

Exam. Code : 103202

Subject Code : 1036

## B.A./B.Sc. Semester—II

## QUANTITATIVE TECHNIQUES—II

Time Allowed—3 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 do you mean by tabulation of data ?
- (iii) Distinguish between skewness and kurtosis.
- (iv) Distinguish between absolute and relative measures of dispersion.
- (v) What are the merits of median as a measure of central tendency ?
- (vi) Distinguish between linear and non-linear correlation.
- (vii) Define rank correlation coefficient.
- (viii) Comment on the following results obtained from given data :  
Coefficient of regression of y on x is 4.2 and  
Coefficient of regression of x on y is 0.5
- (ix) What is meant by time series analysis ?
- (x) What is Fisher's Ideal Index ? 2×10=20

## UNIT—I

2. What do you mean by classification ? Discuss the objectives and advantages of classification of data. 20
3. Explain the various methods that are used for graphical presentation of data. 20

## UNIT—II

4. (a) Calculate Mean and Mode from the following data :

Marks	10-20	10-30	10-40	10-50
No. of Students	4	16	56	97

Marks	10-60	10-70	10-80	10-90
No. of Students	124	137	146	150

- (b) Calculate the coefficient of Kurtosis from the following data :

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

10,10

5. From the data given below, state which team A or B is more consistent :

No. of goals scored in a Match	No. of Matches	
	Team A	Team B
0	27	1
1	9	5
2	8	8
3	5	9
4	1	27

20

## UNIT—III

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

X	64	65	66	67	68	69	70
Y	66	67	65	68	70	68	72

- (b) Find out rank correlation coefficient from the following data :

A	115	109	112	87	98	98	120	100	98	118
B	75	73	85	70	76	65	82	73	68	80

10,10

7. (a) What is regression line ? Why are there generally two regression lines ?  
 (b) From the data given below, find the two regression equations :

X	25	28	35	32	31	36	29	28	34	32
Y	43	46	49	41	46	32	31	20	33	39

10,10

## UNIT—IV

8. (a) Explain various tests of consistency to be satisfied by a good Index number.  
 (b) Calculate Laspeyre's, Paasche's and Fisher's Ideal Index from the following data :

Commodity	Base Year		Current Year	
	Price	Value	Price	Value
A	10	100	8	96
B	16	96	14	98
C	12	36	10	40
D	15	60	5	25

10,10



9. (a) Discuss various components of time series.  
 (b) You are given below the figures of annual production (in thousand tonnes) of a sugar factory :

Year	1978	1979	1980	1981	1982	1983	1984
Production	70	75	90	91	95	98	100

Fit a straight line trend by the method of least square and find the trend values. 10,10

Commodity	Base Year Price Value	Current Year Price Value
A	10	100
B	12	96
C	12	36
D	12	60