

THIRD YEAR B.Com. DEGREE EXAMINATION, MARCH/APRIL 2005

Part III—Commerce

Paper I—BUSINESS STATISTICS

(New Scheme)

Three Hours

Maximum : 80 Marks

Answers may be written either in English or in Malayalam.

Part A

Answer any ten questions.
Each question carries 1 mark.

- What do you understand by hypothetical population ?
- What is cluster sampling ?
- Define Harmonic Mean.
- Give two properties of Median.
- What do you mean by dispersion ?
- What is Kurtosis ?
- What is meant by linear correlation ?
- State any two differences between correlation and regression.
- Give the formula for constructing Index Number under Marshall Edgeworth Method.
- What do you mean by splicing ?
- Find out in how many ways the letters of the word "COUNTRY be re—arranged" ?
- State the multiplication theories of probability when events are independent.

(10 × 1 = 10 marks)

Part B

Answer any ten questions.
Each question carries 4 marks.

- State the merits and demerits of Geometric Mean.
- Explain the functions of Central Statistical Organisation.
- What are the limitations of graphs and Diagrams ?
- Briefly explain the problems in the construction of cost of living index number.
- State the importance of t' : measure of Dispersion.
- What is a time series ? me the components of time series.

Turn over

19. Calculate 3 years moving average from the following data : —
- | | | | | | | | | | | | | |
|------------|--------|----|----|----|----|-----|----|----|-----|----|----|----|
| Year | : 1992 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | '00 | 01 | | |
| Sales '000 | } | : | 55 | 47 | 59 | 151 | 79 | 36 | 45 | 72 | 83 | 89 |
| Units | | | | | | | | | | | | |

20. Following data are related with the prices of 7 commodities for the year 1999. Find the Simple Index Number :—

Commodities	A	B	C	D	E	F	G
Price for 99 (Rs.)	: 150	110	170	200	50	80	10
Price for 2000 (Rs.)	: 160	100	190	220	90	50	15

21. Calculate Standard Deviation from the following data :—

Class	: 0—25	25—50	50—75	75—100	100—125	125—150
Frequency	: 13	12	19	11	15	17

22. The Mean of 20 values is 45. If one of these values is taken as 64 instead of 46, correct mean.

23. Find Geometric Mean from the following data :—

Daily Income	: 0—20	20—40	40—60	60—80	80—100
No. of Workers	: 5	7	12	8	4

24. The sale of bicycle manufactured by a company for the last eight years are given. Fit a straight-line trend by the method of least squares.

Year	: 1980	81	82	83	84	85	86		
No. of Units manufactured	}	:	12	13	13	16	19	23	21

(10 × 4 = 40)

Part C

Answer any two questions.
Each question carries 15 marks.

25. Calculate Median and mode from the following data :—

Class	f	Class	f
0—10	4	50—60	14
10—20	5	60—70	8
20—30	15	70—80	13
30—40	9	80—90	7
40—50	11	90—100	8

Compute Karl Pearson's Co-efficient of Skewness from the data given below :

Marks	No. of Students	Marks	No. of Students
0—1	4	50—60	13
10—20	11	60—70	5
20—30	21	70—80	7
30—40	32	80—90	3
40—50	15		

Calculate Karl Pearson's Co-efficient of Correlation from the following data :—

Income (Rs.)	:	230	560	490	360	270	480	580	600
Expenses (Rs.)	:	200	440	350	250	240	300	420	550

(2 × 15 = 30 marks)

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