14
WHAT MICRO ECONOMICS IS ALL ABOUT

14.1 INTRODUCTION

You have already learnt about the basic economic processes through which an economy functions, the problems faced by an economy, the basic features of Indian economy and some important economic concepts and variables relating to national income. Any meaningfull study of an economy will involve a study of any one or all of the processes and of the various economic agents involved in these processes. For example, any study of production process will involve a study of the economic agents engaged in production, consumption and investment activities. In this lesson you will be explained the importance of such studies and how they help in understanding and solving various economic problems.

14.2 OBJECTIVES

After going through this lesson you will be able to :

- explain the meaning of micro economics;
- distinguish between micro economics and macro economics;
- explain the scope of micro economics;
- explain how micro economic theories are constructed;
- explain how graphical diagrams are used in the study of economics.

14.3 MICRO ECONOMICS AND MACRO ECONOMICS

(a) Meaning

Micro and macro economics are two parts of economics. Micro means small. So when the study or the problem relates to a smaller part of the economy then the subject of study is mirco economics. Macro means large. When the study relates to the whole economy or to the aggregates relating to the whole economy then the subject of study is macro economics.

Let us take an example to understand the meaning of these two concepts more clearly. The human body consists of various organs and cells each of which has some function to perform and they are also interrelated. When we study a particular cell or organ, it will be termed as a micro study. Such studies help us in understanding the mechanism and functioning of the human body. A study of the human body as a whole will be termed as a macro study. Similarly in an economy, production, consumption and investment are its vital processes. They are interrelated. In each of these processes thousands and thousands of individuals and institutions are engaged. They are called economic agents and are grouped as households, firms etc. A study of the economic activities and behaviour of these economic agents individually or as a group and their interrelationship will be called a micro economic study. On the other hand, the study of the problems and aggregates relating to the economy as a whole will be called macro economic study.

(b) Relationship

Micro economics and macro economics are two parts of economics but they are not mutually exclusive. In other words, they are interrelated. All micro economic studies can help in better understanding and analysis of the macro economic variables. Such studies also help in the formulation of economic policies and programmes.

Let us take a few examples to understand their relationship. If we know how the price of a commodity is determined and understand the role of buyers and sellers in the process of price determination, it would help us in analysing the changes that take place in the general price level in the economy. A study of the process of price determination and the role of buyers and sellers in this process is a micro economic study whereas the study of the general price level in the economy is a macro economic study. Similarly, if we want to assess the performance of an economy, we will have to find out the performance of each sector of the economy and to find out the performance of each sector we will have to find out the performance of each production unit individually or in groups. A study of each group of production units or of each sector is a micro economic study whereas the study of the performance of the economy as a whole is a macro economic study. Thus micro economics and macro economics are two interrelated parts of economics.

POINTS TO REMEMBER

- The study relating to a smaller part of the economy such as the study of a single firm, a consumer or demand of a commodity or supply of a commodity etc. is a micro economic study. The study of any aspect of the economy as a whole such as level of unemployment, growth, general price level etc. is a macro economic study.
- Micro economics and macro economics are two complementary parts of economics. They are interrelated. One helps in the study of the other.

INTEXT QUESTIONS 14.1

State whether the following statements are true or false?

(i) Micro and macro economics are two unrelated parts of economics.
(ii) Study of the problems of cotton textile industry is a micro economic study.
(iii) Study of the general price level in the economy is a macro economic study
(iv) Macro economic studies relate to a small part of the economy.
(v) Study of the behaviour of individual economic agents is a macro economic study.

14.4 SCOPE OF MICRO ECONOMICS

You have learnt that production, consumption and investment are the three vital economic processes in an economy and they are interrelated. All economic activities are associated with these processes. All those who are engaged in these activities are called economic agents or economic units. These economic agents or units are the consumers, producers and the owners of factors of production. The economic activities of one group of economic agents influences the economic activities of other groups and their interactions influence many economic variables such as the price of a commodity or of a factor of production, the number of consumers and producers etc.

The study of economic behaviours of these economic units is the subject matter of micro economics. How do the individuals or households as consumers allocate their incomes between alternate uses? How do the producers or firms allocate their resources in the production of different goods and services? How is the price of a good determined? How is the price of a factor of production determined? These are some of the questions that are studied in micro economics. For example, a consumer has only limited income but his wants are unlimited. Wants are satisfied by goods and services. He has to allocate his income on the purchase of the goods and services. His objective is to get maximum satisfaction. How should he spend his income to achieve this objective and how should he react to changes in prices of goods and other changes that may take place from time to time? The study of the actions and reactions of a consumer is a subject matter of micro economics. Similarly the objective of a producer or a firm is generally to earn maximum profits. What should he produce and in how much quantity? How should he react to the actions of the consumers? A study of the actions and reactions of the consumers and producers is also the subject matter of micro economics. Further more, the actions and reactions of the consumers and producers influence of price of a commodity. The study of such influences is also a subject matter of micro economics. You will study some of these questions in subsequent lessons.

The study of the economic behaviour of various economic units and their interactions leads to the formulations of various micro economic theories such as the theory of consumer's behaviour, the theory of firm, the theory of price, the theory of wages, the theory of rent, the theory of interest and the theory of profit etc. An understanding of these theories helps us to understand the various problems that may confront us in our day to day life. For example, why does the price of milk rise in summers, or why is the price of petrol more than the price of milk or why does the Government give subsidies to farmers or why does the Government sell some essential goods through fair price shops etc.

POINTS TO REMEMBER

- The study of the behaviour of an economic unit is the subject matter of micro economics. The economic units may be households, producers or owners of factors of production.
- Micro economic studies also include the study of interrelationships between different economic variables such as the relationship between price and demand of a commodity or price and supply of a commodity.

INTEXT QUESTIONS 14.2

Fill in the blanks with suitable words given in the brackets.

(i) The study of the allocation of resources by a producer on the production of different goods and services is the subject matter of ..... economics. (macro, micro)

(ii) The study of actions and reactions of a consumer is a ..... economic study. (micro, macro)

(iii) The study of the relationship between the price of a commodity and its demand or supply is a ..... economic study. (micro, macro)

(iv) Our wants tend to be ..... (limited, unlimited).

(v) The means (income) with which we have to satisfy our wants are quite ..... (limited, unlimited).

14.5 METHODS OF CONSTRUCTING ECONOMIC THEORIES

It is not possible to study the economic behaviour of each of the numerous economic agents and also each of their interactions. From each group of economic agents a study of the behaviour of some is made and on the basis of this study some conclusions are drawn. These

conclusions are nothing but a generalisation of the behaviour of that group. These generalisations are then tested and then formulated as economic law or theory.

There are two methods of formulating economic theories : (a) deductive method, and (b) inductive method

(a) Deductive Method

For formulating an economic theory by deductive method, following steps are taken :

(i) **Selecting the problem for analysis :**
The first step is to specify the problem to be enquired into. The variables whose behaviours and interrelationships are to analysed must be clearly known.

(ii) **Specifying the assumptions :**
Assumptions are made to facilitate the analysis. They limit the area and scope of study. They may be pertaining to the behaviour of the economic variables. For example, when we study the effect of a change in the price of a good on its demand we make an assumption that no other factor is influencing the demand of that good. The assumptions may be regarding the motivation of the economic agents. For example, when we make a study about a producer, we assume that his objective is to earn maximum profits. The assumptions may also be purely technological in nature.

(iii) **Deducing or fomulating hypothesis through logical reasoning :**
On the basis of the assumptions made a general statement on the relation between economic variables is made and then through logical reasoning certain conclusions are drawn. This is known as formulating a hypothesis.

(iv) **Testing or verfication of hypothesis :**
The hypothesis must be verified before it is given the form of an economic theory. For this the appropriate data are collected which reveal the facts. If the actual facts support the hypothesis then it takes the form of a theory. If the actual facts as revealed by the data do not support the hypothesis then it is rejected and if necessary, it may be modified or reformulated and tested. In constructing a micro economic theory the problem selected for analysis relates to an economic agent or a group of economic agents.

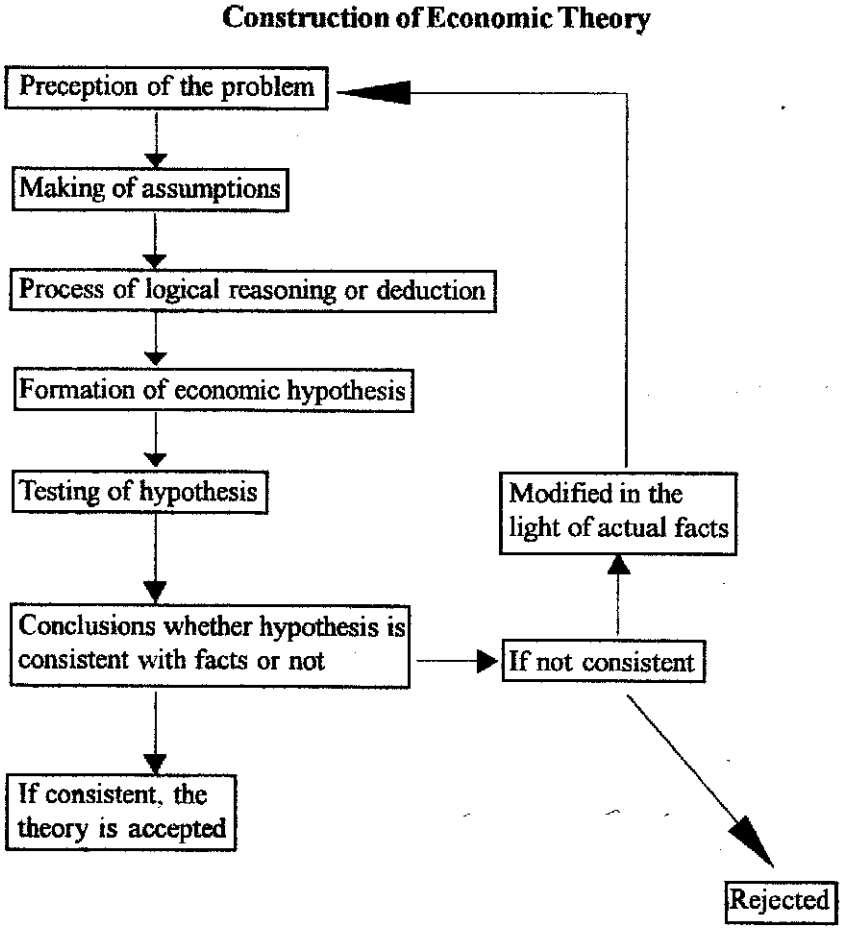

Fig. 14.0 : How theories are constructed, modified and discarded

(b) Inductive Method

In formulating an economic theory by inductive method the following steps are taken :

(i) **Selecting the problem for analysis :**
This step is the same as in case of deductive method.

(ii) **Collection, classification and analysis of data :**
Data relating to the problem is collected, classified and analysed. Data collected should be based on very large number of observations. By using appropriate statistical techniques, relationship between various variables are found.

(iii) **Establishing the relationship through logical reasoning :**
On the basis of the logical finding the theory is formulated by logical reasoning.

While formulating an economic theory, the terms used must be properly defined to aviod any confusion.

POINTS TO REMEMBER

- There are two methods of constructing an economic theory : (a) Deductive method and (b) Inductive method.
- For formulating an economic theory by deductive method the steps required are : (a) selecting the problem, (b) specifying the assumptions, (c) deducing the hypothesis and (d) testing of hypothesis.
- For formulating an economic theory by inductive method the steps taken are : (a) selecting the problem, (b) collection, classification and analysis of data and (c) establishing the relationship between variables through logical reasoning.

INTEXT QUESTIONS 14.3

Fill in the blanks with suitable words given in the brackets

(i) For formulating an economic theory, assumptions are made to ..... the area and scope of study. (wider, limit)

(ii) The two methods of constructing an economic theory are .... (macro and micro economics, inductive and deductive methods)

(iii) The last step in the construction of an economic theory by deductive method is ..... (testing of hypothesis, logical reasoning)

14.6 USE OF DIAGRAMS (GRAPHS) IN ECONOMICS

Graphical diagrams are widely used in economics. These diagrams help in understanding and analysing the relationships of two variables and the interaction of different variables.

You will come across such diagrams in the next three lessons which deal with micro economics problems.

(a) How to draw a graphical diagram

We draw two straight lines intersecting each other at right angle (90°) as shown in figure 14.1 X^1X line and YY^1 line intersect at point O. X^1X line is called the horizontal axis or X-axis and YY^1 line is called the vertical axis or Y-axis. Point O is also read as zero. Each axis represents one variable. To the right of point O on X-axis the positive values of the variable are shown, starting from zero at point O. To the left of point O on X-axis negative values of the variables are shown. Similarly on the Y-axis, upward of point O the positive values of the variables are shown starting from zero at point O. And downward of point O the negative values of the variables are shown. On each axis equal distance should represent

equal values of the variable represented along that axis.

In the figure 14.1 OA distance is showing the quantity of the variable as 1 unit, AB is equal to OA and shows another unit of the variable. Thus OB shows two units of the variable. Similarly Y-axis is also divided in equal part. Each part shows equal quantity of the variable. Into how many parts each axis should be divided and how much quantity of the variable each part represents depends upon the total quantity of the variable that is to be shown on the axis.

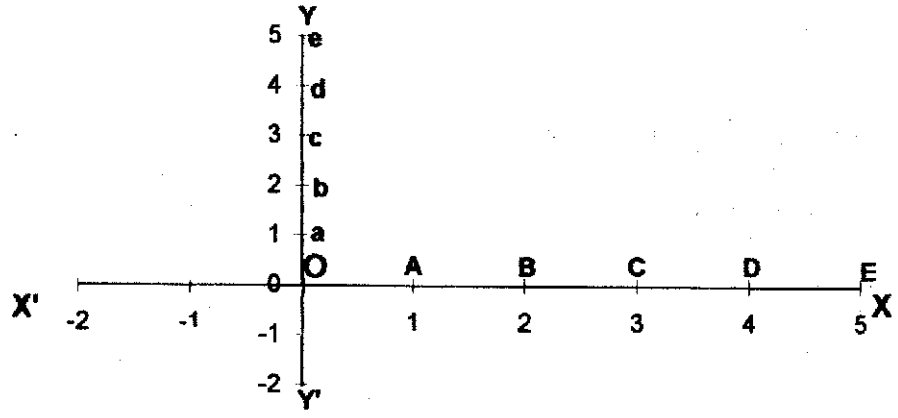

Fig. 14.1

In figure 14.1 we have divided the OX and OY axis into 5 equal parts and each part represents 1 unit of the variable represented on each axis. The distance OE on X-axis shows 5 units of the variable. Similarly the distance Oe on Y-axis shows 5 units of the variable represented on this axis.

(b) How to plot a given data

Let us take an example. The table 14.1 shows the different prices of pen and the number of pens purchased at each price. So price of the pen is one variable and the number of pens purchased is another variable.

Table 14.1

Price of Pen (Rs.)	Number of pens purchased
5	10
4	20
3	30
2	40
1	50

This table also shows that changes in the price of pen effect the number of pens purchased. So price of pen is called an independent variable and is generally shown on OY axis. Number of pens purchased, as shown in the table, depends upon on the price of pen. So number of pens is called dependent variable and is shown on OX-axis. Thus Y-axis represents price per pen and X-axis represents the number of pens as shown in figure 14.2. X-axis has been divided into 5 equal parts, each part shows 10 pens. Y-axis has been divided into 5 parts, each part shows Re. 1. Thus points marked 0, 10, 20, 30, 40, 50 on OX-axis show zero pen, 10 pens, 20 pens, 30 pens, 40 pens and 50 pens respectively. Points marked 0, 1, 2, 3, 4, 5 on Y-axis show price as zero, Re. 1, Rs. 2, Rs.3, Rs. 4 and Rs. 5 respectively. For example, the distance from zero to 40 on OX-axis shows that the number of pen purchased is 40. Similarly the distance from zero to 3 on OY-axis shows that the price of pen is Rs. 3.

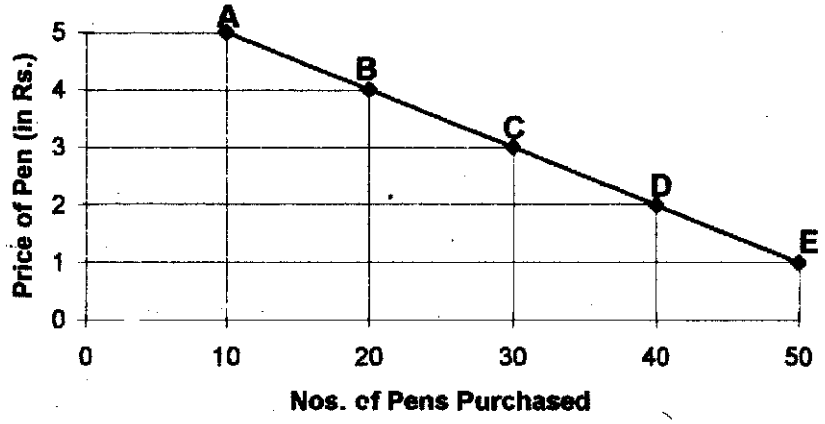

Fig. 14.2 : Straight Line Curve

We take Rs. 5 as the price on Y-axis and and draw a perpendicular (a line making a 90° angle with line OY) from this point. At this price the number of pens purchased was 10 as shown in the table 14.1. We now take the point showing 10 pens on OX-axis and draw a perpendicular from this point on OX line. The two perpendiculars intersect at point A. Point A represents both the price (Rs.5 per pen) and the number of pens purchased (10) at this price. In this way we can plot point B which shows the price of pen as Rs. 4 per pen and the number of pens purchased at this price i.e. 20 pens. Similarly points C, D and E are plotted. Thus the five points A, B, C, D and E give the total information contained in the table 14.1. If we join these points we get a line A B C D E. It is called a straight line curve. Each point on this curve shows a price of pen and the number of pens purchased at that price.

Notice that this curve is downward falling from left to right. This shows that there is an inverse relationship between price (independent variable) and number of pens purchased (dependent variable). As price falls, more pens are purchased.

You may ask at this stage : will such a curve be always a straight line? No, that is not so. We may have the following two other types of curve which are also downward falling from

left to right. Figure 14.3 shows a curve downward falling from left to right but instead of being a straight line, it is bending towards the point of origin i.e. point O. Such a curve is called a convex curve. Figure 14.4 shows a curve which falling downward from left to right but bending away from point O. It is called a concave curve.

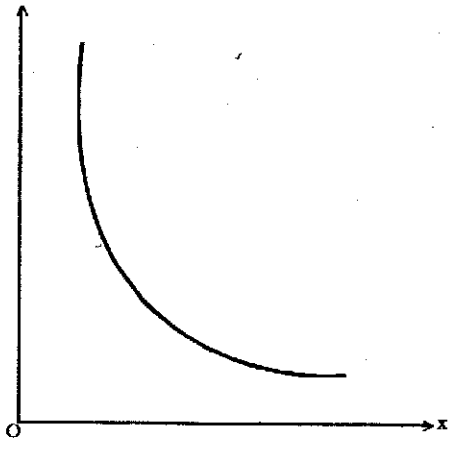

Fig. 14.3 : Convex Curve

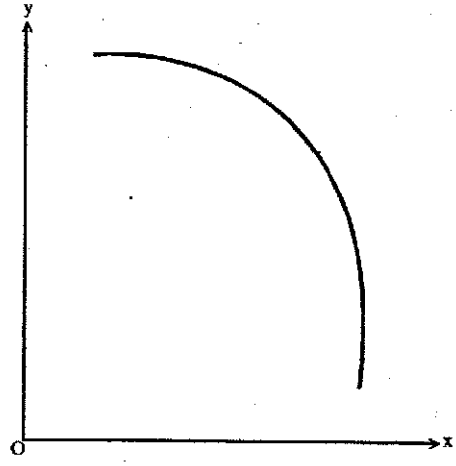

Fig. 14.4 : Concave Curve

Read the table 14.1 carefully you will notice that for every fall in price by Re. 1, the increase in the number of pens purchased is 10. This means that the ratio of change in price and change in the number of pens purchased is constant and is 1:10. In such a case you will get a straight line curve. Consider table 14.2 given below :

Table 14.2

Price of Pen (1)	Number of Pens purchased (2)	Ratio of Change in Price & Change in the number of pens purchased (3)
6	10	—
5	15	1:5 = 1/5
4	25	1:10 = 1/10
3	40	1:15 = 1/15

For each fall in the price of pen by Re. 1 the increase in number of pens purchased is

different. The ratio of change in price and in the number of pens purchased is given in column (3). This ratio is not constant, it is falling. When such a situation is shown on the graph you get a curve similar to the one shown in figure 14.3. Now consider table 14.3

Table 14.3

Price of Pen (1)	Number of Pens purchased (2)	Ratio of Change in Price & Change in the number of pens purchased (3)
6	10	—
5	25	1:15 = 1/15
4	35	1:10 = 1/10
3	40	1:5 = 1/5

This table shows that ratio of change in the price of pen and change in the number of pens purchased is increasing. When this table is shown on a graph, you will get a curve similar to the one shown in figure 14.4. Such a diagram was also drawn in lesson No. 2 (the production possibility curve or PCC).

(c) Upward Rising Curves

It is not necessary that the curve showing the relationship between two variables may always be downward falling from left to right. It will be so only when there is inverse relationship between two variables.

If there is direct relationship between two variables i.e. when one increases the other also increases and vice versa, then the curve that you will get will be upward rising from left to right. Consider table 14.4.

Table 14.4

Price of Pen (in Rs.)	Number of pens supplied by its sellers (per day)
2	20
3	30
4	40
5	50
6	60

As the price of pen rises the number of pens supplied by the sellers is increasing. If you plot this table on a graph paper you will get the following curve (See figure 14.5).

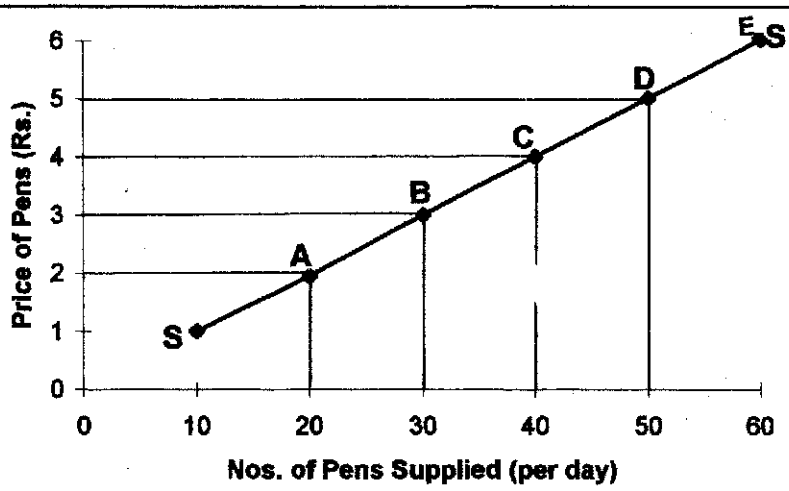

Fig. 14.5 : Upward Rising Curve

Point A shows the price of pen as Rs. 2 per pen and the quantity supplied as 20 pens. Point B shows the price as Rs. 3 and the quantity supplied as 30 pens and so on. This curve SS is upward rising from left to right. Remember that to find out the direction of the curve is we always start from the left. When a curve is downward falling from left to right it is also called negatively sloped. When a curve is upward rising from left to right, it is also called positively sloped.

(d) Showing more than one variable on the same axis

So far we have taken only such examples which require only one variable to be represented on one axis. More than one variable can also be represented on a single axis if these variables are expressed in same units. Consider the table 14.5

Table 14.5

Price of Pen	Market demand of pen	Market supply of pen
5	100	500
4	200	400
3	300	300
2	400	200
1	500	100

In this table there are three variables. Price of pen is the independent variable. Demand of pen and supply of pen are the two dependent variables. Both demand and supply of pen are expressed in numbers, both can be represented on one axis.

Now plot the data given in the table 14.5 on the graph paper. You will get the following figure 14.6.

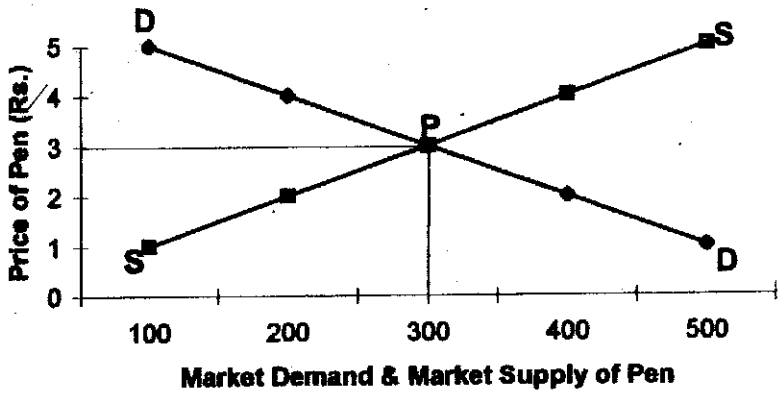

Fig. 14.6

Point P is a point on both the curves, so it represents two set of combinations. First, when price is Rs.3 market demand for pen is 300. Second, when price is Rs.3 market supply for pen is 300.

At this stage this much knowledge about the graphical diagrams used in economics is sufficient for you.

POINTS TO REMEMBER

- Graphical diagrams help in studying the relationship between two variables such as price and demand, price and supply etc.
- Two straight lines are drawn intersecting each other at right angles. The point of intersection is called the point of origin 'O'. The horizontal line is called OX axis and represents one variable. The vertical line is called OY axis and represents another variable.
- For each given combination of two variables we get one point on the graph. Similary each point can be read as a combination of two variables. If we join all such points, we get a curve.
- If the curve is downward falling from left to right, it shows that the two variables are inversely related.
- If the curve is upward rising from left to right, it shows that the two variables are directly related.
- If the ratio of changes in two variables is constant the curve would be a straight line. If the ratio of change is falling then the curve would be convex to the origin. If the ratio of change is rising the curve would be concave to the origin.

INTEXT QUESTIONS 14.4

State whether the following statements are true of false?

(i) The point of origin 'O' is the point of intersection of OX and OY axis.

(ii) For each combination of two variables more than one point can be plotted.

(iii) A downward falling curve (from left to right) indicates the direct relationship between two variables.
(iv) An upward rising curve (from left to right) shows that if the value of one variable increases, the value of the other variable falls.
(v) A graphical diagram can show the relationship of only two variables.
(vi) More than one variable can be represented on an axis if these variables are expressed in same units.
(vii) X axis and Y axis intersect each other at an angle of 90°.

TERMINAL EXERCISE

1. Distinguish between micro economics and macro economics.
2. What is micro economics all about?
3. How are micro economic theories constructed?
4. Plot the following data on a diagram. Is the curve obtained by joining various points a straight line or not? Give reasons.

Price per unit (Rs.)	Quantity demanded (Units)
5	100
4	120
3	180
2	200

5. Distinguish between a dependent variable and an independent variable. Is each variable represented on a particular axis in Economics?
6. What relationship between the two variables is indicated by (a) upward sloping curve and (b) downward sloping curve?
7. Distinguish between inductive method and deductive method of formulating economic theories.

ANSWERS

Intext Questions 14.1

(i) False (ii) True (iii) True (iv) False (v) False

Intext Questions 14.2

(i) micro economics (ii) micro (iii) micro (iv) unlimited (v) limited

Intext Questions 14.3

(i) limit (ii) inductive and deductive methods (iii) testing of hypothesis

Intext Questions 14.4

(i) True (ii) False (iii) False (iv) False (v) False (vi) True (vii) True

Terminal Exercise

1. Read section 14.3
2. Read section 14.4
3. Read section 14.5
4. Read section 14.6 (b)
5. Read section 14.6 (b)
6. Read section 14.6 (b and c)
7. Read section 14.5