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Question Paper Code :25MB01

MBA DEGREE EXAMINATION APRIL/ MAY 2026

First Semester

MB25C01- Statistics for Management

(Regulation: 2025)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Interpret the concept of Bayes' Theorem
2. List any four properties of Normal distribution
3. Outline the meaning of sampling distribution
4. Differentiate between point estimate and interval estimate
5. Explain in brief: non-parametric test?
6. Give Example where the Mann–Whitney U test used for?
7. Describe regression analysis?
8. Define p-value?
9. Interpret the meaning of data-driven storytelling.
10. List any two statistical software tools used in business analytics.

Part – B (5 x 13 = 65 marks)

11. a) Explain the basic rules of probability with suitable examples.

OR

- b) Explain the concept of expectation and variance of a random variable with examples.

12. a) Identify the different types of measures of central tendency with their business applications and explain.

OR

- b) Calculate the Arithmetic Mean, Median and Mode for the following data:

Class intervals	20-40	40-60	60-80	80-100	100-120
Frequency	4	6	10	12	8

13. a) The heights of 10 males of a given locality are found to be 70, 67, 62, 68, 61, 68, 70, 64, 64, 66 inches. Is it reasonable to believe that the average height is greater than 64 inches? Test at 5% significance level assuming that for 9 degrees of freedom $P(t > 1.83) = 0.05$

OR

- b) Identify the different types of parametric test and explain any one with example
14. a) Calculate correlation coefficient for the following heights (in inches) of fathers (X) and their sons (Y):

X	65	66	67	67	68	69	70	72
Y	67	68	65	68	72	72	69	71

OR

- b) Examine the Estimation of standard Errors and explain.
15. a) Explain the uses of Excel, SPSS, and R in business analytics.
- OR**
- b) Explain the dashboard approach for a business scenario (e.g., sales performance tracking) and explain how it aids decision-making.

PART C (1 X 15 = 15)

16. a) Bag A contains 1 white ball and 6 red balls, while another bag contains 4 white balls and 3 red balls. One of the bag is randomly selected, and a ball is drawn from it, which turns out to be white. What is the probability that the white ball was drawn from Bag A?

OR

- b) In a company, the daily output of a machine follows a normal distribution with mean 50 units and standard deviation 5 units. What is the probability that on a given day the machine produces: i) More than 55 units ii) Between 45 and 55 units.