Question Bank – Time Series Analysis and Forecasting

Co1 Unit 1

Questions	Blooms level
1. Explain how to plotting smoothing data	**L2**
2. Can you explain use of forecasts and time series?	**L2**
3. Explain Mean Absolute Error (MAE), Root Mean Squared Error (RMSE)	**L2**
4. Explain Time Series Analysis Types and Examples	**L2**
5. What is Evaluating and how Monitoring Forecasting Model Performance methods we can use.	**L2**
6. Explain Auto-covariance and Auto-correlation Functions	**L2**

Co2 Unit 2

Questions	Blooms level
1. Which R commands used in regression analysis	**L2**
2. What is regression and write types of regression	**L2**
3. What is residual? How to use residual plot analysis	**L1**
4. Explain SST,SSR,SSE,R2	**L2**
5. Explain Steps to conduct hypothesis on regression coefficient .	**L2**
6. Explain variable selection methods in regression.	**L2**

Co 3 -Unit 3

Questions	Blooms level
1. Explain Simple Exponential Smoothing and Holt's linear exponential smoothing l	**L2**
2. How would you explain Methods for Adaptive Updating	**L2**
3. Explain times series modeling steps -Preprocessing Time Series Data, Modeling Techniques	**L2**
4. What is Exponential smoothing and give details Simple Exponential Smoothing	**L2**

Co 3 - Unit 4

Questions	Blooms level
1. What is autoregressive integrated moving average (arima) models	**L1**
2. Can you illustrate modeling procedure bio-surveillance data using ARIMA)	**L2**
3. Why Use ARIMA Models write its applications	**L1**
4. Can you illustrate Linear Models for Stationary Time Series and describe Autoregressive (AR) Model and Moving Average (MA) Model)	**L2**

Co 4 - Unit 5

Questions	Blooms level
1. What is Intervention Analysis? and Write Transfer Function–Noise Models in R using the tfarima package	**L2**
2. What is transfer function model and write Steps to Build a Transfer Function Model	**L2**
3. Explain Transfer Function–Noise Model Specification with steps	**L2**
4. What is transfer function model and write Steps to Build a Transfer Function Model	**L1**

Co 4 - Unit 6

Questions	Blooms level
1. Classify common multivariate time series models and Performance Evaluation Techniques.	**L2**
2. Explain Aggregation and Disaggregation in details	**L2**
3. Explain Neural networks architecture types and Write steps of Forecasting with Neural Networks.	**L2**
4. Explain Spectral Analysis and write its applications	**L2**
5. Illustrate Practical Implementation and Use of Statistical Forecasting.	**L2**