



**14**  
II Semester B.B.M. Examination, May 2016  
(Repeaters) (2012-13 & Onwards)  
Business Management

Paper – 2.4 : QUANTITATIVE METHODS FOR BUSINESS – II

Time : 3 Hours

Max. Marks : 100

**Instruction** : Answer should be written in **English** only.

SECTION – A

I. Answer **any eight** sub-questions from the Section. **Each** sub-question carries **two** marks. (8×2 = 16)

- 1) a) What is Probable Error ?
- b) Mention two uses of Consumer Price Index Number Series.
- c) What do you mean by Secondary Data ?
- d) What is Base year ?
- e) Mention two functions of statistics.
- f) State various measures of Central Tendency.
- g) What are the uses of Time Series ?
- h) If  $\bar{X} = 12$ ,  $Z = 13$  what is M (median) ?
- i) Calculate Range for the data 42, 46, 52, 32, 75, 82, 36, 38, 43.
- j) Define Statistics.



## SECTION – B

II. Answer **any three** of the following questions. Each question carries **8** marks. **(8×3 = 24)**

2) Find Spearman's Rank correlation coefficient between X and Y.

<b>X</b>	36	56	20	65	42	33	44	50	15	60
<b>Y</b>	50	35	70	25	58	75	60	45	80	38

3) Calculate Quartile Deviation from the following :

<b>x</b>	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
<b>f</b>	5	7	12	24	12	8	6

4) Represent by means of Pie chart for the following data :

<b>Items</b>	<b>Expenditure</b>
Agriculture	600
Industry	400
Irrigation	450
Education	300
Miscellaneous	250

5) Calculate Median and Mode of the following data :

<b>Marks</b>	<b>No. of Students</b>
Less than 10	5
" 20	15
" 30	27
" 40	42
" 50	68
" 60	88
" 70	106
" 80	110
" 90	115



SECTION – C

III. Answer Question No. 10 and any three of the remaining questions. Each question carries 15 marks. (15×4 = 60)

6) Construct Fishers Index from the following ;

Item	Base Year	Current Year	Base Year	Current Year
	Qty. Kg	Qty. Kgs	Price Kg	Price Kg
Wheat	20	20	12	14
Rice	22	24	16	18
Gram	20	18	32	36
Pulses	8	12	29	29
Ghee	1	2	62	70
Sugar	5	4	14	16

Also verify Index for TRT and FRT.

7) Fit a straight line by method of least squares from data given below. Find the trend values and predict the sales for the year 2000. Also show the trend values of graph :

Year	1990	1991	1992	1993	1994	1995	1996	1997
Sales	15	18	20	30	39	40	44	50

8) Calculate two regression equation from the following data and estimate X when Y = 26

X	10	12	13	17	18	20	24	30
Y	5	6	7	9	13	15	20	21

Calculate co-efficient of correlation.



- 9) For a continuous frequency table from following data. By grouping and analysis Table method calculate modal value and also Arithmetic mean.

<b>Expenditure</b>	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
<b>No. of families</b>	14	23	27	21	15

**Compulsory**

- 10) Two Batsmen scored the following runs in Test Matches. Find who is better run scorer and who is more consistent. ?

<b>A</b>	30	70	33	5	61	98	84	16	8	95
<b>B</b>	40	16	82	57	72	74	64	43	42	30

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