's rank coefficient of correlation from the following data : 9

X	53	98	95	81	75	61	59	55
Y	47	25	32	37	30	40	39	45

3. *(a)* What do you mean by index number? Explain the uses of index number. 2+7=9

Or

(b) Construct quantity index for 2007 with 2005 as base year from the following data using Fisher's ideal method : 9

Commodities	*2005*		*2007*	
	Quantity	*Price*	*Quantity*	*Price*
Wheat	3	10	4	14
Milk	4	15	4	16
Rice	6	12	7	18
Fish	2	20	3	25
Sugar	3	10	4	12

4. *(a)* Discuss the various measurements of trend in a time series. 9

Or

(b) Find the trend value for the following time series by using three-yearly moving averages : 9

Year	*Production* (in '000)
1980	12
1981	11
1982	16
1983	15
1984	17
1985	28
1986	18
1987	23

5. *(a)* Define census method. Distinguish between census method and sample method. 2+7=9

Or

(b) An urn contains 8 white and 3 red balls. If two balls are drawn at random, then find the probability that *(i)* both are white, *(ii)* both are red and *(iii)* 1 is red and another 1 is white. 9

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2025

(6th Semester)

COMMERCE

Paper : BS–603

(Business Statistics)

(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

1. Choose the correct answer and place its code in the brackets provided : 1×10=10

(a) The quickest method of collecting primary data is

(i) mailed questionnaire

(ii) telephone interview

(iii) enumerators

(iv) information from correspondents

[ ]

(b) The final stage of collection and compilation of numerical data and forms, the initial stage of analysis and interpretation is

(i) tabulation

(ii) classification

(iii) frequency

(iv) distribution [ ]

(c) Square of standard deviation is called

(i) mean deviation

(ii) quartile deviation

(iii) variance

(iv) None of the above [ ]

(d) Correlation coefficient lies between

(i) 0 and 1

(ii) –1 and 1

(iii) –1 and 2

(iv) 0 and 2 [ ]

(e) The index numbers are expressed in

(i) alphabets

(ii) numbers

(iii) percentages

(iv) None of the above [ ]

(f) The index number which gives downward bias is

(i) Paasche's index number

(ii) Laspeyres' index number

(iii) Fisher's index number

(iv) Bowley's index number [ ]

(g) The sum of seasonal indices using additive model is equal to

(i) zero

(ii) one

(iii) two

(iv) three [ ]

(h) A business cycle is an example of

(i) cyclic variation

(ii) seasonal variation

(iii) irregular variation

(iv) All of the above [ ]

(i) The Central Statistical Organization (CSO) was established in

(i) 1951

(ii) 1952

(iii) 1953

(iv) 1954 [ ]

(j) An event that can split into two or more events is

(i) independent event

(ii) dependent event

(iii) exhaustive event

(iv) composite event [ ]

2. State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark : 1×5=5

(a) Primary data are original in nature.

(T / F)

(b) Median and mode are called positional averages.

(T / F)

(c) The longer the period of moving average, the smoother is the trend line likely to be.

(T / F)

(d) Fisher's ideal index formula satisfies circular test.

(T / F)

(e) Sampling errors are present in census method.

(T / F)

3. Write short notes on any *five* the following : 2×5=10

(a) Primary data

(b) Classification

(c) Objectives of dispersion

(d) Scatter diagram

(e) Index number as economic barometers

(f) Base shifting

(g) Seasonal variation

(h) Trial and events

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