**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. 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

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