

Roll No.

Total No. of Pages : 03

Total No. of Questions : 15

MBA/MBA(IB) (2014 to 2017) (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) How does statistics help in managerial decision making?
- 2) Explain the relationship between sample size and errors.
- 3) What is meant by tests of consistency?
- 4) Discuss and differentiate between additive and multiplicative laws of probability.
- 5) Explain the importance of index numbers.
- 6) Discuss the concept of kurtosis.

SECTION-B**UNIT-I**

- 7) Discuss the various sources of data collection. Give examples.
- 8) Comment on the consistency of the 3 variables, A, B & C, from the following data:

A	12	16	20	23	25	28
B	8	7	9	11	6	4
C	33	36	34	31	37	35

UNIT-II

- 9) Explain what is meant by sampling. Discuss its various types.
- 10) A bike manufacturer tabulates the following information about age groups and the liking for a particular model of the new bike which it plans to introduce. On the basis of this data, can it be concluded that the bike model appeal is independent of the age groups? (Given for $\nu=3$, $\chi^2 = 7.815$)

		Ages (in years)				Total
		Below 20	20-30	30-40	40-50	
Appeal	Liked the bike	140	80	40	20	280
	Disliked the bike	60	50	30	80	220
Total		200	130	70	100	500

UNIT-III

- 11) Discuss and differentiate between correlation and regression. Also explain their utilities in managerial decision making.
- 12) Explain the concept of Index numbers. Further explain their different methods of construction.

UNIT-IV

- 13) What is meant by time series analysis? List and explain the various components.
- 14) Write notes on :
- a) Baye's Theorem
 - b) Poisson Distribution

SECTION-C**15) Case Study :**

Liebermaan Retail Inc provides sales training to its personnel, which is followed by an assessment to determine as to whether the training benefitted its personnel or not. Also, the Human Resource department of Lieberman Retail is considering whether it should demote the services of any salesman who does not do well in the test. Then the field sales of the personnel are noted and recorded against their test scores. The following data gives the test scores and sales made by the salesmen during the previous financial year.

Test Scores	77	65	79	83	86	72	88	84	87	90
Sales (in '000 Rs)	21	26	33	37	32	38	31	40	43	47

You as an HR manager are required to analyze the given data, and determine

Questions :

- Whether there is any correlation between the test scores and sales of the personnel.
- Further determine if the Marketing & Sales Department targets a minimum sales volume of Rs 50,000, what should be the corresponding test scores?
- Also estimate the most probable field sales of a salesman who has scored a test score of 75.
- Also discuss as to whether the demotion of services of low test scoring employees is justified?