ISC EXAMINATION PAPER - 2024
ECONOMICS
Class-12th
(Solved)

Maximum Marks: 80
Time allowed: Three Hours
*Canditates are allowed **Additional 15 minutes** for **only** reading the paper.*
*They must **NOT** start during this time*

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*Answer **all** questions in **Section A, Section B and Section C**.*
***Section A** consists of **objective / very short answer** questions.*
***Section B** consists of **short** answer questions.*
***Section C** consists of **long** answer questions.*
The intended marks for questions or parts of questions are given in brackets [].

Section-A — 16 marks

Question 1

(i) If the price elasticity of demand for a commodity is 2 and the percentage change in price is 5, the percentage change in quantity demanded will be: **[1]**

(a) 3 (b) 2.5 (c) 10 (d) 7

(ii) **Assertion**: An increase in public expenditure during recession can help to control the situation. **[1]**

Reason: Government reduces subsidies to overcome its budget deficit.

(a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

(b) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(c) Assertion is true but Reason is false.

(d) Assertion is false but Reason is true.

(iii) At the point of inflexion .... is maximum. **[1]**

(a) total product

(b) total cost

(c) average product

(d) marginal product

(iv) In which one of the following types of market, are Average Revenue curve and Market Demand curve the same? **[1]**

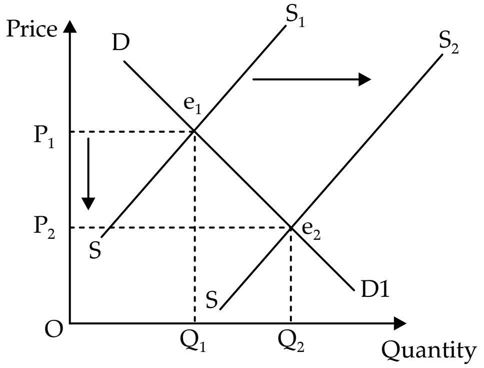
(a) Monopoly

(b) Oligopoly

(c) Perfect Competition

(d) Monopolistic Competition

(v) The diagram given below shows the change in price of cotton shirts. Which one of the following causes the equilibrium price to move from P_1 to P_2? **[1]**



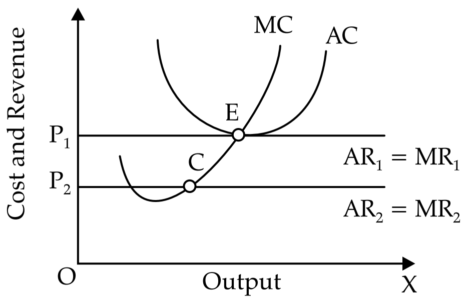
(a) Increase in excise duty on raw cotton.

(b) Expected fall in future price of cotton shirts.

(c) Fall in the price of synthetic shirts.

(d) Increase in wage rate.

(vi) Refer to the diagram given below and choose the incorrect statement. **[1]**



(a) E is the equilibrium point.

(b) The diagram shows a situation of normal profit.

(c) C is the *shut down point*.

(d) E is the *break even point*.

(vii) Government of India purchased Raffle aircrafts from France in recent times. Which one of the following market forms is applicable for this product in India? **[1]**

(a) Monopsony

(b) Monopoly

(c) Oligopoly

(d) Monopolistic Competition

(viii) Revenue receipts in the government's budget: **[1]**

(a) create liability.

(b) reduce liability and create assets.

(c) reduce assets.

(d) keep liability and assets unaltered.

(ix) If S > I, it will lead to: **[1]**

(a) excess demand.

(b) deficient demand.

(c) notional demand.

(d) actual demand.

(x) An increase in the number of firms in the market causes a rightward shift in the market supply curve, but the individual supply curve may shift leftwards. Justify the statement. **[1]**

(xi) State whether the following is True of False. Give a reason for your answer.
TVC is an avoidable cost. **[1]**

(xii) Mention *any one* difference between Induced investment and Autonomous investment. **[1]**

(xiii) Why is the demand curve for foreign exchange negatively sloped? **[1]**

(xiv) Mention *any one* difference between Balance of Trade and Balance of payment. **[1]**

(xv) How is APS obtained from APC? **[1]**

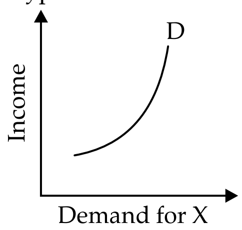
(xvi) With reference to Simple Keynesian model, give the meaning of *ex-ante demand*. **[1]**

Section-B — 32 marks

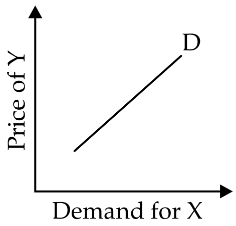
Question 2

(i) Milk is used for making curd, sweets and chocolates. What type of demand does milk have? Give a reason. **[1]**

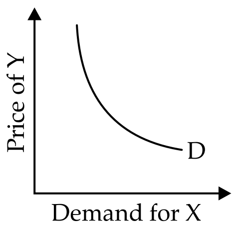
(ii) Figures (A), (B) and (C) given below represent different types of Demand curves. **[3]**



(A)



(B)



(C)

What kind of goods do each of these Demand curves represent? Give a reason for each of the curves.

Question 3

(i) A huge production of onions and lack of storage facilities have caused a continuous fall in its price. This may adversely affect the production of onions in the subsequent year. With the help of a diagram, briefly explain the measure that the government should adopt to combat this situation. **[2]**

(ii) Draw and explain Average Fixed Cost curve. **[2]**

Question 4

With the help of a diagram, explain the relationship between Average Product and total Product under the Law of Variable Proportions. **[4]**

Question 5

(i) Briefly discuss the implication of 'freedom of entry and exit' under perfect competition. **[2]**

(ii) Per unit price of electricity is higher in the Commercial sector as compared to the Domestic sector. Identify and briefly describe this phenomenon. Name the market in which it is applicable. **[2]**

OR

(i) Briefly discuss the importance of Selling Cost under oligopoly market. **[2]**

(ii) There are many manufacturers of pencils in the market who produce pencils in different designs and colours to attract children. Which market form is referred to here? Briefly explain the feature of this market form indicated in the given situation. **[2]**

Question 6

(i) What is meant by *autonomous consumption expenditure*? Show it on a diagram. **[2]**

(ii) When National Income rises from ₹ 600 cr. to ₹ 1000 cr., the consumption expenditure increases from ₹ 500 cr. to ₹ 800 cr. Calculate MPC and hence the value of Investment Multiplier. **[2]**

Question 7

(i) A large amount of fiscal deficit proves to be counter productive. Give *any two* reasons in support of this statement. **[2]**

(ii) What is meant by *no quid pro quo* of a tax? Name *any two* direct taxes. **[2]**

Question 8

(i) Categorise the following items into Current Account or Capital Account of Balance of Payment of India. **[2]**

(a) Acquisition of land in India by an American firm.

(b) Use of transport by Indian tourists in Dubai.

(c) Dividend paid to foreigners on their investment in shares in India.

(d) Loan taken by India from International Monetary Fund (IMF) to cover its BOP deficit.

(ii) Briefly explain the effect of the following on the Balance of Payment of a country. **[2]**

(a) Inflationary pressure in the economy.

(b) Appreciation in domestic exchange rate.

OR

(i) Suppose the exchange rate was \$ 1 = ₹ 80 and later changed to \$ 1 = ₹ 92. What will be its effect on the following? **[2]**

(a) Export of cotton garments by India to the USA

(b) Export of technical knowledge by the USA to India

(c) Import of wheat by India from the USA.

(d) Import of gold jewellery by the USA from India.

(ii) Briefly discuss the *fixed exchange rate system* of determining foreign exchange rate. **[2]**

Question 9

Draw a well labelled diagram and explain the circular flow of income in a four-sector model. **[4]**

Section-C — 32 marks

Question 10

(i) How is Total Revenue under perfect competition different from Total Revenue under imperfect competition? Give two points to show the difference. **[2]**

(ii) Explain the short run equilibrium of a perfectly competitive from earning supernormal profit with the help of a diagram. **[6]**

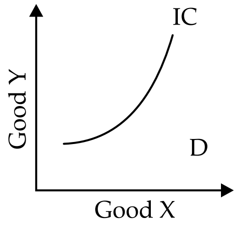
Question 11

(i) Draw a straight-line demand curve joining both the axes. Indicate the following on the demand curve. **[2]**

(a) Elasticity of demand is equal to zero

(b) Elasticity of demand is greater than one

(ii) Observe the graph given below and answer the questions that follow.



(a) Give a reason to explain if the graph shown above can be a common phenomenon or not. **[2]**

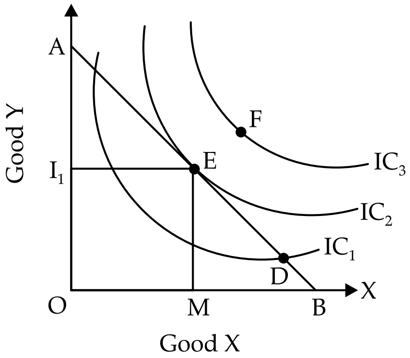
(b) What is an *indifference map*? Draw its diagram. **[2]**

(c) State *any two* differences between *cardinal utility* and *ordinal utility*. **[2]**

OR

(i) Give two differences between intended supply and actual supply. **[2]**

(ii) Refer to the diagram given below and answer the questions that follow.



(a) What does the line AB represent? Why is the line AB negatively sloped? **[2]**

(b) At which one of the given points, D, E and F, will the consumer attain equilibrium? Explain. **[2]**

(c) Briefly explain why the consumer is not in equilibrium at the other two points. **[2]**

Question 12

(i) State whether the following items will be included in the estimation of National Income or not? Give a reason for your answer. **[2]**

(a) Government expenditure on street lighting.

(b) Profit earned by State Bank of India in a foreign country.

(ii) Calculate GNP_{MP} and NNP_{FC} from the following data by Expenditure Method. **[6]**

	PARTICULARS	**₹(crores)**
(i)	Mixed income of self employed	550
(ii)	Private Final Consumption Expenditure	1100
(iii)	Net factor income from abroad	(–)120

(iv)	Net indirect taxes	250
(v)	Consumption of fixed capital	270
(vi)	Net domestic capital formation	480
(vii)	Net exports	(-)130
(viii)	Interest	300
(ix)	Government Final Consumption Expenditure	650
(x)	Indirect taxes	90
(xi)	Profits	23
(xii)	Depreciation	75
(xiii)	Factor income paid abroad	30

OR

(i) State whether the following items will be included in the estimation of National Income or not? Give a reason for your answer. **[2]**

(a) Fresh tomatoes used by a food processing company.

(b) Wooden cupboard purchased by a family.

(ii) Calculate National Income using Income method and Output method. **[6]**

PARTICULARS		**₹(crores)**
(i)	Value of output	1200
(ii)	Wages and salaries	165
(iii)	Rent	60
(iv)	Subsidies	15
(v)	Mixed income of self employed	180
(vi)	Employer's contribution to social security	15
(vii)	Value of intermediate consumption	600
(viii)	Interest	7
(ix)	Factor income earned from abroad	15

Question 13

Read the passage given below and answer the questions that follow.

The Monetary Policy Committee (MPC) increased the repo rate, at which RBI lends short term funds to the commercial banks, from 6.25 to 6.50 percent. This increase in repo rate is based on the increase in the key rate by 250 bps. The Committee also decided to continue the withdrawal of money supply in the economy.

[Source (Edited): The Economic Times. Feb 8, 2023]

(i) Which function of central bank is hinted at, in the passage given above? **[1]**

(ii) In which situation does central bank adopt the measure given in the above passage? **[1]**

(iii) Explain *any two* monetary measures that can be used to accomplish a similar objective, other than the one given in the above passage, **[4]**

(iv) Differentiate between Reserve Bank of India and Commercial banks by giving *any two* points. **[2]**

ANSWERS

Section-A

1. (i) **Option (c) is correct.**

Explanation: Price elasticity of demand = $\frac{\text{Percentage change in quantity demand}}{\text{Percentage change in price}}$

Percentage change in quantity demanded = Price elasticity of demand $\times$ Percentage change in price

Percentage change in quantity demanded = 2 $\times$ 5

Percentage change in quantity demanded = 10%

(ii) **Option (b) is correct.**

Explanation: Increasing public expenditure during a recession can stimulate economic activity, create jobs, and bolster demand, helping to mitigate the negative effects of the downturn and support economic recovery.

Governments often reduce subsidies as a measure to overcome budget deficits, aiming to decrease expenditures and improve fiscal balance.

(iii) **Option (d) is correct.**

Explanation: The point of inflexion on the total product curve corresponds to the level of output where marginal product is at a maximum.

(iv) **Option (c) is correct.**

Explanation: In perfect competition, each firm is a price taker, meaning it cannot influence the market price. As a result, the price remains constant, and the firm's average revenue is equal to the market price, which is also the demand curve for the entire market.

(v) **Option (c) is correct.**

Explanation: A decrease in the price of substitute goods (synthetic shirts) would lead producers to switch their production away from synthetic shirts toward cotton shirts, causing an increase in the supply of cotton shirts and a rightward shift of the supply curve.

(vi) **Option (d) is correct.**

Explanation: Break-even point in the production process is a point at which the firm under perfect competition neither earns profits nor makes losses.

(vii) **Option (a) is correct.**

Explanation: A monopsony market structure exists when there is only one buyer (in this case, the Government of India) in a market for a particular product or service, which is the case with the purchase of Raffle aircrafts from France.

(viii) **Option (d) is correct.**

Explanation: Revenue receipts do not involve any exchange of assets or liabilities; rather, they reflect the government's income generated from its activities. Examples include taxes as well as non-tax revenues like dividends and profits from public sector enterprises.

(ix) **Option (b) is correct.**

Explanation: When people save more money than what businesses are investing, it creates a situation where there's not enough demand for goods and services in the economy. This imbalance, known as deficient demand, can lead to economic slowdowns or recessions.

(x) Increased firm numbers lead to competition, lowering individual supply. This is because heightened competition may lead to reduced market share, increased production costs, or capacity constraints, prompting firms to produce less output at any given price level. Consequently, their supply curves shift to the left as they adjust to the changing market conditions.

(xi) **False.** TVC can be avoided by adjusting production levels, making it non-avoidable. TFC is the fixed obligation, even if nothing is produced, fixed cost has to be incurred. So it is known as unavoidable cost or supplementary cost or overhead cost.

(xii) Induced investment depends on the expected return from an existing investment, whereas Autonomous investment is not influenced by the expected return from existing investments.

(xiii) The demand curve for foreign exchange is negatively sloped because as the price (exchange rate) decreases (appreciates), demand for the foreign currency increases, and when the price increases (depreciates), demand decreases.

(xiv) The balance of trade measures the difference between a country's exports and imports of goods only, while the balance of payments includes not only goods but also services, income and financial transfers between a country and the rest of the world. It provides a comprehensive view of a country's economic transactions with other nations.

(xv) APS + APC = 1

APS = 1 – APC

Thus, the Average Propensity to Save (APS) is obtained by subtracting the Average Propensity to Consume (APC) from 1.

(xvi) In the Simple Keynesian Model, "ex-ante" demand refers to the expected or planned demand for goods and services by consumers, businesses, and the government before they actually make their purchases.

Section-B

2. (i) Milk has a derived demand, as it is sought for various products like curd, sweets, and chocolates, which drive its demand.

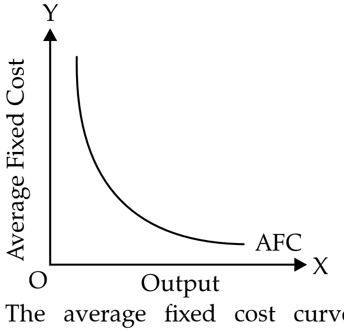
(ii) (A) Normal goods: Normal goods refer to those goods whose demand increases with an increase in income.

(B) Substitute Goods: These can be used in place of one another to satisfy a specific want. Thus, increase in price of one product increases the demand of substitute. This relationship results in an upward sloping demand curve for the substitute good experiencing increased demand.

(C) Complementary goods: Complementary goods are products that are typically used together and influence each other's demand. The demand curve for complementary goods is downward sloping, indicating that an increase in the price of one good decreases the quantity demanded of the other good.

3. (i) A price support scheme involves the government buying up excess supply of onions when prices fall below a certain threshold and then either storing them for future use or distributing them to stabilize prices. This helps to reduce the surplus in the market and prevent drastic price fluctuations.

(ii)



The average fixed cost curve possesses a distinctive shape known as a rectangular hyperbola, where the product of output quantity and AFC remains constant across all production levels, equaling total fixed costs. Additionally, AFC exhibits a characteristic behaviour whereby it declines as production increases, attributable to the spreading effect.

4. Stage 1: Increasing Returns to Scale:

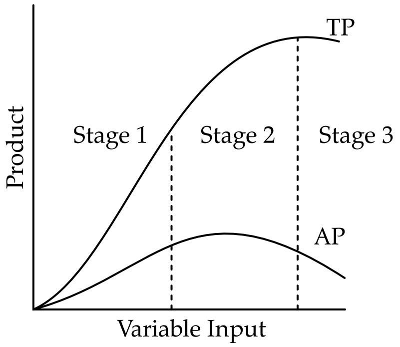
- Total product (TP) increases at an increasing rate due to the increasing productivity of the variable input in combination with the fixed inputs.
- Average product (AP) also rises during this stage because the additional output from each unit of the variable input exceeds the existing average level.
- Consequently, the AP curve lies above the TP curve, illustrating the rising productivity of the variable input.

Stage 2: Diminishing Returns to Scale:

- Total product (TP) continues to increase, but at a decreasing rate as the law of diminishing marginal returns sets in.
- Average product (AP) peaks and starts to decline as the additional output from each unit of the variable input falls below the existing average level.

Stage 3: Negative Returns to Scale:

- Total product (TP) begins to decline as the negative effects of diminishing returns outweigh the positive effects of adding more variable inputs.
- Average product (AP) falls more rapidly as the productivity of the variable input becomes increasingly inefficient.
- The AP curve lies below the TP curve in this stage, reflecting the declining average productivity of the variable input.



5. (i) 1. Freedom of entry and exit under perfect competition allows market equilibrium.

2. It encourages efficiency in production, processes and resource allocation.

3. This feature leads to price stability and consumer welfare.

4. Numerous firms compete, offering variety and lower prices.

5. Inefficient firms are forced out, redirecting resources to more productive uses.

(Any two)

(ii) Price discrimination is the practice of charging different prices for the same product or service based on factors such as location, age, income level, or other characteristics of different customer groups. This strategy allows businesses to capture more consumer surplus and potentially increase their overall profits by tailoring prices to different segments of the market.

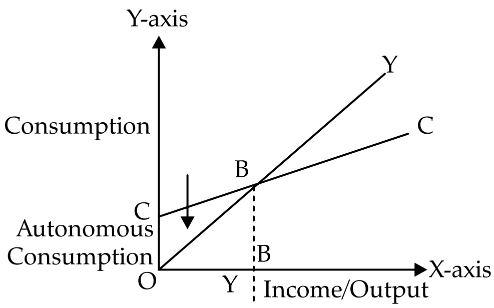
Price discrimination is a feature of monopoly market.

OR

(i) In oligopoly markets, selling costs are pivotal for firms to differentiate their products, maintain market share, and influence consumer preferences through advertising, branding, and marketing efforts. These costs serve as strategic investments to establish brand loyalty, deter potential entrants, and foster non-price competition among a small number of dominant players, ultimately shaping market dynamics and profitability within the industry.

(ii) The market form described here is Monopolistic Competition. This market structure is characterised by multiple sellers, each offering similar but differentiated products. In this case, pencil manufacturers produce various designs and colours to cater to diverse customer preferences. This feature is known as 'Product differentiation'. This differentiation allows firms to compete based on unique product features, and it is one of the main characteristics of monopolistic competition.

6. **(i)**



Autonomous consumption refers to the compulsory minimum expenditure incurred which is independent of income, so it is income inelastic. This expenditure does not depend on an individual's income.

(ii) ΔY = ₹ 1000 cr. – ₹ 600 cr. = ₹ 400 cr.

ΔC = ₹ 800 cr. – ₹ 500 cr. = ₹ 300 cr.

MPC = (ΔC / ΔY)

MPC = (₹ 300 cr. / ₹ 400 cr.)

MPC = 0.75

MPS = 1 – MPC

MPS = 1 – 0.75

MPS = 0.25

Investment Multiplier (K) = 1/MPS

K = 1 / MPS

K = 1 / 0.25

K = 4

7. **(i)** A large amount of fiscal deficit proves to be counter-productive because of:

1. **Crowding Out Effect**: When the government runs a large fiscal deficit, it needs to finance the deficit by borrowing from the domestic and international financial markets. This increased demand for funds leads to an increase in interest rates.
2. **Inflationary Pressures**: A large fiscal deficit can lead to an increase in the money supply in the economy. When the government borrows to finance its deficit, it essentially creates new money. This increased money supply can lead to higher demand for goods and services, which in turn can cause inflation.

(ii) 'No quid pro quo' in the context of taxation means that there is no direct exchange or reciprocity between the taxpayer and the government in terms of services or benefits. Taxpayers do not receive any specific benefits or services in return for paying their taxes. Taxes are levied by the government to fund public goods and services, and they are considered a civic duty.

Two examples of direct taxes are:

1. Income Tax
2. Property Tax

8. **(i)** **(a)** **Acquisition of land in India by an American company**: This transaction involves the purchase of a real asset (land) in India by a foreign entity (American company). It falls under the Capital Account of the BOP.

(b) **Use of transport by Indian tourists in Dubai and Paris**: This transaction involves the purchase of services (transportation) by Indian residents from foreign countries (Dubai and Paris). It falls under the Current Account of the BOP.

(c) **Dividend paid to foreign owners**: This transaction involves the payment of income (dividend) by Indian companies to foreign owners/investors. It falls under the Current Account of the BOP.

(d) **Loan taken by India from International Monetary Fund (IMF)**: This transaction involves borrowing (loan) by India from an international organization (IMF). It falls under the Capital Account of the BOP.

(ii) **(a)** **Inflationary pressure in the economy**:

Inflation may lead to a deterioration in the trade balance, as domestic goods become more expensive compared to imported goods. This could result in an increase in imports and a decrease in exports, causing a trade deficit and affecting BOP adversely.

(b) **Appreciation in domestic exchange rate**:

Appreciation in the domestic exchange rate can also lead to an increase in imports. When the domestic currency strengthens, imports become relatively cheaper for domestic consumers. This can stimulate demand for imported goods and lead to a rise in import levels, potentially exacerbating the trade deficit and adversely affecting the balance of payments.

OR

(i) **(a)** Increase in exports of cotton garments from India to the USA.

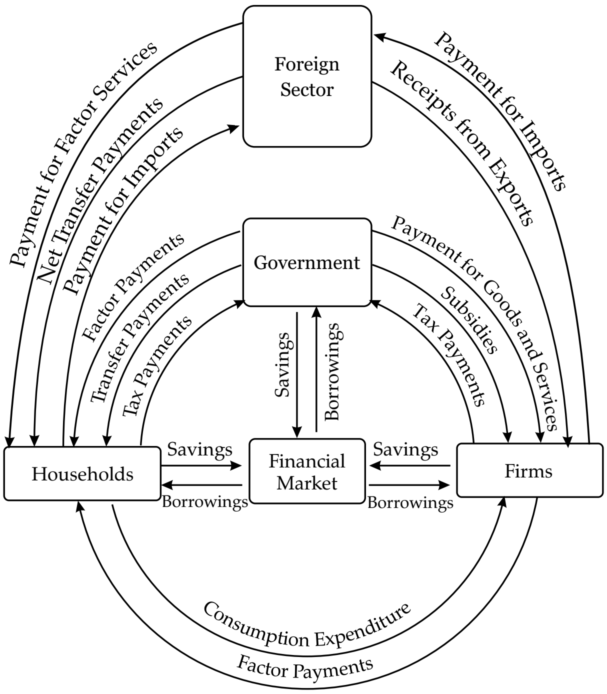
(b) Decrease in exports of technical knowledge from the USA to India.

(c) Decrease in imports of wheat by India from the USA.

(d) Increase in imports of gold jewellery by the USA from India.

(ii) A fixed exchange rate is a regime imposed by a government or central bank which ties the official exchange rate of the country's currency with the currency of another country or the gold price. The main purpose of a fixed exchange rate is to maintain stability in the country's foreign trade and capital flows.

9.



1. **Households**: Households own the factors of production (land, labour, capital, and entrepreneurship) and supply them to firms in exchange for income (wages, salaries, and profits).
2. **Firms:** Firms produce goods and services using the factors of production supplied by households.
3. **Government:** The government collects taxes from households and firms and provides transfers (such as welfare payments) back to households.
4. **Foreign Sector:** The foreign sector includes exports and imports of goods and services.
5. **Banks or Financial Markets:** Banks facilitate the flow of funds between sectors by providing loans to firms for investment and to households for consumption or investment purposes.

Section-C

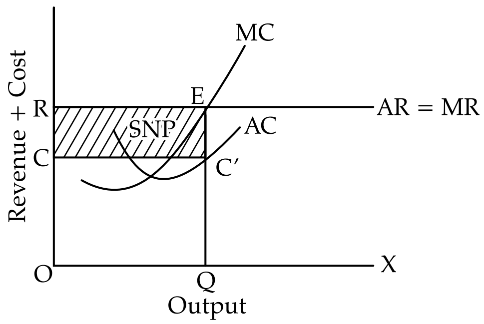
10. **(i)** **Under perfect competition:**

1. **Nature:** In perfect competition, the firm is a price taker, meaning it has no influence over the market price. The marginal revenue (MR) curve is perfectly elastic and coincides with the demand curve, and it remains constant at the market price. As a result, total revenue increases linearly with the quantity sold.
2. **Revenue Maximization:** Since marginal revenue equals price, total revenue is maximized at any quantity where marginal cost equals marginal revenue (MC = MR). This occurs at the quantity where the firm produces up to the point where MC equals the market price.

Under imperfect competition:

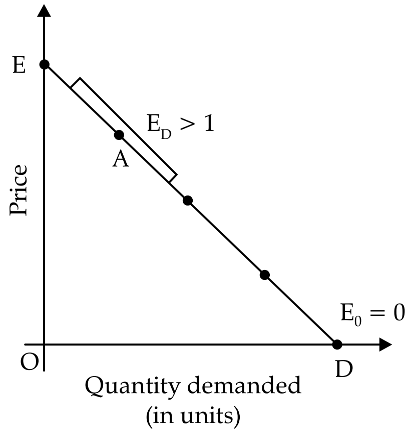
1. **Nature:** Under Imperfect competition, price or AR is lowered to sell more. As a result, MR is falling. The rate of change in TR, that is MR, initially decreases at a diminishing rate and then becomes negative. As a result, TR initially increases at a diminishing rate but soon it starts falling.
2. **Revenue Maximization:** Total revenue is maximized where marginal revenue equals zero (MR = 0). This occurs at a quantity where marginal revenue intersects with the x-axis (horizontal axis). Beyond this quantity, marginal revenue becomes negative, indicating that total revenue starts to decline.

(ii)



OR shows the AR curve of the firm which is equal to MR. The firm produces equilibrium output OQ at point E where MC cuts MR from below. For OQ output Average Cost (AQ) is QC′ which is less than AR for OQ output which shows that firm earns super-normal profits equal to the shaded area or area of rectangle RECC′ (Total profits).

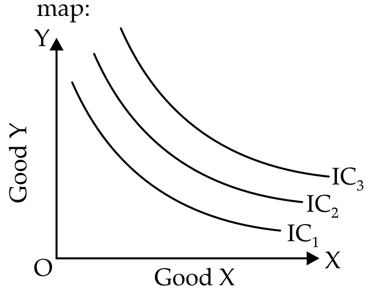
11. **(i)**



(ii) **(a)** No, it's not a common phenomenon as an indifference curve always slopes downward from left to the right, i.e. it has a negative slope. It is because of the simple reason that if the consumer wants to have more units of one good, he will have to reduce the number of units of another good, his level of satisfaction remaining unchanged, in other words, an indifference curve slope downwards because of limited income of the consumer.

(b) An indifference map is a graphical representation used in microeconomics to depict a consumer's preferences for various combinations of two goods. It shows different combinations of goods that provide the consumer with the same level of satisfaction or utility. An indifference map consists of a series of indifference curves, each representing a different level of utility or satisfaction.

Here's a simple diagram of an indifference map:



Indifference Map

(c) Difference between cardinal utility and ordinal utility:

Basis	Cardinal Utility	Ordinal Utility
Meaning	Cardinal utility is a theory that suggests that utility or satisfaction derived from consuming goods and services can be quantified or measured using numerical values.	Ordinal utility is a theory that suggests that while preferences can be ranked or ordered, the exact magnitude or measurement of utility is not necessary.
Measurement	Utility is measured in utils.	Utility is ranked based on satisfaction.

OR

(i) Difference between Intended Supply and Actual Supply:

Basis	Intended Supply	Actual Supply
Meaning	Intended supply refers to the quantity of goods or services that producers plan or intend to supply to the market at a given price level.	Actual supply refers to the quantity of goods or services that producers actually deliver to the market at a given price level.
Determinants	Primarily influenced by factors such as production capacity, technology, input costs, pricing strategies, and expected market demand.	Influenced by production capacity, resource availability, technological constraints, labour supply, raw material availability, unexpected disruptions, and changes in market demand or conditions.

(ii) **(a)** Line AB represents budget line that shows the combination of goods that can be afforded with your current income.

(b) Consumer will attain the equilibrium at point 'E'.

In terms of IC analysis, a consumer attains equilibrium when:

(i) IC and the budget line are tangent to each other, i.e. when the slope of IC equals the price ratio of the goods.

(ii) IC is convex to the origin, at the point of equilibrium.

The consumer will be in equilibrium at combination 'E' because at this point, the price line (AB) is tangent to the highest indifference curve IC_2 and it is also convex to the origin at this point.

(c) Point B will not give consumer that maximum satisfaction as it is situated on lower indifference curve IC_1. Point F is unattainable for consumer as it is beyond the budget line.

12. (i) (a) Government expenditure on street lighting:

Included as it is final expenditure of Government.

(b) Profit earned by State Bank of India in a foreign country:

Included as it is the factor income from abroad.

(ii) GNP_{MP}=Private final consumption expenditure + Government final consumption expenditure + Net domestic capital formation + Net exports + NFIA + Consumption of fixed capital

= 1,100 + 650 + 480 + (-) 130 + (-) 120 + 270

= ₹ 2,250 crore

NNP_{FC}= GNP_{MP} – Net indirect taxes - Consumption of fixed capital

= 2250 – 250 – 270

= ₹ 1,730

OR

(i) (a) Fresh tomatoes used by a food processing company:

Not included as it is a part of intermediate consumption.

(b) Wooden cupboard purchased by a family:

Included as it is considered as the consumption expenditure.

(ii) Income Method:

National Income = Compensation of Employees (Wages and salaries) + Rent + Interest + Profits + Mixed Income of Self-employed + Employer's contribution to social security + Factor income earned from abroad - Factor income paid abroad

National Income = ₹ 165 + ₹ 60 + ₹ 7 + ₹ 23 + ₹ 180 + ₹ 15 + ₹ 15 – ₹ 30

= ₹ 435 crores

Output Method:

National Income = Value of Output - Intermediate Consumption + Factor income earned from abroad – Factor income paid abroad + Subsidies – Indirect Taxes – Depreciation

National Income = ₹ 1200 – ₹ 600 + ₹ 15 – ₹ 30 + ₹ 15 – ₹ 90 – ₹ 75 = ₹ 435 crores

13. (i) Controller of credit

(ii) Excess Demand

(iii) Two other monetary measures that can be used to accomplish similar objectives include:

1. **Open Market Operations (OMO):** The central bank can conduct OMO by buying or selling government securities in the open market. When the central bank sells government securities, it reduces the reserves of commercial banks, leading to a decrease in the money supply and reduction in excess demand.
2. **Reserve Requirement Changes:** The central bank can adjust the reserve requirements of commercial banks, i.e., the percentage of deposits that banks are required to hold as reserves. By increasing reserve requirements, the central bank reduces the amount of funds available for lending by commercial banks, which can help control excess demand.

(iv) Difference between Reserve Bank of India and Commercial Banks

Basis	**Reserve Bank of India (RBI)**	**Commercial Banks**
Ownership and Control	Owned and controlled by the government of India.	Owned by private shareholders or stakeholders.
Function	Acts as the central bank of India, responsible for monetary policy formulation, regulation, and supervision of the banking sector, and issuance of currency.	Primarily engaged in mobilizing deposits from the public, providing loans and advances, facilitating payments, and offering various financial services.