

2316

80

Class – BA/ B.Sc. Sem II

Subject – Quantitative Techniques

Paper- IV

Time Allowed : 3 Hours

Maximum Marks : 100

**Note:-** PART I consists of 10 questions, attempt all questions. Each question carries 2 marks. PART II, III, IV, V consists of 2 questions each, attempt any one question. Each question carries 20 marks.

**PART-I**

1. (i) What do you understand by term statistics?
- (ii) What do you mean by term Mode?
- (iii) Define Histogram.
- (iv) What is difference between classification and presentation of data?
- (v) What are types of skewness?
- (vi) What are measures of dispersion?
- (vii) What is difference between simple, partial and multiple correlation?
- (viii) What is difference between correlation and regression?
- (ix) Find out mode when median = 46.05, mean = 46.10
- (x) Find out Q.D & M.D if S.D is 86

**PART-II**

2. Explain scope and functions of statistics & also discuss distrust of statistics.
3. (a) What do you understand by classification of data? Explain types of classification.
- (b) Draw a less than and more than ogive

Wages (₹)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Workers	4	10	16	12	8	6	12	15	17

**PART-III**

4. (a) Explain Properties of Mean.
- (b) The arithmetic mean of marks for statistics in a class of 30 students was 52. The top 6 students had an average of 80 whereas the bottom 10 students had an average of 31 marks. Determine average marks of remaining students.

5. (a) Calculate Median

X	1	2	3	4-6	7-9	10-12	13-20	21-28	29-36
f	10	5	3	9	6	2	1	10	15

- (b) Modal marks for a group of 94 students are 54. Ten students got marks between 0-20, thirty students between 40-60 and fourteen students between 80-100. Find out number of students getting marks between 20-40 and 60-80, if maximum marks of test are 100.

**PART-IV**

6. (a) Find out number of observations if their mean is

sum of deviation of certain number of items from 2.5 is 50 and sum of deviations of same series measured from 3.5 is - 50.

- (b) Find out mode from the following frequency distribution

Lectures attended	10	20	30	40	50	60	70	80	90
Below									
No of students :	4	6	24	46	67	86	96	99	100

7. (a) A group of 70 labourers has an average daily wage of Rs 3.5 with Standard Deviation of Rs1.4. Another group of 80 labourers has an average daily wage Rs 5 with variance 4. Find for all 150 labourers their
- Average wage per day
  - the variance
  - the coefficient of variation.

#### PART-V

8. (a) What are properties of correlation coefficient ?  
 (b) Find out Kart Pearson's coefficient of correlation

Y\X	40-50	50-60	60-70	70-80	80-90	90-100	Total
40-50	3	5	4	-	-	-	12
50-60	3	6	6	2	-	-	17
60-70	1	4	9	5	2	-	21
70-80	-	-	5	10	8	1	24
80-90	-	-	1	4	6	5	16
90-100	-	-	-	2	4	4	10
Total	7	15	25	23	20	10	100

9. (a) Find out  $\bar{x}$  &  $\bar{y}$  when two regression equations are

$$3x + 2y - 26 = 0$$

$$6x + y - 31 = 0$$

(b) Find out coefficient of correlation when two regression equations are

$$3x + 2y = 21$$

$$4x + y = 23$$

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