JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA

PGDM / PGDM (M) / PGDM (SM)

IV TRIMESTER (Batch 2021-23)

END TERM EXAMINATION, NOVEMBER 2022

Course Name	Marketing Analytics	Course Code	MKT 20125
Max. Time	**2 hours**	Max. Marks	**40 MM**

1. In the customer management lifecycle, customer churn refers to a decision made by the customer about ending the business relationship. It is also referred as loss of clients or customers. Customer loyalty and customer churn always add up to 100%. If a firm has a 60% of loyalty rate, then their loss or churn rate of customers is 40%. As per 80/20 customer profitability rule, 20% of customers are generating 80% of revenue. So, it is very important to predict the users likely to churn from business relationship and the factors affecting the customer decisions

   A marketing manager is interested in finding as to how different variables affect customers' loyalty. The outcome variable, loyal/not loyal is binary.

   a. Which type of regression model is appropriate for this situation and why?

   b. The manager finds the maximum likelihood estimates of slope to be (0.1281) & intercept as (-5.661). What is the chance that a 44 year old will be a loyal customer? $(\exp(-0.0246)=0.9757)$ & $\exp(0.0246)=1.0249)$ **(4+8=12 marks)**

2. A marketing analytics firm is interested in finding the sales of its salesforce across the country in different regions. After analyzing the data, the following equations were obtained. Explain the implications of these equations to the marketing analytics firm:

   a. Predicted sales = 10.2 + 1.3Northeast – 0.9Midwest – 1.7South

   b. Predicted sales = 12.7 + 2.1Education – 1.8Female

   c. Predicted sales = 0.076 + 0.88Education – 4.28Female + 0.16Female*Education

   (3+3+ 4=10 marks)

3. Data opens new doors for understanding customers and creating an incredible customer experience, and the analytics available today provide companies the opportunity to create sophisticated models to drive their decisions. By giving examples discuss how brands that can best take advantage of data analytics have set themselves apart and gained a large competitive advantage? **(10 marks)**

4. A forecast of total-market demand won't guarantee a successful strategy. But without it, decisions on investment, marketing support, and other resource allocations will be based on hidden, unconscious assumptions about industrywide requirements, and they'll often be wrong. By gauging total-market demand explicitly, marketing managers have a better chance of controlling their company's destiny by devising an effective strategy. Total-market forecasting is only the first stage in creating such strategy.

   a. What different techniques can be used by companies to forecast demand?

   b. Under what circumstances will you use regression with qualitative variables

   for forecasting.   **(4+4 marks)**