Roll No												

PRESIDENCY UNIVERSITY
BENGALURU

Department of Research & Development

Mid - Term Examinations - AUGUST 2024

Odd Semester: Ph.D. Course Work
Course Code: MGT913
Course Name: Predictive Analytics for Marketing
Department: School of Management

Date: 12/08/2024
Time: 02:00pm – 3:30pm
Max Marks: 50
Weightage: 25%

Instructions:

(i) Read the all questions carefully and answer accordingly.
(ii) Do not write any matter on the question paper other than roll number.

PART A (THOUGHT PROVOKING)

Answer all the Questions. Each question carries 5 marks. (4Qx 5M= 20M)

1. Compare the effectiveness of decision trees and logistic regression in predicting customer churn (CO:01 BL:Comprehension)

2. Evaluate the role of feature engineering in improving the performance of machine learning models in business applications. (CO:02 BL:Evaluate)

3. Critique the use of K-means clustering for customer segmentation in a retail business context (CO:02 BL:Evaluate)

4. Defend the necessity of ethical considerations in the deployment of machine learning models for customer analytics. (CO:02 BL:Evaluate)

PART B (PROBLEM SOLVING)

Answer all the Questions. Each question carries 10 marks. (3Qx 10M= 30M)

5. Apply logistic regression to build a model for predicting customer churn in a telecommunications company. Describe your approach and interpret the results. (CO:01 BL:Apply)

6. Demonstrate how to implement a K-means clustering algorithm for segmenting customers based on their purchasing behavior. Include steps and visualize the clusters. (CO:02 BL:Apply)

7. Solve the Harvest Market case involving the use of present value to predict customer lifetime value (CLV). Discuss the model construction, evaluation, and business implications (CO:02 BL:Apply)