Summary

- The Term Cycle refers to the recurrent variations in time series that usually last longer than a year but not regular in length or amplitude. Time series related to economies and business show some kind of cyclical variations. Cyclical fluctuations are long term movements, which represent consistently recurring increase and decline in activity

- The study of such cyclical variations is extremely useful in framing suitable policies for stabilizing the level of business activity and for avoiding periods of booms and depressions as both are bad for an economy – particularly depression which brings about a complete disaster and shatters the economy

- Though we can measure the cyclical variations and the associated impacts on the economy, it is very difficult to predict and measure the economic fluctuations. The reason being –
  - ➢ Business cycles do not show regular periodicity as they differ in the timing, pattern
  - ➢ Cyclical variations are mixed with erratic, random forces which make it difficult to isolate separately the effect of cyclical and irregular forces

- Business cycles are distinguished from seasonal variation in the following respects where in the cyclical variations are of a longer durations – more than a year. Typical business cycles could vary from 2 to 10 years. Moreover, they do not ordinarily exhibit regular periodicity as successive cycles vary widely in timing, amplitude and pattern

- Fluctuations in the 4 phases of business cycles are caused by multiple factors. The period of prosperity, decline, depression and improvement viewed as four phases of a business cycle are generated by factors other than weather, social customs and those which create seasonal patterns

- Business cycles are perhaps the most important type of fluctuation in economic data. Certainly they have received a lot of attention in economic literature. Despite the importance of business cycles, they are the most difficult type of economic fluctuation to measure. This is because successive cycles vary so widely in timing, amplitude, pattern and the cyclical rhythm is inextricably mixed with regular factors. Because of these reasons it is impossible to construct meaningful typical cycle indexes or curves similar to those that have been developed for trends and seasonal.

- The various methods used for measuring cyclical variations are:
  - ➢ Residual method
  - ➢ Reference cycle analysis method
  - ➢ Direct percentage variation method
  - ➢ Harmonic analysis method or fitting of sine functions

- **Residual method:**
  Amongst all the methods of arriving at estimates of the cyclical movements of time series, the residual method is most commonly used. This method consists of eliminating the two components seasonal variation and trend, thus obtaining the cyclical irregular movements. The data are usually smoothed in order to obtain cyclical movements, which are sometimes termed the cyclical relatives, since they are always percentages. It is because cyclical, irregular or the cyclical movements remain as residuals that this procedure is referred to as the residual method.

- **Reference cycle analysis or the national bureau method:**
  The national bureau of economic research has developed a different method of analysis the cyclical variations which it has used in the study more than 1,000 specific time series. This method is of value in analysis past cycles only. The national bureau procedure aims to answer two sets of questions:
  1. Is there in a given series a pattern of change that repeats itself (with more or less variation) in successive cycles in business at large? If so, what are its characteristics?
  2. Is there in a given series a wave movement peculiar to that series? If so, what are its characteristics?

  The question under (1) is concerned with the behaviour of individual series during successive waves of expansion and construction in the general economic.
  The question under (2) relate to periodic or semi-periodic fluctuations in individual series.

  A procedure involving 'references dates' has been designed by the National Bureau of Economic Research as a device which allows one not only to compare each series with a standard set of dates and to observe the behaviour of individual series during expansion and contraction of general business but also to compare the results for the various individual series.