

# Khandelwal Vaish Girls Institute of Technology

Internal Examination 2017 - 18

Managerial Economics

MBA Semester I

Question Paper & Answer Key

MM: 30

Time : 02:30 hours

1. **What is macro economics? Explain the scope, importance and limitation?** (4)

Ans. **Meaning:** It is that part of economic theory which studies the economy in its totality or as a whole. It studies not individual economic units like a household, a firm or an industry but the whole economic system. Macroeconomics is the study of aggregates and averages of the entire economy. Such aggregates are national income, total employment, aggregate savings and investment, aggregate demand, aggregate supply general price level, etc.

Here, we study how these aggregates and averages of the economy as a whole are determined and what causes fluctuations in them. Having understood the determinants, the aim is how to ensure the maximum level of income and employment in a country.

**In short**, macroeconomics is the study of national aggregates or economy-wide aggregates. In a way it is like study of economic forest as distinguished from trees that comprise the forest. Main tools of its analysis are aggregate demand and aggregate supply.

**P. A. Samuelson** "Macroeconomics is the study of the behaviour of the economy as a whole. It examines the overall level of nation's output, employment, prices, and foreign trade. "

**D.N. Dwivedi** "Macroeconomics is essentially the study of behaviour and performance of the economy as a whole. More importantly, it studies the relationship and interaction between the 'factor of forces' that determine the level and growth of national output and employment, general price level, and the balance of payments positions of an economy."

**The scope of macroeconomics includes the following parts:** The scope of macroeconomics refers to the fields which the study subject matter covers. The scope of macroeconomics can be discussed as below:

- **Theory of National Income and employment:** The subject matter of macroeconomic analysis is to explain what determines the level of national income and employment, and what causes the fluctuations in the level of national income, output, and employment. Similarly, the consumption functions and investment functions which determine the level of income and employment are equally important in macroeconomic analysis.
- **Macro theory of distribution:** It studies the theory, which is related to national income or production in a different sector and classes, and how it should be distributed. More precisely, this theory covers the answer to these three questions: how is the national income is distributed among its citizen? What are the determinants of prices of a factor of production (land, labour, and capital)? And finally, how proportionally the national income is distributed among factor of productions?

- **Theory of General Price Level and inflation:** Macroeconomics is also concerned with how the general level of prices determined. Under this, it studies the determination of general price level, inflation, and its theories, money related theories.
- **Theory of Economic Growth:** Another more important branch of macroeconomics is the theory of economic growth. This theory applies to both the developed and under-developed economies. The special theories which explain the causes of under-development and poverty in under-developed countries are known as Economics of Development.
- **Theory of International Trade and Business Fluctuations:** It deals with nature, causes, impacts and implications of economic fluctuations in macroeconomic variables like employment, inflation, national income, economic growth, and output. Similarly, it also studies theories related to international trade, and other components like the balance of trade, the balance of payment, exchange rate, etc.
- **Fiscal Policy:** Fiscal policy is concerned with the revenue and expenditure of government. It refers to the budgetary policy of the government. The fiscal policy deals with the key components of macroeconomics like government expenditure, debt management, and tax revenue which finally helps the government to maintain economic stability, economic growth, high employment.
- **Monetary Policy:** Monetary policy is concerned with the exercise of the central bank to create good economic activities mainly through money and credit supply. It is an important tool for the government to design various types of economic policies. Monetary policy is concerned with various macroeconomic variables like quantity, quality, availability, and cost of money as well as the rate of interest, investment, employment, income etc.
- **Trade cycle:** It is the cyclical fluctuations in the national economy, which severely affects production, employment, price level and income. Macroeconomic variables help us in analyzing the causes of fluctuations in the economy and in suggesting the right remedies.

### **Importance of Macroeconomics:**

- **Understand the Functioning** - It helps to understand the functioning of a complicated modern economic system. It describes how the economy as a whole functions and how the level of national income and employment is determined on the basis of aggregate demand and aggregate supply.
- **Achieve the Goal Of Economic Growth** - It helps to achieve the goal of economic growth, higher level of GDP and higher level of employment. It analyses the forces which determine economic growth of a country and explains how to reach the highest state of economic growth and sustain it.

- **Bring Stability in Price Level** - It helps to bring stability in price level and analyses fluctuations in business activities. It suggests policy measures to control Inflation and deflation.
- **Determine Balance of Payment** - It explains factors which determine balance of payment. At the same time, it identifies causes of deficit in balance of payment and suggests remedial measures.
- **Solve Economic Problems** - It helps to solve economic problems like poverty, unemployment, business cycles, etc., whose solution is possible at macro level only, i.e., at the level of whole economy.
- **Coordinate International Economic Policies** - With detailed knowledge of functioning of an economy at macro level, it has been possible to formulate correct economic policies and also coordinate international economic policies.

**Some of the important limitations of microeconomics are listed below:**

- **Excessive Generalisation:** Despite the immense importance of macroeconomics, there is the danger of excessive generalisation from individual experience to the system as a whole. If an individual withdraws his deposits from the bank, there is no-harm in it, but if all the persons rushed to withdraw deposits, the bank would perhaps collapse.
- **Excessive Thinking in terms of Aggregates:** Again, macroeconomics suffers from excessive thinking in terms of aggregates, as it may not be always possible to have the homogeneous constituents. Prof. Boulding has pointed out that 2 apples + 3 apples = 5 apples is a meaningful aggregate ; 2 apples + 3 oranges = 5 fruits may be described as a fairly meaningful aggregate ; but 2 apples + 3 sky scrapers constitute a meaningless aggregate ; it is the last aggregate which brings forth the fallacy of excessive aggregative thinking.
- **Heterogeneous Elements:** It may, however, be remembered that macroeconomics deals with such aggregates as aggregate consumption, saving, investment and income, all composed of heterogeneous quantities. Money is the only measuring rod. But the value of money itself keeps on changing, rendering economic aggregates immeasurable and incomparable in real terms. As such, the sum or average of heterogeneous individual quantities loses their significance for accurate economic analysis and economic policy.
- **Differences within Aggregates:** Under this approach one is likely to overlook the differences within aggregates. For example, during the first decade of planning in India (from 1951-1961) the national income increased by 42% ; this, however, doesn't mean that the income of all the constituents, i.e., the wage earners or salaried persons increased by as much as that of entrepreneurs or businessmen. Hence, it takes no account of differences within aggregates.

- **Aggregates must be functionally related:** The aggregates forming the main body of macroeconomic theory must be significant and mutually consistent. In other words, these should be functionally related. For example, aggregate consumption and investment expenditures—which form part of the macroeconomic theory ( $Y = C + I$ ) would have no importance, if they were not functionally related to the levels of income, interest and employment. If these composing aggregates are mutually inconsistent or are not functionally related, the study of macroeconomic theory will be of little use.
- **Limited Application:** Macroeconomics deals with positive economics in the sense of an analysis or how the aggregate theoretical models work—these are far removed from policy applications. These models explain the functioning of an economy and working of things in abstract and precise terms.

With the commencement of Keynes' General Theory and his basic equation,  $Y = C + I$ ; interest in the study of macroeconomics has deepened. Significant breakthroughs in the computation of national income accounts (the study of which forms the very basis of macroeconomics) prove it beyond doubt that the limitations of macroeconomic studies are not insurmountable.

## 2. Elaborate the fundamental concepts in managerial economics? (4)

Ans. **Introduction:** Managerial Economics is both conceptual and metrical. Before the substantive decision problems which fall within the purview of managerial economics are discussed, it is useful to identify and understand some of the basic concepts underlying the subject.

Economic theory provides a number of concepts and analytical tools which can be of considerable and immense help to a manager in taking many decisions and business planning. This is not to say that economics has all the solutions. In fact, actual problem solving in business has found that there exists a wide disparity between economic theory of the firm and actual observed practice.

Therefore, it would be useful to examine the basic tools of managerial economics and the nature and extent of gap between the economic theory of the firm and the managerial theory of the firm. The contribution of economics to managerial economics lies in certain principles which are basic to managerial economics. There are six basic principles of managerial economics. They are:

- The Incremental Concept
- The Concept of Time Perspective
- The Opportunity Cost Concept
- The Discounting Concept
- The Equi-marginal Concept
- Risk and Uncertainty

- a. **The Incremental Concept:** The incremental concept is probably the most important concept in economics and is certainly the most frequently used in

Managerial Economics. Incremental concept is closely related to the marginal cost and marginal revenues of economic theory.

The two major concepts in this analysis are incremental cost and incremental revenue. Incremental cost denotes change in total cost, whereas incremental revenue means change in total revenue resulting from a decision of the firm.

The incremental principle may be stated as follows: A decision is clearly a profitable one if

- It increases revenue more than costs.
- It decreases some cost to a greater extent than it increases others.
- It increases some revenues more than it decreases others.
- It reduces costs more than revenues.

- b. **Concept of Time Perspective:** The firm can change its output without changing its size. In the long period, the firm can change its output by changing its size. In the short period, the output of the industry is fixed because the firms cannot change their size of operation and they can vary only variable factors. In the long period, the output of the industry is likely to be more because the firms have enough time to increase their sizes and also use both variable and fixed factors.
- c. **The Opportunity Cost Concept:** Both micro and macro economics make abundant use of the fundamental concept of opportunity cost. In everyday life, we apply the notion of opportunity cost even if we are unable to articulate its significance. In Managerial Economics, the opportunity cost concept is useful in decision involving a choice between different alternative courses of action.

Resources are scarce, we cannot produce all the commodities. For the production of one commodity, we have to forego the production of another commodity. We cannot have everything we want. We are, therefore, forced to make a choice.

Opportunity cost of a decision is the sacrifice of alternatives required by that decision. Sacrifice of alternatives is involved when carrying out a decision requires using a resource that is limited in supply with the firm. Opportunity cost, therefore, represents the benefits or revenue forgone by pursuing one course of action rather than another.

The concept of opportunity cost implies three things:

- The calculation of opportunity cost involves the measurement of sacrifices.
- Sacrifices may be monetary or real.
- The opportunity cost is termed as the cost of sacrificed alternatives.

Opportunity cost is just a notional idea which does not appear in the books of account of the company. If resource has no alternative use, then its opportunity cost is nil. In managerial decision making, the concept of opportunity cost occupies an important place. The economic significance of opportunity cost is as follows:

- It helps in determining relative prices of different goods.
- It helps in determining normal remuneration to a factor of production.

- It helps in proper allocation of factor resources

- d. **Equi-Marginal Concept:** One of the widest known principles of economics is the equi-marginal principle. The principle states that an input should be allocated so that value added by the last unit is the same in all cases. This generalisation is popularly called the equi - marginal.

Let us assume a case in which the firm has 100 unit of labour at its disposal. And the firm is involved in five activities viz., A, B, C, D and E. The firm can increase any one of these activities by employing more labour but only at the cost i.e., sacrifice of other activities.

An optimum allocation cannot be achieved if the value of the marginal product is greater in one activity than in another. It would be, therefore, profitable to shift labour from low marginal value activity to high marginal value activity, thus increasing the total value of all products taken together.

- e. **Discounting Concept:** It is simply that in the intervening period a sum of money can earn a return which is ruled out if the same sum is available only at the end of the period. In technical parlance, it is said that the present value of one rupee available at the end of two years is the present value of one rupee available today. The mathematical technique for adjusting for the time value of money and computing present value is called ‘discounting’.
- f. **Risk and Uncertainty:** The management must assume the risk of making decisions for their institution in uncertain and unknown economic conditions in the future. Firms may be uncertain about production, market prices, strategies of rivals, etc. Under uncertainty, the consequences of an action are not known immediately for certain.

The managerial economists have tried to take account of uncertainty with the help of subjective probability. The probabilistic treatment of uncertainty requires formulation of definite subjective expectations about cost, revenue and the environment. The probabilities of future events are influenced by the time horizon, the risk attitude and the rate of change of the environment.

3. **Write short notes on:**

(3)

- Law of demand**
- Exception to law of supply**

Ans. **A. Law of Demand**

**Introduction to the Law of Demand:** The law of demand expresses a relationship between the quantity demanded and its price. It may be defined in Marshall’s words as “**the amount demanded increases with a fall in price, and diminishes with a rise in price**”. Thus it expresses an inverse relation between price and demand. The law refers to the direction in which quantity demanded changes with a change in price.

On the figure, it is represented by the slope of the demand curve which is normally negative throughout its length. The inverse price- demand relationship is based on other things remaining equal. This phrase points towards certain important assumptions on which this law is based.

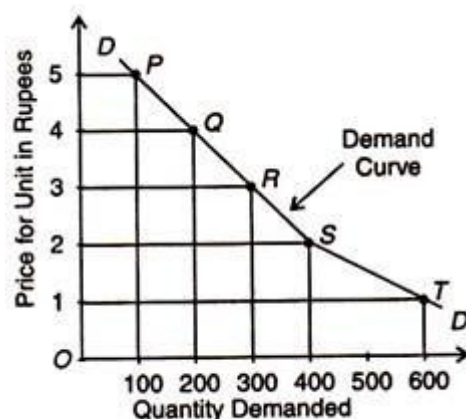
### Assumptions of the Law of Demand:

- There is no change in the tastes and preferences of the consumer;
- The income of the consumer remains constant;
- There is no change in customs;
- The commodity to be used should not confer distinction on the consumer;
- There should not be any substitutes of the commodity;
- There should not be any change in the prices of other products;
- There should not be any possibility of change in the price of the product being used;
- There should not be any change in the quality of the product; and
- The habits of the consumers should remain unchanged. Given these conditions, the law of demand operates. If there is change even in one of these conditions, it will stop operating.

Given these assumptions, the law of demand is explained in terms of Table 3 and Figure 7.

**Table 3.**  
**Demand Schedule**

Price (Rs)	Quantity Demanded
5	100 Units
4	200 Units
3	300 Units
2	400 Units
1	600 Units

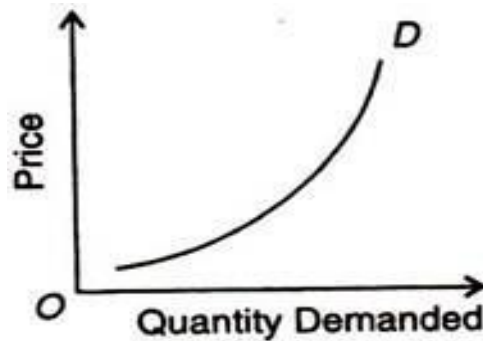


**Fig. 7**

The above table shows that when the price of say, orange, is Rs. 5 per unit, 100 units are demanded. If the price falls to Rs.4, the demand increases to 200 units. Similarly, when the price declines to Re.1, the demand increases to 600 units. On the contrary, as the price increases from Re. 1, the demand continues to decline from 600 units.

In the figure, point P of the demand curve  $DD_1$  shows demand for 100 units at the Rs. 5. As the price falls to Rs. 4, Rs. 3, Rs. 2 and Re. 1, the demand rises to 200, 300, 400 and 600 units respectively. This is clear from points Q, R, S, and T. Thus, the demand curve  $DD_1$  shows increase in demand of orange when its price falls. This indicates the inverse relation between price and demand.

**Exceptions to the Law of Demand:** In certain cases, the demand curve slopes up from left to right, i.e., it has a positive slope. Under certain circumstances, consumers buy more when the price of a commodity rises, and less when price falls, as shown by the D curve in Figure 8. Many causes are attributed to an upward sloping demand curve.



**Fig. 8**

- **War:** If shortage is feared in anticipation of war, people may start buying for building stocks or for hoarding even when the price rises.
- **Depression:** During a depression, the prices of commodities are very low and the demand for them is also less. This is because of the lack of purchasing power with consumers.
- **Giffen Paradox:** If a commodity happens to be a necessity of life like wheat and its price goes up, consumers are forced to curtail the consumption of more expensive foods like meat and fish, and wheat being still the cheapest food they will consume more of it. The Marshallian example is applicable to developed economies.

In the case of an underdeveloped economy, with the fall in the price of an inferior commodity like maize, consumers will start consuming more of the superior commodity like wheat. As a result, the demand for maize will fall. This is what Marshall called the Giffen Paradox which makes the demand curve to have a positive slope.

- **Demonstration Effect:** If consumers are affected by the principle of conspicuous consumption or demonstration effect, they will like to buy more of those commodities which confer distinction on the possessor, when their prices rise. On the other hand, with the fall in the prices of such articles, their demand falls, as is the case with diamonds.
- **Ignorance Effect:** Consumers buy more at a higher price under the influence of the “ignorance effect”, where a commodity may be mistaken for some other commodity, due to deceptive packing, label, etc.
- **Speculation:** Marshall mentions speculation as one of the important exceptions to the downward sloping demand curve. According to him, the law of demand does not apply to the demand in a campaign between groups of speculators. When a group unloads a great quantity of a thing on to the market, the price falls and the



other group begins buying it. When it has raised the price of the thing, it arranges to sell a great deal quietly. Thus when price rises, demand also increases.

- **Necessities of Life:** Normally, the law of demand does not apply on necessities of life such as food, cloth etc. Even the price of these goods increases, the consumer does not reduce their demand. Rather, he purchases them even the prices of these goods increase often by reducing the demand for comfortable goods. This is also a reason that the demand curve slopes upwards to the right.

**Exception to law of Supply:** Economists have studied the behaviour of sellers, just as they have studied the behaviour of buyers. As a result of their observations, they have arrived at the law of supply. Law of supply states the direct relationship between price and quantity supplied, keeping other factors constant (*ceteris paribus*).

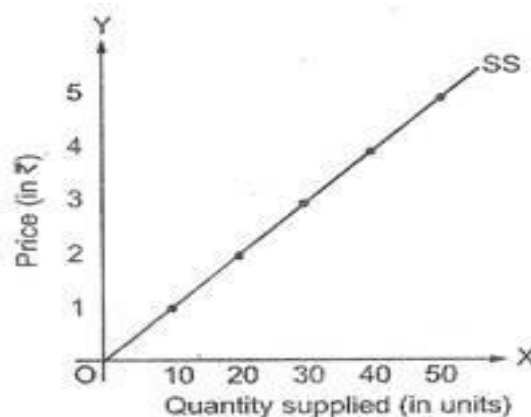
**Assumptions of Law of Supply:** While stating law of supply the phrase ‘keeping other factors constant or *ceteris paribus*’ are used. This phrase is used to cover the following assumptions on which the law is based:

- Price of other goods are constant;
- There is no change in the state of technology;
- Prices of factors of production remain the same;
- There is no change in the taxation policy;
- Goals of the producer remain the same.

#### Supply Schedule:

Price (in Rs.)	Quantity (In Units)
1	10
2	20
3	30
4	40
5	50

It shows that more and more units of the commodity are being offered for sale as the price of the commodity is increased. Supply curve SS slope upwards from left to right, indicating direct relationship between price and quantity supplied.



### **Important Points about Law of Supply:**

- It states the positive relationship between price and quantity supplied, assuming no changes in other factors.
- It is a qualitative statement, as it indicates the direction of change in the quantity supplied, but it does not indicate the magnitude of change.
- It does not establish any proportional relationship between change in price and the resultant change in quantity supplied.
- Law is one sided as it explains only the effect of change in price on the supply, and not the effect of change in supply on the price.

**Reasons for Law of Supply:** Let us now try to understand, why the supply of a commodity expands as the price rises. The main reasons for operation of law of supply are:

- **Profit Motive:** The basic aim of producers, while supplying a commodity, is to secure maximum profits. When price of a commodity increases, without any change in costs, it raises their profits. So, producers increase the supply of the commodity by increasing the production. On the other hand, with fall in prices, supply also decreases as profit margin decreases at low prices.
- **Change in Number of Firms:** A rise in price induces the prospective producers to enter into the market to produce the given commodity so as to earn higher profits. Increase in number of firms raises the market supply. It reduces the supply of the given commodity as the number of firms in the market decreases.
- **Change in Stock:** When the price of a good increases, the sellers are ready to supply more goods from their stocks. However, at a relatively lower price, the producers do not release big quantities from their stocks. They start increasing their inventories with a view that price may rise in near future.

**Exceptions to Law of Supply:** As a general rule, supply curve slopes upwards, showing that quantity supplied rises with a rise in price. However, in certain cases, positive relationship between supply and price may not hold true.

**The various exceptions to the law of supply are:**

- **Future Expectations:** If sellers expect a fall in price in the future, then the law of supply may not hold true. In this situation, the sellers will be willing to sell more even at a lower price.
- **Agricultural Goods:** The law of supply does not apply to agricultural goods as their production depends on climatic conditions. If, due to unforeseen changes in weather, the production of agricultural products is low, then their supply cannot be increased even at higher prices.
- **Perishable Goods:** In case of perishable goods, like vegetables, fruits, etc., sellers will be ready to sell more even if the prices are falling. It happens because sellers cannot hold such goods for long.

- **Rare Articles:** Rare, artistic and precious articles are also outside the scope of law of supply. For example, supply of rare articles like painting of Mona Lisa cannot be increased, even if their prices are increased.
- **Backward Countries:** In economically backward countries, production and supply cannot be increased with rise in price due to shortage of resources.

4. Write short note on:

(4)

- **Cost function**
- **Skimming Pricing**
- **Penetration Pricing**
- **Target Rate Pricing**
- **Dumping**

Ans. A. **Cost Function**

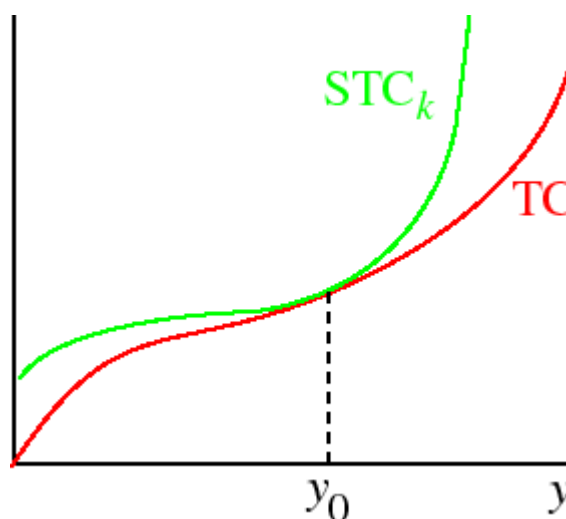
**Long run and short run cost functions:** In the **long run**, the firm can vary all its inputs. In the **short run**, some of these inputs are fixed. Since the firm is constrained in the short run, and not constrained in the long run, the long run cost  $TC(y)$  of producing any given output  $y$  is no greater than the short run cost  $STC(y)$  of producing that output:

$$TC(y) \leq STC(y) \text{ for all } y.$$

Now consider the case in which in the short run exactly *one* of the firm's inputs is fixed. For concreteness, suppose that the firm uses two inputs, and the amount of input 2 is fixed at  $k$ . For many (but not all) production functions, there is *some* level of output, say  $y_0$ , such that the firm would *choose* to use  $k$  units of input 2 to produce  $y_0$ , even if it were free to choose any amount it wanted. In such a case, for this level of output the short run total cost when the firm is constrained to use  $k$  units of input 2 is equal to the long run total cost:  $STC_k(y_0) = TC(y_0)$ . We generally assume that for any level at which input 2 is fixed, there is some level of output for which that amount of input 2 is appropriate, so that for any value of  $k$ ,

$$TC(y) = STC_k(y) \text{ for some } y.$$

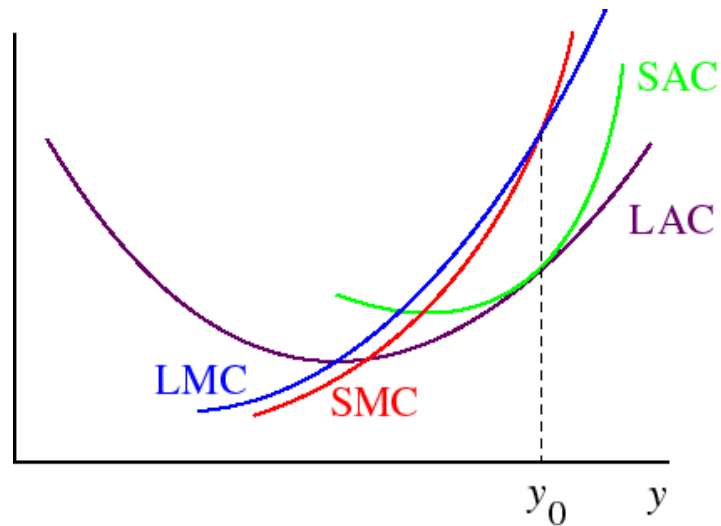
For a total cost function with the typical shape, the following figure shows the relations between  $STC$  and  $TC$ .



### Examples of long run and short run cost functions

#### **Long run and short run average cost functions**

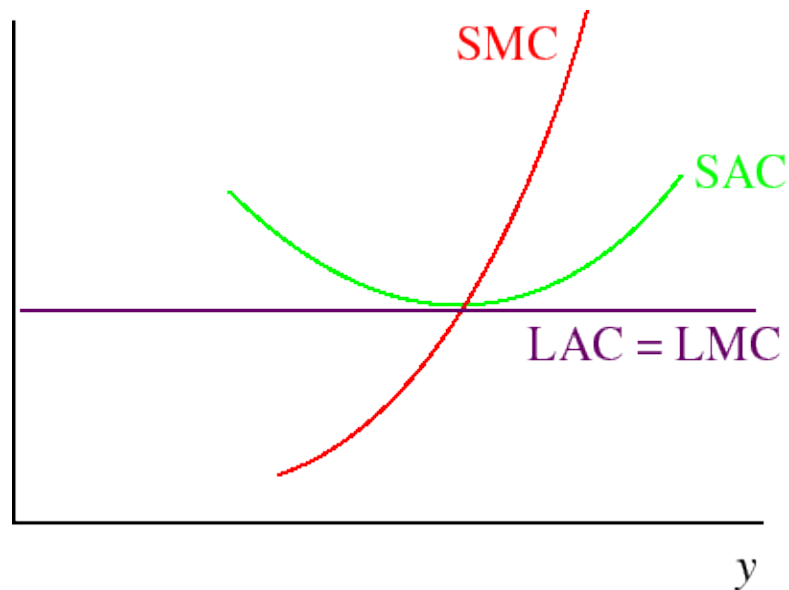
Given the relation between the short and long run total costs, the short and long run average and marginal cost functions have the forms shown in the following figure.



**Note:**

- The SMC goes through the minimum of the SAC and the LMC goes through the minimum of the LAC.
- When  $SAC = LAC$  we must have  $SMC = LMC$  (since slopes of total cost functions are the same there).

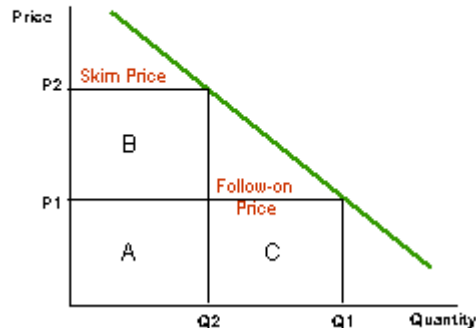
In the case that the production function has CRTS, the LAC is horizontal, as in the following figure.



**B. Skimming Pricing:** Price skimming involves setting a high price before other competitors come into the market. This is often used for the launch of a new product which faces little or no competition – usually due to some technological features. Such products are often bought by "early adopters" who are prepared to pay a higher price to have the latest or best product in the market.

**Price skimming** is a **pricing** strategy in which a marketer sets a relatively high initial **price** for a product or service at first, then lowers the **price** over time. It is a temporal version of **price** discrimination/yield management.

## Price Skimming



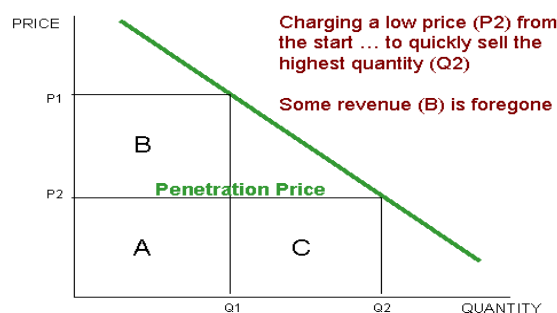
The skim price ( $P_2$ ) generates initial sales of  $Q_2$ , and revenues  $P_2$  times  $Q_2$  (the sum of squares A and B). When the price is subsequently reduced to  $P_1$ , additional sales are generated equal to  $Q_1$  minus  $Q_2$  (since  $Q_2$  sales were made at the higher skim price). The second round revenues are depicted by box C. So, total revenue under the skim strategy is the sum of the boxes A + B + C.

**C. Penetration Pricing:** Penetration pricing refers to a marketing strategy used by businesses to attract customers to a new product or service. Penetration pricing is the practice of offering a low price for a new product or service during its initial offering in order to lure customers away from competitors. This marketing strategy relies on the idea that low prices can help make a customer aware of and more willing to buy a new product.

A strategy adopted for quickly achieving a high volume of sales and deep market penetration of a new product. Under this approach, a product is widely promoted and its introductory price is kept comparatively low. This strategy is based on the assumption that

- The product does not have an identifiable price-market segment,
- It has elasticity of demand (buyers are price sensitive),
- The market is large enough to sustain relatively low profit margins and (4) the competitors too will soon lower their prices.

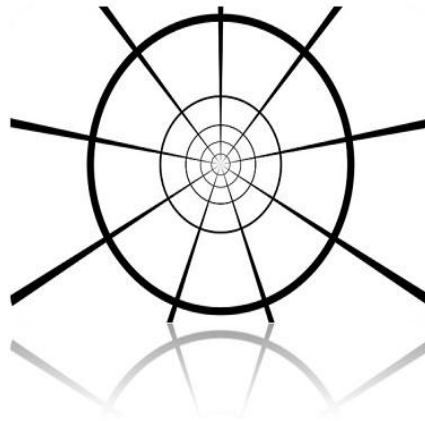
## Penetration Pricing



**D. Target Rate Pricing:** The **Target-Return Pricing** is a method wherein the firm determines the price on the basis of a target rate of return on the investment i.e. what the firm expects from the investments made in the venture.

Here, the firm calculates the amount invested in the business activities and then determine the return they expect from these assuming a particular quantity of the product is sold.

## Target-Return Pricing



In case the forecasted quantity is not sold in the market, then a firm can prepare the break-even chart wherein the breakeven points are calculated for different sales quantity. The manufacturer should try to minimize the cost of production as the break-even volume is directly proportional to it.

**Target-Return pricing an example:** Suppose the tractor manufacturer has invested 2 million in his venture and he expects to earn 20% as an ROI. Therefore, he will set the price accordingly. The cost and sales expectation are:

Unit cost: 20

Expected sales: 50,000 units

The Target-Return Pricing is given by:

**Target-Return Pricing = unit cost + (desired return x invested capital) /unit sales**

Thus, Target-Return Pricing =  $20 + (0.20 \times 2,000,000) / 50,000 = \text{Rs } 28$

To earn the ROI of 20%, the company must sell the product at Rs 28, provided 50,000 units are sold.

The target-return pricing is easy to calculate and understand. Also, it gives direction towards which the efforts of all the team members should be directed, to accomplish the set ROI. But however, the major limitation of this method is the accuracy with which the amount of sales is estimated. It is not necessary that the quantity for which the set ROI is achievable will be same for all the other quantities.

**E. Dumping:** When a monopolist sells products at higher price in the home market and lower prices in the international market, it is called dumping. It is a special form of price

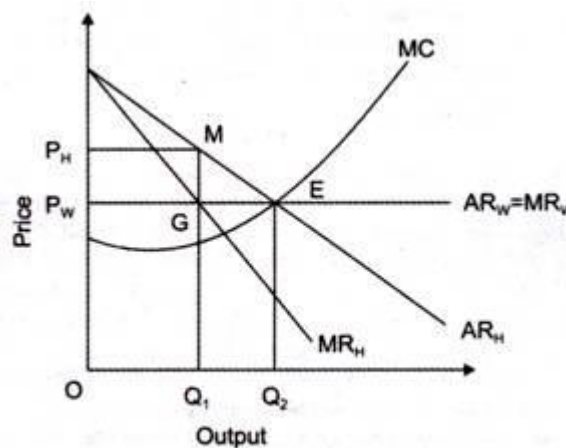
discrimination in which an organization sells its products at a price that is lower than the original price to get rid of the excess inventory.

Dumping is done in case of international trade in which an organization exports its products at a price lower than the price it charges in its own country. In such a situation, the sales volume and market share of the organizations operating in other countries may reduce. The losses which are incurred in the international markets are compensated in home markets.

**A monopolist has following motives for dumping:**

- To dispose an excess stock produced due to wrong judgment of demand.
- To develop new trade relations with countries.
- To benefit from economies of scale
- To drive competitors out of the foreign market

**The concept of dumping can be explained :**



**Figure-16: Equilibrium under Dumping**

- $AR_H$  = Average revenue in home market
- $MR_H$  = marginal revenue in home market
- $AR_W = MR_W$  = Foreign market demand curve
- $P_H$  = Price in home market (monopoly price)
- $P_W$  = Price in world market (competitive price)

An assumption is taken that there are two markets that is domestic market (home market) and foreign market (world market) faced by an organization. In domestic market, the organization enjoys monopoly, whereas in foreign market, the organization faces perfect competition. Monopolist is in equilibrium when profits are maximum that is when  $MR=MC$ .

The equilibrium is achieved at point E, with quantity as  $OQ_2$ , out of which  $OQ_1$  is sold in home market at  $P_H$  price and  $Q_1Q_2$  is sold at price  $P_W$  in world market. The price charged in world market is lower than the price charged in the home market.

Dumping is a kind of predatory pricing in which a foreign organization charges high prices and earns profits in its own country and uses these profits to sell the products at lower prices to build market share in other countries.

According to World Trade Organization, dumping should be condemned, if it is harming an established industry in a particular market. Thus, every country has an anti-dumping policy, which levies the duties that must be paid by organizations; if they engage in dumping. Anti-dumping duties act as measures that help in reducing the impact of dumping on domestic producers.

**5. Explain the law of variable to proportion with the help of diagram? (4)**

Ans. Law of Variable Proportions occupies an important place in economic theory. This law is also known as Law of Proportionality. Keeping other factors fixed, the law explains the production function with one factor variable. In the short run when output of a commodity is sought to be increased, the law of variable proportions comes into operation.

Therefore, when the number of one factor is increased or decreased, while other factors are constant, the proportion between the factors is altered. For instance, there are two factors of production viz., land and labour.

**Definitions:**

“As the proportion of the factor in a combination of factors is increased after a point, first the marginal and then the average product of that factor will diminish.” Benham

“An increase in some inputs relative to other fixed inputs will in a given state of technology cause output to increase, but after a point the extra output resulting from the same additions of extra inputs will become less and less.” Samuelson

**Assumptions:**

**Law of variable proportions is based on following assumptions:**

- **Constant Technology:** The state of technology is assumed to be given and constant. If there is an improvement in technology the production function will move upward.
- **Factor Proportions are Variable:** The law assumes that factor proportions are variable. If factors of production are to be combined in a fixed proportion, the law has no validity.
- **Homogeneous Factor Units:** The units of variable factor are homogeneous. Each unit is identical in quality and amount with every other unit.
- **Short-Run:** The law operates in the short-run when it is not possible to vary all factor inputs.

**Explanation of the Law:** In order to understand the law of variable proportions we take the example of agriculture. Suppose land and labour are the only two factors of production.

**By keeping land as a fixed factor, the production of variable factor i.e., labour can be shown with the help of the following table:**



Table 1.

Units of Land	Units of Labour	Total Production	Average Production	Marginal Production
10 Acres	0	—	—	—
"	1	20	20	20
"	2	50	25	30
"	3	90	30	40
"	4	120	30	30
"	5	140	28	20
"	6	150	25	10
"	7	150	21.3	0
"	8	140	17.5	-10

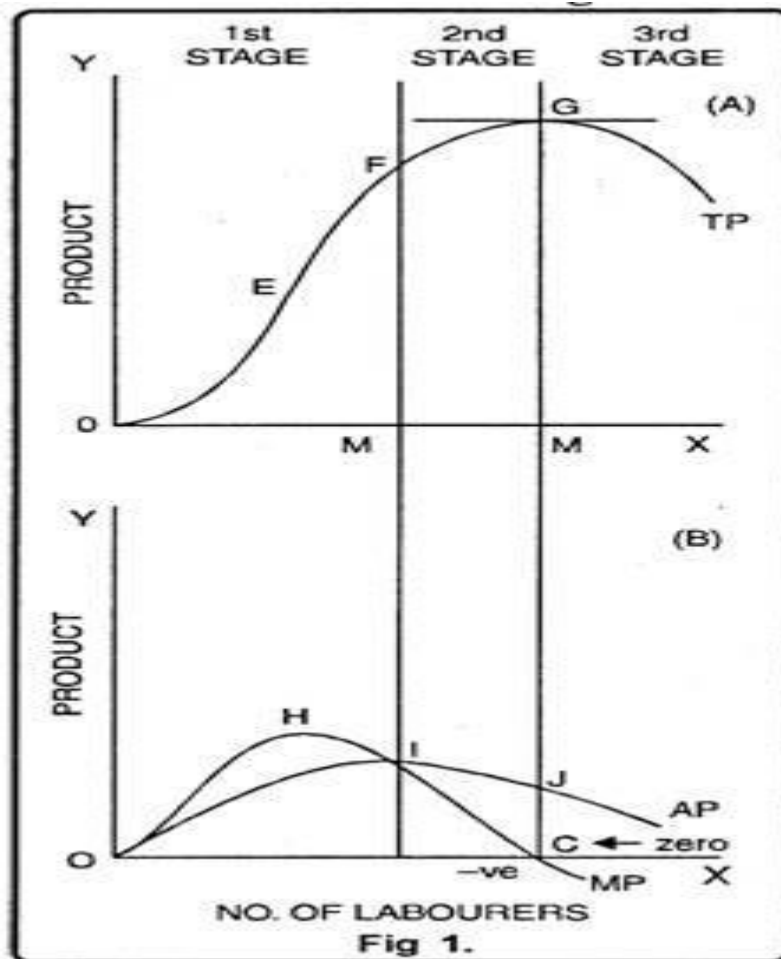
From the table 1 it is clear that there are three stages of the law of variable proportion. In the first stage average production increases as there are more and more doses of labour and capital employed with fixed factors (land). We see that total product, average product, and marginal product increases but average product and marginal product increases up to 40 units. Later on, both start decreasing because proportion of workers to land was sufficient and land is not properly used. This is the end of the first stage.

The second stage starts from where the first stage ends or where AP=MP. In this stage, average product and marginal product start falling. We should note that marginal product falls at a faster rate than the average product. Here, total product increases at a diminishing rate. It is also maximum at 70 units of labour where marginal product becomes zero while average product is never zero or negative.

The third stage begins where second stage ends. This starts from 8th unit. Here, marginal product is negative and total product falls but average product is still positive. At this stage, any additional dose leads to positive nuisance because additional dose leads to negative marginal product.

**Graphic Presentation:**

In fig. 1, on OX axis, we have measured number of labourers while quantity of product is shown on OY axis. TP is total product curve. Up to point 'E', total product is increasing at increasing rate. Between points E and G it is increasing at the decreasing rate. Here marginal product has started falling. At point 'G' i.e., when 7 units of labourers are employed, total product is maximum while, marginal product is zero. Thereafter, it begins to diminish corresponding to negative marginal product. In the lower part of the figure MP is marginal product curve.



Up to point 'H' marginal product increases. At point 'H', i.e., when 3 units of labourers are employed, it is maximum. After that, marginal product begins to decrease. Before point 'I' marginal product becomes zero at point C and it turns negative. AP curve represents average product. Before point 'I', average product is less than marginal product. At point 'I' average product is maximum. Up to point T, average product increases but after that it starts to diminish.

### Three Stages of the Law:

**1. First Stage:** First stage starts from point 'O' and ends up to point F. At point F average product is maximum and is equal to marginal product. In this stage, total product increases initially at increasing rate up to point E. between 'E' and 'F' it increases at diminishing rate. Similarly marginal product also increases initially and reaches its maximum at point 'H'. Later on, it begins to diminish and becomes equal to average product at point T. In this stage, marginal product exceeds average product ( $MP > AP$ ).

**2. Second Stage:** It begins from the point F. In this stage, total product increases at diminishing rate and is at its maximum at point 'G' correspondingly marginal product diminishes rapidly and becomes 'zero' at point 'C'. Average product is maximum at point 'I' and thereafter it begins to decrease. In this stage, marginal product is less than average product ( $MP < AP$ ).

**3. Third Stage:** This stage begins beyond point 'G'. Here total product starts diminishing. Average product also declines. Marginal product turns negative. Law of diminishing returns firmly manifests itself. In this stage, no firm will produce anything. This happens because marginal product of the labour becomes negative. The employer will suffer losses by employing more units of labourers. However, of the three stages, a firm will like to produce up to any given point in the second stage only.

Total Product	Marginal Product	Average Product
<b>Stage I</b> First increases at increasing rate then at diminishing rate.	Increases in the beginning then reaches a maximum and begins to decrease.	First increases, continues to increase and becomes maximum.
<b>Stage II</b> Continues to increase at diminishing rate and becomes maximum.	Continues to diminish and becomes equal to zero.	Becomes equal to MP and then begins to diminish.
<b>Stage III</b> Diminishes	Becomes negative.	Continues to diminish but will always be greater than zero.

**In Which Stage Rational Decision is Possible:** To make the things simple, let us suppose that, a is variable factor and b is the fixed factor. And  $a_1, a_2, a_3, \dots$  are units of a and  $b_1, b_2, b_3, \dots$  are unit of b.

Stage I is characterized by increasing AP, so that the total product must also be increasing. This means that the efficiency of the variable factor of production is increasing i.e., output per unit of a is increasing. The efficiency of b, the fixed factor, is also increasing, since the total product with  $b_1$  is increasing.

The stage II is characterized by decreasing AP and a decreasing MP, but with MP not negative. Thus, the efficiency of the variable factor is falling, while the efficiency of b, the fixed factor, is increasing, since the TP with  $b_1$  continues to increase.

Finally, stage III is characterized by falling AP and MP, and further by negative MP. Thus, the efficiency of both the fixed and variable factor is decreasing.

**Rational Decision:**

Stage II becomes the relevant and important stage of production. Production will not take place in either of the other two stages. It means production will not take place in stage III and stage I. Thus, a rational producer will operate in stage II.

Suppose b were a free resource; i.e., it commanded no price. An entrepreneur would want to achieve the greatest efficiency possible from the factor for which he is paying, i.e., from factor a. Thus, he would want to produce where AP is maximum or at the boundary between stage I and II. If on the other hand, a were the free resource, then he would want to employ b to its most efficient point; this is the boundary between stage II and III.

Obviously, if both resources commanded a price, he would produce somewhere in stage II. At what place in this stage production takes place would depend upon the relative prices of a and b.

**Condition or Causes of Applicability:**

There are many causes which are responsible for the application of the law of variable proportions. They are as follows:

- a. **Under Utilization of Fixed Factor:** In initial stage of production, fixed factors of production like land or machine, is under-utilized. More units of variable factor, like labour, are needed for its proper utilization. As a result of employment of additional units of variable factors there is proper utilization of fixed factor. In short, increasing returns to a factor begins to manifest itself in the first stage.
- b. **Fixed Factors of Production:** The foremost cause of the operation of this law is that some of the factors of production are fixed during the short period. When the fixed factor is used with variable factor, then its ratio compared to variable factor falls. Production is the result of the co-operation of all factors. When an additional unit of a variable factor has to produce with the help of relatively fixed factor, then the marginal return of variable factor begins to decline.
- c. **Optimum Production:** After making the optimum use of a fixed factor, then the marginal return of such variable factor begins to diminish. The simple reason is that after the optimum use, the ratio of fixed and variable factors become defective. Let us suppose a machine is a fixed factor of production. It is put to optimum use when 4 labourers are employed on it. If 5 labourers are put on it, then total production increases very little and the marginal product diminishes.
- d. **Imperfect Substitutes:** Mrs. Joan Robinson has put the argument that imperfect substitution of factors is mainly responsible for the operation of the law of diminishing returns. One factor cannot be used in place of the other factor. After optimum use of fixed factors, variable factors are increased and the amount of fixed factor could be increased by its substitutes.

Such a substitution would increase the production in the same proportion as earlier. But in real practice factors are imperfect substitutes. However, after the optimum use of a fixed factor, it cannot be substituted by another factor.

### **Applicability of the Law of Variable Proportions:**

The law of variable proportions is universal as it applies to all fields of production. This law applies to any field of production where some factors are fixed and others are variable. That is why it is called the law of universal application.

The main cause of application of this law is the fixity of any one factor. Land, mines, fisheries, and house building etc. are not the only examples of fixed factors. Machines, raw materials may also become fixed in the short period. Therefore, this law holds good in all activities of production etc. agriculture, mining, manufacturing industries.

- **Application to Agriculture:** With a view of raising agricultural production, labour and capital can be increased to any extent but not the land, being fixed factor. Thus when more and more units of variable factors like labour and capital are applied to a fixed factor then their marginal product starts to diminish and this law becomes operative.
- **Application to Industries:** In order to increase production of manufactured goods, factors of production has to be increased. It can be increased as desired for a long period, being variable factors. Thus, law of increasing returns operates in industries

for a long period. But, this situation arises when additional units of labour, capital and enterprise are of inferior quality or are available at higher cost.

As a result, after a point, marginal product increases less proportionately than increase in the units of labour and capital. In this way, the law is equally valid in industries.

**Postponement of the Law:** The postponement of the law of variable proportions is possible under following conditions:

- **Improvement in Technique of Production:** The operation of the law can be postponed in case variable factors techniques of production are improved.
- **Perfect Substitute:** The law of variable proportion can also be postponed in case factors of production are made perfect substitutes i.e., when one factor can be substituted for the other.

**6. Explain kinked demand curve. What are the assumptions and criticisms of kinked demand curve? (4)**

Ans. **The Sweezy Model of Kinked Demand Curve (Rigid Prices) (Non-Collusive Oligopoly):** In his article published in 1939, Prof. Sweezy presented the kinked demand curve analysis to explain price rigidities often observed in oligopolistic markets. Sweezy assumes that if the oligopolistic firm lowers its price, its rivals will react by matching that price cut in order to avoid losing their customers.

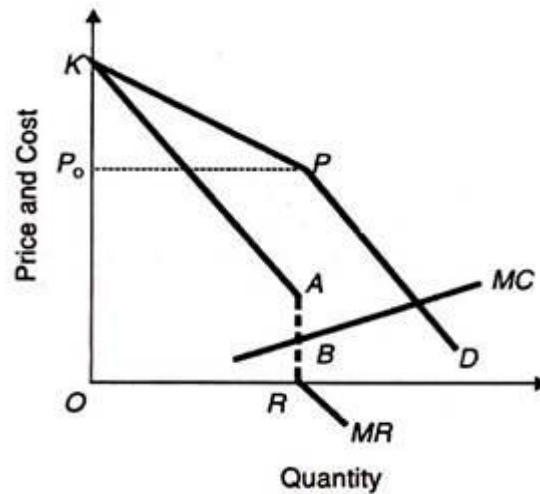
Thus the firm lowering the price will not be able to increase its demand much. This portion of its demand curve is relatively inelastic.

On the other hand, if the oligopolistic firm increases its price, its rivals will not follow it and change their prices. Thus the quantity demanded of this firm will fall considerably. This portion of the demand curve is relatively elastic. In these two situations, the demand curve of the oligopolistic firm has a kink at the prevailing market price which explains price rigidity.

**Its Assumptions:** The kinked demand curve hypothesis of price rigidity is based on the following assumptions:

- There are few firms in the oligopolistic industry.
- The product produced by one firm is a close substitute for the other firms.
- The product is of the same quality. There is no product differentiation.
- There are no advertising expenditures.
- There is an established or prevailing market price for the product at which all the sellers are satisfied.
- Each seller's attitude depends on the attitude of his rivals.
- Any attempt on the part of a seller to push up his sales by reducing the price of his product will be counteracted by other sellers who will follow his move.
- If he raises the price, others will not follow him; rather they will stick to the prevailing price and cater to the customers, leaving the price-raising seller.
- The marginal cost curve passes through the dotted portion of the marginal revenue curve so that changes in marginal cost do not affect output and price.

**The Model:** Given these assumptions, the price-output relationship in the oligopolist market is explained in Figure 5 where KPD is the kinked demand curve and  $OP_0$  the prevailing price in the oligopoly market for the OR product of one seller. Starting from point P, corresponding to the current price  $OP_0$ , any increase in price above it, will considerably reduce his sales, for his rivals are not expected to follow his price increase.



This is so because the KP portion of the kinked demand curve is elastic, and the corresponding portion KA of the MR curve is positive. Therefore, any price – increase will not only reduce his total sales but also his total revenue and profit.

On the other hand if the seller reduces the price of the product below  $OP_0$  (or P) his rivals will also reduce their prices. Though he will increase his sales, his profit would be less than before. The reason is that the PD portion of the kinked demand curve below P is less elastic and the corresponding part of marginal revenue curve below R is negative.

Thus in both the price-raising and price-reducing situations the seller will be a loser. He would stick to the prevailing market price  $OP_0$  which remains rigid. In order to study the working of the kinked demand curve, let us analyse the effect of changes in cost and demand conditions on price stability in the oligopolistic market.

**Reasons for Price Stability:** There are a number of reasons for price rigidity in certain oligopoly markets:

- Individual sellers in an oligopolistic industry might have learnt through experience the futility of price wars and thus prefer price stability.
- They may be content with the current prices, outputs and profits and avoid any involvement in unnecessary insecurity and uncertainty.
- They may also prefer to stick to the present price level to prevent new firms from entering the industry.
- The sellers may intensify their sales promotion efforts at the current price instead of reducing it. They may view non-price competition better than price rivalry.
- After spending a lot of money on advertising his product, a seller may not like to raise its price to deprive himself of the fruits of his hard labour. Naturally, he would stick to the going price of the product.
- If a stable price has been set through agreement or collusion, no seller would like to disturb it, for fear of unleashing a price war and thus engulfing himself into an era of uncertainty and insecurity.

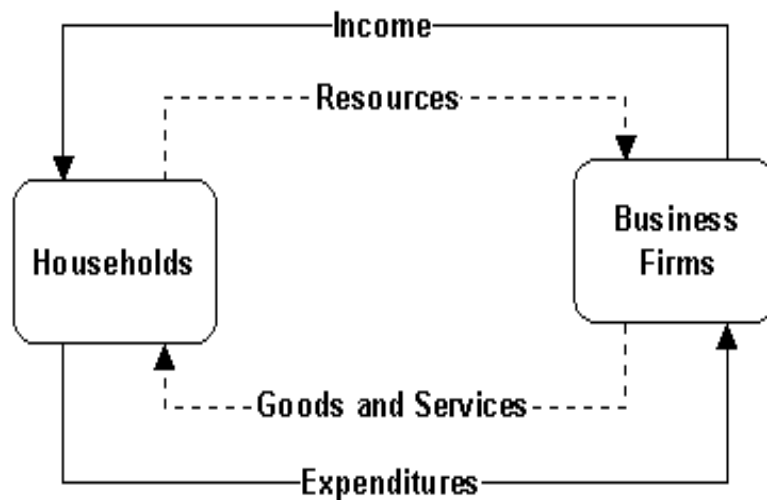
- It is the kinked demand curve analysis which is responsible for price rigidity in oligopolistic markets.

7. **Describe the methods of measuring the national income?**

(4)

Ans. **Meaning:** National income is the aggregate money value of all incomes earned by individuals and enterprises. National income may also be defined as the money measure of the net aggregates of all commodities and services accruing to the inhabitants of an economy during a year. Thus, the concept national income has different meanings. It may be described as the 'national product' or 'national income' or 'national dividend'.

According to A.C. Pigou; "National income is that part of the objective income of the community, including, of course, income derived from abroad which can be measured in money." Profs Lipsey and Chrystal say that national income, in general, is "the value of the nation's total output and the value of the income generated by the production of that output."



The three alternative methods used for measuring national income are as follows:

- Value Added Method
- Income Method
- Expenditure Method.

Since factor incomes arise from the production of goods and services, and since incomes are spent on goods and services produced, three alternative methods of measuring national income are possible.

- **Value Added Method:** This is also called output method or production method. In this method the value added by each enterprise in the production goods and services is measured. Value added by an enterprise is obtained by deducting expenditure incurred on intermediate goods such as raw materials, unfinished goods (purchased from other firms from the value of output produced by an enterprise.

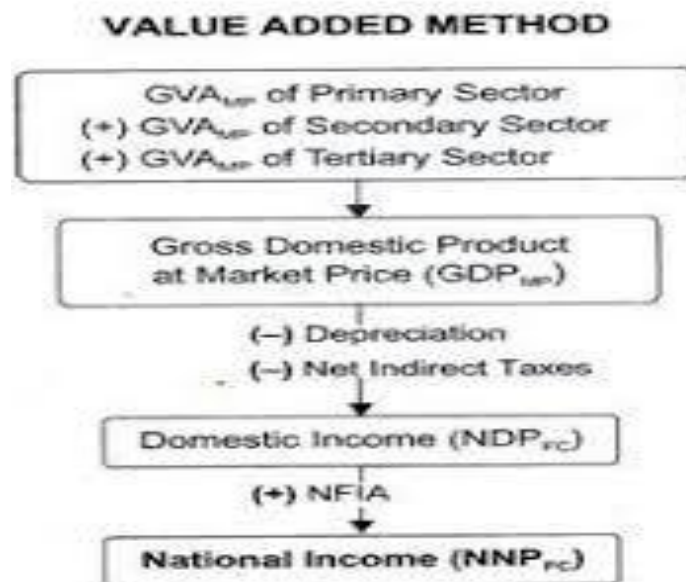
Value of output produced by an enterprise is equal to physical output (Q) produced multiplied by the market price (P), that is, P.Q. From the value added by each enterprise we subtract consumption of fixed capital (i.e., depreciation) to obtain net value added at market prices (NVA<sub>MP</sub>).

However, for estimating national income (that is, Net National Product at factor cost ( $NNP_{FC}$ )) we require to estimate net value added at factor cost ( $NVA_{FC}$ ) by each enterprise in the economy.  $NVA_{FC}$  can be found out by deducting net indirect taxes (i. e. indirect taxes less subsidies provided by the Government).

Under this method, the economy is divided into different industrial sectors such as agriculture, fishing, mining, construction, manufacturing, trade and commerce, transport, communication and other services. Then, the net value added at factor cost ( $NVA_{FC}$ ) by each productive enterprise as well as by each industry or sector is estimated.

**It follows from above that in order to arrive at the net value added at factor cost by an enterprise we have to subtract the following from the value of output of an enterprise:**

- Intermediate consumption which is the value of goods such as raw materials, fuels purchased from other firms
- Consumption of fixed capital (i.e., depreciation)
- Net indirect taxes.



- **Income Method:** This method approaches national income from distribution side. In other words, this method measures national income at the phase of distribution and appears as income paid and or received by individuals of the country. Thus, under this method, national income is obtained by summing up of the incomes of all individuals of a country. Individuals earn incomes by contributing their own services and the services of their property such as land and capital to the national production.

Therefore, national income is calculated by adding up the rent of land, wages and salaries of employees, interest on capital, profits of entrepreneurs (including undistributed corporate profits) and incomes of self-employed people. This method of estimating national income has the great advantage of indicating the distribution of national income among different income groups such as landlords, owners of capital, workers, entrepreneurs.



**Measurement of national income through income method involves the following main steps:**

- Like the value added method, the first step in income method is also to identify the productive enterprises and then classify them into various industrial sectors such as agriculture, fishing, forestry, manufacturing, transport, trade and commerce, banking, etc.
- The second step is to classify the factor payments. The factor payments are classified into the following groups:
  - Compensation of employees which includes wages and salaries, both in cash and kind, as well as employers' contribution to social security schemes.
  - Rent and also royalty, if any.
  - Interest.
  - Profits:

**Profits are divided into three sub-groups:**

- Dividends
- Undistributed profits
- Corporate income tax
- Mixed income of the self-employed:

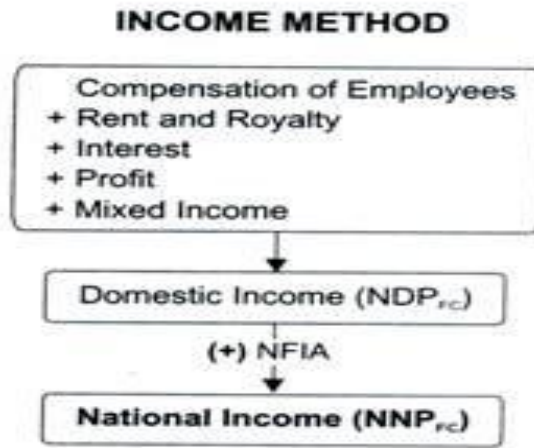
In India as in other developing countries there is fifth category of factor income which is termed as mixed income of self-employed. In India a good number of people are engaged in household industries, in family farms and other unorganised enterprises. Because of self-employment nature of the business it is difficult to separate wages for the work done by the self-employed from the surplus or profits made by them. Therefore, the incomes earned by them are mix of wages, rent, interest and profit and are, therefore, called mixed income of the self-employed.

The third step is to measure factor payments. Income paid out by each enterprise can be estimated by gathering information about the number of units of each factor employed and the income paid out to each unit of every factor. Price paid out to each factor multiplied by the number of units of each factor employed would give us the factor's income.

The adding up of factor payments by all enterprises belonging to an industrial sector would give us the incomes paid out to various factors by a particular industrial sector.

By summing up the incomes paid out by all industrial sectors we will obtain domestic factor income which is also called net domestic product at factor cost ( $NDP_{FC}$ ).

Finally, by adding net factor income earned from abroad to domestic factor income or  $NDP_{FC}$  we get net national product at factor cost ( $NNP_{FC}$ ) which is also called national income.



**Precautions:** While estimating national income through income method the following precautions should be taken:

- Transfer payments are not included in estimating national income through this method.
  - Imputed rent of self-occupied houses are included in national income as these houses provide services to those who occupy them and its value can be easily estimated from the market value data.
  - Illegal money such as hawala money, money earned through smuggling etc. are not included as they cannot be easily estimated.
  - Windfall gains such as prizes won, lotteries are also not included.
  - Corporate profit tax (that is, tax on income of the companies) should not be separately included as it has already been included as a part of profits.
  - Death duties, gift tax, wealth tax, tax on lotteries, etc., are paid from past savings or wealth and not from current income. Therefore, they should not be treated as a part of national income of a year.
  - The receipts from the sale of second-hand goods should not be treated as a part of national income. This is because the sale of second-hand goods does not create new flows goods and services in the current year.
  - Income equal to the value of production used for self-consumption should be estimated and included in the measure of national income.
- **Expenditure Method:** Expenditure method arrives at national income by adding up all expenditures made on goods and services during a year. Income can be spent either on consumer goods or capital goods. Again, expenditure can be made by private individuals and households or by government and business enterprises.

Further, people of foreign countries spend on the goods and services which a country exports to them. Similarly, people of a country spend on imports of goods and services from other countries. We add up the following types of expenditure by households, government and by productive enterprises to obtain national income.

- Expenditure on consumer goods and services by individuals and households. This is called final private consumption expenditure, and is denoted by C.
- Government's expenditure on goods and services to satisfy collective wants. This is called government's final consumption expenditure, and is denoted by G.

- The expenditure by productive enterprises on capital goods and inventories or stocks. This is called gross domestic-capital formation, or gross domestic investment and is denoted by I or GDCF.

**Gross domestic capital formation is divided into two parts:**

- Gross fixed capital formation
  - Addition to the stocks or inventories of goods
- The expenditure made by foreigners on goods and services of a country exported to other countries which are called exports and are denoted by X. We deduct from exports (X) the expenditure by people, enterprises and government of a country on imports (M) of goods and services from other countries. That is, we have to estimate net exports (that is, exports - imports) or (X—M) which is also denoted by NX.

Thus, we add up the above four types of expenditure to get final expenditure on gross domestic product at market prices ( $GDP_{MP}$ ). Thus,

$GDP_{MP}$  = Private final consumption expenditure + Government's final consumption expenditure + Gross domestic capital formation + Exports — Imports or

$$GDP_{MP} = C + G + I + (X - M)$$

$$= C + G + I + NX$$

On deducting consumption of fixed capital (i.e., depreciation) from gross domestic product at market prices ( $GDP_{MP}$ ) we get net domestic product at market prices ( $NDP_{MP}$ ).

In this method, we then subtract net indirect taxes (that is, indirect taxes – subsidies) to arrive at net domestic product at factor cost ( $NDP_{FC}$ ),

Lastly, we add 'net factor income from abroad' to obtain net national product at factor cost ( $NNP_{FC}$ ), which is called national income. Thus,

$NNP_{FC} = GDP_{MP} - \text{Consumption of Fixed capital} - \text{Net Indirect taxes} + \text{Net Factor Income from Abroad}$ .

## Expenditure Method

<b>Private Final Consumption Expenditure</b> + <b>Private Final Investment Expenditure</b> + <b>Government Final Expenditure</b> + <b>Net Exports</b> = <b><math>GDP_{MP}</math></b>
<b><math>GDP_{MP} = \text{Gross Domestic Product at Market Price}</math></b>

**Precautions:** While estimating Gross Domestic Product through expenditure method or measuring final expenditure on Gross National Product, the following precautions should be taken:

- **Second-hand goods:** The expenditure made on second-hand goods should not be included because this does not contribute to the current year production of goods and services.
- **Purchase of shares and bonds:** Expenditure on purchase of old shares and bonds from other people and from business enterprises should not be included while estimating Gross Domestic Product through expenditure method. This is because bonds and shares are mere financial claims and do not represent expenditure on currently produced goods and services.
- Expenditure on transfer payments by government such as unemployment benefits, old-age pension should also not be included because no goods or productive services are produced in exchange by the recipients of these payments.
- Expenditure on intermediate goods such as fertilisers and seeds by the farmers and wool, cotton and yarn by manufacturers of garments should also be excluded. This is because we have to avoid double counting. Therefore, for estimating Gross Domestic Product we have to include only expenditure on final goods and services.

A greatest difficulty in the measurement of national income in the developing countries is general lack of adequate statistical data. Inadequacy, non-availability and unreliability of statistics is a great handicap in measuring national income in these countries.

Statistical information regarding agriculture and allied occupations, and household enterprises is not available. Even the statistical information regarding the enterprises in the organised sector is sketchy and unreliable. There is no accurate information available regarding consumption, investment expenditure and savings of either rural or urban population.

**8. What is profit? Explain the classification & role of Profit? (3)**

Ans. **Meaning:** Profit, also called net income, is the amount of earnings that exceed expenses for the period. In other words, it's the amount of income left over after all the necessary and matched expenses are subtracted for the period.

According to the matching principle all of the expenses that were incurred to produce the income must be recognized in the period in which the revenue is earned. Thus, some expenses that aren't actually paid during the period are still subtracted from income to arrive at the net income for the period.

**Define Profits:** Profit means a business' excess revenues left over after all expenses have been paid for the period.

**On the basis of fields, profit can be classified into two types, which are explained as follows:**

- **Accounting Profit:** Refers to the total earnings of an organization. It is a return that is calculated as a difference between revenue and costs, including both manufacturing and overhead expenses. The costs are generally explicit costs, which refer to cash payments made by the organization to outsiders for its goods

and services. In other words, explicit costs can be defined as payments incurred by an organization in return for labor, material, plant, advertisements, and machinery.

**The accounting profit is calculated as:**

$$\text{Accounting Profit} = \text{TR} - (\text{W} + \text{R} + \text{I} + \text{M}) = \text{TR} - \text{Explicit Costs}$$

TR = Total Revenue

W = Wages and Salaries

R = Rent

I = Interest

M = Cost of Materials

The accounting profit is used for determining the taxable income of an organization and assessing its financial stability. Let us take an example of accounting profit. Suppose that the total revenue earned by an organization is Rs. 2, 50,000. Its explicit costs are equal to Rs. 10, 000. The accounting profit equals = Rs. 2, 50,000 – Rs. 10,000 = Rs. 2, 40,000. It is to be noted that the accounting profit is also called gross profit. When depreciation and government taxes are deducted from the gross profit, we get the net profit.

- **Economic Profit:** Takes into account both explicit costs and implicit costs or imputed costs. Implicit that is foregone which an entrepreneur can gain from the next best alternative use of resources. Thus, implicit costs are also known as opportunity cost. The examples of implicit costs are rents on own land, salary of proprietor, and interest on entrepreneur's own investment.

Let us understand the concept of economic profit. Suppose an individual A is undertaking his own business manager in an organization. In such a case, he sacrifices his salary as a manager because of his business. This loss of salary will opportunity cost for him from his own business.

**The economic profit is calculated as:**

$$\text{Economic profit} = \text{Total revenue} - (\text{Explicit costs} + \text{implicit costs})$$

**Alternatively, economic profit can be defined as follows:**

Pure profit = Accounting profit - (opportunity cost + unauthorized payments, such as bribes)

Economic profit is not always positive; it can also be negative, which is called economic loss. Economic profit indicates that resources of a business are efficiently utilized, whereas economic loss indicates that business resources can be better employed elsewhere.

**Role of Profit**

- **Profits as 'Surplus':** The goal of every business manager is to generate a surplus above cost. In fact, business exists for surplus generation. Profits are only a measure of the surplus of business income over expenses.
- **Profits as Regulator of Efficiency and Effectiveness:** Profits act as a regulator of efficiency in business operations. Those who accomplish objectives with the least cost are able to make the maximum profits). In

competitive conditions only profit-making companies are supposed to use their human and material resources better than others.

- **Profits and Resource Allocation:** In a competitive system the allocation of resources is determined by what consumers want to buy and how much they are willing to pay. If people demand more colour TV sets, its price will increase and its production will become profitable. So there will be transfer of resources from other industries to the colour TV industry.
- **Profits as Rent of Capital:** Profits may be taken as pay for use of capital. One of the purposes of profits is to compensate the numerous owners—proprietors, partners or shareholders—for the use of the capital they have invested in a business. Profits also must compensate them for risk-taking. If the business fails the capital may be lost.
- **Profits as Source of Capital:** A major portion of undistributed profits is reinvested in business for expansion and diversification. And one of the major sources of a company's capital is its profit.
- **Profit and Innovation:** According to J. Schumpeter “profits become the key element in innovation in a dynamic, changing economy, profit-seekers are driven to bring forth new processes and products profits are the lure that keeps the economy seeking new and more efficient ways of meeting real and potential human wants.”
- **Profit and Society:** Profits, as we have noted, yield a socially desirable benefit to those who have capital to invest. Without profit there would be no reason for the existence of business in a private enterprise economy. Even in socialist countries profit is a measure of how a business is serving society. Moreover, a major portion of business profit is taxed away. The revenue from profits is often used to finance many government programmes. The object is social improvement.
- **Profits and Economic:** At the outset, we may note that profits play a very important (rather a strategic) role in a market-oriented, capitalistic economy. Economic profits (or above-normal rates of return) perform a signalling function—they provide valuable signals to sellers. Specifically, the existence of abnormally high rates of return in an industry provides the signal and the incentive for output expansion of that industry.

**Conclusion:** Thus, profit orientation of most modern firms plays a critical role not only in allocating scarce resources but also in providing an incentive for efficiency and innovation.