

**NOTE:** Attempt any five questions.

x-x-x

- I. Answer the following :-
  - a) Explain the difference between cross-sectional data and time series data. Give examples of each.
  - b) What are pooled data? What are panel, longitudinal, or micropanel data?
  - c) What is a stationary time series? A non-stationary time series? Give an example of a non-stationary time series.
  - d) What is the difference between a parameter and an estimate of a regression function? (4x4)
  
- II. Discuss the limitations of the moving average method of estimating trend in a time series. Define the exponentially weighted moving average time series forecasting approach. (16)
  
- III. Discuss a general linear regression model and state the assumptions. Obtain the OLS estimates of the parameters. (16)
  
- IV. Compare and contrast an AL model with a DL model and discuss the relative merits of the two models. (16)
  
- V. Outline the Box-Jenkins identification methodology. (16)
  
- VI. Explain what co integration is and how **you** would test for it using the Engle-Granger method. What is the rationale for an Error Correction Model? (16)
  
- VII. Compare and contrast an AR model with a ARMA model and discuss the relative merits of the two models. (16)
  
- VIII. Write short note on: VAR Models and their role in Business forecasting. (16)
  
- IX. Contrast an ARCH model with a GARCH model and discuss the relative merits of the two formulations
  
- X. Write short notes on:-
  - a) Arima Model
  - b) Tests of Stationarity (8,8)

x-x-x