

**6015/7015**

**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

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

Marks : 1×10=10

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



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

Marks : $1 \times 10 = 10$

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 : $1 \times 6 = 6$

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 : $1 \times 6 = 6$

	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 : $1 \times 10 = 10$

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