Summary

- Forecasting of business fluctuations is carried out by understanding why changes in the past occurred, determine which phase of business activity must be measured, selecting and compiling data used as measuring devices and analysis of data.

- The basis of scientific forecasting is statistics that is the numerical data on business trends, but along with the trends we need to consider the economic changes hence the forecasting involves more than an analysis of the data.

- To handle this increasing variety of managerial forecasting various techniques have been developed, each has its special use and care must be taken to select the correct techniques for particular application.

- Following are some of the methods of forecasting: Historical Analogy method, field survey and opinion poll, business barometer, extrapolation, regression analysis, econometric analysis, lead-lag analysis, Exponential smoothing, input-output or end-use method and forecasting through time series analysis.

- The first step in making estimates for the future consists of gathering information from the past. In this connection, one usually deals with statistical data, which are collected, observed or recorded at successive intervals of time. Such data are generally referred to as 'time series'. A time series is a set of observations taken at specified times, usually at equal intervals.

- Thus in the analysis of time series, time is the most important factor because the variable is related to time which may be either year, month, week, day, hour or even minute or second.

- The statistician, therefore analyze the effect of the various factors under the following broad heads:
  - Changes that have occurred as a result of general tendency of the data to increase or decrease, known as 'secular movements'
  - Changes that have taken place during a period of 12 months as a result of change in climate, weather conditions, festivals, etc, such changes are called as 'seasonal changes'
  - Changes that have taken place as a result of booms and depressions. Such changes are classified under the head 'cyclical variations'
  - Changes that have taken place as a result of such forces that could not be predicted like floods, earthquake, famines, etc. such changes are classified under the head 'irregular or erratic variations'

- Before beginning the actual work of analyzing a time series, it is necessary to make certain adjustments in the raw data. The adjustments are:
  - Adjustments for calendar variations
  - Adjustments for population changes
  - Adjustments for price changes
  - Adjustments for comparability