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**School of Finance and Commerce****Master of Business Administration in Financial Management  
Semester End Examination - Nov 2023****Duration : 180 Minutes  
Max Marks : 100****Sem III - MBAF0903 - Advance Business Statistics**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Define independent events. K1 (2)
- 2) Describe the types and characteristics of hypotheses in statistical testing. K2 (4)
- 3) Differentiate between parametric and non-parametric statistical tests. K2 (6)
- 4) List and describe the theoretical probability distributions - Binomial, Poisson, Normal, and Exponential. K3 (9)
- 5) Compare and contrast Karl Pearson correlation and Spearman's Rank correlation. K3 (9)
- 6) Construct a multiple regression model to predict the sales of a product based on various factors. K5 (10)
- 7) Compare the forecasting accuracy of different time series models (e.g., moving averages, exponential smoothing) for a given dataset. K4 (12)
- 8) You are a financial analyst for a retail company. Explain the concepts of interpolation and extrapolation in the context of time series analysis. Provide a detailed example of how you would use these techniques to forecast future sales trends for your company. Discuss the potential risks and challenges associated with extrapolation in this scenario. K5 (15)
- 9) Evaluate the practicality of using regression analysis to predict sales in a highly dynamic and uncertain market. K5 (15)
- 10) Judge the appropriateness of using a specific forecasting theory for a business expansion strategy in a new geographical region. K6 (18)