

Exam. Code : 103202

Subject Code : 1057

B.A./B.Sc. 2nd Semester

QUANTITATIVE TECHNIQUES—II

Time Allowed—Three Hours] [Maximum Marks—100

Note :— Attempt FIVE questions in all. Question No. 1 is compulsory and attempt ONE question from each of four units.

1. (i) What are the limitations of statistics ?
- (ii) What is a Pie chart ?
- (iii) What do you mean by classification of data ?
- (iv) Discuss the merits of mode as a measure of central tendency.
- (v) Distinguish between Skewness and Kurtosis.
- (vi) Distinguish between linear and non-linear correlation.
- (vii) What are lines of regression ?
- (viii) Define rank correlation coefficient.
- (ix) What are the components of time series ?
- (x) What are the uses of Index numbers ?

2×10=20

UNIT—I

2. What are the chief functions of tabulation ? What precautions would you take in tabulating statistical data ? 20
3. (a) Explain scope and significance of statistics.
(b) Draw a cumulative frequency curve (less than type) and histogram from the following data :

Sales (Rs. lakhs)	No. of Companies	
10—20	8	
20—30	12	
30—40	20	
40—50	10	
50—60	7	
60—70	3	10,10

UNIT—II

4. Find Mean and Median from the following data :

Marks more than	No. of Students	
0	80	
20	76	
40	50	
60	28	
80	18	
100	9	
120	3	20

5. (a) Calculate the coefficient of Kurtosis from the following data :

Marks	Frequency
0—10	2
10—20	2
20—30	3
30—40	2
40—50	1

- (b) Calculate S.D. from the following data :

240.12, 240.13, 240.15, 240.12, 240.17

240.15, 240.17, 240.16, 240.22, 240.21 10,10

UNIT—III

6. (a) Find the Karl Pearson's correlation coefficient from the following data :

X	Y
65	67
66	68
67	66
68	69
69	72
70	72
71	69

- (b) From the following data calculate the rank correlation coefficient :

X	Y
48	13
33	13
40	9
9	6
16	15
16	4
65	20
24	9
16	6
57	19

10,10

7. Find the two regression equations from the following data :

Age of husband	Age of wife
25	18
22	15
28	20
26	17
35	22
20	14
22	16
40	21
20	15
18	14

Hence estimate (i) the age of husband when the age of wife is 10. (ii) the age of wife when the age of husband is 30.

20

UNIT—IV

8. (a) Explain any one method of measuring seasonal variation in time series data.
- (b) Given below are figures of production (tonnes) of a sugar factory :

Year	Production
1990	77
1991	88
1992	94
1993	85
1994	91
1995	98
1996	90

Fit a straight line trend by the method of least squares. 10,10

9. (a) Discuss the problems faced in the construction of an index number of prices.
- (b) Compute the Fisher's Ideal Index from the following data and show that it satisfies time reversal test and factor reversal test.

Commodity	Base Year		Current year	
	Price	Value	Price	Value
A	8	40	10	60
B	6	30	8	40
C	4	24	5	30
D	2	10	4	40

10,10