

## Answers Paper I

| Question | Answer | Question | Answer | Question | Answer | Question | Answer | Question | Answer |
|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
| 01       | 4      | 11       | 1      | 21       | 3      | 31       | 5      | 41       | 1      |
| 02       | 1      | 12       | 3      | 22       | 4      | 32       | 1      | 42       | 1      |
| 03       | 1      | 13       | 2      | 23       | 3      | 33       | 2      | 43       | 3      |
| 04       | 4      | 14       | 4      | 24       | 4      | 34       | 3      | 44       | 2      |
| 05       | 4      | 15       | 1      | 25       | 2      | 35       | 2      | 45       | 3      |
| 06       | 1      | 16       | 4      | 26       | 3      | 36       | 2      | 46       | 3      |
| 07       | 3      | 17       | 4      | 27       | 1      | 37       | 1      | 47       | 2      |
| 08       | 1      | 18       | 2      | 28       | 5      | 38       | 4      | 48       | 2      |
| 09       | 4      | 19       | 1      | 29       | 3      | 39       | 4      | 49       | 3      |
| 10       | 1      | 20       | 2      | 30       | 4      | 40       | 2      | 50       | 2      |

(01 mark for each question – Total 50 Marks)

## Paper II Sub Section 'A'

1. (i) Problems related to the allocation of resources in an economy are the problems of choice or problems of fuller and efficient utilisation of limited resources to satisfy maximum number of wants. Problems related to the allocation of resources in an economy arise primarily due to the presence of scarcity.
  - Human desires for goods and services are virtually unlimited, driven by changing tastes, preferences, and evolving needs. As a result, there is constant pressure on resources to meet these diverse and expanding demands. Resources, including land, labor, capital, and entrepreneurship, are limited in supply relative to the unlimited wants and needs of society. This inherent scarcity necessitates choices and trade-offs in resource allocation.
  - **Resources have alternative uses.** The resources are not only scarce in supply but they also have alternative uses. A choice between the alternative uses of resources has to be made. This problem of choice leads to economic problems.
  - **Resource heterogeneity:** Resources differ in terms of quality, location, and suitability for various purposes. This diversity of resources makes it challenging to allocate them efficiently to meet different needs and wants.
  - **Information asymmetry:** In many cases, individuals and organizations do not have perfect information about the availability and suitability of resources. This information gap can lead to inefficient resource allocation decisions.
  - **Market imperfections:** Imperfections in markets, such as monopolies, oligopolies, externalities, and public goods, can distort the allocation of resources away from their optimal use.
  - **Distributional concerns:** Allocation decisions are also influenced by concerns about income distribution and social justice. Economic systems often grapple with questions of equity and fairness in resource allocation.
  - **Cultural and institutional factors:** Societal norms, cultural values, and institutional frameworks play a significant role in resource allocation. These factors can either facilitate or hinder efficient allocation, depending on the context.
  - **Political and special interests:** Political considerations and the influence of special interest groups can lead to resource allocation decisions that prioritize certain groups or industries over others, even if such decisions are not economically efficient.
- (ii) Renewable resources are natural resources that can be replenished or regenerated naturally over time, either through natural processes or human interventions.
  - These resources are considered sustainable because they can be utilized or exploited without depleting their stock permanently.

### **Examples:**

|                    |                   |                 |
|--------------------|-------------------|-----------------|
| Solar energy       | Geothermal energy | Wind energy     |
| Tidal energy       | Biofuels          | Wood and timber |
| Plant-based fibers | Fish in the ocean | Biomass energy  |

- (iii) The division of labor contributes to increased productivity and efficiency in production processes through several key mechanisms :
  - **Specialization:** When workers specialize in performing specific tasks or processes, they become more skilled and efficient at those tasks over time. This specialization allows them to complete their work more quickly and accurately.
  - **Reduction in skill replication:** Instead of each worker needing to master a wide range of skills, they can focus on mastering a narrower set of skills. This reduces the time and effort required for skill replication across the work force.
  - **Time efficiency:** When workers are specialized, they don't need to switch between different tasks frequently. This minimizes the time wasted on transitioning between activities, leading to a smoother workflow.
  - **Economies of scale:** Specialization often leads to large-scale production, which can result in economies of scale. As the volume of production increases, the cost per unit of output decreases, making the production process more efficient.
  - **Innovation and technology:** When workers specialize in specific tasks, they may discover ways to streamline and improve those tasks. This can lead to innovations and the development of new technologies or techniques that enhance efficiency.

- **Standardization:** Division of labour can lead to standardized processes and procedures, which reduce variability in production. This consistency can improve product quality and reduce errors.
- (iv) **Lack of incentives:** In command economies, individuals and businesses may lack the strong financial incentives present in market economies. Since production decisions are often dictated by the government, there may be less motivation for innovation, efficiency, and hard work.
- **Resource misallocation:** Central planners may not always allocate resources efficiently or in accordance with consumer preferences. This can result in surpluses of unwanted goods and shortages of desired ones. Resource misallocation can lead to economic inefficiency and waste.
- **Bureaucratic inefficiency:** Command economies tend to have large bureaucracies responsible for decision-making, which can be slow, cumbersome, and prone to corruption. This inefficiency can hinder economic growth and responsiveness to changing conditions.
- **Lack of consumer choice:** In command economies, consumers often have limited choices when it comes to products and services. Since the government controls production, there may be a lack of variety and innovation in the marketplace, leading to consumer dissatisfaction.
- **Difficulty in responding to changing conditions:** Command economies may struggle to adapt to changing economic conditions and technological advancements. The rigid nature of central planning can make it challenging to respond quickly to new opportunities or crises which can hinder economic development.
- Black markets would explode due to price controls.
- Government monopoly: Absence of competition leads to inefficiency in resource utilization.
- Slow economic growth.

- (v) An economy's current choice of positions on its production possibilities curve helps determine the future location of that curve. Consider an economy as being able to produce two goods, capital goods and consumer goods. It can choose any point on the production possibilities curve (PPC) representing different combinations of capital goods and consumer goods. For current production, if it focuses on the production of more consumer goods and fewer capital goods, the people in the economy will be able to enjoy a higher standard of living today. But its ability to enhance production of the goods and services in the future would be very weak. Capital goods are the ingredients of economic growth. As it allocates less resources to capital goods, the outward shifting of the future PPC would be smaller indicating a very low economic growth.
- This situation is clearly exhibited in Figure (a). Current choice to produce more consumer goods and fewer capital goods as represented by point P, will result in a modest outward shift of the PPC in the future.

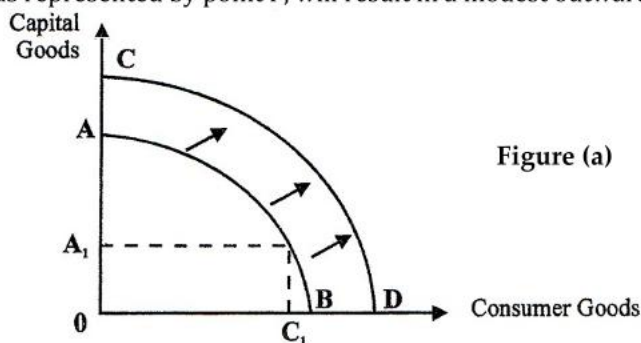


Figure (a)

- A country that allocates more resources in the present to the production of capital goods than to consumer goods will have more of both kinds of goods in the future. In other words, the country will experience more economic growth. This is because consumer goods are used to satisfy present wants, whereas capital goods are used to satisfy future goods. A decision for greater growth typically involves the sacrifice of present consumption.
- Figure (b) shows how the degree of outward shift of a country's PPC is affected when it makes a current choice at point F that stresses larger amount of capital goods and smaller amount of consumer goods. This will result a greater outward shift of the PPC indicating a very high level of economic growth.

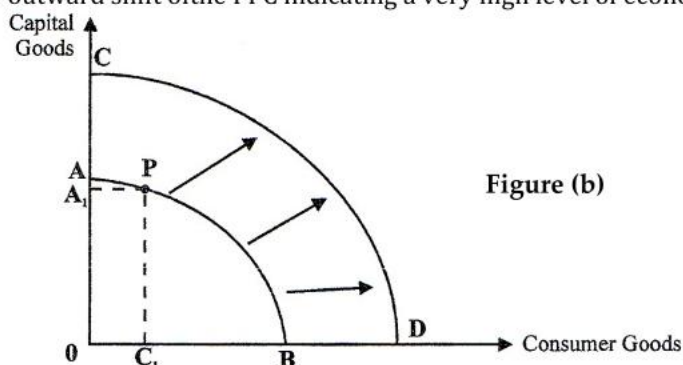


Figure (b)

2. (i)

- **Normal Good:** A normal good is a type of good for which the quantity demanded increases as consumer income rises, and it decreases as consumer income falls. These goods have a positive income elasticity of demand, meaning that as income increases, the demand for these goods increases.
- **Inferior Good:** An inferior good is a type of good for which the quantity demanded increases as consumer income falls, and it decreases as consumer income rises. Inferior goods have a negative income elasticity of demand, indicating that as income decreases, the demand for these goods increases.

- **Giffen Good:** A Giffen good is a special type of inferior good where the quantity demanded paradoxically increases as the price of the good rises and decreases as the price falls, all other factors being equal.

(ii) **Rationing function:** Prices help ration scarce resources.

- **Signaling function:** Prices convey information about the relative scarcity or abundance of goods and services in the market.
- **Provide incentives to producers and consumers:** If the price of a particular good increases, it signals to producers that consumers want more of it, prompting them to increase production. When prices are high consumers may choose to substitute with lower-priced alternatives or reduce consumption.

(iii) **Rise in marginal cost of production:** Marginal cost of production increases with an increase in the quantity produced. There are two reasons for the increase in marginal cost when output expands:

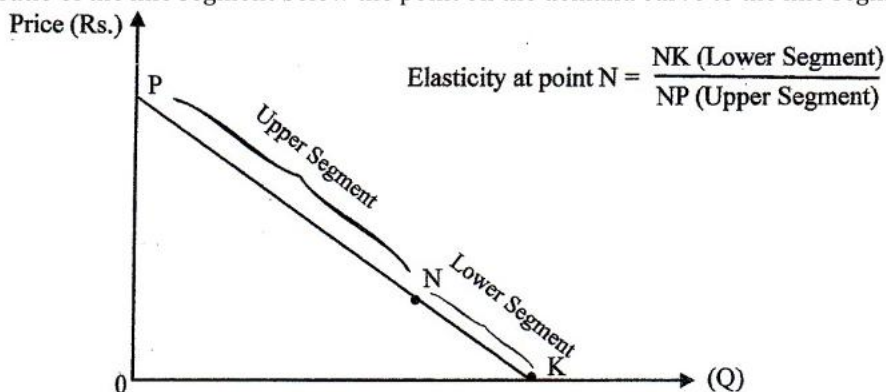
- **The Law of Increasing Opportunity Cost:** The Law of Increasing Opportunity Cost states that as the production of one good increases, the opportunity cost of producing an additional unit of that good tends to increase. This is because resources are not equally suited to all tasks, and some resources are better suited to producing one type of good over another.
- **Diminishing marginal product:** In the short run in order to expand output as additional units of a variable input are added to the production process while keeping other inputs constant, the marginal product of each additional unit will eventually decrease. Diminishing marginal product is often a cause of increasing marginal cost. It means that each additional unit of input contributes less to the total output. As a result, the cost of producing an additional unit of output (marginal cost) tends to rise because more input is required for the same level of output. Thus, producers may be willing to supply more at higher prices to offset the diminishing returns.
- **Profit motive of individual firms:** Levels of price determine the amount of profits. Higher is the price of the commodity, the greater is the incentive for the producer to produce and supply in the market, other things remaining the same. When the price of a good or service rises, it becomes more profitable for producers to increase the supply of that good or service.

(iv)

- Use price elastic formula:  $\frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$
- At higher price range value of  $\frac{P}{Q}$  is larger. P has a higher value and Q has a lower value.
- At a lower price range value of  $\frac{P}{Q}$  is smaller. P has a smaller value and Q has a higher value.
- Though the value of  $\frac{\Delta Q}{\Delta P}$  is same for both higher and lower price ranges. The ratio  $P/Q$  has a higher value at higher price ranges than at lower price ranges. Therefore, the price elasticity of demand is higher at higher price ranges than at lower price ranges.

#### ALTERNATIVE ANSWER:

- Geometric method of measuring elasticity of demand is the method where the elasticity of demand is measured by taking the ratio of the line segment below the point on the demand curve to the line segment above the point.



- According to this method, any point on the linear demand curve which lies below the mid-point has a elasticity value smaller than the elasticity values at points above the mid-point.

(v) (a) **Income effect:**

- The income effect is the change in the quantity demanded of a good or service that results from a change in real income (purchasing power) due to a change in price of the good when other things remain unchanged.
- When the price of a good falls, consumers effectively have more real income to spend because they can purchase the same quantity of the good for less money. As a result, they may choose to buy more of that good or may allocate some of their increased income to other goods.

- **Substitution effect:**

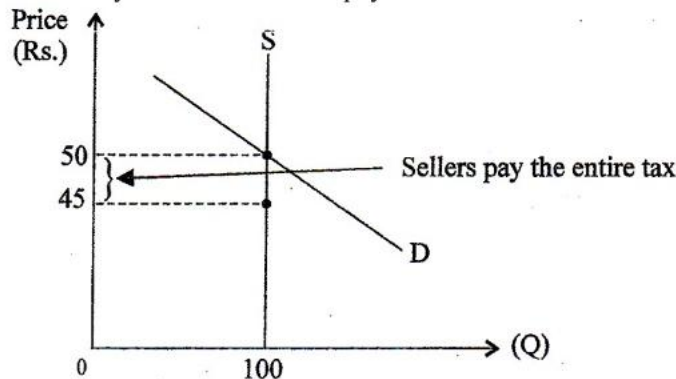
The substitution effect is the change in the quantity demanded of a good or service that results from a change in its relative price compared to the prices of other goods.

- When the price of a good falls, it becomes relatively cheaper compared to other goods that have not changed in price. Consumers may substitute the now cheaper good for other, relatively more expensive goods.
- When the price of the good rises, it becomes relatively expensive compared to other goods that have not

changed in price. Consumers may reduce the quantity demanded of a relatively expensive good and buy more of its substitutes.

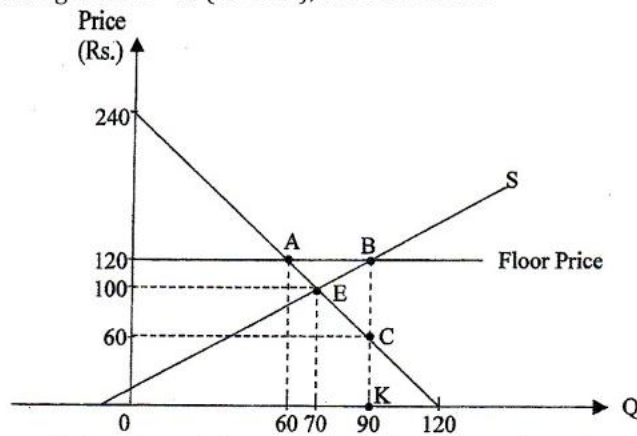
- (b) The Law of Demand states other things remaining the same, the higher the price of a good, the smaller is the quantity demanded; and the lower the price of the good, the greater is the quantity demanded.
- The Law of Demand can be thought of as the combined effect of the income and substitution effects. When the price of a good falls, the quantity demanded generally increases due to both effects. When the price of a good rises, the quantity demanded generally falls due to both effects.

3. (i) A unit tax on a good can leave both the market price and the quantity bought unaltered under specific circumstances, which typically involve unique conditions in the market. When supply is perfectly inelastic, the entire tax is borne by the seller. Market price and the quantity remain unchanged. The tax reduces the price received by the seller.
- The diagram below shows a perfectly elastic supply curve (S) and a normal demand curve (D). With no tax price is Rs. 50 and quantity bought is 50 units. Suppose this good is taxed at Rs. 5 per unit. The supply curve does not change, though the price they receive falls to Rs. 45 per unit, because it is perfectly inelastic. The tax reduces the price received by sellers and sellers pay the entire tax.



- (ii) (a) False: Consumer surplus is shown graphically as the area below the demand curve and above the market price line. It represents the difference between the price that the consumers are willing to pay and the actual market price that they face in the market. Therefore, it's the area between the demand curve and the market price line and not the area above the supply curve and below the demand curve.
- (b) False: An increase in the market price due to a decrease in supply cannot increase consumer surplus. Consumer surplus is graphically shown as the area between the demand curve and the price, up to the quantity demanded. When the price rises due to reduced supply, the quantity demanded will fall. This results in a decrease in consumer surplus.
- (c) False: If the market price of a good falls as a result of a decrease in demand, additional producer surplus cannot be generated. Producer surplus is graphically shown as the area between the supply curve and the price, up to the quantity supplied. When the demand decreases, the price will fall as producers are not willing to supply the same quantity at the lower price. In this case, the producer surplus would be reduced.
- (iii) (a) Setting the  $Q_D$  equal to  $Q_S$
- $120 - 0.5P = -30 + P$
  - $0.5P + P = 120 + 30$
  - $1.5P = 150$        $P = 150 \div 1.5P = 100$
  - Equilibrium price = Rs. 100
  - **The equilibrium quantity:**
  - $Q_D = 120 - 0.5P$
  - $Q_D = 120 - 0.5(100)$        $Q_D = 120 - 50$        $Q_D = 70$
  - The equilibrium quantity = 70 million units
- (b) With a price floor set at Rs. 120 per kilogram, the government imposes a minimum price at which paddy can be sold. To find the excess supply, we compare the quantity supplied and quantity demanded at the price floor.
- Quantity supplied at the floor price =  $Q_S = -30 + 120 = 90$  million units
  - Quantity demanded at the floor price =  $Q_D = 120 - 0.5(120) = 120 - 60 = 60$  million units
  - Excess supply = Quantity supplied at the floor price - Quantity demanded at the floor price =  $90 - 60 = 30$  million units.
- (c) The cost of the programme to the government can be calculated by multiplying the excess supply by the price floor.
- Cost to the government = Excess supply x Price floor
  - Cost to the government = 30 million units x Rs. 120
  - Cost to the government = Rs. 3,600 million
- (d) Deadweight loss represents the loss of economic efficiency due to the price support policy. It can be calculated as the area of the triangle formed by the difference between the supply and demand curves covering inefficient quantity of output resulting from the price floor.
- Inefficient quantity of output (over-production):  
Quantity supplied at the Floor price - the equilibrium quantity

- $90 - 70 = 20$  million units
- Calculate the deadweight loss as the area of the triangle formed around inefficient quantity of output:
- Deadweight Loss =  $\frac{1}{2} \{ \text{Inefficient quantity of output } (90 - 70) \times (\text{Marginal cost of the quantity supplied at floor price } (B - K = 120) - \text{Marginal Benefit of the quantity supplied at floor price } (C - K = 60)) \}$
- Deadweight Loss =  $\frac{1}{2} \{ 20 \times (120 - 60) \}$
- Deadweight Loss =  $\frac{1}{2} (20 \times 60)$ ; Rs. 600 million



4. (i) Accounting profit is a financial measure calculated by subtracting explicit costs (direct costs) from total revenue. It represents the profit reported in a firm's financial statements and is based on generally accepted accounting principles.
- Economic profit is a broader measure that considers both explicit costs and implicit costs. Implicit costs include the foregone income or returns that could have been earned if resources (such as the owner's time and capital) were used in their next best alternative use. The sum of explicit cost and implicit cost is called economic cost or opportunity cost. Thus, economic profit is calculated by subtracting opportunity cost from the total revenue.
- (ii) **The features of an oligopolistic market:**
- The number of firms is small but the size of the firms is large
  - Homogeneous or differentiated product
  - Mutual interdependence among firms
  - Barriers to entry
  - Price rigidity
  - Non-price competition
  - Collusion possibility
  - Kinked-demand curve
- (iii) In a perfectly competitive market, a firm is considered a price taker because it has no control over the market price and cannot choose the price at which it sells its products. This characteristic is a fundamental aspect of perfectly competitive markets and is based on several key assumptions.
- These assumptions are: (a) numerous sellers and buyers (b) homogeneous products (c) perfect information (d) ease of entry and exit. Under the circumstances, individual firms have no market power to influence prices. As a result, each firm simply accepts the market price and adjusts its production quantity to maximize its profit at that price.
- (iv) (a) Total Revenue (TR) = Price (P) x Quantity sold (Q)
- Marginal Revenue (MR) = Change in Total Revenue ( $\Delta TR$ ) + Change in quantity sold ( $\Delta Q$ )
  - Given price (P), Rs. 200 per kilogram and Quantity sold (Q) = 50 kilograms
  - Total revenue (TR) =  $200 \times 50$
  - Total revenue (TR) = Rs.10,000
  - Marginal Revenue (MR): Since Sarath is selling 50 kilograms per week, and he sells an additional kilogram at a constant price of Rs. 200, his Marginal Revenue (MR) is also Rs. 200.
- (b) To determine if Sarath is maximizing profit, it is necessary to compare his marginal cost (MC) to his Marginal Revenue (MR). In perfect competition, profit maximization occurs where MC equals MR. In this case, his marginal cost is Rs. 150 per kilogram, and his marginal revenue is Rs. 200 per kilogram. Since MR (Rs. 200) is greater than MC (Rs. 150), Sarath is not maximizing his profits.
- To maximize profit, Sarath should produce more carrots until MC equals MR. In a perfectly competitive market, this point is where the two curves intersect. Since MR is greater MC he should increase his output until they are equal.
- (c) At the output level of 30 kgs. Sarath's marginal cost is Rs. 100 per kilogram, and his marginal Revenue is also Rs. 100 per kilogram. Since MR (Rs. 100) is equal to MC (Rs. 100), Sarath is maximizing his profit (or minimizing losses).
- Economic profit (or loss) = Total Revenue (TR) - Total Cost (TC)
  - Total Revenue (TR) =  $100 \times 30$  = Rs. 3,000
  - Total cost (TC) = Average Total Cost (ATC) x Q
  - ATC = Average Variable Cost (AVC) + Average Fixed Cost (AFC)
  - $= 80 + 40$  = Rs.120
  - Total Cost (TC) =  $120 \times 30$  = 3,600

- Now, we can calculate the profit or loss:
- Economic profit (or loss) = Total Revenue (TR) – Total Cost (TC)
- Economic profit (or loss) = Rs.3,000 – Rs.3,600 = - Rs.600
- Sarath is not making an Economic profit; He is incurring a total loss of Rs. 600 or an average loss of Rs.20 per kilogram.

5. (i) (a) This event would lead to a decrease in GDP. GDP (Gross Domestic Product) measures the total value of final goods and services produced within a country's borders over a specific period. A decrease in parliamentary salaries means a reduction in government spending which is a component of GDP (government consumption). As government spending decreases, it contributes less to the overall GDP, resulting in a lower GDP figure.
- (b) The purchase of land does not immediately affect GDP because GDP measures the value of goods and services produced. The land purchase itself is a financial transaction and not a production activity.
- (c) This event would not affect GDP. When a retired worker receives an increase in pension allowance, it represents a transfer payment from the government. Transfer payments are not included in GDP because they do not represent production.
- (d) An increase in firm inventories directly contributes to GDP. When firms increase their inventories, it implies that they are producing more goods than are currently being sold. This production activity adds to the value of goods produced and is counted in GDP as part of gross domestic capital formation. It reflects the value of goods produced but not yet sold, which contributes to the current period's GDP.
- (ii) Gross Domestic Income (GDI) is a measure of the total income generated within a country's borders during a specific time period, GDI includes various sources of primary income, which are typically categorized into the following main components:
- Wages and Salaries:
  - Profits
  - Interest and Investment Income
  - Rental Income

#### **Alternative Answer (1):**

- Primary incomes are incomes that accrue to institutional units as a consequence of their involvement in processes of production or ownership of assets that may be needed for purposes of production. Main components of primary income are the following:
  - **Compensation of employees:** This represents the income accruing to individuals in return for their labour input into production processes.
  - **Property income:** Property income is that part of primary incomes that accrues by lending or renting financial or natural resources, including land, to other units for use in production.
    - Interest
    - Profit
    - Rent
  - **Taxes less subsidies on production and imports:** Primary incomes of government.

#### **Alternative Answer (2):**

- Compensation of employees.
  - Gross operating surplus.
  - Gross mixed incomes.
  - Taxes less subsidies on production and imports.
- (iii) When the government increases transfer payments by Rs. 100 billion and simultaneously increases taxes by the same amount, the net effect on the economy is generally neutral in terms of total income or aggregate demand. This is often referred to as a "fiscal wash" or "fiscal neutrality."
- When the government increases transfer payments, disposable income of the recipients rises by Rs. 100 billion. At the same time, the government raises taxes by an equal amount. Taxes reduce the disposable income of taxpayers By Rs. 100 billion. The net effect on the economy is that the increase in disposable income due to transfers is offset by the decrease in disposable income due to higher taxes.

(iv) (a)  $Y = C + I + G + NX$

$$Y = 420 + 0.8 Y_D + 160 + 100 + (-40)$$

$$Y = 420 + 0.8 (Y + Tr. - T) + 260 - 40$$

$$Y = 420 + 0.8 (Y + 200 - 250) + 260 - 40$$

$$Y = 420 + 0.8Y + 160 - 200 + 220$$

$$Y = 420 + 0.8Y + 180$$

$$Y = 600 + 0.8Y$$

$$0.2Y = 600 \quad Y = 3000 \quad \text{Rs.3000 billion}$$

- (b) Disposable National Income ( $Y_D$ ) = Gross National Income + Net current transfers received from the rest of the world — Net direct taxes (on income and wealth) paid to the rest of the world
- Net current transfers received from the rest of the world = 0
  - Net direct taxes (on income and wealth) paid to the rest of the world = 0
  - Disposable National Income ( $Y_D$ )  $3000 + 0 - 0 = \text{Rs. 3000 billion}$
  - Aggregate savings = Private savings ( $S_P$ ) + Government savings ( $S_G$ )
  - Private savings ( $S_P$ ) = Disposable Personal Income - Private consumption (C)
  - Private savings ( $S_P$ ) =  $Y_D - \{420 - 0.8 (Y_D)\}$

- $Y_D$  (Disposable private income) =  $Y + \text{Transfer payments} - \text{Autonomous taxes} = 3000 + 200 - 250 = 2950$
- Private savings ( $S_P$ ) =  $2950 - \{420 + 0.8(2950)\} = 2950 - 2780 = 170$
- Government savings ( $S_G$ ) =  $\text{Net taxes (NT)} - \text{Government purchases (G)} = (250 - 200) - 100 = -50$
- Aggregate savings =  $(S_P) + (S_G) = 170 + (-50) = \text{Rs. 120 billion}$

**Alternative Answer (1) :**

- Aggregate savings ( $S$ ) = Disposable National Income ( $Y_D$ ) - Final consumption
- Final Consumption = Private consumption + Government consumption
- Final Consumption =  $2780 + 100 = 2880$
- Aggregate savings ( $S$ ) =  $3000 - 2880 = \text{Rs. 120 billion}$

**Alternative Answer (2):**

- Aggregate savings ( $S$ ) = Gross Domestic Capital Formation ( $I$ ) + Net Exports ( $NX$ )
- Aggregate savings ( $S$ ) =  $160 + (-40) = 120 \text{ billion}$

(c) To find out how much investment spending ( $I$ ) would have to change to reach an equilibrium at Rs. 4000 billion, we can use the investment multiplier model.

- We already found that the equilibrium level of national income ( $Y$ ) is Rs. 3,000 billion.
- To reach an equilibrium at Rs. 4,000 billion, we need to find the difference:

- Change in  $Y$  ( $\Delta Y$ ) = Desired  $Y$  - Initial  $Y$
- Change in  $Y$  ( $\Delta Y$ ) =  $4000 - 3000$   $\Delta Y = \text{Rs. 1000 billion}$

- Investment multiplier ( $k$ ) =  $\frac{1}{MPS} = \frac{1}{1 - MPS} = \frac{1}{1 - 0.8} = \frac{1}{0.2} = 5$

- Required. Investment spending ( $I$ ) to increase income level by Rs. 1000 billion =

$$\Delta I = \frac{1000}{5} = 200 \quad \text{Rs. 200 billion}$$

**Sub Section 'B'**

6. (i) The GDP deflator measures the general price level of all final goods and services produced within an economy. It reflects changes in the prices of goods and services consumed by households, businesses, and the government, as well as those used in investment and exports.
- The CPI specifically measures changes in the prices of a fixed basket of goods and services that are typically purchased by households. It focuses on goods and services consumed by a representative sample of households and is primarily used to assess changes in the cost of living for consumers.
  - The GDP deflator covers all domestically produced goods and services within an economy. On the other hand, CPI includes foreign or imported goods in addition to domestically produced goods and services.
  - The CPI assigns fixed weights to the prices of different goods, whereas the GDP deflator assigns changing weights. In other words, the CPI is computed using a fixed basket of goods, whereas the GDP deflator allows the basket of goods to change over time as the composition of GDP changes.
  - The fixed basket goods used in CPI calculations is static and sometimes misses changes in prices of goods outside of it. Since GDP isn't based on the basket of goods and services and the GDP price deflator automatically covers changes in consumption patterns or the introduction of new goods and services, it is a better indicator of where the economy stands than the CPI.

**(ii) The costs of inflation:**

- Inflation erodes the purchasing power of money. As prices rise, a given amount of money can buy fewer goods and services. This means that consumers may need to spend more to maintain their standard of living. It can particularly hurt people living on fixed incomes.
- High or volatile inflation can create uncertainty in the economy. Businesses may struggle to plan for the future, as they are unsure about the future value of money, costs, and prices. This can lead to reduced investment and economic instability.
- Central banks may raise interest rates to combat high inflation. Higher interest rates can make borrowing more expensive, reducing consumer spending and business investments. It can also negatively impact industries sensitive to interest rates, such as housing and construction.
- Inflation can distort price signals in the economy. When prices are rising due to inflation, it becomes challenging to distinguish between price changes driven by inflation and those driven by changes in supply and demand. This can lead to suboptimal economic decision making.
- Firms may incur costs in adjusting their prices to keep up with inflation. Frequently firms may incur costs in adjusting their prices to keep up with inflation. Frequent price lists, update software, and adjust marketing strategies.
- Inflation can redistribute income and wealth within society. Debtors may benefit from inflation because they are repaying loans with money that has less purchasing power. Conversely, creditors may lose because the real value of their loans is reduced.
- High inflation can erode a country's international competitiveness. When a country's currency depreciates due to inflation, its exports may become cheaper for foreign buyers, but imports become more expensive. This can lead to trade imbalances and affect industries that rely on international trade.
- Inflation can discourage saving and long-term investment. When the real return on savings (adjusted for inflation) is low or negative, individuals and institutions may be less inclined to save or invest in productive assets.
- Extremely high inflation or hyperinflation can lead to social and political unrest. It can erode trust in the currency

and financial institutions, leading to hoarding of goods, barter systems, and a breakdown in economic activity.

(iii) High-powered money which is also called reserve or base money is the monetary base upon which a much bigger stock of monetary aggregates is built. It is one of the principal determinant of the nation's money supply.

- High-powered money consists of (a) currency held by the public and the commercial banks and (b) deposits held by the commercial banks with the central Bank.

The formula for high-powered money (H) is as follows:  $H = C$  (currency) +  $R$  (reserves in the banking system).

**- The factors that determine the stock of high-powered money in the economy:**

- There are two channels of releasing high-powered money from the Central Bank to the economy. One is acquiring domestic assets through lending to the government and commercial banks.
- The other channel is the Central Bank's purchase of foreign exchange from the government and commercial banks.
- Central Bank's Policy: The central bank has direct control over the monetary base. It can influence the money supply by changing the amount of high-powered money through open market operations, adjustments to reserve requirements, or changes in the discount rate. For example, the central bank can purchase or sell government securities in the open market, which affect the reserves of commercial banks and consequently, the monetary base.
- Currency demand: The amount of currency in circulation (C) is influenced by public preferences for holding cash as a medium of exchange. Factors such as changes in economic conditions, consumer sentiment, and payment habits can affect the demand for physical currency.

(iv) To calculate the excess reserves of the bank, you first need to determine the required reserves and then subtract them from the actual reserves.

- Given the Demand Deposits = Rs. 2000 billion
- Required reserve ratio = 10%
- Required Reserves = Demand Deposits x Required Reserve Ratio
- Required reserves = Rs. 2000 billion x 10% = Rs. 200 billion
- Actual Reserves = Rs. 500 billion
- Excess Reserves Actual Reserves - Required Reserves
- Excess Reserves = Rs. 500 billion - Rs. 200 billion = Rs. 300 billion

(v) The Central Bank can use several tools to pursue a contractionary monetary policy, which is aimed at reducing the money supply in the economy to control inflation and cool down.

- **Increase in the Policy Interest Rates:** By increasing this key interest rate, the central bank makes borrowing more expensive for banks and consumers. This, in turn, reduces consumer spending and business investments, leading to a decrease in the money supply as people borrow less.
- **Open Market Operations:** The central bank can conduct open market operations by selling government securities in the open market. When the central bank sells government bonds to banks and other financial institutions, it absorbs money from the banking system. As a result, banks have less money to lend, which reduces the overall money supply in the economy.
- **Raise the Statutory Reserve Ratio:** When the reserve requirement is increased, banks must hold more funds in reserve and have less money available for lending to consumers and businesses. This reduction in the lending capacity of banks reduces the money supply.

7. (i) **External benefits (positive externalities):** External benefits occur when the production or consumption of a good or service generates benefits for third parties who do not directly participate in the transaction.

- **Under-production:** In the presence of positive externalities, the market tends to produce less of the goods or services providing benefits to society than is socially optimal. This is because producers do not capture all the societal benefits in their pricing decisions, leading to under-allocation of resources to these activities.
- **External costs (Negative externalities)** occur when the production or consumption of a good or service imposes costs on third parties who are not compensated for those costs.
- **Over-production:** When negative externalities are present, the market tends to produce more of the goods or services causing harm to others than is socially desirable. This is because producers do not take into account the external costs in their pricing decisions. As a result, resources are allocated inefficiently, leading to an overallocation of resources towards harmful activities.

(ii) **Examples for merit goods:**

- |                         |                            |                       |                |
|-------------------------|----------------------------|-----------------------|----------------|
| - Education             | Vaccinations               | Healthcare            | Healthy eating |
| - Arts and culture      | Environmental conservation |                       | Libraries      |
| - Public Transportation | Museums                    | Renewable energy      | Housing        |
| - Information           | Safety equipment           | Sports and recreation |                |

- Merit goods are goods that have positive externalities, meaning that their consumption not only benefits the individual but also generates additional benefits for society as a whole. They are often under-consumed in the absence of government intervention because individuals may not fully consider the societal benefits when making consumption choices. The private market may not produce and consume these goods in optimal quantities.
- Incomplete information: Consumers may not have complete or accurate information about the positive externalities associated with merit goods. As a result, they might underestimate the true benefits and, consequently, under-consume these goods.
- Long-term benefits: Merit goods often provide long-term benefits, such as improved health, education, or environmental sustainability. Individuals may prioritize short term benefits and discount the long-term advantages, leading to under-consumption in the absence of externalities.

(iii) The excess burden of taxation, also known as deadweight loss, refers to the economic inefficiency due to

misallocation of resources that arises when taxes are imposed. This is called excess burden because it is an additional burden to the financial burden of the tax.

- It represents the loss of economic welfare that occurs because taxes distort incentives and alter the behavior of consumers and businesses. Taxes can lead to a misallocation of resources as businesses and individuals make decisions to minimize their tax liability.

(iv) As per the Budget 2022, the Government imposed a retrospective one-off surcharge tax of 25 per cent on individuals, companies, and partnerships whose taxable income for the 2020/2021 tax assessment year exceeded Rs.2.0 billion.

- VAT on financial services was increased from 15 per cent to 18 per cent with effect from January 2022.
- Raising the VAT rate from 8 percent to 12 percent in May 2022 and to 15 percent in September 2022, and reducing the VAT registration threshold from September 2022;
- The threshold turnover per annum for VAT registration was brought down to Rs. 80.0 million from Rs. 300.0 million with effect from 01 October 2022, thereby broadening the tax base.
- Effective from 01 October 2022, a Social Security Contribution Levy of 2.5 per cent on turnover was imposed on importers, manufacturers, service providers, annual turnover exceeds Rs. 120.0 million.
- In December 2022 the income tax structures were revised for both individuals and corporates. The tax-free threshold for personal income taxes was revised to Rs. 1.2 million per annum from Rs. 3.0 million; Expenditure relief of Rs.1.2 million granted for expenditure incurred on account of education, health, interest paid on housing loans, contributions to pension scheme, etc., was removed;
- Personal income tax rates were revised upward to 6 per cent, 12 per cent, 18 per cent, 24 per cent, 30 per cent, and 36 per cent compared to previous 6 per cent, 12 per cent, and 18 per cent; revision of tax brackets to Rs. 0.5 million for the income above Rs. 1.2 million tax free threshold.
- Introduction of mandatory withholding taxes starting from January 2023;
- Upward revision of corporate income tax rate to 30 per cent, while removing sector specific corporate income tax exemptions and concessionary rates granted for companies.

(v) **Importance of the balance of the primary account in determining the sustainability of public debt of a country.**

- The primary account balance is a crucial indicator for assessing debt sustainability in a country. It measures the fiscal health of a government and its ability to service its debt without accumulating further debt.
- **Debt service capacity:** The primary account balance reflects a government's ability to cover its current expenditures (excluding interest payments) with its current revenues. When the primary balance is positive, it indicates that the government can cover its non-interest spending without borrowing more money. This means the government has more fiscal space to allocate funds to public services, infrastructure, or other development projects without relying on additional debt.
- **Reducing debt burden:** A positive primary account balance can be used to reduce the existing debt burden. If the government generates a surplus in the primary balance, it can allocate these funds to pay down existing debt, leading to a decrease in the debt to GDP ratio over time. A lower debt-to-GDP ratio is a key indicator of improved debt sustainability.
- **Reducing reliance on borrowing:** A positive primary balance reduces the government's reliance on borrowing to cover its current expenditures. When governments consistently run deficits in the primary balance, they must borrow more to meet these obligations, leading to an accumulation of debt. Over time, this can become unsustainable as debt level increases.
- **Credit worthiness:** Maintaining a healthy primary account balance is essential for a country's creditworthiness. Lenders and credit rating agencies closely monitor a government's ability to generate a surplus in the primary balance because it indicates whether the government can meet its financial obligations, including interest payments on existing debt. A strong primary balance can lead to better credit ratings and lower borrowing costs for the government.

8. (i) **Absolute advantage:** Absolute advantage refers to a situation in which one country can produce a particular good or service more efficiently (using fewer resources or less time) than another country. In other words, it's about being the best at producing a specific product.

Example: Let's consider two countries, Country A and Country B. If Country A can produce cars using fewer labor hours and fewer raw materials compared to Country B, then Country A has an absolute advantage in car production.

- **Comparative advantage:** Comparative advantage is a concept that emphasizes the opportunity cost of producing one good or service relative to another. It's about assessing which good a country can produce at a lower opportunity cost compared to its trading partner(s).

(ii) **Arguments for Protectionism in International Trade:**

- **Domestic industry protection:** Protectionist measures such as tariffs and quotas can shield domestic industries from foreign competition. This helps protect jobs and prevents industries from collapsing due to foreign competition, particularly in sectors deemed essential for national security or economic stability.
- **Strategic trade policy:** Protectionism can be used strategically to support emerging industries that have the potential to become globally competitive. By protecting these industries in their infancy, countries may eventually gain a competitive edge in global markets.
- **National security:** Certain industries, like defense or critical infrastructure, are vital for national security. Protectionism can ensure that these industries remain under domestic control to safeguard national interests.

- **Infant industry argument:** Protecting new industries until they become efficient and competitive can promote economic growth and diversification. This argument suggests that temporary protection is necessary to allow domestic industries to develop.
- **Reduction of trade deficits:** Protectionist measures can be used to reduce trade deficits by limiting imports, which, in turn, can help stabilize a country's balance of payments.

#### **Arguments against Protectionism:**

- **Resource misallocation:** Protectionism can lead to inefficient allocation of resources. When industries are protected, they may not have the same incentive to become efficient and innovative as they would under competition. This can result in wasted resources and lower overall economic growth.
- **Higher consumer prices:** Tariffs and quotas typically lead to higher prices for imported goods, which can hurt consumers by reducing their purchasing power and limiting choices in the marketplace.
- **Retaliation:** Protectionist policies can trigger trade wars as other countries respond with their own trade barriers. This retaliatory cycle can reduce overall global trade and harm the economies of all involved nations.
- **Reduce economic welfare:** Protectionism can decrease economic welfare by limiting goods in which they have a comparative advantage, leading to less efficient resource utilization.
- **Innovation and competition:** Competition from foreign firms often drives domestic firms to innovate and become more competitive. Protectionism can stifle this competition, resulting in less dynamic and innovative domestic industries.
- **Complexity and bureaucracy:** The implementation and enforcement of protectionist measures can be complex and bureaucratic, adding administrative costs and potentially leading to corruption.
- **Inefficient rent seeking:** Protectionism can encourage rent-seeking behavior, where special interest groups lobby for protectionist policies that benefit them but harm the broader economy.

#### (iii) **Short term effects:**

- **Immediate impact on prices:** When a country's currency depreciates (loses value) relative to other currencies, its exports become cheaper for foreign buyers, while imports become more expensive for domestic consumers. This can lead to an initial increase in exports and a decrease in imports, as foreign customers find the country's goods more attractive, and domestic consumers switch to cheaper domestic alternatives.
- It's important to note that the adjustment process takes time. Contracts and agreements in place before the exchange rate change may still dictate trade volumes in the short term, so the immediate impact on the trade balance may be limited.

#### **Long term effects:**

- **Price elasticity of demand:** Over time, the price elasticity of demand for a country's goods and services plays a crucial role. If a country's exports are relatively price-elastic (responsive to price changes), a depreciation of the currency can lead to a significant increase in export volumes. Conversely, if a country's imports are relatively price-elastic, a depreciation can result in a notable reduction in.
- **Impact on domestic production:** A depreciating currency can also influence domestic production. As exports become more competitive, domestic industries may expand production to meet increased demand, which can further boost export volumes. Import substituting industries may expand.
- **Trade balance:** In the short term, a country may experience a trade deficit as the volume of imports takes time to adjust to the higher prices caused by a depreciated currency. Over time, if the demand for the country's exports respond positively to lower prices and if domestic industries expand production, the trade balance can improve. This means that the country may eventually export more than it imports, resulting in a trade surplus.
- **Import cost and inflation:** While a depreciating currency can boost exports and reduce imports, it may also increase the costs of imported raw materials and goods, potentially leading to inflationary pressures within the country.

#### (iv) **Significance of an improvement in a country's commodity terms of Trade**

- **Increased export revenue:** An improvement in terms of trade means that a country is receiving more favorable prices for its exports relative to the prices it pays for imports. This translates into higher export revenue for the country, which can boost its overall economic development.
- **Economic growth:** The additional revenue from improved terms of trade can contribute to economic growth by increasing a country's gross domestic product (GDP). This extra income can be used for investment in infrastructure, education, healthcare, and other essential sectors.
- **Improved trade balance:** A positive change in terms of trade often leads to an improved trade balance, with exports exceeding imports. This can help reduce trade deficits and contribute to a more favorable balance of payments.
- **Enhanced standard of living:** As a result of increased income, individuals and households may experience an improvement in their standard of living. They may have more disposable income to spend on goods and services, leading to higher living standards.
- **Reduced external vulnerability:** A country with improved terms of trade is less vulnerable to external economic shocks. It can better withstand fluctuations in global commodity prices because the value of its exports is relatively stable or rising.
- **Positive effects on government budget:** Government may collect more revenue from export taxes or tariffs on goods with improved terms of trade. This additional revenue can be used for public spending, reducing budget deficits, or investing in public projects.
- **Investment and development:** Improved terms of trade can attract foreign investment and contribute to economic development. Investors may see the country as a more attractive destination due to its improved

economic prospects.

- **Diversification opportunities:** Countries with improved terms of trade may have the opportunity to diversify their economies and reduce their reliance on a narrow range of commodities. This diversification can make the economy more resilient to commodity price fluctuations.
- **Reduced inflationary pressures:** When the terms of trade improve, the cost of imported goods relative to export earnings decreases. This can help mitigate inflationary pressures, as imports become less expensive.
- **Enhanced economic stability:** Improved terms of trade can contribute to greater economic stability by reducing external imbalances, supporting currency stability, and fostering confidence in the country's economic prospects.

(v) **Factors that led to a sharp depreciation of the Sri Lanka Rupee against the US dollar in the recent years:**

- **Balance of payments deficit:** Persistent trade deficits and current account deficits, where imports consistently exceed exports, can create a significant demand for foreign currency (especially the US dollar) to finance the trade imbalance. This increased demand for foreign exchange can lead to the depreciation of the LKR.
- **Foreign debt burden:** Sri Lanka's substantial reliance on external borrowing to fund infrastructure projects and government spending has resulted in a high level of foreign debt. Servicing this debt requires a constant out flow of LKR to convert into foreign currencies increasing the demand for foreign exchange and contributing to the LKR's depreciation.
- **Political and economic uncertainty:** Political instability and policy uncertainty can erode investor confidence and lead to capital flight. Foreign investors may withdraw their investments, converting LKR into foreign currencies which puts additional pressure on the LKR's exchange rate.
- **Global economic factors:** External shocks and global economic conditions, such as changes in commodity prices (e.g., oil), fluctuations in international capital flows, and broader economic events (e.g., the COVID-19 pandemic), can affect exchange rates. For instance, disruptions in global supply chains and a decline in international trade during the pandemic impacted Sri Lanka's trade balance and its ability to maintain the LKR's value.

9. (i) **Health Dimension:** This component assesses indicators related to health and nutrition, such as child mortality (the percentage of children who die before the age of 5) and nutrition (the percentage of underweight children).

- **Education dimension:** The education dimension includes indicators related to access to and attainment of education. Common indicators in this dimension include the percentage of children not attending school and the percentage of children who have not completed a certain level of education, such as primary school.
- **Standard of Living Dimension:** This dimension assesses living conditions and access to basic amenities and assets. Indicators may include access to clean drinking water, sanitation facilities, cooking fuel, electricity, and housing quality.

(ii) Low-income countries (LICs)

Lower-middle-income countries (LMCs)

Upper-middle-income countries (UMCs)

High-income countries (HICs)

(iii) **Increased productivity:** Technological progress often leads to increased productivity in various sectors of the economy. New technologies, such as improved machinery or more efficient production methods, can allow for the production of more goods and services with the same or fewer resources. This, in turn, can lead to economic growth.

- **Resource Efficiency:** Technological advancements can help economies use their resources more efficiently. This can be especially important for developing countries with limited resources. For example, innovations in agriculture can lead to higher crop yields, reducing the need for additional land and labor.
- **Competitiveness:** Countries that invest in and adopt new technologies tend to be more competitive in the global market. Technological advancements can enable firms to produce higher-quality products at lower costs, making them more competitive both domestically and internationally.
- **Structural Transformation:** Technological progress can drive structural transformation in economies. As new technologies emerge, they can lead to shifts in the composition of an economy's output. For example, as a country adopts more advanced technologies, it may transition from agriculture-dominated to manufacturing or service-oriented sectors, leading to economic development.
- **Innovation and Entrepreneurship:** Many economic development theories emphasize the importance of innovation and entrepreneurship in driving economic growth. Technological progress is often at the heart of these activities, as entrepreneurs and innovators create and commercialize new products, services, and processes.
- **Human Capital Development:** Technological progress often requires a skilled workforce. Thus, it incentivizes investments in education and human capital development. Countries that prioritize education and training are better positioned to adopt and adapt to new technologies, leading to long-term economic development.
- **Diffusion of Knowledge:** Technological progress can spread knowledge and ideas globally. Through trade, foreign investment, and international collaboration, countries can benefit from technological advancements made elsewhere, accelerating their own economic development.
- **Environmental sustainability:** Some economic development theories emphasize the importance of environmentally sustainable technologies. Technological progress in areas like renewable energy, clean transportation, and sustainable agriculture can promote economic development while minimizing environmental degradation.

(iv) **Structural Unemployment:** Structural unemployment arises from long-term shifts and balances in the economy, such as changes in technology, shifts in consumer preferences, or changes in the structure of industries.

- It is often caused by a mismatch between the skills and qualifications of the workforce and the suitable

employment.

- It tends to persist over an extended period and is not typically affected by short-term changes in economic conditions. Structural unemployment is more of a chronic issue and can exist even when the overall economy is healthy.
- **Cyclical Unemployment:** Cyclical unemployment is directly related to the fluctuations in the business cycle. It occurs during economic downturns when aggregate demand for goods and services in the economy decreases, leading to reduced production and job layoffs.
- It is generally temporary and directly tied to the economic cycle. When the economy goes into a recession or downturn, cyclical unemployment increases, and it decreases during economic expansions.

(v) **Key social safety net programmes implemented in Sri Lanka at present:**

(a) Social Protection for Public Sector Workers:

- Public Servants Pension Scheme
- Widows, Widowers and Orphans Pension Scheme
- Public Servants Provident Fund
- Employees' Trust Fund
- Agrahara Medical Insurance Scheme

(b) Social insurance for formal private sector workers

- The Employees' Provident Fund
- Employee's Trust Fund

(c) Social Assistance

- Samurdhi/Aswesuma cash transfer programme
- Assistance for elderly
- Assistance for persons with disabilities
- Allowance for low-income kidney patients
- Nutrition allowance for expecting mothers

(d) Social Protection Programs for Children

- free school text-book programme
- free school uniform material programme
- school and higher education season ticket
- scholarship programs for students from low-income families.
- Mid-day meal for school children in selected schools covering students of Grades 1-5.
- Thripasha' National Supplementary Food Programme.

(e) Emergency Relief Programmes.

10. (i) **Food security** is the condition that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their food preferences and dietary needs to live an active and healthy life. This definition covers four major dimensions of food security.

- **Availability:** There must be a consistent and adequate supply of food, both from domestic production and imports, to meet the nutritional requirements of the population.
- **Access:** People must have the economic and physical means to obtain the food they need.
- **Utilization:** Food consumed should be safe and nutritionally adequate.
- **Stability:** Food security requires that access to food is stable over time.

**Factors influencing food insecurity in Sri Lanka:**

**Economic factors:**

- **Poverty:** High levels of poverty can limit people's access to nutritious food. Poverty has risen since 2019 from 11.3% to 12.7% in 2020, adding over 300,000 new poor in that period. It continued to increase in 2021 and then doubled between 2021 and 2022 from 13.1% to 25%. This increase has added an additional 12.5 million people into poverty in 2022.
- **Unemployment:** Lack of job opportunities and underemployment has led to income instability, making it difficult for families to afford an adequate diet.
- **Food inflation:** Sri Lanka has been facing a serious food crisis since 2021. This is due to the increase in prices of fertilizer, rice and other inputs. Food inflation is a major cause of food insecurity. Sri Lanka 5th among 10 countries with the highest food price inflation according to a World Bank report. According to the Census and Statistics Department Colombo's food inflation recorded 90.9% year-on-year to October 2022 making even staples such as rice unaffordable for millions of families.
- **Import restrictions:** Import controls imposed by the government in the context of severe foreign exchange crisis, have led to certain food items becoming scarce.

**Political and Institutional Factors:**

- **Policy instability:** Inconsistent policies related to agriculture, trade, and food distribution have contributed to food insecurity. Sri Lanka's food insecurity is largely a result of the prevailing economic crisis coupled with short-sighted policies enforced by local policymakers. The decision of the Government of Sri Lanka to ban imports of chemical fertilizers and pesticides in May 2021 resulted in the sharp decline in the production of key agricultural products.
- **Corruption:** Corrupt practices in the distribution of resources and aid may hinder the effectiveness of food security programmes.
- **Food wastage:** Food waste in Sri Lanka is shocking especially in the context of the current food crisis. We witness everyday newspaper articles highlighting the enormous losses of rice, vegetables due to lack of fuel,

poor distribution and highly fluctuating prices.

**Environmental factors:**

- **Climate change:** Changes in climate patterns can impact agriculture, affecting crop yields and food production. Sri Lanka faces significant threat from climate change. Severe drought followed by heavy rainfalls in Sri Lanka has hit large swaths of cropping areas, threatening the food security of some 900,000 people. according to FAO and WFP.
- **Natural disasters:** Sri Lanka is prone to natural disasters such as floods and droughts, which can disrupt agricultural activities and lead to food shortages.
- **Global Factors:** Since mid-2020, food prices worldwide have been consistently rising. The Covid-19 pandemic, and subsequently, the Russian invasion of Ukraine, have exacerbated food inflation and increased the cost of importing food. Similarly, increased crude oil prices as well as the disruption in fertilizer supplies have raised fertilizer prices.

(ii) **Positive economic impacts:**

- **Remittances:** Sri Lankan professionals working abroad often send remittances back to their home country. These remittances can provide a significant source of income for their families, which can boost consumption and improve the standard of living for those left behind.
- **Skills transfer:** Some professionals may gain new skills and experiences while working abroad, which they can bring back to Sri Lanka when they return. This can enhance the country's human capital and potentially contribute to economic development.
- **Foreign exchange earnings:** The foreign exchange earned by Sri Lanka through remittances can bolster the country's foreign exchange reserves, which can be used to stabilize the exchange rate and pay for imports.
- **Reduced unemployment:** Migration can alleviate domestic unemployment pressures by providing job opportunities abroad for Sri Lankan professionals. This can ease unemployment rates in the home country.
- **Investment:** Some expatriate professionals may invest in businesses or real estate in Sri Lanka, potentially stimulating economic growth and job creation.

**Negative economic impacts:**

- **Brain drain:** Large-scale migration of middle-class professionals can result in a "brain drain" as the country loses its skilled and educated workforce. This can hinder economic development, research and development, and innovation.
- **Dependence on remittances:** Overreliance on remittances can lead to economic vulnerability, as the country becomes heavily dependent on the income sent by migrants. Fluctuations in the global economy or changes in immigration policies in destination countries can affect remittance flows.
- **Aging population:** When middle-class professionals migrate, they often leave behind an aging population. This can strain healthcare and social services, which may require increased government spending.
- **Loss of tax revenue:** When professionals leave the country, the government may lose tax revenue, which can affect public services and infrastructure development.

(iii) **The circular economy concept and sustainable development:**

- The circular economy concept promotes sustainability and reduces environmental impact by rethinking traditional linear economic models, which involve the extraction of resources, production, consumption, and disposal. Instead, the circular economy aims to create closed-loop system where products, materials, and resources are reused, recycled, and repurposed, thereby minimizing waste and environmental harm. Here are several Key in promotes sustainability and reduces environmental impact:

**Resource efficiency:**

- Maximizes the use of existing resources, reducing the need for new resource extraction and minimizing resource depletion.

**Waste reduction:**

- Drastically reduces waste generation by designing products and systems with longevity and reusability in mind.

**Extended product life:**

- Focuses on creating products that are durable, repairable, and upgradable, increasing their lifespan.

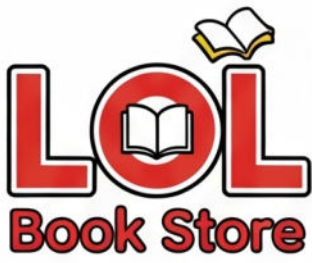
**Reduced carbon footprint:**

- Minimizes greenhouse gas emissions by reducing the energy and resource inputs required for manufacturing and transportation.
- Slows down the depletion of finite resources, such as minerals and fossil fuels.

(iv) **The key quantitative targets assigned to Sri Lanka under IMF agreement:**

The debt sustainability targets as per the Debt Sustainability Analysis (DSA) carried out by the IMF that needs to be achieved by Sri Lanka through the debt restructuring process are as follows:

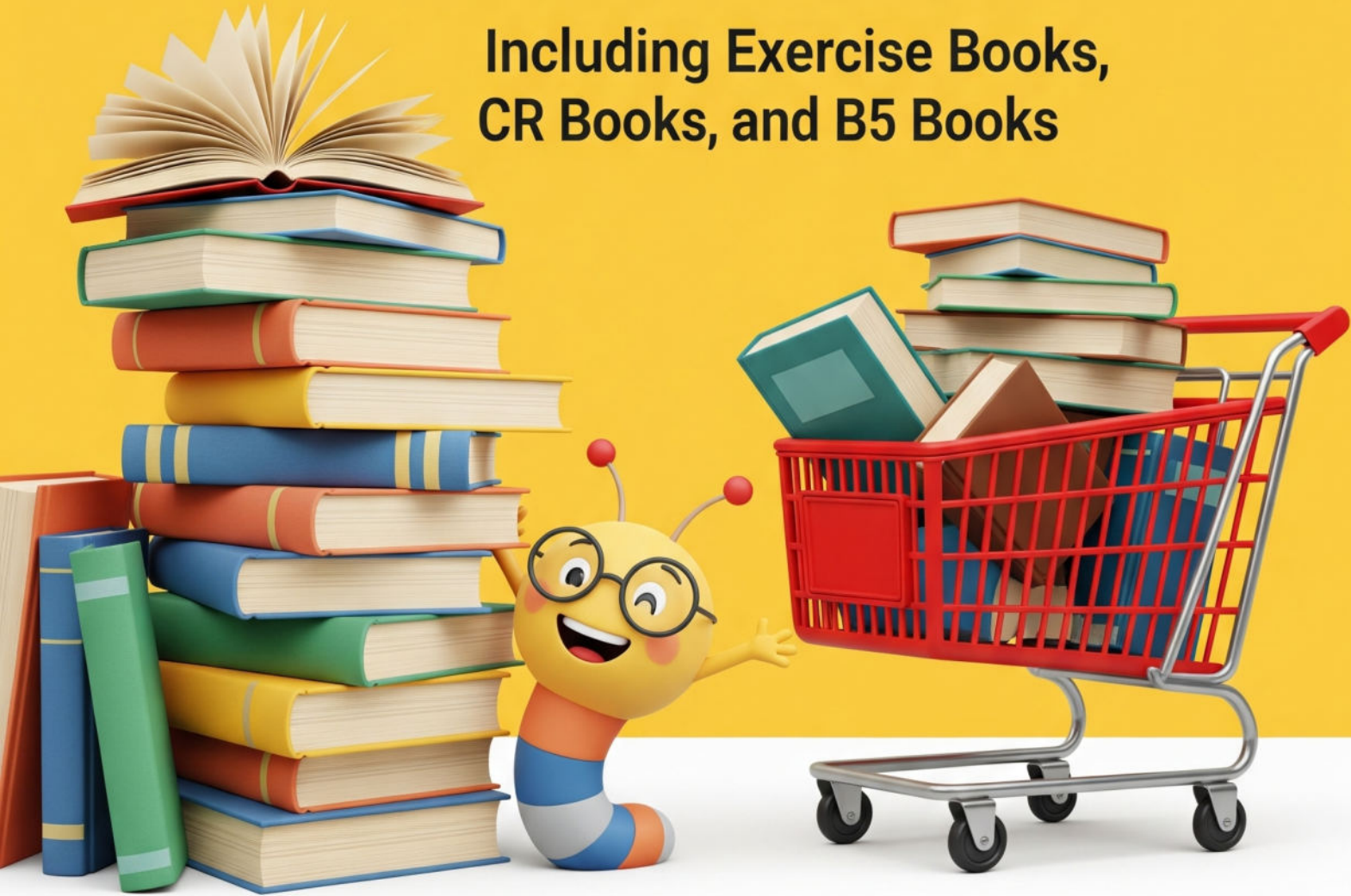
- **Debt stock:** Public debt to decline below 95 per cent of GDP by 2032.
- **Gross financing needs:** Average annual gross financing needs of the central government in 2027-2032 to remain below 13 per cent of GDP.
- **Post-programme forex debt service:** Annual forex debt service of the central government to remain below 4.5 per cent of GDP in each year over 2027-2032.
- **Programme financing gaps:** Debt service reduction during 2023-2027 to be sufficient to close external financing gaps. Under staff's baseline scenario, US\$ 17 billion in debt service reduction is required, including the arrears accumulated in 2022.



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