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Z-5246

M.B.A./M.B.A. (MM) (First Semester) Examination, Feb. 2015

(New/Old Course Course)

QUANTITATIVE METHOD

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 notes should be a part of your answer while attempting numerical problems.*

Unit-I

1. Why is knowledge of statistical methods important to managers? Discuss application of various quantitative techniques in different fields on business decision making.

Or

Following incomplete frequency distribution it is know that the total frequencies is one thousand and that the median is 213.11 Estimate by calculation the missing frequencies and find the value of mode :

Central size	Frequency
112·5	5
137·5	17
162·5	80
187·5	?
212·5	326
237·5	?
262·5	88
287·5	9

Unit-II

2. Distinguish between dispersion and skewness. What are the methods of testing skewness? Explain the objects of measuring it.

Or

(a) What do you mean by correlation? 4/5

(b) Calculate correlation coefficient between age and illiteracy : 10/12

Age group (in years)	Total population (00)	Literate population (00)
10-20	1,200	1,100
20-30	1,000	925
30-40	800	740
40-50	500	470
50-60	250	230
60-70	150	140
70-80	50	45

Unit-III

3. Explain the term "regression" and its utility in Economic Analysis. Why there are two regression lines when the coefficient of correlation is not unity?

Or

(a) The line of regression of marks in statistics on marks in accountancy for a class of 50 students is

$$3y - 5x + 180 = 0$$

Average marks in accountancy is 44 and variance of marks in statistics is 9/16 of variance of marks in accountancy.

Find :

(i) Average marks in statistics

(ii) Coefficient of correlation between mark of statistics and marks in accountancy

(b) A student compute regression coefficient of you X as 1·2 and that of X on Y as 0·9. Is he correct. Give reasons.

Unit-IV

4. Write notes on the following :

(i) Conditional probability

(ii) Bernoulli's method

(iii) Bayes' theorem

Or

Find the probability of the following out comes :

(a) A bag contains 6 white and 9 black balls. Two successive drawings of 4 balls in each draw are made in such a way that (i) balls are replaced before the second draw and (ii) balls are not replaced before the second draw find the probability of getting 4 white

balls in the first draw and 4 black balls in the second draw.

(b) It is 9 : 7 against a person who is now 35 years old living till he is 65 years and O'dds are 3 : 2 against a person now 45 years old living till he is 75 years. Find the probability that at least one of them will be a live 30 years hence.

Unit-V

5. Describe the various steps involved in testing of a hypothesis. What is the role of standard error in testing of hypothesis?

Or

Suppose the number of accidents during a certain week is distributed as follows. Test the hypothesis that accidents are equally distributed during the week (table value of χ^2 at 5% level of significance and for 6 degrees of freedom is 12.592) :

Days	No. of Accidents
Sunday	14
Monday	16

Tuesday	8
Wednesday	12
Thursday	11
Friday	9
Saturday	14
Total	84