



0433/3056/1615/1715

IV Semester 5 Year B.B.A. LL.B./B.Com. LL.B./III Semester 5 Year B.B.A. LL.B./
B.Com. LL.B. Examination, January/February 2026 (Odd Sem.)
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. Define Statistics. Explain the scope of statistics.

Marks : 16

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

Marks : 16

Marks	20	30	40	50	60	70
No. of Students	8	12	20	10	6	4

Q. No. 3. Calculate Karl Pearson's coefficient of Skewness.

Marks : 16

Classes	Frequency
0 - 10	12
10 - 20	18
20 - 30	28
30 - 40	26
40 - 50	16

Q. No. 4. Calculate standard deviation and co-efficient of variation for the following data.

Marks : 16

Class Interval	Frequency
0 - 5	3
5 - 10	6
10 - 15	9
15 - 20	8
20 - 25	5
25 - 30	7

Q. No. 5. From the following data, prove Fisher's ideal index number satisfies Time Reversal Test (TRT) and Factor Reversal Test (FRT) and also calculate Fisher's price index numbers.

Marks : 16

Items	Base Year		Current Year	
	Price	Quantity	Price	Quantity
Food	5	20	10	15
Transportation	6	25	8	20
Clothing	8	10	15	14
Others	10	12	20	6

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- Q. No. 6. Calculate the coefficient of correlation from the following data by Spearman's rank correlation method only. Marks : 16

Price of Tea (Rs.)	75	88	95	70	60	80	81	50
Price of Coffee (Rs.)	120	134	150	115	110	140	142	100

- Q. No. 7. What do you mean by dispersion ? Explain the various measures of dispersion with its merits and demerits. Marks : 16

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

- (a) Primary data and its methods
- (b) Limitations of statistics
- (c) Skewness.

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

- (a) Draw Histogram and locate mode for the following data :

Class	Frequency
0 – 10	2
10 – 20	10
20 – 30	40
30 – 40	20
40 – 50	15

- (b) Draft a blank table showing the population of a town according to

- (i) Sex
- (ii) Religion (Hindu, Muslim, Christian)
- (iii) Years – 2018, 2019

- (c) Calculate Median for the following data.

Class Intervals	No. of Students
10 – 19	8
20 – 29	12
30 – 39	30
40 – 49	28
50 – 59	40



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IV Semester 5 Year B.B.A. LL.B. (Even Sem.) Examination,
August/September 2024
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.
 4. Use simple calculator only.

Q. No. 1. Define statistics. Briefly explain the scope and importance of statistics. Marks : 1×16=16

Q. No. 2. What is Index Number ? Explain the importance and steps in constructing the index number. Marks : 1×16=16

Q. No. 3. Calculate mean, median and mode for the following data : Marks : 1×16=16

Class Intervals	Frequency
15 – 19	06
20 – 24	14
25 – 29	12
30 – 34	10
35 – 39	10
40 – 44	09
45 – 49	09
50 – 54	10
55 – 59	05
60 – 64	04
65 – 69	01

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Q. No. 4. Calculate quartile deviation and coefficient of quartile deviation from the following data :

Marks : $1 \times 16 = 16$

Age (Years)	No. of Teachers
50	10
51	12
52	15
53	10
54	14
55	18
56	06

Q. No. 5. Calculate Fisher's Ideal Index for the following data and verify that it satisfies TRT and FRT.

Marks : $1 \times 16 = 16$

Commodities	1999		2000	
	Price	Quantity	Price	Quantity
I	6	50	10	56
II	2	100	2	120
III	4	60	6	60
IV	10	30	12	24
V	8	40	12	36

Q. No. 6. Explain correlation analysis.

Marks : $1 \times 16 = 16$

Q. No. 7. Calculate standard deviation from the following data :

Marks : $1 \times 16 = 16$

X : 20 30 40 50 55 60 70

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

Marks : $2 \times 8 = 16$

- Skewness
- Primary data
- Tabulation.



Q. No. 9. Solve **any two** of the following questions :

Marks : $2 \times 10 = 20$

- (a) Define Average. What are the functions and characteristics of good average ?
- (b) Calculate Mean Deviation.

Age (Years)	No. of Teachers
70	12
71	10
72	15
73	10
75	18
77	14
76	06

- (c) Calculate geometric mean for the following data :

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



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**Fourth Semester 5 Year B.B.A., LL.B. Examination,
March/April 2024 (Odd Sem.)
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.
 3. Answers should be written in English completely.
 4. Use only simple calculator.

Q. No. 1. Calculate A.M., Median and Mode for the following data. Marks : 16

Class Marks	No. of Students
More than 0	200
More than 10	190
More than 20	172
More than 30	142
More than 40	110
More than 50	70
More than 60	50
More than 70	35
More than 80	22
More than 90	10
More than 100	00

Q. No. 2. Discuss the meaning and scope of statistics state the importance of statistics with reference to commerce and industry. Marks : 16

P.T.O.



Q. No. 3. Calculate standard deviation and coefficient of variation

Marks : 16

C.I.	f
10 – 19	5
20 – 29	8
30 – 39	17
40 – 49	12
50 – 59	8
60 – 69	3
70 – 79	7

Q. No. 4. What is meant by 'measure of central tendency' ? Define A.M.
Mode, Median and G.M.

Marks : 16

Q. No. 5. The following data gives the monthly income and expenditure
on food of 10 families

Marks : 16

Income	Expenditure
120	40
90	36
80	40
150	45
130	40
140	44
110	45
95	38
75	50
101	35

Calculate both the Regression Equations.



Q. No. 6. Using the following data compute Fisher's ideal price and quantity index number and verify fisher's Ideal index number satisfies time reversal and factor reversal test.

Marks : 16

Commodities	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	6	50	10	60
B	2	100	3	125
C	4	60	6	65
D	10	30	13	24

Q. No. 7. What is dispersion ? Explain the various measures of dispersion with its merits and demerits.

Marks : 16

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

Marks : 2x8=16

- (a) Secondary data
- (b) Cost of living index number
- (c) Tabulation.

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

Marks : 2x10=20

a) Compute the value of quartiles

Rent in Rs.	No. of houses
150 – 250	8
250 – 350	10
350 – 450	15
450 – 550	25
550 – 650	40
650 – 750	20
750 – 850	15
850 - 950	7



- b) The marks scored by Students A and B are given below. Represent the data by means of pie chart.

Marks scored by		
Subject	Student A	Student B
English	60	40
Statistics	90	50
Economics	90	70
Accounts	70	50
Commerce	50	60

c) **Classes** **f**

15 – 25	6
25 – 35	9
35 – 45	10
45 – 55	21
55 – 65	26
65 – 75	16
75 – 85	12

Find the geometric mean for the above frequency distribution.

No. of houses	Rent in Rs.
8	150 – 200
10	200 – 250
15	250 – 300
25	300 – 350
40	350 – 400
20	400 – 450
15	450 – 500



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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

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 : 2×8=16

- (a) Tabulation
- (b) Skewness
- (c) Sources of secondary data.

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

- (a) What is correlation ? What is its utility ?
- (b) 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

(c) 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



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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

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- 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 : 2×8=16

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



Q. No. 9. Solve **any two** of the following problem :

Marks : 2×10=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

(i) Sex

(ii) Faculties – Arts, Science, Commerce

(iii) Four years 2000, 2001, 2002, 2003

(iv) 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



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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

P.T.O.



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

Items	2019 (Base Year)	2020
	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

- (a) Differentiate correlation and regression analysis.
- (b) Measures of Central Tendency.
- (c) Secondary data.

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

- (a) 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.
- (b) 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

- (c) Tabulation of statistical data.
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IV Semester 5 Year B.B.A., LL.B. Examination, April/May 2022 (Dec. 2021)
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. Explain the functions and the limitations of statistics.

Marks : 16

Q. No. 2. Find mean, mode and quartiles for the following data.

Marks : 16

Wages (Rs.)	No. of workers
10 - 30	3
30 - 50	25
50 - 70	34
70 - 90	34
90 - 110	12
110 - 130	2
130 - 150	2

Q. No. 3. The following are the distribution of lives of electric bulbs manufactured by two firms.

Marks : 16

Life (hours)	No. of bulbs (Firm A)	No. of bulbs (Firm B)
800 - 900	8	16
900 - 1000	21	24
1000 - 1100	14	40
1100 - 1200	4	16
1200 - 1300	3	4

- (a) Which firm bulbs perform better ?
- (b) Which firms bulbs is more consistent ?

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- Q. No. 4. Calculate Karl Pearson's Co-efficient of skewness for the following data.

Marks : 16

Marks Scored	No. of Students
0 – 10	1
10 – 20	5
20 – 30	8
30 – 40	4
40 – 50	2

- Q. No. 5. For the following data, construct Fisher's ideal index number and test for TRT and FRT.

Marks : 16

Items	Base Year		Current Year	
	Price	Expenditure	Price	Expenditure
A	6	330	5	210
B	4	120	7	322
C	8	192	10	290
D	8	232	6	114
E	10	80	8	112
F	4	128	5	120

- Q. No. 6. From the following information :

Marks : 16

	Sales (Rs. Crores)	Advertisement (Rs. Crores)
Mean	40	6
Standard Deviation	10	1.5

$$r = 0.9.$$

- Estimate sales when advertisement expenditure is Rs. 10 crores.
- Estimate advertisement expenditure when sales is 60 crores.



Q. No. 7. Three Judges in a beauty competition rank the 10 entries in the following order.

Marks : 16

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

Using Rank Correlation Co-efficient, find out which pair of Judges have nearest approach to beauty.

Q. No. 8. Write short notes on **any two** of the following.

Marks : $2 \times 8 = 16$

- (a) Dispersion.
- (b) Range.
- (c) Class limits and class intervals.

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

Marks : $2 \times 10 = 20$

- (a) Calculate median for the following.

Class Interval	Frequency
3.0 – 3.9	2
4.0 – 4.9	14
5.0 – 5.9	20
6.0 – 6.9	31
7.0 – 7.9	30
8.0 – 8.9	8



- (b) Draw a Histogram and find mode for the following data.

Height (cms.)	No. of Students
140 – 150	5
150 – 160	15
160 – 170	20
170 – 180	10
180 – 190	2

- (c) Construct cost of living index using Family Budget Method for the following data.

Items	Price		Weights
	Base Year	Current Year	
Food	200	280	30
Clothing	100	200	20
Rent	150	120	20
Fuel	50	100	10
Miscellaneous	100	200	20



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**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

- (a) Range
- (b) Quartile deviation of the marks of students.

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

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54	10
55	11
56	12
57	11
58	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 : $2 \times 8 = 16$

- Classification of data
- Skewness
- Correlation.

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

- 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



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Fourth Semester 5 Years B.B.A., LL.B. Examination, March/April 2021
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 remaining question carry 16 marks each.

3. Use simple calculator.

Q. No. 1. Calculate the A.M. Mode and Quartiles for the following data.

Class Limits	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	3

Marks : 16

Q. No. 2. Scores of 2 golfers for 24 rounds were as follows :

Golfer A :	74	75	78	78	72	77
	79	78	81	76	72	77
	74	70	78	79	80	81
	80	75	71	73	72	74
Golfer B :	86	84	80	88	88	85
	86	82	82	79	86	80
	82	76	86	89	87	83
	80	88	86	81	84	87

Find :

(1) Which player is better scorer ?

(2) Which player may be considered to be a more consistent player ?

Marks : 16

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Q. No. 3. Calculate the correlation co-efficient from the following data on height (in inches) and weight (in pounds) of 12 boys.

Height	Weight
62	118
63	130
63	118
66	135
68	152
67	140
63	115
69	154
71	165
70	170
68	145
72	152

Marks : 16

Q. No. 4. Calculate Fisher's price index number from the following data and that it satisfies time reversal test and factor reversal test.

Item	Base Year		Current Year	
	Price	Expenditure	Price	Expenditure
A	6	300	10	560
B	2	200	02	240
C	4	240	06	360
D	8	320	12	432

Marks : 16

Q. No. 5. "Statistics may be defined as a science of collection, presentation, analysis and interpretation of numerical data".
Elucidate the above statement.

Marks : 16

Q. No. 6. Define an Index number. Discuss the main steps involved in the construction of price index numbers.

Marks : 16

Q. No. 7. What is meant by tabulation of data ? Give the main steps in the tabulation of data.

Marks : 16



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

Marks : 8×2=16

- (a) Class limits and Class interval
- (b) Primary data
- (c) Dispersion.

Q. No. 9. Answer **any two** of the following :

Marks : 10×2=20

- (a) From the data given below find :
 - (1) The two regression equations.
 - (2) The most likely age of wife when husband's age is 25.

Age of husband (in years)	Age of wife (in years)
22	18
23	20
23	21
24	20
26	21
27	22
27	23
28	24
30	25
30	26

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

x :	20	25	30	35	40	45	50
f :	8	11	19	25	21	10	06

(c) Compute the cost of living index number for 1970 with 1959 of base year for the following.

Commodities	Weight	Price	
		1959	1970
Food	52	25.0	5.11
Clothing	14	13.0	20.0
House rent	8	15.0	30.0
Education	6	2.3	5.4
Fuel	3	0.8	1.6
Miscellaneous	17	6.9	30.0



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Fourth Semester 5 Year B.B.A.LL.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

P.T.O.



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 : $2 \times 8 = 16$

- a) Tabulation
- b) Skewness
- c) Secondary data.

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

Marks : $2 \times 10 = 20$

- a) Draft a blank table showing the distribution of students of university according to
 - i) Sex;
 - ii) Faculties : Arts, Science, Commerce
 - iii) Four Year : 1981, 1984, 1985 and 1986
 - iv) Age group : Below 18 years, 18-21 years and 22 years and above.
- b) 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

- c) 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



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Fourth Semester 5 Year B.B.A. LL.B. (New/Old)

Examination, December 2018

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.
 4. Use only simple calculator.

Q. No. 1. Obtain arithmetic mean, mode and quartiles for the following data :

Marks : 16

Variable	Frequency
0 – 10	32
10 – 20	65
20 – 30	100
30 – 40	184
40 – 50	288
50 – 60	167
60 – 70	98
70 – 80	46
80 – 90	20

P.T.O.



- Q. No. 2. Distribution of workers according to weekly wages paid by two small scale industries A and B is given below. Which industry pays more uniform wages ?

Marks : 16

Weekly wages in Rs.	No. of Workers in industry	
	A	B
20 – 30	10	5
30 – 40	15	15
40 – 50	20	10
50 – 60	40	50
60 – 70	15	10
70 – 80	10	10
80 – 90	7	6
90 – 100	3	4

- Q. No. 3. Ten competitors in a beauty contest are ranked by three judges in the following order :

Marks : 16

1 st Judge	2 nd Judge	3 rd Judge
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 the rank correlation co-efficient to determine which pair of judges has nearest approach to common tastes in beauty.



Q. No. 4. For the following data construct Fisher's ideal index number.

And also prove that Fisher's ideal formula satisfy

Marks : 16

- 1) Time reversal test
- 2) Factor reversal test.

Commodities	Price		Quantity	
	Base Year	Current Year	Base Year	Current Year
A	175	300	2	3
B	210	230	3	4
C	475	525	1	2
D	100	120	4	4

Q. No. 5. Explain the classification and tabulation of a statistical data.

What are the important rules of tabulation of statistical data ? Marks : 16

Q. No. 6. What is an index number ? Why index numbers are called economic barometers ?

Marks : 16

Q. No. 7. What is graphical representation of data ? Explain the various types of diagrams.

Marks : 16

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

Marks : 2x8=16

- a) Class interval and class frequency
- b) Regression
- c) Range.



Q. No. 9. Answer **any two** of the following :

Marks : 10×2=20

a) The heights (in cm) of group of father's and sons are given below.

Height of fathers		Height of sons	
	158		163
	160		158
	163		167
	165		170
	167		160
	170		180
	167		170
	172		175
	177		172
	111		175

Find the lines of regression and estimate the height of the son when the height of the father is 164 cms.

b) Calculate co-efficient of correlation from the following data by Karl Pearson's method.

x	y
3	-1
6	5
2	1
0	1
-1	3
4	0
3	2

c) Find Karl Pearson's coefficient of skewness.

x :	20	25	30	35	40	45	50
f :	8	11	19	25	21	10	06



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IV Semester 5 Year B.B.A.,LL.B. Examination, June/July 2018
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 classification. Explain different types of classification. Marks : 16

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

Classes	Frequency
129.5 – 134.5	05
134.5 – 139.5	14
139.5 – 144.5	28
144.5 – 149.5	24
149.5 – 154.5	18
154.5 – 159.5	10
159.5 – 164.5	01

Q. No. 3. Explain the concept of Regression and its uses. Marks : 16

P.T.O.

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Q. No. 4. During the 10 weeks of a session the marks scored by two candidates Vishal and Rakesh taking the computer programme course are given below :

Marks : 16

Vishal	Rakesh
58	87
59	89
60	78
54	71
65	73
66	84
52	65
75	66
69	56
52	46

- a) Who is better scorer ?
b) Who is more consistent ?

Q. No. 5. From the following data, prove Fishers ideal index number satisfies TRT and FRT.

Marks : 16

Items	Base Year		Current Year	
	Price	Expenses	Price	Expenses
A	8	480	80	960
B	4	400	120	1080
C	20	600	40	1200
D	16	480	50	1200
E	12	480	50	1000
F	15	750	60	1080

Q. No. 6. Define dispersion. Explain various measures of dispersion.

Marks : 16

Q. No. 7. Calculate coefficient of correlation from the following data by Karl Pearson's Method.

Marks : 16

X	Y
3	-1
6	5
2	1
0	1
-1	3
4	0
3	2



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

Marks : $2 \times 8 = 16$

- a) Range
- b) Skewness
- c) Rank Correlation.

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

Marks : $2 \times 10 = 20$

- a) Calculate the mean and standard deviation from the following data :

Value	Frequency
30 – 40	1
40 – 50	4
50 – 60	14
60 – 70	20
70 – 80	22
80 – 90	12
90 – 100	2

- b) Draw a blank table showing the distribution of students of university according to :

- Gender
- Faculties – Maths, Science, History and English
- Four years – 2001, 2005, 2007 and 2011
- Age group – Below 18 years, 18 – 20 year and 20 years and above.

- c) Draw Histogram and find mode for the following data :

Classes	Frequency
10 – 20	5
20 – 30	22
30 – 40	35
40 – 50	25
50 – 60	15