



SA – 801

II Semester B.B.M. Examination, April/May 2015
(Semester Scheme) (Repeaters) (2012-13 and 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. 1) Answer **any eight** sub-questions from this Section. **Each** question carries **2** marks. **(8×2=16)**
- What is statistics ?
 - Name any two characteristics a good measure of central tendency.
 - What is meant by sampling ?
 - Mention the parts of a table.
 - State the empirical relationship between mean, median and mode.
 - What is meant by trend ?
 - State any two uses of range.
 - If variance = 36, $\Sigma X = 100$, $N = 10$, find C.V ?
 - What is meant by probable error ?
 - What is constructing consumer price index ?

SECTION – B

- II. Answer **any three** of the following questions. **Each** question carries **8** marks : **(3×8=24)**
- 2) In the house of Lok Sabha, there were 600 members present. During the discussion on a motion put to vote, 400 voted in favour of resolution.
- The government member in the house was 380, 65 members belonging to the opposition voted for the resolution. All the members belonged to either of the two groups and there were no absentees tabulate the above data.

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- 3) From the following details given, find out, which factory pays higher amount as wages. In which factory, there is greater variance of wages per employee for the two factories ?

Particulars	Firm A	Firm B
No. of employees	500	1000
Average wages per employee per month	Rs. 1,200	Rs. 850
Variance of wages per employee per month	Rs. 81	Rs. 256

- 4) From the following data, determine Mode by drawing a histogram and verify the result.

Variable	0-10	10-20	20-30	30-40	40-60	60-80
Frequency	8	20	28	16	14	10

- 5) Find the Quarter Deviation from the following data.

Sl. No.	1	2	3	4	5	6	7	8	9
Marks	25	30	37	32	42	48	61	54	72

SECTION - C

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

- 6) Construct two regression equations for the following data and estimate the value of X when Y = 70 and Y when X = 650.

X:	100	200	300	400	500	600	700
Y:	30	50	60	80	100	110	130

- 7) Calculate Spearman's rank coefficient of correlation from the following data :

Sales (Rs. in lakhs)	45	56	39	54	45	40	56	60	30	36
Advertisement cost (Rs. in '000s)	40	36	30	44	36	32	45	42	20	36



- 8) Compute Fishers ideal index and show that it satisfies the time reversal test and factor reversal test.

Items	Base year		Current year	
	Price	Expenditure	Price	Expenditure
A	5	25	10	60
B	1	10	2	24
C	4	16	8	40
D	2	40	4	75
E	3	30	6	60

- 9) Fit a straight line trend by the method of least squares to the following data relating to the earnings of a company, and obtain the trend values. What would be predicted earnings for the year 2016 ?

Year	2008	2009	2010	2011	2012	2013	2014
Population in crores	25	25.1	27.9	31.9	36.1	43.9	54.7

- 10) Construct the consumer price index.

Group	Food	Clothing	House rent	Fuel	Miscellaneous
Expenditure (%)	40	15	10	10	25
Price in 2012 (Rs.)	300	200	100	40	120
Price in 2013 (Rs.)	500	250	300	80	220

What changes in the cost of living index has taken place in 2013 as compared to 2012 ?

