

2316

120

Class – BA/B.Sc III

Subject – Q.T

Paper- Eco. Sem. VI

Time Allowed : 3 Hours

Maximum Marks : 100

**Note:-** Attempt all questions of question number one, each question carries 2 marks and attempt any one question out of two questions of the four units and each question carries 20 marks.

1. Define Set
2. Subset
3. Function
4. Relation
5. Mean
6. Median
7. Mode
8. Correlation
9. Regression
10. Index number

10×2=20

**Unit-I**

2.(a) Write a note on types of set.

(b) Differentiate  $(3x+2)^{\frac{1}{3}}(x+1)$ 

20×1=20

3.(a) Define Matrices and its types.

(b) Find the inverse of

$$A = \begin{bmatrix} 1 & 3 & 4 \\ 2 & 4 & 5 \\ 3 & 1 & 2 \end{bmatrix}$$

20×1=20

### Unit-II

4. (a) Calculate the value of mode :

Size :	2	3	4	5	6	7	8	9	10	11	12	13
Frequency :	3	8	10	12	16	14	10	8	17	5	4	1

- (b) Define Geometric mean . Give merits and demerits of geometric mean. 20×1=20
5. (a) Discuss various measures of dispersion.
- (b) Calculate standard deviation of the following data using direct method. 20×1=20

### Unit-III

6. (a) Explain different measures of skewness.
- (b) Find out Kelly's co-efficient of skewness of the data given below :- 20×1=20

Class :	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
	3	10	17	7	6	4	2	1

7. (a) Calculate coeff. of correlation .

X	2	3	4	5	6	7	8
Y	4	7	8	9	10	14	18

- (b) Differentiate between correlation and regression. 20×1=20

## Unit-IV

8. (a) Explain the difficulties in the construction of index numbers .
- (b) Find out index values from the data using
- Laspeyer's Method
  - Paasche's Method
  - Dorbish Method
  - Fisher's Method

Item	Base Year Quantity	Base Year Price	Current Year quantity	Current Year Price
A	3	5	2	8
B	7	4	5	6
C	4	7	3	10
D	6	6	5	7

20×1=20

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