

**6015**

**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.



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 2005	Weights (2005)
Food	122	32
House rent	140	15
Cloth	112	18
Fuel	116	10
Miscellaneous	106	25