5 Year B.B.A. LL.B. (Hons.) IV Semester Examination, June/July 2012
BUSINESS STATISTICS

Duration : 2$\frac{1}{2}$ Hours   Max. Marks : 70

Instructions : 1. Answer **all 5** questions.

2. **One** essay type and **one** short note question or problem from **each unit** have to be attempted, which is referred as part (**a**) and (**b**) in all the units.

3. Figures to the **right** indicate marks.

UNIT – I

Q. No. 1. (a) Define statistics. Discuss its scope and utility in the field of trade and commerce.   Marks : 9

OR

Distinguish between classification and tabulation. Mention the requisites of good statistical table.

(b) Write short note on :   Marks : 5

State the rules for diagrammatic representation.

OR

Draw a pie diagram to represent the following population in a town :

Men	Women	Girls	Boys	Total
2,000	1,800	4,200	2,000	10,000

P.T.O.

UNIT – II

Q. No. 2. (a) Find Mean, Median and Mode for the following distributions :   Marks : 9

Class interval	Frequency
0 – 4	5
4 – 8	7
8 – 12	9
12 – 16	17
16 – 20	15
20 – 24	14
24 – 28	6
28 – 32	3
32 – 36	1
36 – 40	0

OR

What is an average ? Mention different types of averages and state why the arithmetic mean is the most commonly used among them.

(b) Find Geometric mean.   Marks : 5

x : 12.5 22.5 32.5 42.5 52.5 62.5 72.5

f : 21   22   30   35   40   32   40

OR

Write the merits and demerits of mean.

UNIT – III

Q. No. 3. (a) The following table gives the scores made by two batsman A and B in a series of 10 innings.   Marks : 9

Batsman A : 32 28 47 63 71 39 10 60 96 14

Batsman B : 19 31 48 53 67 90 10 62 40 80

Find which of the batsman is more consistent.

OR

Define the term "Dispersion" ? What are the methods of computing dispersion ?

(b) Calculate quartile deviation and its relative measure from the following data : Marks : 5

  x :   200   300   400   500   600

  f :   8   20   40   46   50

    OR

Find mean and standard deviation.

2, 4, –3, 0, –7, –1, 3, 5, 0, –5

UNIT – IV

Q. No. 4. (a) Calculate Karl Pearson's coefficient of correlation between x and y : Marks : 9

  x :   6.9   8.5   5.8   8.6   9.6   8.0   9.7

  y :   2.9   3.8   6.5   2.3   5.5   3.5   3.2

    OR

Obtain the lines of regression for the following data :

  x :   1   2   3   4   5   6   7

  y :   9   8   10   12   11   13   14

Obtain an estimate of y when x = 6.2.

(b) Briefly explain the concept of regression. Marks : 5

    OR

Calculate Spearman's rank correlation coefficient from the following data :

  x :   52   63   45   36   72   65   47   25

  y :   62   53   51   25   79   43   60   33

UNIT – V

Q. No. 5. (a) Calculate : Marks : 9

    i) Laspeyre's

    ii) Paasche's and

    iii) Fisher's index numbers for the following data.

Commodities	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	12	10	15	12
B	15	7	20	5
C	24	5	20	9
D	5	16	5	12

OR

Define :

    i) Time reversal test

    ii) Factor reversal test

    iii) Prove that Fisher's ideal index number satisfies both tests.

(b) Write a short note on : Marks : 5

Cost of living index number.

OR

Construct the cost of living index number from the following data by family budget method.

Group	Weights	Base year price	Current year price
Food	40	150	200
Clothing	20	50	80
Rent	15	100	200
Others	25	40	90

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