

CBSE
Class XII Economics
Sample Paper – 5

SECTION A

Answer 1

AC continues to fall even when MC is rising till MC is less than AC.

(OR)

Total variable costs vary directly with the level of output. So, TVC increases at a decreasing rate initially with an increase in output, then at a constant rate and finally at an increasing rate.

Answer 2

The correct answer is option (b). At the point where MR is equal to MC, the difference between TR and TC is maximum. This is the point where a firm maximises profit.

Answer 3

Product differentiation refers to slightly differentiating the product size, shape and colour. This is done by firms with the objective of increasing market share.

Answer 4

The correct answer is option (C). When price falls with rise in output, then the revenue from every additional unit will be less than AR. As a result, both AR and MR curves slope downwards from left to right. This is because the firms can increase the volume of sale only by decreasing the sale.

(OR)

The correct answer is option (A). A Change in total cost when an additional unit of output is produced is the marginal cost.

AC is the sum of AFC and AVC.

AC decreases = MC decreases at a faster rate & $MC < AC$

AC increases \Rightarrow MC increases at a faster rate & $MC > AC$

AC is at its minimum point (z) $\Rightarrow MC = AC$

Hence, marginal cost and average cost are equal when AC tends to stabilise.

Answer 5

The equation for the budget line is

$$P_1X_1 + P_2X_2 = Y$$

Substituting the given values

$$5X_1 + 10X_2 = 50$$

For the budget line, the x-intercept and the y-intercept can be calculated as follows.

x-intercept:

If the consumer spends the entire income on X_1 , then he can purchase

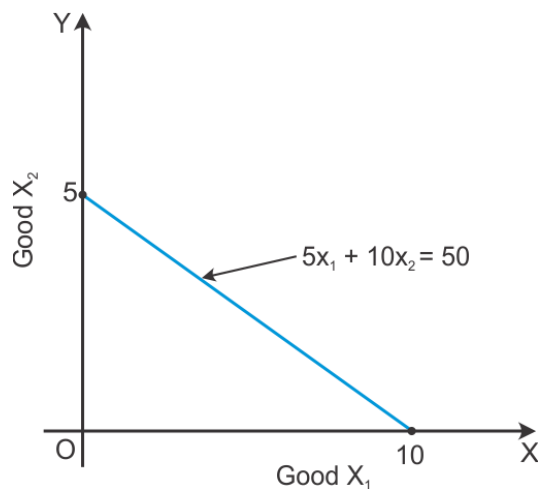
$$\frac{50}{5} = 10 \text{ units}$$

y-intercept:

If the consumer spends the entire income on X_2 , then he can purchase

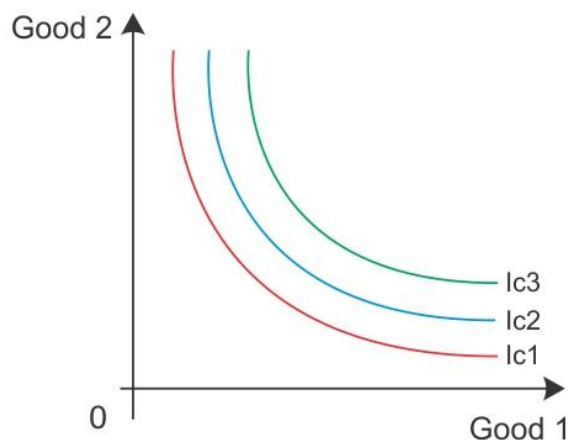
$$\frac{50}{10} = 5 \text{ units}$$

So, the budget line can be drawn as follows:



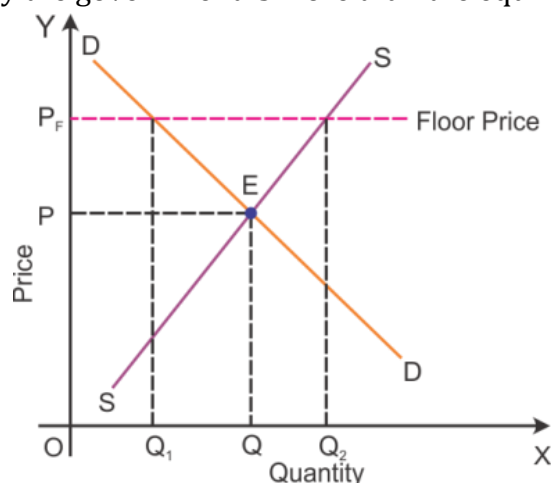
(OR)

Higher indifference curve shows higher level of satisfaction because higher IC corresponds to higher level of income of the consumer. The assumption of monotonic preferences of the consumers also indicates that higher the level of consumption, greater the level of satisfaction. In the diagram, an indifference curve IC_3 which is to **the right shows a higher level of satisfaction** to the consumer than the IC_1 and IC_2 .



Answer 6

Price floor refers to the minimum price fixed by the government for a commodity. The minimum price as fixed by the government is more than the equilibrium price.



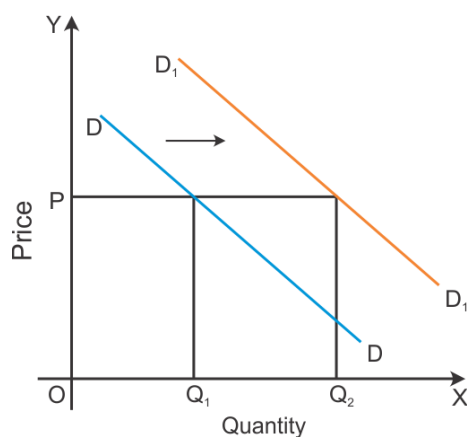
In the diagram, DD is the initial demand curve and SS is the initial supply curve. Point E is the equilibrium point where DD intersects SS. Correspondingly, OQ is the equilibrium quantity and OP is the equilibrium price.

Suppose the government fixes the minimum price at P_F . At this price, the quantity demanded is OQ_1 and quantity supplied is OQ_2 . That is, there is excess supply in the market. The government purchases this extra stock of the commodity.

Answer 7

Increase in demand refers to an increase in the quantity demanded of a commodity due to factors other than the price of the commodity. In such a situation, the quantity demanded of the commodity increases even when the price of the commodity is constant.

Diagrammatically, it is represented by a parallel rightward shift of the demand curve.



In the given diagram, DD is the initial demand curve. Q_1 quantity of the commodity is demanded at P_1 price. The increase in demand is represented by a parallel rightward shift of the demand curve to D_1D_1 . Here, even at the same price, the quantity demanded rises to Q_2 .

Factors which cause increase in demand:

- i. Increase in income of the consumer
- ii. Increase in the price of the substitute good
- iii. Fall in price of complementary good
- iv. Change in tastes and preferences in favour of the commodity
- v. An expectation of the decrease in availability of the commodity in the future

(OR)

Actual Total Expenditure (TE_0) = Rs 1000

Change in Total Expenditure (TE_1) = Rs 1000

Actual Price (P_0) = Rs 8

Percentage change in price = 25%

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

$$25 = \frac{P_1 - 8}{8} \times 100$$

$$\frac{200}{100} = P_1 - 8$$

$$P_1 = 10$$

Therefore,

Price (P)	Total Expenditure (TE) = Price (P) × Quantity (Q)	Quantity (Q) = $\frac{TE}{P}$
$P_0 = \text{Rs } 8$	$TE_0 = \text{Rs } 1000$	$Q_0 = 125$
$P_1 = \text{Rs } 10$	$TE_1 = \text{Rs } 1000$	$Q_1 = 100$

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

$$Ed = (-) \frac{\frac{\text{Change in demand}}{\text{Actual demand}} \times 100}{25}$$

$$Ed = (-) \frac{\frac{Q_1 - Q_0}{Q_0} \times 100}{25}$$

$$Ed = (-) \frac{\frac{100 - 125}{125} \times 100}{25}$$

$$Ed = (-) \frac{-20}{25}$$

$$\therefore Ed = 0.8$$

Thus, the price elasticity of demand is 0.8.

Answer 8

<i>Units of labour</i>	<i>Average Product</i>	<i>Marginal Product</i>	<i>Total Product</i>
1	5	-	5
2	10	15	20
3	4	8	12
4	2	4	8
5	1	3	5

Answer 9

Marginal opportunity cost refers to the number of units of one good which must be sacrificed for the production of each additional unit of the other good. The concept of opportunity cost arises because of the scarcity of resources. Accordingly, to put the resources to one use, they must be withdrawn from the other. Algebraically, marginal opportunity cost is represented as

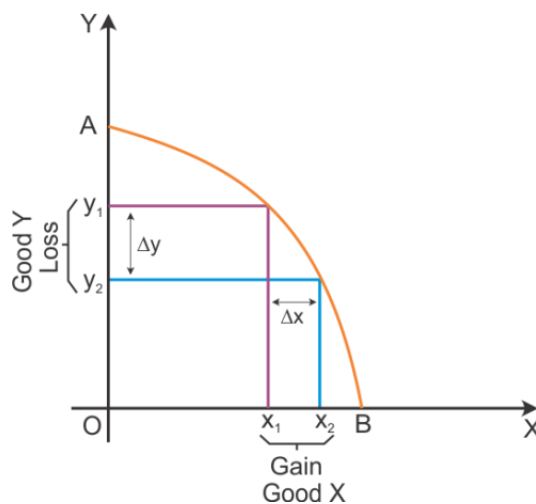
$$\frac{\Delta Y}{\Delta X}$$

The opportunity cost can be understood with the help of the following schedule:

Good X (units)	Good Y (units)	Opportunity Cost $\frac{\Delta Y}{\Delta X}$
0	10	-
1	8	2
2	5	3
3	1	4

Marginal opportunity cost is the slope of the production possibility curve. The marginal opportunity cost is rising which indicates that for the production of each additional unit of Good X, greater units of Good Y must be sacrificed.

Diagrammatically,



(OR)

Marginal cost of producing more of good Y

$$\begin{aligned} \text{MOC} &= \frac{\Delta \text{Good-X}}{\Delta \text{Good-Y}} = \frac{\text{Sacrifice/Loss of Good-X}}{\text{Gain of Good-Y}} \\ &= \frac{\Delta \text{Good-X}}{\Delta \text{Good-Y}} = \frac{100}{500} = 0.2 \end{aligned}$$

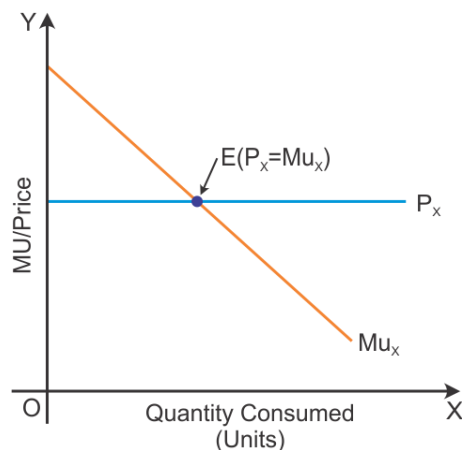
This gives the opportunity cost of producing an additional unit of good Y when some resources are shifted from the production of good X to the production of good Y.

Answer 10

In case a consumer consumes only one commodity, he strikes equilibrium at the point where the rupee worth of satisfaction derived from the consumption of the commodity is equal to the marginal utility of money.

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

Diagrammatically,



In the diagram, MU_x is the marginal utility curve. P_x being constant is a horizontal straight line parallel to the x-axis. The consumer strikes equilibrium at Point E, where MU_x is equal to P_x .

This can be better understood with the help of the following example:

Suppose a consumer consumes one commodity X, priced at Rs 3 per unit. Also, the marginal utility of money is 5 utils. The marginal utility schedule of the commodity is as follows:

Units	Marginal Utility of X (utils)
1	20
2	15
3	7
4	1

The consumer would strike equilibrium at the point where

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

This is achieved at 2 units of the commodity

Here,

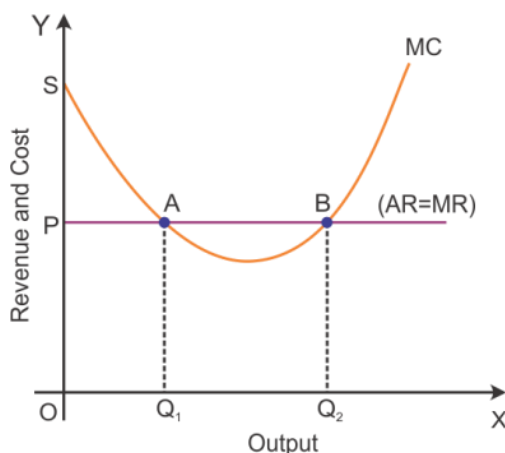
$$\frac{15}{3} = 5 = MU_m$$

Answer 11

According to the MR–MC approach, a consumer strikes equilibrium at the point where the following two conditions are met:

- i. $MR = MC$
- ii. MC is rising

This can be understood with the help of the following diagram:



In the diagram, AR (demand curve) is a horizontal straight line parallel to axis and is equal to MR. The MC curve is u-shaped. From the diagram, it can be seen that MR is equal to MC at two points—A and B. However, it is only at Point B that the second condition of equilibrium is met, that is MC is rising. Thus, Point B is the equilibrium point. This can be proved as follows:

At Point A:

Total Revenue = Area under MR curve = Area (OPAQ₁)

Total Variable Cost = Area under MC curve = Area (OSAQ₁)

As Area (OSAQ₁) > Area (OPAQ₁)

So,

$TVC > TR$

This implies a situation of loss.

On the other hand, at Point B,

Total Revenue = Area under MR curve = Area (OPBQ₂)

Total Variable Cost = Area under MC curve = Area (OSBQ₂)

As Area (OPBQ₂) > Area (OSBQ₂)

So,

$TR > TVC$

This implies a situation of profit.

Answer 12

<i>Perfect Competition</i>	<i>Monopoly</i>
There are a large number of buyers and sellers.	There is a single seller against a large number of buyers.
The entry of new firms in the market is not restricted.	There is restriction to the entry of new firms.
Firms have perfect knowledge with respect to market conditions.	The monopolist has imperfect knowledge of market conditions.
A firm under perfect competition faces a perfectly elastic demand curve.	The demand curve faced by the firm is relatively less elastic.
A single firm has no control over the price.	The monopolist has complete control over the price.
The average revenue of a firm is equal to its marginal revenue.	The average revenue is more than the marginal revenue.

(OR)

When decrease in demand is proportionately equal to decrease in supply, the changes in the curve will be leftward shift in demand curve from D_1D_1 to D_2D_2 which is proportionately equal to leftward shift in supply curve from S_1S_1 to S_2S_2 . As the changes in demand and supply curve are proportionate, the equilibrium price will remain constant at Rs 6, but the equilibrium quantity will fall from 20 units to 12 units.

Market equilibrium			
Price of good X	Demand for good X	Supply of good X	Equilibrium
4	24	16	$D > S$
6	20	20	$D = S$
8	16	24	$D < S$

Market equilibrium: Simultaneous decrease both in demand and supply but no change in market price			
Price of good X	Demand for good X	Supply of good X	Equilibrium
4	14	10	$D > S$
6	12	12	$D = S$
8	10	14	$D < S$

SECTION B**Answer 13**

One of the measures to reduce revenue deficit is to reduce unnecessary and unproductive expenditure of the government.

Answer 14

The correct answer is (d). Revenue receipts refer to receipts of the government as a result of which there is neither any creation of liability nor any reduction in assets of the government.

(OR)

False. This is because fiscal deficit also incurred based on capital receipts and expenditures of the government.

Answer 15

Involuntary unemployment refers to a situation where a person who is willing to work and capable to work at the prevailing wage rate does not get work.

Answer 16

When aggregate demand is greater than aggregate supply, then a situation corresponding to full employment equilibrium will lead to inflationary gap. On the other hand, a situation corresponding to underemployment equilibrium will not lead to inflationary gap.

Answer 17

Money is demanded for the following reasons:

- i. **Transaction motive:** Money is required for various transactions which need to be conducted daily. Cash is required to be held by the people as there is a gap between the receipt of income and expenditure. According to Keynes, there is a direct positive relation between the transaction demand for money and the level of income of the individual. As the income increases, the transaction demand for money increases and *vice versa*.
- ii. **Precautionary motive:** People hold cash for certain unforeseen contingencies. The demand for money for precautionary motive is positively related to the level of income of the individual. With the rise in income, the demand for money for precautionary motive increases and *vice versa*.
- iii. **Speculative motive:** It refers to the demand for money for speculative purposes. Besides cash balances, people can hold money in the form of bonds. The decision whether to hold cash or bonds depends on the expected rate of interest. With a rise in the interest rate, the value of bonds falls, so, the demand for money for speculative purposes falls and *vice versa*.

(OR)

Yes, there is expansion of market with the emergence of money. This is because:

- i. After money came into existence, the buyers and sellers were able to purchase and sell the goods without purchasing or selling anything in return. This led to the expansion of market with ease in expansion of exchange activities. Under barter system, the simultaneous fulfilment of mutual wants of buyers and sellers are necessary. But the monetary exchange of money does not require to fulfil this feature.
- ii. The standard of deferred payment function of money has led to the introduction of financial market and other institutions. This increased the availability of credit in the financial market and resulted in increase in investment and consumption expenditure. Hence, it led to expansion of market activities.
- iii. The introduction of money encouraged the mobility of capital to different parts of the world with wide range of activities at the global level. This resulted in increase in the flow of foreign direct investment in to our economy.

Answer 18

The Central Bank functions in the same way with commercial banks as a commercial bank functions with the public. As the banker's bank, the Central Bank performs the following functions:

- i. **Holding cash reserves:** Commercial banks are mandatorily required to maintain a minimum portion (as defined) of the deposits with the Central Bank.
- ii. **Lender of last resort:** The Central Bank comes to the rescue of commercial banks when they cannot meet their financial requirements from any other source. In such a scenario, the Central Bank provides loans to commercial banks by discounting securities and bills of exchange. **Clearing house function:** The Central Bank acts as a clearing house for commercial banks; in other words, it settles interbank claims by commercial banks.

Answer 19

At equilibrium

$$Y = C + I$$

$$Y = 400 + 0.75Y + 2000$$

$$Y = 9,600$$

Putting the value of Y in consumption function

$$C = 400 + 0.75Y$$

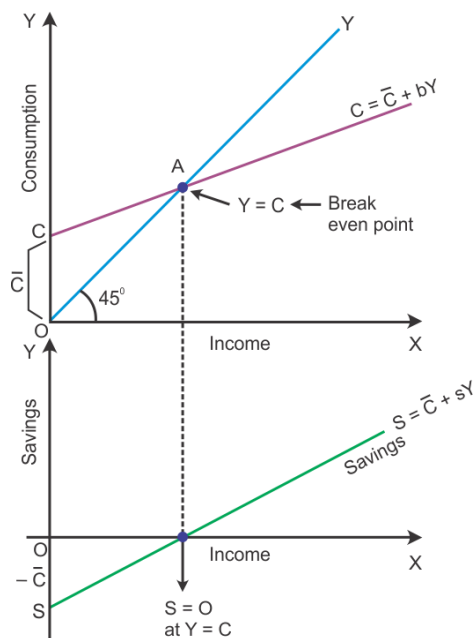
$$C = 400 + 0.75 \times 9600$$

$$C = 7,600$$

(OR)

Derivation of saving curve from consumption curve:

— \bar{C} is the saving function where negative savings are equal to autonomous consumption at $Y = 0$. This is shown on the negative axis in the lower panel at Point S. Here, all the income is spent on consumption expenditure. Hence, there is no saving which is shown as the breakeven point. After this point, S and Y are joined to have a straight line sloping curve.



Answer 20

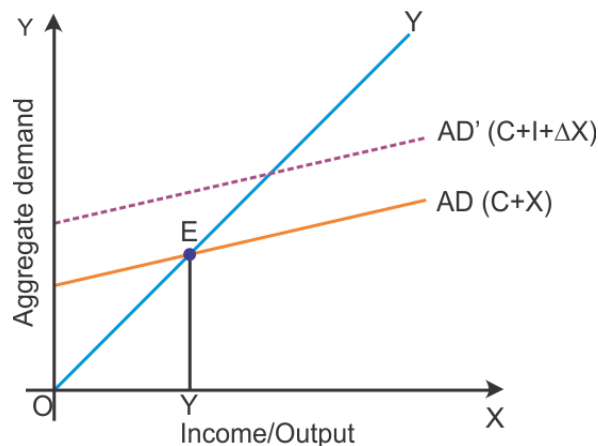
Consumption of fixed capital = GDP at market price + NFIA – (Indirect taxes – Subsidies) – NNP at factor cost
 $= 300 + 10 - (20 - 5) - 250$
 $= \text{Rs } 45 \text{ crore}$

Answer 21

- Purchase of stationery by an employer for office use is an expenditure on intermediate product as it is not used for final consumption by the employer but rather for further office work.
- Bread purchased by a household is an expenditure on the final good as it is used for final consumption by the household.

Answer 22

Excess demand refers to a situation wherein at the full employment level of output, the aggregate demand is greater than the aggregate supply.
 Excess demand is represented by the following diagram:



According to the diagram, AD is the aggregate demand curve. On the other hand, AS is represented by the 45 degree line. Point E is the point of equilibrium, where the AD and AS curves intersect each other. OY is the full employment level of output. If due to rise in investment expenditure, AD rises to AD', then it will be called the situation of excess demand.

Bank rate can be used to correct the situation of excess demand. Bank rate refers to the rate at which the Central Bank lends to commercial banks. In a situation of excess demand, the Central Bank raises the bank rate. A rise in the bank rate implies that the cost of borrowings for commercial banks rises. Commercial banks, in turn, raise their lending rates. This discourages loans and credit in the economy which helps in correcting the situation of excess demand.

(OR)

Given that

Value of MPC = 0.5

Initial increase in investment = Rs 800 crore

So, every increase of Re 1 in the income, 0.5 part of the increased income will be consumed by people.

Consumption= Rs 0.50

Saving= Rs 0.50

Round	Increase in investment ΔI	Change in income ΔY	Induced change in consumption ΔC	Savings ΔS
1	800	800	400	400
2	-	400	200	200
3	-	200	100	100
4	-	100	50	50
5	-	50	25	25
6	-	25	12.5	12.5
7	-	12.5	6.25	6.25

8	-	6.25	3.12	3.12
9	-	3.12	1.56	1.56
10	-	1.56	0.78	0.78
11	-	0.78	0.39	0.39
12	-	0.39	0.2	0.2
13	-	0.2	0.1	0.1
Total	800	1600	800	800

The above shows the multiplier process which continue and the income will increase due to increase in consumption.

Changes in the income (ΔY) = Rs 1600

Change in the investment (ΔI) = Rs 800

As we know that

$$k = \frac{1}{1 - MPC} = \frac{\Delta Y}{\Delta I}$$

$$k = \frac{1}{1 - 0.5} = \frac{\Delta Y}{800}$$

$$\frac{1}{0.5} = \frac{\Delta Y}{800}$$

$$\Delta Y = \frac{800}{0.5} = 1600$$

Hence, an initial increase in the investment by 800 crore lead to an increase in income and output by its 1600 crore.

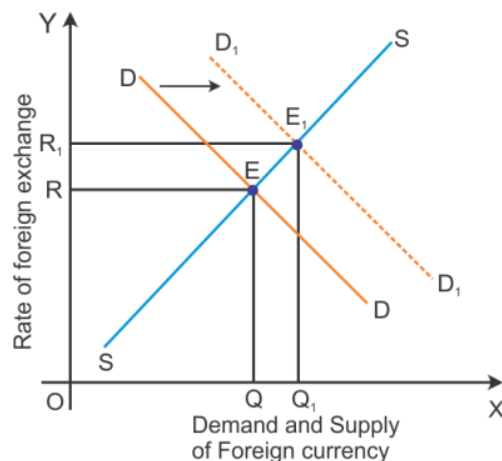
Answer 23

a.

<i>Fixed Exchange Rate System</i>	<i>Flexible Exchange Rate System</i>
The exchange rate is determined by the government.	The exchange rate is determined by the market forces of demand and supply.
It is also known as the pegged exchange rate system.	It is also known as the floating exchange rate system.
There is complete control of the government.	There is no control of the government.
The exchange rate remains stable.	The exchange rate keeps changing.

- b. A rise in the demand for foreign exchange implies that there is a rise in the demand for the foreign exchange rate to make payments for imports. With the supply of foreign exchange remaining the same, this would lead to a rise in the foreign exchange rate (currency depreciation).

This can be understood with the help of the following diagram:



In the diagram, DD and SS are the initial demand curve and the initial supply curve, respectively. Initial equilibrium is determined at Point E, and therefore, OQ is the initial equilibrium quantity and OR is the initial equilibrium exchange rate.

With the rise in demand for foreign exchange, the initial demand curve shifts outwards to the right to D_1D_1 . With the supply curve remaining the same, the new equilibrium is determined at Point E_1 . Accordingly OQ_1 is the new equilibrium quantity and OR_1 is the new equilibrium exchange rate.

Answer 24

Gross national disposable income = National income + Consumption of fixed capital + Indirect tax – Subsidies – Net current transfers to abroad
 = Private final consumption expenditure + Government final consumption expenditure + Net domestic fixed capital formation + Change in stock – Net imports – Net factor income to abroad – Indirect taxes + Subsidies
 = $300 + 60 + 40 + (-20) - (-10) - 20 - 50 + 30 = 350$
 = $350 + 20 + 50 - 30 - 4 = \text{Rs } 386 \text{ crore}$