

Biyani's Think Tank

Concept based notes

Managerial Economic

MBA

Swati Shastri

Deptt. of Management
Biyani Girls College, Jaipur

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Q1. Define managerial economics.

Ans. Managerial economics applies economic theory and methods to solve business and administrative problems through the proper use of economic models in decision making. Managerial economics prescribes rules for improving managerial decisions. Managerial economics also helps managers recognize how economic forces affect organizations and describes the economic consequences of managerial behavior. It links traditional economics with the decision sciences to develop vital tools for managerial decision making.

Managerial economics identifies ways to efficiently achieve goals. For example, suppose a small business seeks rapid growth to reach a size that permits efficient use of national media advertising. Managerial economics can be used to identify pricing

and production strategies to help meet this short-run objective quickly and effectively

Q2. Explain the scope of managerial economics.

Ans. Scope of Managerial Economics:

ME deals with Demand analysis, Forecasting, Production function, Cost analysis, Inventory Management, Advertising, Pricing System, Resource allocation etc.

Following aspects are to be taken into account while knowing the scope of ME:

1. Demand analysis and forecasting: Unless and until knowing the demand for a product how can we think of producing that product. Therefore demand analysis is something which is necessary for the production function to happen. Demand analysis helps in analyzing the various types of demand which enables the manager to arrive at reasonable estimates of demand for product of his company. Managers not only assess the current demand but he has to take into account the future demand also.

2. Production function: Conversion of inputs into outputs is known as production function. With limited resources we have to make the alternative uses of this limited resource. Factor of production called as inputs is combined in a particular way to get the maximum output. When the price of input rises the firm is forced to work out a combination of inputs to ensure the least cost combination.

3. Cost analysis: Cost analysis is helpful in understanding the cost of a particular product. It takes into account all the costs incurred while producing a particular product. Under cost analysis we will take into account determinants of costs, method of estimating costs, the relationship between cost and output, the forecast of the cost, profit, these terms are very vital to any firm or business.

4. Inventory Management: Well the actual meaning of the term inventory is stock. It refers to stock of raw materials which a firm keeps. Now here the question arises how much of the inventory is ideal.

Managerial economic helps the manager to take decision about holding of optimum level of stock of raw material and finished goods over a period of time so that in inventory management problem may be solved.

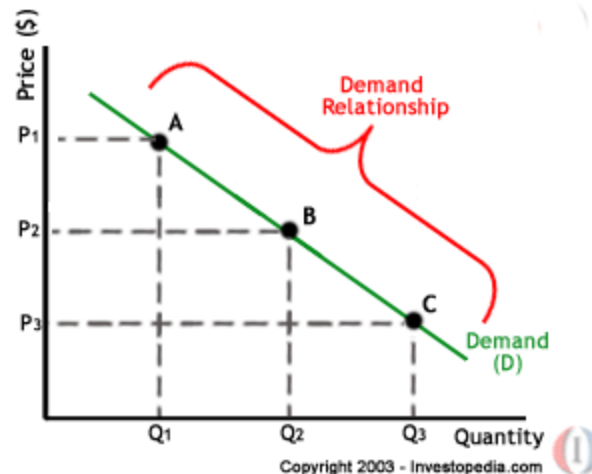
Q3. Explain the law of demand.

Ans. The **law of demand** is an economic law that states that consumers buy more of a good when its price decreases and less when its price increases (ceteris paribus).

The greater the amount to be sold, the smaller the price at which it is offered must be in order for it to find purchasers.

Law of demand states that the quantity demanded of a commodity and its price are inversely related, other things remaining constant. That is, if the income of the consumer, prices of the related goods, and tastes and preferences of the consumer remain unchanged, the consumer's demand for the good will move opposite to the movement in the price of the good.

"If the price of the good increases, the quantity demanded decreases, while if price of the good decreases, its quantity demanded increases."



Assumptions

Every law will have certain limitation or exceptions. While expressing the law of demand, the assumptions that other conditions of demand were unchanged. If remains constant, the inverse relation may not hold well. In other words, it is assumed that the income and tastes of consumers and the prices of other commodities are constant. This law operates when the commodity's price changes and all other prices and conditions do not change. The main assumptions are

- Habits, tastes and fashions remain constant
- Money, income of the consumer does not change.
- Prices of other goods remain constant
- The commodity in question has no substitute
- The commodity is a normal good and has no prestige or status value.
- People do not expect changes in the prices.

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- Quantity of the commodity remains constant.
- State of wealth of consumer does not change.

Exceptions to the law of demand

Generally, the quantity demanded of good increases with a decrease in price of the good and vice versa. In some cases, however, this may not be true. Such situations are explained below.

Giffen goods

As noted earlier, if there is an inferior good of which the positive income effect is greater than the negative substitution effect, the law of demand would not hold. For example, when the price of potatoes (which is the staple food of some poor families) decreases significantly, then a particular household may like to buy superior goods out of the savings which they can have now due to superior goods like cereals, fruits etc., not only from these savings but also by reducing the consumption of potatoes. Thus, a decrease in price of potatoes results in decrease in consumption of potatoes. Such basic good items consumed in bulk by the poor families, generally fall in the category of Giffen goods.

Commodities which are used as status symbols

Some expensive commodities like diamonds, air conditioned cars, etc., are used as status symbols to display one's wealth. The more expensive these commodities become, the higher their value as a status symbol and hence, the greater the demand for them. The amount demanded of these commodities increase with an increase in their price and decrease with a decrease in their price. Also known as a veblen good.

Expectation of change in the price of commodity

If a household expects the price of a commodity to increase, it may start purchasing greater amount of the commodity even at the presently increased price. Similarly, if the house hold expects the price of the commodity to decrease, it may postpone its purchases. Thus, law of demand is violated in such cases.

In the above circumstances, the demand curve does not slope down from left to right instead it presents a backward sloping from top right to down left as shown in diagram. This curve is known as exceptional demand curve

Law of demand explain the inverse relation b/w price of commodity and its demand, assuming other things remain constant. this negative relation itself implies downward movement of demand curve from left to right. But basically it happens due to main three effects or laws: 1. Law of Diminishing marginal utility. (Please connect it to the concept) 2. Income effect, which simply talk about change in real income (Purchasing Power) of consumer. Whenever there fall in price of good exist, the purchasing power of consumer gets increase and thus she wants to purchase more. 3. Substitution effect: for most of the goods substitutes or similar commodity are available. When there is change in price of one and it become cheaper as compare to its

substitute, some buyer transform from present consumption towards those goods whose prices falls

Q4.Discuss the shape of supply curve.

Ans.The relationship between the quantity sellers want to sell during some time period (quantity supplied) and price is what economists call the **supply curve**. Though usually the relationship is positive, so that when price increases so does quantity supplied, there are exceptions. Hence there is no law of supply that parallels the law of demand.

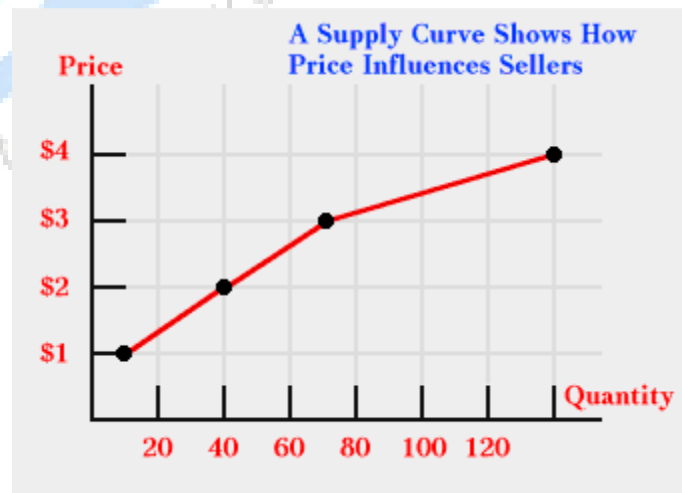
The supply curve can be expressed mathematically in functional form as

$$Q_s = f(\text{price, other factors held constant}).$$

It can also be illustrated in the form of a table or a graph.

A Supply Curve	
Price of Widgets	Number of Widgets Sellers Want to Sell
\$1.00	10
\$2.00	40
\$3.00	70
\$4.00	140

The graph shown below has a positive slope, which is the slope one normally expects from a supply curve.



If one of the factors that is held constant changes, the relationship between price and quantity, (supply) will change. If the price of an input falls, for example, the supply relationship may change, as in the following table.

A Supply Curve Can Shift	
Price of Widgets	Number of Widgets Sellers Want to Sell
\$1.00	[10] becomes 20
\$2.00	[40] becomes 60
\$3.00	[70] becomes 100
\$4.00	[140] becomes 180

The same changes can be shown with a graph that shows the supply curve shifting to the right. Notice each price has a larger quantity associated with it.

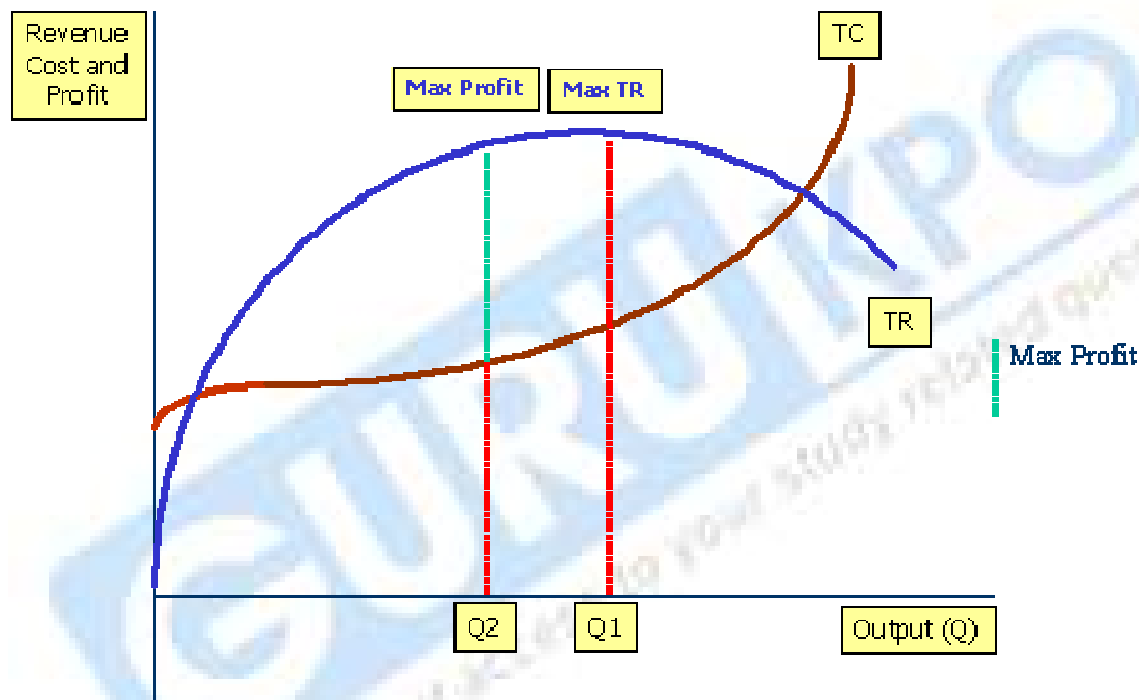


Q5.Explain the sales revenue maximization theory of firm.

Ans.According to Baumol, every business firm aims at maximization its sales revenue (price x quantity) rather than its profit. Hence his hypothesis has come to be known as sales maximization theory & revenue maximization theory. According to Baumol, sales have become an end by themselves and accordingly sales maximization has become the ultimate objective of the firm. Hence, the management of a firm directs its energies in promoting and maximizing its sales revenue instead of profit.

The goal of sales maximization is explained by the management's desire to maintain the firm's competitive position, which is dependent to a large extent on its size. Unlike the shareholders

who are interested in profit, the management is interested in sales revenue, either because large sales revenue is a matter of prestige or because its remuneration is often related to the size of the firm's operations than to its profits. Baumol, however does not ignore the cost of production which has to be covered and also a margin of profit. In fact, he advocates the adoption of a price, which will cover the cost and also will yield a minimum rate of profits. According to Baumol the firm will have to choose that output which will yield adequate profit even through it may not achieve sales maximization.



Q6.Explain the types of elasticity of demand.

Ans.There are following types of demand elasticities:

- **Price elasticity of demand**

Price elasticity of demand measures the percentage change in quantity demanded caused by a percent change in price. As such, it measures the extent of movement along the demand curve. This elasticity is almost always negative and is usually expressed in terms of absolute value (i.e. as positive numbers) since the negative can be assumed. In these terms, then, if the elasticity is greater than 1 demand is said to be elastic; between zero and one demand is inelastic and if it equals one, demand is unit-elastic.

- **Income elasticity of demand**

Income elasticity of demand measures the percentage change in demand caused by a percent change in income. A change in income causes the demand curve to shift reflecting the change in demand. Income elasticity of demand is a measurement of how far the curve shifts horizontally along the X-axis. Income elasticity can be used to classify goods as normal or inferior. With a normal good demand varies in the same direction as income. With an inferior good demand and income move in opposite directions.

- **Cross price elasticity of demand**

Cross price elasticity of demand measures the percentage change in demand for a particular good caused by a percent change in the price of another good. Goods can be complements, substitutes or unrelated. A change in the price of a related good causes the demand curve to shift reflecting a change in demand for the original good. Cross price elasticity is a measurement of how far, and in which direction, the curve shifts horizontally along the x-axis. A positive cross-price elasticity means that the goods are substitute goods.

Q7.How would you measure price elasticity of demand?

Ans.Measurement of price elasticity of demand:

Point-price elasticity

One way to avoid the accuracy problem described above is to minimise the difference between the starting and ending prices and quantities. This is the approach taken in the definition of *point-price* elasticity, which uses differential calculus to calculate the elasticity for a small change in price and quantity at any given point on the demand curve:

$$E_d = \frac{P}{Q_d} \times \frac{dQ_d}{dP}$$

In other words, it is equal to the absolute value of the first derivative of quantity with respect to price (dQ_d/dP) multiplied by the point's price (P) divided by its quantity (Q_d)

In terms of partial-differential calculus, point-price elasticity of demand can be defined as follows: let $x(p, w)$ be the demand of goods x_1, x_2, \dots, x_L as a function of parameters price and wealth, and let $x_l(p, w)$ be the demand for good l . The elasticity of demand for good $x_l(p, w)$ with respect to price p_k is

$$E_{x_l, p_k} = \frac{\partial x_l(p, w)}{\partial p_k} \cdot \frac{p_k}{x_l(p, w)} = \frac{\partial \log x_l(p, w)}{\partial \log p_k}$$

However, the point-price elasticity can be computed only if the formula for the demand function, $Q_d = f(P)$, is known so its derivative with respect to price, dQ_d / dP , can be determined.

Arc elasticity

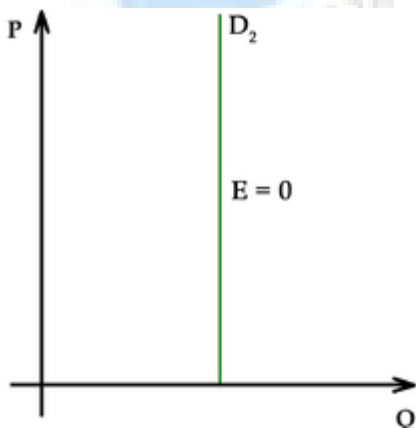
A second solution to the asymmetry problem of having a PED dependent on which of the two given points on a demand curve is chosen as the "original" point and which as the "new" one is to compute the percentage change in P and Q relative to the *average* of the two prices and the *average* of the two quantities, rather than just the change relative to one point or the other. Loosely speaking, this gives an "average" elasticity for the section of the actual demand curve—i.e., the *arc* of the curve—between the two points. As a result, this measure is known as the *arc elasticity*, in this case with respect to the price of the good. The arc elasticity is defined mathematically as

$$E_d = \frac{\frac{P_1 + P_2}{2}}{\frac{Q_{d1} + Q_{d2}}{2}} \times \frac{\Delta Q_d}{\Delta P} = \frac{P_1 + P_2}{Q_{d1} + Q_{d2}} \times \frac{\Delta Q_d}{\Delta P}$$

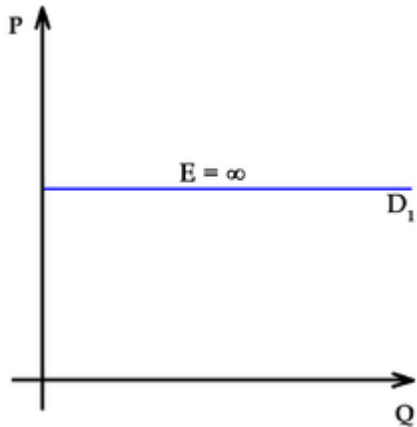
This method for computing the price elasticity is also known as the "midpoints formula", because the average price and average quantity are the coordinates of the midpoint of the straight line between the two given points.

Q8. How would you interpret price elasticity of demand?

Interpreting values of price elasticity coefficients



Perfectly inelastic demand



Perfectly elastic demand

Elasticities of demand are interpreted as follows:

Value	Descriptive Terms
$E_d = 0$	Perfectly inelastic demand
$-1 < E_d < 0$	Inelastic or relatively inelastic demand
$E_d = -1$	Unit elastic, unit elasticity, unitary elasticity, or unitarily elastic demand
$-\infty < E_d < -1$	Elastic or relatively elastic demand
$E_d = -\infty$	Perfectly elastic demand

A decrease in the price of a good normally results in an increase in the quantity demanded by consumers because of the [law of demand](#), and conversely, quantity demanded decreases when price rises. As summarized in the table above, the PED for a good or service is referred to by different descriptive terms depending on whether the elasticity coefficient is greater than, equal to, or less than -1 . That is, the demand for a good is called:

- *relatively inelastic* when the percentage change in quantity demanded is *less than* the percentage change in price (so that $E_d > -1$);
- *unit elastic, unit elasticity, unitary elasticity, or unitarily elastic* demand when the percentage change in quantity demanded is *equal to* the percentage change in price (so that $E_d = -1$); and
- *relatively elastic* when the percentage change in quantity demanded is *greater than* the percentage change in price (so that $E_d < -1$).

As the two accompanying diagrams show, *perfectly elastic* demand is represented graphically as a horizontal line, and *perfectly inelastic* demand as a vertical line. These are the *only* cases in which the PED and the slope of the demand curve ($\Delta P/\Delta Q$) are *both* constant, as well as the *only* cases in which the PED is determined solely by the slope of the demand curve (or more precisely, by the *inverse* of that slope).

Q9. Calculate price elasticity of demand from the following data.

Price(OLD)=9

Price(NEW)=10

QDemand(OLD)=150

QDemand(NEW)=110

Ans. To calculate the price elasticity, we need to know what the percentage change in quantity demanded is and what the percentage change in price is. It's best to calculate these one at a time.

Calculating the Percentage Change in Quantity Demanded

The formula used to calculate the percentage change in quantity demanded is:

$$\frac{[QDemand(NEW) - QDemand(OLD)]}{QDemand(OLD)}$$

By filling in the values we wrote down, we get:

$$\frac{[110 - 150]}{150} = \frac{(-40)}{150} = -0.2667$$

We note that **% Change in Quantity Demanded = -0.2667** (We leave this in decimal terms. In percentage terms this would be -26.67%). Now we need to calculate the percentage change in price.

Calculating the Percentage Change in Price

Similar to before, the formula used to calculate the percentage change in price is:

$$\frac{[Price(NEW) - Price(OLD)]}{Price(OLD)}$$

By filling in the values we wrote down, we get:

$$\frac{[10 - 9]}{9} = \frac{(1)}{9} = 0.1111$$

We have both the percentage change in quantity demand and the percentage change in price, so we can calculate the price elasticity of demand

Final Step of Calculating the Price Elasticity of Demand

We go back to our formula of:

$$PEoD = \frac{(\% \text{ Change in Quantity Demanded})}{(\% \text{ Change in Price})}$$

We can now fill in the two percentages in this equation using the figures we calculated earlier.

$$PEoD = (-0.2667)/(0.1111) = -2.4005$$

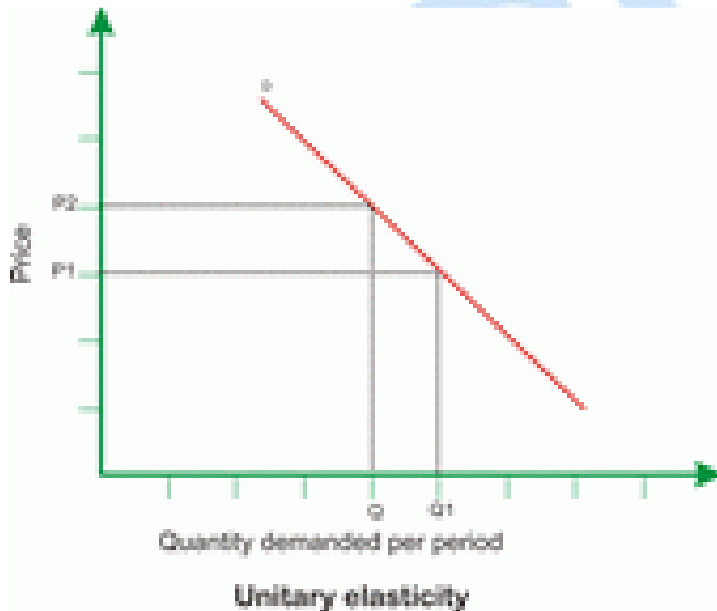
When we analyze *price* elasticities we're concerned with their absolute value, so we ignore the negative value. We conclude that the price elasticity of demand when the price increases from \$9 to \$10 is 2.4005.

Q10. Discuss the various types of price elasticity of demand.

Ans.

Types of Price Elasticity

1. unitary elastic demand



when percentage change in demand is same as percentage change in price demand is unitary elastic.

2. perfectly elastic demand



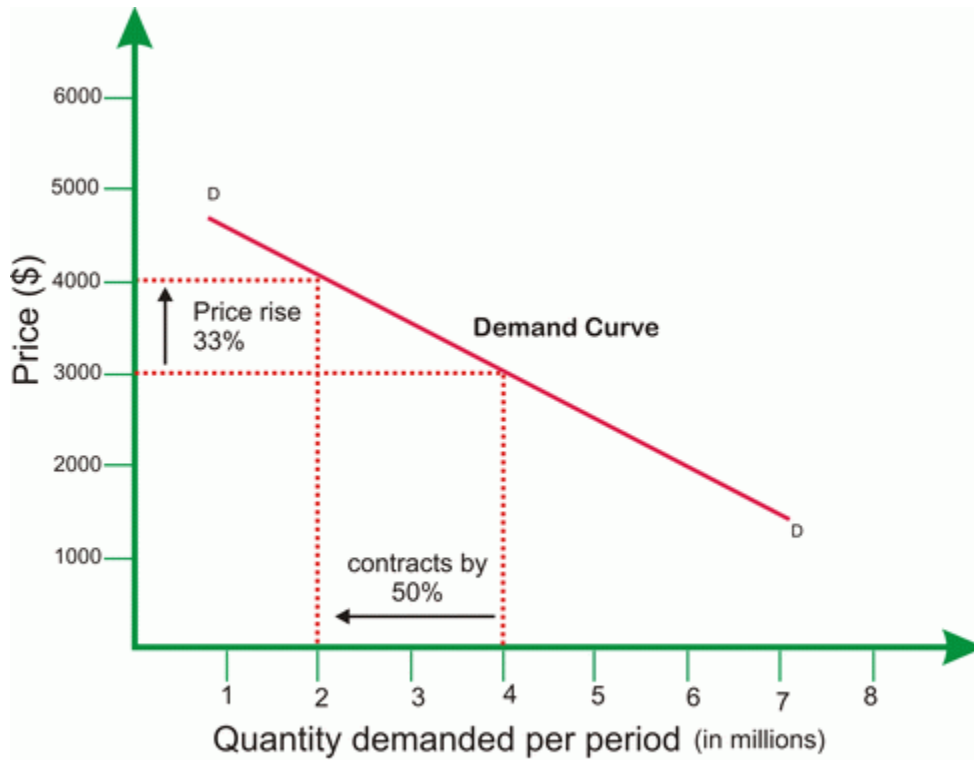
When a small change in price leads to infinite change in demand, price elasticity is infinite.

3. Perfectly inelastic demand



when there is no change in demand in response to change in price demand is perfectly inelastic.

4. Elastic demand

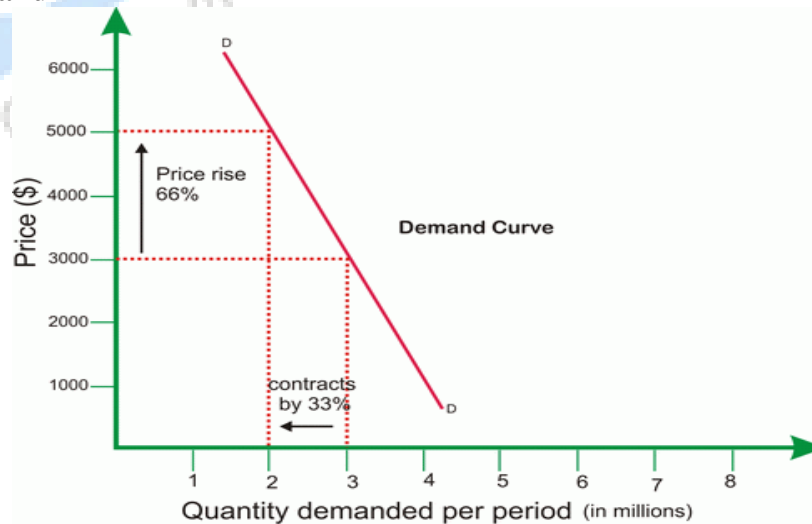


Demand is Price Elastic

if the percentage change in demand is more than the percentage change in price.

The value of PED is more than 1.

5. Inelastic demand



Demand is Price Inelastic

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When there is a smaller percentage change in quantity demanded as compared to the percentage change in its price, the product is said to be price INELASTIC.

Q11. What do you mean by consumer surplus?

Ans. Consumer surplus is the difference between the maximum price a consumer is willing to pay and the actual price they do pay. If a consumer would be willing to pay more than the current asking price, then they are getting more benefit from the purchased product than they spent to buy it. An example of a good with generally high consumer surplus is drinking water. People would pay very high prices for drinking water, as they need it to survive. The difference in the price that they would pay, if they had to, and the amount that they pay now is their consumer surplus.

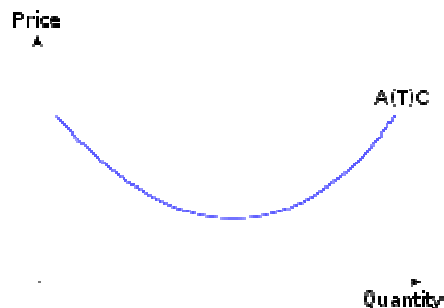
Q12. Explain the shape of cost curves in short and long run.

Ans. In economics, a **cost curve** is a graph of the cost of production as a function of total quantity produced. In a free market economy, productively efficient firms use these curves to find the optimal point of production, where they make the most profits. There are various types of cost curves, all related to each other. The two basic categories of cost curves are total and per unit or average cost curves.

Short-run average variable cost curve (SRAVC)

Average variable cost (which is a short-run concept) is the variable cost (typically labor cost) per unit of output: $SRAVC = wL / Q$ where w is the wage rate, L is the quantity of labor used, and Q is the quantity of output produced. The SRAVC curve plots the short-run average variable cost against the level of output, and is typically U-shaped.

Short-run average total cost curve (SRATC or SRAC)



Typical short run average cost curve

The average total cost curve is constructed to capture the relation between cost per unit of output and the level of output.

Short-run total cost is given by

$$STC = P_K K + P_L L,$$

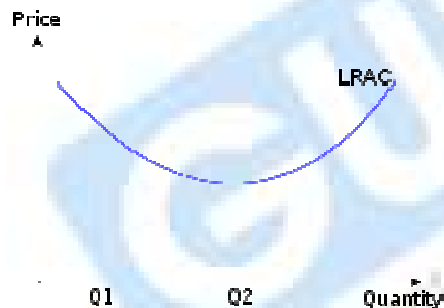
Where P_K is the unit price of using physical capital per unit time, P_L is the unit price of labor per unit time (the wage rate), K is the quantity of physical capital used, and L is the quantity of labor used. From this we obtain short-run average cost, denoted either SATC or SAC, as STC / Q :

$$SRATC \text{ or } SRAC = P_K K/Q + P_L L/Q = P_K / AP_K + P_L / AP_L,$$

Where $AP_K = Q/K$ is the average product of capital and $AP_L = Q/L$ is the average product of labor.

Short run average cost equals average fixed costs plus average variable costs. Average fixed cost continuously falls as production increases in the short run, because K is fixed in the short run. The shape of the average variable cost curve is directly determined by increasing and then diminishing marginal returns to the variable input (conventionally labor).

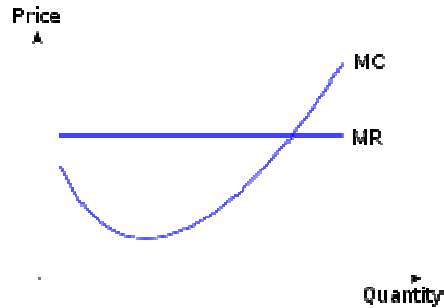
Long-run average cost curve (LRAC)



Typical long run average cost curve

The long-run average cost curve depicts the cost per unit of output in the long run—that is, when all productive inputs' usage levels can be varied. All points on the line represent least-cost factor combinations; points above the line are attainable but unwise, while points below are unattainable given present factors of production..

Short-run marginal cost curve (SRMC)



Typical marginal cost curve

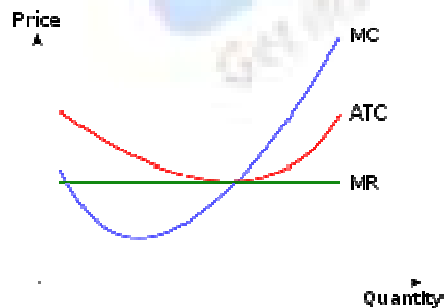
A short-run marginal cost curve graphically represents the relation between marginal (i.e., incremental) cost incurred by a firm in the short-run production of a good or service and the quantity of output produced. This curve is constructed to capture the relation between marginal cost and the level of output, holding other variables, like technology and resource prices, constant. The marginal cost curve is U-shaped.

Long-run marginal cost curve (LRMC)

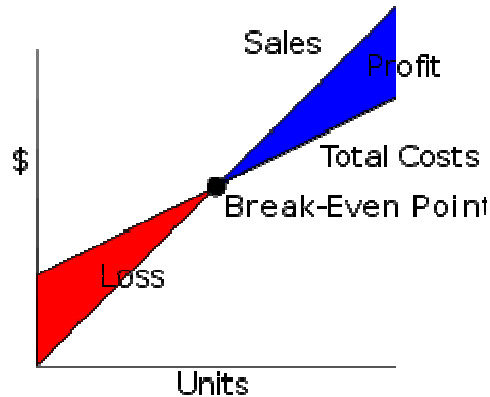
The long-run marginal cost curve shows for each unit of output the added total cost incurred in the long run, that is, the conceptual period when all factors of production are variable so as to minimize long-run average total cost. Stated otherwise, LRMC is the minimum increase in total cost associated with an increase of one unit of output when all inputs are variable.

The long-run marginal cost curve is shaped by economies and diseconomies of scale, a long-run concept, rather than the law of diminishing returns, which is a short-run concept. The long-run marginal cost curve tends to be flatter than its short-run counterpart due to increased input flexibility as to cost minimization. The long-run marginal cost curve intersects the long-run average cost curve at the minimum point of the latter.

Graphing cost curves together



Q8. Discuss the concept of break even point.



The **Break-Even Point** is the point where Total Costs is equal to Sales. In the Cost-Volume-Profit Analysis model, Total Costs are linear in volume.

In economics & business, specifically cost accounting, the **break-even point** (BEP) is the point at which cost or expenses and revenue are equal: there is no net loss or gain, and one has "broken even". A profit or a loss has not been made, although opportunity costs have been paid, and capital has received the risk-adjusted, expected return.

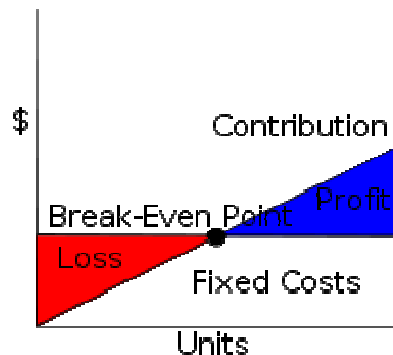
Computation

In the linear cost volume profit analysis model the **break-even point** (in terms of Unit Sales (X)) can be directly computed in terms of Total Revenue (TR) and Total Costs (TC) as:

$$\begin{aligned}
 TR &= TC \\
 P \times X &= TFC + V \times X \\
 P \times X - V \times X &= TFC \\
 (P - V) \times X &= TFC \\
 X &= \frac{TFC}{P - V}
 \end{aligned}$$

where:

- **TFC** is **Total fixed cost**
- **P** is **Unit Sale Price**, and
- **V** is **Unit Variable Cost**.



The Break-Even Point can alternatively be computed as the point where contribution equals fixed cost

The quantity $(P - V)$ is of interest in its own right, and is called the unit contribution (C): it is the marginal profit per unit, or alternatively the portion of each sale that contributes to Fixed Costs. Thus the break-even point can be more simply computed as the point where Total Contribution = Total Fixed Cost:

$$\text{Total Contribution} = \text{Total Fixed Costs}$$

$$\text{Unit Contribution} \times \text{Number of Units} = \text{Total Fixed Costs}$$

$$\text{Number of Units} = \frac{\text{Total Fixed Costs}}{\text{Unit Contribution}}$$

In currency units (sales proceeds) to reach break-even, one can use the above calculation and multiply by Price, or equivalently use the Contribution Margin Ratio (Unit Contribution Margin

$$\text{Break-even (in Sales)} = \frac{\text{Fixed Costs}}{C/P}$$

over Price) to compute it as:

$R=C$ Where R is revenue generated C is cost incurred i.e. Fixed costs + Variable Costs or $Q \times P$ (Price per unit) = $FC + Q \times VC$ (Price per unit) $Q \times P - Q \times VC = FC$ $Q (P - VC) = FC$ or Break Even Analysis $Q = FC / (P - VC) = \text{Break Even}$.

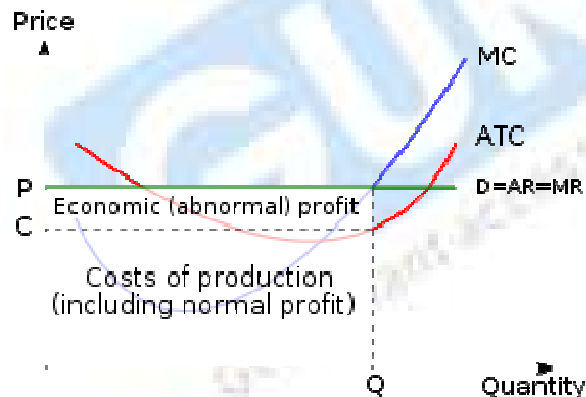
Q13. Discuss the features of perfect competition. Also explain the condition of profit maximization by a firm

Ans. In economic theory, **perfect competition** describes such markets that no participants are large enough to have the market power to set the price of a homogeneous product.

Basic structural characteristics

Generally, a perfectly competitive market exists when every participant is a price taker no participant influences the price of the product it buys or sells. Specific characteristics may include:

- **Infinite buyers and sellers** – Infinite consumers with the willingness and ability to buy the product at a certain price, and infinite producers with the willingness and ability to supply the product at a certain price.
- **Zero entry and exit barriers** – It is relatively easy for a business to enter or exit in a perfectly competitive market.
- **Perfect factor mobility** - In the long run factors of production perfectly mobile allowing free long term adjustments to changing market conditions.
- **Perfect information** - Prices and quality of products are assumed to be known to all consumers and producers
- **Zero transaction costs** - Buyers and sellers incur no costs in making an exchange (perfect mobility)
- **Profit maximization** - Firms aim to sell where marginal costs meet marginal revenue, where they generate the most profit.
- **Homogeneous products** – The characteristics of any given market good or service do not vary across suppliers.
- **Constant returns to scale** – Constant returns to scale ensure that there are sufficient firms in the industry



Condition for equilibrium is $MC=MR$.

Q14. What do you mean by Monopoly?

Ans. Features of monopoly

- **Single seller:** In a monopoly there is one seller of the good who produces all the output therefore, the whole market is being served by a single firm, and for practical purposes, the firm is the same as the industry.

- **Market power:** Market power is the ability to affect the terms and conditions of exchange so that the price of the product is set by the firm (price is not imposed by the market as in perfect competition). Although a monopoly's market power is high it is still limited by the demand side of the market. A monopoly faces a negatively sloped demand curve not a perfectly inelastic curve. Consequently, any price increase will result in the loss of some customers.
- **Firm and industry:** In a monopoly, market, a firm is itself an industry. Therefore, there is no distinction between a firm and an industry in such a market.
- **Price Discrimination:** A monopolist can change the price and quality of the product. He sells more quantities charging less price against the product in a highly elastic market and sells less quantities charging high price in a less elastic market.

Q.15.What are the sources of monopoly?

Ans.Sources of monopoly power

Monopolies derive their market power from barriers to entry - circumstances that prevent or greatly impede a potential competitor's entry into the market or ability to compete in the market. There are three major types of barriers to entry; economic, legal and deliberate.

- **Economic barriers:** Economic barriers include economies of scale, capital requirements, cost advantages and technological superiority.

Economies of scale: Monopolies are characterised by declining costs over a relatively large range of production. Declining costs coupled with large start up costs give monopolies an advantage over would be competitors. Monopolies are often in a position to cut prices below a new entrant's operating costs and drive them out of the industry. Further the size of the industry relative to the minimum efficient scale may limit the number of firms that can effectively compete within the industry. If for example the industry is large enough to support one firm of minimum efficient scale then other firms entering the industry will operate at a size that is less than MES meaning that these firms cannot produce at an average cost that is competitive with the dominant firm. Finally, if long run average cost is constantly falling the least cost way to provide a good or service is through a single firm.

Capital requirements: Production processes that require large investments of capital, or large research and development costs or substantial sunk costs limit the number of firms in an industry. Large fixed costs also make it difficult for a small firm to enter an industry and expand.

Technological superiority: A monopoly may be better able to acquire, integrate and use the best possible technology in producing its goods while entrants do not have the size or fiscal muscle to use the best available technology. In plain English one large firm can sometimes produce goods cheaper than several small firms.

No substitute goods: A monopoly sells a good for which there is no close substitutes. The absence of substitutes makes the demand for the good relatively inelastic enabling monopolies to extract positive profits.

Control of Natural Resources: A prime source of monopoly power is the control of resources that are critical to the production of a final good.

Network Externalities: The use of a product by a person can affect the value of that product to other people. This is the network effect. There is a direct relationship between the proportion of people using a product and the demand for that product. In other words the more people who are using a product the higher the probability of any individual starting to use the product. This effect accounts for fads and fashion trends. It also can play a crucial role in the development or acquisition of market power. The most famous current example is the market dominance of the Microsoft operating system in personal computers.

- **Legal barriers:** Legal rights can provide opportunity to monopolise the market in a good. Intellectual property rights, including patents and copyrights, give a monopolist exclusive control over the production and selling of certain goods. Property rights may give a firm the exclusive control over the materials necessary to produce a good.
- **Deliberate Actions:** A firm wanting to monopolise a market may engage in various types of deliberate action to exclude competitors or eliminate competition. Such actions include collusion, lobbying governmental authorities, and force.

In addition to barriers to entry and competition, barriers to exit may be a source of market power. Barriers to exit are market conditions that make it difficult or expensive for a firm to leave the market. High liquidation costs are a primary barrier to exit. Market exit and shutdown are separate events. The decision whether to shut down or operate is not affected by exit barriers. A firm will shut down if price falls below minimum average variable costs.

Q16.What do you mean by monopolistic competition?

Ans.In a monopolistic market a large number of sellers or producers sell differentiated products.It differs from perfect competition that the products sold by different firms are not identical. that is why in a monopolistic market sellers can sell differentiated products in slightly different price.

As example Nokia sells its *Music Express* phones in slightly higher price than the other music phones of other companies because of its differentiated features.

Q17.Discuss the characteristics of oligopoly. Also explain the concept of kinked demand curve.

Ans.Characteristics of oligopoly.

Profit maximization conditions: An oligopoly maximizes profits by producing where marginal revenue equals marginal costs.

Ability to set price: Oligopolies are price setters rather than price takers.

Entry and exit: Barriers to entry are high. The most important barriers are economies of scale, patents, access to expensive and complex technology, and strategic actions by incumbent firms designed to discourage or destroy nascent firms.

Number of firms: "Few" – a "handful" of sellers. There are so few firms that the actions of one firm can influence the actions of the other firms.

Long run profits: Oligopolies can retain long run abnormal profits. High barriers of entry prevent sideline firms from entering market to capture excess profits.

Product differentiation: Product may be homogeneous (steel) or differentiated (automobiles).

Perfect knowledge: Assumptions about perfect knowledge vary but the knowledge of various economic actors can be generally described as selective. Oligopolies have perfect knowledge of their own cost and demand functions but their inter-firm information may be incomplete. Buyers have only imperfect knowledge as to price cost and product quality.

Interdependence: The distinctive feature of an oligopoly is interdependence. Oligopolies are typically composed of a few large firms. Each firm is so large that its actions affect market conditions. Therefore the competing firms will be aware of a firm's market actions and will respond appropriately. This means that in contemplating a market action, a firm must take into consideration the possible reactions of all competing firms and the firm's countermoves. It is very much like a game of chess or pool in which a player must anticipate a whole sequence of moves and countermoves in determining how to achieve his objectives. For example, an oligopoly considering a price reduction may wish to estimate the likelihood that competing firms

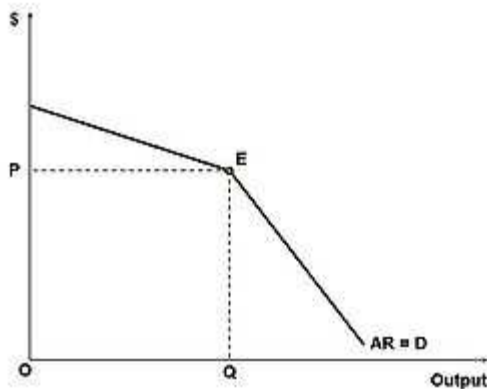
greater revenue and market share.

Q18. Discuss the shape of Kinked demand curve.

Ans. "Kinked" demand curves are similar to traditional demand curves, as they are downward-sloping. They are distinguished by a hypothesized convex bend with a discontinuity at the bend—"kink". Thus the first derivative at that point is undefined and leads to a jump discontinuity in the marginal revenue curve.

Classical economic theory assumes that a profit-maximizing producer with some market power (either due to oligopoly or monopolistic competition) will set marginal costs equal to marginal revenue. This idea can be envisioned graphically by the intersection of an upward-sloping marginal cost curve and a downward-sloping marginal revenue curve (because the more one sells, the lower the price must be, so the less a producer earns per unit). In classical theory, any change in the marginal cost structure (how much it costs to make each additional unit) or the marginal revenue structure (how much people will pay for each additional unit) will be immediately reflected in a new price and/or quantity sold of the item. This result does not occur if a "kink" exists. Because of this jump discontinuity in the marginal revenue curve, marginal costs could change without necessarily changing the price or quantity.

The motivation behind this kink is the idea that in an oligopolistic or monopolistically competitive market, firms will not raise their prices because even a small price increase will lose many customers. This is because competitors will generally ignore price increases, with the hope of gaining a larger market share as a result of now having comparatively lower prices. However, even a large price decrease will gain only a few customers because such an action will begin a price war with other firms. The curve is therefore more price-elastic for price increases and less so for price decreases. Firms will often enter the industry in the long run.



Q19. Discuss various concepts of National Income.

Ans. A variety of **measures of national income and output** are used in economics to estimate total economic activity in a country or region, including gross domestic product (**GDP**), gross national product (**GNP**), and net national income (**NNI**). All are specially concerned with counting the total amount of goods and services produced within some "boundary". The boundary may be defined geographically, or by citizenship; and limits on the type of activity also form part of the conceptual boundary; for instance, these measures are for the most part limited to counting goods and services that are exchanged for money: production not for sale but for barter, for one's own personal use, or for one's family, is largely left out of these measures, although some attempts are made to include some of those kinds of production by *imputing* monetary values to them. Mr Ian Davies defines development as 'Simply how happy and free the citizens of that country feel.'

Formulae:

GDP(gross domestic product) at market price = value of output in an economy in a particular year - intermediate consumption

NNP at factor cost = GDP at market price - depreciation + NFIA (*net factor income from abroad*) - net indirect taxes

Q20. Discuss approaches to national income.

Ans.

The income approach

The income approach equates the total output of a nation to the total factor income received by residents of the nation. The main types of factor income are:

- Employee compensation (= wages + cost of fringe benefits, including unemployment, health, and retirement benefits);
- Interest received net of interest paid;
- Rental income (mainly for the use of real estate) net of expenses of landlords;
- Royalties paid for the use of intellectual property and extractable natural resources.

All remaining value added generated by firms is called the *residual* or profit. If a firm has stockholders, they own the residual, some of which they receive as dividends. Profit includes the income of the entrepreneur - the businessman who combines factor inputs to produce a good or service.

Formulae:

NDP at factor cost = Compensation of employees + Net interest + Rental & royalty income + Profit of incorporated and unincorporated firms + Income from self-employment.

National income = NDP at factor cost + NFIA (net factor income from abroad) - Depreciation.

The expenditure approach

The expenditure approach is basically an output accounting method. It focuses on finding the total output of a nation by finding the total amount of money spent. This is acceptable, because like income, the total value of all goods is equal to the total amount of money spent on goods. The basic formula for domestic output combines all the different areas in which money is spent within the region, and then combining them to find the total output.

$$\mathbf{GDP = C + I + G + (X - M)}$$

Where:

C = household consumption expenditures / personal consumption expenditures

I = gross private domestic investment

G = government consumption and gross investment expenditures

X = gross exports of goods and services

M = gross imports of goods and services

Note: $(X - M)$ is often written as X_N , which stands for "net exports"

Q21.what do you mean by inflation?

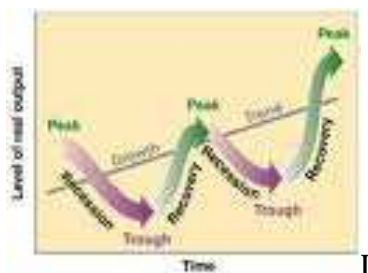
Ans. Inflation is the overall general upward price movement of goods and services in an economy (often caused by a increase in the supply of money), usually as measured by the Consumer Price Index and the Producer Price Index. Over time, as the cost of goods and services increase, the value of a dollar is going to fall because a person won't be able to purchase as much with that dollar as he/she previously could.

Q22.How would you measure inflation?

Ans.Measures of Inflation, which literally means proliferation, determines the certain change, or better to say increase, of the price of goods and other services. Combine measurement of the escalation of the price of general goods and services gives the picture of general price change.Inflation is measured by consumer price index and wholesale price index.

Q23.Define business cycles.

Ans.The recurring and fluctuating levels of economic activity that an economy experiences over a long period of time. The five stages of the business cycle are growth (expansion), peak, recession (contraction), trough and recovery. At one time, business cycles were thought to be extremely regular, with predictable durations, but today they are widely believed to be irregular, varying in frequency, magnitude and duration



Q24.What do you mean by fiscal policy?

Ans.Fiscal policy is an additional method to determine public revenue and public expenditure. In the recent years importance of fiscal policy has increased due to economic fluctuations. Fiscal

policy is an important instrument in the modern time. According to Arther Smithies “fiscal policy is a policy under which government uses its expenditure and revenue program to produce desirable effects and avoid undesirable effects on the national income, production .”

Q25.What are the objectives of fiscal policy?

Ans.Objectives of fiscal policy:

The objectives of fiscal policy may be regarded as follows;

1. To achieve desirable price level:

The stability of general prices is necessary for economic stability. The maintenance of a desirable price level has good effects on production, employment and national income. Fiscal policy should be used to remove; fluctuations in price level so that ideal level is maintained.

2. To Achieve desirable consumption level:

A desirable consumption level is important for political, social and economic consideration. Consumption can be affected by expenditure and tax policies of the government. Fiscal policy should be used to increase welfare of the economy through consumption level.

3. To Achieve desirable employment level:

The efficient employment level is most important in determining the living standard of the people. It is necessary for political stability and for maximization of production. Fiscal policy should achieve this level.

4. To achieve desirable income distribution:

The distribution of income determines the type of economic activities the amount of savings. In this way, it is related to prices, consumption and employment. Income distribution should be equal to the most possible degree. Fiscal policy can achieve equality in distribution of income. High tax burden on the rich can be spent on the poor may result in equal distribution of income.

5. Increase in capital formation:

In under-developed countries deficiency of capital is the main reason for under-development. Large amounts are required for industry and economic development. Fiscal policy can divert resources and increases capital.

6. Degree of inflation:

In under-developed countries, a certain degree of inflation is required for economic development. Fiscal policy aims at maintaining the rate of inflation within desirable limits.

Q26.Name the instruments of fiscal policy.

Ans. instruments of fiscal policy are:

- 1.Taxation
- 2.Public Debt
- 3.Public expenditure
- 4.Deficit financing

Q27.What are the types of inflation?

Ans.Types of Inflation:

There are three major types of inflation

- 1)Demand Pull Inflation
- 2)Cost Push inflation
- 3)Built in Inflation

Demand Pull Inflation:- Demand Pull Inflation caused by increase in aggregate demand due to increased private and government spending. It occurs when aggregate demand exceeds aggregate supply which increases costs suddenly. To increase the output firms employ more people. When firms employ more and more people they end up in increasing cost of production of the good as compared to the output .This results in increase in price of the good and hence Inflation.

Cost Push Inflation:- Cost supply inflation is also termed ‘supply shock inflation’. Caused by drops in aggregate supply due to increased prices of inputs. For example sudden decrease in the supply of oil would increase oil prices. Producers for whom oil is a part of their costs could then pass this on to consumers in the form of increased prices. If the good whose price increases is used widely in production the effect is much more and causes inflation.

Built in Inflation:- These types of Inflation are induced by adaptive expectations i.e. the workers try to keep their wage levels high in anticipation of inflation. The employers and firms increase the prices of their goods in anticipation of the workers demands. This forms a vicious circle and results in increase in general level of prices. This results in Inflation.