JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM / PGDM (M) / PGDM (SM)
THIRD TRIMESTER (Batch 2018-20)
END TERM EXAMINATIONS, MARCH 2019
Set-I

Course Name	Introduction to Business Analytics	Course Code	BA-IBA 001
Max. Time	**2 hours**	Max. Marks	**40 MM**

INSTRUCTIONS:
1. This is a close book test.
2. All 4 question need to be answered.

1. What is the probability of getting 6 as sum of two fair dice drawn together? Provide commented R simulation code for the answer. (10 Marks)

2. In context of a regression model, what is "response variable and what is "predictor variable"?
   Explain Ordinary Least Square (OLS) method for estimating the regression equation.
   What are the four assumptions of OLS?
   How to reduce number of predictors in a linear regression model (any one method)? Give an example.
   Explain – Correlation, R^2, and Adjusted-R^2 (1+2+2+2+3 = 10 Marks)

3. Explain Descriptive and Predictive Time Series Analysis with example
   What is Trend, Seasonality and Cycle in a Time Series? Provide Example.
   Explain MAP, MEAP, RMSE in context of forecasting accuracy measurement?
   What forecasting method is used as benchmark prediction for any model evaluation?
   What is the criteria of a time series for a forecasting analysis? (2+3+3+1+1 = 10 Marks)

4. Assume that goog.csv contains last ten years (day wise) stock price data of GOOGLE Inc. It has two columns namely Date and Price.
   Provide commented R code to build a forecasting model and predict tomorrow's price. (10 Marks)