Time allowed: 2 hrs

Max Marks: 50

Roll No: _____

Instruction: The paper has 3 questions. Question 1 is compulsory. Answer any one from the next two questions. The problems have to be solved on the monitor provided to you. All relevant syntax and metrics of the solutions with final interpretations will have to be mentioned in the answer sheet.

Each question carries 25 marks.

Q1. Why Logistic regression is required when the dependent variable is dichotomous? Describe the Logistic regression model and how you would solve it using Excel non-linear engine? Consider the data set 'Logistic-2' with status as dependent variable, age and experience as independent variable. Interpret the outcome.

Q2.

a) How the revenue from a film can be predicted using from the revenue of 1st week ,2nd week and 3rd week using nonlinear multi start engine? Solve the problem on forecasting from dataset 'Data-3 week for forecasting with minimizing the total square errors. Interpret the solution

b) Suppose quarterly software sales are given which depend on quarterly PC shipments to the market. Write down the model to forecast sales. Consider the data "scan_Pro-swsales_data_MAD" with minimizing total men absolute deviation. Interpret the solution.

OR

Q3. How RFM helps in categorizing customers? Use the data "RFM_data" for categorizing all 5000 customers in to 64 categories where all three variables have four equal categories. Interpret the solution.