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M. B. A. / M. B. A. (MM) / M.B.A. (RM) (First Semester) Examination, Dec. 2013

(New/Old Course)

QUANTITATIVE METHODS**Paper : MS/MM/MR/106****Time Allowed : Three hours**

**Maximum Marks : 70 (New Course)
: 85 (Old Course)**

Note : Attempt all questions. All questions carry equal marks. Working should be a part of your answer while attempting a numerical questions.

Unit-I

1. (a) 'By statistics we mean quantitative data affected to a marked extent by multiplicity of causes.' Explain.

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- (b) What is meant by measure of central tendency? Which is the measure do you consider as most satisfactory and why?

Or

Find out Arithmetic Average, Median and the Mode of the following distribution :

Marks (less than) :	10	20	30	40	50
Frequency :	3	12	25	33	35

Unit-II

2. (a) Difference between mean deviation and standard deviation.
(b) Find out standard deviation and mean and the percentage of case lying within a \pm S.D. ... a ± 2 S.D. and a ± 3 S.D.

Marks	No. of students
0-10	7
10-20	11
20-30	15
30-40	20
40-50	13
50-60	8

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60-70	5
70-80	1

Or

- (a) What is meant by Skewness?
- (b) (i) If the median and mode of any 10 item values are 25.5 and 28 respectively and the sum of squared deviation from mean is 360, find out Karl-Pearson's co-efficient of skewness.
- (ii) Calculate P.E. as well as S.E. and interpret r when $r = 0.6$; $n = 25$.
- (c) What do you understand by the term 'Co-efficient of Correlation'?

Unit-III

3. What is Regression? Why are there two regression lines? Do they cut each other? If so, where?

Or

Find the trend value by the method of least squares from the following data and estimate the sales for the year 2006 :

Year	: 2000	2001	2002	2003	2004	2005
Sales (in lakh)	: 65	75	80	90	95	105

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Unit-IV

4. (a) What is the chance of drawing a queen from a pack of 52 cards?
- (b) In how many ways we can arrange 4 books in the group of two?
- (c) A bag contains 5 black and 4 white balls. Find the probability that all the three balls are of same colours.

Or

- (a) Probability is based only on logic. Explain.
- (b) State Bernoulli's theorem on Probability.
- (c) Explain the various components of a time series.

Unit-V

5. What do you mean by t -test, f -test and z -test? Discuss the practical importance of these tests.

Or

Memory capacity of 9 students were tested before and after training. State wheather the training was effective or not from the following scores :

Student	: 1	2	3	4	5	6	7	8	9
Before	: 10	15	9	3	7	12	16	17	14
After	: 12	17	8	5	6	11	18	20	3

1,500]

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