



Q. No. 3. Calculate the mean and standard deviation from the following data :

Marks : 16

Value	Frequency
90 – 99	02
80 – 89	12
70 – 79	22
60 – 69	20
50 – 59	14
40 – 49	04
30 – 39	01

Q. No. 4. Distinguish between positive and negative correlation with the help of scatter diagram.

Marks : 16

Q. No. 5. Compute the regression equations for the following data :

Marks : 16

X :	2	4	5	6	8	11
Y :	18	12	10	08	07	05

Q. No. 6. Using the following data, compute Fisher's ideal price index number and show it satisfies TRT and FRT.

Marks : 16

Item	Base Year		Current Year	
	Price	Exp	Price	Exp
A	08	48	12	48
B	10	80	12	96
C	14	56	18	90
D	04	24	02	20
E	10	100	10	80

Q. No. 7. Define correlation. Discuss its significance.

Marks : 16



Q. No. 8. Write short note on any two of the following :

Marks : 2×8=16

- Tabulation
- Skewness
- Secondary data.

Q. No. 9. Solve any two of the following problems :

Marks : 2×10=20

- Draft a blank table showing the distribution of students of university according to
 - Sex;
 - Faculties : Arts, Science, Commerce
 - Four Year : 1981, 1984, 1985 and 1986
 - Age group : Below 18 years, 18-21 years and 22 years and above.
- Find Karl Pearson's coefficient of skewness for the following data :

Age	Students
10 – 12	04
12 – 14	10
14 – 16	16
16 – 18	30
18 – 20	20
20 – 22	14
22 – 24	06

- Find the coefficient of correlation between X and Y from the following data :

X :	10	14	15	28	35	48
Y :	74	61	50	54	43	46

Fourth Semester 5 Year B.B.A.L.L.B. Examination, June/July 2019

BUSINESS STATISTICS (Old/New)

Duration : 3 Hours

Max. Marks : 100

Instructions : 1. Answer Q. No. 9 and **any five** of the remaining questions.

2. Q. No. 9 carries 20 marks and **remaining** questions carry 16 marks each.

3. Answers should be written in **English**.

4. **Use** simple Calculator.

Q. No. 1. Discuss the functions and limitations of Statistics. Marks : 16

Q. No. 2. Calculate the mean, median and mode of the following distribution : Marks : 16

Class	Frequency
28 – 31	01
32 – 35	14
36 – 39	56
40 – 43	172
44 – 47	245
48 – 51	263
52 – 55	156
56 – 59	67
60 – 63	23
64 – 67	03



Q. No. 3. Calculate Fisher's ideal index number for the following data and verify that it satisfies TRT and FRT.

Marks : 16

Item	Base Year		Current Year	
	Price	Qty	Price	Qty
A	4	20	5	24
B	5	15	3	24
C	2	30	5	35
D	1	50	2	60
E	3	25	4	30

Q. No. 4. Calculate both the regression equation and estimate the demand (X) if the price (Y) is 75.

Marks : 16

X :	60	63	66	69	72	78	81	90	96	99
Y :	85	87	84	80	82	79	78	73	70	72

Q. No. 5. Explain the concepts of correlation along with different types of correlation.

Marks : 16

Q. No. 6. Critically evaluate the importance of various measures of central tendency.

Marks : 16

Q. No. 7. Define secondary data. What are their sources and precautions necessary for using them ?

Marks : 16

Q. No. 8. Write a short note on **any two** of the following: Marks : 2×8=16

- (a) Dispersion
- (b) Index number
- (c) Rank correlation.

Q. No. 9. Solve **any two** of the following problems. Marks : 2×10=20

(a) Calculate rank correlation from the following data :

X :	15	20	28	12	40	60	20	80
Y :	40	30	50	30	20	10	30	60



(b) Calculate Karl Pearson's coefficient of skewness.

Classes	Frequency
0 – 5	12
5 – 10	18
10 – 15	28
15 – 20	26
20 – 25	16

(c) Calculate Harmonic Mean (H.M.) for the following data :

Classes	Frequency
20 – 30	12
30 – 40	19
40 – 50	20
50 – 60	17
60 – 70	15
70 – 80	13
80 – 90	04

Fourth Semester 5 Year B.B.A. LL.B. Examination, December 2019
BUSINESS STATISTICS (New/Old)

Duration : 3 Hours

Max. Marks : 100

- Instructions :**
1. Answer Q. No. 9 and **any five** of the remaining questions.
 2. Q. No. 9 carries **20** marks and remaining question carries **16** marks **each**.
 3. Answer should be written in **English**.
 4. **Use** simple calculator.

Q. No. 1. Calculate the value of Mean, Median and Mode for the following data :

Marks : 16

Marks	No. of Students
More than 30	100
More than 35	92
More than 40	80
More than 45	62
More than 50	40
More than 55	24
More than 60	14
More than 65	06
More than 70	00

Q. No. 2. The runs scored by two cricketers in 08 innings are given below :

Marks : 16

A : 42 17 83 59 72 76 64 45
 B : 28 70 31 10 59 82 14 45

Find who is better batsman and who is more consistent ?



(b) Calculate Harmonic Mean for following : Marks : 6

Value	Frequency
0-10	4
10-20	8
20-30	14
30-40	19
40-50	25
50-60	32
60-70	24
70-80	17
80-90	12
90-100	7

OR

(b) Write a short note on Quartiles.

Marks : 6

UNIT – III

Q. No. 3. (a) Calculate Karl-Pearson's co-efficient of skewness.

Marks : 10

Classes	Frequency
0-5	12
5-10	18
10-15	28
15-20	26
20-25	16

OR

(a) The number of employees and their average wages and variance of the wages per employee for 2 factories are given below. In which factory the variation is greater in the distribution of daily wage/employee ?

Marks : 10

	Factory A	Factory B
No. of employees	50	100
Average wage	120	85
Variance	3	4



(b) What do you mean by Quartile Deviation ? Mention the merits of Quartile Deviation.

Marks : 6

OR

(b) Write a note on skewness.

Marks : 6

UNIT – IV

Q. No. 4. (a) Define Regression. Explain linear and non-linear regression and lines of regression.

Marks : 10

OR

(a) Obtain Rank correlation co-efficient from the following data : Marks : 10

Marks in Science	Marks in Mathematics
70	91
65	76
71	65
62	83
58	90
69	64
78	55
64	48

(b) From the following data find out two regression lines.

Marks : 6

	X	Y
Mean	15.5	22
S.D.	3	4
$r = 0.85$		

OR

(b) Write a short note on Rank-correlation.

Marks : 6

UNIT - V

- Q. No. 5. (a) Define Index Numbers. Explain different steps involved in the construction of Index Numbers.

Marks : 10

OR

- (a) Compute Fisher's Index Number. Show that it satisfies both Time Reversal Test (TRT) and Factor Reversal Test (FRT).

Marks : 10

Item	2018		2019	
	Price	Quantity	Price	Quantity
P	5	6	6	7
Q	7	12	6	13
R	6	15	8	15
S	8	10	8	12

- (b) Construct the cost of living index number from the table given below :

Marks : 6

By Family Budget Method

Commodity	A	B	C	D	E
Quantity in units 2015	50	100	60	30	40
Price per unit 2015	6	2	4	10	8
Price per unit 2020	10	2	6	12	12

OR

- (b) Write short note on "Weights" in index number.

Marks : 6

III Semester 5 Year B.B.A. LL.B. Examination, December 2019

BUSINESS STATISTICS
(2018 and 2019 Batch)

Duration : 3 Hours

Max. Marks : 80

- Instructions :** 1. Answer **all 5** questions.
2. One essay type and one short note question or problem from **each** Unit have to be attempted.
3. **Use** simple calculator.

UNIT - I

- Q. No. 1. (a) What is Primary Data ? Explain various methods of collecting Primary Data.

Marks : 10

OR

- (a) Mention the requisites of a good table. Marks : 10
(b) Sales of a company from 2012-2013 to 2016-17 are given below :

Marks : 6

Year	2012-13	13-14	14-15	15-16	16-17
Sales (Crores)	85	109	204	126	209

Represent this data by a suitable bar diagram.

OR

- (b) Write a short note on Pie-Diagram with example.

Marks : 6

UNIT - II

- Q. No. 2. (a) Calculate the Mean, Median and Mode for the following :

Marks : 10

Classes	Frequency
28-31	1
32-35	14
36-39	56
40-43	172
44-47	245
48-51	263
52-55	156
56-59	67
60-63	23
64-67	03

OR

- (a) Write merits and demerits of Mean, Median and Mode.

Marks : 10

P.T.O.



Q. No. 4. Define regression. Explain linear and non linear regression. Marks : 16

Q. No. 5. From the following data calculate Fishers index number and show that it satisfies T.R.T. and F.R.T. Marks : 16

Items	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	10	3	12	3
B	15	4	20	5
C	25	4	28	6
D	12	5	15	5

Q. No. 6. Compute the regression equations for the following data : Marks : 16

X : 2 4 5 6 8 11
Y : 18 12 10 08 7 5

Q. No. 7. Calculate coefficient of rank correlation for the data : Mark : 16

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

Q. No. 8. Write short notes on **any two** of the following : Marks : 2x8=16

- Cost of living index numbers
- Quartiles
- Tabulation.



Q. No. 9. Solve **any two** of the following problems : Marks : 2x10=20

a) Calculate Mean and Median for the following data :

Classes	Frequencies
20 – 30	12
30 – 40	19
40 – 50	20
50 – 60	17
60 – 70	15
70 – 80	13
80 – 90	4

b) The following table gives number of people affected by earthquake for the past five years.

Represent the data by percentage bar diagram.

Year	No. of Deaths	No. of Injured
1997	4,000	7,500
1998	7,000	8,500
1999	25,000	20,000
2000	12,000	18,000
2001	25,000	50,000

c) Calculate two regression equations :

	X	Y
Mean	20	120
S. D. (σ)	5	25

Correlation coefficient 0.8. Find Y when X = 25 and X when Y = 150.

IV Semester 5 Year B.B.A., LL.B. Examination, Nov./Dec. 2020

BUSINESS STATISTICS

(Old and New Batch)

Duration : 3 Hours

Max. Marks : 100

Instructions : 1. Answer Q. No. 9 and any five of the remaining questions.

2. Q. No. 9 carries 20 marks and the remaining questions carry 16 marks each.

3. Answers should be written in English completely.

4. Use simple calculator.

Q. No. 1. Define Statistics. Explain the sources of secondary data. Marks : 16

Q. No. 2. The median and mode of the following hourly wage distribution are known to be Rs. 33.5 and Rs. 34 respectively. Three frequency values from the table are however missing, you are required to find out those values. Marks : 16

Wages (Rs.)	No. of Persons
0 – 10	4
10 – 20	16
20 – 30	?
30 – 40	?
40 – 50	?
50 – 60	6
60 – 70	4
Total	230

Q. No. 3. From the following prices of shares X and Y. State which share price are more stable : Marks : 16

X-Rs.	Y-Rs.
55	108
54	107
53	105
56	105
68	106
52	107
50	104
51	103
49	104
53	101



Q. No. 3. a) Calculate mean, median and mode for following data. Marks : 10

Marks	No. of Students
Less than 10	12
Less than 20	30
Less than 30	50
Less than 40	80
Less than 50	96
Less than 60	110
Less than 70	116
Less than 80	120

Q. No. 3. b) Find Harmonic mean. Marks : 6

X :	12	16	20	24	28	32	36	40
f :	10	13	15	20	25	32	28	22

Q. No. 4. a) Explain mathematical properties of Arithmetic mean with its merits and demerits. Marks : 10

Q. No. 4. b) Write a short note on quartiles. Marks : 6

Q. No. 5. a) A purchasing agent obtained samples of lamps from two suppliers. Find which company's lamps are more uniform. Marks : 10

Length of life in hours	Company A	Company B
700-900	10	3
900-1100	16	42
1100-1300	26	12
1300-1500	8	3

Q. No. 5. b) Calculate Bowley's co-efficient of skewness. Marks : 6

No. of children per family	No. of families
0	7
1	10
2	16
3	25
4	18
5	11
6	8



Q. No. 6. a) Define dispersion. Explain various measures of dispersion. Marks : 10

Q. No. 6. b) Define range. What are the merits of range ? Marks : 6

Q. No. 7. a) Define correlation. Explain different measures of correlation. Marks : 10

Q. No. 7. b) Write a note on rank correlation. Marks : 6

Q. No. 8. a) Calculate the regression equations for the following data : Marks : 10

X:	1	2	3	4	5
Y:	2	3	5	4	6

Q. No. 8. b) Calculate co-efficient of correlation from the following data : Marks : 6

X :	8	7	6	5	4	3	2
Y :	19	17	15	13	11	7	9

Q. No. 9. a) Calculate Fisher's Index number and show that it satisfies TRT and FRT. Marks : 10

Item	Base Year		Current Year	
	Price (Rs.)	Expenditure (Rs.)	Price (Rs.)	Expenditure (Rs.)
A	6	300	10	560
B	2	200	2	240
C	4	240	6	360
D	8	320	12	432

Q. No. 9. b) Write a note on applications of Index number. Marks : 6

Q. No. 10. a) Explain types of index numbers. Marks : 10

Q. No. 10. b) Construct cost of living index for 2009 from the given data taking 2005 as the base period. Marks : 6

Group	Group Index for 2009	Weights (2009)
Food	122	32
House rent	140	15
Cloth	112	18
Fuel	116	10
Miscellaneous	106	25

III Semester 5 Yr. B.B.A. LL.B. Examination, March/April 2021
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

- Instructions :** 1. Answer any five questions from group (a) each question carries 10 marks.
 2. Answer any five questions from group (b) each question carries 06 marks.
 3. Answers should be written only in English.

Q. No. 1. a) Explain all the primary methods of data collection. Marks : 10

Q. No. 1. b) Represent the following distribution of marks by frequency polygon. Marks : 6

Percentage of Marks No. of Students

0 – 10	01
10 – 20	05
20 – 30	07
30 – 40	09
40 – 50	50
50 – 60	35
60 – 70	25
70 – 80	10

Q. No. 2. a) Represent the following data by percentage bar diagram. Marks : 10

Number of students

College	Arts	Science	Commerce	Total
A	900	960	1140	3000
B	750	600	650	2000

Q. No. 2. b) Write short note on Tabulation. Marks : 6

P.T.O.

54	10
55	11
56	12
57	11
68	9
70	8

- Q. No. 4. The scores of two batsmen Mr. A and Mr. B in ten cricket matches are given below :

Marks : 16

Mr. A	Mr. B
32	19
28	31
47	48
63	53
71	67
39	90
10	10
60	62
96	40
14	80

Using co-efficient of variation, find whether batsmen Mr. A or Mr. B is more consistent in scoring ?

- Q. No. 5. Prices and quantities of the base year and current year for eight groups of commodities are given below :

Marks : 16

Commodities	Price		Quantity	
	Base year	Current year	Base year	Current year
A	12	20	55	120
B	10	12	100	80
C	14	15	60	80
D	16	18	30	70
E	18	20	40	40
F	20	15	70	60
G	20	16	90	100
H	15	18	80	80

Calculate Fisher's ideal index number and verify TRT and FRT for the same.



- Q. No. 6. Ten competitors in a music competition were ranked by three judges X, Y and Z in the following order

Marks : 16

Judge X	Judge Y	Judge Z
1	3	6
6	5	4
5	8	9
10	4	8
3	7	1
2	10	2
4	2	3
9	1	10
7	6	5
8	9	7

By using Rank correlation, find out which pair of judges have the nearest approach to the common test in music.

- Q. No. 7. Calculate Mode and Quartiles from the following data :

Marks : 16

Wages (in Rs.)	No. of workers
Above 0	80
Above 10	77
" 20	72
" 30	65
" 40	55
" 50	43
" 60	28
" 70	16
" 80	10
" 90	8
" 100	0

- Q. No. 8. Explain the characteristics and types of collecting statistical data.

Marks : 16

- Q. No. 9. Find Karl Pearson's co-efficient of skewness for following data :

Marks : 16

Income	No. of Households
10 - 20	18
20 - 30	13
30 - 40	22

40 – 50	21
50 – 60	27
60 – 70	19
70 – 80	11
80 – 90	9
90 – 100	5
100 – 110	1

Q. No. 10. Write short notes on **any two** of the following : Marks : 2×8=16

- Classification of data
- Skewness
- Correlation.

Q. No. 11. Solve **any two** of the following problems : Marks : 2×10=20

- You are given the following data :
The value of median = 50, calculate the missing frequency.

Expenditure (Rs.)	No. of Families
0 – 20	14
20 – 40	?
40 – 60	27
60 – 80	21
80 – 100	15

- The following data relate to the expenditure of two families per month :

Items of expenditure	Family 'A' (Rs.)	Family 'B' (Rs.)
Food	400	600
Rent	200	400
Clothing	200	300
Miscellaneous	100	500

Represent the above data by angular diagrams (Pie).

- From the following data, obtain the regression equation of X on Y and also that of Y on X.

X	10	6	10	6	8
Y	6	2	10	4	8

IV Semester 5 Years B.B.A.,LL.B. Examination, October/November 2021
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 100

- Instructions :** 1. Answer Q. No. 11 and any five of the remaining questions.
2. Q. No. 11 carries 20 marks and the remaining questions carry 16 marks each.
3. Use only simple calculator.

Q. No. 1. Define statistics. Explain the scope of statistics.

Marks : 16

Q. No. 2. Calculate Arithmetic mean and median from the following data :

Marks : 16

Wages (in Rs.)	No. of Workers
110 – 100	2
100 – 90	2
90 – 80	4
80 – 70	8
70 – 60	8
60 – 50	12
50 – 40	9
40 – 30	7
30 – 20	5
20 – 10	1
10 – 0	2

Q. No. 3. From the following data calculate :

Marks : 16

- Range
- Quartile deviation of the marks of students.

Marks	No. of Students
40	10
45	12
52	14
53	9



Q. No. 3. a) Calculate Mean, Median and Mode for the following data. Marks : 10

Marks	No. of Students
Less than 10	12
Less than 20	20
Less than 30	30
Less than 40	45
Less than 50	80
Less than 60	89
Less than 70	97
Less than 80	105
Less than 90	120

Q. No. 3. b) Calculate Geometric Mean from the following data. Marks : 6

Weights (x)	No. of Persons (f)
135	3
145	6
147	4
157	6
167	3
182	5
198	4

Q. No. 4. a) Model marks for a group of 94 students are 54, 10 students got marks between 0 – 20, 30 students got between 40 – 60, and 14 students got between 80 – 100. Find the number of students getting marks between 20 – 40 and 60 – 80, if the maximum marks of the test were 100. Marks : 10

Q. No. 4. b) Calculate Harmonic Mean from the following data. Marks : 6

C – I	f
0 – 10	2
10 – 20	5
20 – 30	18
30 – 40	12
40 – 50	14
50 – 60	19
60 – 70	8
70 – 80	2

Q. No. 5. a) Compute Quartile Deviation and the co-efficient of Quartile Deviation from the following data. Marks : 10

Marks	No. of Students
10 – 19	12
20 – 29	17
30 – 39	5
40 – 49	10
50 – 59	6
60 – 69	20
70 – 79	15
80 – 89	13

Q. No. 5. b) Calculate standard Deviation from the following data. Marks : 6

x
20
30
40
50
55
60
70

Q. No. 6. a) A Panel of 2 Judges. Mr. A and Mr. B graded seven Dance performances by awarding marks as follows. Marks : 10

Performances	1	2	3	4	5	6	7
Judge A	46	42	44	40	43	41	45
Judge B	40	38	36	35	39	37	41

Find out the co-efficient of variation in the marks awarded and find out who is more consistent.

Q. No. 6. b) Write a note on Skewness. Marks : 6

Q. No. 7. a) Calculate Karl Pearson's co-efficient of correlation from the following. Marks : 10

X	Y
249	237
251	238
248	236
252	240
258	245
269	255
271	254
272	252
280	258
275	251

6015/7015

-4-



Q. No. 7. b) Write a note on Rank correlation.

Marks : 6

Q. No. 8. a) Given are the bi-variate data, obtain the two regression equation and calculate X on Y when Y = 14 and Y on X when X = 18.

Marks : 10

X	Y
3	7
6	2
5	1
3	2
2	6
8	5
4	3
2	8

Q. No. 8. b) From the following, calculate Spearman's rank correlation.

Marks : 6

Marks in Statistics	96	54	52	78	45	68	34	99	53	74
Marks in Science	34	78	45	92	69	90	84	14	74	97

Q. No. 9. a) Price and quantities of the base year and the current year for eight groups of commodities are given below.

Marks : 10

Commodities	Price		Quantity	
	Base Year	Current Year	Base Year	Current Year
A	14	15	55	80
B	10	12	100	90
C	16	18	60	70
D	18	20	30	40
E	20	22	40	40
F	12	14	70	60
G	09	11	90	80
H	08	13	80	75

Calculate Fisher's ideal index number and verify both TRT and FRT tests.

Q. No. 9. b) Write a note on Index Number.

Marks : 6

Q. No. 10. a) Explain TRT and FRT.

Marks : 10

Q. No. 10. b) Write a note on cost of living index number.

Marks : 6

6015/7015



III Semester 5 Years B.B.A. LL.B./B.Com. LL.B.
Examination, October/November 2021
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

- Instructions :**
1. Answer any five questions from group (a) each question carries 10 marks.
 2. Answer any five questions from group (b) each question carries 6 marks.
 3. Answer should be written either in English or Kannada completely.
 4. Use only simple calculator.

Q. No. 1. a) Define statistics. Explain the scope of statistics.

Marks : 10

Q. No. 1. b) Write a note on Tabulation.

Marks : 6

Q. No. 2. a) The following data relate to monthly expenditures of two families 'A' and 'B'.

Marks : 10

Items of Expenditure	Expenditure (in Rs.)	
	Family A	Family B
Food	160	100
Clothing	80	30
Rent	60	40
Fuel and Light	20	10
Miscellaneous	80	20
Total	400	200

Represent the data by a suitable percentage bar diagram.

Q. No. 2. b) Draw a Pie chart to represent the following data of the proposed expenditure by the Karnataka Government for the year ended 2020 – 2021.

Marks : 6

Items	Expenditure (Rs.)
Industries	400
Agriculture	600
Education	450
Irrigation	250
Miscellaneous	300

P.T.O.



- Q. No. 4. Calculate co-efficient of variation from the following data using Mean and Standard deviation. Marks : 16

Class	Frequency
0 – 5	03
5 – 10	09
10 – 15	15
15 – 20	22
20 – 25	26
25 – 30	19
30 – 35	13
35 – 40	08

- Q. No. 5. Define correlation. Explain different types of correlation and measures of correlation. Marks : 16

- Q. No. 6. Calculate Fisher's Ideal index numbers for the following data verify that it satisfies Time Reversal and Factor Reversal (TRT) and (FRT). Marks : 16

Commodities	Base year		Current year	
	Price	quantity	Price	quantity
A	4	20	5	24
B	5	15	3	24
C	2	30	5	35
D	1	50	2	60
E	3	25	4	30

- Q. No. 7. Explain in terms, classification and tabulation of data. Mention the requisites of a good statistical table. Marks : 16

- Q. No. 8. Write a short note on **any two** of the following : Marks : 2x8=16

- Graphical Representation.
- Measures of central tendency
- Skewness.



- Q. No. 9. Solve **any two** of the following problem : Marks : 2x10=20

- (a) Calculate Spearman's rank correlation for the following :

X : 12 17 19 32 42 56 64

Y : 70 54 45 50 37 41 57

- (b) Draft a blank table showing the distribution of students of university according to
- Sex
 - Faculties – Arts, Science, Commerce
 - Four years 2000, 2001, 2002, 2003
 - Age group – Below 18 years, 18 – 21 years and 22 years.

- (c) Find the Geometric Mean for the following frequency distribution.

Classes	Frequency
15 – 25	06
25 – 35	09
35 – 45	10
45 – 55	21
55 – 65	26
65 – 75	16
75 – 85	12

IV Semester 5 Year B.B.A. LL.B. Examination, March/April 2023 (Dec. 2022)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 100

- Instructions :**
1. Answer Q. No. 9 and any five of the remaining questions.
 2. Q. No. 9 carries 20 marks and the remaining questions carry 16 marks each.
 3. Answers should be written in English completely.
 4. Use simple calculator only.

Q. No. 1. What is statistics ? Explain the scope and limitations of statistics. Marks : 16

Q. No. 2. Calculate Mean, Median and Mode for the following. Marks : 16

Value	Frequency
0 – 10	4
10 – 20	8
20 – 30	14
30 – 40	19
40 – 50	25
50 – 60	32
60 – 70	24
70 – 80	17
80 – 90	12
90 – 100	7

Q. No. 3. Define an Index Number. Explain the steps in construction of Index Numbers. Marks : 16



Q. No. 4. Estimate simple linear regression equation Y on X for the data given below and forecast Y values when X takes 40, 120, 135. Marks : 16

Y	X
97	11
99	15
88	19
99	34
63	27
44	23
37	29
41	49
29	42
15	31

Q. No. 5. What is index number ? Discuss Factor Reversal Test and Time Reversal Test. Marks : 16

Q. No. 6. Calculate Spearman's Rank Correlation Coefficient for the following data. Marks : 16

Y	X
28	66
32	44
30	55
26	44
31	55
15	83
45	41
22	84
52	35
36	83



Q. No. 7. Calculate index number for the following data using simple aggregate and simple average of price relative method. Marks : 16

	2019 (Base Year)	2020
Items	Price (Rs.)	Price (Rs.)
Rice	47	59
Dhal	40	53
Potato	32	18
Onion	70	30
Oil	132	171
Sugar	46	32

Q. No. 8. Write short note on **any two** of the following. Marks : 8x2=16

- Differentiate correlation and regression analysis.
- Measures of Central Tendency.
- Secondary data.

Q. No. 9. Solve **any two** of the following. Marks : 10x2=20

- Present the data on colour of cloths worn by 20 students in their re-union by Bar diagram and Pie chart.
Blue, Blue, Green, Red, Rose, Orange, Blue, Orange, Red, Red, Orange, Green, Green, Rose, Red, Red, Rose, Red, Blue, Blue.
- Calculate Karl Pearson coefficient of correlation for the data given below.

Y	X
7	33
6	37
9	42
13	27
21	26
20	21
17	25
14	16

- Tabulation of statistical data.

**IV Semester 5 Year B.B.A. LL.B. Examination,
October/November 2022 (June 2022)
BUSINESS STATISTICS**

Duration : 3 Hours

Max. Marks : 100

- Instructions :**
1. Answer Q. No. 9 and any five of the remaining questions.
 2. Q.No. 9 carries 20 marks and the remaining questions carry 16 marks each.
 3. Answers should be written in English completely.
 4. Use simple calculator.

Q. No. 1. Define Statistics and explain the methods of collecting primary data. Marks : 16

Q. No. 2. Calculate Geometric Mean and Harmonic Mean of the following data on speed per hour of selected vehicles. Marks : 16

Speed per hour

220
153
125
182
174
132
140
149
166
193

Q. No. 3. Find the skewness of the given data using Karl Pearson's Method. Marks : 16

Income ('000 Rs.)	No. of Households
10 – 20	18
20 – 30	13
30 – 40	22
40 – 50	21
50 – 60	27
60 – 70	19
70 – 80	11
80 – 90	9
90 – 100	5
100 – 110	1

6015/7015

-2-

Marks : 1×10=10

Q. No. 2. a) Find Mean, Median and Mode.

Class	f
10 – 19	10
20 – 29	18
30 – 39	32
40 – 49	40
50 – 59	22
60 – 69	18

Q. No. 2. b) Find the Arithmetic mean from the following.

Marks : 1×6=6

Marks below	No. of Students
10	18
20	35
30	58
40	73
50	80
60	96
70	100

OR

Q. No. 2. b) Calculate first and third quartiles.

Marks : 1×6=6

Income	No. of Persons
250	20
300	14
325	6
350	26
375	9
400	13
600	4

Q. No. 3. a) An agent obtained samples of bulbs from two companies. He had tested them for durability and got the following results.

Marks : 1×10=10

Life (in Kms)	Type – A	Type – B
17 – 19	100	30
19 – 21	160	420
21 – 23	260	120
23 – 25	80	30

Which company's bulbs have more uniform life ?

OR

6015/7015

-3-

Marks : 1×10=10

Q. No. 3. a) Which Series is more consistent ?

Variable	Series – A	Series – B
10 – 20	10	18
20 – 30	18	22
30 – 40	32	40
40 – 50	40	32
50 – 60	22	18
60 – 70	18	10

Q. No. 3. b) Find the median from the following.

Marks : 1×6=6

Marks below	No. of Students
10	18
20	35
30	58
40	73
50	80
60	96
70	100

OR

Q. No. 3. b) The mean and standard deviation of 2 brands of bulbs are given below.

Marks : 1×6=6

	Brand 'A'	Brand 'B'
Mean	1000 hrs.	820 hrs.
S.D.	100 hrs.	65 hrs.

Calculate co-efficient of variation for two brands and which brand is more consistent ?

Q. No. 4. a) Calculate Karl Pearson's Co-efficient of correlation between Temperature and Germination time.

Marks : 1×10=10

Temperature	Germination time
57	10
42	26
40	30
38	41
42	29
45	27
42	27
44	19
40	18

Take 47 and 26 as assumed mean.

OR



Q. No. 4. a) Find Karl Pearson's co-efficient of skewness.

Marks : 1×10=10

x	f
20	8
25	11
30	19
35	25
40	21
45	18
50	6

Q. No. 4. b) Explain correlation and mention the properties of correlation. Marks : 1×6=6

OR

Q. No. 4. b) What is Regression ? Explain lines of Regression.

Marks : 1×6=6

Q. No. 5. a) Calculate Fisher's ideal index numbers and also show that it is satisfying Time Reversal Test (TRT) and Factor Reversal Test (FRT).

Marks : 1×10=10

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
Wheat	12	20	14	20
Rice	16	22	18	24
Gram	32	20	36	18
Pulses	29	8	29	12
Ghee	62	1	70	2
Sugar	14	5	16	4

OR

Q. No. 5. a) What is Index numbers ? Explain steps involved in computing Index numbers.

Marks : 1×10=10

Q. No. 5. b) Write a note on uses of Index number.

Marks : 1×6=6

OR

Q. No. 5. b) Write a note on consumer price index.

Marks : 1×6=6

III Semester 5 Year B.B.A.LL.B./B.Com.LL.B.
Examination, October/November 2022 (June 2022)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

Instructions : 1. Answer all 5 questions.

2. One essay type and one short note or problem from each Unit have to be attempted.

3. Use simple calculator.

Q. No. 1. a) Draw 'less than ogive' and 'more than ogive' curves from the following data and also locate median value to verify the actual calculations.

Marks : 1×10=10

Class Interval	Frequency
10 – 50	10
50 – 100	30
100 – 150	50
150 – 200	40
200 – 250	20

OR

Q. No. 1. a) Discuss the scope, functions and limitations of statistics. Marks : 1×10=10

Q. No. 1. b) Distinguish between primary data and secondary data.

Marks : 1×6=6

OR

Q. No. 1. b) Explain the methods of collection of primary data.

Marks : 1×6=6

Q. No. 2. a) From the following data, calculate Mean, Median and Mode.

Marks : 1×10=10

Weight (in kg)	No. of Students
58	4
60	12
61	24
62	32
63	32
64	16
65	8
66	2

OR

More than 40	62
More than 50	40
More than 60	24
More than 70	14
More than 80	06
More than 90	00

Q. No. 2. b) Write a short note on Quartiles.

Marks : 6

OR

Q. No. 2. a) Critically evaluate the importance of various measures of central tendency.

Marks : 10

Q. No. 2. b) Find Harmonic mean.

Marks : 6

X	f
124	5
129	18
134	20
139	7
144	3

Q. No. 3. a) The following table gives scores of two Students A and B in series of 8 exams.

Marks : 10

Student A	Student B
32	10
28	80
46	20
60	75
70	65
55	15
40	17
45	70

Find which Student is more consistent.

Q. No. 3. b) Write a short note on Skewness.

Marks : 6

OR

Q. No. 3. a) Define dispersion. Explain various measures of dispersion.

Marks : 10

Q. No. 3. b) Calculate quartile deviation for the following data.

Marks : 6

Income	No. of Persons
50 – 70	100
70 – 90	140
90 – 110	300
110 – 130	230
130 – 150	125

Q. No. 4. a) Obtain lines of regression for the following data.

Marks : 10

x	y
5	13
7	14
9	16
1	18
3	11
4	10
2	17

Q. No. 4. b) Write a short note on Rank correlation.

Marks : 6

OR

Q. No. 4. a) Define correlation. Explain different types of correlation.

Marks : 10

Q. No. 4. b) Calculate Karl Pearson's coefficient of correlation for the following data.

Marks : 6

x	y
3	5
6	1
2	1
0	3



- Q. No. 5. a) Calculate Fisher's index number and verify it satisfies Time Reversal Test (TRT) and Factor Reversal Test (FRT). Marks : 10

Commodities	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	4	20	5	24
B	5	15	3	24
C	2	30	5	35
D	1	50	2	60
E	3	25	4	30

- Q. No. 5. b) Write a short note on 'weights in index number'. Marks : 6

OR

- Q. No. 5. a) Define index number. Explain different steps involved in the construction of index number. Marks : 10

- Q. No. 5. b) Construct cost of living index from the following data. Marks : 6

Group	Index	Weights
Food	55	40
Clothing	20	10
Fuel	15	20
Rent	10	20
Miscellaneous	18	10

III Semester 5 Year B.B.A.LL.B./B.Com.LL.B.
Examination, March/April 2023 (December 2022)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

- Instructions : 1. Answer any five questions from group (a) each question carries 10 marks.
2. Answer any five questions from group (b) each question carries 06 marks.
3. Use simple calculator only.

- Q. No. 1. a) What are the different sources of data collection ? Explain all the primary methods. Marks : 10

- Q. No. 1. b) Write a short note on scope of statistics. Marks : 6

OR

- Q. No. 1. a) Represent the following data by percentage bar diagram. Marks : 10

Year	No. of Petrol cars	No. of Diesel cars
2013	50,000	30,000
2014	65,000	20,000
2015	45,000	25,000
2016	40,000	15,000
2017	70,000	10,000

Above table gives number of cars sold by a car manufacturing company in past five years.

- Q. No. 1. b) Write a short note on tabulation. Marks : 6

- Q. No. 2. a) Calculate Mean, Median and Mode for the following data. Marks : 10

Marks	No. of Students
More than 10	100
More than 20	92
More than 30	80



Q. No. 2. a) Calculate :

- (i) Mean
(ii) Median and
(iii) Mode for the following.

Marks	No. of Students
More than 30	100
More than 35	92
More than 40	80
More than 45	62
More than 50	40
More than 55	24
More than 60	14
More than 65	06
More than 70	00

Q. No. 2. b) Explain the merits and demerits of median.

Marks : 6

OR

Q. No. 2. b) Write a short note on quartiles.

Marks : 6

UNIT – III

Q. No. 3. a) Define dispersion. Explain various measures of dispersion.

Marks : 10

OR

Q. No. 3. a) Calculate Karl Pearson's co-efficient of skewness.

Marks : 10

Classes	f
0 – 5	12
5 – 10	18
10 – 15	28
15 – 20	26
20 – 25	16



Q. No. 3. b) Write a short note on skewness.

Marks : 6

OR

Q. No. 3. b) What do you mean by quartile deviation and mention the merits of quartile deviation.

Marks : 6

UNIT – IV

Q. No. 4. a) Define regression. Explain linear and non-linear regression and lines of regression.

Marks : 10

OR

Q. No. 4. a) Calculate the co-efficient of correlation from the following data.

Marks : 10

X :	7	6	5	4	3	2	1
Y :	18	16	14	12	10	6	8

Q. No. 4. b) Obtain the rank correlation co-efficient from the following data.

Marks : 6

Marks in Stats :	70	65	71	62	58	69	78	64
Marks in Accounts :	91	76	65	83	90	64	55	48

OR

Q. No. 4. b) Write a note on correlation.

Marks : 6

UNIT – V

Q. No. 5. a) Calculate Laspeyre's Paasche's and Fisher's index for the following data and test that it satisfies FRT and TRT tests.

Marks : 10

Commodities	Base year		Current Year	
	Price	Quantity	Price	Quantity
A	12	10	20	12
B	4	20	4	24
C	8	12	12	15
D	12	15	24	2

OR



Q. No. 5. a) Index numbers are 'specialised averages' discuss. Mention its advantages and purposes. Marks : 10

Q. No. 5. b) Construct cost of living index number by family budget method for the year 1980 taking 1975 as base year. Marks : 6

Commodity	A	B	C	D	E
Quantity in units 1975	50	100	60	30	40
Price per unit 1975	6	2	4	10	8
Price per unit 1980	10	2	6	12	12

OR

Q. No. 5. b) Write short notes on 'Weights' in index numbers. Marks : 6



III Semester 5 Yr. B.B.A.LL.B./B.Com.LL.B.
Examination, September/October 2023 (June 2023)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

Instructions : 1. Answer all 5 Units.

2. One essay type and one short note question or problem from each Unit have to be attempted.

3. Use simple calculator.

UNIT – I

Q. No. 1. a) Define statistics. Explain the sources of secondary data. Marks : 10

OR

Q. No. 1. a) Define classification of data. Explain different types of classification of data. Marks : 10

Q. No. 1. b) Write short note on ogive curves. Marks : 6

OR

Q. No. 1. b) Represent the following frequency distribution by Histogram. Marks : 6

Classes	f
10 – 20	4
20 – 30	10
30 – 40	15
40 – 50	20
50 – 60	17
60 – 70	12
70 – 80	6

UNIT – II

Q. No. 2. a) What do you mean by measures of central tendency ? What are the various measures of central tendency ? Marks : 10

OR

P.T.O.



Q. No. 5. Calculate Karl Pearson co-efficient of correlation from the following : Marks : 16

X	Y
249	237
251	238
248	236
252	240
258	245
269	255
271	254
272	252
280	258
275	251

Q. No. 6. Price and quantities of the base year and the current year for eight group of commodities are given below : Marks : 16

Commodities	Price		Quantity	
	Base Year	Current Year	Base Year	Current Year
A	14	15	55	80
B	10	12	100	90
C	16	18	60	70
D	18	20	30	40
E	20	22	40	40
F	12	14	70	60
G	09	11	90	80
H	08	13	80	75

Calculate Fishers ideal index number and verify both TRT and FRT tests.



Q. No. 7. A panel of 2 judges Mr. A and Mr. B graded seven dance performances by awarding marks as follows. Analyse. Marks : 16

Performances	1	2	3	4	5	6	7
Judge A	46	42	44	40	43	41	45
Judge B	40	38	36	35	39	37	41

Q. No. 8. Write short notes on **any two** of the following : Marks : 2x8=16

- Tabulation
- Skewness
- Sources of secondary data.

Q. No. 9. Solve **any two** of the following problems : Marks : 2x10=20

- What is correlation ? What is its utility ?
- Represent the following data through a simple bar diagram and histogram.

Marks :	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50
Students :	10	12	18	15	25

- Find quartiles from the following data :

Age (Years)	No. of Employees
Below 20	13
20 - 25	29
25 - 30	46
30 - 35	60
35 - 40	112
40 - 45	94
45 - 50	45
50 and above	21

Fourth Semester 5 Year B.B.A.,LL.B. Examination, Sept./Oct. 2023 (June 2023)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 100

- Instructions :** 1. Answer Q. No. 9 and any five of the remaining questions.
 2. Q. No. 9 carries 20 marks and the remaining questions carry 16 marks each.
 3. Answer should be written in English only.

Q. No. 1. What is primary data ? Explain the methods of collecting primary data. Marks : 16

Q. No. 2. Calculate mean, median and mode for the following data : Marks : 16

Marks :	0 – 10	10 – 20	20 – 30	30 – 40
Frequency :	14	23	35	20
	40 – 50	50 – 60	60 – 70	70 – 80
	8	5	15	10

Q. No. 3. Define index numbers. Briefly explain the types of index number. Marks : 16

Q. No. 4. Compute quartile deviation and the co-efficient of quartile deviation from the following data. Marks : 16

Marks	No. of Students
10 – 19	12
20 – 29	17
30 – 39	05
40 – 49	10
50 – 59	06
60 – 69	20
70 – 79	15
80 – 89	13

UNIT – II

Q. No. 2. a) Explain the various measures of central tendency. Marks : 10

OR

Q. No. 2. a) Calculate mean, median and mode for the following data : Marks : 10

Marks	No. of students
Less than 10	15
Less than 20	35
Less than 30	64
Less than 40	84
Less than 50	96
Less than 60	120
Less than 70	192
Less than 80	256

Q. No. 2. b) Calculate geometric mean from the following data : Marks : 6

Classes	f
0 – 10	5
10 – 20	7
20 – 30	15
30 – 40	25
40 – 50	8

OR

Q. No. 2. b) Find the harmonic mean from the data : Marks : 6

Marks	No. of Students
15 – 25	4
25 – 35	11
35 – 45	19
45 – 55	14
55 – 65	6
65 – 75	2



UNIT – III

Q. No. 3. a) The scores of 2 batsman A and B in a certain season are given below. Marks : 10

Mr. A	58	59	60	54	65	66	52	75	69	62
Mr. B	87	89	78	71	73	84	65	66	56	46

Use appropriate measure and answer the following :

(i) Who is the better scorer ?

(ii) Who is more consistent ?

OR

Q. No. 3. a) Find the quartile deviation and its co-efficient. Marks : 10

Weekly wages	Number of workers
250 – 300	5
300 – 350	13
350 – 400	22
400 – 450	44
450 – 500	36
500 – 550	24
550 – 600	16

Q. No. 3. b) Write a short note on skewness. Marks : 6

OR

Q. No. 3. b) Calculate mean deviation about the median for the following data : Marks : 6

x	f
10	3
11	12
13	12
14	3
12	18

UNIT – IV

Q. No. 4. a) Ten competitors in a beauty contest are ranked by 3 judges in the following order : Marks : 10

1 st Judge	2	7	1	5	3	4	8	6	10	9
2 nd Judge	10	6	3	8	7	2	9	5	4	1
3 rd Judge	2	5	6	9	1	3	7	4	8	10

Use rank correlation coefficient to determine which pair of Judge has the nearest approach to common taste in a beauty.

OR

Q. No. 4. a) Define regression. Explain the linear and non-linear regression and lines of regression. Marks : 10



Q. No. 4. b) Compute the regression equation for the following data : Marks : 6

X	10	12	13	17	18	20	24	30
Y	5	6	7	9	13	15	20	21

OR

Q. No. 4. b) Distinguish between correlation and regression. Marks : 6

UNIT – V

Q. No. 5. a) Define index number. Explain the steps involved in the construction of index number. Marks : 10

OR

Q. No. 5. a) Calculate Fisher's ideal index from the following data and show how it satisfies time reversal test and factors reversal test. Marks : 10

Commodities	Base Year		Current Year	
	Price (Rs.)	Quantity	Price (Rs.)	Quantity
A	10	100	12	96
B	8	96	8	104
C	12	144	15	120
D	20	300	25	250
E	5	40	8	64
F	2	20	4	24

Q. No. 5. b) Write a short note on consumer price index. Marks : 6

OR

Q. No. 5. b) Construct Laspeyre's index number from the following data : Marks : 6

Year	Commodity – A		Commodity – B		Commodity – C	
	Price (Rs.)	Quantity	Price (Rs.)	Quantity	Price (Rs.)	Quantity
2021	10	20	16	12	15	6
2022	8	24	14	14	20	8

Duration : 3 Hours

Max. Marks : 80

Instructions : 1. Answer all five Units.

2. One essay type question and short note question

or problems is compulsory from each Unit.

3. Use simple calculator only.

4. Answer should be written in English completely.

UNIT – I

Q. No. 1. a) Draw a percentage bar diagram for the following data : Marks : 10

Expenditure	Company A	Company B
	Rs.	Rs.
Materials	3,00,000	4,00,000
Wages	50,000	60,000
Power	1,00,000	1,30,000
Maintenance	20,000	30,000
Total	4,70,000	6,20,000

OR

Q. No. 1. a) Define statistics. Explain the scope and limitations of statistics.

Marks : 10

Q. No. 1. b) Write a short note on classification.

Marks : 6

OR

Q. No. 1. b) Mention the components of a good table.

Marks : 6



UNIT - 3

- Q. No. 3. a) Following are the runs scored by batsmen in a cricket match. Find the mean deviation and coefficient of mean deviation from mean and median.

Marks : 10

Runs scored	No. of matches
5	16
10	32
15	36
20	44
25	28
30	18
35	12
40	14

OR

- Q. No. 3. a) The scores of two batsmen A and B in ten cricket matches is given below.

Marks : 10

A	B
63	53
71	19
39	31
10	48
96	10
60	90
14	67
32	62
28	40
48	80

Using coefficient of variation, find whether batsmen A or B is more consistent in scoring.



- Q. No. 3. b) You are given $\bar{X} = 50$, C.V. = 40% and coefficient of skewness = -0.4. You are required to find out standard deviation, mode and median.

Marks : 6

OR

- Q. No. 3. b) Write a note on skewness.

Marks : 6

UNIT - 4

- Q. No. 4. a) Calculate correlation coefficient for the following X and Y series :

Marks : 10

X	Y
45	56
55	50
56	48
58	60
60	62
65	64
68	65
70	70
75	74
80	82

OR

- Q. No. 4. a) From the following data, obtain the two regression equations.

Marks : 10

X	1	5	3	2	1	2	7	3
Y	6	1	0	0	1	2	1	5

- Q. No. 4. b) Write a note on Spearman's coefficient of rank correlation.

Marks : 6

OR

- Q. No. 4. b) Obtain the regression equations from the following :

Marks : 6

	X Series	Y Series
Mean	20	25
Variance	4	9

Coefficient of correlation = 0.75.



UNIT – 5

Q. No. 5. a) Using the data given below, calculate price index number for the year 2018 by

(i) Laspeyre's formula

(ii) Paasche's formula and

(iii) Fisher's formula with the year 2009 as base.

Marks : 10

Commodity	Price (Rs.)		Quantity (kg.)	
	2009	2018	2009	2018
Rice	90	110	100	130
Wheat	64	85	50	68
Pulses	59	90	70	74
Sugar	48	60	62	83
Ragi	60	65	95	45
Jowar	40	45	08	15
Onion	20	15	20	19
Toor dal	30	29	25	28
Moong dal	42	45	42	38
Soybean	41	80	18	29

OR

Q. No. 5. a) An enquiry into the budgets of the middle class families in Mumbai gave the following information.

Marks : 10

Expenses on	Weights (in %)	Price (Rs.)	
		2002	2013
Food	20	300	500
Rent	10	100	200
Clothing	5	40	300
Fuel	3	120	80
Electricity	8	95	220
Vegetables	12	40	98
Refreshments	12	85	100
Miscellaneous expenses	30	500	600

What changes in the cost of living index of 2013 has taken place as compared to 2002 ?



Q. No. 2. a) From the following data calculate mean, median and mode.

Marks : 10

Wages (in Rupees)	No. of Workers
Above 0	80
Above 10	77
Above 20	72
Above 30	65
Above 40	55
Above 50	43
Above 60	28
Above 70	16
Above 80	10
Above 90	8
Above 100	0

Q. No. 2. b) Explain the various measures of central tendency.

Marks : 6

OR

Q. No. 2. b) The mean weight of 100 students in a class is 60 kgs.

The mean weight of boys in the class is 65 kgs. and that of girls is 55 kgs. Find the number of boys and girls in the class.

Marks : 6



Q. No. 1. b) Explain the limitations of statistics.

Marks : 6

OR

Q. No. 1. b) Present the following business statistics results of 2nd B.Com.LL.B. held during December 2016, 2017 and 2018 by means of multiple bars.

Marks : 6

Year	1 st Class	2 nd Class	3 rd Class	Failed
Dec. 2016	100	300	400	280
Dec. 2017	120	400	700	300
Dec. 2018	100	500	600	200

UNIT - 2

Q. No. 2. a) Find the geometric mean and harmonic mean from the following distribution.

Marks : 10

Marks	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
No. of Students	7	12	4	25	30	22

OR



Q. No. 5. b) Construct Fisher's index for the following data and verify whether it satisfies TRT and FRT.

Marks : 6

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	12	100	20	112
B	14	120	14	240
C	08	80	12	120
D	20	60	24	40
E	16	120	24	48
F	15	40	30	52

OR

Q. No. 5. b) What is index number ? Explain the advantages of index number.

Marks : 6



6015/7015

III Semester 5 Years B.Com.,LL.B./B.B.A.,LL.B. (Even Sem.)
Examination, August/September 2024
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

Instructions : 1. Figures to the right indicate marks.

2. Answer should be written in English completely.

3. Use simple calculator only.

UNIT – 1

Q. No. 1. a) Define statistics. Explain the characteristics of statistics. Marks : 10

OR

Q. No. 1. a) Present the following data by a percentage bar rectangular diagram. Marks : 10

Items	Family A	Family B
	Income Rs. 4,500 per month	Income Rs. 3,500 per month
Food	1,300	1,200
Clothing	800	700
Rent	700	500
Education	300	350
Electricity	400	100
Miscellaneous	600	250
	4,100	3,100

P.T.O.

6015/7015

Third Semester 5 Year B.B.A., LL.B./B.Com. LL.B. Examination,
January/February 2025 (Odd Sem.)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

- Instructions :
1. Answer all five Units.
 2. One essay type question and short note/problem is compulsory from each Unit.
 3. Figures to the right indicate marks.
 4. Answer should be written in English only.
 5. Use simple calculator only.

UNIT – 1

- Q. No. 1. (a) Prepare a frequency distribution for the following observation by constructing a class interval of 10 and draw a histogram.

Marks : 10

16	12	30	29	22	35	39	40	42	40
50	30	18	12	5	15	3	4	9	45
9	0	5	6	8	15	25	22	3	4
8	12	5	9	3	4	30	32	29	1

OR

- (a) Define statistics. Explain the scope and limitation of statistics.

Marks : 10

- Q. No. 1. (b) Prepare a blank table to show the distribution of students of a college according to :

Marks : 6

- I) Faculty : Arts, Commerce and Science
- II) Gender : Male and Female
- III) Year : 2009 and 2010

OR

- (b) Distinguish between Primary and Secondary data.

Marks : 6

P.T.O.



UNIT – 4

Q. No. 4. (a) 10 Competitions in a beauty contest were ranked by 3 judges in the following.

Marks : 10

Judge 1	Judge 2	Judge 3
1	3	6
6	5	4
5	8	9
10	4	8
3	7	1
2	10	2
4	2	3
9	1	10
7	6	5
8	9	7

Use rank correlation coefficient to determine which pair of judges have the nearest approach to common taste in beauty.

OR

(a) Define correlation. Explain the kinds of correlation.

Marks : 10

Q. No. 4. (b) Estimate the 2 regression equations using the following data.

Marks : 6

	X	Y
Mean	25	30
Standard deviation	05	4

and $r = 0.8$

Estimate the value of X when $Y = 20$.

OR

(b) Difference between correlation and regression.

Marks : 6



-5-
UNIT – 5

6015/7015

Q. No. 5. (a) Calculate Fisher's Ideal Index from the following data and prove that it satisfies TRT and FRT.

Marks : 10

Commodities	2002		2003	
	Price	Expenditure	Price	Expenditure
A	8	80	10	120
B	10	120	12	96
C	05	40	05	50
D	04	56	03	60
E	20	100	25	150

OR

(a) What is Index Number ? Explain the importance and limitations of Index Number.

Marks : 10

Q. No. 5. (b) Compute Consumer Price Index Number by using the following information.

Marks : 6

Items	Group Index		Group Weight
	2008	2012	
Food	140	210	33
Clothing	220	300	10
Fuel	125	140	05
Housing	150	200	12
Others	135	160	11

OR

(b) Explain the types of Index Number.

Marks : 6

1/10/2024

1

1/10/2024

1/10/2024

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6015/7015

III Semester 5 Year B.B.A.LL.B./B.Com.LL.B.
Examination, June/July 2025 (Even Sem.)
BUSINESS STATISTICS

Duration : 3 Hours

Max. Marks : 80

- Instructions :**
1. Answer all five Units.
 2. One essay type question and short note question or problems is compulsory from each Unit.
 3. Use simple calculator.

UNIT – I

- Q. No. 1. (a) Draw less than and more than Ogives for the following data and determine the median graphically.

Marks : 10

Class Interval	Frequency
10 – 20	2
20 – 30	5
30 – 40	7
40 – 50	12
50 – 60	9
60 – 70	4

OR

- Q. No. 1. (a) What is primary data ? Explain the various methods of collecting primary data.

Marks : 10

- Q. No. 1. (b) Draw a pie chart to represent the following data.

Marks : 6

Colour	Frequency
Red	100
Blue	130
Green	240
Yellow	50
Other	80

OR

- Q. No. 1. (b) Write a short note on tabulation.

Marks : 6

P.T.O.



UNIT – II

- Q. No. 2. (a) Calculate the geometric and harmonic mean from the following data.

Marks : 10

Class Interval	Frequency
100 – 200	4
200 – 300	6
300 – 400	10
400 – 500	12
500 – 600	11
600 – 700	13

OR

- Q. No. 2. (a) Write the merits and demerits of mean, median and mode.

Marks : 10

- Q. No. 2. (b) Write a short note on quartiles.

Marks : 6

OR

- Q. No. 2. (b) Calculate the median of the following distribution.

Marks : 6

x	f
10	24
15	6
8	30
20	16
18	26

UNIT – III

- Q. No. 3. (a) What is Skewness ? Explain the types and measures of Skewness.

Marks : 10

OR



- Q. No. 3. (a) You are given below the daily wages paid to the workers in two factories X and Y.

Marks : 10

Daily Wages	No. of workers	
	Factory X	Factory Y
120 – 130	15	25
130 – 140	30	40
140 – 150	44	60
150 – 160	60	35
160 – 170	30	12
170 – 180	14	15
180 – 190	7	5

Use appropriate measure and answer the following :

- (i) Which factory pays higher wages ?
(ii) Which factory has a more consistent wages structure ?

- Q. No. 3. (b) Calculate the range and it's coefficient from the following.

Marks : 6

Marks	No. of students
10 – 20	5
20 – 30	8
30 – 40	10
40 – 50	7
50 – 60	12
60 – 70	9

OR

- Q. No. 3. (b) Define dispersion. Explain the measures of dispersion.

Marks : 6

UNIT – IV

- Q. No. 4. (a) Explain correlation analysis.

Marks : 10

OR



- Q. No. 4. (a) Calculate Spearman's rank correlation co-efficient between marks in Accountancy and marks in Statistics from the data.

Marks : 10

Marks in Accountancy	Marks in Statistics
78	84
39	47
36	51
65	53
62	58
90	86
82	62
75	68
25	60
98	91

- Q. No. 4. (b) From the following data find out two regression lines for the following data.

Marks : 6

	X	Y
Mean	15.5	22
SD	3	4
$r = 0.85$		

OR

- Q. No. 4. (b) Write a short note on regression analysis.

Marks : 6

UNIT – V

- Q. No. 5. (a) Calculate index numbers from the following data.

Marks : 10

- (a) Fisher's price index number.
(b) Test whether Fisher's price index satisfy time reversal and factor reversal test.

Commodities	p_0	q_0	p_1	q_1
A	8	5	10	11
B	8.5	6	9	9
C	9	4	12	6

OR

- Q. No. 5. (a) What is index number ? Explain the uses of index number.

Marks : 10

- Q. No. 5. (b) Write a short note on time reversal test and factor reversal test.

Marks : 6

OR

- Q. No. 5. (b) Write a note on cost of living index.

Marks : 6