APPOLO STUDY CENTRE CHENNAI

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Test – 1

UNIT VI INDIAN ECONOMY

Date: 11/12/21

Nature of Indian Economy – Five Year Plans – Planning commission & NITI Aayog	**11th std Economics**	**Unit 1 - Introduction To Micro-Economics**
		Unit 7 - Indian Economy
		Unit 8 - Indian Economy Before and After Independence

11th STD Economics

Unit – 1 Introduction to Micro-Economic

Introduction

- A subject should have a name or a title that facilitates a clear and correct understanding of its contents. In a subject like Economics, there are many books available with titles such as 'Introductory Economics', 'Economics: An Introduction', 'Basic Economics',

'Elements of Economics', 'Elementary Economics', 'Fundamentals of Economics' etc. But these books have the same contents, though each is intended to serve readers of a different levels of interest and capacity.

- A good introduction to a subject, besides containing the meaning of its title, should have an explanation of the nature and scope of the subject, i.e., whether the subject is traditional or modern, static or dynamic. The readers should be in a position to clearly classify the subject as belonging to either arts alone, or to science alone or to both. The significance of all the branches of the subject should find a place in it. As they go through the introduction, the readers should be able to understand the relationships of the subject with other subjects. Newer areas incorporated into the subject and the newer ways of comprehending its contents are to be highlighted in the introduction. The methodologies applied in the derivation of its laws are to be stated in such an introduction.

Economics: Meaning

- The term or word 'Economics' comes from the Ancient Greek oikonomikos (oikos means "households"; and, nomos means "management", "custom" or "law"). Thus, the term 'Economics' means 'management of households'. The subject was earlier known as 'Political Economy', is renamed as 'Economics', in the late 19th century by Alfred Marshall.

Economics: Its Nature

- The nature of a subject refers to its contents and how and why they find a place in the subject. This nature is understood by studying the various definitions given by the notable economists. The existence of multiplicity of the definitions makes some scholars comment that a search for a clear definition of Economics is an exercise in futility. J. M. Keynes, for example, observes that "Political Economy is said to have strangled itself with definitions". Their presence makes studying a subject interesting, exciting, enjoyable, or worthwhile. In fact, their presence in a social science subject is a clear sign of the growth of the science. It indicates that there exists freedom for people associated with such as science to formulate fresh definitions.

These associates appreciate and make use of the opportunity afforded to them and come up with a plethora of definitions saying: 'The more, the merrier'. Each definition represents a unique generalisation. A wide variety of definitions paves the way to arrive a near-complete agreement on the subject-matter of Economics.

- A science grows stage by stage, and at every stage, its newer definition emerges and a concept associated with it receives some special emphasis. However, the study of a subject is made possible when it possesses its clear cut definition and boundary.

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1. Smith's Wealth Definition, representing the Classical era;
2. Marshall's Welfare Definition, representing the Neo-Classical era;
3. Robbins' Scarcity Definition, representing the New Age; and,
4. Samuelson's Growth Definition, representing the Modern Age.

Wealth Definition: Adam Smith

- Adam Smith (1723- 1790), in his book "An Inquiry into Nature and Causes of Wealth of Nations" (1776) defines "Economics as the science of wealth". He explains how a nation's wealth is created and increased. He considers that the individual in the society wants to promote his own gain and in this process, he is guided and led by an "invisible hand". He states that every man is motivated by his self interest This means that each person works for his own good.

- Smith favours the introduction of "division of labour" to increase the quantum of output. Severe competition in factories and society helps in bettering the product. Supply force is very active and a commodity is made available to the consumers at the lowest price.

The publication of Adam Smith's "The Wealth of Nations" in 1776, has been described as "the effective birth of economics as a separate discipline".

Criticism

- For Smith, Economics consists of 'wealthgetting' activities and 'wealth-spending' activities. An undue emphasis is given to material wealth. Wealth is treated to be an end in itself. This view leads him to ignore human welfare as an essential part of Economics. Smith gives his definition when religious and spiritual values are held high. Ruskin and Carlyle regard Economics as a 'dismal science', "pig science" etc. as it teaches selfishness which is against ethics.

Welfare Definition: Alfred Marshall

- Alfred Marshall (1842-1924) in his book "Principles of Economics" (1890) defines Economics thus: "Political Economy" or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well-being. Thus, it is on one side a study of wealth; and on the other, and more important side, a part of the study of man."

The important features of Marshall's definition are:

- ❖ Economics does not treat wealth as the be-all and end-all of economic activities. Man promotes primarily welfare and not wealth.

- ❖ The science of Economics contains the concerns of ordinary people who are moved by love and not merely guided or directed by the desire to get maximum monetary benefit.
- ❖ Economics is a social science. It studies people in the society who influence one another.

Criticism

- Marshall regards only material things. He does not consider immaterial things, such as the services of a doctor, a teacher and so on. They also promote people's welfare.

- In the theory of wages, Marshall ignores the amount of money that goes as reward for the services of 'immaterial' services.

- Marshall's definition is based on the concept of welfare. But it is not clearly defined. Welfare varies from person to person, country to country and one period to another. Marshall clearly distinguishes between those things that are capable of promoting welfare of people and those things that are not. Things like liquor that are not capable of promoting welfare but command a price, come under the purview of Economics

- However, welfare means happiness or comfortable living conditions of an individual or group of people. The welfare of an individual or nation is dependent not only on the stock of wealth possessed but also on political, social and cultural activities of the nation.

Scarcity Definition: Lionel Robbins

- Lionel Robbins published a book "An Essay on the Nature and Significance of Economic Science" in 1932. According to him, "Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses".

The major features of Robbins' definition are:

- Ends refer to human wants. Human beings have unlimited number of wants.

- On the other hand, resources or means that go to satisfy the unlimited human wants are limited or scarce in supply. The scarcity of a commodity is to be considered only in relation to its demand.

- Further, the scarce means are capable of having alternative uses. Hence, an individual grades his wants and satisfies first his most urgent want. Thus, Economics, according to Robbins, is a science of choice.

Criticism

- Robbins does not make any distinction between goods conducive to human welfare and goods that are not. In the production of rice and alcoholic drink, scarce resources are used. But the production of rice promotes human welfare, while that of alcoholic drinks does not. However, Robbins concludes that Economics is neutral between ends.

- Economics deals not only with the micro-economic aspects of resourceallocation and the determination of the price of a commodity, but also with the macro-economic aspects like how national income is generated. But, Robbins reduces Economics merely to theory of resource allocation.

- Robbins' definition does not cover the theory of economic growth and development.

Growth Definition: Samuelson

- Paul Samuelson defines Economics as "the study of how men and society choose, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities over time, and distribute them for consumption, now and in the future among various people and groups of society".

The major implications of this definition are as follows:

- Like Robbins, Samuelson states that the means are scarce in relation to unlimited ends and that such means could be put to alternative uses.

- Samuelson makes his definition dynamic by including the element of time in it. Therefore, his definition covers the theory of economic growth.

- Samuelson's definition is applicable also in a barter economy, where money is not used.

- His definition covers various aspects like production, distribution and consumption.

- Samuelson treats Economics as a social science, whereas Robbins regards it as a science of individual behaviour.

- Of all the definitions discussed above, the 'growth' definition stated by Samuelson appears to be the most satisfactory.

Scope of Economics

- The scope of the subject of Economics refers to on the subject-matter of Economics. It throws light on whether it is an art or a science and if science, whether it is a positive science or a normative science.

Economics: Its subject-Matter

- Economics focuses on the behaviour and interactions among economic agents, individuals and groups belonging to an economic system. It deals with the activities such as the consumption and production of goods and services and the distribution of income among the factors of production. The activities of the rational human beings in the ordinary business of life under the existing social, legal and institutional arrangement are included in the Science of Economics; the abnormal persons and the socially unacceptable and unethical activities are excluded.

- Economics studies the ways in which people use the available resources to satisfy their multiplicity of wants. Scarcity is a problem indicating the gap between what people want and what they are able to get. This scarcity can be eliminated either by limiting the human wants or by increasing the supply of the goods that satisfy the human wants. The method of getting more is resorted to, rather than the method of wanting less.

- Economics is concerned with activities of human being only. Human beings are related to one another and the actions of one member

affect those of the other members in the society. Hence, Economics is called a Human Science or Social Science.

- The activities of rational or normal human beings are the subject-matter of Economics.

- All human activities related to wealth constitute the subject-matter of Economics. Thus, human activities not related to wealth (non-economic activities) are not treated in Economics. For example, playing cricket for pleasure, mother's child care.

- It is customary to clarify whether Economics is an art or a science; and if it is a science, to observe its specific features.

Economics is an Art and a Science
Economics as an Art

- Art is the practical application of knowledge for achieving particular goals. Economics provides guidance to the solutions to all the economic problems.

- C. Pigou, Alfred Marshall and others regard Economics as an art.

Economics as a Science

- Science is a systematic study of knowledge. All its relevant facts are collected, classified and analyzed with its scale of measurement. Using these facts, science develops the co-relationship between cause and effect. Scientific laws derived are tested through experiments; and future predictions are made. These laws are universally applicable and accepted. Economists like Robbins, Jordon and Robertson argue that Economics is a science like Physics, Chemistry etc., since, it has several similar characteristics. Economics examines the relationships between the causes and the effects of the problems. Hence, it is rightly considered as both an art and a science. In fact, art and science are complementary to each other.

Economics: Positive science Normative science

- Positive science deals with what it is, means, it analyses a problem on the basis of facts and examines its causes. For example, at the time of a price increase, its causes are analysed.

- On the other hand, normative science responds to a question like what ought to be. Here, the conclusions and results are not based on facts, but on different considerations belonging to social, cultural, political, religious realms. They are basically subjective in nature.

- In short, positive science is concerned with 'how? and why?' and normative science with 'what ought to be'. The distinction between the two can be explained. An increase in the rate of interest, under positive science, would be looked into as to why and how can it be reduced, whereas under normative science, it would be seen as to whether it is good or bad.

Three statements about each type are given below:
Positive Economics

- ❖ An increase in money supply implies a price-rise in an economy.

- ❖ As the irrigation facilities and application of chemical fertilizers expand, the production of food-grains increases.

- ❖ An increase in the birth rate and a decrease in the death rate reflect the rate of growth of population.

Normative Economics

- ❖ Inflation is better than deflation.

- ❖ More production of luxury goods is not good for a less-developed country.

- ❖ Inequalities in the distribution of wealth and incomes should be reduced.

Basic Concepts in Economics

- Like other sciences, Economics also has concepts to explain its theories. A complete and clear grasp of their meaning is necessary when the theories associated with them are studied. Only a preliminary acquaintance is now attempted here.

Goods and Services

- Both goods and services satisfy human wants. In Economics, the term 'goods' implies the term 'services' also, unless specified otherwise. Goods (also called 'products', 'commodities', 'things' etc)

  - ❖ as material things, they are tangible;
  - ❖ have physical dimensions, i.e., their physical attributes can be preserved over time;
  - ❖ exist independently of their owner;
  - ❖ are owned by some persons;
  - ❖ are transferable;
  - ❖ have value-in exchange;

Ki nds of Goods (and Services)
Free and Economic goods

- Free goods are available in nature and in abundance. Man does not need to incur any expenditure to own or use them. For example air, and sun shine. Water was also an example in the past, but at present it has exchange value. So it is not a free good.

- Milton Friedman, a Nobel laureate, popularises a saying: "There is no such thing as a free lunch". He means that it is impossible to get something for nothing. Even those offered 'free' always costs a person or the society as a whole. Its cost, however, is hidden. It is an externality. Someone can benefit from an externality or from a public

good, but someone-else has to pay the cost of producing these benefits. In Economics, it refers to 'opportunity cost'.

- On the other hand, economic goods are not available in plenty. They are scarce in supply. Man has to spend money to own or use them.

Consumer goods and Capital goods:

- Consumer goods directly satisfy human wants, TV, Furniture, Automobile etc.

- Capital-goods (also called producer's goods) don't directly satisfy the consumer wants. They help to produce consumer goods. For example, machines do not directly satisfy the consumers, but in factories, the manufacturers need them.

Perishable goods and Durable goods:

- Perishable goods are short-lived. Their life-span is limited. For example fish, fruits, flower etc do not have a long life.

- Durable goods and semi-durable goods have a little longer life-time than the Perishable goods. For example, a table, a chair etc.

Services

- Along with goods, services are produced and consumed. They are generally, possess the following:

Intangible:

- Intangible things are not physical objects but exist in connection to other things, for example, brand image, goodwill etc. But today, the intangible things are converted and stored into tangible items such as recording a music piece into a pen-drive. They are marketed as a good.

Heterogeneous:

- Services vary across regions or cultural backgrounds. They can be grouped on the basis of quality standards. A single type service yields multiple experiences. For example, music, consulting physicians etc.

Inseparable from their makers:

- Services are inextricably connected to their makers. For example, labour and labourer are inseparable; and,

Perishable:

- Services cannot be stored as inventories like assets. For example, it is useless to possess a ticket for a cricket-match once the match is over. It cannot be stored and it has no valuein- exchange.

Utility

Meaning

- 'Utility' means 'usefulness'. In Economics, utility is the wantsatisfying power of a commodity or a service. It is in the goods and services for an individual consumer at a particular time and at a particular place.

Characteristics of Utility

- Utility is psychological. It depends on the consumer's mental attitude. For example, a vegetarian derives no utility from mutton;

- Utility is not equivalent to usefulness. For example, a smoker derives utility from a cigarette; but, his health gets affected;

- Utility is not the same as pleasure. A sick person derives utility from taking a medicine, but definitely, it is not providing pleasure;

- Utility is personal and relative. An individual obtains varied utility from one and the same good in different situations and places;

- Utility is the function of the intensity of human want. An individual consumer faces a tendency of diminishing utility;

- Utility is a subjective concept it cannot be measured objectively and it cannot be measured numerically;

- Utility has no ethical or moral significance. For example, a cook derives utility from a knife using which he cuts some vegetables; and, a killer wants to stab his enemy by that knife. In Economics, a commodity has utility, if it satisfies a human want;

Types of Utility

- The following are the types of utility

Form Utility:

- An individual consumer obtains utility from a good or service only when it is available in a particular form. Raw materials in their original form may not possess utility for a consumer. But in their changed forms as they become finished products, they provide utility to him. For example, cotton as a raw material may not possess utility for a consumer; but as it gets a new form as a cloth, it yields the consumer utility.

Time Utility:

- A sick man derives time utility from blood not at the time of its donation, but only at the operation-time, i.e., when it is used.

Place Utility:

- A student derives place utility from a book not at the place of its publication (production centre) but only at the place of his education (consumption centre).

Service Utility:

- An individual consumer derives service utility from a service made available at the time when he most needs it. For example, clients obtain service utility from their lawyers, patients derive service utility from the doctors and so on.

Possession Utility:

- When a student buys a book or dictionary from a book seller, then only it gives utility.

Knowledge Utility:

- It is the utility derived by having knowledge of a particular thing. Advertisement serves as a source of information on an object.

Measurability of Utility

- Wants of a person are satisfied by the act of consumption. The consumer derives utility, measured in terms of 'Utils'. An 'Util' is a unit of measurement of utility. An individual pays a price for the unit of the good, equal to the utility derived. Marshall states that utility can be measured indirectly using the 'measuring rod of money'.

Price

- Price is the value of the good expressed in terms of money. Price of a good is fixed by the forces of demand for and supply of the good. Price determines what goods are to be produced and in what quantities. It also decides how the goods are to be produced.

Market

- Generally, market means a place where commodities are bought and sold. But, in Economics, it represents

- where buyers and sellers enter into an exchange of goods and services over a price.

Cost

- Cost refers to the expenses incurred to produce or acquire a given quantum of a good. Together with revenue, it determines the profit gained or the loss incurred by a firm.

Revenue

- Revenue is income obtained from the sale of goods and services. Total Revenue (TR) represents the money obtained from the sale of all the units of a good. Thus, TR = P × Q, where TR is Total Revenue; P is the price per unit of the good; and, Q is the Total Quantity of the goods sold.

Equilibrium Diagram

Stable Equilibrium

- Prof. Stigler states that "equilibrium is a position from which there is no net tendency to move". Its absence is referred to as disequilibrium. Consumer's equilibrium occurs when he gets maximum satisfaction. The equilibrium of the Producer occurs when he gets maximum profit. A resource is in equilibrium when it gets fully employed and gets its maximum payment. Thus, static equilibrium is based on given and constant prices, quantities, income, technology, population etc.

Particular Equilibrium and General Equilibrium

- An equilibrium, when it pertains to a single variable, may be called particular equilibrium.

- An equilibrium, on the other hand, when it relates to numerous variables or even the economy as a whole, may be called general equilibrium.

Income

- Income represents the amount of monetary or other returns, either earned or unearned small or big, accruing over a period of time to an economic unit. Nominal income refers to income, expressed in terms of money. It is termed as the money income. Real income is the amount of goods that can be purchased with money as income. It is the purchasing power of income which is based on the rate of inflation.

Methods of Economics, Facts, Theories and Laws
Methods of Economics Deduction and Induction

- Like any other science, Economics also has its laws or generalisations. These laws govern the activities in the various divisions of Economics such as Consumption, Production, Exchange and Distribution. The logical process of arriving at a law or generalization in a science is called its method.

Economics uses two methods: deduction and induction.
Deductive Method of Economic Analysis

- It is also named as analytical or abstract method. It consists in deriving conclusions from general truths; it takes few general principles and applies them to draw conclusions. The classical and neo-classical school of economists notably, Ricardo, Senior, J S Mill, Malthus, Marshall, Pigou, applied the deductive method in their economic investigations.

Steps of Deductive Method

- The analyst must have a clear and precise idea of the problem to be inquired into.

- The analyst clearly defines the technical terms used in the analysis. Further, assumptions of the theory are to be precise.

Deduce hypothesis from the assumptions taken.

- Hypotheses should be verified through direct observation of events in the real world and through statistical methods. (eg) There exists an inverse relationship between price and quantity demanded of a good.

Inductive Method of Economic Analysis

- Inductive method, also called empirical method, is adopted by the "Historical School of Economists". It involves the process of reasoning from particular facts to general principle.

Economic generalizations are derived in this method, on the basis of

1. Experimentations;
2. Observations; and,
3. Statistical methods.

- Data are collected about a certain economic phenomenon. These are systematically arranged and the general conclusions are drawn from them.

  By observing the data, conclusions are easily drawn.

  Generalization of the data and then Hypothesis Formulation

  Verification of the hypothesis (eg.Engel's law)

- Economists today are of the view that both these methods are complementary. Alfred Marshall has rightly remarked: "Inductive and Deductive methods are both needed for scientific thought, as the right and left foot are both needed for walking".

Economics: Facts, Theories

- Using the methods, the economist observes facts, such as, changes in the price of a commodity. Similarly, the quantity demanded of that commodity also varies. And he observes these movements and comes up with a theory that these two movements are inversely related, i.e.,when the price increases, the quantity demanded of that

commodity decreases and vice versa. Thus, he formulates his theory of demand.

- He tests his theory by collecting further facts and when his theory stands the test of time and obtains universal acceptance, the theory is raised to the status of a law.

Nature of Economic Laws

- A Law expresses a causal relation between two or more than two phenomena. Marshall states that the Economic laws are statement of tendencies, and those social laws, which relate to those branches of conduct in which the strength of the motives chiefly concerned can be measured by money price.

- In natural sciences, a definite result is expected to follow from a particular cause. In Economic science, the laws function with cause and effect. The consequences predicted by the data, necessarily and invariably follow.

- However, Economic laws are not as precise and certain as the laws in the physical sciences. Marshall holds the opinion that there are no laws of economics which can be compared for precision with the law of gravitation.

Importance of Micro Economics

- ❖ To understand the operation of aneconomy
- ❖ To provide tools for economicpolicies
- ❖ To examine the condition ofeconomic welfare
- ❖ Efficient utilization of resources
- ❖ Useful in international trade
- ❖ Useful in decision making:

- ❖ Optimal resource allocation
- ❖ Basis for prediction
- ❖ Price determination

- A physical scientist carrying out controlled experiments in his laboratory can test the scientific laws very easily by changing the conditions obtaining there. Changes in Economics science cannot be brought about easily. As a result, prediction regarding human behaviour is likely to go wrong. There are exceptions to the Law of Demand. Thus, economic laws are not inviolable.

- As unpredictability is invariably associated with the economic laws. Marshall compares them to the laws of tides. Just as it cannot be predicted and said with certainty that a high tide would follow a low tide, unpredictability prevails in Economics. Human behaviour is volatile. Economic laws are not assertive but they are indicative. The Law of Demand, for example, states that other things remaining the same, the quantity demanded of a commodity increases, as its price decreases and vice versa.

- The use of the assumption 'other things remaining the same' (ceteris paribus) in Economics makes the Economic laws hypothetical. It might be argued that the laws in other sciences can also be called hypothetical. It should be admitted however that in the case of Economics, the hypothetical elements in its laws are a little less pronounced than in the laws of physical sciences.

- But since money is used as the measuring rod, laws in economics are more exact, precise and accurate than the other social sciences. As the value of the measuring- rod money is not constant, there is always an hypothetical element surrounding the laws of Economics.

- Some economic laws are simply truisms. For example, saving is a function of income. Another example of truism is: human wants are unlimited.

Economics: Its sub Divisions

- Economics has been divided into some branches.

Consumption

- Human wants coming under consumption is the starting point of economic activity. In this section the characteristics of human wants based on the behaviour of the consumer, the diminishing marginal utility and consumer's surplus are dealt with.

Production

- Production is the process of transformation of inputs into output. This division covers the characteristics and role of the factors of production namely Land, Labour, Capital and Organization and also the relationship between inputs and output.

Exchange

- Exchange is concerned with price determination in different market forms. This division covers trade and commerce. Consumption is possible only if the produced commodity is placed in the hands of the consumer.

Distribution

- Production is the result of the coordination of factors of production. Since a commodity is produced with the efforts of land, labour, capital and organization, the produced wealth has to be distributed among the cooperating factors. The reward for factors of production is studied in this division under rent, wages, interest and profit. Distribution studies about the pricing of factors of production.

Economics: Its Types

- Economics is a rapidly growing subject and its horizon has been expanding. The basic thrust of the subject is that there should be efficient allocation of the available scarce resources to obtain maximum welfare to the people on a sustainable basis. Given below

are some of the major branches of the subject, where such efficient resource allocation is made.

Micro-economics

- Micro Economics is the study of the economic actions of individual units say households, firms or industries. It studies how business firms operate under different market conditions and how the combined actions of buyers and sellers determine prices. Micro economics covers

  ❖ Value theory (Product pricing and factor pricing)

  ❖ Theory of economic welfare

Macro-economics

- Macro economics is the obverse of micro economics. It is concerned with the economy as a whole. It is the study of aggregates such as national output, inflation, unemployment and taxes. The General Theory of Employment, Interest and Money published by Keynes is the basis of modern macro economics.

Difference between Micro Economics and Macro Economics

Micro Economics	Macro Economics
It is that branch of economics which deals with the economic decisionmaking of individual economic agents such as the producer, the consumer etc.	It is that branch of economics which deals with aggregates and averages of the entire economy. E.g., aggregate output, national income, aggregate savings and investment, etc.
It takes into account small components of the whole economy.	It takes into consideration the economy of the country as a whole.
It deals with the process of price determination in case of individual products and factors of production.	It deals with general price-level in any economy.
It is known as price theory	It is also known as the income

	theory.
It is concerned with the optimization goals of individual consumers and producers	It is concerned with the optimization of the growth process of the entire economy.

International Economics

- In the modern world, no country can grow in isolation. Every country is having links with the other countries through foreign capital, investment (foreign direct investment) and international trade.

Public Economics

- Public finance is concerned with the income or revenue raising and expenditure incurring activities of the public authorities and with the adjustment of the one with the other. The scope of Public Finance covers Public expenditure, Public revenue, Public debt and financial administration.

Developmental Economics

- The countries have been classified into developed, developing and under developed on the criteria of per capita income, Human Development Index and Happiness Index. The Development Economics deals with features of developed nations, obstacles for development, Economic and Non-economic factors influencing development, various growth models and strategies.

Health Economics

- Health Economics is an area of applied economics. It covers health indicators, preventive and curative measures, medical research and education, Rural Health Mission, Drug Price control, Neo natal care, Maternity and Child health, Budgetary allocation for health etc.

Environmental Economics

- Depletion of natural resources stock and pollution result from rapid economic development. Hence the need for the study of Environmental Economics which analyses the inter relationship between economy and environment. Environmental Economics is a study of inter disciplinary tools for the problems of ecology, economy and environment.

Basic Economic Problems

- If resources are abundant and wants are so few, then there would be no economic problem. But this situation can never exist. Resources are always scarce and our wants are numerous. Hence in every society certain choices have to be made.

The Economic problem

- ❖ Wants, desires, unlimited
- ❖ Resources Scarce not freely available
- ❖ Economic choice
- ❖ Economics
  How people use resources to satisfy unlimited wants.

What and how much to produce?

- Every society must decide on what goods it will produce are and how much of these it will produce. In this process, the crucial decisions include:
  - ❖ Whether to produce more of food, clothing and housing or to have more luxury goods
  - ❖ Whether to have more agricultural goods or to have industrial goods and services

- ❖ Whether to use more resources in education and health or to use more resources in military services

- ❖ Whether to have more consumption goods or to have investment goods

- ❖ Whether to spend more on basic education or higher education

How to Produce?

- Every society has to decide whether it will use labour-intensive technology on capital intensive technology; that is whether to use more labour and less more machines and vice versa.

For whom to produce?

- Every society must also decide how its produce be distributed among the different sections of the society. It must also decide who gets more and who gets less. It should also decide whether or not a minimum amount of consumption be ensured for everyone in the society. Due to the scarcity of resources, a society faces the compulsion of making choice among alternatives. It faces the problem of allocating the scare resources to the production of different possible goods and services and of distributing the produced goods and services among individuals within the economy.

Production Possibility Curve

- The problem of choice between relatively scarce commodities due to limited productive resources with the society can be illustrated with the help of a geometric device, is known as production possibility curve. Production possibility curve shows the menu of choice along which a society can choose to substitute one good for another, assuming a given state of technology and given total resources.

- The explanation and analysis of production possibility curve is based upon certain assumptions, some of them are following

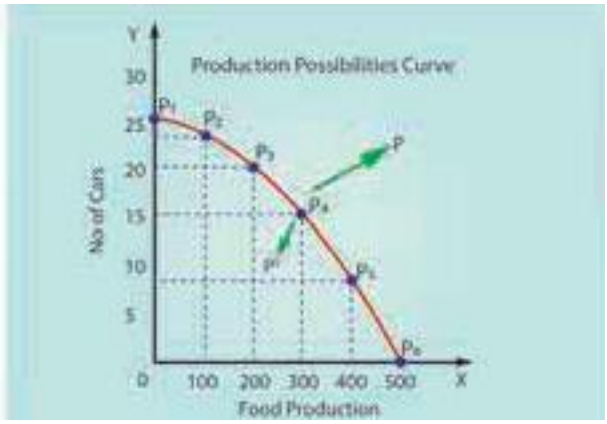
- ❖ The time period does not change. It remains the same throughout the curve.
- ❖ Techniques of production are fixed.
- ❖ There is full employment in the economy
- ❖ Only two goods can be produced from the given resources.
- ❖ Resources of production are fully mobile.
- ❖ The factors of production are given in quantity and quality
- ❖ The low of diminishing returns operates in production.

- Every production possibility curve is based upon these assumptions. If some of these assumptions changes or neglected, then it affects the nature of production possibility curve.

- To draw this curve we take the help of production possibilities schedule, as shown below.

- This schedule suggests that if all resources are thrown into the production of food, a maximum of 500 tons of food can be produced, given the existing technology. If on the other hand, all resources are instead used for producing cars, 25 cars can be produced. In between these two extreme possibilities exist. If we are willing to give up some food, we can have some cars.

- We can obtain a production possibility curve by drawing production possibilities schedule graphically. The quantity of food is shown on x-axis and the number of cars is shown on y-axis, the different six production possibilities are being shown as point P1 P2 P3 P4 P5 & P6



Food production

- If we assume that innumerable production possibilities exist between any two production possibilities schedule, we get the production possibility curve P1 to p6. This shows the locus of points of the different possibilities of production of two commodities, which a firm or an economy can produce, with the help of given resources and the techniques of production. Points outside the production possibility (e.g. point p) are unattainable as society's resources of production are not sufficient to give output beyond the curve. Points lying inside the curve like p1 are attainable by the society but at these points resources production are not fully employed. For example, if society is producing at point p7 then it can increased the production of food keeping the no of cars constant or it can increase the production of cars keeping the food grain output constant or it can increased the output of both the goods simultaneously.

The PPC shifts upward or downward due to:

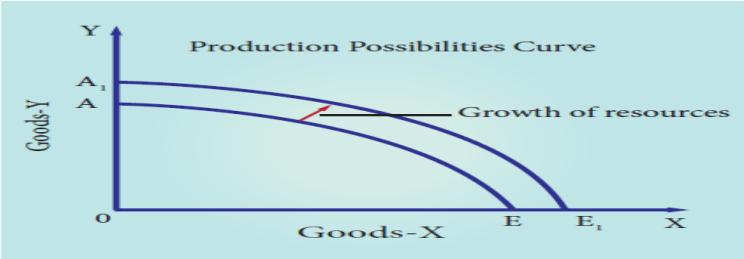
1. The change in the supply of productive resources and

2. The change in the state of technology.

- The production capacity of an economy grows overtime through increase in resource supplies and improvement of technology. This enables PPC to shift upward from AE to A1E1 as shown in figure below. This outward shift of the PPC is the basic feature of economic growth.

Uses of production possibility curve

- Through the device of PPC can be used for many analytical purposes. We shall discuss below some of its popular uses.



The problem of choice

- The problem of choice arise because of the given limited resources and unlimited wants, may relate to the allocation of resources between the goods for the higher income group and the lower income group and the goods for the defense and the civilians. Since PPC is the locus of the combination of the goods the problem of choice will not arises when we choose any point on PPC.

The Notion of Scarcity

- We can explain the notion of scarcity with the help of PPC. We know that every society possesses only a specific amount of resources, which can produce only limited amount of output even with the help of best technology, Economic scarcity of best fact of life. The production possibility curve reflects the constraints imposed by the element of economic scarcity.

Solution of central problems

- The central problems of an economy can be explained with the help of PPC. The solution of problem of what to produce involves the decision regarding the choice of location on the production possibility carves. A production combination represented by any point inside the PPC indicates that the economy is using inefficient methods of production and inefficient combination of resources.

Conclusion

- This chapter has given a broad overview of economics. Moreover the present certain common characteristics of economics definitions of Wealth, Welfare, Scarcity & Growth free essential questions an economy must solve; what to produce, how to produce and for whom to produce and also looked at division of economics, distinguishing between Micro and Macroeconomics. It has introduced some basic concepts frequently appearing throughout the lessons.

- It is perhaps both importance, the study of economics is an intellectually fascinating adventure highly relevant and it affects people's life. Every now and then after learning lesson, think of economic activities in and around you. Perhaps in this way learning of economics makes to think like an economist.

Unit -7
Indian Economy

Meaning of Growth and Development

- A country's economic growth is usually measured by National Income, indicated by Gross Domestic Product (GDP). The GDP is the total monetary value of the goods and services produced by that country over a specific period of time, usually one year.

- The level economic development is indicated not just by GDP, but by an increase in citizens' quality of life or well-being. The quality of life is being assessed by several indices such as Human Development Index (HDI), Physical Quality of Life Index (PQLI) and Gross National Happiness Index (GNHI).

Gross National Happiness Index (GNHI)
The term "Gross National Happiness" was coined by the fourth king of Bhutan, Jigme Singye Wangchuck, in 1972. It is an indicator of progress, which measures sustainable development, environmental conservation promotion of culture and good governance.

- On the basis of the level of economic development, nations are classified as developed and developing economies.

- Developed economies are those countries which are industrialised, utilise their resources efficiently and have high per capita income. The USA, Canada, U.K, France, and Japan are some of the developed economies. Developed economies are also termed as Advanced Countries. On the other hand, countries which have not fully utilized their resources like land, mines, workers, etc., and have low per capita income are termed as under developed economies. Examples of underdeveloped countries are Sub Saharan Africa, Bangla Desh, Myanmar, Pakistan, Indonesia etc. They are also termed as Undeveloped Countries or Backward Nations or Third World Nations.

Indian Economy

- Indian economy is the Seventh largest economy of the world. Being one of the top listed countries. In terms of industrialization and economic growth, India holds a robust position with an average growth rate of 7% (approximately).

- Even though the rate of growth has been sustainable and comparatively stable, there are still signs of backwardness.

Features of a Developed Economy

1. High National Income
2. High Per Capita Income
3. High Standard of Living
4. Full Employment of Resources
5. Dominance of Industrial Sector
6. High Level of Technology
7. High Industrialisation
8. High Consumption Level
9. High Level of Urbanisation
10. Smooth Economic Growth
11. Social Equity, Gender Equality and Low Levels of Poverty
12. Political Stability and Good Governance

The diametrically opposite features of Indian Economy are discussed below in detail.

Features of Indian Economy
Strengths of Indian Economy

India has a mixed economy

- Indian economy is a typical example of mixed economy. This means both private and public sectors co-exist and function smoothly. On one side, some of the fundamental and heavy industrial units are being operated under the public sector, while, due to the liberalization of the economy, the private sector has gained importance. This makes it a perfect model for public – private partnership.

Agriculture plays the key role

- Agriculture being the maximum pursued occupation in India, it plays an important role in its economy as well. Around 60% of the people in India depend upon agriculture for their livelihood. In fact, about 17% of our GDP today is contributed by the agricultural sector. Green revolution, ever green revolution and inventions in bio technology have made agriculture self sufficient and also surplus production. The export of agricultural products such as fruits, vegetables, spices, vegetable oils, tobacco, animal skin, etc. also add to forex earining through international trading.

An emerging market

- India has emerged as vibrant economy sustaining stable GDP growth rate even in the midst of global downtrend. This has attracted significant foreign capital through FDI and FII. India has a high potential for prospective growth. This also makes it an emerging market for the world.

Emerging Economy

- Emerging as a top economic giant among the world economy, India bags the seventh position in terms of nominal Gross Domestic Product (GDP) and third in terms of Purchasing Power Parity (PPP).

As a result of rapid economic growth Indian economy has a place among the G20 countries.

Fast Growing Economy

- India's economy is well known for high and sustained growth. It has emerged as the world's fastest growing economy in the year 2016-17 with the growth rate of 7.1% in GDP next to People's Republic of China.

Fast growing Service Sector

- The service sector, contributes a lion's share of the GDP in India. There has been a high rise growth in the technical sectors like Information Technology, BPO etc. These sectors have contributed to the growth of the economy. These emerging service sectors have helped the country go global and helped in spreading its branches around the world.

Large Domestic consumption

- With the faster growth rate in the economy the standard of living has improved a lot. This in turn has resulted in rapid increase in domestic consumption in the country. The standard of living has considerably improved and life style has changed.

Rapid growth of Urban areas

- Urbanization is a key ingredient of the growth of any economy. There has been a rapid growth of urban areas in India after independence. Improved connectivity in transport and communication, education and health have speeded up the pace of urbanization.

Stable macro economy

- The Indian economy has been projected and considered as one of the most stable economies of the world. The current year's Economic survey represents the Indian economy to be a "heaven of macroeconomic stability, resilience and optimism. According to the Economic Survey for the year 2014-15, 8%-plus GDP growth rate has

been predicted, with actual growth turning out to be a little less (7.6%). This is a clear indication of a stable macroeconomic growth.

Demographic dividend

- The human capital of India is young. This means that India is a pride owner of the maximum percentage of youth. The young population is not only motivated but skilled and trained enough to maximize the growth. Thus human capital plays a key role in maximizing the growth prospects in the country. Also, this has invited foreign investments to the country and outsourcing opportunities too.

Weakness of Indian Economy
Large Population

- India stands secondin terms of size of population next to China and our country is likely to overtake china in near future. Population growth rate of India is very high and this is always a hurdle to growth rate. The population growth rate in India is as high as 1.7 per 1000.The annual addition of population equals the total population of Australia.

Inequality and poverty

- There exists a huge economic disparity in the Indian economy. The proportion of income and assets owned by top 10% of Indians goes on increasing. This has led to an increase in the poverty level in the society and still a higher percentage of individuals are living Below Poverty Line (BPL). As a result of unequal distribution of the rich becomes richer and poor becomes poorer.

Increasing Prices of Essential Goods

- Even though there has been a constant growth in the GDP and growth opportunities in the Indian economy, there have been steady increase in the prices of essential goods. The continuous rise in prices erodes the purchasing power and adversely affects the poor people, whose income is not protected.

Weak Infrastructure

- Even though there has been a gradual improvement in the infrastructural development in the past few decades, there is still a scarcity of the basic infrastructure like power, transport, storage etc.

Inadequate Employment generation

- With growing youth population, there is a huge need of the employment opportunities. The growth in production is not accompanied by creation of job. The Indian economy is characterized by 'jobless growth'.

Outdated technology

- The level of technology in agriculture and small scale industries is still outdated and obsolete.

Demographic trends in India

- Scientific study of the characteristics of population is known as Demography. The various aspects of demographic trends in India are:

  - **Size of population**
  - **Rate of growth**
  - **Birth and death rates**
  - **Density of population**
  - **Sex-ratio**
  - **Life-expectancy at birth**
  - **Literacy ratio**

Size of Population

Census Year	Population (in crores)	Average annual growth rate
1901	23.84	-
1911	25.21	0.56
1921	25.13	-0.03
1931	27.90	1.04

1941	31.87	1.33
1951	36.11	1.25
1961	43.92	1.96
1971	54.81	2.20
1981	68.33	2.22
1991	84.33	2.16
2001	102.70	1.97
2011	121.02	1.66

- Over a period of 100 years, India has quadrupled its population size. In terms of, size of population, India ranks 2nd in the world after China. India has only about 2.4% of the world's geographical area and contributes less than 1.2% of the world's income, but accommodates about 17.5% of the world's population. In other words, every 6th person in the world is an Indian. Infact, the combined population of just two states namely, Uttar Pradesh and Maharashtra is more than the population of United States of America, the third most populous country of the world. Some of the states in India have larger population than many countries in the world.

- The negative growth during 1911-21 was due to rapid and frequent occurrence of epidemics like cholera, plague and influenza and also famines. The year 1921 is known as the 'Year of Great Divide' for India's population as population starts increasing.

- During 1951, population growth rate has come down from 1.33% to 1.25%. Hence it is known as 'Year of Small divide'.

- In 1961, population of India started increasing at the rate of 1.96% i.e, 2%. Hence 1961 is known as 'Year of Population Explosion'. In the year 2001, the Population of India crossed one billion (100 crore) mark.

- The 2011 census reveals growth of youth population which is described as 'demographic transition'.

Birth rate and death rate
Crude Birth rate:

It refers to the number of births per thousand of population.

Crude Death rate:

- It refers to the number of deaths per thousand of population
- Crude birth and death rates of India during various years.

Birth rate and death rate

Year	C.B.R	C.D.R.
1951	39.9	27.4
2001	25.4	8.4
2011	21.8	7.11

- Birth rate was 39.9 in 1951; it fell to 21.8 in 2011. Although the birth rate has declined, the decline is not so remarkable. The death rate has declined from 27.4 in 1951 to 7.1 in 2011. However, from the data it is clear that the fall in birth rates is less than that of death rates.
- Kerala has the lowest birth rate (14.7) and Uttar Pradesh has the highest birth rat (29.5). West Bengal has the lowest death rate (6.3) and Orissa (9.2) has the highest. Among States Bihar has the highest decadal (2001-11) growth rate of population, while Kerala has the lowest growth rate. The four states Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh called BIMARU states have very high population.

Density of population

- It refers to the average number of persons residing per square kilometre. It represents the man- land ratio. As the total land area remains the same, an increase in population causes density of population to rise.

Density of population

Year	Density of population (No. of persons per sq. km)
1951	117
2001	325
2011	382

- Just before Independence, the density of population was less than 100. But after independence, it has increased rapidly from 117 in 1951 to 325 in 2001. According to 2011 census, the present Density of population is 382. Thus, the pressure of population on land has been rising. Kerala, West Bengal, Bihar and Uttar Pradesh have density higher than the India's average density. Bihar is the most densely populated state in the country with 1,102 persons living per sq.km followed by West Bengal with 880. Arunachal Pradesh has low density of population of only 17 persons.

Sex ratio

- It refers to the number of females per 1,000 males. It is an important indicator to measure the extent of prevailing equity between males and females at a given point of time.

Census year	Sex ratio (Number of females per 1000 males)
1951	946
2001	933
2011	940

- In India, the sex ratio is more favourable to males than to females. In Kerala, the adult sex ratio is 1084 as in 2011. The recent census (2011) shows that there has been a marginal increase in sex ratio. Haryana has the lowest sex ratio of 877 (2011) among other states, while Kerala provides better status to women as compared to other States with 1084 females per 1000 males.

Life expectancy at birth

- It refers to the mean expectation of life at birth. Life expectancy has improved over the years. Life expectancy is low when death rate is high and / or instances of early death are high. On the other hand, life expectancy is high when death rate is low and / or instances of early death are low.

Year	Male	Female	Overall
1951	32.5	31.7	32.1
1991	58.6	59.0	58.7
2001	61.6	63.3	62.5
2011	62.6	64.2	63.5

- During 1901 – 11, life expectancy was just 23 years. It increased to 63.5 years in 2011. A considerable fall in death rate is responsible for improvement in the life expectancy at birth. However the life expectancy in India is very low compared to that of developed countries.

Literacy ratio

- It refers to the number of literates as a percentage of the total population. In 1951, only one-fourth of the males and one-twelfth of the females were literates. Thus, on an average, only one-sixth of the people of the country were literates. In 2011, 82% of males and 65.5% of females were literates giving an overall literacy rate of 74.04% (2011). When compared to other developed countries and even Sri Lanka this rate is very low.

Census year	Literate persons	Males	Females
1951	18.3	27.2	8.9
2001	64.8	75.3	53.7
2011	74.04	82.1	65.5

- Kerala has the highest literacy ratio (92%) followed by Goa (82%), Himachal Pradesh (76%), Maharastra (75%) and Tamil Nadu (74%). Bihar has the lowest literacy ratio (53%) in 2011.

Natural Resources

- Any stock or reserve that can be drawn from nature is a Natural Resource. The major natural resources are - land, forest, water, mineral and energy. India is rich in natural resources, but majority of the Indians are poor. Nature has provided with diverse climate, several rivers for irrigation and power generation, rich minerals, rich forest and diverse soil.

Types of Natural resources

- Renewable Resources: Resources that can be regenerated in a given span of time. E.g. forests, wildlife, wind, biomass, tidal, hydro energies etc.

- Non-Renewable Resources: Resources that cannot be regenerated. E.g. Fossil fuelscoal, petroleum, minerals, etc.

Land Resources

- In terms of area India ranks seventh in the world with a total area of 32.8 lakh sq. km. It accounts for 2.42% of total area of the world. In absolute terms India is really a big country. However, land- man ratio is not favourable because of the huge population size.

- According to Agricultural Census, the area operated by large holdings (10 hectares and above) has declined and area operated under marginal holdings (less than one hectare) has increased. This indicates that land is being fragmented and become ineconomic.

Forest Resources

- India's forest cover in 2007 is 69.09 million hectare which constitutes 21.02 per cent of the total geographical area. Of this, 8.35 million hectare is very dense forest, 31.90 million hectare is moderately dense forest and the rest 28.84 million hectare is open forest.

Important Mineral Resources
Iron-Ore

- India possesses high quality iron-ore in abundance. The total reserves of iron-ore in the country are about 14.630 million tonnes of haematite and 10,619 million tonnes of magnetite. Hematite iron is mainly found in Chhattisgarh, Jharkhand, Odisha, Goa and Karnataka. The major deposit of magnetite iron is available at western coast of Karnataka. Some deposits of iron ore are also found in Kerala, Tamil Nadu and Andhra Pradesh.

Coal and Lignite

- Coal is the largest available mineral resource. India ranks third in the world after China and USA in coal production. The main centres of coal in India are the West Bengal, Bihar, Madhya Pradesh, Maharashtra, Odisha and Andhra Pradesh. Bulk of the coal production comes from Bengal-Jharkhand coalfields.

c. Bauxite

- Bauxite is a main source of metal like aluminium. Major reserves are concentrated in the East Coast bauxite deposits of Odisha and Andhra Pradesh.

Mica

- Mica is a heat resisting mineral which is also a bad conductor of electricity. It is used in electrical equipment's as an insulator. India stands first in sheet mica production and contributes 60% of mica trade in the world. The important mica bearing pegmatite is found in Andhra Pradesh, Jharkhand, Bihar and Rajasthan.

Crude Oil

- Oil is being explored in India at many places of Assam and Gujarat. Digboi, Badarpur, Naharkatia, Kasimpur, Palliaria, Rudrapur, Shivsagar, Mourn (All in Assam) and Hay of Khambhat, Ankaleshwar and Kalol (All in Gujarat) are the important places of oil exploration in India.

Gold

- India possesses only a limited gold reserve. There are only three main gold mine regions—Kolar Goldfeld, Kolar district and Hutti Goldfeld in Raichur district (both in Karnataka) and Ramgiri Goldfeld in Anantpur district (Andhra Pradesh).

Diamond

- As per UNECE the total reserves of diamond is estimated at around 4582, thousand carats which are mostly available in Panna(Madhya Pradesh),Rammallakota of Kurnur district of Andhra Pradesh and also in the Basin of Krishna River.

- The new Kimberlile fields have been discovered in Raipur and Pastar districts of Chhattisgarh, Nuapada and Bargarh districts of Odisha, Narayanpet - Maddur Krishna areas of Andhra Pradesh and Raichur-Gulbarga districts of Karnataka.

Economic Infrastructure

- Infrastructural development means the development of many support facilities. These facilities may be divided into (a) economic infrastructure and (b) social infrastructure. Economic infrastructure includes - transport, communication, energy, irrigation, monetary and financial institutions. Social infrastructure includes - education, training and research, health, housing and civic amenities.

Economic Infrastructure

- Economic infrastructure is the support system which helps in facilitating production and distribution. For instance, railways, trucks, posts and telegraph offices, ports, canals, power plants, banks, insurance companies etc. are all economic infrastructure of an economy. They help in the production of goods and services.

Transport

- For the sustained economic growth of a country, a well-connected and efficient Transport system is needed. India has a good network of rail, road, coastal shipping, and air transport. The total length of roads in India being over 30 lakh km, India has one of the largest road networks in the world. In terms of railroads, India has a broad network of railroad lines, the largest in Asia and the fourth largest in the world. The total rail route length is about 63,000 km and of this 13,000 km is electrified. The major Indian ports including Calcutta, Mumbai, Chennai, Vishakhapatnam and Goa handle about 90% of sea- borne trade and are visited by cargo carriers and passenger liners from all parts of the world. A comprehensive network of air routes connects the major cities and towns of the country. The domestic air services are being looked after by Indian Airlines and private airlines. The international airport service is looked after by Air India.

Indian Railways Provide Wi-Fi Facility First in India is Bangalore Railway Station

Air India and Indian Airlines were merged on August 27, 2007 to from National Aviation Company of India Ltd. (NACIL)

The National Harbour board was set up in 1950 to advise the Central and State Governments on the management and development of ports, particularly minor ports

Energy

- Electrical energy is one of the necessary components of our life. Nowadays, without electricity, we cannot survive in this world of technology. The energy sources are classified under two heads based on the availability of the raw materials used, while generating energy.

  1. Non-renewable energy sources
  2. Renewable energy sources

Non-renewable energy sources

- As the name suggests, the sources of energy which cannot be renewed or re-used are called non-renewable energy sources. Basically these are the energy sources which will get exhausted over a period of time. Some of the examples of this kind of resources are coal, oil, gas etc.

Renewable energy sources

- These are the kind of energy source which can be renewed or reused again and again. These kinds of materials do not exhaust or literally speaking these are available in abundant or infinite quantity. Example for this kind include **1. Solar energy 2. Wind energy 3. Tidal energy 4. Geothermal energy 5. Biomass energy** Sometimes renewable sources are also called non-conventional sources of energy since, these kinds of materials or these ways of energy production were not used earlier or conventionally.

Social Infrastructure

- Social infrastructure refers to those structures which are improving the quality of manpower and contribute indirectly towards the growth of an economy. These structures are outside the system of production and distribution. The development of these social structures help in increasing the efficiency and productivity of manpower. For example, schools, colleges, hospitals and other civic amenities. It is a fact that one of the reasons for the low productivity of Indian workers is the lack of development of social infrastructure. The status and developments in the social infrastructure in India are discussed below.

Education
Education in India

- Imparting education on an organized basis dates back to the days of 'Gurukul' in India. Since then the Indian education system has flourished and developed with the growing needs of the economy. The Ministry & Human Resource Development (MHRD) in India

formulates education policy in India and also undertakes education programs.

Education system in India

- Education in India until 1976 was the responsibility of the State governments. It was then brought under concurrent list (both Centre and State). The Centre is represented by the Ministry of Human Resource Development decides the India's education budget. The education system in India consists of primarily six levels:

    1. **Nursery Class,**
    2. **Primary Class,**
    3. **Secondary Level,**
    4. **Higher Secondary Level,**
    5. **Graduation, 6. Post-Graduation**

Education Institutions in India:

- Education in India follows the 10+2 pattern. For higher education, there are various State run as well as private institutions and universities providing a variety of courses and subjects. The accreditation of the universities is decided under the University Grant Commission Act. The Education Department consists of various schools, colleges and universities imparting education on fair means for all sections of the society. The budget share of the education sector is around 3% of GDP, of this largest proportion goes for school education. However, per pupil expenditure is the lowest for school students.

Health
a. Health in India

- Health in India is a state government responsibility. The Central Council Of Health and Welfare formulates the various health care projects and health department reform policies. The administration of health industry in India as well as the technical needs of the health sector are the responsibility of the Ministry Of Health And Welfare.

- Health care in India has many forms. These are the ayurvedic medicine practice, unani or galenic herbal care, homeopathy, allopathy, yoga, and many more. Each different healthcare form has its own treatment system and practice patterns. The medical practicing in India needs a proper licensing from the Ministry of Health. All medical systems are now under one ministry viz AYUSH.

Health Care Services in India:

- The health care services in India are mainly the responsibility of the Ministry of Health. State wise, health status is better in Kerala as compared to other States. Compared to other developed countries, India's health status is not satisfactory. India's health status is poor compared to Sri Lanka.

Contributions of Indian Economic Thinkers
Tiruvalluvar

- The economic ideas of Tiruvalluvar are found in his immortal work, Thirukkural, a book of ethics. Even though scholars differ widely over the estimation of the period of Tiruvalluvar, it is generally believed that, he belongs to the Sangam age in Tamil Nadu around third century A.D. Tiruvalluvar's work is marked by pragmatic idealism.

- A large part of Valluvar's economic ideas are found in the second part of Tirukkural, the porutpal. It deals with wealth. Tiruvalluvar is a fundamental thinker. He believes that rains are the basic support of life. Since rain provides food, it forms the basis for stable economic life. Agriculture which is the most fundamental economic activity depends on rain, "It is rain that both ruins and aids the ruined to rise".

Factors of Production

- Tiruvalluvar has made many passing references about the factors of production viz., Land, Labour, Capital, Organisation, Time, Technology etc. He says, "Unfailing harvest, competent body of men, group of men, whose wealth knows no diminution, are the components of an economy".(Kural 61)

Agriculture

- According to Tiruvalluvar, agriculture is the most fundamental economic activity. They are the axle-pin of the world, for on their prosperity revolves prosperity of other sectors of the economy, "The ploughmen alone", he says "live as the freemen of the soil; the rest are mere slaves that follow on their toil"(Kural 1032). Valluvar believes that agriculture is superior to all other occupation.

Public Finance

- Tiruvalluvar has elaborately explained Public Finance under the headings Public Revenue, Financial Administration and Public expenditure. He has stated these as 1) Creation of revenue, 2) Collection of revenue, 3) Management of revenue 4) Public expenditure

Public Expenditure

- Valluvar has recommended a balanced budget. "It is not a great misfortune for a state if its revenues are limited, provided the expenditure is kept within bounds." He has given certain guidelines for a budgetary policy. "Budget for a surplus, if possible, balances the budget at other times, but never budget for a deficit." Valluvar advocates the following main items of public expenditure: 1) Defence 2) Public Works and 3) Social Services.

External Assistance

- Valluvar was against seeking external assistance. According to Kural No. 739, countries taking external assistance are not to be considered as countries at all. In other words, he advocated a self-sufficient economy.

Poverty and Begging

- Valluvar considerers' freedom from hunger as one of the fundamental freedoms that should be enjoyed by every citizen. According to him 'poverty' is the root cause of all other evils which

would lead to ever-lasting sufferings. It is to be noted that the number of people living below poverty line, begging, sleeping on the roadsides and rag picking in India has been increasing.

Wealth

- Valluvar has regarded wealth as only a means and not an end. He said, "Acquire a great fortune by noble and honourable means." He condemned hoarding and described hoarded wealth as profitless richness. To him industry is real wealth and labour is the greatest resource.

Welfare State

- Tiruvalluvar is for a welfare state. In a welfare state there will be no poverty illiteracy, disease and industry. The important elements of a welfare state are 1) perfect health of the people without disease 2) abundant wealth, 3) good crop 4) prosperity and happiness and 5) full security for the people.

Mahatma Gandhi

- Gandhian Economics is based on ethical foundations. In 1921, Gandhi wrote, "Economics that hurts the moral well-being of an individual or a nation is immoral, and therefore, sinful." Again in 1924, he repeated the same belief: "that economy is untrue which ignores or disregards moral values".

Salient Features of Gandhian Economic Thought

1. **Village Republics:**

- To Gandhi, India lives in villages. He was interested in developing the villages as self-sufficient units. He opposed extensive use of machinery, urbanization and industrialization.

2. **On Machinery:**

- Gandhi described machinery as 'Great sin'. He said that "Books could be written to demonstrate its evils… it is necessary to realize that machinery is bad. Instead of welcoming machinery as a boon, we should look upon it as an evil. It would ultimately cease.

3. **Industrialism:**
   - Gandhi considered industrialism as a curse on mankind. He thought industrialism depended entirely on a country's capacity to exploit.

4. **Decentralization:**
   - He advocated a decentralized economy, i.e., production at a large number of places on a small scale or production in the people's homes.

5. **Village Sarvodaya:**
   - According to Gandhi, "Real India was to be found in villages and not in towns or cities." So he suggested the development of self-sufficient, self-dependent villages.

6. **Bread Labour:**
   - Gandhi realized the dignity of human labour. He believed that God created man to eat his bread by the sweat of his brow. Bread labour or body labour was the expression that Gandhi used to mean manual labour.

7. **The Doctrine of Trusteeship:**
   - Trusteeship provides a means of transforming the present capitalist order of society into an egalitarian one. It gives no quarter to capitalism. However, now India experiences both casino capitalism and crony capitalis

8. **On the Food Problem:**
   - Gandhi was against any sort of food controls. He thought such controls only created artificial scarcity. Once India was begging for food grain, but India tops the world with very large production of food grains, fruits, vegetables, milk, egg, meat etc.,

9. **On Population:**
   - Gandhi opposed the method of population control through contraceptives. He was, however, in favour of birth control through Brahmacharya or self-control. He considered self-control as a sovereign remedy to the problem of over-population.

10. On Prohibition:

- Gandhi advocated cent per cent prohibition. He regarded the use of liquor as a disease rather than a vice. He felt that it was better for India to be poor than to have thousands of drunkards. But ,now many states depend on revenue from liquor sales.

Jawaharlal Nehru

- Jawaharlal Nehru, one of the chief builders of Modern India, was the first Prime Minister of Independent India and he was there in that post till his death in 1964. He was a great patriot, thinker and statesman. His views on economics and social problems are found in the innumerable speeches he made and in the books he wrote.

Democracy and Secularism

- Jawaharlal Nehru was a firm believer in democracy. He believed in free speech civil liberty, adult franchise and the Rule of Law and Parliamentary democracy. Secularism, is another signal contribution of Nehru to India. In our country, there are many religions - Hinduism, Islam, Christianity, Buddhism, Jainism, Zoroastrianism, Sikhism and so on. But there is no domination by religious majority. Secularism means equal respect for all religions.

Planning

- Jawaharlal Nehru was responsible for the introduction of planning in our country. To Jawaharlal Nehru, the Plan was essentially an integrated approach for development. Initiating the debate on the Second Plan in the Lok Sabha in May 1956, Nehru spoke on the theme of planning. He said, "the essence of planning is to find the best way to utilize all resources of manpower, of money and so on." Planning for Nehru was essentially linked up with industrialization and eventual self-reliance for the country's economic growth on a self- accelerating growth. Nehru carried through this basic strategy of planned development. Nehru's contribution to the advancement of science, research, technology and industrial development cannot be forgotten. It was during his period, many IITs and Research Institutions were established. He always in insited on "scientific temper".

Democratic Socialism

- Socialism is another contribution of Nehru to India. He put the country on the road towards a socialistic pattern of society. But Nehru's socialism is democratic socialism.

B. R. Ambedkar

- B.R. Ambedkar (1891-1956) was a versatile personality. He was the architect of the Indian Constitution, a custodian of social justice and a champion of socialism and state planning. Ambedkar's writings included "Ancient Indian Commerce" (a thesis submitted to the Columbia University for the award of the Master of Arts Degree in 1915), 'National Dividend of India: A Historical and Analytical Study (a thesis for which he was awarded Ph.D). His thesis was published as 'The Evolution of Provincial Finance in British India: A Study of the Provincial Decentralization of Imperial Finance".

- Ambedkar's thesis on "Provincial Decentralization of Imperial Finance in British India" was accepted for the M. Sc degree in 1921. And his thesis" The Problem of the Rupee" was accepted for the award of the D.Sc degree by the London School of Economics in 1923. It is a miracle that RBI was conceptualized as per the guidelines presented by Ambedkar in his book, "The Problem of the Rupee; Its origin and its solution". The main economic ideas of Ambedkar may be studied under four broad headings:

Financial Economics

- Much of the work done by Ambedkar during his stay abroad mostly during the period 1913-1923, was in the field of Finance Economics. Ambedkar divided the evolution of provisional finance into three stages: (i). Budget by Assignment (1871-72 to 1876-77); (ii) Budget by Assigned Revenue (1877-78 to 1881-82); and (iii) Budget by Shared Revenues (1882-83 to 1920-1921).

Agricultural Economics

- In 1918, Ambedkar published a paper "Small Holding in India and their Remedies". Citing Adam Smith's 'Wealth of Nations", he made a fine distinction between "Consolidation of Holdings" and "Enlargement of Holdings".

Economics of Caste

- Ambedkar believed that caste was an obstacle to social mobility. It resulted in social stratification. He was of the firm view that individuals must be free to change their occupations. Moreover, the caste system caused social tensions. The caste system has resulted in the absence of social democracy in India as distinct from political democracy.

Economics of Socialism

- Ambedkar was a socialist. He was a champion of state socialism. He advocated the nationalization of all key industries and suggested state ownership of land and collective farming. He was for state monopoly of insurance business. Not only that, he advocated compulsory insurance for every citizen.

- There is no doubt that Ambedkar was a great economist. But his academic work as an economist was eclipsed by his greater contributions in the field of law and politics. Above all he was a great social reformer.

J. C. Kumarappa

- Joseph Chelladurai Kumarappa was born on 4 January 1892 in Tanjavur, Tamil Nadu. A pioneer of rural economic development theories, Kumarappa is credited for developing economic theories based on Gandhism – a school of economic thought he coined "Gandhian Economics".

Gandhian Economics

- J.C. Kumarappa strongly supported Gandhi's notion of village industries and promoted Village Industries Associations. Kumarappa worked to combine Christian and Gandhian values of "trusteeship", nonviolence and a focus on human dignity and development in place of materialism as the basis of his economic theories. While rejecting socialism's emphasis on class war and force in implementation, he also rejected the emphasis on material development, competition and efficiency in free-market economies. Gandhi and Kumarappa envisioned an economy focused on satisfying human needs and challenges while rooting out socio-economic conflict, unemployment, poverty and deprivation.

- Kumarappa worked as a Professor of economics at the Gujarat Vidyapith in Ahmedabad, while serving as the editor of Young India during the Salt Satyagraha. He founded the All India Village Industries Association in 1935; and was imprisoned for more than a year during the Quit India movement. He wrote during his imprisonment, Economy of Permanence: The Practice and Precepts of Jesus (1945) and Christianity: Its Economy and Way of Life (1945).

- Several of Gandhi's followers developed a theory of environmentalism. Kumarappa took the lead in a number of relevant books in the 1930s and 1940s. Historian Ramachandra Guha calls Kumarappa, "The Green Gandhian," portraying him as the founder of modern environmentalism in India.

- Kumarappa worked for the Planning Commission of India and the Indian National Congress to develop national policies for agriculture and rural development. He also travelled to China, Eastern Europe and Japan on diplomatic assignments and to study their rural economic systems.

V.K.R.V. Rao

- According to P.R. Brahmananda, " the great trinity of pre-independent and post independent Indian economists consisted of D.R. Gadgill, C.N. Vakil and V.K.RV. Rao. These scholars were imbibed with a missionary zeal and analysed the Indian economic

problems with a view to designing and propagating economic policies/programmes and plans to India's national advantage." V.K.R.V: Rao was a prolific writer.

V.K.R.V: Rao was deeply interested in three large themes. They were:

- **National Income,**
- **Food, nutrition and the distribution of good; and**
- **Employment and occupational distributions**.

National Income Methodology

- As an applied economist, Rao's name is remembered for his pioneering work on the enumeration of national income of India. Rao was a pupil of J.M. Keynes and he worked with Colin Clark. H.W Singer considered V.K.R.V Rao as " the best equipped of all Keynes' pupils. He attempted (i) to develop the national income concepts suited to India and developing countries generally; (ii) to analyse the concepts of investment, saving and the multipliers in an underdeveloped economy; and (iii) to study the compatibility of the national incomes of industrialized and underdeveloped countries. Rao's paper on "Full Employment and Economic Development" was one of the earliest contributions in the field of development towards employment.

International Food Aid

- Rao was influential in creating ideas and shaping policy in the international attack on world poverty, not only through his contributions to the question of international aid and improved flows of external resources, but also through his activities in the field of food aid.

Support for Socialism

- During the early phases of planning in India, Rao supported the case of a socialist India, where the state would control the commanding heights of the economy and the public sector would play a dominant role in economic development.

Rao's Views on Industrialization

- In his pamphlet "what is wrong with Indian Economic Life?' (1938), Rao gave the following reasons for low per capita income and low levels of per capita nutrition in India.

  - **Uneconomic holdings with subdivisions and fragmentation;**
  - **Low levels of water availability for crops;**
  - **Excess population pressure on agriculture due to the absence of a large industrial sector;**
  - **Absence of capital;**
  - **Absence of autonomy in currency policy, and in general in monetary matters encouraging holding of gold.**

Village Clusters

- Rao felt that rural communities had to be given a viable base. Therefore he suggested that a cluster of villages should form a unit for rural development, so that both social and economic interactions between villages could develop, and they could effectively generate and fashion their own development with a more meaningful participation by people.

Investment, Income and Multiplier

- Rao's examination of the "interrelation between investment, income and multiplier in an under developed economy" (1952) was his major contribution to macroeconomic theory. As a thinker, teacher, economic adviser and direct policy maker, V.K.R.V. Rao followed the footsteps of his great teacher, John Maynard Keynes.

Institution Builder

- He founded three national level research institutes namely Delhi School of Economics, Institute of Economic Growth (both at Delhi) and Institute for Social and Economic Change (Bangalore)

Amartya Kumar Sen

- The Nobel citation refers to Sen's contributions to social choice theory, development economics, study on poverty and famines and concept of entitlements and capability development (1998).

Poverty and Famines

- Sen's Poverty and Famines: An Essay on Entitlement and Deprivation" (1981) is both a theoretical and an applied work. In the book, several famines have been studied in the working of a general theoretical framework from an original angle. He examined various meanings of poverty and drew attention to the incidence of absolute and relative deprivation.

Poverty and Inequality

- Sen has carried out massive work on poverty and inequality in India. Sen's major point has been that the distribution of income/ consumption among the persons below the poverty line is to be taken into account.

The Concept of Capability

- The concept of capabilities developed by Sen has been cited as a better index of wellbeing than commodities or utilities. Capability, as defined by Sen, is the ability to transform Rawlsian primary goods to the achievement of wellbeing.

Entitlement

- Sen has included the concept of entitlement items like nutrition, food, medical and health care, employment, security of food supply in times of famine etc. He considered famine as arising out of the failure of establishing a system of entitlements.

Choice of Technique

- Sen's 'Choice of Technique ' was a research work where he argued that in a labour surplus economy, generation of employment cannot

be increased at the initial stage by the adaptation of capital- intensive technique.

- Conclusively, Amartya Sen, more than just an economist, is an ethical philosopher. He is a lover of freedom and a humanist. He has focused on the poor, viewing them not as objects of pity requiring charitable hand–outs, but as disempowered folk needing empowerment, education, health, nutrition, gender equality, safety net in times of distress; all are needed to empower people.

Conclusion

- This lesson mainly focused on some of the aspects of the Indian Economy and its resources, infrastructure facilities and energy, It also discussed the principles of Indian Economic thinkers to motivate the students to read good books on Economics Written by the great economists.

Unit 8. Indian Economy Before and After Independence

Introduction

- This chapter discusses the major events that took place in India before and after Independence. India was a colony for long. Colonialism refers to a system of political and social relations between two countries, of which one is the ruler and the other is its colony. The ruling country not only has political control over the colony but it also determines the economic policies of the subjugated country. Thus, the people living in a colony cannot take independent decisions in respect of utilisation of the country's resources and Important economic activities. India had the bitter experience of colonialism.

Indian Economy during the British Period

- Indian's sea route trade to Europe started only after the arrival of Vasco da Gama in Calicut, India on May 20, 1498. The Portuguese had traded in Goa as early as 1510. In 1601 the East India Company was chartered, and the English began their first inroads into the Indian Ocean. In 1614 Sir Thomas Roe was successful in getting permission from Jahangir for setting up factories and slowly moved all parts of India.

History of British Period

During the British period

Before the advent of the British, Indian practically lived in village. Thus the economy of the village was self-sufficient. But under the British rule only industries were allowed to develop. These economic and organization change brought down the economic condition of Indians. All the problems are chiefly related with health, housing, child and woman welfare and labour, recreation, crime and social disorganization. Due to these problems, the need for organized social work was realised.

- Hundred years after Battle of Plessey the rule of the East India Company finally did come to an end. In 1858, British Parliament passed a law through which the power for governance of India was transferred from the East India Company (EIC) to the British crown.

Even the transfer of power from the East India Company to the British Crown did not materially alter the situation. Britain had exploited India over a period of two centuries of its colonial rule. On the basis of the form of colonial exploitation, economic historians have divided the whole period into three phases: namely the period of merchant capital, the period of industrial capital, the period of finance capital.

Period of Merchant Capital

- The period of merchant capital was from 1757 to 1813.
- The only aim of the East India Company was to earn profit by establishing monopoly trade in the goods with India and the East India's.
- During this period, India had been considered as the best hunting ground for capital by the East Indian company to develop industrial capitalism is Britain.
- When Bengal and South India came under political shake of the East India Company in 1750s and 1760s, the objective of monopoly trade was fulfilled.
- The company administration succeeded in generating huge surpluses which were repatriated to England, and the Indian leaders linked this problem of land revenue with that of the drain.
- Above all, the officers of the company were unscrupulous and corrupt.

Period of Industrial Capital

- The period of Industrial capital was from 1813 to 1858.
- During this period, India had become a market for British textiles.

- India's raw materials were exported to England at low price and imported finished textile commodities to India at high price. In this way, Indians were exploited.

- India's traditional handicrafts were thrown out of gear.

Period of Finance Capital

- The third phase was the period of finance capital starting from the closing years of the 19th century and continuing till independence. During this period, finance imperialism began to entrench itself through the managing agency firms, export – import firms, exchange banks and some export of capital

  .

- Britain decided to make massive investments in various fields (rail, road, postal system irrigation, European banking system, and a limited field of education etc.) in India by plundering Indian capital.

- Railway construction policy of the British led to unimaginable as well as uneconomic. The poor Indian taxpayers had been compelled to finance for the construction of railways. The political power was handed over to the British Government by the East India Company in 1858.

Decline of Indian Handicrafts

- The Indian handicrafts products had a worldwide market. Indian exports consisted chiefly of hand weaved cotton and silk fabrics, calicoes, artistic wares, wood carving etc.

- Through discriminatory tariff policy, the British Government purposefully destroyed the handicrafts.

- With the disappearance of nawabs and kings, there was no one to protect Indian handicrafts.

- Indian handicraft products could not compete with machine-made products.

- The introduction of railways in India increased the domestic market for the British goods.

The Land Tenure Systems in India

- Land Tenure refers to the system of land ownership and management. The features that distinguish a land tenure system from the others relate to the following:
    - Who owns the land;
    - Who cultivates the land;
    - Who is responsible for paying the land revenue to the government.
- Based on these questions, three different types of land tenure existed in India before Independence. They were Zamindari system, Mahalwari system and Ryotwari system.

Zamindari System or the Land lord-Tenant System

- This system was created by the British East India Company, when in 1793, Lord Cornwallis introduced 'Permanent Settlement Act'. Under this system the landlords or the Zamindari were declared as the owners of the land and they were responsible to pay the land revenue to the government. The share of the government in total rent collected was fixed at 10/11th, the balance going to the Zamindars as remuneration.

Mahalwari System or Communal System of Farming

- After introduction of this system, it was later extended to Madhya Pradesh and Punjab. The ownership of the land was maintained by the collective body usually the villagers which served as a unit of management. They distributed land among the peasants and collected revenue from them and pay it to the state.

Ryotwari System or the Owner-Cultivator System

- This system was initially introduced in Tamil Nadu and later extended to Maharashtra, Gujarat, Assam, Coorg, East Punjab and Madhya Pradesh. Under this system the ownership rights of use and control of land were held by the tiller himself. There was the direct relationship between owners. This system was the least oppressive system before Independence.

Process of Industrial Transition and Colonial Capitalism

- This process of industrial transition in India during the British period can be broadly classified into two as given below:

Industrial growth during the 19th century

- During the 19th century, British investors started to pioneer industrial enterprises in India as they had experiences of running industries at home. British enterprises also received maximum state support. Although the Britishers initiated industrialisation process in the 19th century, they were primarily interested in making profit and not in accelerating the economic growth in India. At the end of 19th century, there were about 36 jute mills, 194 cotton mills and a good number of plantation industries. The production of coal had risen to over 6 million tonnes per annum.

Industrial progress during the 20th century

- During the first part of 20th century, Swadeshi movement stimulated the industrialisation process in India. The existing industries and new industries had maintained a slow but steady growth till the outbreak of the First World War in 1914.By this time more than 70 cotton mills and 30 jute mills were set up. Coal production was doubled. The foundation of iron and steel industry was laid. Railway network was extended.

- During the period 1924-39, various major industries like iron and steel, cotton textiles, jute, matches, sugar, paper and pulp industry etc. were brought under protection scheme. This led to rapid expansion of protected industries in India. These protected industries

captured the entire Indian market and eliminated foreign competition totally.

- Thus in the early part, British rule tried to transform the Indian economy as the producer of industrial raw materials and tried to capture Indian market for their industrial finished goods and thus started exploiting Indian economy in a different way. Later on, British capitalists gradually developed various industries like, jute, tea, coffee, cotton and textiles, paper and paper pulp, sugar etc, in India for locational advantages and exploited Indian labourers extensively.

Problems of British Rule

1. The British rule stunted the growth of Indian enterprise.

2. The economic policies of British checked and retarded capital formation in India.

3. The drain of wealth financed capital development in Britain.

4. Indian agricultural sector became stagnant and deteriorated even when a large section of Indian population was dependent on agriculture for subsistence.

5. The British rule in India led the collapse of handicraft industries without making any significant contribution to development of any modern industrial base.

6. Some efforts by the colonial British regime in developing the plantations, mines, jute mills, banking and shipping, mainly promoted a system of capitalist forms that were managed by foreigners. These profit motives led to further drain of resources from India.

Important Industrial Policies Prior to 1991

- India is the Asia's third largest economy. The 70 years of Independence have brought a remarkable change in the socio - economic landscape of India.

Industrial Policy of India 1948, 1956, 1977, 1980, 1990 & 1991

- Economic development of a country particularly depends on the process of industrialisation. At the time of Independence, India inherited a weak and shallow industrial base. Therefore during the post-Independence period, the Government of India took special emphasis on the development of a solid industrial base. The Industrial Policy Resolutions of 1948 and 1956 clearly stated the need for developing both small scale industries and large scale industries.

Industrial Policy Resolutions 1948

- The Government of India recognized the significant contribution of industrialization. Therefore the Government of India declared its first Industrial Policy on 6th April 1948. The main importance of this policy was that it ushered in India the system of mixed economy.

Industrial Policies

Industrial Policy 1948 –
Center's Monopoly: Government of India's Monopoly shall include Railways. Arms and ammunition, Atomic Energy, Postal Department.
State's Monopoly: State Monopoly shall include natural resources like coal, steel, manufacture of aircraft, cement, rubber automobile, wireless apparatus (Radio Receiving Sets) and mineral oil.
Unregulated Private Enterprises: It was kept open to private enterprises of individuals and co-operative societies to also involve.

1. Industries were classified into four groups such as public sector (strategic industries), public-cum -private Sector (key industries), and controlled private sector, private and co-operative sectors.

2. This policy endeavoured to protect cottage and small scale industries.

3. The central and state governments had a virtual monopoly in rail roads and exclusive rights to develop minerals, iron ore etc.

4. The Government encouraged the significance of foreign capital for industrialization but the government decided that the control should remain with Indian hands.

Industrial Policy Resolution 1956

1. The Industrial Policy of 1956 sought to give a dominant role to public sector. At the same time, it assured a fair treatment to the private sector.

2. The Government would support and encourage cottage and small scale enterprises by restricting volume of production in the large scale sector by differential taxation or by direct subsidies.

3. This industrial policy emphasized the necessity of reducing the regional disparities in levels of development.

4. The Government recognized the need for foreign capital for progressive Indenisation of foreign concerns.

Industrial Resolution Policy – 1956

Shaped by the Mahalanobis Model of growth which suggested that emphasis on heavy industries would lead the economic towards a long term higher growth path. The Industrial Policy Resolution – 1956 classified industries into three categories;

17 Industries:

Exclusively under the domain of the Government. These included inter alia, railway, air transport, arms and ammunition, iron and steel and atomic energy.

12 Industries:

Which were envisaged to be progressively State owned by Private Sector was expected to supplement the efforts of the State. The third category contained all the remaining industries and it was expected that private sector would initiate development of these industries but they would remain open for the state as well.

Green Revolution

- The term Green Revolution refers to the technological breakthrough in of agricultural practices. During 1960s the traditional agricultural practices were gradually replaced by modern technology and agricultural practices in India. Initially the new technology was tried

in 1960-61 as a pilot project in seven districts. It was called as the High Yielding Varieties Programme (HYVP).

Achievement of Green Revolution

1. The major achievement of the new strategy was to boost the production of major cereals viz., wheat and rice. India was depending on the US for the food grain. The US by using Public Law 480 (PL480) exported wheat to India. Indians were waiting for the ships to sip their food. On the other hand, India lost lots of minerals. The US could strategically exploit Indian mineral resources at cheapest price for manufacturing missiles and weapons, which gave job opportunity for larger US youth and largely contributed to US GDP. But now India is food surplus, exporting food grains to the European countries.

2. The Green revolution was confined only to High Yielding Varieties (HYV) cereals, mainly rice, wheat, maize and jowar.

3. This Strategy was mainly directed to increase the production of commercial crops or cash crops such as sugarcane, cotton, jute, oilseeds and potatoes.

4. Per hectare productivity of all crops had increased due to better seeds.

5. Green Revolution had positive effect on development of industries, which manufactured agricultural tools like tractors, engines, threshers and pumping sets.

6. Green Revolution had brought prosperity to rural people. Increased production had generated employment opportunities for rural masses. Due to this, their standard of living had increased.

7. Due to multiple cropping and more use of chemical fertilizers, the demand for labour increased.

8. Financial resources were provided by banks and co-operative societies. These banks provided loans to farmer on easy terms.

The New Agricultural strategy was also called by various names. Modern agricultural technology, seed - fertilizer - water technology, or simply green revolution.

Weaknesses of Green Revolution

1. Indian Agriculture was still a gamble of the monsoons.

2. This strategy needed heavy investment in seeds, fertilizers, pesticides and water.

3. The income gap between large, marginal and small farmers had increased. Gap between irrigated and rain fed areas had widened.

4. Except in Punjab, and to some extent in Haryana, farm mechanization had created widespread unemployment among agricultural labourers in the rural areas.

5. Larger chemical use and inorganic materials reduced the soil fertility and spoiled human health. Now organic farming is encouraged.

Rainbow Revolution	
1. Green revolution – Agriculture (Food grains productions)	7. White Revolution - Milk
2. Blue Revolution – Fish	8. Yellow Revolution – Oilseeds
3. Golden Revolution – Fruits /Apple	9. Black Revolution – Petroleum
4. Solver Revolution – Egg	10. Round Revolution – Potato
5. Red Revolution- Meat/Tomato	11. Grey Revolution – Fertilizes
6. Pink Revolution – Shrimp	12. Brown Revolution – Leather

Second Green Revolution

- The Government of India had implemented 'Second Green revolution' to achieve higher agricultural growth. The target of Second Green Revolution was to increase 400 million tons of food grain production as against about 214 million tons in 2006-07. This is to be achieved by 2020. In agricultural sector, the growth rate of 5% to

6% has to be maintained over next 15 years. There may be changes in these statistics.

Requirements of Second Green revolution:

- Introduction of Genetically Modified (GM) seeds which double the per acreage production.
- Contribution of private sector to market the usage of GM foods.
- Government can play a key role in expediting irrigation schemes and managing water resources.
- Linking of rivers to transfer surplus water to deficient areas.

Large Scale Industries

- The term "Large scale industries" refers to those industries which require huge infrastructure, man-power and a have influx of capital assets. The term 'large scale industries' is a generic one including various types of industries in its purview. All the heavy industries of India like the iron and steel industry textile industry automobile manufacturing industry fall under the large scale industrial arena. However in recent years due to the IT boom and the huge amount of revenue generated by it the IT industry can also be included with in the jurisdiction of the large scale industrial sector. Indian economy is heavily dependent on these large industries for its economic growth, generation of foreign currency and for providing job opportunities to millions of Indians. The following are the major large scale industries in India.

Iron and steel industry

- First steel industry at Kulti, Near Jharia, West Bengal - Bengal iron works company in 1870.
- First large scale steal plant TISCO at Jamshedpur in 1907 followed by IISCO at Burnpur in 1919. Both belonged to private sector.

- The first public sector unit was "Vishveshvaraya Iron and Steel works" at Bhadrawati.

- All these are managed by SAIL (at present all important steel plants except TISCO, are under public sector)

- Steel Authority of India Ltd (SAIL) was established in 1974 and was made responsible for the development of the steel industry.

- Presently India is the eighth largest steel producing country in the world.

Public sector steel plants

Location	Assistance
Rourkela (Odissa)	Germany
Bhilai (MP)	Russia
Durgapur (WB)	UK
Bokaro (Jharkhand)	Russia
Burnpur (WB)	Acquired from private sector in 1976
Vishakhapatnam(AP)	Russia
Salem (Tamil Nadu)	Government of India (No external assistance)
Vijai Nagar Karnataka)	Government of India
Bhadrawati (Karnataka)	Nationalisation of Vishveshvarayya Iron and Steel Ltd(owned by Centre and State government)

Jute industry

- Jute industry is an important industry for a country like India, because not only it earns foreign exchange but also provides substantial employment opportunities in agriculture and industrial sectors.

- Its first modernised industrial unit was established at Reshra in West Bengal in 1855.

- The jute industry in the country is traditionally export oriented. India ranks number one in the raw jute and jute goods production and number two in export of jute goods in the world.

Cotton and textile industry

- Oldest industry of India, and employs largest number of workers.

- It is the largest organised and broad-based industry which accounts for 4% of GDP, 20% of manufacturing value-added and one third of total export earnings.

- The first Indian modernised cotton cloth mill was established in 1818 at Fort Gloaster near Calcutta. But this mill was not successful. The second mill named "Mumbai's Spinning and Weaving Co." was established in 1854 at Bombay by KGN Daber.

Sugar industry

- Sugar industry is the second largest industry among agriculture-based industries in India.
- India is now the largest producer and consumer of sugar in the world. Maharashtra contributes over one third of the Indian total sugar output, followed closely by Uttar Pradesh.

Fertiliser industry

- India is the third largest producer of nitrogenous fertilisers in the world.

Paper industry

- The first mechanised paper mill was set up in 1812 at Serampur in West Bengal.

- The paper industry in India is ranked among the 15 top global paper industries.

Silk industry

- India is the second-largest (first being China) country in the world in producing natural silk. At present, India produces about 16% silk of the world.

- India enjoys the distinction of being the only country producing all the five known commercial varieties of silk viz Mulberry, Tropical Tussar, Oak Tussar, Eri and Muga.

Petroleum and natural gas

- First successful Oil well was dug in India in 1889 at Digboi, Assam.

- At present a number of regions with oil reserves have been identified and oil is being extracted in these regions

- For exploration purpose, Oil and Natural Gas Commission (ONGC) was established in 1956 at Dehradun, Uttarakhant

Small Scale Industries

- Small scale industries play an important role for the development of Indian economy in many ways. About 60 to 70 percent of the total innovations in India comes from the SSIs. Many of the big businesses today were all started small and then nurtured into big businesses. The role of SSIs in economic development of the country is briefly explained in forthcoming paragraphs.

Role of SSIs in Economic Development

Provide Employment

- SSIs use labour intensive techniques. Hence, they provide employment opportunities to a large number of people. Thus, they reduce the unemployment problem to a great extent.

- SSIs provide employment to artisans, technically qualified persons and professionals, people engaged in traditional arts, people in villages and unorganized sectors.

- The employment-capital ratio is high for the SSIs.

Bring Balanced Regional Development

- SSIs promote decentralized development of industries as most of the SSIs are set up in backward and rural areas.

- They remove regional disparities by industrializing rural and backward areas and bring balanced regional development.

- They help to reduce the problems of congestion, slums, sanitation and pollution in cities. They are mostly found in outside city limits.

- They help in improving the standard of living of people residing in suburban and rural areas in India.

- The entrepreneurial talent is tapped in different regions and the income is also distributed instead of being concentrated in the hands of a few individuals or business families.

Help in Mobilization of Local Resources

- SSIs help to mobilize and utilize local resources like small savings, entrepreneurial talent etc., of the entrepreneurs, which might otherwise remain idle and unutilized.

- They pave way for promoting traditional family skills and handicrafts. There is a great demand for handicraft goods in developed countries.

- They help to improve the growth of local entrepreneurs and self-employed professionals in small towns and villages in India.

Pave for Optimisation of Capital

- SSIs require less capital per unit of output. They provide quick return on investment due to shorter gestation period. The payback period is quite short in SSIs.

- SSIs function as a stabilizing force by providing high output-capital ratio as well as high employment-capital ratio.

- They encourage the people living in rural areas and small towns to mobilize savings and channelize them into industrial activities.

Promote Exports

- SSIs do not require sophisticated machinery. Hence, import the machines from abroad is not necessary. On the other hand, there is a great demand for goods produced by SSIs. Thus they reduce the pressure on the country's balance of payments. However, with recent past large scale industries are able to borrow large funds with low interest rate and spend large sums on advertisements. Hence SSSs are gradually vanishing.

- SSIs earn valuable foreign exchange through exports from India.

Complement Large Scale Industries

- SSIs play a complementary role to large scale sector and support the large scale industries.

- SSIs provide parts, components, accessories to large scale industries and meet the requirements of large scale industries through setting up units near the large scale units.

- SSIs serve as ancillaries to large scale units.

Meet Consumer Demands

- SIs produce wide range of products required by consumers in India.

- Hence, they serves as an anti-inflationary force by providing goods of daily use.

Develop Entrepreneurship

- SSIs help to develop a class of entrepreneurs in the society. Tey help the job seekers to become job givers.

- They promote self-employment and spirit of self-reliance in the society.

- SSIs help to increase the per capita income of India in various ways.

- They facilitate development of backward areas and weaker sections of the society

- SSIs are adept in distributing national income in more efficient and equitable manner among the various participants of the society.

Micro, Small and Medium Enterprises (MSMEs)

- As on now, the following monetary limits have been used for defining different kinds of industrial service units. However, these limits are subject to changes over time.

Manufacturing Enterprises

a. **Micro Manufacturing Enterprises:** The investment in plant and machinery does not exceed Rs.25 lakhs.
b. **Small Manufacturing Enterprises:** The investment in plant and machinery is more than twenty five lakh rupees but does not exceed Rs.5 crores.
c. Medium Manufacturing Enterprises: The investment in plant and machinery is more than Rs.5 crores but not exceeding Rs.10 crores.

Service Enterprises

a. **Micro Service Enterprises:** The investment in equipment does not exceed Rs. 10 lakh

b. **Small Service Industries:** The investment in equipment is more than Rs.10 lakhs but does not exceed Rs. 2 crores.

c. **Medium Service Enterprises:** The investment in equipment is more than Rs.2 crores but does not exceed Rs.5 crores.

Public Sector and Private sector banks
Public Sector Banks

- Public sector bank is a bank in which the government holds a major portion of the shares. Say for example, SBI is public sector bank; the government holding in this bank is 58.60%. Similarly PNB is a public sector bank; the government holds a stake of 58.87%. Usually, in public sector banks, government holdings are more than 50 percent. Public sector banks are classified into two categories: 1. Nationalised Banks 2. State Bank and its Associates.

- In case of nationalized banks, the government controls and regulates the functioning of the banking entity. Some examples are SBI, PNB, BOB, OBC, Allahabad Bank etc. However, the government keeps reducing the stake in PSU banks as and when they sell shares. So, to that extent they can also become minority shareholders in these banks. This is in accordance with the privatization policy.

Private Sector Banks

- In these banks, most of the equity is owned by private bodies, corporations, institutions or individuals rather than government. These banks are managed and controlled by private promoters. Of the total banking industry in India, public sector banks constitute 72.9% share while the rest is covered by private players. In terms of the number of banks, there are 27 public sector banks and 22 private sector banks. As part of its differentiated banking regime, RBI, the apex banking body, has given license to Payments Bank and Small Finance Banks (SFBs). This is an attempt to boost the government's Financial Inclusion drive. (But, there may be other problems).

- As a result, Airtel Payments Bank and Paytm Payments Bank Limited have come up. How far these banks would help the poor people is not known.

Nationalisation of Banks

- After Independence, the Government of India adopted planned economic development. For this purpose, Five Year Plans came into existence since 1951. The main objective of the economic planning aimed at social welfare. Before Independence commercial banks were in the private sector. These commercial banks failed in helping the Government to achieve social objectives of planning. Therefore, the government decided to nationalize 14 major commercial banks on 19 July 1969. In 1980, again the government took over another 6 commercial banks.

Nationalization	
1969 14 banks with deposits above Rs.50 crores were nationalized. 19 July 1969 1. Allahabad Bank 2. Bank of Baroda 3. Bank of Maharashtra 4. Canara Bank 5. Central Bank of India 6. Dena Bank 7. Indian Bank 8. Indian Overseas Bank 9. Punjab National Bank 10. Syndicate Bank 11. Union Bank 12. United Bank of India 13. UCO Bank 14. Bank of India	1980 6 banks with deposits above Rs. 200 crores were Nationalized 15 April 1980 1. Andhra Bank 2. Corporation Bank 3. New Bank of India 4. Oriental Bank of Commerce 5. Punjab & Sindh Bank 6. Vijaya Bank

Objectives of Nationalization

- The Government of India nationalized the commercial banks to achieve the following objectives.

1. The main objective of nationalization was to attain social welfare. Sectors such as agriculture, small and village industries were in need of funds for their expansion and further economic development.

2. Nationalisation of banks helped to curb private monopolies in order to ensure a smooth supply of credit to socially desirable sections.

3. In India, nearly 70% of population lived in rural areas. Therefore it was needed to encourage the banking habit among the rural population.

4. Nationalisation of banks was required to reduce the regional imbalances where the banking facilities were not available.

5. Before Independence, the numbers of banks were certainly inadequate. After nationalization, new bank branches were opened in both rural and urban areas.

6. Banks created credit facilities mainly to the agriculture sector and its allied activities after nationalization.

- After New Economic Policy 1991, the Indian banking industry has been facing the new horizons of competitions, efficiency and productivity. With all these developments people in villages and slums depend largely on local money lenders for their credit need. This is unfortunate.

Performance of India's Five Year Plans

- Economic planning is the process in which the limited natural resources are used skill fully so as to achieve the desired goals. The concept of economic planning in India or five year plan is derived from Russia (then USSR). India has launched 12 five year plans so far. Twelfth five year plan will be the last one. The government of India has decided to stop the launching of five year plans and it was replaced by NITI Aayog.

First Five Year Plan (1951-1956)

- It was based on the Harrod-Domar Model.

- Its main focus was on the agricultural development of the country.

- This plan was successful and achieved the GDP growth rate of 3.6% (more than its target)

Second Five Year Plan (1956-1961)

- It was based on the P.C. Mahalanobis Model.
- Its main focus was on the industrial development of the country.
- This plan was successful and achieved the growth rate of 4.1%

Third Five Year Plan (1961-1966)

- This plan was called 'GadgilYojana' also.
- The main target of this plan was to make the economy independent and to reach self-propelled position or take off.
- Due to Indo -China war, this plan could not achieve its growth target of 5.6%

Plan Holiday (1966-1969)

- The main reason behind the plan holiday was the Indo-Pakistan war & failure of third plan.

- During this plan, annual plans were made and equal priority was given to agriculture, its allied sectors and the industry sector.

Fourth Five Year Plan (1969-1974)

- There are two main objectives of this plan i.e. growth with stability and progressive achievement of self reliance.

- This plan failed and could achieve growth rate of 3.3% only, against the target of 5.7%.

Fifth Five Year Plan (1974-1979)

- In this plan top priority was given to agriculture, next cameindustry and mines.

- Overall this plan was successful, which achieved the growth rate of 4.8% against the target of 4.4%.

- The draft of this plan was prepared and launched by D.P. Dhar. This plan was terminated in 1978.

Rolling Plan

- This plan was started with an annual plan for 1978-79 and as a continuation of the terminated fifth year plan.

Sixth Five Year Plan (1980-1985)

- The basic objective of this plan was poverty eradication and technological self-reliance. Garibi-Hatao was the motto.

- It was based on investment yojana.

- Its growth target was 5.2% but it achieved 5.7%.

Seventh Five Year Plan (1985-1990)

- Objectives of this plan included the establishment of the self-sufficient economy and opportunities for productive employment.

- For the first time, due to the pressure from private sector the private sector got the priority over public sector.

- Its growth target was 5.0% but it achieved 6.0%.

Annual Plans

- Eighth five year Plan could not take place due to volatile political situation at the centre. So two annual programmes are formed in 1990-91 & 1991-92.

Eighth Five Year Plan (1992-1997)

- In this plan the top priority was given to development of the human resources i.e. employment, education and public health.
- During this plan, New Economic Policy of India was introduced.
- This plan was successful and got annual growth rate of 6.8% against the target of 5.6%.

Ninth Five Year Plan (1997-2002)

- The main focus of this plan was "growth with justice and equity".
- This plan failed to achieve the growth target of 7% and Indian economy grew only at the rate of 5.6%.

Tenth Five Year Plan (2002-2007)

- This plan aimed to double the per capita income of India in the next 10 years.
- It aimed to reduce the poverty ratio to 15% by 2012.
- Its growth target was 8.0% but it achieved only 7.2%.

Eleventh Five Year Plan (2007-2012)

- Its main theme was "faster and more inclusive growth".
- Its growth rate target was 8.1% but it achieved only 7.9%

Twelfth Five Year Plan (2012-2017)

- Its main theme is "Faster, More Inclusive and Sustainable Growth".
- Its growth rate target is 8%.

- Here it can be concluded that since the Indian Independence the five year plans of India played a very prominent role in the economic development of the country. These plans had guided the Government as to how it should utilise scarce resources so that maximum benefits can be gained. It is worthy to mention here that Indian Government adopted the concept of five year plans from Russia.

NITI Aayog

The Planning Commission has been replaced by the NITI Aayog on 1st January, 2015. NITI (National Institution for Transforming India) Aayog will monitor, coordinate and ensure implementation of the accepted sustainable development goals. NITI Aayog serves as a knowledge hub and monitors progress in the implementation of policies and programmes of the Government of India. It includes the matters of national and international importance on the economic front, dissemination of best practices from within the country and from other nations, the infusion of new policy ideas and specific issue-based support. In order to understand the achievements of the NITI Aayog, researches need to be done then and there.

Development Indicators
Human Development Index (HDI)

- United Nations Development Programme has been publishing Human Development Report annually since 1990. HDI helped the government to the real uplifting of standard of living of the people.

Human Development Index (HDI)
HDI was developed by the Pakistani Economist Mahbub ul Haq and the Indian Economist Amartya Kumar Sen in 1990 and was published by the United Nations Development Programme (UNDP). It is constructed based on Life Expectancy Index, Education Index and GDP Per Capita.

HDI is based on the following three indicators

1. Longevity is measured by life expectancy at birth,
2. Educational attainments,
3. Standard of living, measured by real GDP per capita (PPP$).

- Before calculating HDI, the fixed minimum and maximum values of each indicator are chosen.

- The performance in each dimension is expressed as a value between 0 and 1 by applying the following formula Dimension Index = (Actual value – Minimum value) / (Maximum value -Minimum value) According to Planning Commission's National Human Development Report 2011, HDI has improved significantly between 1980 and 2011. That is, The HDI went up from 0.302 in 1981 to 0.472 score in 2011.

- As per latest Human Development Report (2016) by the United Nations Development Programme (UNDP), India has been ranked 131st out of 188 countries. Out of 188 countries, India lies in Medium Human Development bracket. The other nations such as Bangladesh, Bhutan, Pakistan, Kenya, Myanmar and Nepal attained the medium human development. The HDR 2016 stated that regional disparities in education, health and living standards within India has caused India's downfall to 27 % on HDI score. India's HDI rank value in 2015 stood at 0.624, which had increased from 0.580 in 2010. India's rank in 2014 was 131.

Top three countries of HDI
Norway (0.949) Australia (0.939) Switzerland (0.939)

Human Development Index (HDI)		
Dimensions	Indicator	Dimensions Index
Long and Healthy Life	Life Expectancy at Brith	Life Expectancy Index
Knowledge	Adult Literacy rate	Education Index
Decent Standard of Living	Cross enthrallment ratio	GDP Index
	GDP Per capita (PPP USS)	

- Biswajeet Guha has stated that the calculation of HDI neglected many important aspects of human development. He has created four indices of HDI as HDI_1, HDI_2, HDI_3, and HDI_4. HDI_1 is based on UNDP methodology as given in Human than Development Report. He has enlarged the scope of HDI by adding three more dimensions

such as quality of life, poverty eradication, and urbanization. Various countries including India are continuously making efforts to improve and enlarge the scope of available statistical information.

Physical Quality of Life Index (PQLI)

- Morris D Morris developed the Physical Quality of Life Index (PQLI). The PQLI is a measure to calculate the quality of life (well-being of a country). For this, he included three indicators such as life expectancy, infant mortality rate and literacy rate. A scale of each indicator ranges from the number 1 to 100. Number 1 represents the worst performance by any country. 100 is the best performance. For example, in case of life expectancy, the upper limit of 100. This was assigned to 77 years which was achieved by Sweden in 1973. The lower limit of 1 was assigned to 28 years which was achieved by Guinea-Bissau in 1960. The main difference between the two is the inclusion of income in HDI and exclusion of income from PQLI. HDI represents both physical and financial attributes of development and PQLI has only the physical aspects of life.

Conclusion

- To conclude, the British were more focused on the money from Indians than good governance. Some positive things happened during British Rule. They eradicated systems like 'sati', introduced railway services, English language and education, infrastructure and basic principle of capitalist economy. After Independence, the Government of India formulated many policies with the help of Five year plans to achieve the growth target in various sectors. Among the other things, the major challenges that still continue are: poor health standard, female foeticide, declining child sex ratio, open defecation, social & economic inequalities, increasing slumming, urban congestion and declining qualities of basic environmental resources namely air, land and water.