# Fourth Semester Five Year B.B.A. LL.B. Examination, June 2013 BUSINESS STATISTICS 

Duration : 3 Hours
Max. Marks : 100
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. Figures to the right indicate marks.
4. Non-programmable calculator are allowed.
5. Step-wise working is expected.

## UNIT - 1

Q. No. 1. (a) Define statistics. Explain its scope and importance.

OR
What is primary data ? Mention and explain the methods of collecting primary data.
(b) Write short notes on classification.

OR
Represent the following data by percentage bar diagram :
Items of Expenditure (in Rs.)
Expenditure Family A Family B
Food 160100

| Clothing | 80 | 30 |
| :--- | :--- | :--- |

Rent 60

Fuel 20
Others $\quad \underline{0}$ 20
Total Rs. $400 \quad 200$

## UNIT - 2

Q. No. 2. (a) Explain briefly the various measures of central tendency.

Marks : 15 OR

Compute mean, median and mode for the following data :
Age No. of Persons
20-25 100
25-30 140
$30-35 \quad 200$
$35-40 \quad 360$
40-45 300
45-50 240
$50-55 \quad 140$
55-60 120
(b) From the following data find the missing frequency. If the median is 50 :

Marks : 5

Class interval: 10-20 20-30 30-40 40-50 50-60 60-70
Frequency: $\begin{array}{lllllll} & 2 & 8 & 6 & - & 15 & 10\end{array}$
OR
Write the merits and demerits of mean.

## UNIT - 3

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

Marks : 15
(Coefficient of Variation)

Y-Rs.: 108107105105106107104103104101 OR

Define dispersion. Mention its characteristics and write the merits and demerits of range and quartile deviation.
(b) Write short notes on standard deviation and its mathematical properties.

OR
Calculate quartile deviation for the following data :
Income No. of Persons
Less than $50 \quad 54$
50-70 100
70-90 140
90-110 300
110-130 230
130-150 125
above 15051
UNIT-4
Q. No. 4. (a) Compute Karl, Pearson's coefficient variation from the following data:
National income (X) Per capita income (Y)
249237
251238
248236
252240
258245
269255
271254
272252
280258
275251
OR
Define regression. Explain linear and non-linear regression.
(b) Calculate coefficient of rank correlation for the data:

| $\mathbf{X}:$ | 48 | 33 | 40 | 9 | 16 | 16 | 65 | 24 | 16 | 57 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: | :--- |
| $\mathbf{Y}:$ | 13 | 13 | 24 | 6 | 15 | 4 | 20 | 9 | 6 | 19 |
|  | OR |  |  |  |  |  |  |  |  |  |

Write a note on rank-correlation.

## UNIT - 5

Q. No. 5. (a) 'Index numbers are economic barometers' critically evaluate the statement.

Marks : 15
OR
Calculate Fisher's index number and show that it satisfies TRT and FRT :

## Base Year 1990 Current Year 1992

Items Price Quantity Price Quantity

| A | 5 | 20 | 10 | 15 |
| :--- | :--- | :--- | :--- | :--- |


| B | 6 | 25 | 8 | 24 |
| :--- | :--- | :--- | :--- | :--- |
| C | 8 | 15 | 10 | 14 |
| D | 10 | 13 | 20 | 6 |

(b) Explain the steps in constructing of index numbers.

OR
Write short notes on cost of living index numbers.

