K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH,
Vidyavihar, Mumbai- 400077

Program: PGDM FS/ MMS MARKETING/MMS-FINANCE/
PGDM- EXECUTIVE/PG and MMS OPERATIONS Sem.-V
Subject: Big Data Analytics
(end term exam)

Maximum Marks: 25 **Duration: 1.5 hours** **Date: 29th Dec. 2017**

Instructions
1. **Kindly solve the case in Excel and R.**

2. **Excel file/ Word file to be sent.**

QUESTION 1 – S&P BSE CAPITAL GOODS -   10
Marks

India's Capital Goods manufacturing industry serves as the strong base for its engagement across sectors such as engineering, construction, infrastructure, and consumer goods. Today, the Capital Goods sector is a robust, multi-level, diversified segment of the Indian industry environment, playing a critical role in driving growth, creating jobs, and boosting exports. The Indian Capital Goods sector is notable for increasing diversification, rising value added production, and growing competitiveness. Several companies have shifted their strategies for greater geographical and sectorial diversification. Indian companies are stepping into the international tenders market for projects to great success. Equally, the domestic market is home to many global majors, which are taking advantage of the Indian ecosystem.

 The S&P BSE CAPITAL GOODS closing prices Monthly data have been available since Jan, 2000 to Dec, 2016. Apply ARIMA Modeling to forecast the results for the Year 2017.

The Vintage restaurant is located on Captiva Island, a resort community near Fort Myers, Florida. The restaurant, which is owned and operated by Karen Payne, just completed its third year of operation. During this time, Karen sought to establish a reputation for the restaurant as a high quality dining establishment that specializes in fresh seafood. The efforts made by Karen and her staff proved successful and her restaurant are currently one of the best and fastest-growing restaurants on the island.

Karen concluded that, to plan better for the growth of the restaurant for the future, she needs to develop a system that will enable her to forecast food and beverage sales by month for up to one year in advance. Karen compiled the data on total food and beverage sales for the three years (2015 Jan to 2017 Dec) of operations.

Perform ARIMA Modeling of the sales data for the Vintage restaurant. Prepare the report for Karen that summarizes your findings, forecasts, and recommendations.

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