

**K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH,**

**Vidyavihar, Mumbai- 400077**

**Program: PGDM Executive (Batch2018-19), Trimester.-V**

**Subject: BIG DATA ANALYTICS**

**(End Term Examination)**

Maximum Marks: 25

**Duration: 1.5 hours**

**Date: 26<sup>th</sup> Dec. 2018**

**Instructions**

- 1. All questions are compulsory**
- 2. Write all the interpretation on the word documents.**

**Case 1 : Forecasting Monthly Sales for The Glass Slipper restaurant -**

For years The Glass Slipper restaurant has operated in a resort community near a popular ski area of New Mexico. The restaurant is busiest during the first 3 months of the year, when the ski slopes are crowded and tourists flock to the area.

When James and Deena Weltee built The Glass slipper, they had a vision of the ultimate dining experience. As the view of surrounding mountains was breath-taking, a high priority was placed on having large windows and providing a spectacular view from anywhere inside the restaurant. Special attention was also given to the lighting, colours and overall ambiance, resulting in a truly magnificent experience for all who came to enjoy gourmet dining. Since its opening, The Glass Slipper has developed and maintained a reputation as one of the “must visit” places in that region of New Mexico.

While James loves to ski and truly appreciates the mountains and all that they have to offer, he also shares Deena’s dream of retiring to a tropical paradise and enjoying a more relaxed lifestyle on the beach. After some careful analysis of their financial conditions, they knew that retirement was many years away. Nevertheless, they were hatching a plan to bring them closer to their dream. They decided to sell The Glass Slipper and open a bed and breakfast on a beautiful beach in Mexico. While this would mean that work was still in their future, they could wake up in the morning to the sight of the palm trees blowing in the wind and the

waves lapping at the shore. They also knew that hiring the right manager would allow James and Deena the time to begin a semi-retirement in a corner of paradise.

To make this happen, James and Deena would have to sell The glass Slipper for the right price. The price of the business would be based on the value of the property and equipment, as well as projections of future income. A forecast of sales for the next year is needed to help in the determination of the value of the restaurant. Monthly sales for each of the past 3 years are provided in the Excel file (**sales**).

**Perform the Arima Model to forecast sales for each month of the next year?**

### **Case 2 – Retail Outlet –**

A retail outlet wants to know the consumer behavioural pattern of the purchase of products in two categories – national Brands and local brands respectively, which would help it to place the order demanding on demand and requirements of the customer. The retail outlet used data from a retail outlet in another location to arrive at a decision about customer's visiting at their end.

This retail outlet wants to use decision analysis model, to screen the responsiveness of customers towards national and local brands category. Perform the CHAID analysis and interpret the groups based on annual income and household size with respect to brand?