

B.B.A. I (with Credits)-Regular-Semester 2012 Sem. I
0195 - Statistical Methods for Business – I

P. Pages : 3

Time : Three Hours



GUG/W/16/2922

Max. Marks : 80

- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. a) What is mean by statistics? Explain the functions of statistics. 8
b) Calculate Geometric mean of age of the following series : 8

Age :	10	12	17	22	27	28	29	30
No. of persons :	3	4	9	14	12	14	4	2

OR

- c) Calculate mean, median and mode from the following data. 16

'X' series	Frequency
Exceeding 0	50
"- 10	47
"- 20	40
"- 30	31
"- 40	20
"- 50	7

2. a) Find out the Range and Range co-efficient of the following data. 8

Marks less than :	50	40	30	20	10
No. of students :	48	35	21	11	5

- b) Find out Standard Deviation and co-efficient of variation from the following data. 8

Name of Students :	A	B	C	D	E	F	G	H	I	J	K	L
Marks :	82	88	90	80	82	72	78	80	70	72	90	32

OR

- c) Calculate the co-efficient of skewness by Karl Pearson's formula. 16

Age of group	No. of Persons
0 – 10	10
10 – 20	17
20 – 30	22
30 – 40	38
40 – 50	96
50 – 60	134
60 – 70	98
70 – 80	56
80 – 90	40
90 – 100	89

3. a) Distribution of samples consisting of 100 observation gives the value of probable error is 0.007. Find out the value of correlation. 8
- b) Given : $r = 0.49$ and $n = 40$ 8
Find out the probable error of co-efficient of correlation and determine the limits of co-efficient of correlation.

OR

- c) The following are the marks in Hindi and Marathi obtained by 65 students in B. Com. II examination. Find out co-efficient of correlation with the help of Karl Pearson's formula. 16

Marks in Marathi	Marks in Hindi					
	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	Total
20 – 30	5	3	2	4	1	15
30 – 40	1	6	5	9	11	32
40 – 50	2	--	--	3	2	7
50 – 60	--	--	--	--	1	1
60 – 70	--	--	--	6	4	10
Total	8	9	7	22	19	65

4. a) Calculate the Index Number by Applying Fisher's formula. 8

Commodity	2014		2015	
	Quantity	Price	Quantity	Price
A	10	3	8	4
B	20	15	15	20
C	2	25	3	30
D	4	18	7	14

- b) Find out Index Number by Laspeyres method. 8

Commodity	2013		2014	
	Price	Quantity	Price	Quantity
A	5	10	8	4
B	6	12	10	3
C	8	6	12	5
D	10	4	8	6

OR

- c) Find out the Index Number by Bowley's method. 8

Commodity	2013		2014	
	Price	Quantity	Price	Quantity
A	175	35	140	45
B	75	20	100	18
C	25	14	30	22
D	50	15	60	25
E	60	25	85	30

d) Calculate the Index Number by Paasche's Method.

8

Commodity	2013		2014	
	Price	Quantity	Price	Quantity
L	12	20	9	12
M	5	6	8	10
N	8	12	6	8
O	22	24	7	6

5. Write answers in short :

a) Explain the importance of statistics.

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b) Write the note on positive and negative skewness.

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c) Write the uses of correlation analysis.

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d) Explain the importance of Index Number.

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