# Fourth Semester 5 Year B.B.A., LL.B. Examination, June 2011 BUSINESS STATISTICS (Course - III) 

Duration : 3 Hours

Max. Marks : 100
Instructions: 1. Answer all the 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.

## UNIT - I

Q. No. 1. (a) Define Statistics. Explain the sources of secondary data.

OR
Define classification. Explain bases of classification.
(b) Write a short note on ogive curves.

Marks: 5
OR
The following data relating to the strength of the Indian Merchant Shipping Fleet gives the (GRT) as on $31^{\text {st }}$ December, for different years

| Year : | 1961 | 1966 | 1971 | 1975 | 1976 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| GRT in '000 : | 901 | 1792 | 2500 | 4500 | 5250 |
| Represent the data by suitable bar diagram. |  |  |  |  |  |

## UNIT - II

Q. No. 2. (a) Explain the properties of a good average. Which average do you think is the best and why?

OR
Discuss partition values.
(b) Explain merits and demerits of median.
OR

Eight coins were tossed together and the number of heads (X) resulting was noted. The operation was repeated 256 times and frequency distribution of the number of heads is given below.

| No. of Heads (X) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency (f) | 1 | 9 | 26 | 59 | 72 | 52 | 29 | 7 | 1 |

Calculate median.

## UNIT - III

Q. No. 3. (a) Define range. Explain the merits and demerits of range and
uses.

Marks : 15
OR
Define dispersion. Explain various measures of dispersion.
(b) Write a short note on 'Skewness'.

Marks: 5
OR
Calculate the mean deviation about the mean for the following data.
x: $\begin{array}{lllllll}5 & 15 & 25 & 35 & 45 & 55 & 65\end{array}$
f: $8 \quad 12 \begin{array}{llllll}10 & 8 & 3 & 2 & 7\end{array}$

## UNIT - IV

Q. No. 4. (a) Explain Rank Correlation.

Define regression. Explain linear and non linear regression and lines of regression.
(b) Calculate the co-efficient of correlation from the following data:

| $\mathbf{X}:$ | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{Y}:$ | 18 | 16 | 14 | 12 | 10 | 6 | 8 |

OR
Obtain the rank correlation co-efficient from the following data :

| Marks in statistics : | 70 | 65 | 71 | 62 | 58 | 69 | 78 | 64 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Marks in costing : | 91 | 76 | 65 | 83 | 90 | 64 | 55 | 48 |

UNIT - V
Q. No. 5. (a) Explain the types of index numbers.

Marks : 15
OR
Explain the cost of living index number and steps in the construction of cost of living index number.
(b) Explain family budget enquiry.

OR
Construct the cost of living index number from the table given below :

## Group

1) Food
2) Clothing
3) Fuel and lighting
4) House rent
5) Miscellaneous

Index for 1998 Expenditure
$46 \%$
$10 \%$
$7 \%$
$12 \%$
$25 \%$

