1 Economics An Introduction

Introduction

Human beings are intellectual creatures and thus they are able to group, distinguish and examine their surroundings and environments. To ensure a happy living, they have created various institutions like the social, political and economic systems.

In order to understand such systems significantly, sustain them over a long period of time and to resolve the complexities in such systems, human beings formulated certain principles based upon various philosophies and sciences.

In the pre-historic and in the earlier historic periods, human beings dealt with differences and solved certain complexities by entering in feuds, fights and battles. However, with the development and progress of civilizations, human beings were able to logically resolve differences and complexities of life by creating and using philosophical principles. And, economics developed as a philosophy and science of rational economic behaviour.

1.1 Meaning of Economics

The word economics in Indian thought is 'arthshashtra' which is derived from the Sanskrit word 'arth' meaning 'purpose' or 'goal'. And thus, 'arthshashtra' in Sanskrit means, "the science of benefits or purpose in practical life". It describes that the purpose of human behaviour is to seek benefits.

The English word economics is a derivative from the Greek word 'Oikonomos'. 'Oikos' means households and 'nomos' means management and hence economics means, 'management of households'.

1.2 Economics in Indian Thought

The history of Indian culture is almost more than five thousand years old and thus Indian philosophy depicts various aspects of human life and provides insights into "a way of life".

The four 'purusharthas' (purposes of a human being) in Indian philosophy are 'dharma' (righteousness, duty), 'arth' (purpose, benefit, wealth), 'kama' (desire) and 'moksha' (liberation). And, the activities of life done for 'arth' (benefits) are the subject matter of economics.

Any activity done with the purpose of obtaining some benefit is called an economic activity and it is one of the four goals or duties of a human being to create wealth as a means of living and for material pleasures (in other words, perform activity for benefits).

2500 years ago, Kautilya who is also known as Chanakya discussed in his book 'Arthashashtra' the purpose of economic activity undertaken by a state and society. According to Kautilya, the intention of a human being is 'arth' (wealth); the piece of land which has human settlement is 'arth' (wealth) and thus the science explaining the purpose and utility of wealth creation on earth is called economics.

1.3 Development of Economics as a Science in the West

Greek philosopher Aristotle gave his views on economics in his book 'Oeconomica'.

However, with the advent of industrial revolution, just as division of labour and specialization were introduced in the industrial sector (where a piece of work is done by a worker or a group of workers who specialize only in that particular job); the knowledge of philosophy also started getting classified into various specialized sciences.

Now, like the physical sciences, the social sciences also developed as specialized branches and their methodologies were no longer based purely upon descriptive logic but these sciences started applying scientific tools and methods.

Hence studying purposeful human activity was not solely a subject matter of political or social philosophy but it also developed as an independent science.

And, pondering upon the creation of wealth, Adam Smith wrote in 1776 a book titled "An Inquiry into the Nature and Causes of Wealth of Nations". The book is popularly known as 'Wealth of Nations'. With this book Adam Smith is known to have pioneered the development of economics as a specialized area of knowledge in the west. Industrial revolution created a new socio-economic way of life and new methods of wealth creation with the introduction of machines and huge investments in means of mass production.

Definition of Economics by Adam Smith : "Economics is the study of the nature and causes of wealth of nations". (Economics studies the exchange of physical wealth produced by labour.)

Adam Smith introduced economics as a social science because on the one hand he studied human efforts and on the other hand his methodology was scientific. Since the times of Adam Smith economics was studied as an independent science and not as part of general philosophy. In a way, he talked about human welfare only in his book.

Definition of Economics by Alfred Marshall : In his book, "Principles of Economics" published in 1890, Alfred Marshall defines, "Economics is the study of mankind in the ordinary business of life" - it implies that in everyday life people usually seek material wellbeing.

Thus, this definition identifies economics as the study of everyday activity of human beings and seeks to explain how well being is attained from material consumption. This definition is narrow as it talks only about material consumption or material wellbeing; yet it is important as it keeps human wellbeing at the centre of human activity.

Definition of Economics by Lionel Robbins : Any field of science deals with a problem question and economics deals with the question, "how to allocate limited resources which have alternative uses in the satisfaction of recurring and unlimited human wants in order to increase the wellbeing in a society"?

Hence in 1931, Lionel Robbins in his book, "Nature and Significance of Economics" gave the following definition, "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses".

Human wants are unlimited and most wants keep on recurring. On the other hand, resources which help in satisfying human wants are limited and have alternative uses. Hence, economics must deal with the problem of allocation of scarce resources in the satisfaction of human wants to the maximum possible extent.

According to Robbins, economics is a positive science and does not prescribe 'how things should be'. It studies, 'how human beings behave' and does not deal with 'how they should ideally behave'. Hence economics does not deal with norms and thus is not a normative science.

Definition of Economics by Paul Samuelson : In his book 'Foundations of Economic Analysis' published in 1947, Samuelson defines, "Economics is the study of how people and society end up choosing, with or without the use of money, to employ scarce productive resources that could have alternative uses to produce various commodities over time and distributing them for consumption, now or in the future, among various persons in the society. It analyses costs and benefits of improving patterns of resource allocation". Hence Samuelson talks about choice, allocation of scarce resources and evaluation of costs and benefits of doing so.

All definitions in a way commonly point out that economics studies human behaviour, is positive in nature, adopts scientific methods and methodologies and thus it is a social science.

1.4 Economic Activity and Non-Economic Activity

Most human beings perform several activities during a day. They meet friends, spend time in shops, engage in political discussions, watch television and films and do much more. But all activities are not the subject matter of economics. Economics studies only economic activities. Hence it is important to understand the meaning of economic activities.

Meaning of Economic Activity : Activity performed with the purpose of getting economic benefits in the form of incomes; involving exchange of goods, services and/or factors as well as involving costs is called economic activity. Important aspects about an economic activity pertain to purpose of making economic gains, satisfaction of some want and; involvement of exchange and cost.

Examples of economic activities :

(1) Eating in a restaurant (satisfy need by incurring expense).

(2) Watching a movie in a theatre (incur expense to get entertainment).

(3) Work in one's own farm (to exert labour and get output).

(4) Get employed in a school to teach (provide service and get a salary).

Thus human requirements are plenty. Activity for fulfilment of a requirement through a transaction which involves costs and benefits on both sides is called an economic activity. Farmers, lawyers, teachers, actors, governments – all perform economic activities.

The following chain of activity is another example, to clarify the meaning of economic activity. A farmer needs a motorcycle. In order to earn income to pay for the motorcycle, she works in her farm and sells the output for money; the seller of motorcycle who earns money by selling the motorcycle spends it to fulfil some other want.

Meaning of Non-Economic Activity : Activity which is performed without the specific purpose of obtaining economic gains is called non-economic activity. It does not involve exchange of benefits on both sides of the transaction. For example, charitable activity or activities which are done out of love, affection, compassion etc. These activities involve costs but these costs are not incurred to get monetary/economic benefits in exchange.

1.5 Microeconomics and Macroeconomics

Economic analysis is done to study individual economic units as well as to study the eocnomy as a whole. Hence for the pupose of analysis, the entire study of economics is classified into : (1) Microeconomics and (2) Macroeconomics.

Microeconomics is the study/analysis of individual units of the economy. It studies the rational behaviour of individual units.

Microeconomics studies the behaviour of individual units of the economy and micro economic analysis uses the principle of 'marginalism' to analyse how individual units make decisions.

The unit of demand analysis is the consumer, that of supply analysis is the firm, and that of labour market is labour. And according to state examples, subject of price determination of a product in a market, equilibrium output level for a firm, marginal productivity and wage determination of labour as a factor of production; are studied in microeconomics.

Microeconomic has set scientific principles showing behaviour of individual units.

Microeconomic studies issues which emerge from the entire economic set up and impact the entire economic set up. For example, determination of national income, unemployment, poverty, growth rate and demographic profile of population are topics studied under macroeconomics.

Macroeconomic analysis has helped to give principles for resource management to increase national income, reduce unemployment, poverty, inflation and so on.

However, the behaviour of individual economic units impact the macro economic parameters and the macroeconomic parameters impact the decisions of individual economic units.

1.6 Presentation of Information (Data) in Economics

In economic analysis or in a study of economics, information can be presented in the following three ways:

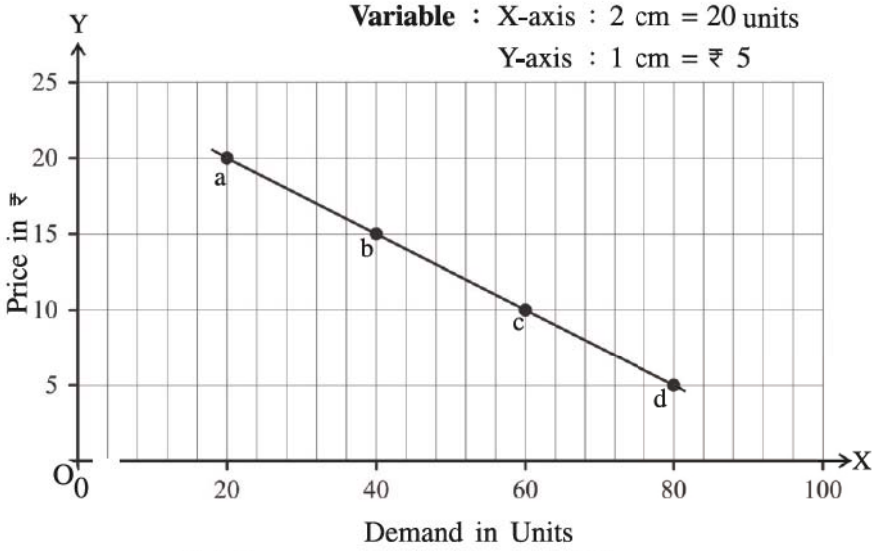
(1) Descriptive manner (2) By the way of data tables (3) By the way of graphs (diagrams)

For instance, the description of relation between price of a commodity and its demand is stated as, "when price of a commodity falls, its demand expands and vice-versa".

This can be shown merely by presenting a data table showing a consumer's willingness to demand a commodity at different prices of the commodity. This is shown below :

Price of the Commodity (₹)	**Demand for the Commodity by Individual (in units)**
20	20
15	40
10	60
5	80

Thus, the table also represents the same fact that as price of a commodity falls, its demand expands.



1.1 Representation of Data in Diagram

The curve in diagram 1.1 is a representation of the data given in the table above given in page 4 in the form of a graph. This curve slopes downward from left to right showing that when variable on 'Y' axis (which is price of the commodity in ₹) falls, the variable on 'X' axis (which is demand for the commodity in units) extends. Economics studies relationship between various economic parameters and hence a cause-effect relationship can be expressed by way of such graphs/diagrams.

1.7 Importance of Statistical Information

The importance of statistical information in economics can be stated as under:

1.7.1 Statistical Information Supports or Confirms a Principle : Philosophy of economics observes human behaviour and scientific tools in economics establish principles and theories. To test the validity of such theories in real life at different times and places, information from real life activity at such different times and places is necessary. Such information can be collected and presented in quantitative terms with the help of statistical tools. For example, statistical data on rainfall and agricultural production in a region at one time or at different times helps to understand the cause – effect relationship between rainfall and agricultural production which economic theory has already established. Likewise, data on price of a commodity and its demand can help to confirm the theoretical relationship established by economics between the two.

1.7.2 Gives an Idea about the Changing Trends of Economic Parameters : With the help of economic data we can obtain an idea of the direction and magnitude of change in economic parameters.

For example, we can know how sales revenue of a particular firm is changing; or we can know the trends of employment in a nation; or we can know the trends of production in different sectors of an economy. For instance, we can say that share of agricultural is falling in national income or supply of money is rising in the economy.

Such data help individual units to make appropriate decisions to increase their benefits and help the government in making appropriate economic policies.

1.7.3 To Make Comparative Study Easy : If appropriate statistical data are obtained then comparison of a parameter over different time periods, across regions and across nations can be made.

For example, we can compare growth rate of India's national income between 1951 and 2015; we can also compare India's macroeconomic parameters like per capita income, inflation etc. with those of other countries like USA, UK, China etc.

1.7.4 To Make Precise Presentation of Facts : Sometimes facts about economic parameters can be represented more clearly with the help of statistical data and graphs. Graphs showing inflation, agricultural production, regional disparities in incomes etc. can give clearer picture of their trends as compared to what description in words can do.Thus, it can be easily understood by lay persons.

1.8 Some Requisite Aspects in Collecting Statistical Information and Presenting it in Diagram/Graph/Chart

Statistical information can be represented in the form of a diagram/chart/graph. These are helpful in explaining some economic principles, trends and relationships in a simple and suggestive manner. Such a representation also becomes attention catching.

While constructing such diagrams the following particulars must be carefully considered.

1.8.1 Sources of Information/Data : The sources of data must be reliable and universally acceptable to ensure their accuracy.

For instance, to obtain information regarding growth and development parameters in India, 'Economic Survey of India' and data provided by Central Statistical Organization is a reliable source.

To obtain comparative data for such parameters for different countries of the world, 'World Development Report' is a reliable and universally acceptable source.

1.8.2 Clarity Regarding Dependent and Independent Variable : When there is a cause – effect relationship between variables then the cause variable is treated as an independent variable and the effect variable is treated as a dependent variable as its values are dependent on the values of the independent variable. In such relationships, data pertaining to the independent variable must be represented on the 'X' axis and that pertaining to the dependent variable must be represented on the 'Y' axis.

For instance, if we are examining the relationship between rainfall and agricultural production in a region, then rainfall is the independent variable and represented on 'X' axis and agricultural production is the dependent variable and therefore represented on the 'Y' axis.

If we are examining production over different time periods then time periods are represented on 'X' axis and production on 'Y' axis.

In economics in the law of demand however, price which is an independent variable is represented on the 'Y' axis and demand which is a dependent variable is represented on 'X' axis.

1.8.3 Selecting Appropriate Scales : In order to obtain a systematic graph with clarity and appropriate size, proper scales must be taken on both the axis. Scales are measures taken to represent actual data in a diagram. If actual data is too large, say in '000 or in '00,000 then such data cannot be directly represented in charts. Hence it is represented after converting it into measures on an appropriate scale.

For example, in a diagram, a distance of 1 cm. = 10,000 units or 1 cm. = 5 years and so on.

Such scales are taken on both the axes.

1.9 Presenting Quantitative/Numerical Information in Diagrams/Graphs

Numerical data can be represented in different types of graphs and diagrams.

Diagrams showing linear and non-linear relations are commonly used in economics. The demand curve is one such diagram.

Some other types of charts/graphs/diagrams used frequently in economics are,

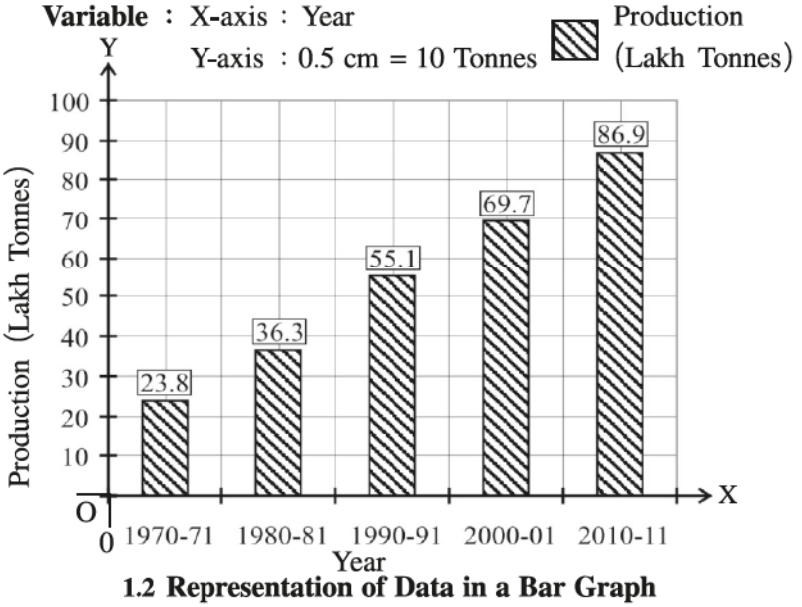
(1) Bar diagram (2) Grouped bar Diagram (3) Pie Diagram etc.

1.9.1 Bar Diagram : A bar diagram (also known as bar chart or bar graph) is a diagram which represents grouped data with rectangular bars with length proportional to the values which they represent.

For example, Production of wheat in India.

Wheat Production in India

Year	Production (Lakh Tonnes)
1970-71	23.8
1980-81	36.3
1990-91	55.1
2000-01	69.7
2010-11	86.9



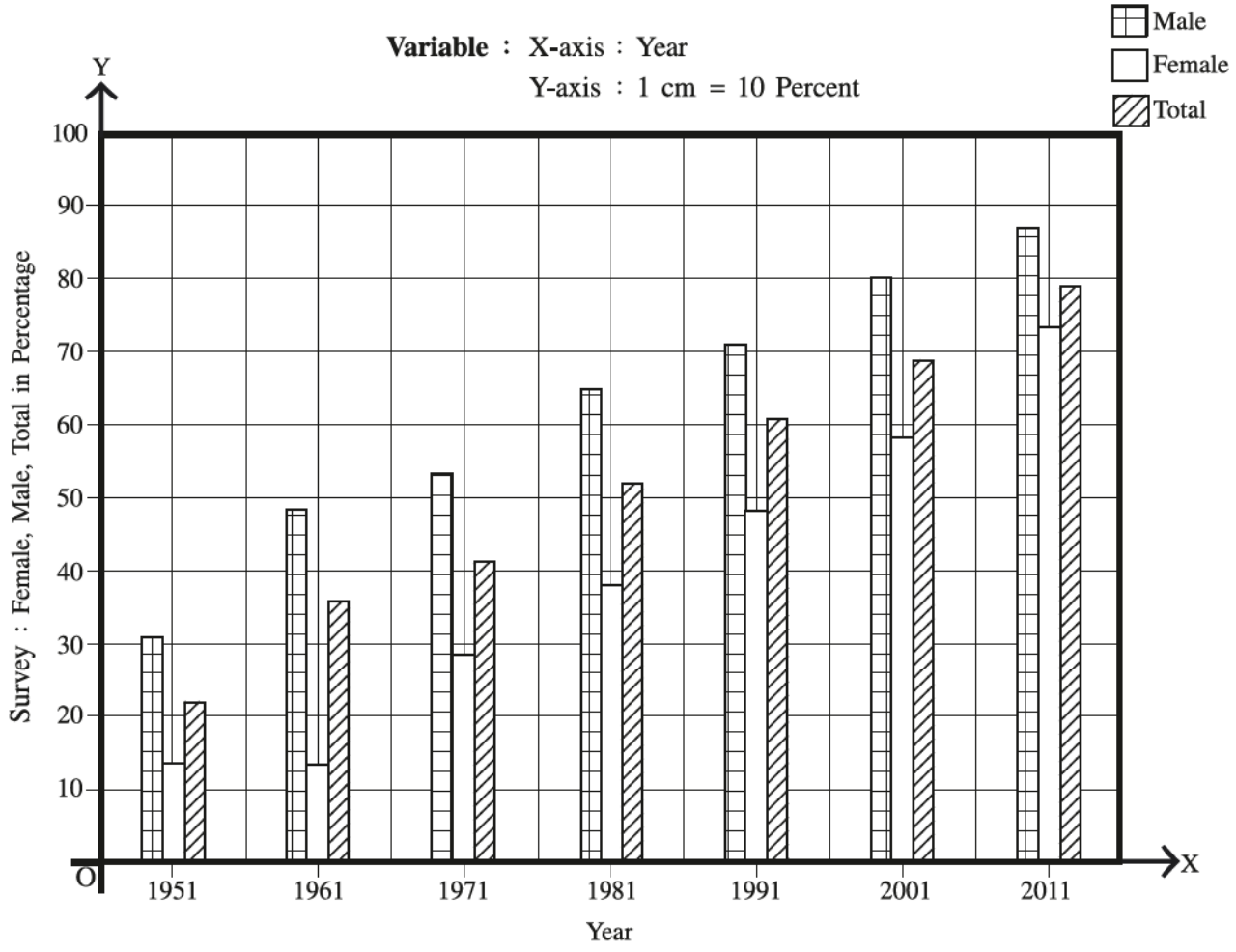
1.2 Representation of Data in a Bar Graph

1.9.2 Grouped/Clustered Bar Diagram : These charts are used when the dependent variable is grouped in more than one category. For example, when we want to examine the litreacy rates for different years in Gujarat, we can use a grouped bar chart to show male, female and total litreacy rates as three categories in one group for one year. Bar for each category can be shaded or coloured differently.

Literacy Rate in Gujarat (in Percentage)

Years	Male	Female	Total
1951	30.17	12.79	21.09
1961	48.73	12.77	36.19
1971	53.78	29.00	41.84
1981	65.10	38.50	52.20
1991	73.13	48.64	61.29
2001	80.50	58.60	69.14
2011	87.23	70.73	79.31

Source : Socio–Economic Survey of Gujarat: 2011-12

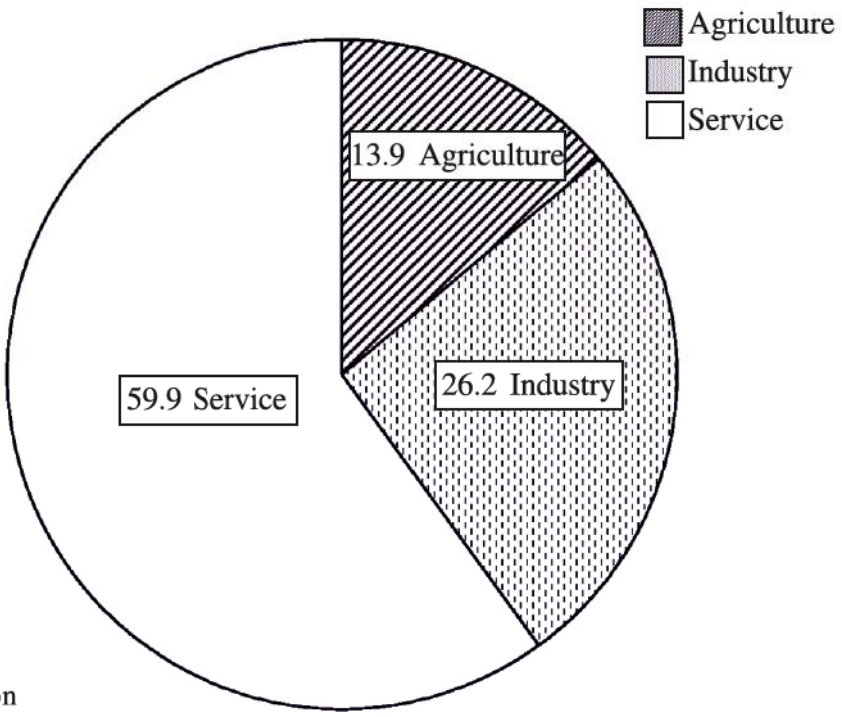


1.3 Representation of Data in a Grouped/Clustered Bar Graph

1.9.3 Pie Diagram : A pie chart is a circular statistical graph which is divided into sectors to illustrate the numerical proportion of data. The numerical data is proportionately converted into degrees in a circle and sectors are formed considering those degrees. For example, the share of different sectors in India's national income can be shown in a pie chart. .

Sector	Share in NI in Percentage
Agriculture	13.9
Industry	26.2
Service	59.9

Thus, numerical information can be explained in a simple manner with the help of graphs.



Source : Economic Survey of India : 2014-15

1.4 Representation of Numerical Data in a Pie Diagram

1.10 Importance of Economics

In a modern world almost all goods of human needs have become economic goods owing to increasing use and scarcity and thus all activities of human beings are increasingly becoming economic activities. Hence, the relevance of economics as a philosophy as well as a science is increasing in human life. Economics is important to understand, behaviour of human beings, society and state while managing every day activities and scientific theories and principles guiding professional decision making.

1.10.1 Understanding Everyday Behaviour : It is useful in understanding everyday behaviour of human beings, society and state while managing routine tasks. Economics helps in understanding everyday behaviour in the following ways :

1.10.1.1 Understanding International Events : Some international events affect lives of people in several countries like USA, Russia, China etc. People try to understand the impact of rise in price of crude oil in international market on their own cost of living; people also try to understand why some countries are more developed and others are less developed. Thus, in modern times with increasing information available to public owing to continuously improving technology, the scope of economics in everyday life is expanding.

1.10.1.2 Understanding Historical Events Knowledge of economics helps to understand historical events better. Economics helps to understand better the reasons behind wars, the entry of East India Company in India for trade and the resultant 'British raj', India's revolt against goods made in England during British rule, labour movements etc.

1.10.2 Economic Importance :

1.10.2.1 Decision Making by Individuals : People from all walks of life like households, lawyers, actors, singers and others try to get maximum gains from the efforts which they make; they try to manage their time and resources in an optimum manner to increase their gains. In a way, they all indulge in economic decision making knowingly or unknowingly.

1.10.2.2 Understanding Government Policies : To understand various policies of a state like tax policy, wage policy and so on, knowledge of economics is useful. People take decision according to the bank rates declared by the Reserve Bank of India. (REPO Rates and Reverse REPO Rates guide decision making regarding saving and investment.

1.10.3 Professional Decision Making : Economics is useful in knowing scientific principles and theories which guide professional decision making. Revenue and cost as well as demand and supply are concepts which are used in all types of economic activities. Certain theories of economics help businesses in day to day decisions pertaining to price determination, wage determination, employment of various factors of production and so on. Economics provides knowledge regarding the impact of certain decisions. For example, it provides insights into question like, what happens if price is reduced in a market with very high degree of competition.

Economics is a science which provides insights for day to day decision making. All human beings play role/s as a (1) consumer (2) producer or (3) labour from time to time in life. Economics helps them to take rational decisions for maximizing gains by minimizing costs.

Exercise

1. Choose correct option for the following from the options provided :

(1) What is the science which studies human behaviour and deals with economic problems called ?
(A) Philosophy (B) Physics (C) Economics (D) Statistics

(2) From which Greek word is economics derived ?
(A) Oikonomikos (B) Ecology (C) PHILO (D) NOMOS

(3) Who is known to be the first economist to have started studying economics as a separate science ?
(A) Kautilya (B) Marshall (C) Robbins (D) Adam Smith

(4) Who introduced economics as a real science ?
(A) Adam Smith (B) Robbins (C) Samuelson (D) Marshall

(5) In how many branches is economics classified by the method of study and analysis ?
(A) four (B) three (C) two (D) five

(6) On which axis are the independent variables like countries, year, rainfall etc. usually represented ?
(A) Vertical axis (B) Horizontal axis
(C) On the point of origin (D) On the corner of the graph

(7) Who has written the book 'Principles of Economics' ?
(A) Adam Smith (B) Marshall (C) Robbins (D) Samuelson

2. Answer the following questions in one sentence :

(1) State the definition of economics given by Robbins.
(2) Which is the focus point of Samuelson's definition of economics ?
(3) Which are the three ways of representing economic information ?
(4) On which axis are the independent and dependent variables usually represented ?
(5) What is pie diagram ?

3. Answer the following questions in short :

(1) Give Kautilya's definition of economics.
(2) Explain Marshall's definition of economics.
(3) Explain the difference between economic and non – economic activities.
(4) Specify the difference between microeconomics and macroeconomics.
(5) "Statistical information is necessary to know the direction and condition of growth of an economy" explain.

4. Answer the following questions in brief points :

(1) Explain the definitions of economics by Adam Smith and Marshall.
(2) Give the points of importance of statistical information in the study of economics.
(3) Give an idea regarding Indian economic thought.
(4) Clarify the importance of economics.

5. Answer the following questions in detail :

(1) Give an idea of the development of economics as a science in the west.
(2) 'Graphs/diagrams are a better method of precisely presenting economic information.' Explain.

Glossary

Economic Activity		Activity for fulfilment of a requirement through a transaction which involves costs and benefits on both sides is called an economic activity.
Microeconomics		Microeconomics is the study/analysis of behaviour of individual units of the economy.
Macroeconomics		Macroeconomics studies issues which emerge from the entire economic set-up and impact the entire economic set-up.
Pie Chart (Diagram)		A pie chart is a circular statistical graph which is divided into sector to illustrate the numerical proportion of data. The numerical data is proportionately converted into degrees in a circle and slices are formed considering those degrees.
Analysis		Process of identifying, classifying information and understanding relationship between various parameters given in the information is called analysis.
Exchange		It is an activity of transaction which involves give and take.
Scientific Method		A method of analysis which uses facts, scientific tools and tries to establish scientific relationships based on proofs is called scientific method.
Specialisation		It is a method of working where a piece of work is done by some units of a factor of production or by a worker or by a group of workers who specialize only in that particular job.
Positive Method		A science which uses only observable and experimental facts to analyse reality.
Normative Science	:	A science which prescribes what should be done and what should not be done. It judges behaviour, activities and actions as good or bad based upon some ideal benchmarks for a society.

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