CBSE
Class XII Economics
All India Board Paper Set 3 – 2014

Time: 3 hrs   **Max. Marks: 100**

Note:
- Please check that this question paper contains 12 printed pages.
- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains 32 questions.
- **Please write down the Serial Number of the question before attempting it.**
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

General Instructions:
(i) **All** questions in both the sections are compulsory.
(ii) Marks for questions are indicated against each question.
(iii) Questions Nos. **1 – 5** and **17 – 21** are very short-answer questions carrying **1** mark each. They are required to be answered in one sentence each.
(iv) Questions Nos. **6 – 10** and **22 – 26** are short answer questions carrying **3** marks each. Answers to them should normally not exceed **60** words each.
(v) Questions Nos. **11 – 13** and **27 – 29** are also short answer questions carrying **4** marks each. Answers to them should normally not exceed **70** words each.
(vi) Question Nos. **14 – 16** and **30 – 32** 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.

SECTION A

1. Define variable cost.   [1]

2. The government has started promoting foreign capital. What is its economic value in the context of Production Possibilities Frontier?   [1]

3. What is market supply of a product?   [1]

4. What is imperfect oligopoly?   [1]

5. What is meant by monotonic preferences?   [1]

6. Why is Average Revenue always equal to price? [3]

7. Explain how technological progress is a determinant of supply of a good by a firm.

OR

Explain how input prices are a determinant of supply of a good by a firm. [3]

8. Why is the number of firms small in oligopoly? Explain. [3]

9. Why is Production Possibilities Curve concave? Explain. [3]

10. A consumer buys 27 units of a good at a price of Rs 10 per unit. When the price falls to Rs 9 per unit, the demand rises to 30 units. What can you say about price elasticity of demand of the good through the 'expenditure approach'? [3]

11. How does change in price of complementary good affect the demand of the given good? Explain with the help of an example. [4]

12. Giving reasons, explain the 'Law of Variable Proportions'. [4]

13. A consumer consumes only two goods X and Y and is in equilibrium. Show that when the price of good X rises, the consumer buys less of good X. Use utility analysis. [4]

OR

Given the price of a good, how will a consumer decide as to how much quantity of that good to buy? Use utility analysis.

14. From the following information about a firm, find the firm's equilibrium output in terms of marginal cost and marginal revenue. Give reasons. Also find profit at this output. [6]

Output (Units)	Total Revenue (Rs)	Total Cost (Rs)
1	6	7
2	12	13
3	18	17
4	24	23
5	30	31

15. Market of a commodity is in equilibrium. Demand for the commodity 'decreases'. Explain the chain of effects of this change till the market again reaches equilibrium. Use diagram. [6]

16. Explain why is an indifference curve
   a. Downward sloping and
   b. Convex.

OR

Explain the concept of 'Marginal Rate of Substitution' with the help of a numerical example. Also explain its behaviour along an indifference curve. [6]

SECTION B

17. What is 'excess demand' in macroeconomics? [1]

18. Define fiscal deficit. [1]

19. What is 'managed floating exchange rate'? [1]

20. What are time deposits? [1]

21. What is full employment? [1]

22. Is the following a revenue receipt or a capital receipt in the context of government budget and why? [3]
   i.   Tax receipts
   ii.   Disinvestment

23. Explain the effect of appreciation of domestic currency on exports. [3]

24. What are externalities? Give an example of a positive externality and its impact on welfare of the people. [3]

25. Explain the significance of the 'Unit of Account' function of money. [3]
OR
Explain the significance of the 'Standard of Deferred Payment' function of money.

26. Distinguish between 'autonomous' and accommodating' Balance of Payments transactions. [3]

27. Calculate Autonomous Consumption Expenditure from the following data about an economy which is in equilibrium: [4]
National income = 500
Marginal propensity to save = 0.30
Investment expenditure = 100

28. Tax rates on higher income group have been increased. Which economic value does it reflect? Explain. [4]

29. Explain 'Banker to the Government' function of the central bank. [4]
OR

Explain 'Bankers' Bank' function of the central bank.

30. How should the following be treated in estimating national income of a country? You must give reason for your answer. [6]
   i. Taking care of aged parents
   ii. Payment of corporate tax
   iii. Expenditure on providing police services by the government

31. When is an economy in equilibrium? Explain with the help of Saving and Investment functions. Also explain the changes that take place in an economy when the economy is not in equilibrium. Use diagram. [6]

OR

Outline the steps required to be taken in deriving the Consumption Curve from the given Saving Curve. Use diagram.

32. Calculate 'Net National Product at Market Price' and 'Gross National Disposable Income' from the following: [6]

	(Rs in Arab)
i. Closing stocks	10
ii. Consumption of fixed capital	40
iii. Private final consumption expenditure	600
iv. Exports	50
v. Opening Stock	20
vi. Government final consumption expenditure	100
vii. Imports	60
viii. Net domestic fixed capital formation	80
ix. Net current transfers to abroad	(-)10
x. Net factor income to abroad	30

SECTION A

Answer 1

Costs incurred on variable factors such as labour are called variable costs.

Answer 2

When the government promotes foreign capital, there is an increase in the flow of money into the country. This in turn increases the availability of resources to a great extent which leads to an increase in the country's production potential. So, there is a rise in economic value which leads to a shift in the production possibility curve (PPC) to the right.

Answer 3

Market supply of a product is the supply of various quantities of the product by all the producers at various price levels during a given period of time.

Answer 4

Imperfect oligopoly is a form of market in which firms produce differentiated products such as automobile industries and soft drinks.

Answer 5

A monotonic preference means that a rational consumer always prefers more of a good as it offers the consumer a higher level of satisfaction. A consumer may have different preference sets corresponding to the different levels of income.

Answer 6

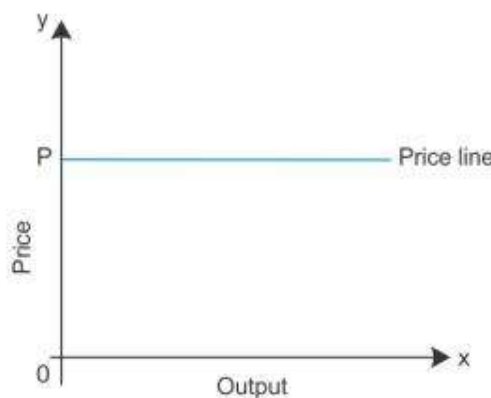Average revenue of a firm is the total revenue per unit of output sold.

$AR = TR/q$ ----- (1)

$TR = p*q$ ----- (2)

By relating Equations 1 and 2,

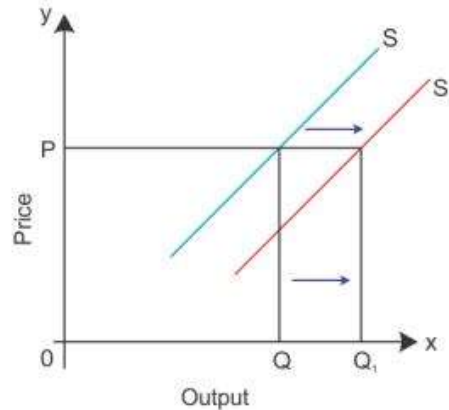$AR = p*q/q = p$

When AR equals the market price, the firm can sell any amount of good at a given price.
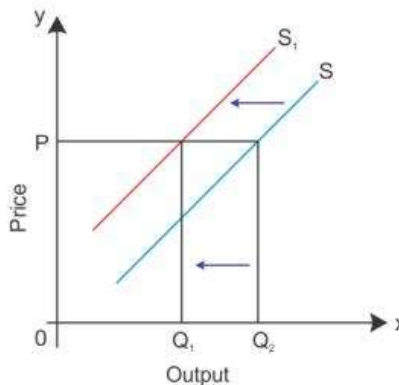
Answer 7

When there is advancement in technology, the cost of production falls and there is an increase in profit. It leads to an increase in the supply of good which shifts the supply curve towards the right.

The above diagram shows that the advancement in technology shifts the supply curve S towards the right from S to S_1 and the increase in the supply of good from OQ to OQ_1. However, the price of the good at OP remains constant.

OR

When there is a rise in input prices, there will be an increase in the cost of production which results in a decline in profit margin and the supply of good.

When there is an increase in input prices, the supply curve S shifts leftwards from S to S_1. It leads to a fall in the supply of good from OQ_2 to OQ_1, where the price remains constant at OP.
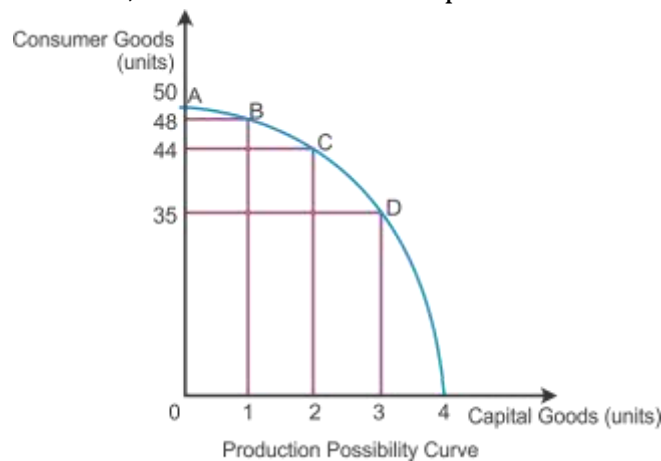
Answer 8

In an oligopoly market, each firm is huge enough to control a significant portion of the market even though they are few firms. Output quotas and the price have a direct bearing on the output and price of rival firms in the market. So, there is no unique demand curve for an oligopoly firm. They form a collusive agreement among the firms to fix the price and output in the market. It is in order to avoid price competition and earn monopoly profits.

Answer 9

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. Opportunity cost of producing every additional unit of Good X tends to increase in terms of the loss of production of Good Y.

Let us 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 one more unit of capital good. The opportunity cost increases as the PPC moves down from Point C to D. Hence, PPC has a concave shape.

Production Possibility Curve

Answer 10

Given that

$Q_1 = 27$

$Q_2 = 30$

$P_1 = Rs\ 10$

$P_2 = Rs\ 9$

Therefore,

Total initial expenditure $= Q_1 \times P_1 = 270$

Total final expenditure $= Q_2 \times P_2 = 270$

As there is fall in the price of good, the total expenditure remains constant, so it implies that demand for the good is unitary elastic i.e. $|ed| = 1$.
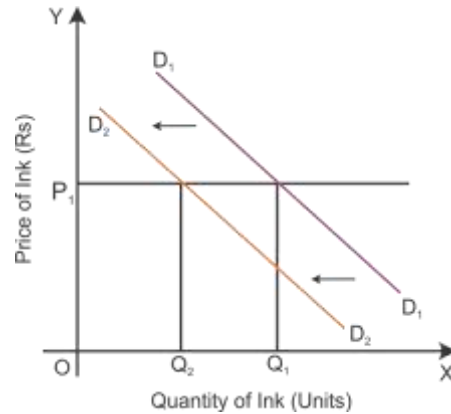
Answer 11

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 price of complementary good:

If there is an increase in the price of a good, then the demand for another good will decline. So the demand curve shifts parallel to the left, i.e. from D_1D_1 to D_2D_2.

Quantity of Ink (Units)

Decrease in price of complementary good:

If there is a decrease in the price of a good, then the demand for another good will increase. So the demand curve shifts parallel to the right, i.e. from D_1D_1 to D_2D_2.

Quantity of Ink (Units)
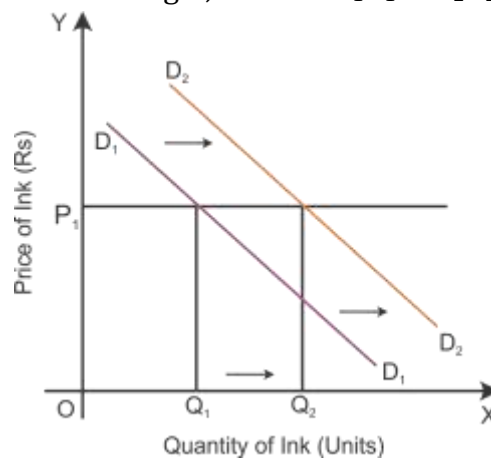
Answer 12

Law of variable proportion:

Law of variable proportion states that 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 (Negative returns to a factor)
1	8	21	−9	
1	9	10	−11	

In 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.
Reasons:
   i.   The units of labour are not sufficiently used with the available fixed factors. So the firm increase the number labour units with the fixed factor to increase the level of output.
   ii.   This facilitates the division of labour and hence the productivity level increases.
   iii. This in turn increases the specialisation of labour and therefore it leads to improved efficiency of labour with high productivity.

Stage II: However, when the 4th unit of factor input is used, the ***diminishing returns*** set 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.

Reasons:
   i.   The units of labour are used more to use the fixed factors at the maximum level.
   ii.   There is no perfect substitution exists between labour and capital and hence the diminishing returns take place.
   iii. Once the optimum combination reached, the total product is maximum. Hence, the marginal return to variable factor starts to diminish.

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

Reasons:

   i.   Over-utilisation of the fixed factors leads to negative returns to a factor.

   ii.   Here the cost of additional unit of labour is higher than its contribution to the total production.

   iii.   It becomes inefficient to manage more units of labour in the production system.
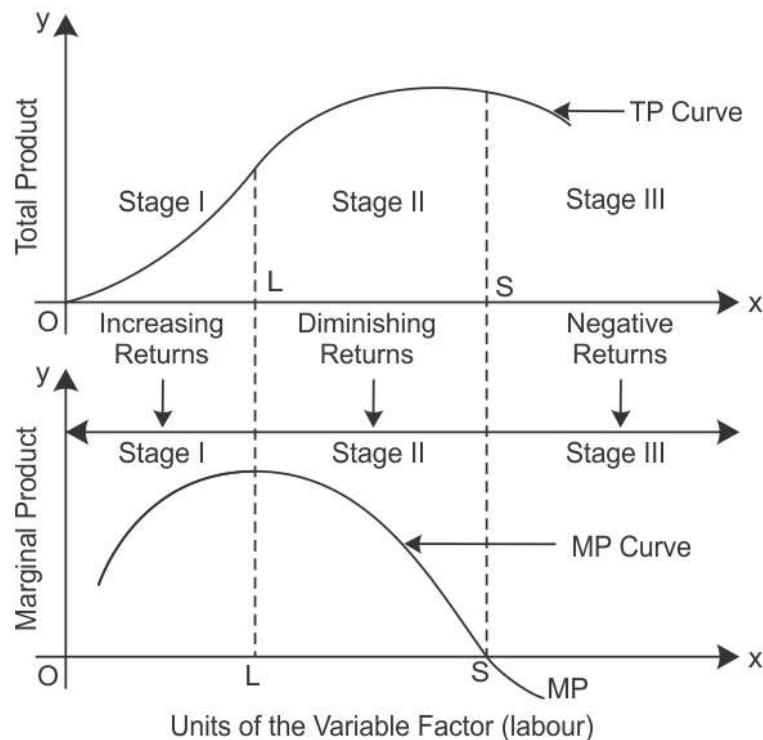
Answer 13

When a consumer buys both Goods X and Y, the consumer's equilibrium condition is expressed through the equation:

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

Consider the following numerical example to understand the consumer's equilibrium using marginal utility. A consumer's Marginal Utility of Money (MU_m) is 16 utils and two commodities x and y whose prices are Rs 1 (P_x) and Rs 1 (P_y) per unit, respectively. Consider the following schedule to analyse marginal utility of commodity x (MU_x) and commodity y (MU_y).

Units of x	MU x (Utils)	MU y3 (Utils)
1	28	32
2	24	29
3	21	27
4	20	23
5	16	20
6	13	18
7	9	17
8	5	16
9	3	12
10	1	9

Based on the given schedule, the consumer is in equilibrium at the consumption of 5 units of commodity x and 8 units of commodity y. At such a consumption combination, the marginal utility of a rupee spent on commodity $x\left(\dfrac{MU_x}{P_x}\right)$ is equal to the marginal utility of a rupee spent on commodity $y\left(\dfrac{MU_y}{P_y}\right)$ and also equal to the marginal utility of money (MU_m).

If the price of commodity x rises, the ratio of marginal utility to price of $X\left(\dfrac{MU_x}{P_x}\right)$ will be lesser than that of y.

$$\dfrac{MU_x}{P_x} < \dfrac{MU_y}{P_y}$$

Here, the consumer reorganises his consumption combination to attain equilibrium. Therefore, the consumption of commodity x decreases till it reaches equality.

OR

Given the price of the good, a consumer will decide the amount of goods to buy. So, the consumer compares the price of the good with its utility. A rational consumer will be at equilibrium only when the marginal utility is equal to the price paid for the good.
$MU_X = P_X$
The marginal utility is greater than the price paid for the good, i.e. $MU_X > P_X$ implies that the consumer is not in equilibrium and buys more of a good. While the marginal utility is lesser than the price paid for the good, i.e. $MU_X < P_X$ implies that the consumer is not in equilibrium and buys less of that good.
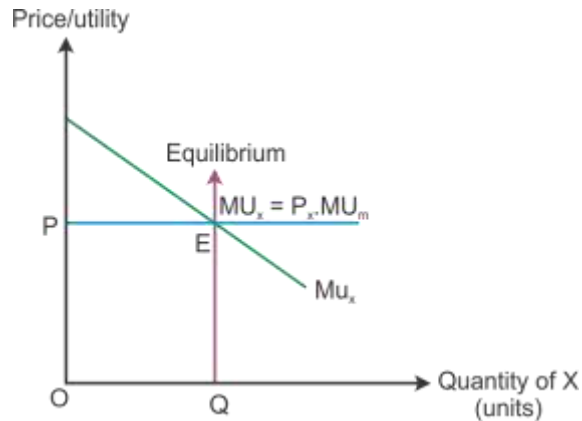
In the diagram, OP is the price of the good given on the Y-axis and OQ is the utility given on the X-axis. The marginal utility curve MU_X slopes downwards because the marginal utility diminishes with every additional consumption of X. The consumer reaches equilibrium at Point E, where the marginal utility is equal to the price paid for the good.

Answer 14

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

i.   MR = MC

ii. MC is rising or the MC curve cuts the MR curve from below.

Output (units)	Total Revenue (Rs)	Total Cost (Rs)	Marginal Revenue (Rs)	Marginal Cost (Rs)	Profit (TR - TC)
1	6	7	-	-	-1
2	12	13	6	6	-1
3	18	17	6	4	1
4	24	23	6	6	1
5	30	31	6	8	-1

Here, the firm is in equilibrium at output equal to **_4 units_** i.e. MR= MC and MC start **_rising_** after the 4th 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 price which fall short of the MC.

Answer 15

Consider DD_1 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_1, and the equilibrium quantity demanded is OQ_1.

If there is fall in the demand, the demand curve will shift towards the left to DD_1 and the supply curve SS will remain the same. This implies that at the initial price OP_1, there is an excess supply of OQ_1 to OQ^1_1 units of output. Thereby the competition among producers will increase and they tend to reduce the price of the output to the OP_2 level. Now, the new market equilibrium will be at Point E_1, where the new demand curve DD_1 intersects the supply curve SS.

This clearly states that if the ***demand curve shifts towards the left, the price of the good tends to decrease with a decrease in the demand for a good***. Thus, the direction of change in equilibrium price and the quantity are the same whenever there is a shift in the demand curve.
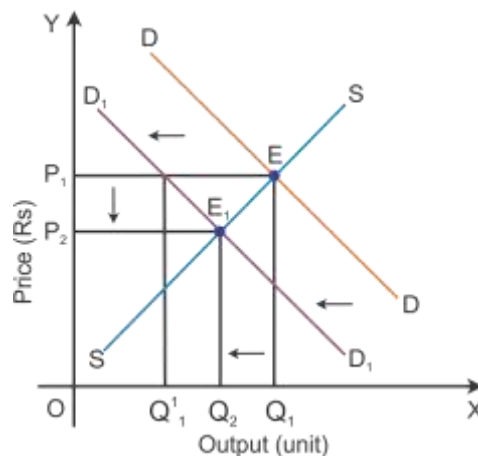
Answer 16

a. The indifference curve slope downwards from left to right because an increase in the amount of good 1 along the indifference curve is associated with a decrease in the amount of good 2, as the ***preferences are monotonic.***

b. At the point of tangency of the budget line and the indifference curve, the ***indifference curve must be convex to the origin, i.e. the MRS must fall.*** In other words, for every additional unit increase in consumption of one good, the consumer must be willing to sacrifice less and less units of the other good. That is the law of diminishing marginal utility must be followed.

OR

Marginal Rate of Substitution means the rate at which the consumer is willing to substitute one commodity for the other commodity.

The optimum bundle of the consumer is located at the point where the budget line is tangent to an indifference curve. 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 is equal at that point, i.e. marginal rate of substitution (MRS) is equal to the price ratio. The slope of the budget line is the rate at which the consumer is able to substitute one good for the other in the market. At the optimum, the two rates should be the same. Thus, at a point at which MRS is greater, the price ratio cannot be optimum, as well as when MRS is less, the price ratio cannot be the optimum.

$$MRT = \frac{\Delta Y}{\Delta X} = \frac{\text{Amount of good y sacrified}}{\text{Amount of good x gained}}$$

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 product possibility schedule:

Production Possibilities	Good X	Good Y	$MRT = \dfrac{\Delta Y}{\Delta X}$
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

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

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

SECTION B

Answer 17
Excess demand is a situation where the aggregate expenditure exceeds the equilibrium level of expenditure.

Answer 18

Fiscal deficit is the excess of total expenditure, i.e. revenue and capital expenditure over total receipts. This measure reflects ***total borrowings of the government*** during the financial year.

Answer 19

The managed floating exchange rate is the system in which the exchange rate is determined by the market forces and controlled the value of currency appreciation or depreciation by Central bank.

Answer 20

Time deposits are fixed-term deposits with a fixed maturity period and their term of deposit varying from 7 days to 10 years. One cannot avail the benefits of issuing cheques against these deposits and they cannot be payable on demand. However, time deposits can avail interest towards the deposited amount.

Answer 21

Full employment is a situation where all the resources in an economy are efficiently utilised. It reaches equilibrium when the aggregate demand is equal to the aggregate supply at full employment level.

Answer 22

   i.   Tax receipts are the revenue receipts which neither create any liability nor cause any reduction in the assets of the government.

  ii.   Disinvestment is the capital receipt which causes reduction in the assets of the government.

Answer 23

Currency appreciation means the value of domestic currency becomes costlier in terms of foreign currency. For example, if the exchange rate for $1 = Rs 50 decreases to $1 = Rs 45, then the export of goods to foreign countries will become costlier. This implies that the rupee value is appreciated against the dollar. So, the goods worth Rs 48 for $1 only get exported, and hence, there is a decrease in the demand for exports.

Answer 24

Externality is a positive and negative impact on economic activity on the others without involving any price. For example, emissions from driving contribute significantly to global warming. This leads to poor air quality and it contributes to significant health problems. People who breathe in this polluted air are at a higher risk for asthma and damage to the reproductive system. Thus, it affects the health of the people, which in turn reduces the welfare of the nation.

Answer 25

It is the monetary expression of the market value of goods and services. These goods are measured in terms of gram, litre and metre. This common unit of measurement enables the

buyer and seller to compare the value of goods in the market. This enhances the activities of buying and selling in the market.

The common device to measure goods is completely absent under the barter system. The sale and purchase of goods occur at the same time. Their sale and purchase values also remain equal at that point. After existence of money, a person can purchase or sell goods with cash at any point of time. Thus, the act of purchase and sale has been separated.

The introduction of money resulted in the end of the barter system where the value of goods are measured in terms of money and are hence progressed with market activities.

OR

Deferred payments refer to those payments which are made in the future. Money has made deferred payments easier. When money is borrowed, the principal and interest amounts have to be returned to the lender. However, these transactions are not possible in terms of goods and services. Money performs this function more effectively.

Answer 26

Autonomous transaction	**Accommodating transaction**
An autonomous transaction is shown as an item in the balance of payment (BOP). It refers to international economic transactions which are made independently of the state of the BOP, such as ***profit motive.***	An accommodating transaction is shown as an item in the BOP. It refers to international economic transactions which are ***not made with the profit motive*** such as government financing.
It is also known as ***'above the line items'*** in BOP.	It is also known as ***'below the line items'*** in BOP.
It is ***independent of the BOP condition*** of an economy.	It is ***dependent on the BOP condition*** of an economy because compensating short-term capital transactions are undertaken to correct the disequilibrium in the autonomous items.

Answer 27

Given that

$I = 100$

$Y = 500$

$MPS = 0.30$

$MPC = 1 - MPS = 1\text{-}0.30 = 0.70$

As we know that

$Y = C + I$

$500 = \bar{C} + cY + I$

$500 = \bar{C} + 0.7 \times 500 + 100$

$C = 500$

Therefore, $\bar{C} = 50$

Answer 28

An increased tax rate on higher income will increase the tax revenue of the government. So, there will be an increase in government expenditure on producing public goods which in turn improves the welfare of the nation. 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.

Hence, it helps to bridge the gap between the rich and poor sections of society.

Answer 29

Banker to the government

The Central Bank is also a banker, agent and financial advisor to the government. As a banker, it manages government accounts across the country. It buys and sells securities on behalf of the government as an agent of the government. It helps the government in framing policies to regulate the money market by acting as an advisor to the government.

OR

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.

Answer 30

i. Taking care of aged parents ***will not be included in the estimation of national income*** because it does not produce any goods and services and it is only for self consumption.

ii. Payment of corporate tax ***will be included in the estimation of national income*** because it is a part of corporate profit.

iii. Expenditure on providing police services by the government ***will be included in the estimation of national income*** because it forms a part of government final consumption expenditure.
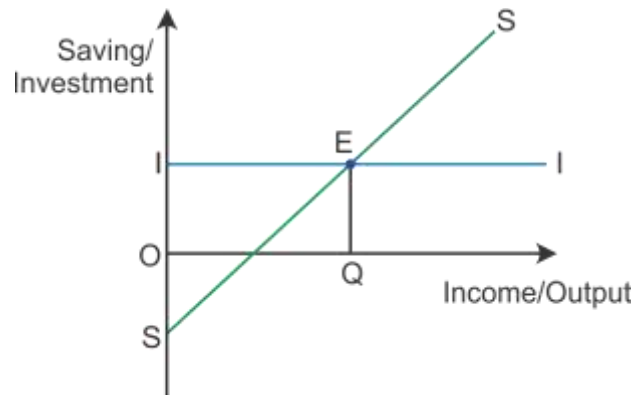
Answer 31

An economy is in equilibrium when any of the following two conditions are satisfied:

i. Aggregate demand = Aggregate supply

ii. Saving = Investment

Saving and Investment Approach

In the saving and investment approach, the equilibrium is attained at the point where saving and investment will intersect each other, i.e. leakages are equal to injections.

In the diagram, SS and II is the saving curve and investment curve, respectively. The II curve is a horizontal line which implies the autonomous investment. OQ is the equilibrium level of income where the SS and II curves intersect each other at Point E.

Saving < investment on the left side of equilibrium point E: Investment exceeding saving implies that the injection into the circular flow of income is more than the withdrawal from the income. Supply of goods and services is not sufficient to meet the demand for goods and services. As consumption is high, there will be a low amount of saving and thereby planned output is not sufficient to meet the demand. This leads to a fall in the inventory, and therefore, the savings need to increase. This is possible only when the savings are again equal to the investment and the equilibrium is restored.

Saving > investment on the right side of equilibrium point E: Saving exceeding investment implies that the withdrawal from the income is more than the injection into the circular flow of income. Consumption of goods and services is less than the supply of goods and services. As saving is high, there will be low amounts of consumption and thereby the sold output is less than the planned output. This leads to accumulation of inventory, and therefore, the savings need to reduce. This is possible only when the savings are again equal to the investment and the equilibrium is restored.

OR

In the diagram, the supply curve is given as the SS curve and $-\overline{C}$ represents negative savings. At the breakeven Point B, we find that Y = C and S = 0.

Derivation of the consumption curve from the saving curve:

Given the SS curve, let us consider OS = OC. At Point B, draw a perpendicular 45° line towards Point A. Points C and A are joined to produce a straight line upward sloping consumption curve CC.
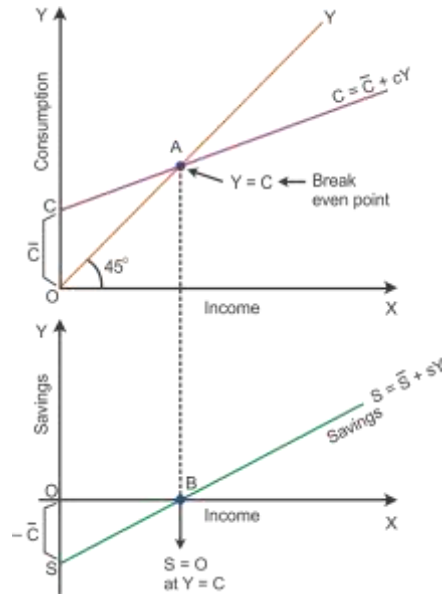
Answer 32

NNP_{MP} = Private final consumption expenditure+ Government final consumption expenditure + (Net domestic fixed capital formation + Consumption of fixed capital)+ (Closing Stock - Opening Stock)+ (Exports - Imports) - Consumption of fixed capital - Net factor income to abroad

= 600 + 100 + 80 + 40 + (10 - 20) + (50 - 60) - 40 – 30

= Rs 730 arab

Gross National Disposable Income = NNP_{MP} - Net current transfers to abroad+ Consumption of fixed capital

= 730 - (-10) + 40

= Rs 780 arab