



**Fourth Semester 5 Year B.B.A., LL.B. Examination, June/July 2012**  
**BUSINESS STATISTICS**

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'. Write the functions and limitations of statistics.

Marks : 15

OR

Prepare a frequency distribution for the following observation and represent as an Histogram.

15	45	40	42	50	60	62	68	70	42
75	75	80	81	25	26	31	32	78	45
31	45	42	43	55	56	78	80	81	62
60	62	58	69	70	45	50	56	72	58
75	62	68	65	60	70	35	37	40	55

- (b) Write a short note on classification.

Marks : 5

OR

Represent the following distribution of marks bet. :

- a) Frequency polygon  
 b) Frequency curve.

Percentage of marks	No. of students
0 – 10	05
10 – 20	22
20 – 30	42
30 – 40	35
40 – 50	20
50 – 60	10
60 – 70	04
70 – 80	02

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## UNIT – II

- Q. No. 2. (a) Calculate A. M. Median and Mode of the frequency distribution given below :

Marks : 15

Classes	Frequency
130 – 134	05
135 – 139	14
140 – 144	28
145 – 149	24
150 – 154	18
155 – 159	10
160 – 164	01

OR

What do you mean by measure of central tendency ? What are the various measures of central tendency.

- (b) Write a note on merits and demerits of mean.

Marks : 5

OR

Find the Quartiles :

<b>x –</b>	5	8	10	11	12	15	20	25
<b>f –</b>	0	7	16	25	57	84	96	100

## UNIT – III

- Q. No. 3. (a) Calculate coefficient of variation of the following two series and show which series is more variables.

Marks : 15

Weight in kg	Class A	Class B
0 – 10	1	1
10 – 20	2	2



20 – 30	9	7
30 – 40	8	8
40 – 50	5	7
50 – 60	4	3
60 – 70	1	1

OR

Define dispersion. Explain the various measures of dispersion.

(b) Write a short note on 'Skewness'.

Marks : 5

OR

What you mean by Quartile deviation and mention the merits of quartile deviation.

#### UNIT – IV

Q. No. 4. (a) Define regression. Explain linear and non linear regression.

Marks : 15

OR

Calculate coefficient of correlation from the following data by Karl Pearson's method.

**X** : 3 6 2 0 -1 4 3

**Y** : -1 5 1 1 3 0 2

(b) From the following data find likely value of  $x$  when  $y$  is 103.8 and also calculate two regression equations.

Marks : 5

	<b>x</b>	<b>y</b>
<b>Mean</b>	8.4	103
<b>S.D.</b>	1.21	0.4

$$r = -0.32$$

OR

Write a short note on Rank correlation.



### UNIT – V

- Q. No. 5. (a) Calculate Fisher's Ideal index number for the following data. Verify that it satisfies time reversal test (TRT) and factor reversal test (FRT)

Marks : 15

Commodities	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	4	20	5	24
B	5	15	3	24
C	2	30	5	35
D	1	50	2	60
E	3	25	4	30

OR

Define an 'Index number' and explain its uses.

- (b) What are the uses of cost of living index number.

Marks : 5

OR

Write a short note on the term 'weights in index number'.

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