

Roll No.

Total No. of Pages : 03

Total No. of Questions : 15

MBA / MBA(IB) (2012 & onward) (Sem.–1)

QUANTITATIVE TECHNIQUES

Subject Code : MBA-104

Paper ID : [C0104]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A contains SIX questions carrying FIVE marks each and students has to attempt any FOUR questions.
2. SECTIONS-B consists of FOUR Subsections : Units-I, II, III & IV. Each Subsection contains TWO questions each carrying EIGHT marks each and student has to attempt any ONE question from each Subsection.
3. SECTION-C is COMPULSORY and consist of ONE Case Study carrying EIGHT marks.

SECTION-A

1. “*Statistical methods are most dangerous tools in the hands of the inexpert*”. Elucidate.
2. Differentiate between
 - a) Statistics and parameter
 - b) Type I and Type II errors (2.5, 2.5)
3. Distinguish between Correlation and Regression. Why should there be two lines of regression in a bivariate distribution?
4. What are the components of a Time Series?
5. State and explain the addition and multiplication theorems on probability.
6. What are the uses of Chi-square test? Also explain various conditions for applying the chi-square test.

SECTION-B

UNIT-I

7. Calculate Coefficient of skewness by Karl Pearson's method and the values of $\sqrt{\beta_1}$ and β_2 from the following data :

Profits (₹ Lakh) :	10-20	20-30	30-40	40-50	50-60
No. of Companies :	18	20	30	22	10

OR

8. "Measure of central of tendency, dispersion, skewness and kurtosis are complimentary to one another in understanding a frequency distribution". Explain.

UNIT-II

9. 12 students were given intensive coaching and 5 tests were conducted in a month. The scores of tests 1 and 5 are given below. Does the scores from the 1 to 5 show an improvement?

No. of Students :	1	2	3	4	5	6	7	8	9	10	11	12
Marks in 1 st test :	50	42	51	26	35	42	60	41	70	55	62	38
Marks in 5 th test :	62	40	61	35	30	52	68	51	84	63	72	50

(Use 5% level of significance).

OR

10. Write short notes on the following

- Standard error and sampling error.
- Stratified random sampling
- Multistage Sampling.

(4,2,2)

III

UNIT-

11. For certain X and Y series which are correlated, the two lines of regression are :

$$5X - 6Y + 90 = 0$$

$$15X - 8Y - 130 = 0$$

Find the mean of the two series and the correlation coefficient.

OR

12. Explain Time Reversal and Factor Reversal test in index numbers. What are the various problems while constructing on index numbers?