CBSE
Class XII Economics
All India Board Paper Set 1 – 2015 Solution

SECTION A

Answer 1

An indifference curve is the curve which represents all those ***combinations of two commodities*** which give the same level of satisfaction to a consumer. It slopes downward because an increase in the amount of Good X along the indifference curve is associated with a decrease in the amount of Good Y as the preferences are monotonic.

Answer 2

The correct option is (b). If due to a fall in the price of good X, the demand for good Y rises, the two goods are ***complements*** because these goods complete the demand of each other.

Answer 3

The correct option is (b). Assume that the marginal rate of substitution is increasing throughout; the indifference curve would be a ***downward sloping concave*** because the consumer can get higher marginal utility from each additional unit of output.

Answer 4

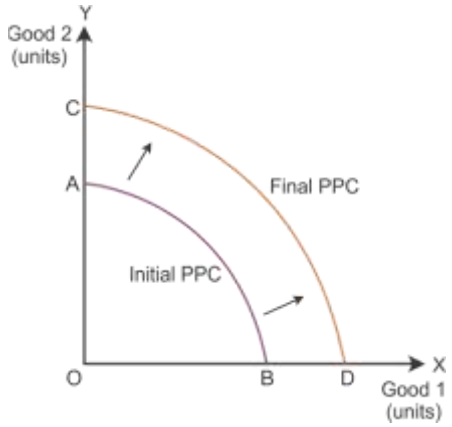
Marginal opportunity cost is as follows:

Good X (units)	Good Y (units)	$MOC = \frac{\Delta Y}{\Delta X}$
0	30	–
1	27	3/1 = 3
2	21	6/1 = 6
3	12	9/1 = 9
4	0	12/1 = 12

The above schedule clearly states that the production of Good X increases from Unit 1 to Unit 2, and correspondingly, the units of Good Y forgone is 3. While the production of Good X increases from Unit 2 to Unit 3, 6 units of Good Y are forgone. With each additional unit of production of Good X, the amount of Good Y to be forgone increases. So, because of increasing opportunity cost, the production possibility curve (PPC) is ***concave to the origin.***

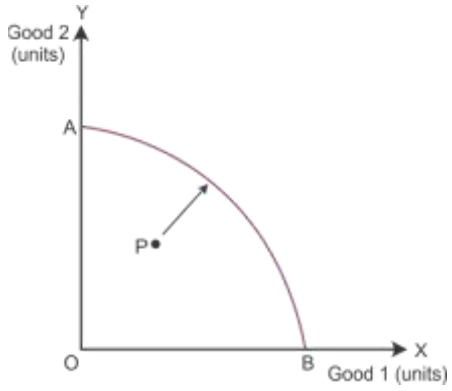
Answer 5

The *Make in India* appeal implores foreign producers to produce in India. This will increase the level of resources and lead to an increase in the country's production potential. Therefore, the ***production possibility curve will shift to the right*** as shown in the below diagram, i.e. the production possibility curve shifts from the initial curve AB to the final curve CD.



OR

When an economy is producing below its potential level because of unemployment, it implies that the economy is not functioning on the PPC but below the PPC, i.e. Point P as shown in the below diagram. Given the resources and technology, along with the initiation of government schemes, the employment level will increase. Therefore, Point P will ***shift nearer to PPC.***



Answer 6

The measurement of price elasticity of demand for normal goods has a (–) sign because the demand and price of the good are ***inversely related***. It is assumed that other things remain constant if an increase in the price of a good causes a ***decrease in the quantity demanded for a good.***

The measurement of price elasticity of supply for normal goods has a (+) sign because the supply and price of the good are ***positively related***. It is assumed that other things remain

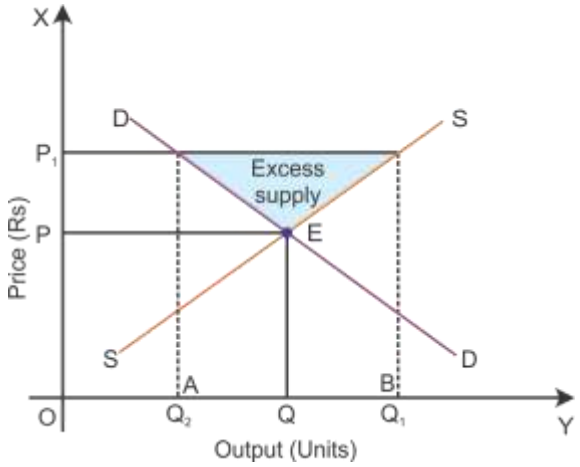
constant if an increase in the price of a good causes an ***increase in the quantity of supply of goods.***

Answer 7

In a perfectly competitive market, the buyers will treat the products of all the firms in the market as homogeneous. There is zero degree of product differentiation and the firm cannot take any control of the price. Here, the firm does not involve in advertisement and sales promotion activities. Hence, ***uniform price prevails in a perfectly competitive market*** for homogeneous products.

Answer 8

Price floor means the minimum price fixed by the government for a good in the market. The government fixes this price on agricultural products and food grains in particular. A minimum price is fixed which the traders must pay to the farmers in the wholesale market. Thus, the income of the farmer is regulated and a continuous production is assured. In the diagram, the equilibrium price and quantity are OP and OQ. As the equilibrium price is low for farmers, the government fixes the price floor, i.e. the price level increased from OP to OP_1 which leads to a decline in the quantity demand, and therefore, there is ***excess supply*** in the market.



Effects of price floor:

i. The government ensures to buy the full produce of the farmers which are not sold in the market at the price floor. Hence, they are able to ***produce the maximum level of output***.

ii. Farmers are ensured with the ***minimum returns*** as their products are completely sold in the market at comparatively higher price. This leads to an increase in their level of income.

iii. Because of price floor, consumers and traders in the market are ***forced to pay higher price than the equilibrium price***.

iv. The interests of the farmer are protected by the government and they are forced to store the excess supply as a buffer stock including the ***storage cost*** of their product.

v. The cost incurred by the government is borne by consumers and traders in the form of tax, i.e. the ***consumption of excess supply at higher price in the market***.

Answer 9

Given:

Actual Total Expenditure $(TE_0) = \text{Rs } 1000$

Change in Total Expenditure $(TE_1) = \text{Rs } 800$

Actual Price $(P_0) = \text{Rs } 10$

Percentage change in price $= -20$

$$\text{Percentage change in price} = \frac{P_1 - P_0}{P_0} \times 100$$

$$-20 = \frac{P_1 - 10}{10} \times 100$$

$$\frac{-200}{100} = P_1 - 10$$

$$P_1 = 8$$

Therefore,

Price (P)	**Total Expenditure (TE) = Price (P) × Quantity (Q)**	**Quantity (Q) = $\frac{TE}{P}$**
P_0 = Rs 10	TE_0 = Rs 1000	Q_0 = 100
P_1 = Rs 8	TE_1 = Rs 800	Q_1 = 100

$$Ed = (-)\frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

$$Ed = (-)\frac{\frac{\text{Change in demand}}{\text{Actual demand}} \times 100}{-20}$$

$$Ed = (-)\frac{\frac{Q_1 - Q_0}{Q_0} \times 100}{-20}$$

$$Ed = (-)\frac{\frac{100 - 100}{100} \times 100}{-20}$$

$$\therefore Ed = 0$$

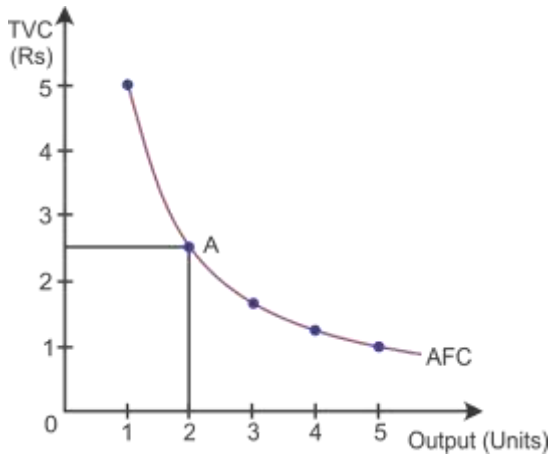
Thus, the price elasticity of demand is 0.

Answer 10

a. Average fixed cost is the fixed cost per unit of output produced. It ***slopes downward to the right*** because AFC decreases as the output increases. It is a rectangular hyperbola curve. It means that the product of AFC and output is equal to TFC which remains constant at all levels of output. AFC is Rs 2.5 for 2 units of output produced at Point A as shown in the diagram.

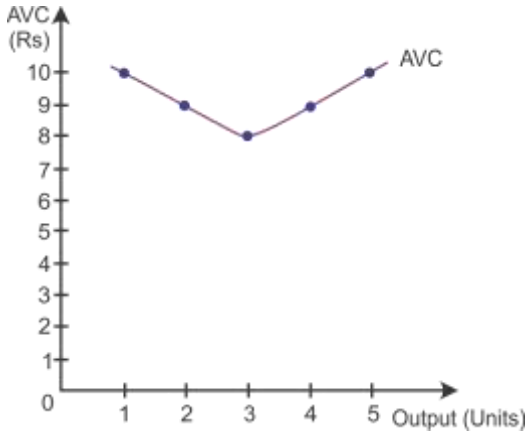
$TFC = AFC \times Q$

$$AFC = \frac{TFC}{Q}$$



b. Average variable cost is the variable cost per unit of output produced. It is a U-shaped curve because AVC decreases as output increases till it reaches Point K and it starts increasing as shown in the diagram. It is the law of variable proportion.

$$AVC = \frac{TVC}{Q}$$



OR

Average revenue is the revenue earned per unit of output sold in the market. It is identical to the price of the output produced.

$$AR = \frac{TR}{Q}$$

where

TR = total revenue

$$AR = \frac{P \times Q}{Q}$$

$$AR = P$$

Thus, AR is always equal to the price of the output.

Answer 11

The consumer reaches equilibrium point only when the following condition is satified

$$MRS = \frac{P_x}{P_y}$$

Given that,

$$MRS = 2$$

$$\frac{P_x}{P_y} = \frac{2}{2} = 1$$

As MRS is greater than the price ratio, the rational consumer would try to satisfy the condition by increasing the consumption of Good-X and forego the consumption of Good-Y.

OR

The consumer reaches equilibrium only if the following condition is satisfied

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

Give that,

$$\frac{MU_x}{P_x} = \frac{5}{4}$$

$$\frac{MU_y}{P_y} = \frac{4}{5}$$

Here, $\frac{MU_x}{P_x}$ is greater than $\frac{MU_y}{P_y}$, the rational consumer would try to satisfy the condition by increasing the consumption of Good-X and forego the consumption of Good-Y.

Answer 12

Law of variable proportion:

As more of the variable factor input is combined with the fixed factor input, a point will eventually be reached where the marginal product of the variable factor input starts declining.

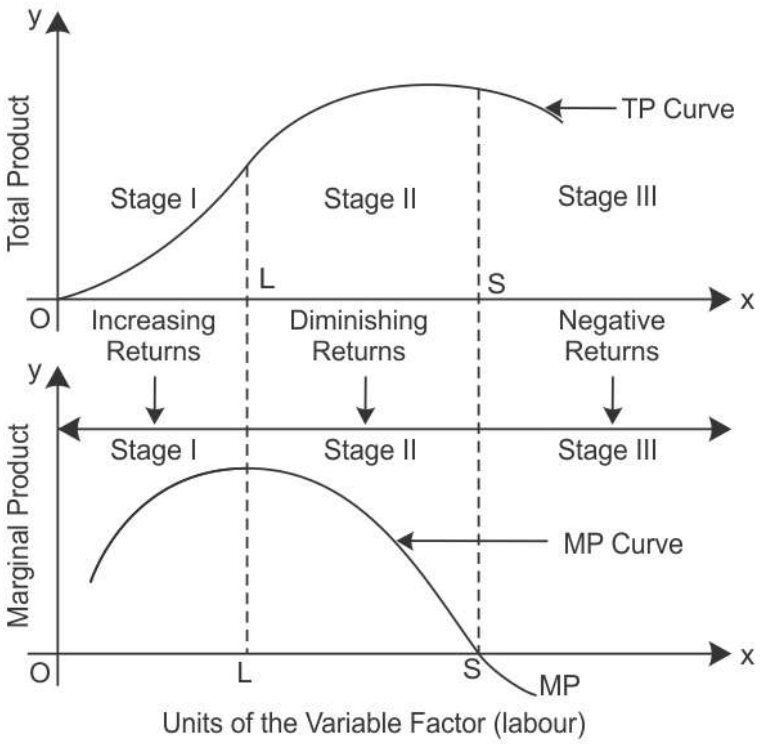
Units of Fixed Factor	Units of Variable Factor	TP	MP	Stages
1	1	4	4	Increasing MP
1	2	12	8	(Increasing returns to a factor)
1	3	24	12	
1	4	32	8	Diminishing MP
1	5	34	2	(Diminishing returns to a factor)
1	6	34	0	
1	7	30	−4	Negative MP
1	8	21	−9	(Negative returns to a factor)
1	9	10	−11	

Consider the above table.

Stage I: 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.

Stage II: However, when the 4th unit of factor input is used, the diminishing returns sets in, where MP starts decreasing and TP increases at a decreasing rate. Diminishing MP reduces to zero. The total output is the maximum when the marginal output is zero.

Stage III: When MP is negative, TP starts declining from 34 to 10 when the 9th unit is employed.



Answer 13

The producer's equilibrium refers to the 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.

MR, MC Schedule and Producer's Equilibrium:

Output	MR	MC
1	10	8
2	10	7
3	10	6
4	10	8
5	10	10
6	10	13

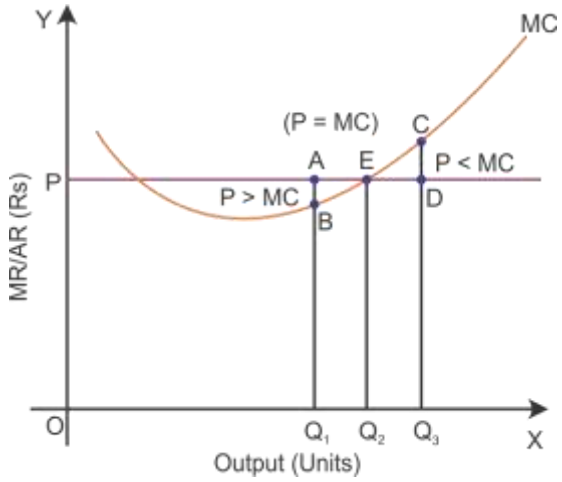
Here, it is assumed that price (AR) is constant, so that MR is constant, i.e. = Rs 10 under perfect competition. This table indicates that the two conditions of equilibrium are satisfied only when 5 units of output are produced. It is here that (i) MR = MC = Rs 10 and (ii) MC is rising.

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.

Condition 1:

i. If MR > MC:

Suppose OQ_1 is the output level at the price AQ_1 and the marginal cost is BQ_1, then it would be $AQ_1 > BQ_1$. Here, OQ_1 is not the level of output at which the profit is maximised. So, the firm can increase its profit by increasing the production to the OQ_2 level of output.

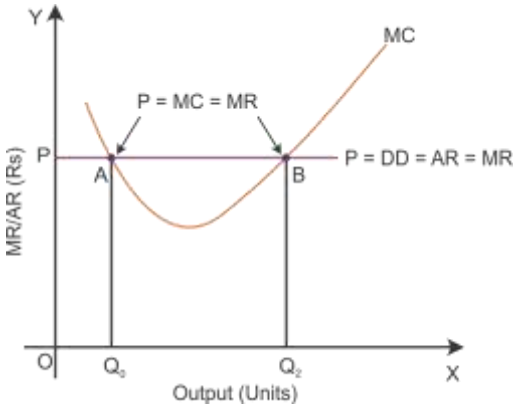


ii. If Price (MR) < MC:

Suppose OQ_3 is the output level at the price DQ_3 and the marginal cost is CQ_3, then it would be $DQ_3 < CQ_3$. Here, OQ_3 is not the level of output at which the profit is maximised. So, the firm can increase its profit by decreasing its output level to OQ_2. Thus, the firm's equilibrium level of output to maximise output is that MR = MC and MC should rise at the point of intersection with MR.

Condition 2:

In the diagram, the MC curve intersects the price line (or MR) at two points—A and B. Here, Condition 1 of profit maximisation MR = MC is satisfied at these two points. Next, let us consider Condition 2.



i. Intersection point at A:

At intersection point A, price is equal to MC but MC is falling, and it is a downward-sloping curve. If the output is increased more than the OQ_0 level, then the price is more than MC. This means that the firm can increase the production more than the OQ_0 level of output to maximise profit.

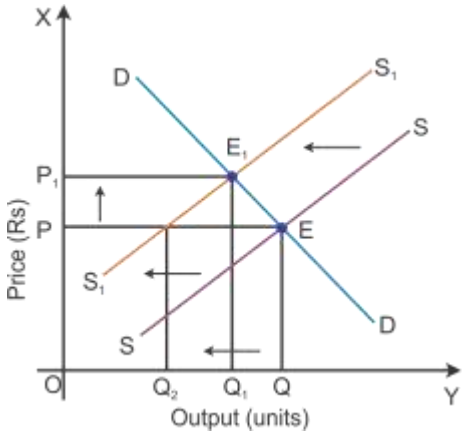
ii. Intersection point at B:

At intersection point B, if the output is increased more than output OQ_2, the price is more than MC. This states that the firm can increase the production more than the OQ_2 level of output to maximise profit. While if the firm produces higher level of output than OQ_2, then the price is less than MC. This clearly states that high profit is possible by decreasing the output level to OQ_2. Thus, Point B is the producer's equilibrium and OQ_2 is the output level to maximise profit by satisfying the two necessary conditions (i) Price = MC and (ii) the MC curve is rising.

Answer 14

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 a change in factors other than price, there will be a decrease in the supply of goods. There will be a shift in the supply curve towards the left to SS_1 with a decrease in the supply, and the demand curve DD will remain the same. This implies that there will be a situation of excess demand at the equilibrium point as shown in the below diagram.



This excess demand increases the competition among buyers, and they will pay a higher price to obtain more goods. So, the price will tend to increase till it reaches to OP_1 and the total quantity will fall to OQ_1. Now, the new market equilibrium will be at Point E_1, where the new supply curve SS_1 intersects the demand curve DD.

SECTION B

Answer 15

Aggregate demand means the total quantity demanded for goods and services by all the consumers of a country at a given price.

Answer 16

The correct option is (d). We know that

The value of multiplier is

$$\frac{1}{1-\text{MPC}}$$

where

MPC = Marginal propensity to consume

Given that

MPC = 1

Thus, the value of multiplier becomes infinity.

Answer 17

The correct option is (d). Primary deficit is the difference between the fiscal deficit and interest payment.

Primary deficit = Fiscal deficit – Interest payment

It determines the amount of borrowing which is necessary for the government to pay for the expenses other than interest payments.

Answer 18

The correct option is (d). Direct tax means the tax which is ***directly imposed on individuals*** and collected by the government. The burden of tax cannot be shifted to any other person. Here, the income earners are the individuals who pay the direct tax.

Answer 19

The correct option is (b). Currency appreciation takes place when there is a decrease in the price of a foreign currency in terms of the domestic currency. Here, less rupees are required to buy one dollar, i.e. the value of domestic currency becomes more valuable in relation to a foreign currency. So, the quantum of imports will increase and the exports will decrease, and thereby it leads to a ***decrease in national income***.

Answer 20

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index of Current Year}} \times 100$$

$$400 = \frac{450}{\text{Price Index of Current Year}} \times 100$$

$$\text{Price Index of Current Year} = 112.5$$

Answer 21

Fixed exchange rate is fixed by the government or Central Bank of a country and the changes can be made by the government. Under this system, the value of currency is fixed against different currencies to ensure stability in the exchange rate and it promotes foreign trade.

Flexible exchange rate is determined by demand and supply forces of varied currencies in the foreign exchange market. It is also called free rate of exchange, as it is freely determined by demand and supply forces in the international market. Here, the government does not hold any reserves and there is no problem of under or over valuation of currency.

OR

Managed floating is a system which allows adjustments in exchange rate according to a set of rules and regulations which are officially declared in the foreign exchange market. It is the combination of both fixed exchange rate and the flexible exchange rate. Here, the exchange rate is agreed on the basis of market forces along with the involvement of the monetary authority.

Answer 22

Borrowings which include commercial borrowing by the government or private sector from the rest of the world and the external assistance to a nation or by a nation. These borrowings lead to an inward flow of foreign exchange and hence are treated as ***positive items in the capital account of balance of payments***.

Answer 23

Banker's bank functions of the Central Bank:

The Central Bank is an apex bank of all banks in the country. It has almost the same relation with other banks in the country as a commercial bank has with its customers. The Central Bank keeps some cash balances of the commercial banks as compulsory deposit. This is to help them during financial crises.

OR

Bank of issue functions of the Central Bank:

The Central Bank of a country has the exclusive right of issuing notes. If commercial banks enjoy the right to issue notes, then they will partly control the supply of money. Because the commercial banks are profit-maximising firms, these banks will manipulate the

amount of paper notes to suit their own objective. This may not be conducive to the economic interests of the country. This is why the right has been relegated to the Central Bank. Notes issued by the Central Bank are unlimited legal tender.

Answer 24

Commercial banks create money even though they cannot print money. Bank deposits form the basis for credit creation. They accept deposits from the public by opening a deposit account known as the primary deposit. Banks do not hold the money in the account itself, and the entire amount is not withdrawn from the account at the same time. So, they advance loans to business persons and retain only a small portion of the total deposits in the bank. The Central Bank decides the amount to be held in the form of cash and the remaining amount is advanced as loans to business persons only against collateral securities. The bank will not give cash but open a derivative account in the name of the individual or institution. Here, the loans create a derivative deposit which is called a secondary deposit or derivative deposit. This ***secondary deposit is called the creation of credit.*** Hence, the banks are able to provide financial assistance to traders and industrialists. Their cheques and drafts are useful for trading on a large scale. It also provides concessional loans to the priority sectors such as agriculture, small-scale industry, retail trade and export. Thus, the ***production activity increases*** the overall development of the nation.

Answer 25

Given that

$\text{National Income}(Y) = 800$

$\text{Marginal Propensity Save} = 0.3$

Therefore,

$\text{MPC} = 1 - \text{MPS}$

$= 1 - 0.3 = 0.7$

$\bar{C} = 100$

We know that

$Y = C + I$

$Y = \bar{C} + \text{MPC}(Y) + I$

$800 = 100 + 0.7 \times 800 + I$

$I = 140$

Thus, the investment expenditure is Rs 140.

Answer 26

i. Payment of interest by a firm to bank ***is included*** in the estimation of national income because it is only an intermediate expenditure for the firm.

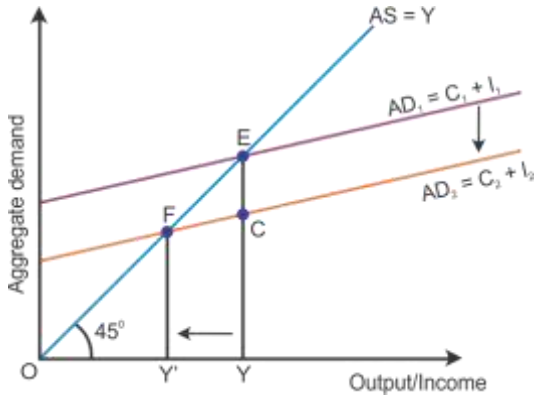
ii. Payment of interest by a bank to an individual ***is included*** in the estimation of national income because the bank has used the amount of saving of an individual for productive purposes.

iii. Payment of interest by an individual to a bank ***is not included*** in the estimation of national income because an individual's loan is used only for consumption purposes but not productive purposes.

Answer 27

Deficient demand means 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 shown by the AD curve and aggregate supply is shown by 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,*** (EY – CY = EC).



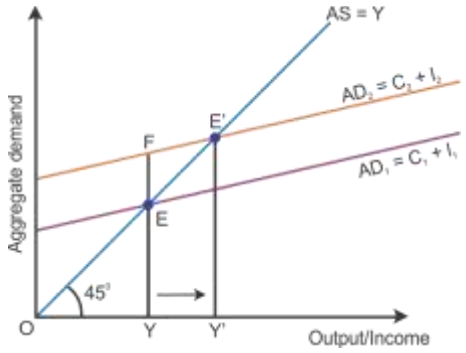
The Central Bank overcomes the deficient demand. The Central Bank decreases the bank rate and there is fall in the cost of borrowing for commercial banks. This enables the increase for the demand for loans and borrowings in the market. This in turn increases the ability to purchase more. In this way,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

OR

Excess demand occurs in a situation when aggregate demand is more than aggregate supply corresponding to full employment. It leads to reduction in inventories and inflation in the economy. This situation is considered an inflationary gap—the difference between aggregate demand beyond full employment and aggregate demand at full employment.

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 increases beyond the full employment level of output from EY to FY, then the economy will have ***excess demand*** (FY – EY = FE).



Because of excess demand, the repo rate will be increased by the Central Bank and it will increase the cost of borrowings for the commercial bank. This leads to a decline in the demand for loans and consumption expenditure. Thus, the aggregate demand comes down and the economy attains equilibrium.

Answer 28

Budgetary policy in reducing inequalities in incomes:

Fiscal policy implies the income and expenditure policy or the budgetary policy of the government. Income inequality has increased in both advanced and developing economies in recent decades. Evidence from public surveys indicates that widening income inequality has been accompanied by growing public demand for income redistribution. Governments can play a significant role in reducing inequality of income and wealth as well as inequality of opportunity through fiscal policies.

Both ***tax and spending policies*** can alter the distribution of income over both short-term and medium-term. For example, progressive income taxes and cash transfers can reduce the inequality of disposable incomes today. Spending on education has an impact on future earnings, and therefore, it could eventually increase the number of individuals earning a higher income.

Answer 29

National Income = Wages and salaries + Social security contributions by employers + Rent + Interest + Dividends + Corporation tax + Undistributed profits - Net factor income to abroad

NNP_{FC} = 700 + 100 + 200 + 150 + 50 + 30 + 20 – 10
= 1240 crore

Private Income = National income – Net domestic product accruing to government + Current transfer from government – Net current transfers to the rest of the world + National debt interest
= 1240 – 250 + 10 – 5 + 15
= 1010 crore