

Roll No. ....

**56524**

**MBA 5 Year 2nd Semester (N.S.)  
Examination – May, 2023**

**BUSINESS STATISTICS**

Paper : 502 P4

*Time : Three Hours ]*

*[ Maximum Marks : 80*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

*Note : Attempt five questions in all, selecting four questions from Section-B (one question from each Unit) and one question from Section-A which is compulsory. All questions carry equal marks.*

**SECTION – A**

1. (a) What do you mean by geographical classification ?
- (b) What is frequency polygon ?
- (c) What is multiple correlation ?
- (d) What do you mean by chain index numbers ?
- (e) What do you mean by mode ?

- (g) What do you understand by consumer price index number ?
- (h) What is regression ?

**SECTION – B**

**UNIT – I**

2. "Statistics or statistical methods may be defined a collection, presentation, description and analysis of data and interpretation of numerical data." Explain statement.
3. Discuss the usefulness of diagrammatic presentation of facts. Also discuss various types of diagrams.

**UNIT – II**

4. Calculate the mean by step deviation method and median of the following distribution :

Weights (kgs)	No. of workers
40-50	4
50-60	8
60-70	9
70-80	16
80-90	6
90-100	3
100-110	2
110-120	2

5. Calculate standard deviation and coefficient of variation from the following data :

Value	Frequency
5-10	18
10-15	30
15-20	46
20-25	28
25-30	20
30-35	12
35-40	6

### UNIT - III

6. Following table shows the ages (X) and Blood pressures (Y) of 9 persons :

Ages (X)	Blood Pressure (Y)
52	62
63	53
45	51
36	25
72	25
72	79
65	43
47	60
25	33

Obtain the regression equation of Y on X, and find the expected blood pressure of a person who is 49 years old.

Find out the coefficient of correlation using Karl Pearson's formula between X and Y obtained from the following data :

X	Y
70	62
48	47
58	53
55	60
54	55
50	68
60	51
52	48

### UNIT - IV

"A time series consists of data arranged chronologically." Discuss the statement and briefly describe different components of time series.

From the following data calculate price index number for 2021 with 2020 as base by (i) Laspeyre's method (ii) Passche's method (iii) Marshall-Edgeworth's method and (iv) Fisher's ideal method.

Commodities	2020		2021	
	Price $p_0$	Quantity $q_0$	Price $p_1$	Quantity $q_1$
A	10	12	12	15
B	07	15	05	20
C	05	24	09	20
D	16	05	14	05