Summary

- Professor Irving fisher has given a number of formulae for constructing index number and of these one is the ideal index. The fisher's ideal index is the geometric mean of the Laspeyer's and Paasche's indices. Thus, in the fisher's method we average geometrical formulae that err in opposite directions.
- The Fishers Ideal Index is given by the formula:

P01 =
$$\sqrt{(\Sigma P1q0/\Sigma P0q0)X(\Sigma P1q1/\Sigma P0q1)} \times 100$$

Or
P01 = \sqrt{LxP}

- The Fisher's Index is called the ideal index number based on the following:
 - It is based on the geometric mean, which is theoretically considered to be the best average for constructing index numbers.
 - o It takes into account both current year and base year prices and quantities.
 - o It satisfies both the test of adequacy the time and factor reversal test.
 - It is free from bias. The two formulae (Laspeyer's & Paasche's) express the opposing type and weight biases, as the ideal formula is crossed geometrically, that is by averaging process that of itself has no bias. The result is the complete cancellation of biases.
- Like the unweighted relative method it is also possible to compute the weighted average of relatives, we can also use either the arithmetic mean or the geometric mean in the calculation of the averages.
- Instead of using the arithmetic mean, the geometric mean may be used for assigning relatives. The weighted geometric mean of relatives is computed in the same manner as the unweighted geometric mean or relative index number except that weights are introduced by applying them to the logarithms of the relatives.
- Chain base index numbers: the various formulae discussed for the construction of index numbers are based on the fixed base method and they reflect the relative change in the level of phenomenon in any period called current year with its changes in same particular fixed year called the base year.
- A series of index numbers are computed for each year using the preceding year as the base year. This index number calculated after taking the preceding year as base year is called the link relatives. Then link relatives are chained together by successive multiplication to form a chain index.
- Thus, a chain index is the figure for each year first expressed as a percentage of the preceding year. These percentages are then chained together by successive multiplication to form a chain index.
- Base shifting: Base shifting refers to the preparing of a new or more recent base period than the original one. Change of base year or reference period is known as shifting the base.

- Splicing: Splicing of index numbers means combining two or more series of overlapping index numbers to obtain a single index number on a common base.
- Splicing of index number can be done only if the index numbers are constructed with the same items and have an overlapping year. A second series of index number is constructed by the same formula.
- Forward Splicing: In this method, the old series, say A is brought forward to splice it with new series, say B by multiplying the various index numbers of the old series by the index number of the last year in the old series and divide the result so obtained by 100. This splicing is called forward splicing.
- Backward Splicing: In this method, the new series is pushed backward by dividing the various index numbers of the old series by the index number of the year in which change takes place and the result so obtained is multiplied by 100. This splicing procedure is known as backward splicing.
- Deflating means adjusting, correcting or reducing a value, which is inflated. It is a technique of converting a series of value calculated at current prices into constant prices of a given year. This is a process of removing the effect of price changes from the current money values.
- This is particularly desirable in the case of an economy, which has inflationary trends because in such an economy, the increase in the prices of commodities over a period of year means a fall in their real incomes. Thus, it becomes necessary to adjust or correct the nominal wages in accordance with the rise in the corresponding price index to arrive at real income.