GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Business

Master of Business Administration MBA Dual Specialization
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - D1PK201T - MSB21T1004 Introduction to Business Analytics

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)	From an analytics perspective, explain the broad range of applications associated with regression analytics in fields like finance, marketing, healthcare, and supply chain management, additionally Justify the importance of uncovering nuanced relationships, accurately predicting outcomes, and enhancing decision-making processes across various organizational functions.	K5	(5)
2)	Model the architecture of all business analytics with a suitable diagram and explain each components	K3	(6)
3)	Imagine you are a Chief Data Officer in a large multinational corporation. The company is at a crucial juncture, aiming to enhance its decision-making processes through advanced analytics. As a leader, you are tasked with outlining a roadmap for the future of Business Analytics within the organization, considering the latest trends and technologies. Consider the integration of emerging technologies, the role of big data, and the potential impact of AI-driven decision support.	K4	(8)
4)	Examine the primary advantages of utilizing Business Analytics in decision-making processes, highlighting its pivotal role in enhancing organizational outcomes and facilitating strategic decision-making.	K4	(8)
5)	Examine the essential role of data cleaning in upholding the accuracy, reliability, and efficacy of data-driven decision-making processes.	K3	(9)
6)	Inspect the applications of predictive models, including decision trees, neural networks, and support vector machines, across finance, healthcare, and e-commerce sectors	K3	(9)
7)	Recommend a comprehensive regression analysis strategy for predicting housing prices in a metropolitan area, considering variables like square footage, number of bedrooms, location, and amenities. Assess the suitability of linear and multiple regression models for this task. Interpret the assumptions, challenges, and limitations associated with regression analysis, including model selection, data preprocessing	K5	(10)

8) The diameter of pizza(in inches) and price(in Dollars) given in the table . K4 (12)

Evaluate:

1) slope

2) Intercept ,

additionally

predict the prize of pizza if the pizza diameter is 20 inches

Diameter(X) In inches	Price(Y) in Dollars
2	3
3	4
4	5
6	8
7	9
8	10
10	13
12	16

9) Consider yourself a senior leader within a retail corporation aiming to revolutionize its operations through advanced business analytics. Given the dynamic nature of the retail industry and the ever-changing consumer landscape. discuss the steps, methodologies, and best practices you would adopt to develop and integrate robust analytics capabilities into the company's operations, taking into account factors such as customer behavior, inventory management, sales forecasting, and personalized marketing initiatives. K5 (15)

10) A garment manufacturer manufactures T-shirts of five different colors, i.e., White, Black, Pink, Green, and Beige. He produces these T-shirts in seven different sizes, i.e. 2, 4, 6, 8, 10, 12, 14. He has two Warehouses. In both the warehouses number of a particular colour and size rage from 20 to 180 (multiples of 10). K6 (18)

1) Construct a formula in Excel to calculate the total number of T-shirts in Warehouse 1.(3 marks)

2) Develop a syntax in Excel to create a DataFrame representing the T-shirt inventory for Warehouse 2.(3 marks)

3) Formulate a formula in Excel to find the total count of T-shirts in size 6 across both warehouses.(3 marks)

4) Design a syntax in Excel to filter the DataFrame to display only the T-shirts in pink color.(3 marks)

5) Assemble a formula in Excel to calculate the average number of T-shirts per size across both warehouses.(3 marks)

6) Investigate a Excel function to determine the maximum count of T-shirts in any single color across both warehouses.(3 marks)