

Economics re-examination 2018

Time allowed : 3 hours

Maximum marks : 80

SECTION—A

30

1. Which of the following measures of price elasticity shows elastic supply ? [1]

(Choose the correct alternative)

- (a) 0 (b) 0.5
(c) 1.0 (d) 1.5

Answer : (d) 1.5

2. Define opportunity cost. [1]

Answer : Opportunity cost is the cost of availing one opportunity in terms of the loss of the other opportunity.

3. At what level of production is total cost equal to total fixed cost ? [1]

Answer : At zero level of production, total cost is equal to total fixed cost.

4. Which of the following does not cause shift of supply curve of a good ? (Choose the correct alternative) [1]

- (a) Price of input
(b) Price of the good
(c) Goods and services tax
(d) Subsidy

Answer : (b) Price of the good.

5. A consumer buys 200 units of a good at a price of ₹ 20 per unit. Price elasticity of demand is (-) 2. At what price will he be willing to purchase 300 units ? Calculate. [3]

Answer :

$$\text{Original Price (P)} = ₹ 20 \text{ Per Unit}$$

$$\text{Original Quantity (}\theta\text{)} = 200 \text{ Units}$$

$$\text{Elasticity of demand (E}_d\text{)} = (-) 2$$

$$\text{New Qty. (}\theta_1\text{)} = 300 \text{ Units}$$

$$\text{New Price (P}_1\text{)} = ?$$

$$\text{Change in Qty.} = \text{New Qty.}$$

$$- \text{Original Qty.}$$

$$(\Delta\theta) = 300 - 200$$

$$= 100 \text{ Units}$$

$$\text{New Price (P}_1\text{)} = \Delta P - P$$

$$(\text{Change in Price} - \text{Original Price})$$

Utilizing the formula :

$$E_d = \frac{\Delta\theta}{\Delta P} \times \frac{P}{Q}$$

Where,

E_d = Price elasticity of demand

Δθ = Change in Qty.

ΔP = Change in Price

P = Original Price

Q = Original Qty.

$$\text{So, } (-) 2 = \frac{100}{\Delta P} \times \frac{20}{200}$$

$$(-2) \Delta P = 10$$

$$\therefore (-2) \Delta P = \frac{10}{2} = 5$$

(-) sign is ignored since it tells only the inverse relationship between Price and Qty. demanded.

$$\text{New Price (P}_1\text{)} = P - \Delta P$$

$$= ₹ 20 - ₹ 5 = ₹ 15$$

Hence, New Price (P₁) will be ₹ 15 at New Qty. of 300 units.

6. Explain the central problem of "What is to be produced and in what quantities". [3]

OR

In what circumstances may the production possibility frontier shift away from the origin? Explain.

Answer : It is the problem of choosing which goods and services should be produced and in what quantities. The economy cannot have more of everything with available resources at the same time. Thus, society has to decide between consumer goods and producer goods etc. Since resources are limited, all goods and services desired cannot be produced at the same time. So, the society has to decide which goods are to be produced and also the quantities in which they should be produced. Hence, the problem is related with two aspects *i.e.*,
(i) Which commodity should be produced ? (ii) In how much quantity ?

OR

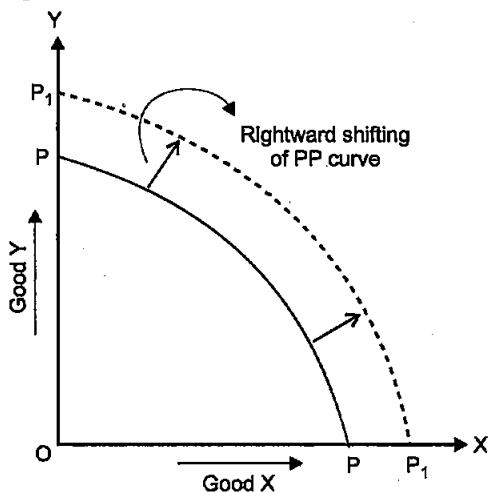
Shifting away of PPC from the origin means the rightward shift of production possibility frontier. It takes place because of the two main reasons :

(i) When resources of an economy increase :

It may be in the form of discovery of new natural resources, availability of new machinery through saving and investment and increase in skilled and unskilled labour through population growth.

(ii) When there is an improvement in technology-

It happens as a result of the work of scientists, engineers and inventors over a long period of time. In this case, more of the two goods can be produced with the given amount of resources, causing shift of PPC to the right. Rightward shifting can be shown through the following figure :



7. Explain the implications of "Freedom of entry and exit of firms" under perfect competition. [4]

Answer : A firm can enter or leave the industry any time. The free entry and exit of the firm is possible only in the long period, not in the short period. Because of free entry and exit, firms in the long run earn only normal profits. (TR = TC or AR = AC). In case super normal profits are earned, new firms will get attracted and join the industry. Market supply will increase and extra profit will wipe out. In case of super normal losses, some of the existing firms will leave the industry. Market supply will decrease and hence, price will increase so extra losses will wipe out. In this way, firms can only earn normal profit in the long run.

8. Write a budget line equation of a consumer if the two goods purchased by the consumer, Good X and Good Y are priced at ₹ 10 and ₹ 5 respectively and the consumer's income is ₹ 100. [4]

OR

Define marginal rate of substitution. Explain its behaviour along an indifference curve.

Answer : Lets take the Price of Good X = P_1

Price of Good Y = P_2

Consumer's income = Y'

According to the sum,

$$P_1 = ₹ 10,$$

$$P_2 = ₹ 5$$

$$Y^1 = ₹ 100$$

Hence, budget equation is

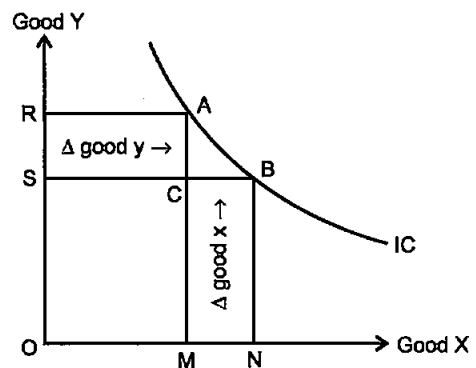
$$P_1X + P_2Y = Y'$$

$$10X + 5Y = 100$$

OR

Marginal Rate of Substitution is the rate at which the consumer is ready to sacrifice some amount of good 1 for obtaining one more unit of another good 2 without affecting his total utility.

For example, a consumer has a bundle of two goods, say, $2x + 10y$ and shifts to another bundle of $3x + 6y$ maintaining the same level of satisfaction (total utility). Here, MRS is 4 (10 - 6) units of y which the consumer is willing to giving up to obtain an extra unit of x = (3x - 2x). It can also be illustrated with the help of the given figure.



The two points A & B are taken on IC curve . At point A, a consumer gets a combination of OR (= MA) of good y and OM (= RA) of good X. Suppose he shifts from point A to point B where he gets combination of OS (= MC) of good y and ON (= SB) of good X. By this change, he loses AC (MA - MC) amount of good y and gains CB (ON - OM) amount of good X which means he is willing to substitute good X for good Y.

The slope of MRS can be understood as :

$$\frac{\Delta \text{ good Y}}{\Delta \text{ good X}}$$

9. Explain the conditions of producer's equilibrium under perfect competition. [4]

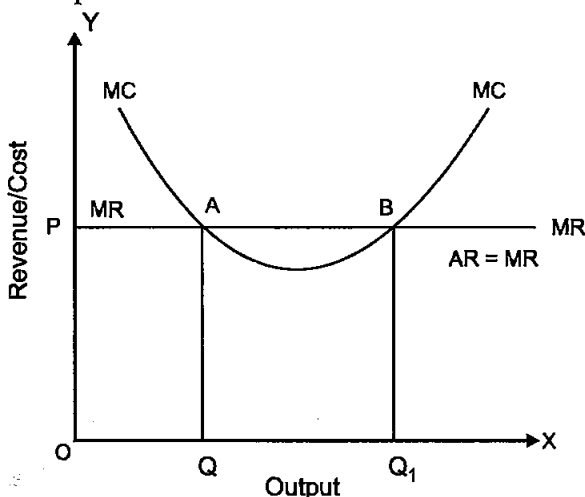
Answer : A producer is said to be in equilibrium at that level of output which gives him the maximum profit and he has no incentive to increase or decrease further. A producer attains equilibrium when following two conditions are fulfilled simultaneously.

- (i) $MC = MR$ (It is expressed as $P = MC$ under perfect competition)
 - (ii) MC is greater than MR after $MC = MR$ output level or MC curve cuts MR curve from below.
- It can be explained with the help of a schedule and its graph.

Units sold	MR (₹)	MC (₹)
1	10	12
2	10	10
3	10	8
4	10	10
5	10	12

In the above schedule, Price (P) is constant and $P = AR = MR$. In the above schedule, condition 1 is satisfied initially at 2 level of units but the second condition is not satisfied thereafter since MC is below than MR at the next level so, producer is not in equilibrium.

Again at unit 4 $MR = MC$ and MC is greater than MR thereafter so, producer will be in equilibrium at unit 4.

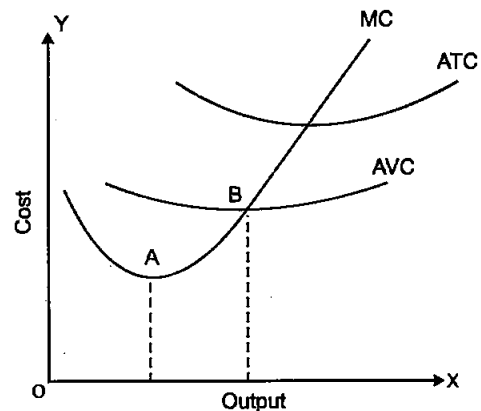


The situation is also shown in the graph. Under perfect competition, Price line is parallel to X-axis because it is constant and therefore, $P = AR = MR$. MC curve is as usual U-shaped which intersects MR (Price) curve at two points A and B. It means $MR = MC$ at two places. But point B is only satisfying both the conditions essential for equilibrium, hence producer will be in equilibrium at point B.

10. Draw Average Variable Cost (AVC), Average Total Cost (ATC) and Marginal Cost (MC) curves in a single diagram. State the relation between MC curve and AVC & ATC curves.

[6]

Answer :



Relation between MC and AVC—

- (i) When AVC falls, $MC < AVC$ or AVC falls only when $MC < AVC$. (Diagrammatically MC curve lies below AVC curve till their intersection).
- (ii) When AVC is minimum, $MC = AVC$ or AVC is constant or minimum when $MC = AVC$ (Diagrammatically the point where MC curve intersects AVC curve is the minimum point of AVC).
- (iii) When AVC rises, MC is more than AVC or AVC rises when $MC > AVC$. (Diagrammatically MC lies above AVC curve after intersecting AVC at its minimum point).

Relation between MC and ATC

- (i) When AC (i.e., ATC) falls, $MC < AC$
- (ii) When AC is constant, $MC = AC$
- (iii) When AC rises, $MC > AC$

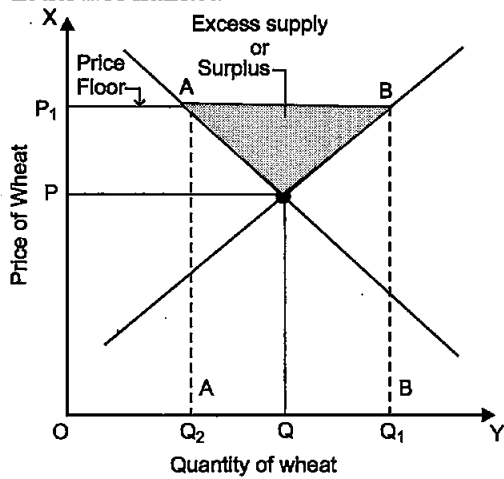
11. Define price floor. Explain the implications of price floor. [6]

OR

Market of a good is in equilibrium. Demand for the good 'decreases'. Explain the chain of effects of this change.

Answer : When Government fixes price of a product at a level higher than the equilibrium price, it is called support price (or floor price). It is the minimum price at which the producer must be paid for their products. Support price is generally fixed for agricultural products like food grains, sugar etc; to safeguard the interest of producers (farmers). For instance, Food

Corporation of India (FCI) purchases wheat from the farmers at its fixed price and stores it in godown as buffer stock. The aim of support price is to insulate farmers from the fluctuations in their incomes caused by the price variations in the free market.



This figure shows OP as the equilibrium price and OQ as equilibrium quantity of wheat. The government fixes price at OP_1 , slightly above equilibrium price OP. Traders in the market are now bound to pay at OP_1 , but, a rise in price causes market demand to contract from OQ to OQ_2 , on the other hand market supply expands from OQ_2 to OQ_1 . There emerges excess supply $AB = Q_1Q_2$ ($OQ_2 - OQ_1$). The government buys this surplus and stores it as a buffer stock.

The following are the implications of price floor:

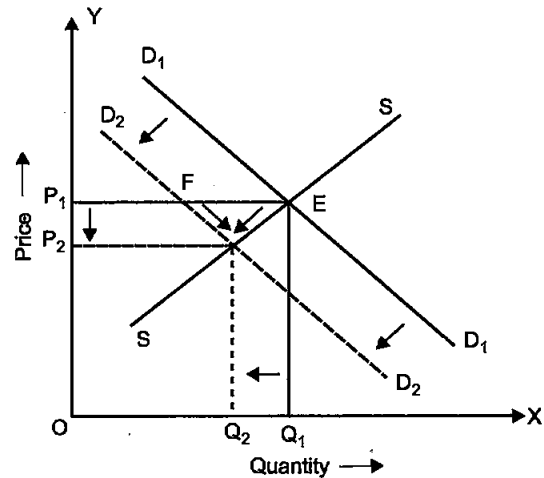
1. **Assurance to the Farmers**—The imposition of the price floor assures the farmers that whatever they produce will get sold in the market. This implies that the farmers can produce to their maximum.
2. **Assurance of Returns**—Due to the price floor, the farmers need not to bother about the sale of their output. This ensures a minimum guaranteed return to their investment in the production process.
3. **Higher Income**—The minimum guaranteed returns in form of minimum price and minimum wage to labourers result in increase in the income of the poor people.
4. **Burden on Consumers**—Price floor exerts additional pressure on the consumers and the traders, as they need to buy the products at comparatively higher price instead of the equilibrium price.
5. **Burden on Government**—It also puts extra burden on the government revenues. It

becomes mandatory for the government to purchase the excess produce, even if it runs a sufficient volume of buffer stocks.

6. **Higher Taxes**—The government tries to shift the burden (associated with purchasing the excess produce at higher price) to the consumers and the traders in form of higher taxes.

OR

Market of a good is in equilibrium. If the demand for the good decreases, it will have the effects as shown through the following figure :



- (i) D_1D_1 is the initial demand curve and SS is the supply curve.
- (ii) Both curves are cutting at point E which is the equilibrium point.
- (iii) At point E OP_1 is the equilibrium price and OQ_1 is the equilibrium quantity.
- (iv) As the demand decreases, D_1D_1 shifts to D_2D_2 in left.
- (v) At the existing Price OP_1 , demand falls from E to F.
- (vi) As an immediate impact, there is excess supply in the market. It is EF (at the existing price.)
- (vii) Due to excess supply, price falls from OP_1 to OP_2 . Due to the fall in price, the quantity supplied tends to contract. The contraction of supply occurs from E to F.
- (viii) The above process continues till excess supply is fully eliminated, and the market clears itself once again.
- (ix) The net effect of decrease in demand is
 - (a) decrease in equilibrium price from OP_1 to OP_2 and
 - (b) decrease in equilibrium quantity from OQ_1 to OQ_2 .

12. A consumer consumes only two goods X and Y. Explain the conditions of consumer's equilibrium using Utility Analysis. [6]

Answer : When the consumer is consuming two commodities (say X and Y) he can reach the equilibrium when ratio of MU of a commodity to its price $\left(\frac{MU_x}{P_x}\right)$ becomes equal to the ratio of MU of the other commodity to its price $\left(\frac{MU_y}{P_y}\right)$. Symbolically, it can be expressed as-

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$$

This equation also implies that if the price of the commodity x is equal to the price of the commodity y ($P_x = P_y$) the consumer will attain equilibrium when $MU_x = MU_y$.

It also means that satisfaction is maximum when a rupee worth of MU is same in both the goods X and Y. Suppose a consumer has ₹ 20 with him to spend on two goods X and Y. Further suppose price of each unit of X is ₹ 5 and that of Y is ₹ 2. Now consumer may attain his equilibrium by utility approach in the following way :

Utility schedule in case of two goods :				
Unit of goods	MU _x (Utils)	Mux/Px (A rupee worth of MU)	MU _y (Utils)	MUy/Py (worth of MU)
1	50	50 ÷ 5 = 10	24	24 ÷ 2 = 12
2	40	40 ÷ 5 = 8	22	22 ÷ 2 = 11
3	30	30 ÷ 5 = 6	20	20 ÷ 2 = 10
4	20	20 ÷ 5 = 4	18	18 ÷ 2 = 9
5	10	10 ÷ 5 = 2	16	16 ÷ 2 = 8
6	0	-	14	14 ÷ 2 = 7

For obtaining maximum satisfaction from spending his given income of ₹ 20, the consumer will buy 2 units of X, by spending ₹ 10 and 5 units of Y by spending ₹ 10. This combination of goods brings him maximum satisfaction because a rupee worth of MU in case of good X is 8 $\left(\frac{MU}{P_x} = \frac{40}{5}\right)$ and in case of good Y is also 8 $\left(\frac{MU}{P_y} = \frac{16}{2}\right)$ i.e. $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$ since per rupee MU is same, there is no incentive for consumer to buy more of one good and less of the other good.

SECTION—B

13. Define aggregate supply. [1]

Answer : Aggregate supply is the total production of goods and services in the economy during the year.

14. State the two components of M₁ measure of Money Supply. [1]

Answer : The two components of M₁, measure of Money Supply are currency and demand deposits.

15. Credit creation by commercial banks is determined by (Choose the correct alternative) [1]

- (a) Cash Reserve Ratio (CRR)
- (b) Statutory Liquidity Ratio (SLR)
- (c) Initial Deposits
- (d) All the above

Answer : (d) All the above

16. Give one example of negative externalities. [1]

Answer : If you produce chemicals and cause pollution as a side effect, then local fishermen will not be able to catch fish. This loss of income will be the negative externality.

17. Define investment multiplier. How is it related to marginal propensity to consume ? [3]

Answer : The number of times by which income increases as a result of increase in investment is called investment multiplier. Investment multiplier shows a relationship between initial increment in investment and the resulting increment in national income.

$$K = \frac{\Delta Y}{\Delta I}$$

where

K = multiplier

ΔY = change in income

ΔI = change in investment

Relation of multiplier with MPC :

$$K = \frac{\Delta Y}{\Delta I}$$

$$K = \frac{\Delta Y}{\Delta C}$$

(Dividing this equation by ΔY we get)

$$K = \frac{\Delta Y}{\Delta Y - \Delta C}$$

$$= \frac{\frac{\Delta Y}{\Delta Y}}{\frac{\Delta Y}{\Delta Y} - \frac{\Delta C}{\Delta Y}} = \frac{1}{1 - MPC}$$

There is a direct relation between K and MPC. If MPC is high, K will also be high but if MPC is low K will also be low.

18. Distinguish between stock and flow variables with suitable examples. [3]

OR

What are capital goods? How are they different from consumption goods?

Answer : Difference between stock and flow variables is :

Stock	Flow
(i) Stock relates to a point of time, e.g. your saving as on January 1, 2014 are ₹ 10,000.	Flow relates to the period of time, e.g. your pocket expenses of ₹ 20 per day.
(ii) Stock is not time-dimensional.	Flow is time-dimensional as per hour, per month, per year.
(iii) Stock influences the flow, greater the stock of capital, greater is the flow of goods and services.	Flow influences the stock. For example, monthly increase in the supply of money leads to an increase in the quantity of money.
(iv) Example - Population of a country, Bank deposit etc.	Expenditure of money, interest on capital etc.

OR

Difference between capital goods and consumption goods is :

Consumption Goods	Capital Goods
(i) Goods which are consumed for their own sake to satisfy current needs of the consumers directly are consumption goods.	Capital goods are fixed assets of producers which are repeatedly used in production of other goods and services.
(ii) These are used for achieving satisfaction.	These are used for generating income by production units.
(iii) Consumption goods meet the basic objective of an economy i.e. to sustain the consumption of entire population of the economy.	Capital goods are producer's goods which are repeatedly used in production process for generating income.
(iv) For example - Food, shoes, retailers, barbers etc.	For example - Machine, tools, technology etc.

19. What is ex-Ante consumption? Distinguish between autonomous consumption and induced consumption. [3]

Answer : Ex-Ante consumption refers to planned or desired consumption expenditure of households. Consumption function is represented by :

$$C = \bar{C} + bY$$

Where,

C = Consumption expenditure

\bar{C} = Autonomous consumption

b = Marginal propensity to consume (MPC)

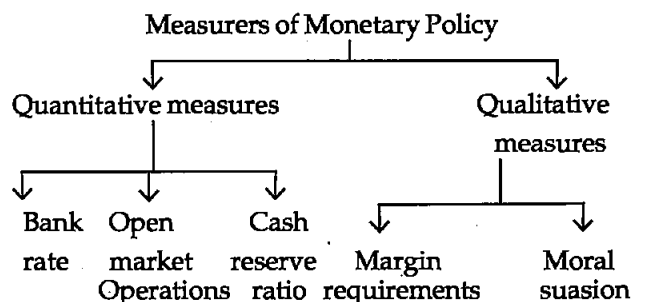
Y = National Income

Difference between Autonomous and Induced consumption :

Autonomous Consumption	Induced Consumption
(i) When consumption occurs even at zero level of income, this is called as Autonomous consumption.	When consumption increases by increase in income, it is known as induced consumption.
(ii) It is generally done in government sector.	It is generally done in private sector.
(iii) It is income inelastic, i.e., it is not affected by change in income level.	It is income elastic. i.e., it is affected by change in income level.

20. What is monetary policy? State any three instruments of monetary policy. [4]

Answer : Monetary Policy is the policy of the central bank of a country to regulate and control money supply and credit in the economy.



Bank rate : Bank rate is the rate of interest charged by the central bank on loans given to the commercial banks. In a situation of excess demand leading to inflation, central bank raises bank rate. This raises cost of borrowing which

discourages commercial banks to borrow from the central bank. Raising bank rate forces the commercial banks to raise their lending rate of interest to consumers and investors. Thus, makes credit costlier. As a result, demand for loans falls or vice-versa.

Open Market Operations : It refers to the sale and purchase of government securities and bonds in the open market by the central bank. Sale of securities by central bank brings flow of money to central bank from commercial banks thereby restricting their lending capacity. During inflation, central bank sells Government securities to commercial banks which lose equivalent amount of cash reserve thereby affecting their capacity to offer loans. This absorbs liquidity from the system. As a result, there is a fall in investment and aggregate demand. Thus, it is an effective measure to control credit.

Cash Reserve Ratio (CRR) : It is the ratio of bank deposits that a commercial bank must keep as reserve in cash with the central bank. It is compulsory for each commercial bank. When there is an inflationary situation, central bank raises the rate of CRR thereby making the banks to keep more cash reserve with RBI which curtails the lending capacity of commercial banks. Opposite takes place at the time of recession. In this way, the central bank keeps control on the flow of money in an economy.

21. Define full employment in an economy. Discuss the situation when aggregate demand is more than aggregate supply at full employment income level. [4]

OR

What are two alternative ways of determining equilibrium level of income ? How are these related ?

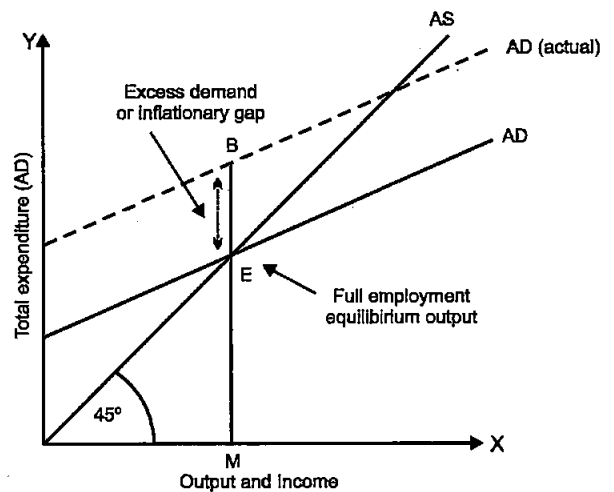
Answer : Full employment refers to a situation in which every able bodied person who is willing to work at the prevailing rate of wages is, in fact, employed.

Excess demand or Inflationary gap : When in an economy, aggregate demand is in excess of aggregate supply at full employment, the situation is termed as excess demand and the gap created is called inflationary gap.

For example : Lets suppose an imaginary economy, whereby employing all of its available resources, it can produce 10,000 qtls of rice. If

aggregate demand for rice is, say 12,000 qtls, this demand will be called as excess demand and the gap between demand & supply is called inflationary gap.

The situation is shown through a graph :



In the graph, Point E lying on the 45° line is the full equilibrium point. This is an ideal situation because aggregate demand represented by EM is equal to full employment level of output represented by OM. The actual aggregate demand is for a level of output BM which is greater than full employment level of output EM (OM). Thus, the difference between the two is $EB = (BM - EM)$ which is measure of inflationary gap.

OR

Equilibrium level of income is that level of income at which aggregate demand equals aggregate supply. (and planned savings equals planned investment)

The two different alternatives to reach at the equilibrium level of income are :

(i) Increase in Govt. Expenditure to pump more money in the system to increase demand.

During the period of deficiency of demand, the Government should make large investments in public works like-construction of roads, bridges, buildings, railways, canals and provide free education and medical facilities although it may enlarge budget deficit. The aim is to give more money in the hands of people so that they should spend more.

(ii) Central bank should buy Govt. bonds and securities from commercial banks to increase cash stocks of banks for lending. By doing this money flow will increase in the economy.

People will take loans from the banks to install new projects. More people will get jobs thus, income will increase, in turn, consumption will also increase and economy will move towards achieving equilibrium level of income.

22. Discuss briefly the meanings of : [6]

- (i) Fixed Exchange Rate
- (ii) Flexible Exchange Rate
- (iii) Managed Floating Exchange Rate

Answer : (i) **Fixed Exchange Rate :** Fixed exchange rate is the rate which is officially fixed by the government or monetary authority on a daily or monthly basis. In this system, foreign central banks stand ready to buy and sell their currencies at a fixed price. A typical kind of system was used under gold standard system in which each country committed itself to convert freely its currency into gold at a fixed price.

(ii) **Flexible Exchange Rate :** It is the rate which is determined by market force of supply and demand in the foreign exchange market. There is no official intervention. Here, the value of a currency is left completely free to be determined by market force of demand and supply of the currencies concerned. Under this system, the central banks, without intervention, allow the exchange rate to adjust so as to equate the supply and demand for foreign currency.

(iii) **Managed Floating Exchange Rate :** It is also called Dirty floating exchange rate. It is a system of floating exchange rate (where exchange rate is determined by the forces of demand and supply) but the one which the central bank of the country tries to manage by way of planned sale and purchase of foreign currencies in the international money market.

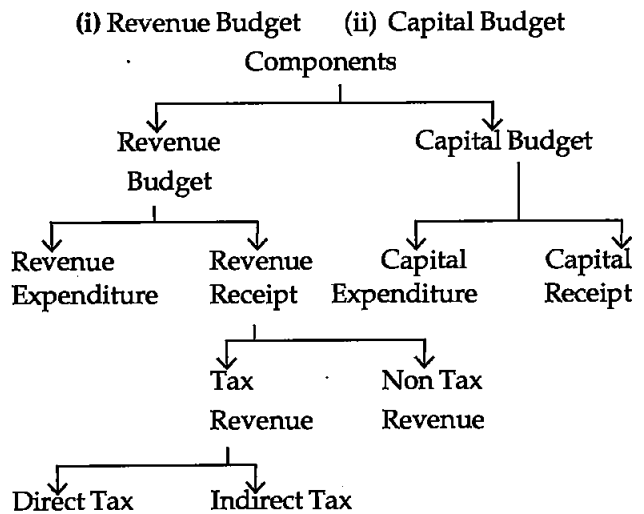
23. What is government budget? Explain its major components. [6]

OR

Explain (a) allocation of resources and (b) economic stability as objectives of government budget.

Answer : "A government budget is an annual financial statement showing estimated receipts and estimated expenditure of the government during a fiscal year."

Components of the budget : The budget is divided into two main parts :



(i) **Revenue Budget :** It comprises of current revenue receipts and current revenue expenditures met from such revenues. It includes the following components :

(a) **Revenue Receipt :** It includes tax revenue and non-tax revenue.

Tax Revenue : Tax revenue consist of proceeds of taxes and other duties levied by the union government. It may be direct or indirect taxes.

(i) **Direct tax :** When liability to pay a tax and the burden of that tax falls on the same person. The tax is called a direct tax. For e.g. income tax, corporate tax etc.

(ii) **Indirect Tax :** When liability to pay a tax is on one person and the burden of that tax falls on some other person, the tax is called an indirect tax. For e.g. custom duty, excise duty etc.

Non-tax Revenue : Income from sources other than taxes is called non-tax revenue. For e.g. interest, fees and fine, grant in aid etc.

(b) **Revenue Expenditure :** An expenditure which neither creates assets nor reduces liability is called revenue expenditure. For e.g. salaries of employees, interest, payment on past debt, subsidies etc.

(ii) **Capital Budget :** It comprises of current capital receipts and current capital expenditures which are described as :

(a) **Capital Receipt :** Government receipts which either create liabilities or reduces assets are called capital receipts. For example- borrowings, raising of funds from PPF and small saving deposits.

(b) **Capital Expenditure :** An expenditure which either creates an asset or reduces a liability is called capital expenditure. This type of expenditure adds to the capital stock of the

(ii) Labour-intensive technique : This is the technique in which labour is required more than the capital.

OR

An economy faces a major central problem *i.e.*, for whom the production is to be done? Production/Income is distributed either on the basis of the purchasing powers of the consumers or on the basis of requirements of the individuals. Two types of distribution are :

- (i) Functional Distribution
- (ii) Personal Distribution.

6. What is meant by inelastic demand ? Compare it with perfectly inelastic demand. [3]

Answer : Elasticity is a measure of the responsiveness of the quantity demanded to a change in its price. Inelastic demand means that the demand for a product does not increase or decrease corresponding to the fall or rise in its price. In this case elasticity is less than 1, as percentage change in quantity demanded is less than the percentage change in price.

For Ex.—Percentage change in quantity demanded is 10% whereas percentage change in price = 20%

So, Elasticity ($E_d < 1$) = 0.5

On the other hand, when increase or decrease in price does not affect the quantity demanded, it is known as perfectly inelastic demand.

For Ex.—Price is changed by 10% but quantity demanded remains the same *i.e.*,

Percentage change in quantity demand = 0

Percentage change in price = 20%

So, elasticity is 0.

7. When the price of a commodity changes from ₹ 4 per unit to ₹ 5 per unit, its market supply rises from 100 units to 120 units. Calculate the price elasticity of supply. Give reason. [4]

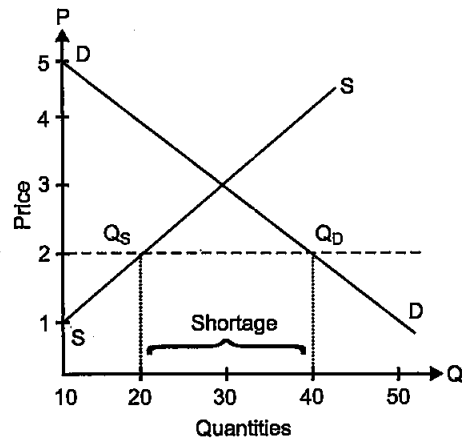
$$\begin{aligned} \text{Answer : } E_s &= \frac{P}{Q} \times \frac{\Delta Q}{\Delta P} \\ &= \frac{4}{100} \times \frac{20}{1} \\ &= 0.8 \end{aligned}$$

It is inelastic, as elasticity is less than one.

8. What is meant by price ceiling ? Explain its implications. [4]

Answer : Price ceiling is a situation when the price charged is more than or less than the

equilibrium price determined by market forces of demand and supply. It has been found that higher price ceilings are ineffective. Price ceiling has been found to be of great importance in the house rent market.



Implications of 'Price Ceiling'

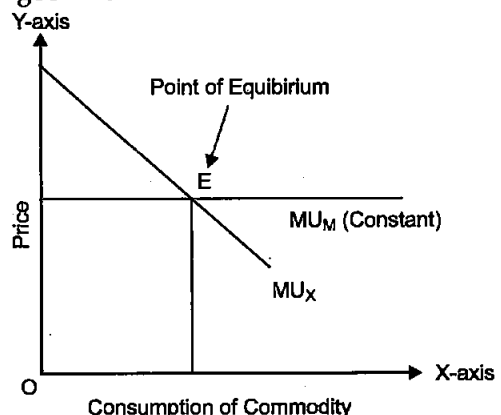
- (i) Price ceiling enables the availability of basic goods at reasonable price to the poor. This enables to increase the welfare of the people.
- (ii) When there is a fall in the price level, the demand for a good increases more than the supply of the good. Hence, it creates an excess demand for the good.

9. Given the price of a good, how will a consumer decide as to how much quantity to buy of that good ? Explain.

OR

What is Indifference Curve ? State three properties of indifference curves. [4]

Answer : Consumer equilibrium refers to the situation when consumer gets maximum satisfaction/utility from the goods it consumes. It is the situation through which a consumer decides how many units of the goods to consume.



Price remains constant when MU of goods is more than its price, and in that case, consumer

will decide not to purchase that good.
 Also, when MU is less than its price, then also consumer will give up its consumptions. As a consumer will consume only when, MU is equal to price.

$$MU_x = P_x$$

In the figure,

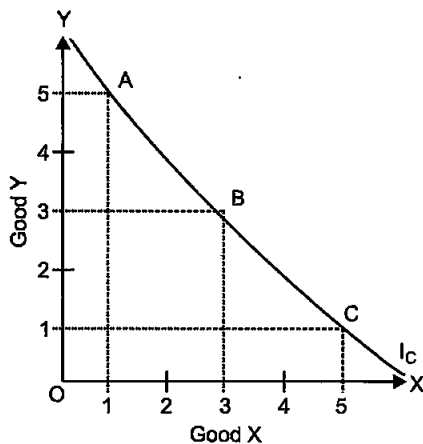
X-axis = Consumption

Y-axis = Price

E = Consumer Equilibrium

OR

A curve on a graph (the axis of which represent quantities of two commodities) linking those combinations of quantities which the consumer regards as of equal value.



IC—Indifference Curve.

X-axis = Good x

Y-axis = Good y

Properties :

- (i) Higher IC gives higher level of satisfaction.
- (ii) Two Indifference curves never intersect each other.
- (iii) Indifference curve is convex to the origin.

10. State three characteristics of monopolistic competition. Which of the characteristics separates it from perfect competition and why?

OR

Explain the implications of the following :

- (a) Freedom of entry and exit of firms under perfect competition.
- (b) Non-price competition under oligopoly.

[6]

Answer : The main features of monopolistic competition are as under :

- (1) **Large Number of Buyers and Sellers :** There are large numbers of firms but not as large as under perfect competition.

That means each firm can control its price-output policy to some extent. It is assumed that any price-output policy of a firm will not get reaction from other firms so each firm follows the independent price policy.

- (2) **Less Mobility :** Under monopolistic competition, both the factors of production as well as goods and services are not perfectly mobile.
- (3) **More Elastic Demand :** Under monopolistic competition, demand curve is more elastic. In order to sell more, the firms must reduce its price.

The characteristics which separates monopolistic competition from perfect competition are :

- (1) **Nature of Firms :** Under perfect competition, an industry consists of a large number of firms. Each firm in the industry has a very little share in the total output. The firms have to accept the price determined by the industry. On the other hand, under monopolistic competition the number of firms is limited. The firms can influence the market price by their individual actions.
- (2) **Nature of Price and Output :** Under perfect competition, price is equal to marginal cost as well as marginal revenue whereas under imperfect competition it is not so. Although, under monopolistic competition marginal cost and marginal revenue are equal yet not equalising the price.
- (3) **Nature of Product :** Under perfect competition, firms produce homogeneous products. The cross elasticity of demand among the goods is infinite. Under imperfect competition, all the firms produce differentiated products and the cross elasticity of demand among them is very small.

OR

- (a) **Freedom of entry and exit of firms under perfect competition :** There is freedom of entry and exit of firms in perfect competition. This implies that under perfect competition, in long-run, firms earn only normal profits, so new firms does not enter or exit the market in long-run. The firms in this competition do not earn supernormal profits or losses in long-run. It is only in short-run that the firms enter or exit the market.
- (b) **Non-price competition under oligopoly :** In an oligopoly market, firms do not compete with each other for changes in the

price. If the firm increases the price, rival firms may not increase it, so it will lead to a loss of the market. Consumers will shift to rival firms. On the other hand, if the firm decreases the price, the rival firms may decrease it, so it will lead to a loss of total revenue. There will not be an increase in the demand for the product. They take into consideration the decisions of rival firms, and hence, the price does not move freely and it leads to non-price competition. High selling cost prevails in the market, resources are not fully used and welfare is not maximised.

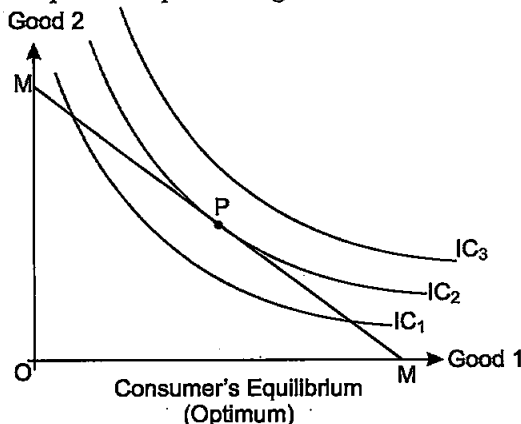
11. Explain the conditions of consumer's equilibrium using Indifference Curve Analysis.

[6]

Answer : According to indifference curve analysis, a consumer attains equilibrium at a point where budget line is tangent to indifference curve. Consumer equilibrium is achieved where slope of indifference curve (MRS) = slope of budget line (Px/Py).

$MRS = P_x \div P_y$ (Ratio of prices of two goods)

Given the indifference map (preference schedule) of the consumer and budget or price line, we can find out the combination which gives the consumer maximum satisfaction. The aim of the consumer is to obtain highest combination on his indifference map and for this, he tries to go to the highest indifference curve with his given budget line. He would be in equilibrium only at such point which is common between a budget line and the highest attainable indifference curve. A consumer is in equilibrium at a point where budget line is tangent to indifference curve. At this point, slope of indifference curve (called MRS) is equal to slope of budget line.



In the above fig, P is the equilibrium point at which budget line M just touches the highest attainable indifference curve IC₂ within

consumer budget. Combinations on IC₃ are not affordable because his income does not permit whereas combinations on IC₁ gives lower satisfaction than IC₂. Hence, best combination is at point P where budget line is tangent to the indifference curve IC₂. It is at this point that consumer attains the maximum satisfaction at the state of equilibrium.

For consumer's equilibrium, two conditions are necessary :

- (a) Budget line should be tangent to indifference curve ($MRS = P_x/P_y$).
- (b) Indifference curve should be convex to the point of origin (i.e., MRS should be diminishing at a point of equilibrium.)

12. Explain the conditions of producer's equilibrium in terms of marginal revenue and marginal cost.

[6]

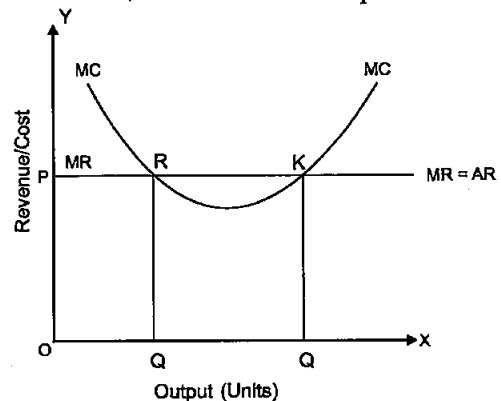
Answer : Producer's equilibrium refers to the state in which a producer earns his maximum profit or minimise its losses. According to MR-MC approach, the producer is at equilibrium, when the Marginal Revenue (MR) is equal to the Marginal Cost (MC) and Marginal Cost curve cuts the Marginal Revenue curve from below.

Two conditions under this approach are :

- (i) $MR = MC$
- (ii) MC curve should cut the MR curve from below, or MC should be rising.

MR is the addition to TR from the sale of one more unit of output and MC is the addition to TC for increasing the production by one unit. In order to maximise profits, firms compare its MR with its MC.

As long as the addition to revenue is greater than the addition to cost, it is profitable for a firm to continue producing more units of output. In the diagram, output is shown on the X-axis, revenue and cost on the Y-axis. The Marginal Cost (MC) curve is U-shaped and $P = MR = AR$, is a horizontal line parallel to X-axis.



MC = MR at two points R and K in the diagram, but profits are maximised at point K,

corresponding to OQ level of output. Between OQ and Q₁ levels of output, MR exceeds MC. Therefore, firm will not stop at point R but will continue to produce to take advantage of additional profit. Thus, equilibrium will be at point K, where both the conditions are satisfied.

Situation beyond OQ₁ level :

MR < MC when output level is more than OQ₁
MR < MC, which implies that firm is making a loss on its last unit of output. Hence, in order to maximise profit a rational producer decreases output as long as MC > MR. Thus, the firm moves towards producing OQ units of output.

SECTION—B

13. Define money supply. [1]

Answer : Money supply is the total amount of money in circulation or in existence in a country at a specific time.

14. Which of the following affects national income ? (Choose the correct alternative) [1]

- (a) Goods and Services tax
- (b) Corporation tax
- (c) Subsidies
- (d) None of the above

Answer: (c) Subsidies

15. Why does consumption curve not start from the origin? [1]

Answer : As consumption includes autonomous consumption and autonomous consumption can never be zero.

16. The central bank can increase availability of credit by : (Choose the correct alternative).[1]

- (a) Raising repo rate
- (b) Raising reverse repo rate
- (c) Buying government securities
- (d) Selling government securities

Answer: (c) Buying government securities.

17. Given nominal income, how can we find real income ? Explain.

OR

Which among the following are final goods and which are intermediate goods ? Give reasons. [3]

- (a) Milk purchased by a tea stall
- (b) Bus purchased by a school
- (c) Juice purchased by a student from the school canteen

Answer : Real income can be calculated by applying the following formula :

Real Income =

$$\frac{\text{Nominal Income}}{\text{Price Index of current year}} \times \text{Price Index of base year}$$

Consider price index of base year as 100

When nominal income is given, we can convert it into real income with the help of GDP deflator.

$$\therefore \text{Real Income} = \frac{\text{Nominal Income}}{\text{GDP deflator}} \times 100$$

OR

- (a) It is an intermediate good because it is used by producer during production process of making tea and not for final consumption.
- (b) It is a final good as, it is purchased by school for final consumption.
- (c) It is a final good as, it is purchased by a student for final consumption.

18. Define multiplier. What is the relation between marginal propensity to consume and multiplier ? Calculate the marginal propensity to consume if the value of multiplier is 4. [3]

Answer : In economics, a multiplier is the factor by which gains in total output are greater than the change in spending that caused it. It is usually used in reference to the relationship between investment and total national income.

Relationship between marginal propensity to consume and multiplier

There is a direct relationship between MPC and Multiplier as, the higher the MPC, the higher the multiplier and *vice versa*.

$$\Rightarrow \text{Multiplier} = \frac{1}{1 - \text{MPC}}$$

$$\Rightarrow 4 = \frac{1}{1 - \text{MPC}}$$

$$\Rightarrow \text{MPC} = 0.75$$

$$\therefore \text{MPC} = 0.75$$

19. What is meant by inflationary gap ? State three measures to reduce this gap.

OR

What is meant by aggregate demand ? State its components. [4]

Answer : An inflationary gap, is the amount by which the actual gross domestic product exceeds the potential full-employment GDP.

Three measures to reduce this gap are :

1. **Fiscal Policy :** Fiscal policy is the expenditure

and revenue (taxation) policy of the government to accomplish the desired objectives.

In case of excess demand (when current demand is more than aggregate supply at full employment), the objective of fiscal policy is to reduce aggregate demand.

2. **Monetary Policy :** Monetary policy of the central bank of a country is to control the money supply and credit in the economy. Therefore, it is also called Central Bank's Credit Control Policy. Money broadly refers to currency notes and coins whereas credit generally means loans, *i.e.*, finance provided to others at a certain rate of interest. Monetary measures (instruments) affect the cost of credit (*i.e.*, rate of interest) and availability of credit. Thus, it helps in checking excess demand when credit availability is restricted and credit is made costlier.
3. **Miscellaneous :** Other anti-inflationary measures are import promotion, wage freeze, control and blocking of liquid assets, compulsory savings scheme for households, increase in production by utilising idle capacities, etc.

OR

Aggregate demand (AD) or Domestic Final demand (DFD) is the total demand for final goods and services in an economy at a given time. It specifies the amount of goods and services that will be purchased at all possible price levels.

Components of aggregate demand are :

$$AD = C + I + G + (X - M)$$

Where

C = Consumption

I = Investment

G = Government Spending

X - M = Net Exports

1. **Consumption :** This is made by households, and sometimes consumption accounts for the larger portion of aggregate demand. An increase in consumption shifts the AD curve to the right.
2. **Investment :** Investment, second of the four components of aggregate demand, refers to the spending by firms not households. However, investment is also the most volatile component of AD. An increase in investment shifts AD to the right in the

short run and helps to improve the quality and quantity of factors of production in the long run.

3. **Government :** Government spending forms a large total of aggregate demand, and an increase in government spending shifts aggregate demand to the right. This spending is categorized into transfer payments and capital spending. Transfer payments include pensions and unemployment benefits and capital spending is on things like roads, schools and hospitals. Government spends to increase the consumption of health services, education and to re-distribute income. They may also spend to increase aggregate demand.
 4. **Net Exports :** Imports are foreign goods bought by consumers domestically, and exports are domestic goods bought abroad. Net exports is the difference between exports and imports, and this component can be net imports too, if imports are greater than exports. An increase in net exports shifts aggregate demand to the right. The exchange rate and trade policy affects net exports.
20. **The value of marginal propensity to consume is 0.6 and initial income in the economy is ₹ 100 crores. Prepare a schedule showing Income, Consumption and Saving. Also show the equilibrium level of income by assuming autonomous investment of ₹ 80 crores. [4]**

Answer : Given that,

Marginal propensity to consume (MPC) = 0.6

Initial income = ₹ 100 crores

Autonomous investment = ₹ 80 crores

$$C = \bar{C} + c(Y)$$

$$C = 0 + 0.6(Y)$$

Income (₹)	Consumption	Saving (₹) (1 - MPC = MPS) MPS = 0.40	Investment
100	60	40	80
200	120	80	80
300	180	120	80
400	240	160	80
500	300	200	80

Aggregate Demand (AD) = Aggregate Supply (AS)

$$AD = C + I \text{ and } AS = C + S$$

Therefore, the equilibrium level of income is ₹ 200 crores.

21. Explain the role of the Reserve Bank of India as the “lender of last resort”. [4]

Answer : A person or organisation which is ready to help the individual or organisation who is in need of immediate financial help to come out of the financial struggles is the lender of the last resort. It means that if a commercial bank fails to get financial accommodation from anywhere, it approaches the Reserve Bank as a last resort. Reserve Bank advances loan to such banks against approved securities. By offering loan to the commercial bank in situations of emergency, the Reserve Bank ensures that :

- (i) The banking system of the country does not suffer from any set back.
- (ii) Money market remains stable.

It preserves the stability of the banking and financial system by protecting individual's deposited funds and preventing panic-ridden withdrawals from banks with temporary limited liquidity. For more than century and a half, central banks have been trying to avoid great depressions by acting as lenders of last resort in times of financial crisis.

22. (a) Explain the impact of rise in exchange rate on national income.
 (b) Explain the concept of 'deficit' in balance of payments. [6]

Answer : (a) If the exchange rate of a country falls with respect to the other country then its exports become cheap while imports become expensive. For example : If earlier, the exchange rate was US\$1 = INR 60, and if the exchange rate decreased to US\$1 = INR 70, then businesses that are selling their products in the US will receive more money. So, if my product was priced at US\$5, earlier I was receiving $5 \times 60 = \text{INR } 300$, now the exchange rate depreciated to INR 70, so for the same priced product in the US that is priced at US\$5, I will be receiving $5 \times 70 = \text{INR } 350$. Similarly, for imports, as the exchange rate depreciated to INR 70 and if I want to purchase a Smartphone worth US\$200; earlier I had to pay $200 \times 60 = \text{INR } 12,000$. Now I will pay, $200 \times 70 = \text{INR } 14,000$.

Exactly opposite will happen when exchange rate will appreciate. For example : when US\$1 = INR 60 will become US\$1 = INR 50.

(b) The deficit in the Balance of Payment (BOP) is governed by the balance of autonomous

transactions in the BOP. The BOP would show a deficit if the autonomous receipts are lesser than the autonomous payments. As autonomous receipt implies a receipt of foreign exchange and autonomous payment implies a payment of foreign exchange, so, it can be said that BOP would show a deficit when the foreign exchange receipts are less than foreign exchange payment which also means that the BOP deficit would reflect depletion of foreign exchange reserves of the country.

23. Calculate (a) Net National Product at market price, and (b) Gross Domestic Product at factor cost : [4 + 2 = 6]

	(₹ in crores)
(i) Rent and interest	6,000
(ii) Wages and salaries	1,800
(iii) Undistributed profit	400
(iv) Net indirect taxes	100
(v) Subsidies	20
(vi) Corporation tax	120
(vii) Net factor income to abroad	-70
(viii) Dividends	80
(ix) Consumption of fixed capital	50
(x) Social security contribution by employers	200
(xi) Mixed income	1,000

Answer : $NDP_{FC} = \text{Wages and salaries} + \text{SSC by employers} + \text{Rent and interest} + \text{Dividend} + \text{Corporation tax} + \text{Undistributed profit} + \text{Mixed income}$

$$NDP_{FC} = 1800 + 200 + 6000 + 80 + 120 + 400 + 1000$$

$$NDP_{FC} = ₹ 9600 \text{ Crores}$$

(a) $NNP_{MP} = NDP_{FC} + NFIA + NIT$

$$NNP_{MP} = ₹ 9600 + (-70) + 100$$

$$NNP_{MP} = ₹ 9630 \text{ Crores}$$

(b) $GDP_{FC} = NDP_{FC} + \text{Consumption of fixed capital}$

$$GDP_{FC} = ₹ 9600 + 50$$

$$GDP_{FC} = ₹ 9650 \text{ Crores}$$

24. Explain the meaning of the following : [6]

- (a) Revenue deficit
- (b) Fiscal deficit
- (c) Primary deficit

OR

Explain the following objectives of government budget:

- (a) Allocation of resources
- (b) Reducing income inequalities.

Answer : (a) Revenue Deficit : A revenue deficit occurs when the net income generated (revenues less expenditures), falls short of

the projected net income. This happens when the actual amount of revenue received and/or the actual amount of expenditures do not correspond with budgeted revenue and expenditure figure.

(b) Fiscal Deficit : A fiscal deficit occurs when a government's total expenditures exceed the revenue that it generates, excluding money from borrowings. Deficit differs from debt, which is an accumulation of yearly deficits.

(c) Primary Deficit : The deficit can be measured with or without including the interest paid on the debt as expenditures. The primary deficit is defined as the difference between current government's spending on goods and services and total current revenue from all types of taxes.

OR

(a) Allocation of Resources : It is one of the important objectives of government budget. In a mixed economy, the private producers aim towards profit maximisation, while, the government aims towards welfare maximisation. The private sector always tend to divert resources towards

areas of high profit, while ignoring areas of social welfare. In such a situation, the government through the budgetary policy aims to reallocate resources in accordance with the economic and social priorities of the country.

(b) Reducing Income inequalities : Government through budget makes every possible effort to reduce income inequalities. Income inequalities are so much prevalent in an economy like India. To achieve this objective, government uses fiscal instruments of taxation and subsidies. By imposing taxes on rich and giving subsidies to the poor, the government redistributes income in favour of poorer sections of the society. Distribution of food grain through 'fair = price shops' to BPL (below poverty line) population is an important step in this direction. Equitable distribution of income and wealth is a sign of social justice.

Thus, government budget reduces income inequalities.



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