

PGDM (RM), 2015-17  
Retail Analytics RM-407  
Trimester – IV, End-Term Examination: September 2016

Time allowed: 2 hrs 30 min

Max Marks: 50

Roll No: \_\_\_\_\_

**Instruction:** Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet.

**Section - A**

**Attempt any 3 out of 5 questions from this section. Each question carries 5 marks .**

- A1 How outliers are detected in forecasting sales?
- A2 How a non-product element, like height or education of a customer can be used as lifts to increase profits?
- A3 You wish to forecast the total revenue from a movie. Discuss the process.
- A4 Write mathematical function of ADBUDG curve? Where it is used?
- A5 How can you rank the frequency of a customer's purchase?

**Section B**

**Attempt any 2 out of 5 questions from this section. Each question carries 10 marks.**

- B1 Explain Three-way lifts with example and its process of optimization.
- B2 Discuss the use of Two-way lift in optimizing store layout.
- B3 What is RFM analysis? How you decide to contact a customer based on RFM analysis?
- B4 How could the ADBUDG curve be used to determine optimal allocation of advertising funds?
- B5 How would you develop a strategy to maximize revenue generated by mailing 25percent of the customers?

**Section - C**

**Compulsory Case Study (15 Marks)**

Suppose a customer can either subscribe to a newspaper or not. Her age in years and subscription in 0 or 1 is given. 0 means, she has not subscribed to the newspaper and 1 means she has subscribed.

1. Can you forecast whether the customer can subscribe or not based on simple regression? If not why?
2. What is logistic regression model? Derive it mathematically.
3. How maximum likelihood is estimated in a logistic regression?
4. How can you use parameters of simple regression in logistic regression?