MBA 24107

MBA DEGREE EXAMINATIONS

FIRST SEMESTER

QUANTITATIVE TECHNIQUES FOR MANAGEMENT

(w.e.f. Admitted Batch 2024 - 25)

Time: 3 Hours **Max. Marks: 75M**

SECTION - A

Answer any **FIVE** Questions not exceeding **One** page each. **(5 X 4 = 20 M)**

1. Define statistics?
2. Explain Mean or Average
3. Discuss marginal probability
4. Differentiate Point estimation and Interval estimation
5. Describe Alternative Hypothesis
6. Role of Quantitative Techniques in Marketing
7. Differentiate Correlation and Regression.
8. Write a short note on Exponential Distribution

SECTION - B

Answer **ALL** Questions not exceeding **Four** pages each. **(5 X 8 = 40M)**

9. (a) Discuss the nature and scope of quantitative techniques in business decision making.

(Or)

(b) What types of business problems can be solved using quantitative techniques?

10. (a) What is correlation coefficient? Explain its significance in business operations?

(Or)

(b) Find the correlation coefficient from the following data:

Fertilizer used (in Metric tons)	**15**	**18**	**20**	**24**	**30**	**35**	**40**	**50**
Productivity (in Metric tons)	**85**	**93**	**95**	**105**	**120**	**130**	**150**	**160**

11. (a) Explain Bayes' Theorem and its relevance in business decision making **(Or)**

(b) Explain the rules of Probability & also explain normal Distribution passion Distribution.

12. (a) From the Following data Find out T- Test 5% Level of Significance the Critical Value is 2.381 is their any significance between two Sales Man.

Information	**Salesman -1**	**Salesman -1**
Mean	**30**	**40**
Standard Deviation	**8**	**9**
Sample Size	**20**	**22**

(Or)

(b) Define hypothesis? Exemplify the procedure of testing a hypothesis?.

13. (a) Explain chi-square Test a non-parametric test? If so, what are its assumptions and business applications?

(Or)

(b) A teacher is interested in understanding whether there is a significant difference in the final scores of students in a statistics course based on their understanding level (categorized as Low, Medium, and High). The teacher selects four students from each group and records their final scores out of 100.

Group	Student 1	Student 2	Student 3	Student 4
Low	**50**	**55**	**45**	**52**
Medium	**60**	**62**	**59**	**58**
High	**85**	**90**	**87**	**92**

The teacher wants to perform a One-Way ANOVA **(ANALYSIS OF VARIANCE)** at a 5% significance the critical value α is 1.281 level to test if there is a Significant difference in the mean scores across the three understanding levels (Low, Medium, and High).?

SECTION-C
(Compulsory)

Case Study. **(15 M)**

Calculate the regression coefficient and obtain the lines of regression Y on X and X on Y for the Following Data:

X	11	12	13	14	15	16
Y	19	18	10	21	23	17

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