Economics 2019
Delhi - Set-3

General Instructions :

(i) All questions in both the sections are compulsory.
(ii) Marks for questions are indicated against each question.
(iii) Question Nos. **1 - 4** and **13 - 16** are very short-answer questions carrying **1** mark each. They are required to be answered in **one sentence** each.
(iv) Question Nos. **5 - 6** and **17 - 18** are short-answer questions carrying **3** marks each. Answers to them should normally not exceed **60** words each.
(v) Question Nos. **7 - 9** and **19 - 21** are also short-answer questions carrying **4** marks each. Answers to them should normally not exceed **70** words each.
(vi) Question Nos. **10 - 12** and **22 - 24** are long-answer questions carrying **6** marks each. Answers to them should normally not exceed **100** words each.
(vii) Answers should be brief and to the point and the above word limits should be adhered to as far as possible.

Question 1

The average product curve in the input-output plane, will be _____. (Choose the correct alternative)

(a) an 'S' shaped curve
(b) an inverse 'S' shaped curve
(c) a 'U' shaped curve
(d) an inverse 'U' shaped curve

SOLUTION:

The average product curve in the input-output plane, will be an inverse 'U' shaped curve.
Hence, the correct answer is option (D).

Question 2

If the market supply of a commodity X changes due to improvement in technology, the market supply curve will _____. (Fill up the blank)

OR

If the market supply of a commodity X changes due to rise in price of a factor input, the market supply curve will _____. (Fill up the blank)

SOLUTION:

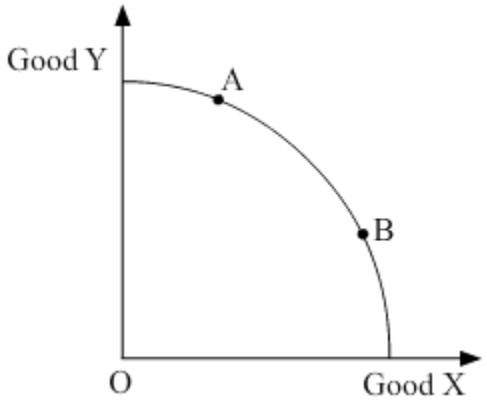
If the market supply of commodity X changes due to improvement in technology, the market supply curve will shift rightwards.

OR

If the market supply of commodity X changes due to rise in price of factor input, the market supply curve will shift leftwards.

Question 3

In the given figure, the movement on the production possibility curve from point A to point B shows _____. (Choose the correct alternative)



(a) Growth of all the resources in the economy.
(b) Underutilisation of resources.
(c) Production of more units of Good X and less units of Good Y.
(d) Production of more units of Good Y and less units of Good X.

SOLUTION:

In the given figure, the movement on the production possibility curve from point A to point B shows production of more units of good X and less units of Good Y.
Hence, the correct answer is option (C).

Question 4

Average fixed cost curve ____. (Choose the correct alternative)
(a) is a straight line parallel to X-axis.
(b) is straight line parallel to Y-axis.
(c) falls, as more units are produced
(d) rises, as more units are produced

OR

Which of the following formula is correct for calculating marginal cost?
(Choose the correct alternative)
(a) $MC_N = TFC_n - TFC_{N-1}$
(b) $MC_N = AC_N - AC_{N-1}$
(c) $MC_N = AVC_N - AVC_{n-1}$
(d) $MC_N = TC_n - TC_{N-1}$

SOLUTION:

Average fixed cost curve falls as more units are produced. Hence, the correct answer is option (c).

OR

The correct formula of calculating marginal cost is $MC_n = TC_n - TC_{n-1}$
Hence, the correct answer is option (D).

Question 5

Good X and Good Y are complementary goods. If price of Good X increases, discuss briefly its likely impact on the demand for Good Y.

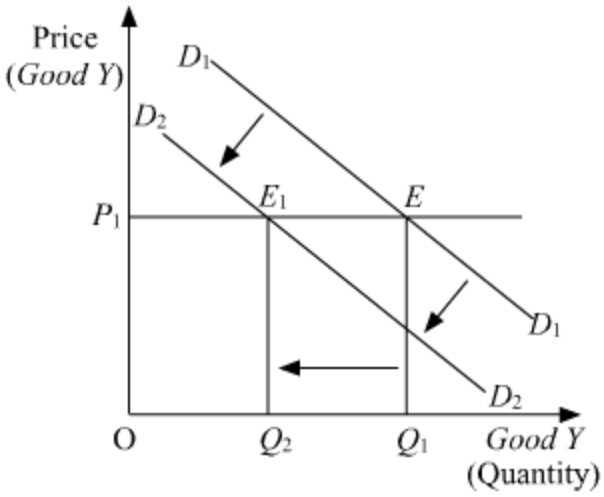
OR

If the income of a consumer increases, discuss briefly its likely impact on the demand for a normal good, Good X.

SOLUTION:

Complementary goods refer to those goods that are consumed together. The joint consumption of these goods satisfies wants of the consumer. For example Tea and sugar, ink pen and ink, printer and paper, etc. In the given ques two goods X and Y are complementary goods. If the price of Good X increases, the demand for Good Y falls. This can be understood from the given figure:

Let D_1D_1 be the initial demand curve for good Y. At price OP_1, the quantity demanded of Good Y is OQ_1. Now, if the price of the X (complementary good) rises, then demand for X will fall. As X and Y are consumed together, so the demand for Y will also fall. This shifts the initial demand curve for Y . D_1D_1 parallelly leftwards to D_2D_2. In the figure, we can see that at the same price OP_1, the demand for Y has decreased from OQ_1 to OQ_2.



OR

Change in the income of the consumer affects the demand for goods such that if the income rises, the purchasing power of the consumer also rises, as a result, the demand for a good increase, however, if the income falls, the purchasing power also falls and therefore the demand for the good also falls. So we can say, that the demand for ***normal goods*** shares a ***positive***relationship with consumer's income. As income increases, the demand for normal goods also increases and vice-versa.

Question 6

Identify and discuss the nature of the following newspaper reports in terms of positive or normative economic analysis :
(i) "India jumped 23 points in the World Bank's ease of doing business index to 77^{th} place, highest in 2 years." – *The Economic Times*
(ii) "Government should further liberalise the business rules." – *The Economic Times*

SOLUTION:

(i) The given statement is positive in nature. This is because positive Statements are the factual statements and describe what was, what is and what would be. These statements can be tested, proven or disproven. These statements do not involve any personal value judgment. Since, the given statement is verifiable in nature therefore it is positive statement.

(ii) The given statement is normative in nature. This is because normative Statements describe what should be or what ought to be. These statements cannot be tested and verified. Unlike positive statements, normative statements involve personal value judgments. Usually, these statements are debatable in nature. Since, the given statement about government is opinion based statement, therefore it is normative in nature.

Question 7

Explain the law of equi-marginal utility.

OR

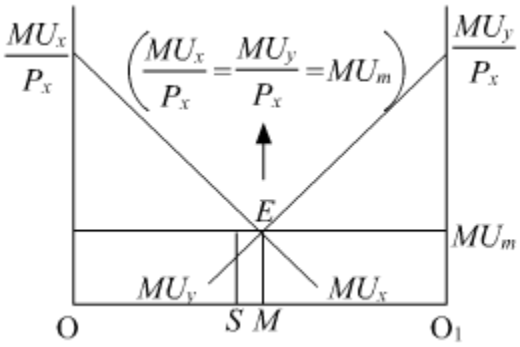
State and discuss the conditions of consumer's equilibrium under ordinal approach.

SOLUTION:

The Law of Equi-Marginal Utility states that a consumer allocates his expenditure on various commodities in such a manner that the utility derived from each additional unit of the rupee spent on each of the commodities is equal. Algebraically, this is represented the following equality.

$$\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = \ldots \frac{MU_m}{P_n} = MU_m$$

This law helps in explaining the consumer equilibrium in case of two or more commodities. Diagrammatically, the consumer's equilibrium in case of two commodities is represented as:



In the above figure, OO_1 represents the total income of a consumer. MU_x and MU_y represent the Marginal Utility curves of commodity *x* and commodity *y*, respectively. The point *E* represents the point of consumer's equilibrium, where:

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

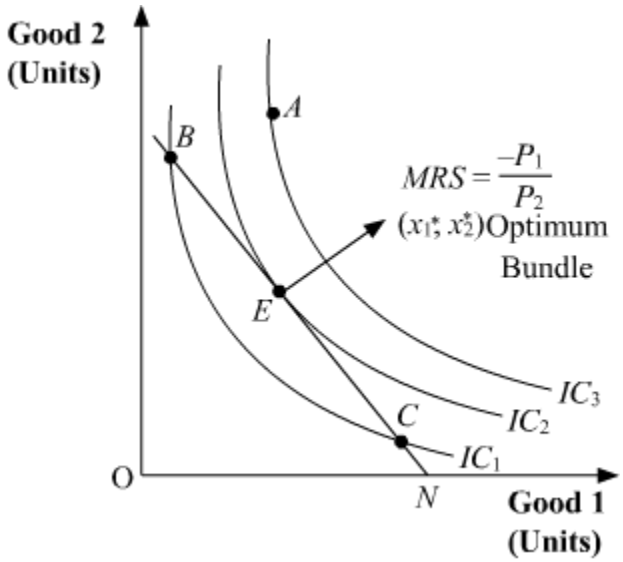
OR

According to Ordinal or the Indifference Curve Approach, a consumer attains equilibrium at the point where the budget line is tangent to the indifference curve and the IC is convex to the origin at the point of tangency. This optimum point is

characterised by the following equality:

That is,

Absolute value of the slope of the IC = Absolute value of the slope of the budget line



In the above figure, point E depicts consumer's equilibrium. At this point, the budget line is tangent to the indifference curve IC_2. The optimum bundle is denoted by (x_1^* x_2^*). This point is the optimum or the best possible consumption bundle, where the consumer is maximising his satisfaction.

All other points lying on the budget line (such as point B and point C) are inferior to (x_1^* x_2^*)) as they lie on a lower IC (i.e. IC_1). Thus, the consumer will rearrange his consumption and will attempt to reach the equilibrium point, where the marginal rate of substitution is equal to the price ratio.

Let's suppose that instead of point E, the consumer is at point B. At this point, MRS is greater than the price ratio. In this case, the consumer would tend to move towards point E by giving-up some amount of good 2 in order to consume more units of good 1. The consumer will continue to give-up the consumption of good 2, until, he reaches the point E, where, MRS becomes equal to the price ratio. On the other hand, for all other points such as point C,MRS is lesser than the price ratio. In this case, the consumer would tend to move towards point E by giving up some amount of good 1 to consume more units of good 2.

Thus, we can conclude that if the consumer is consuming any bundle other than the optimum one, then he would rearrange his consumption bundle in such a manner that the equality between the MRS and the price ratio is established and he attains the state of equilibrium.

Question 8

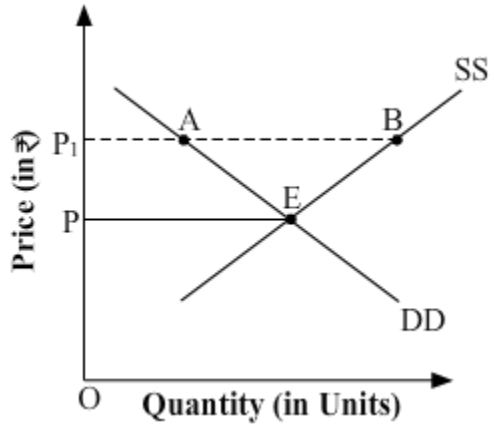
Complete the following cost schedule :

Quantity (in Units)	0	1	2	3	4
Total cost (in ₹)	200	.....	.....	.....	.....
Total variable cost (in ₹)	0	.....	180	.....	.....
Average variable cost (in ₹)	–	100	.....	80	.....

SOLUTION:

Quantity	Total Cost	Total Variable Cost	Average Variable Cost	Total Fixed Cost
0	200	0	–	**200**
1	**300**	**100**	100	**200**
2	**380**	180	**90**	**200**
3	**440**	**240**	80	**200**
4	490	**290**	**72.5**	**200**

In the given diagram, OP is the market determined price and OP_1 is the price fixed by the government.



(a) Identify if the diagram represents, price ceiling or price flooring.

(b) Discuss the likely behaviour of the market in the given condition.

OR

Suppose the demand and supply equations of a commodity X in a perfectly competitive market are given by :

$Q_d = 1700 - 2P$

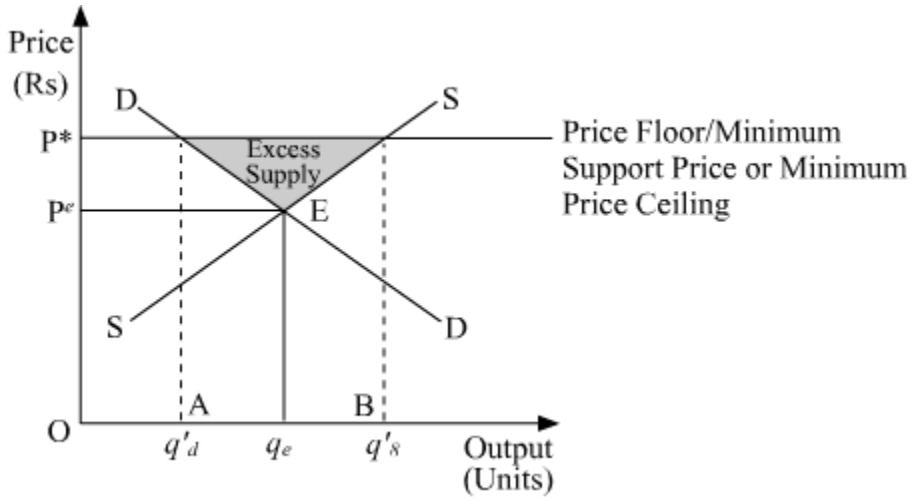
$Q_s = 1300 + 3P$

Calculate the value of equilibrium price and equilibrium quantity of the commodity X.

SOLUTION:

(a) The diagram represents price flooring.

(b) Price floor implies legislated or government fixed minimum price that should be charged by the seller. The minimum price is fixed above the equilibrium price. In the following figure, *DD* represents the market demand and *SS* represents the market supply. The point '*E*' represents the market equilibrium point, where the market demand and market supply intersect. The equilibrium price is OP^e and equilibrium output is Oq^e. Now, assume that the government imposes price floor at price OP_1. At this price, the quantity demanded is *q'd*, whereas, the quantity supplied is q's units. As quantity supplied (q′ *s*) is more than quantity demanded (*q′ d*), so there exists a situation of excess supply of *AB* units of a given good. (i.e. *q's* – *q'd*).



OR

At the point of equilibrium demand is equal to supply in a perfectly competitive market.

So, $Q_d = 1700 – 2P$

$Q_s = 1300 + 3P$

At point of equilibrium,

$Q_d = Q_s$

$= 1700 – 2P = 1300 + 3P$

= 1700 – 1300 = 3P + 2P

= 400 = 5P

400/5 = P_e

80 = P_e

Q_e = 1700 – 2 (80)

= 1700 – 160

= 1540

The equilibrium price is equal to 80 and equilibrium quantity is equal to 1540 units of a commodity X.

Question 10

Elaborate three main features of monopolistic competition form of market.

OR

Distinguish between perfect competition and monopolistic competition on the basis of the following:

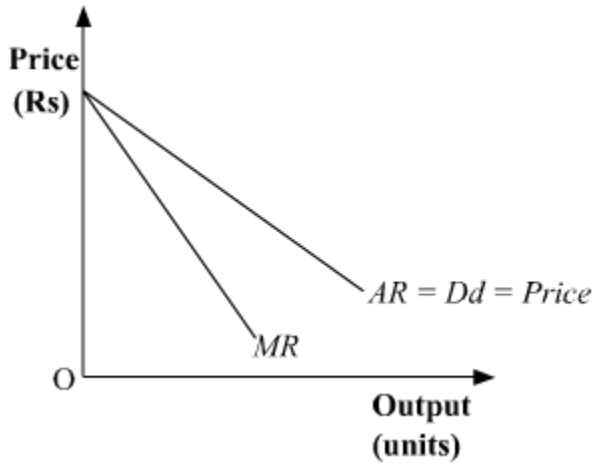
(a) Number of sellers

(b) Nature of product

(c) Selling cost

SOLUTION:

Monopolistic market structure is defined as the market structure in which there are different sellers selling differentiated products, which are close substitutes for each other. A monopolistic firm is also a price maker, as it can design its own price policies. The firms are distinguished on the basis of their brand names, therefore each monopolistic firm enjoys a monopolist (or monopoly) position. This is because no other firm can produce and sell its products under the same brand name. Therefore, a monopolistic firm enjoys a certain degree of monopoly due to the existence of the brand name. Due to this, the *AR* curve (or demand curve) and the *MR* curve faced by a monopolistic firm are downward sloping.



The three main features of monopolistic competition are:

1. Large Number of Buyers and Sellers and Free Entry and Exit of firms- Similar to a perfect competition market, in a monopolistic market also there are large number of buyers and large number of sellers. Not only this, the firms in the monopolistic market enjoy the freedom of entry and exit from the market. But at certain times, due to some legal barriers and patent rights, it is not so free for the new firm to enter the market. The implication of this feature is that the firms cannot earn abnormal profits or losses, rather they will only earn normal profits in the long run.

2. Differentiated Product- The product of a monopolistic firm is differentiated from the product of the other firm but both are close substitute for each other. In other words, the products of different firms are slightly different from that of the others, but nevertheless; they are close substitutes. The product differentiation is achieved through brand name and trade mark by the way of advertisements. The cause of differentiating the similar products can be attributed to the advertisement expenses incurred.

3. Selling Costs- The need of the selling cost arises due to the sole aim of differentiating the products. The product differentiation may be true or artificial (hypothetical). It is through the help of an advertisement that a particular monopolistic firm tries to convince the consumers by distinguishing its product on qualitative basis from its substitutes.

OR

Characteristic	Perfect Competition	Monopolistic Competition
Number of Sellers	Under Perfect Competition market, there exist a large number of sellers for a particular commodity.	Under Monopolistic Competition market, there exist a large number sellers for a commodity. However, in certain cases due to barriers such as patents, etc., the entry may be restricted to some extent.

Nature of Product	Firms under Perfect Competition, sell homogeneous products that are perfect substitutes of each other.	Firms under this market structure produce similar yet differentiated products that are 'close' substitutes of each other.
Selling Cost	There is no selling cost under this market as all the firms sell the same good and there is no advertisement or marketing of the products.	The selling cost under this market is huge as all the firms spend a lot of money on advertisement and other selling techiniques.

Question 11

(a) Define price elasticity of demand.

(b) If the price of a commodity rises by 40% and its quantity demanded falls from150 units to 120 units, calculate coefficient of price elasticity of demand for the commodity.

SOLUTION:

It is the measure of the degree of responsiveness of the demand for a good to the changes in its price. It is defined as the percentage change in the demand for a good divided by the percentage change in its price.

$$ed = \frac{\text{Percentage change in demand for good}}{\text{Percentage change in price of that good}}$$

$$ed = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

Where $\Delta Q = Q_2 - Q_1$, change in demand
$\Delta P = P_2 - P_1$, change in price
P_1 = Initial price
Q_1 = Initial quantity
(b) Given : $Q_1 = 150$
$Q_2 = 120$
Price rises by 40%

$$\text{Elasticity of demand} = \frac{\text{Percentage change } in \text{ Quantity Demanded}}{\text{Percentage change } in \text{ Price}}$$

$$\text{Percentage change in Quantity demande} = \frac{Q_2 - Q_1}{Q_1} \times 100$$

$$= \frac{150 - 120}{150} \times 100 = 20\%$$

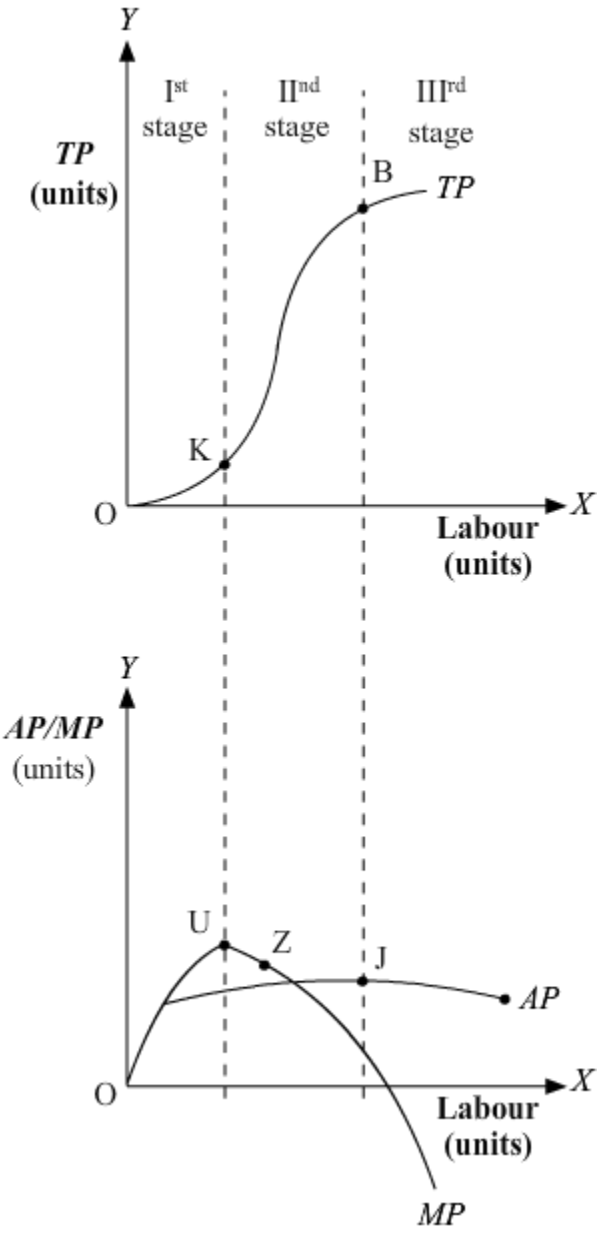
$$\text{Elasticity of demand} = \frac{\text{Percentage change } in \text{ Quantity Demanded}}{\text{Percentage change } in \text{ Price}} = \frac{20}{40} = 0.5$$

Question 12

What is meant by "diminishing returns to a factor" ? Discuss any two reasons for the operation of diminishing returns to a factor.

SOLUTION:

The diminishing returns to a factor depicts a particular phase under the law of variable proportion. Under this stage, the returns to a variable factor input or the marginal product is diminishing in nature, thereby giving the name ‘diminishing returns to a factor’. This can be better understood with the help of the given diagram.



Here, the Diminishing Returns to a Factor is the stage that starts from point K and continues till point B on the TP curve. During this stage, the TP increases but at a

decreasing rate and attains its maximum point at B, where it remains constant. On the other hand (in the figure ii), the MP curve continues to fall and cuts AP from its maximum point Z, where MP equals AP. When TP attains its maximum point, corresponding to it, MP becomes zero. AP, in this stage initially rises, attains its maximum point at Z and thereafter starts falling.

Reasons for Decreasing Returns to a Factor

a. Fuller utilisation of fixed factor- In this stage, the fixed factor is utilised to its maximum level as more and more of labour inputs are employed.

b. Imperfect substitutability between labour and capital- The variable factors are imperfect substitute for the fixed factor. Therefore, the firm cannot substitute labour for capital and as a result diminishing returns takes place.

c. Optimum Proportion/ Ideal Factor Ratio- The optimum proportion (or ideal factor ratio) is a fixed ratio in which the labour and capital inputs are employed. These factors will be the most efficient if they are employed as per the optimum proportion. If this proportion is disturbed (by combining more of labour inputs to the fixed units of capital), then the efficiency of the factors will fall, thereby leading to the diminishing returns to the factor.

Question 13

Suppose in a hypothetical economy, the income rises from ₹ 5,000 crores to ₹ 6,000 crores. As a result, the consumption expenditure rises from ₹ 4,000 crores to ₹ 4,600 crores. Marginal propensity to consume in such a case would be _____. (Choose the correct alternative)
(a) 0.8
(b) 0.4
(c) 0.2
(d) 0.6

SOLUTION:

Suppose in a hypothetical economy, the income rises from ₹ 5,000 crores to ₹ 6,000 crores. As a result, the consumption expenditure rises from ₹ 4,000 crores to ₹ 4,600 crores. Marginal propensity to consume in such a case would be 0.6 .
The correct answer is option (D).

Question 14
What is meant by primary deficit ?

OR

What is meant by fiscal deficit ?

SOLUTION:

Primary deficit refers to the difference between the fiscal deficit and the interest payments. Since, fiscal deficit reflects the borrowing requirements of the government, it can be said that the primary deficit refers to the difference between the government's borrowing requirements and its interest liabilities.

Primary Deficit = Fiscal Deficit – Interest Payments

OR

Fiscal deficit refers to the difference between the total budget expenditure and total budget receipts of the government, other than the borrowings and liabilities. That is, *Fiscal Deficit = Budget Expenditure – Budget Receipts (other than borrowing and liabilities)*

Question 15
Give any two examples of flow concept.

SOLUTION:

Two examples of flow concept are: capital formation, interest on capital.

Question 16
Define the term 'tax'.

SOLUTION:

A tax is a legally compulsory monetary contribution to the government by different economic units such as household, firms and other economic units. Taxes are imposed by the government on different activities, income, property, production, occupation, etc. The main motive of imposing taxes is to raise revenue and to incur various expenditures for enhancing welfare of the country.

Question 17
Define the problem of double counting in the computation of national income. State any two approaches to correct the problem of double counting.

OR

"Gross Domestic Product (GDP) does not give us a clear indication of economic welfare of a country. "Defend or refute the given statement with valid reason

SOLUTION:

Double counting refers to a situation where the value of a good is taken into account (counted) more than once. Such a problem occurs because for every producer, the commodity he sells is the final commodity. Thus, if every time the value of the good is taken into account, then it will lead to the estimation of the value of the product more than once.

For instance, in the example of production of cloth, for the cotton farmer cotton is the final product and he sells it for Rs 500. Thus, for him the cost of the final output is Rs 500. Similarly for the weaver, who sells weaved cotton for Rs 700, weaved cotton is the final product and cost of the final output is Rs 700. Next, the textile producer converts the weaved cotton into cloth and sells it to retailer for Rs 900, for him the cloth is the final product and cost of the final output is 900. The retailer then sells the cloth for Rs 1100.

The total value of the final output in the process is Rs 3,200 (i.e. Rs 500 + Rs 700 + Rs 900 + Rs 1,100). But, in this manner, the value of cotton is counted four times, value of thread three times and that of cloth twice.

In other words, there is an ***overestimation of the value of the goods produced***.

Efforts must be taken to reduce double counting by the following two approaches:
a. By considering only the value added by each production unit
b. By considering only the final goods and services (i.e. excluding intermediate consumption) in the estimation of the national income.

OR

GDP does not gives us a clear indication of economic welfare of the country. The following observations can be made in this regard.

1. *Income Patterns*- It is possible that even with the rise in the Real *GDP*, the welfare of the people might not increase. The increase in the *GDP* may be a result of the increase in the income of a few individuals. On the other hand, the majority of people remain deprived of the benefits of the rise in the *GDP*. Hence, a rise in national income may lead to false interpretation of the social welfare.

2. *Composition of Output*: To know whether with the rise in Real *GDP* reflects a rise in the welfare of the economy, one need to consider the composition of the output produced that has led to the rise in the level of *GDP*. For example, the production of goods such as guns, narcotic drugs and high-end luxurious goods increases the monetary value of the production, but they do not add to the welfare of the majority of population.

3. *Non-Monetary Exchanges*: *GDP* does not take into account those transactions that are not expressed in monetary terms. In less developed countries, there are various non-monetary exchanges, particularly in the rural areas and household sector. Consequently, such transactions remain outside the domain of *GDP* leading to underestimation of the value of *GDP*. Thus, *GDP*cannot be regarded as an index of economic welfare, as it ignores the household and the volunteer sectors.

Question 18

If in an economy :

Change in initial Investment (ΔI) = ₹ 1,200 crores
Marginal Propensity to Save (MPS) = 0.2

Find the values of :
(a) Investment Multiplier (k),
(b) Change in final income (ΔY)

SOLUTION:

(a) We know,

$$k = \frac{1}{MPS} = \frac{1}{0.2} = 5$$

So, investment multiplier is 5.

(b) We also know,

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

$$5 = \frac{\Delta Y}{1200}$$

$$\Delta Y = 6,000$$

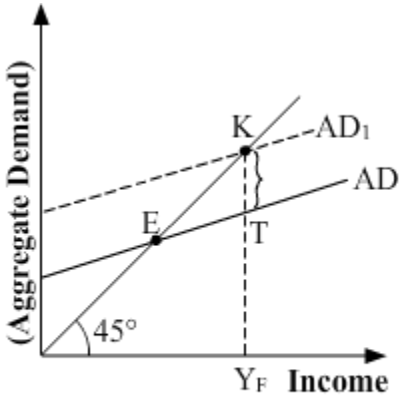
So, change in income is ₹ 6,000 crores

Question 19

State and discuss the components of Aggregate Demand in a two sector economy.

OR

In the given figure, what does the gap 'KT' represent? State any two fiscal measures to correct the situation.



SOLUTION:

The components of Aggregate Demand in a two sector economy are:

*1. Private consumption expenditure:*Private consumption expenditure refers to the total expenditure incurred by all the households in an economy on different types of final goods and services in order to satisfy their wants. Consumption depends on the level of the disposable income. It shares a positive relationship with the level of disposable income, that is, lower the level of disposable income lower will be the purchasing power and hence lower will be the consumption expenditure. The functional form that depicts the relationship between consumption expenditure and the level of disposable income is known as *consumption function*. There are two types of consumption expenditure- *Autonomous Consumption Expenditure* and *Induced Consumption Expenditure*. Autonomous Consumption Expenditure is independent of the level of disposable income, whereas, Induced Consumption Expenditure depends on the level of disposable income.

2. Private investment expenditure: Private investment expenditure refers to the planned (ex-ante) total expenditure incurred by all the private investors on creation of capital goods such as, expenditure incurred on new machinery, tools, buildings, raw materials, etc. This expenditure by all the private investors on the capital goods add to the total stock of capital thereby increases the overall productive capacity of the economy. Investment depends on the rate of interest and level of income. Broadly, investment can be categorised in two types- *Autonomous Investment Expenditure* and *Induced Investment Expenditure*. The Autonomous Investment Expenditure is independent of the rate of interest and level of income, whereas, the Induced Investment Expenditure depends on the rate of interest and level of income.

OR

The gap 'KT' represents the inflationary gap. This is the situation of excess demand. Fiscal policy refers the policy that is undertaken by the government to influence the economy through the process of its expenditure and taxation. The fiscal measures to correct the excess demand are given as follows:

1. Government Expenditure: The Government of a country incurs various types of expenditure to enhance the welfare of the people and also to facilitate economic growth and development. **In case of excess demand**, the government cuts down its expenditures in form of disinvestment. This lowers the level of economic activity, which in turn, reduces the level of employment, thereby reducing the income level. This subsequently reduces the aggregate demand, thus, the situation of excess demand gets corrected.

2. ***Public Borrowings***
Through the measure of public borrowings, the government affects the liquidity (cash

balances) held by the public. It is because of the excess liquidity, the people demands more and vice-versa. Therefore, government affects the liquidity balances with the help of public borrowings.

In case of excess demand, the government raises the public borrowings, which reduces the liquidity balances with the public. A reduction in the liquidity lowers the purchasing power of the people, which in turn, lowers the aggregate demand.

Question 21

(a) How are tax receipts different from non-tax receipts? Discuss briefly.

(b) State any two items of revenue expenditure in a Government budget?

SOLUTION:

(a) Tax receipt refers to the revenue receipts generated from the different types of taxes. A tax is a legally compulsory monetary contribution to the government by different economic units such as household, firms and other economic units. Taxes are imposed by the government on different activities, income, property, production, occupation, etc. The main motive of imposing taxes is to raise revenue and to incur various expenditures for enhancing welfare of the country. The following are the various types of taxes.

a. Direct and indirect taxes
b. Progressive and regressive taxes
c. Ad valorem and specific taxes

On the other hand, non-tax receipts refer to those budget receipts of the government from sources other than taxes such as interest receipts, dividends, fines, duty fees, etc. Various non-tax receipts of the government can be classified as:

a. Fees and License - The government receives fees in return of various services provided by it to the people. *Example* - college fees, passport fees, registration fees, etc.

b. License Fees - These refer to the fees that are received by the government in return of the allowances granted to the people to perform certain activities. *Example*- Fees received from issue of import licenses.

c. Escheat - Escheat refers to the income from a property of a person who dies without having any legal heirs. In other words, the government acquires legal right over a property which has no claimant.

d. Fines and Penalties - Fines and penalties are imposed by the government on those who boycott law.

e. Gifts and Grants- Gifts, grants and donations received by the government in events of natural calamity, war, etc. also form a source of revenue for the government.

(b) Revenue Expenditure refers to the government expenditure which does not cause any reduction in government liabilities and also does not create assets for the government. For example- expenditure on salaries, pensions, subsidies, interest payments, etc.

Question 22

Given the following data, find the missing values of 'Gross Domestic Capital Formation' and 'Wages and Salaries'.

S.No.	Particulars	Amount (in Cr. ₹)
(i)	Mixed Income of Self Employed	3,500
(ii)	Net Indirect Taxes	300
(iii)	Wages & Salaries	?
(iv)	Government Final Consumption Expenditure	14,000
(v)	Net Exports	3,000
(vi)	Consumption of Fixed Capital	300
(vii)	Net Factor Income from Abroad	700
(viii)	Operating Surplus	12,000
(ix)	National Income	30,000
(x)	Profits	500
(xi)	Gross Domestic Capital Formation	?
(xii)	Private Final Consumption Expenditure	11,000

SOLUTION:

National Income (NNP_{FC}) = 30,000

We know,

NNP_{FC} = GDP_{MP} - Depreciation - *NIT* + *NFIA*

30,000 = GDP_{MP} - 300 - 300 + 700

GDP_{MP} = 29,900

Now, we know as per the expenditure method:

GDP_{MP} = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Investment Expenditure + Net Exports

29,900 = 11,000 + 14,000 + I + 3,000

I = 1,900

Since Gross Domestic Capital Formation is same as Investment Expenditure so it is equal to ₹ 1,900.

Now, $NNP_{FC} = NDP_{FC} + NFIA$

30,000 = NDP_{FC} + 700

NDP_{FC} = 29,300

Also,

NDP_{FC} = Compensation of Employees + Operating Surplus + Mixed Income

29,300 = *COE* + 12,000 + 3,500

COE = 13,800

Since Wages and Salaries are a part of *COE* and no other component has been mentioned so Wages and Salaries will be same as *COE* so it is equal to ₹ 13,800.

Question 23

(a) State any two components of M_1 measure of money supply.
(b) Elaborate any two instruments of Credit Control, as exercised by the Reserve Bank of India.

OR

Define Credit Multiplier. What role does it play in determining the credit creation power of the banking system? Use a numerical illustration to explain.

SOLUTION:

(a) The following are the components of M_1:

i. **Currency component** - It includes currency notes and coins (collectively called the currency component of money supply) that are issued by the monetary authority of a country. In India, the RBI issues currency notes of various denominations such as Rs 2, Rs 5, Rs 100, Rs 500 and Rs 1000 and the Government of India issues currency coins and notes of denominations less than and equal to Re 1.

ii. **Deposit component –** It includes the savings or the current account deposits held by the public in various commercial banks of a country. Deposits held by the public can be classified into two major categories- Term Deposits and Demand Deposits.

(b) The following are the instruments of Credit Control by RBI:

1. ***Bank Rate****:* Bank rate refers to the rate at which the central bank provides loans to the commercial banks. This instrument is a key at the hands of RBI to control the money supply. Changes in the bank rate change the cost of borrowings, thereby affect the money supply. This is explained by the following mechanism.

An increase in the bank rate increases the cost of borrowing for the commercial banks from the central bank. The commercial banks in turn, increase the lending rate for their customers. However, this increase in the lending rate reduces the borrowing capacity of the public, thereby, discourages loans and credit. This depresses the multiplier process and thus, decreases the value of money multiplier. Hence, the total money supply decreases. A decrease in the bank rate will have the reverse effect and will increase the money supply.

2. ***Cash reserve ratio (CRR)***- It refers to the minimum proportion of the total deposits that the commercial banks has to maintain with the central bank in form of reserves. An increase in the *CRR,*would mean that banks would be required to keep a greater portion in form of deposits with the central bank. This implies that the commercial banks are left with lesser amount of funds to lend out. Hence, the lending capacity of the banks reduces, leading to fall in the money supply. On the contrary, a fall in CRR will lead to an increase in the money supply.

To ***summarise***,
CRR ↑ ⇒ ***Deposits with the banks*** ↓⇒ ***cash reserves of the bank*** ↓ ⇒ ***Lending capacity of banks*** ↓ ⇒ ***Money supply*** ↓
CRR ↓ ⇒ ***Deposits with the banks*** ↑ ⇒ ***cash reserves of the bank*** ↑ ⇒ ***Lending capacity of banks*** ↑ ⇒ ***Money supply*** ↑

OR

The Credit multiplier is equal to 1/CRR and depicts the number of times the credit is multiplied, with a given amount of initial deposit. The process of credit creation can be explained by taking an example of a bank XYZ. A depositor deposits Rs.10,000 in his savings account, which will become the demand deposit of the bank. Based on the assumption that not all customers will turn up at the same day to withdraw their deposits, bank maintains a minimum cash reserve of 10 % of the demand deposits, i.e. Rs.1000. It lends the remaining amount of Rs.9000 in the form of credit to other customers. This further creates deposits for the bank XYZ of Rs 9000. Now in the next round, out of Rs 9000, Rs 900 goes as cash reserves and the remaining Rs 8100 are extended as loans. And so the process will continue. Such a process will increase the money supply in the economy by the amount (times) of credit multiplier. The credit multiplier is given by:

Credit multiplier = 1/CRR = 1/10% = 10
Therefore, the money supply will increase by 10 times and the total credit created in the economy will be equal to around Rs 1,00,000.

The same process can be supported by the following table:

Rounds	Deposits Received *A*	Loans Extended *B*	Cash Reserves
Initial	10,000	9000	1000
Round I	9000	8100	900
Round II	8100	7290	810
Round III	-	-	-
Round IV	-	-	-
.	-	-	-
.	-	-	-
Round *N*	-	-	-
Total	**1,00,000**	**90,000**	**10,000**

Question 24

(a) Define "Trade surplus". How is it different from "Current account surplus" ?
(b) "Indian Rupee (₹) plunged to all time low of ₹ 74.48 against the US Dollar ($)".

−The Economic Times

In the light of the above report, discuss the impact of the situation on Indian Imports.

SOLUTION:

(a) Trade surplus refers to the situation when exports of goods and services exceeds the import of goods and services.
Exports of Goods and Services > Imports of Goods and Service ⇒ Current Account Surplus

Trade surplus is different from "Current Account Surplus" . This is because current account is the account which maintains the records of imports and exports of goods and services as well as the record of unilateral transfers.
Current Account Balance = Balance of Visible Trade + Balance of Invisible Trade + Balance of Unilateral Transfers

(b) Indian Rupee is depreciating against the US Dollar since it is given that " Indian Rupee (₹) plunged to all time low of ₹ 74.48 against the US Dollar ($)". A high exchange rate makes the imports more expensive. Consequently, a rise in the exchange rate implies a reduction in the demand for imports and *vice-versa*.
When imports falls, net exports (Exports - Imports) of a country rises. The given figure explains this process as follows:

Suppose the initial equilibrium income is given by *Ye* that corresponds to a trade balance equal to *Ytb*. With the rise in the net export demand, the aggregate demand

curve *DD* shifts upwards to *DD'* such that the new equilibrium is established at point *E'* and the equilibrium income rises to *Y'*.

In the lower panel due to the fall in the imports, the net export rises and the net export curve shifts upwards from *NX* to *NX'*. At the new level of income, the net exports is represented by the vertical distance *AE'* which are necessarily positive (because the total demand curve *DD'* lies above the aggregate demand curve *AD*). Thus, with a fall in the imports, there is a trade surplus. This trade surplus is represented in the lower panel by the vertical length *DF.*