

**CBSE**  
**Class XII Economics**  
**All India Board Paper Set 1 – 2013 Solution**

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**Answer 1**

Marginal revenue (MR) is the change in total revenue when another unit of a good is sold.

**Answer 2**

The rightward shift of demand curve shows an increase in the demand for a good because of a favourable change in other factors than the own price of the good. Increase in the prices of substitute goods and decrease in the prices of complementary goods are examples of changes in factors.

**Answer 3**

Under perfect competition, an individual firm cannot influence the price level on its own as its share is negligible in the total market supply. So, a firm is a price taker under this form of market.

**Answer 4**

When a large change in the price does not bring about a significant change in the demand, it is called perfectly inelastic demand ( $=0$ ), i.e. the slope of an inelastic demand curve is steep.

**Answer 5**

An increase in the supply of a good caused because of a change in any factor other than the own price of the good. Change in the price of inputs and change in taxes are examples of changes in factors.

**Answer 6****Price of other goods and demand for the given good****i. Demand for a commodity in relation to price of the substitute good**

When the price of one good falls, it becomes cheaper in relation to another good. As a result, one good is substituted for the other good such as coffee and tea. Assume tea and coffee are two substitute goods.

**Increase in the price of substitute good:** If there is an increase in the price of the substitute good coffee, then the consumer is willing to buy more quantity of tea. Here, more tea is consumed even when its price is constant.

**ii. Demand for a commodity in relation to price of the complementary good**

Complementary goods are purchased jointly such as ink and ink pens.

**Increase in the price of complementary good:** If there is an increase in the price of a good, then the demand for another good will decline.

**Answer 7**

Given that

$$Q_s = 10, P = \text{Rs } 5 \text{ and } E_s = 1.25$$

If the new price is Rs 7 per unit

$$\Delta P = 7 - 5 = 2$$

As we know,

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

or

$$1.25 = \frac{\Delta Q}{2} \times \frac{5}{10}$$

$$\text{or } \Delta Q = 1.25 \times 4 = 5$$

A change in quantity that the firm would supply at a price of Rs 7 per unit is 15 (5+10).

**Answer 8**

Marginal rate of substitution is the rate at which the consumer is willing to substitute one commodity for another commodity.

For example, assuming that resources and technology remain constant, an economy is producing Good X and Good Y. Different combinations of production of Good X and Good Y are given in the production possibilities schedule:

<b>Production Possibilities</b>	<b>Good X</b>	<b>Good Y</b>	$MRT = \frac{\Delta Y}{\Delta X}$
I	0	30	-
II	1	27	-3
III	2	21	-6
IV	3	12	-9
V	4	0	-12

In the beginning, at the production Point II, where 1 unit of Good X and 27 units of Good Y are produced, to produce an additional unit of Good X, 3 units of Good Y must be sacrificed.

Here, the marginal rate of transformation (MRT) is

$$MRT = \frac{\Delta Y}{\Delta X} = \frac{\text{Amount of good Y sacrificed}}{\text{Amount of good X gained}} = \frac{27 - 30}{2 - 1} = -3$$

Thus, MRT or the opportunity cost of getting an additional unit of Good X is 3 units of Good Y.

**Answer 9**

Output	Marginal Revenue	Marginal Cost
1	8	10
2	8	8
3	8	7
4	8	8
5	8	9

The producer's equilibrium refers to a situation in which he maximises his profits. A producer strikes equilibrium when two conditions are satisfied:

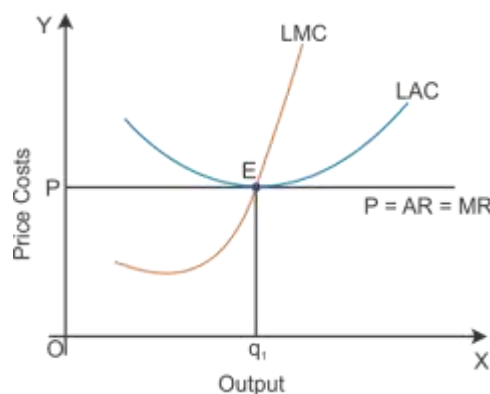
- i.  $MR = MC$
- ii.  $MC$  is rising or the  $MC$  curve cuts the  $MR$  curve from below.

Here, the firm is in equilibrium at output equal to 2 units and 4 units, i.e.  $MR = MC$  and  $MC$  start rising after the 4<sup>th</sup> unit of output.

Equilibrium is not struck when  $MR > MC$ . In such a situation, producing an additional unit would add more to  $TR$  than to  $TC$ . This implies that the gap between  $TR$  and  $TC$  tends to widen or that profits are still to be maximised. On the other hand, if the firm produces slightly higher level of output than 4 units, then the firm will face a price which falls short of  $MC$ .

**Answer 10**

In the long run, a firm makes only normal profits ( $AR = AC$ ) because of freedom of entry and exit. If the firm earns abnormal profit in the long run, then new firms enter the market. This leads to an increase in output, and the supply of output will also rise. At this point, price continues to fall till it reaches the minimum average cost. Hence, there will not be any abnormal profit or zero profit in the long run.



The diagram shows equilibrium at Point S, where  $MR = MC$  and also  $AR = AC$ . Price is determined by the industry, and the firm adjusts its output to the given price. Thus, the firm in the long run strikes equilibrium, where

- i.  $MR = MC$
- ii.  $MC$  is rising
- iii.  $AR = AC$  only normal profits are earned

**OR**

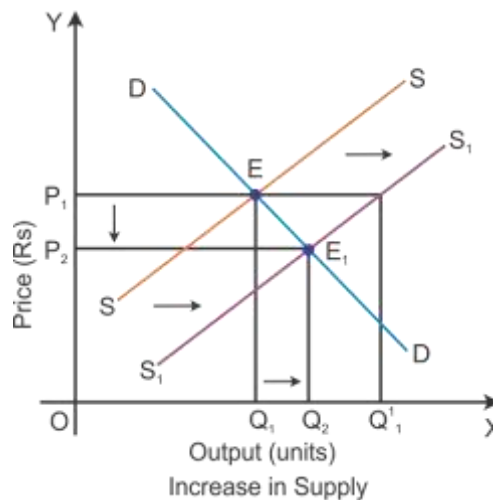
Under monopolistic competition, the downward sloping demand curve is more elastic than monopoly because of the presence of close substitutes. Products are differentiated on the basis of brand, colour, size and shape under monopolistic competition. Here, the demand curve is more elastic to the changes in the price of the good. On the other hand, there are no close substitutes of the product under monopoly market. Hence, the demand curve is less elastic to the changes in prices of the good.

**Answer 11**

If the equilibrium price of an essential medicine is too high, then the price can be brought down by creating a situation of excess supply.

Consider  $DD$  to be the initial demand curve and  $SS$  to be the supply curve of the market. Market equilibrium is achieved at Point  $E$ , where the demand and supply curves intersect each other. Therefore, the equilibrium price is  $OP$ , and the equilibrium quantity demanded is  $OQ$ .

When there is change in other factors than the price, there will be rise in the supply of goods. There will be a shift in the supply curve towards the right to  $SS_1$  with an increase in the supply, and the demand curve  $DD$  will remain the same. This implies that there will be a situation of excess supply at the equilibrium point.

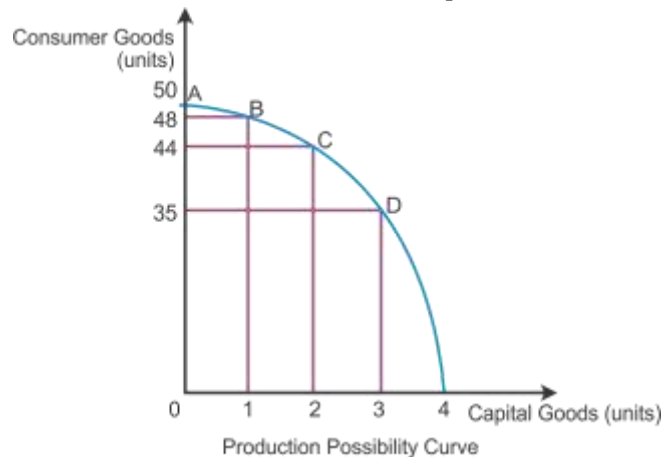


In the diagram, there is an excess supply of OQ1 to OQ11 units of output at the initial price OP1. Thereby the producers will tend to reduce the price of the output to increase the sale in the market. Profit margin of the firm will come down and slowly some firms will tend to quit the market. So, the market supply will decline to OQ2 level of output and the price of the output also gets reduced to Point OP2. Now, the new market equilibrium will be at Point E1, where the new supply curve SS1 intersects the demand curve DD.

**Answer 12**

Opportunity cost refers to value of a factor in its next best alternative use, i.e. opportunity cost of producing every additional unit of Good X tends to increase in terms of the loss of production of Good Y.

Consider capital goods and consumer goods to represent PPC in the diagram. If 1 unit of capital good and 48 units of consumer goods are produced at the initial production Point B, then to produce one additional unit of capital good, 4 units of consumer goods must be sacrificed. The opportunity cost of one additional capital good is 4 units of consumer goods at Point C. Likewise, it moves on to Point D by sacrificing 9 units of consumer goods to produce another unit of capital good. The opportunity cost increases as the PPC moves down from Point C to D. Hence, PPC has a concave shape.



The production possibility curve is concave to the point of origin because to produce each additional unit of Good X, more units of Good Y will have to be sacrificed than before.

**OR**

**Central problem - 'For whom to produce':**

'For whom to produce' refers to the problem of distribution of final goods and services or the problem of distribution of income. It has two aspects. The first aspect relates to personal distribution and the second aspect relates to functional distribution. Personal distribution refers to output/income share of individuals or households in society. Functional distribution refers to income share of different factors of production. Here, the

problem is whether allocation of resources is promoting equality or not. Equality is a social virtue, and inequality may induce high saving, investment and hence high rate of growth.

Suppose an economy producing normal rice and graded rice at Rs 15 per kg and Rs 100 per kg, respectively. More of normal rice produced to provide sufficient food grains to the lower segment of the nation, the production possibility curve will be as



While the economy provides more of graded rice to the upper segment of the nation and lesser normal rice for the low segment, the PPC will be as



**Answer 13**

Given, the original quantity  $Q_1 = 300$

$$\Delta Q = 318 - 300 = 18$$

$$\text{Percentage fall in price} = \frac{\Delta P}{P} \times 100 = (-)5\%$$

As we know that,

$$E_d = (-) \frac{\frac{\Delta Q}{Q} \times 100}{\frac{\Delta P}{P} \times 100}$$

$$E_d = (-) \frac{\frac{18}{300} \times 100}{(-)5}$$

$$E_d = (-) \frac{6}{(-)5} = 1.2$$

Thus, price elasticity of demand is 1.2

**Answer 14**

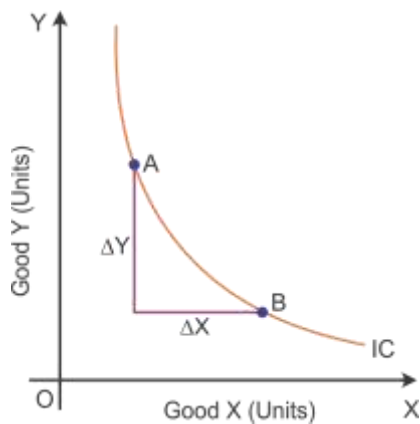
**Properties of indifference curves (ICs)**

**i. Indifference curves slope downwards (negative slope):**

The indifference curves slope downwards, left to right, because an increase of Good X along the indifference curve is associated with a decrease of Good Y, as the preferences are monotonic.

**ii. Slope of indifference curves represents marginal rate of substitution:**

Marginal rate of substitution (MRS) is the rate at which a consumer is willing to substitute one commodity for another commodity.

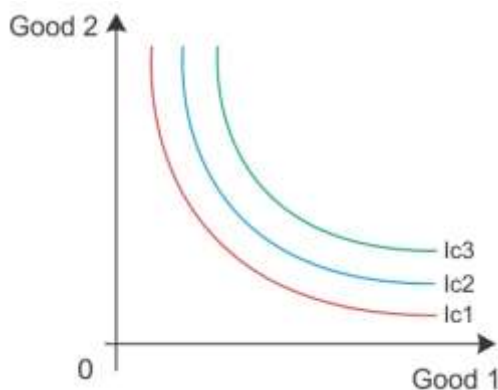


Slope of indifference curve between A and B = MRS

MRS is the rate at which the output of Good Y is sacrificed for every additional unit of Good X.

**iii. In an indifference map, higher IC represents higher level of satisfaction:**

An indifference map refers to a set of indifference curves. An indifference curve which is to the right and above another shows a higher level of satisfaction to consumers. Here, IC3 shows higher level of satisfaction than IC2. Thus, the indifference curve relates to a higher level of income of the consumer.



OR

**Conditions of consumer's equilibrium using indifference curve analysis:**

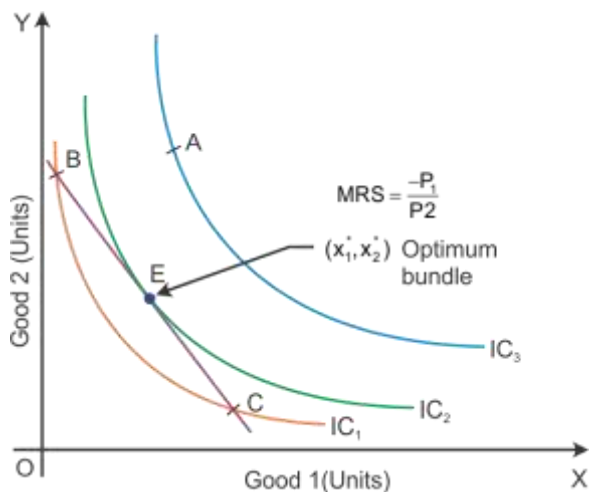
A consumer will strike his equilibrium at the point where the budget line is tangent to an indifference curve.

Slope of IC = Slope of price line

$$\left| \frac{-dy}{dx} \right| = |MRS| = \left| \frac{-P_1}{P_2} \right|$$

**Equality of marginal rate of substitution and ratio of prices:** When the budget line is tangent to an indifference curve at a point, the absolute value of the slope of the indifference curve and of the budget line are equal at that point, i.e. MRS is equal to the price ratio. The slope of the budget line is the rate at which the consumer can substitute one good for the other in the market. At the optimum, the two rates should be the same. Thus, a point at which the MRS is greater, the price ratio cannot be optimum, and when the MRS is less than the price ratio, the ratio cannot be optimum.

The equilibrium can be represented as follows:



In the diagram, Point E shows consumer equilibrium where the budget line is tangent to the indifference curve. Consumers desire to purchase corresponds to the consumer's original purchase, i.e.  $x_1^*, x_2^*$  shows the optimum bundle.

Consumer does not reach equilibrium condition at the following points:

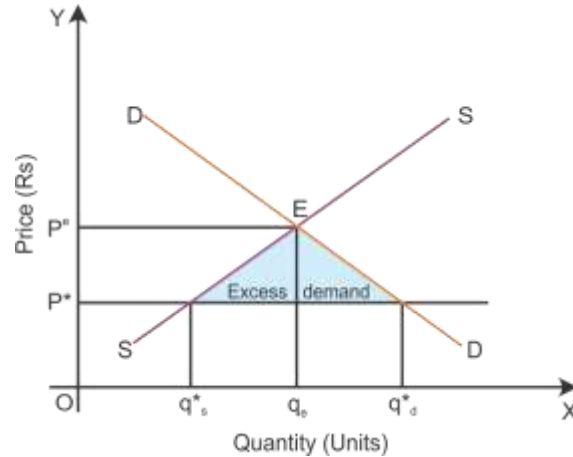
**At Point B:**  $MRS > -\frac{P_1}{P_2}$

**At Point A:**  $MRS < -\frac{P_1}{P_2}$

Answer 15

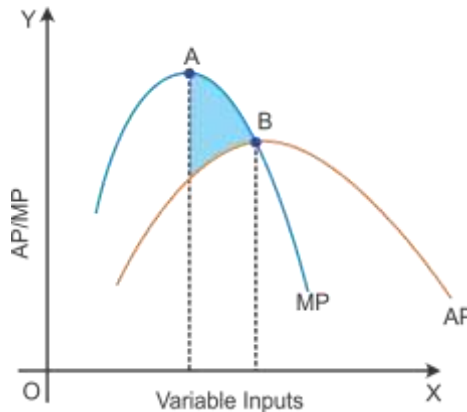


When the price is lower than the equilibrium market price of a good ( $OP_e$ ), the price ceiling leads to excess of demand. Now, the excess demand will increase the competition among consumers in the market. Thereby they consume the good at a higher price which leads to an increase in the price level, i.e.  $OP_e$ .

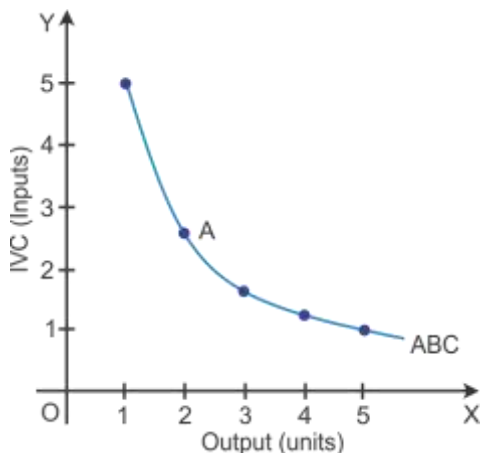


**Answer 16**

- i. It is false because if the marginal product rises, the average product does not increase. Average product keeps increasing with a fall in the marginal product. In the diagram, the area between A and B, the average product increases although the marginal product decreases. This is because the marginal product will increase or decrease at a faster rate than the average product.



- ii. It is false because the average product cannot fall till it reaches zero with an increase in the level of output. As we know that average fixed cost is a rectangular hyperbola which cannot be zero.



In the diagram, the average fixed cost being a rectangular hyperbola appears to be zero, but it can never become zero.

- iii. It is true. As more units of factor input are used, MP tends to rise till 3 units of factor input are used. Here, the total product increases at an increasing rate which is called increasing returns to the factor input. However, when the 4<sup>th</sup> unit of factor input is used, the diminishing return sets in where MP starts decreasing and TP increases at a decreasing rate. Diminishing MP reduces to zero. The total output is maximum when the marginal output is zero.

Units of Fixed Factor	Units of Variable Factor	TP	MP	Stages
1	1	4	4	Increasing MP (Increasing returns to a factor)
1	2	12	8	
1	3	24	12	
1	4	32	8	Diminishing MP (Diminishing returns to a factor)
1	5	34	2	
1	6	34	0	

**Answer 17**

Wood purchased by a furniture industry and cotton purchased by a cloth industry are two examples of intermediate goods.

**Answer 18**

Currency and deposit are two components of supply of money.

**Answer 19**

If taxation increases, consumers will be discouraged to consume products which are harmful for health.

**Answer 20**

The Reserve Bank of India can sell foreign currency in exchange of domestic currency to reduce the foreign exchange rate.

**Answer 21**

Revenue deficit is an excess of revenue expenditure of the government over its revenue receipts.

Revenue deficit = Revenue expenditure – Revenue receipts

**Answer 22**

**Medium of exchange:** The primary function of money is to act as a medium of exchange between two parties involved in a transaction. It avoids practical problems of wastage of time and resources involved in the barter system of exchange and it improves the efficiency of the transaction. It promotes allocation efficiency in the trade and production of goods and services.

For the barter system, the sale and purchase of goods occurs at the same time. Their sale and purchase value also remains equal at that point. After money was introduced, a person can purchase or sell goods with cash without selling or purchasing any good at that point. Thus, the act of purchase and sale has been separated. Thereby the medium of exchange facilitated sale and purchase very easily in terms of monetary value.

For example, a fruit seller wants to sell his fruits to buy wheat. In the absence of money, he will have to look for some person who wants to sell wheat and buy fruits. This is not always easy and possible. However, with money as a medium of exchange, the fruit seller has to just find a buyer for his fruits. When fruits are exchanged for money, he can purchase wheat from the market.

**OR**

**Lender of the last resort:** A Central Bank is the apex bank which controls the entire banking system of a country. It has the sole authority to issue notes in that country. It also acts as a banker to the government and controls the supply of money in the country.

The Central Bank provides financial assistance to commercial banks by rediscounting eligible bills of exchange. When commercial banks do not get loan facilities from any other sources, they approach the Central Bank as a last resort. The Central Bank advances loans to such banks against approved securities. Thus, the Central Bank acts as a 'lender of the last resort'.

**Answer 23**

<b>Basis of Difference</b>	<b>Capital Receipts</b>	<b>Revenue Receipts</b>
Definition	Capital receipt which causes reduction in the assets of the government and creates liability to the government.	Revenue receipts which neither create any liability nor cause any reduction in government assets.
Impact	Decrease in government assets and create liabilities for the government.	Zero effect on government assets and liabilities.
Example	Disinvestment	Tax receipts

**Answer 24**

Through the budgetary policy, the government can reallocate resources so that social and economic objectives can be met in the following ways:

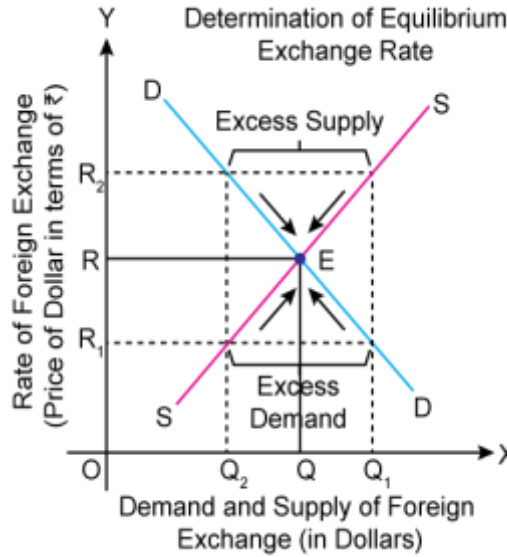
- i. The government ensures productive expenditure to maximise the welfare of the nation with minimum level of profit.
- ii. The government regularises the activities of the private sector to provide social benefit to the poor.
- iii. The government imposes taxes on socially unsafe goods such as alcohol and tobacco to shift resources to the production of socially essential goods.

**Answer 25**

Depreciation of domestic currency refers to a decrease in the price of domestic currency related to foreign exchange. For example, \$1 = Rs 48 to \$1 = Rs 52 indicates that the exports will be cheaper, and hence, a raise in the demand for exports.

**Answer 26**

The foreign exchange rate is the rate at which one currency is exchanged for the other. It implies the price of one currency related to the other currency. In a flexible exchange rate market, the interaction of the forces of demand and supply of foreign currency determines the equilibrium level of the exchange rate.



In the diagram, the demand curve and the supply curve intersect each other at Point E which represents the equilibrium exchange rate. If there is an increase in the exchange rate to OR<sub>2</sub>, then the supply of foreign currency will be more than the demand for foreign currency. This will push the exchange rate to level OR because of excess supply. On the other hand, if there is a fall in the exchange rate to OR<sub>1</sub>, then the demand for foreign currency will be more than the supply of foreign currency. Eventually, it will push the exchange rate from OR<sub>1</sub> to OR.

**Equilibrium – DD for foreign exchange = SS of foreign exchange (OR = OQ)**

**Answer 27**

$$\begin{aligned} \text{GDPMP} &= \text{NDPFC} - \text{Subsidies} + \text{Depreciation} \\ &= 2000 - 200 + 700 \\ &= 2500 \end{aligned}$$

So,

$$\text{GDPMP} = \text{Sales} + (\text{Closing Stock} - \text{Opening Stock}) - \text{Intermediate Consumption}$$

or

$$\begin{aligned} \text{Sales} &= \text{GDPMP} - (\text{Closing Stock} - \text{Opening Stock}) + \text{Intermediate Consumption} \\ &= 2500 - (600 - 100) + 3000 \\ &= 5000 \end{aligned}$$

**Answer 28**

Real GDP	Nominal GDP
i. Total market value of the output at the base year prices.	i. The total market value of the output at the current year prices.
ii. Only when quantity of output changes overtime, the value of real GDP will change.	ii. Only when there is a change in the prices overtime, the value of nominal GDP will change.

iii. Treated as an index of economic growth, i.e. higher real GDP.	iii. Treated as an index of economic growth, i.e. higher nominal GDP, but it does not indicate higher economic growth.
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Real GDP is a better index as compared to nominal GDP. It is determining the effect of increase in production of goods and services because it is affected by change in physical output only. It provides international comparison of economic performance across countries.

**OR**

<b>Stock</b>	<b>Flow</b>
i. Stock is a variable which is measured at a particular time.	i. Flow is a variable which is measured over a long period of time.
ii. Stock is static.	ii. Flow is dynamic.
iii. Time dimension is not applied to the stock concept.	iii. Time dimension is applied to the flow concept.
iv. Examples: National wealth and bank deposits	iv. Examples: National income and interest on capital

In a tank of water, the flow of water can be considered a flow variable and the stock of water can be considered a stock variable because it can be measured at a particular point of time. Capital is like the stock of water in the tank at a particular point of time, whereas net investment is like the flow of water into the tank.

**Answer 29**

Money multiplier refers to the number of times the value of money increases from the reserves held by commercial banks. Algebraically, it is the reciprocal of the legal reserve ratio.

$$\text{Money multiplier} = 1/\text{LRR}$$

Through the process of money creation, commercial banks are able to create capital which is more than the initial deposits. Bank offered loans are many times more than the deposits received by banks. It is assumed that the entire banking system is one unit and all receipts and payments in the economy are routed through the bank.

Now, let us measure the amount of money banks are able to create in the form of deposits with every unit of money it keeps as reserves.

<b>Rounds</b>	<b>Deposits</b>	<b>Loans</b>	<b>Cash Reserves (LRR = 20%)</b>
Initial Deposit	1000	800	200

First round	800	640	160
Second round	640	512	128
<b>Total</b>	<b>5000</b>	<b>4000</b>	<b>1000</b>

$$\begin{aligned} \text{Money Multiplier} &= 1/\text{LRR} \\ &= 1/0.2 \\ &= 5 \end{aligned}$$

So, it indicates that higher the value of LRR, lower the value of the money multiplier.

### Answer 30

#### a. Investment Expenditure

Consumption function

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

where autonomous consumption (C) = 500

Equilibrium level of income (Y) = 5000

Marginal propensity to consume (c) = 0.4

By substituting the values in the give formula,

$$C = 500 + (0.4) 5,000$$

$$C = 2,500$$

We know that

At equilibrium level  $Y = C + I$

So,

$$I = Y - C$$

Or

$$I = 5000 - 2500 = 2500$$

#### b. Consumption Expenditure

As we know that

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

$$C = 500 + (0.4)5000 = 2500$$

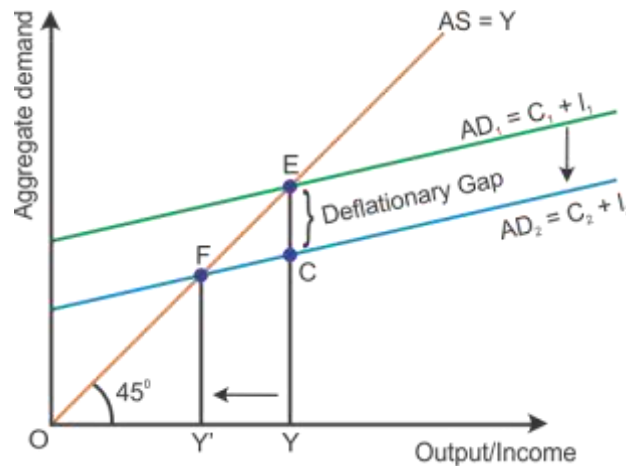
### Answer 31

Under employment equilibrium level is a situation where the actual or the equilibrium level of output is less than the full employment level of output. This situation indicates a deficit demand.

Deficient demand is a situation when the aggregate demand is short of the aggregate supply corresponding to full employment in the economy. It leads to a fall in the general price level and results in deflation, i.e.  $AD < AS$ .

Aggregate demand is the AD curve and aggregate supply is the AS curve (as shown in the diagram below). While the aggregate demand curve and the aggregate supply curve

intersect each other, the full employment equilibrium is attained at Point E. OY is the full employment level of output, and EY is the aggregate demand at full employment level of output. If the aggregate demand decreases below the full employment level of output from EY to CY, then the economy will have deficient demand, i.e. situation of the deflationary gap (EY - CY = EC).



**a. Buying securities in the market**

The Central Bank overcomes the deflationary situation by buying securities in the market. This increases the circulation of money and it enables people to increase their ability to purchase more. In this way, the aggregate demand increases to the level of aggregate supply and the economy attains equilibrium.

**b. Bank rate**

The Central Bank overcomes the deficient demand. It decreases the bank rate and there is a fall in the cost of borrowing for commercial banks. This enables the increase for the demand for loans and borrowings in the market. This in turn increases the ability to purchase more. In this way, the aggregate demand increases to the level of aggregate supply and the economy attains equilibrium.

**Answer 32**

i. As we know that

$$\text{GNPMP} = \text{NDPFC} + \text{Depreciation} + \text{Net indirect taxes} - \text{Net factor income to abroad,}$$

where NDPFC = Compensation of employees + Interest + Rent + Profits + Mixed income of self-employed

Or

$$\text{NDPFC} = 2000 + 500 + 700 + 800 + 1500 = 5500$$

By substituting this value in the formula for GNPMP,

$$\begin{aligned} \text{GNPMP} &= 5500 + 100 + 250 - 150 \\ &= 5700 \text{ crore} \end{aligned}$$

ii. Gross National Disposable Income = Net domestic product at factor cost + Indirect taxes -



Subsidies + Net current transfers from the rest of the world – Net factor income to abroad  
+ Consumption of fixed capital

Or

$$\begin{aligned}\text{Gross National Disposable Income} &= 3000 + 300 - 100 + 250 - 150 + 200 \\ &= \text{Rs } 3500 \text{ crore}\end{aligned}$$