**Time series analysis and Forecasting**

**Question Bank**

**Unit 1- Introduction and forecasting**

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| **Q. No** | **Question** | **Co Mapping** |
| 1 | Explain use of forecasts and time series? | CO1 |
| 2 | Explain time series forecasting techniques | CO1 |
| 3 | Explain forecasting process in detail? | CO1 |
| 4 | What is imputation explain any 2 imputation techniques | CO1 |
| 5 | Draw time series analysis DART model and List time series analysis plot types | CO1 |
| 6 | Explain plotting smoothing data | CO1 |
| 7 | Explain Auto-covariance and Auto-correlation Functions | CO1 |
| 8 | Explain General Approach to Time Series Modelling and Forecasting | CO1 |
| 9 | What is Evaluating and how Monitoring Forecasting Model Performance methods we can use. | CO1 |
| 10 | List R commands and explain with use | CO1 |

**Unit 2- REGRESSION ANALYSIS AND FORECASTING**

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| **Q. No** | **Question** | **Co Mapping** |
| 1 | What is regression and write types of regression. | CO2 |
| 2 | What is the Least Squares Regression method and why use it? | CO2 |
| 3 | Explain SST,SSR,SSE,R2 | CO2 |
| 4 | Explain Steps to conduct hypothesis on regression coefficient . | CO2 |
| 5 | Explain steps for prediction. | CO2 |
| 6 | Outline types of residual. | CO2 |
| 7 | Explain variable selection methods in regression. | CO2 |
| 8 | Summarize Estimating the Parameters in Time Series Regression Models. | CO2 |
| 9 | Summarize The Maximum Likelihood Approach in Regression Analysis. | CO2 |
| 10 | Which R commands used in regression analysis | CO2 |

**Unit 3- REGRESSION ANALYSIS AND FORECASTING**

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| **Q. No** | **Question** | **Co Mapping** |
| 1 | What is Exponential smoothing and explain Simple Exponential Smoothing and Holt Linear Exponential Smoothing | CO2 |
| 2 | Explain First-Order Exponential Smoothing | CO2 |
| 3 | Explain second-order exponential smoothing | CO2 |
| 4 | Explain Higher-order exponential smoothing | CO2 |
| 5 | What Are Exponential Smoothing Methods? | CO2 |
| 6 | Summarize modelling time series steps. | CO2 |
| 7 | What is constant process and write characteristics of a Constant Process | CO2 |
| 8 | Classify Methods for Adaptive Updating | CO2 |
| 9 | Summarize Applications of Exponential Smoothing in Bio-surveillance | CO2 |
| 10 | Explain R commands used for Exponential Smoothing Methods | CO2 |