Introduction -:

An index number is a method of evaluating variations in a variable or group of variables in regards to the geographical location, time, and other features. The base value of the index number is usually 100 and indicates either to price, date, a level of production, etc.

Types of Index Number

- **Price Index Number:** It evaluates the relative differences in costs between two particular points in time.
- **Quantity Index Number:** It measures differences in the physical quantity of products manufactured, bought or sold of one item or group of items.

What are Index Numbers? Meaning and Characteristics

(A) DEFINITION OF INDEX NUMBERS	**According to Croxton and Cowden**, "Index Numbers are devices for measuring differences in the magnitude of a group of related variables." **According to Spiegal**, "An Index Number is a statistical measure designed to show changes in variable or a group of related variable with respect to time, geographical locations or other characteristics".

(B) FOLLOWING ARE THE IMPORTANT CHARACTERISTICS OF INDEX NUMBERS:

(1) EXPRESSED IN PERCENTAGE	- Change in terms of absolute values may not be comparable. - Index Numbers are expressed in percentage so, they remove this barrier. Although we do not use the percentage sign. - It is possible to compare agricultural production and industrial production and at the same time being expressed in percentage, we can also compare the change in prices of different commodities.
(2) RELATIVE MEASURES OR MEASURES OF NET CHANGES	- Index Numbers measure net or relative change in a variable or a group of variables. - For example, if the price of a certain commodity rises from Rs.10 in the year 2007 to Rs.15 in the year 2017, Price Index Number will be 150 showing that there is 50% increase in the prices over this period.
(3) MEASURE CHANGE OVER A PERIOD OF TIME OR IN TWO OR MORE PLACES	- Index Numbers measure the net change among related variables over a period of time or at two or more places. - For example, Change in Prices, Production, etc. over two periods or at two places.

(4) SPECIALISED AVERAGE	• Simple averages like, Mean, Median Mode, etc. can be used to compare the variables having similar units. • Index Numbers are specialized average, expressed in percentage, and which help in measuring & comparing the change in those variables which are expressed in different units. • For example, we can compare the change in the production of Industrial goods and Agricultural Goods.

WHAT ARE THE ADVANTAGES OF INDEX NUMBERS?

ANSWER:

INDEX NUMBERS ARE ONE OF THE MOST WIDELY USED STATISTICAL TOOLS. FOLLOWING ARE SOME OF THE ADVANTAGES OR USES OF INDEX NUMBERS:

(1) HELP IN FORMULATING POLICIES	• Most of the economic and business decisions and policies are guided by Index numbers. • **For example:** • To increase DA government refers Cost of Living Index. • To make any policy related to Industrial or Agricultural production, government refers to their respective Index Numbers.
(2) HELP IN STUDY OF TRENDS	• Index Numbers help in the study of trends in variables like, Export-Import, Industrial & Agricultural Production, Share Prices etc.
(3) HELPFUL IN FORECASTING	• Index Numbers not only help in the study of past and present behavior, they are also used for forecasting economic and business activities.
(4) FACILITATES COMPARATIVE STUDY	• To make comparisons with respect to time and place, especially where units are different, Index Numbers prove very useful. • For example, change in 'Industrial production' can be compared with change in 'Agricultural production' with the help of Index numbers.
(5) MEASUREMENT OF PURCHASING POWER OF MONEY TO MAINTAIN STANDARD OF LIVING	• Index Numbers, such as Cost Inflation Index, help in measuring purchasing power of money at different times, between different regions. • Such analysis helps the government to frame suitable policies for maintaining or raising the standard of living of the people.

BRIEFLY DISCUSS THE PROBLEMS INVOLVED IN THE CONSTRUCTION

OF INDEX NUMBERS.

ANSWER:

FOLLOWING ARE SOME OF THE PROBLEMS INVOLVED IN THE CONSTRUCTION OF INDEX NUMBERS:

(1) PURPOSE OF INDEX NUMBERS	• Many different types of Index Numbers are constructed with different objectives. • Like, Price Index, Quantity Index, Consumer Price Index, Wholesale Price Index etc. • So, the first important issue/problem is to define the objective for which Index Number is to be constructed.
(2) SELECTION OF BASE PERIOD	• Base Period is the period against which comparisons are made. • Selection of suitable base period is very crucial step. • It should be of reasonable length and normal one i.e. shouldn't be affected by any abnormalities like, natural calamities, war, extreme business cycle situations. • It should not be too close or too far.
(3) SELECTION OF COMMODITIES	• All the items cannot be included in the construction of an Index Number. • Nature and number of items to be included in an Index Number depend upon the type of Index to be constructed. • For example, to construct 'Consumer Price Index' those commodities should be considered which are generally consumed and the number should be neither too small nor too big.
(4) SELECTION OF SOURCES OF DATA	• Depending upon the type of Index Number, correct source should be selected for data. • Like, to construct CPI, we need retail prices and to construct the Wholesale Price Index, we need wholesale prices. Accordingly right and reliable source should be selected.
(5) SELECTION OF WEIGHTS	• The term 'Weight' refers to the relative importance of different items in the construction of Index Numbers. • All the items do not have the same importance. • So, it is necessary to adopt some suitable measure to assign weight.
(6) SELECTION OF AN APPROPRIATE FORMULA	• There are various formulae for construction of Index Numbers like, Laspeyre's method, Paasche's method, Fisher's method etc. • No single formula is appropriate for all types of Index Numbers. • Choice of formula depend upon the purpose the available data.

WHAT IS CONSUMER PRICE INDEX NUMBER? GIVE THE USES OF CONSUMER PRICE INDEX NUMBER.

ANSWER:

(A) CONSUMER PRICE INDEX NUMBER

- Consumer price index (CPI) measures changes in the cost of living due to changes in retail prices of a basket of goods over a period of time.
- Separate Cost of Living Index is prepared for different classes of people.
- It is also known as "Cost of Living Index Numbers" or "Retail Price Index Number"

(B) FOLLOWING ARE THE USES OF CONSUMER PRICE INDEX NUMBER:

(1) HELPFUL IN MEASURING PURCHASING POWER OF MONEY

- Consumer price index has an inverse relation with a purchasing power of money.
- Purchasing Power of Money = 1/Consumer Price Index
- As CPI increases, the purchasing power of money falls.

(2) HELPFUL IN WAGE NEGOTIATIONS

- CPI helps in determining wages for a particular class.
- It provides the basis for wage negotiations between workers and employers.

(3) HELP GOVERNMENT IN FRAMING POLICIES

- These Index Numbers provide guidelines for the formulation of Wage Policy, Price Policy, Taxation Policy and other General Economic Policies.

(4) MARKET ANALYSIS

- CPI also helps a market analyst to determine the demand for different goods and services.

(5) HELP BUSINESS MEN IN FORECASTING

- On the basis of CPI of different classes of people, a businessman can make projections about demand for his products.