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

Total No. of Questions : 15

MBA/MBA(IB) (2015 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 has 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

Ql.   What is the significance of coefficient of variation?

Q2.   State and explain the differences between census and sampling.

Q3.   Explain the concept of splicing.

Q4.   Explain the two laws of probability.

Q5.   What are the differences between probability and non-probability sampling?

Q6.   Explain the importance of rank correlation coefficient?

SECTION-B

UNIT-I

Q7.   Discuss how is data classified and tabulated. Give examples.

Q8.   Given the marks data of 110 students, find the mode of the following data :

Marks	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60	Less than 70	Less than 80	Less than 90	Less than 100
No. of students	8	12	19	29	44	64	82	94	102	110

UNIT-II

Q9.   What is meant by sampling theory? Discuss the steps in formulation of hypothesis.

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Q10.   8 salesmen were given training after observing their low performances in the field. The sales figures (in Rs. Crores), of salesmen before and after the training is as under :

Salesman	S_1	S_2	S_3	S_4	S_5	S_6	S_7	S_8
Before training	11	15	12	14	17	10	8	12
After training	13	16	11	12	19	13	6	15

Find out whether the training to the salesmen can be considered as successful? Test at 5% level of significance.

UNIT-III

Q11.   Discuss the various methods of construction of Index numbers. Also state the problems faced therein.

Q12.   Explain how regressional analysis is helpful in managerial decision making. Support your answer with examples.

UNIT-IV

Q13.   Differentiate between Binomial, Poisson and Normal probability distributions.

Q14.   Explain the concept of time series analysis? Explain its various components.

SECTION-C

Q15.   To study the performance of 3 newly launched water soluble detergent liquids at 3 different water temperature settings, the following "Cleaning ability" readings were noted with specially designed equipments :

Water Temperature	Detergent D_1	Detergent D_2	Detergent D_3
Hot Water	66	54	57
Warm Water	61	52	59
Cold Water	69	45	53

You as a statistician are required to analyze the given data, and determine :

1. Whether the detergents are significantly different in their cleaning abilities?

2. Whether the temperature settings affect the cleaning significantly?

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.