Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 15

MBA (2016 to 2017)   (Sem.–1)
QUANTITATIVE TECHNIQUES
Subject Code : MBA-104
M.Code : 49004

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A contains SIX questions carrying FIVE marks each and students have to attempt any FOUR questions.**

2. **SECTION-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. What is meant by data tabulation?

2. Discuss the essence of skewness and kurtosis.

3. Explain the tests of significance for small samples.

4. What is the significance of spearman's rank correlation coefficient?

5. Explain what is meant by deflation and splicing?

6. Discuss the two theorems of probability, giving examples.

SECTION-B

UNIT-I

7. Discuss the scope and importance of statistics. Further discuss the applications of statistics in managerial decision making, giving examples.

8. Find out the standard deviation for the following data :

X	110-115	115-120	120-125	125-130	130-135	135-140	140-145
Freq	3	8	11	16	12	9	4

UNIT-II

9. Define Sampling. Explain the different types of sampling.

10. Participation of customers was noted during a recent online sale. Their monthly incomes were also noted. Find out if there is any association between their income and their participation in the sale? (Given for $\upsilon = 3$, $\chi^2 = 7.815$)

		Income (in '000 Rs.)				
		Below 30	**30-40**	**40-50**	**Above 50**	**Total**
Participation	Participated in the sale	130	60	60	50	300
	Did not participate	80	50	30	40	200
	Total	**210**	**110**	**90**	**90**	**500**

UNIT-III

11. Write brief notes on :

    a) Regression coefficients

    b) Standard error

12. Explain what is meant by Index numbers? Discuss their different methods of construction.

UNIT-IV

13. What is time series analysis? List and explain its various methods.

14. Write brief notes on :

    a) Random Variables

    b) Normal Distribution

SECTION-C

15. A study was conducted on the salesmen of a company. The sales revenues (in Rs Lakhs) achieved in a particular quarter was cross tabulated *vis-α-vis* their experiences. As a business analyst, find out if there is any correlation or association between the experience years of the salesmen and the sales revenues, and to what degree?

	Experience (in years)			
Revenues achieved (Rs Lakhs)	**18**	**19**	**20**	**21**
200-250	4	4	2	1
250-300	3	5	4	2
300-350	2	6	8	5
350-400	1	4	6	10

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.