

CBSE
Class XII Economics
All India Board Paper Set 3 – 2018 Solution

SECTION A

Answer 1

The correct answer is option (d).

$$TC = TFC + TVC$$

$$TC = 30 + AVC \times Q$$

$$TC = 30 + 3 \times 100$$

$$TC = \text{Rs } 330$$

Answer 2

The correct answer is option (a).

When Average product is maximum, the Marginal product is equal to Average product.

Answer 3

Example of Positive Economics which is based on facts and purely objective: ***Lower income taxes result in lower unemployment.***

Answer 4

Fixed cost is the cost which is incurred on buying fixed factors of production. It ***does not vary*** with the level of output.

Answer 5

The central problem of “choice of technique” is related to the ***allocation of resources to production techniques*** which have to be employed during the production of goods and services. The production of goods and services can take place in two ways –labour-intensive technique and capital intensive technique. The labour-intensive technique involves more of labour and less of capital in the output, while it is reverse for the capital intensive technique.

(OR)

The central problem ***for whom to produce is the problem of allocation of resources.*** This relates to the distribution of national products among the various individuals. It is true that sharing of national product is directly influenced by the income of an individual. People having higher income will definitely possess higher purchasing capacities. Therefore, for proper and equal distribution of goods and services, there should be equality of income among all the people of the society. Thus, we can observe that every economy faces the problem of allocating its national resources to the production of different goods and services and of distributing the produced goods and services among the individuals within the economy.

Answer 6

When a large change in the price does not bring so much change in the demand, the **demand is said to be inelastic**. In this situation, percentage change in demand is lesser than the percentage change in price.

Inelastic demand	Perfectly inelastic demand
When a large change in the price does not bring so much change in the demand, the demand is said to be inelastic.	When quantity demanded does not change at all as a result of change in price of the commodity, demand of that commodity is said to be perfectly inelastic.
The slope of the inelastic demand curve is steep.	The demand curve is parallel to Y-axis.
Elasticity of demand is less than one.	Elasticity of demand is zero.

Answer 7

Given that

Price (P)	Quantity (Q)
P₀= 4	Q₀= 100
P₁= 5	Q₁= 120

$$E_s = \frac{\frac{Q_1 - Q_0}{Q_0} \times 100}{\frac{P_1 - P_0}{P_0} \times 100}$$

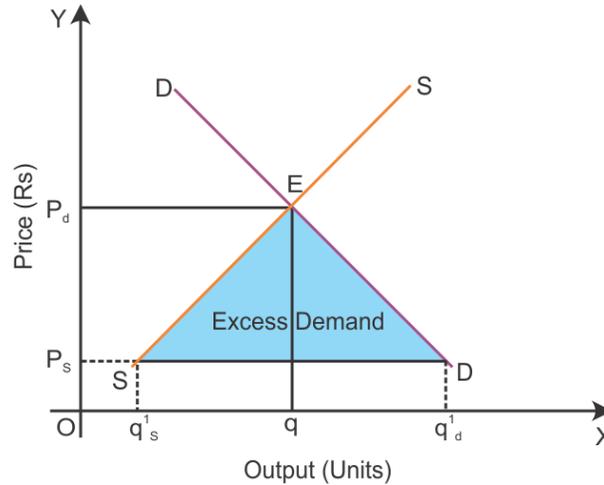
$$\Rightarrow E_s = \frac{\frac{120 - 100}{100} \times 100}{\frac{5 - 4}{4} \times 100} = 0.8$$

$$\therefore E_s < 1$$

Therefore, elasticity of supply is inelastic.

Answer 8

Price ceiling is the maximum price of a good which sellers can expect from buyers. This price is fixed by the government and is lower than the equilibrium market price of a good. Hence, the price ceiling leads to **excess of demand and contract of supply**.



Implications of price ceiling:

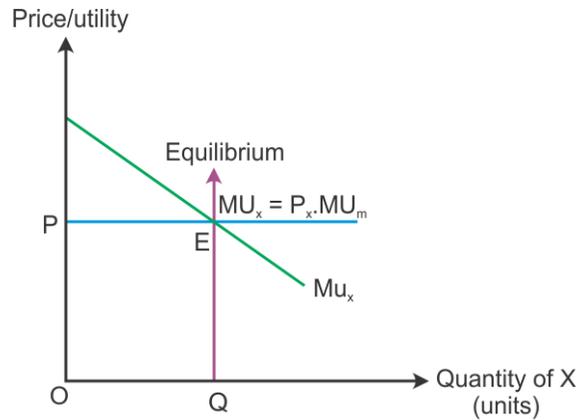
- i. Price ceiling enables the availability of basic goods at reasonable prices to the poor. This enables to **increase the welfare of the people**.
- ii. When there is a fall in the price level, the demand for a good increases more than the supply of the good. Hence, it creates an **excess demand for the good**.
- iii. A consumer receives only a limited quantity of goods because the **fixed quota system** is followed. So, the consumer would not be able to satisfy his/her needs.
- iv. Goods which are available at ration shops are mostly of a **low quality**.

Answer 9

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.

$$MU_x = P_x$$

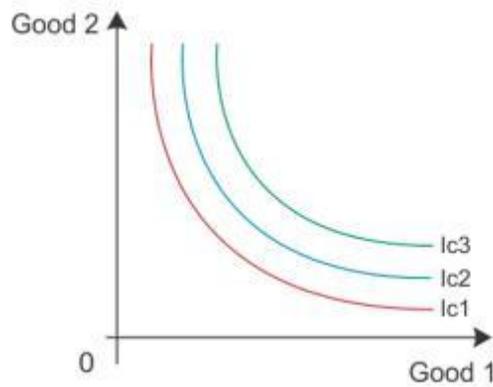
The marginal utility is greater than the price paid for the good, i.e. $MU_x > P_x$ implies that the consumer is not in equilibrium and buys more of a good. While the marginal utility is lesser than the price paid for the good, i.e. $MU_x < P_x$ implies that the consumer is not in equilibrium and buys 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**.

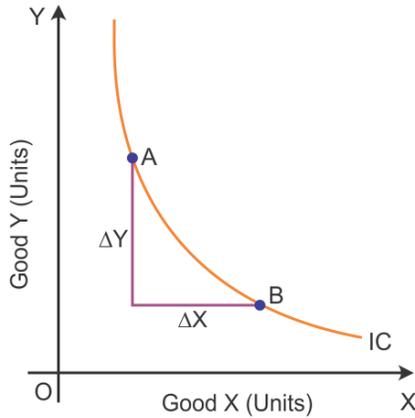
(OR)

An indifference curve shows all the combinations which create the same level of satisfaction. We can present an **indifference curve with high or low level of satisfaction**, i.e. to the right and above another show a higher level of satisfaction to the consumer. Here, IC₃ shows higher level of satisfaction than IC₂.



Properties of indifference curves (ICs)

- i. **Indifference curves slope downwards or negative slope:** The indifference curves slope downwards, left to right, 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.
- 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.

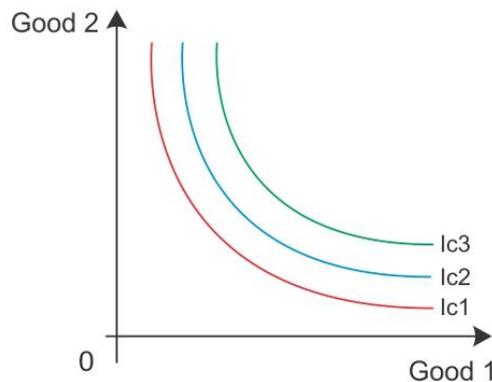


Slope of indifference curve between A and B = $\frac{\Delta Y}{\Delta X} = \text{MRS}$

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 the consumer. Here, IC₃ shows higher level of satisfaction than IC₂. Thus, the indifference curve relates to a higher level of income of the consumer.



Answer 10

Characteristics of monopolistic competition:

- **Large number of sellers:** There are large number of firms selling closely related but not homogeneous product. Each firm acts independently and has a limited share of the market. So an individual firm has limited control over the market price. Large number of firms leads to competition.

- **Product differentiation in monopolistic competition:** Monopolistic competition is a form of market in which there are many sellers of the product, but the product of each seller is different from one another. Products are differentiated through designs and colour of the packaging of the product. It attracts consumers to buy the product at a higher price level. As there are many rivals and close substitutes of products in the market, the monopolistic firm cannot have full control over the price. A monopolistic firm has partial control over price only through product differentiation
- **Selling cost:** Products are differentiated and these differences are made known to the buyers through selling costs. Such costs are incurred to persuade the buyers to buy a particular brand of the product in preference to competitor's brand. Hence, the selling costs constitute a substantial part of the total cost under monopolistic competition.

Product differentiation in monopolistic competition separates it from perfect competition because the products are homogeneous. They are identical in all respects such as size, shape and quality in perfect competition. Selling cost is heavy in the case of monopolistic completion whereas the selling is not incurred as they have perfect knowledge of product in perfect competition.

(OR)

Free entry and exit of firms in perfect competition: The new firms are free to enter and the existing firms are free to exit in a perfectly competitive market. This situation is possible only in the long period because the new firms will join the industry with the attraction of extra-normal profit. There will be an increase in the market supply, and hence, the price will decrease. Thereby the extra normal profit will decrease. Further, if the industry incurs extra normal loss, some existing firms will tend to leave the industry which will lead to a decline in market supply and market price. The industry will not incur extra normal loss. This is how the firms in the long run earn ***neither extra profit nor extra loss in the industry***. Thus, firms were able to earn normal profit which prevents a firm from exiting or a new firm from entering the industry.

Non-price competition under oligopoly: Firms under oligopoly are in a position to influence the prices. However, they try to avoid price competition for the fear of price war. They follow the policy of ***price rigidity***. Price rigidity refers to a situation in which price stay fixed irrespective of changes in demand and supply of the condition. They follow other ways such as advertising and providing better services to the customers to compete with each other.

Answer 11

Conditions of consumer's equilibrium using indifference curve analysis:

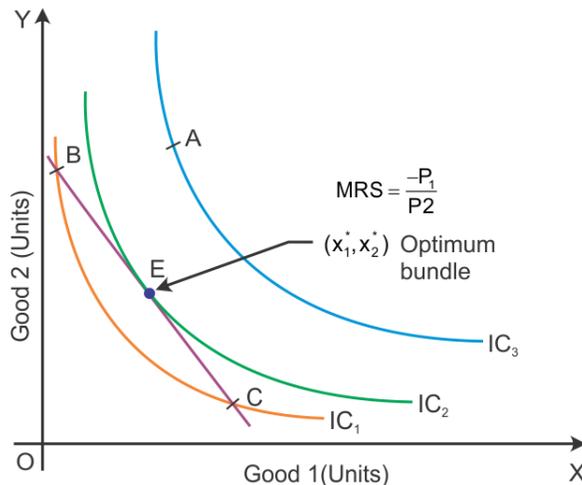
A consumer will strike his equilibrium at the point where the budget line is tangent to an indifference curve.

Slope of IC = Slope of price line

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

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, 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.

Answer 12

The producer's equilibrium refers to the 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.**

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

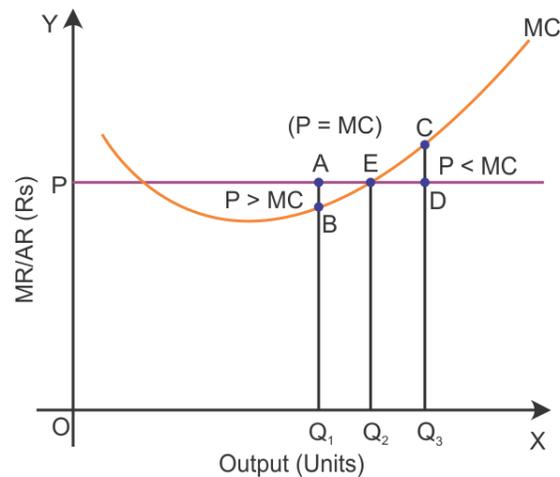
Here, it is assumed that price (AR) is constant, so that MR is constant, i.e. = Rs 10 under perfect competition. This table indicates that the two conditions of equilibrium are satisfied only when 5 units of output are produced. It is here that (i) $MR = MC = Rs\ 10$ and (ii) MC is rising.

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.

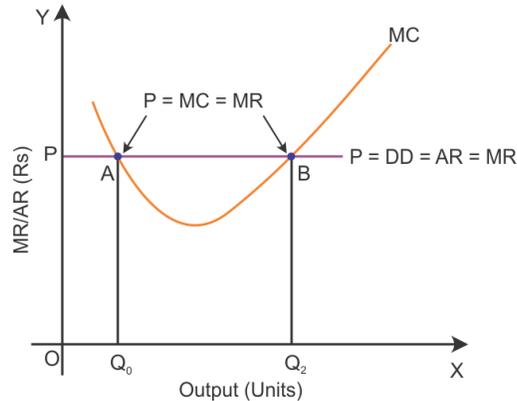


ii. If Price (MR) < MC

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 be rising at the point of intersection with MR.

Condition 2:

In the given 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.

SECTION B

Answer 13

Money supply means the total stock of money in circulation among the people at a particular point of time in an economy.

Answer 14

The correct answer is option (b).

Corporation tax affects the national income as it is the part of corporate profits.

Answer 15

Consumption curve does not start from the origin because there is **autonomous consumption expenditure even when the national income is zero.**

Answer 16

The correct answer is option (c).

The central bank buys government securities from the public through the banks. This results in the transfer of money from Central bank to the commercial banks and increases the credit creation capacity of the commercial banks. Hence, the central Bank can increase availability of credit by buying the government securities.

Answer 17

Real income can be calculated by applying the following formula:

$$\text{Real Income} = \frac{\text{Nominal Income}}{\text{Price Index of Current Year}} \times \text{Price Index of Base Year}$$

Consider Price Index of base year as 100

When nominal income is given, we can convert into real income with the help of GDP deflator

$$\text{Real income} = \frac{\text{Nominal Income}}{\text{GDP deflator}} \times 100$$

(OR)

- Milk purchased by tea stall – **Intermediate** good as milk will be used as an input to make the final product i.e. tea.
- Bus purchased by school- **Final** good as bus will be used by the school. School is the final user of bus.
- Juice purchased by a school student from the canteen- **Final** good as juice will be consumed by the student. Here, student is the final user of juice.

Answer 18

Multiplier is the **ratio of increase in national income due to an increase in investment.**

MPC and the value of multiplier has direct relationship. Higher the MPC more will be the value of multiplier.

$$Y = C + I$$

$$\Delta Y = \Delta C + \Delta I$$

Dividing both sides by ΔY , we will obtain

$$K = 1/1-MPC$$

Given value of multiplier is 4, then MPC will be

$$k = \frac{1}{1-MPC}$$

$$4 = \frac{1}{1-MPC} = 4(1-MPC) = 1$$

$$4 - 4MPC = 1$$

$$-4MPC = 1 - 4$$

$$-4MPC = -3$$

$$MPC = 0.75$$

Answer 19

Inflationary gap

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.

3 measures to reduce the gap

During ***inflationary situation***, the government can take fiscal measures to reduce excess demand as follows:

- ***Increase in taxes***: Government levies new taxes and enhances the rate of prevailing ones. It will reduce the disposable income of the people, and therefore, the aggregate demand is reduced.
- ***Surplus budget policy***: Government's expenditure should remain less than its income to control the excess demand.
- ***Decrease in public expenditure*** leads to a fall in aggregate demand. This in turn reduces the price level of goods in the market.

(OR)

Aggregate demand and its component

Aggregate demand is the aggregate expenditure where different sectors of the economy are willing to incur during a particular period of time.

Components of aggregate demand

- ***Private Consumption Expenditure (C)***: It refers to total expenditure to be incurred by all households on the purchase of goods and services such as food, clothing and housing. Autonomous consumption expenditure which is independent of income and induced consumption expenditure is dependent on disposal income.
- ***Private Investment Expenditure (I)***: It refers to planned expenditure by private entrepreneurs on creation of capital goods for profit motive. Autonomous investment expenditure which is independent of interest and income and induced investment expenditure is dependent on interest and income.
- ***Government Expenditure (G)***: It refers to government planned expenditure on purchase of consumer and capital goods to fulfill the basic needs of the society and increase growth in the economy
- ***Net Exports (X – M)***: It is defined as the aggregate of demand for domestic goods and services by foreign countries over country's demand for foreign countries' goods and services

Answer 20

Given that

Marginal propensity to consume (MPC) = 0.6

Initial income = 100

Autonomous investment = 80

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

$$C = 0 + 0.6(Y)$$

Income	Consumption	Saving	Investment
100	60	40	80
200	120	80	80
300	180	120	80
400	240	160	80
500	300	200	80

Aggregate demand (AD) = Aggregate supply (AS)

AD = C + I and AS = C + S

Therefore, the equilibrium level of income is Rs 200 crores.

Answer 21

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 22

a) Impact of rise in exchange rate on National income

Foreign exchange rate refers to the rate at which one currency is exchanged for the other.

If the *exchange rate rises* from \$1 = Rs 45 to \$1 = Rs 60, the Indian rupee is said to be depreciated. It implies that there is *fall in the value* of domestic currency against foreign currency. Depreciation implies that *domestic goods become cheaper* in terms of foreign currency and hence the demand for exports increases.

As export increases, there will be increase in employment growth, aggregate demand which causes higher economic growth. This results in bigger share of national income.

b) Deficit in Balance of payments

Balance of payments (BOP) gives a systematic record of all economic transactions between the residents and the rest of the world during a particular period of time.

Deficit in balance of payments is when receipts of the country coming from autonomous transactions are less than the corresponding payments to the rest of the world during the

period of an accounting year. It shows net liabilities towards the rest of the world. There are certain positive and negative impacts of deficit in balance of payment. When deficit occurs on account of capital import which is required for advancing the process of growth and development, it is a positive impact of deficit in balance of payment. Negative impact is that it shows Indian liabilities to the rest of the world. These liabilities strain the GDP by making payments to the rest of the world.

Answer 23

$NDP_{FC} = \text{Wages and salaries} + \text{SSC by employer} + \text{Rent and interest} + \text{Dividend} +$
 $\text{Corporation tax} + \text{undistributed profit} + \text{mixed income}$
 $NDP_{FC} = 1800 + 200 + 6000 + 80 + 120 + 400 + 1000$
 $NDP_{FC} = \text{Rs } 9600 \text{ Crore}$

$NNP_{MP} = NDP_{FC} + NFIA + NIT$
 $NNP_{MP} = 9600 + (-70) + 100$
 $NNP_{MP} = 9630$

$GDP_{FC} = NDP_{FC} + \text{Consumption of fixed capital}$
 $GDP_{FC} = 9600 + 50$
 $GDP_{FC} = 9650$

Answer 24

- a) **Revenue deficit** means the excess revenue expenditure over the revenue receipts. This shows the inability of the government to meet the regular and recurring expenditure.
- b) **Fiscal deficit** refers to the excess of total expenditure over total receipts excluding borrowings during the given fiscal year.
- c) **Primary deficit** refers to the difference between fiscal deficit and interest payments. It indicates the borrowing requirements of the government excluding interest. Primary deficit = Fiscal deficit – Interest payments

(OR)

Allocation of resources:

Reallocation of resources: Through the budgetary policy, the government can reallocate resources so that social and economic objectives can be met.

- A tax is a legally compulsory payment imposed by the government on households and producers. The government impose taxes on socially unsafe goods such as alcohol and tobacco. Thereby resources will be shifted to the production of socially essential goods.
- Subsidies do not reduce the liability of the government and it does not add to the assets of the government. The government also provides subsidies for necessary goods such as wheat, rice and sugar. Thereby the resources are shifted from the production of goods for the rich to the production of goods for the poor.

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.