

1.

i. **Define a free good with examples.** (4 marks)

- Characteristics of a free good:
 1. No opportunity cost
 2. A good that takes no resources/factors of production to produce
 3. Naturally abundant in supply
 4. Does not use scarce resources
- Eg: Wind, Air, Sunlight

ii. **Define investment.** (3 marks)

- Investment is spending on capital goods to increase output
- The source of investment is savings

iii. **Discuss the concept of division of labour.** (4 marks)

- The production of a good or service is broken down into a large number of separate and simple operations. Each worker is responsible for and spends the whole of his or her time carrying out one of these operations. Thus, in many industries, the finished product is the result of the combined efforts of many hundreds of specialized workers. This technique of breaking down production into a large number of specialized tasks is described as the division of labour.
- Division of labour may reduce cost of production and increase competitiveness in the following ways.
 - “Practice makes perfect” – When a worker concentrates on a task which requires no more than a few relatively simple movements, he or she develops the ability to do work with great speed and dexterity.
 - An important advantage of the division of labour is that it makes it possible to mechanize the production process. When production is subdivided into many simple operations, it is not a too difficult task to devise a machine for each of these operations. Even today if there is no division of labour adapted. It becomes possible to use a whole range of powered tools and machines such as saws planes, drills, lathes, polishers and so on.
 - When a worker is responsible for several different operations, workers will have a set of tools for each of the different tasks. For a large part of the time therefore much of the equipment will be lying idle. When work is specialized, each worker only needs one set of tools and these will be in constant use. Thereby, it reduces the fixed costs.
 - Since the employees do not move onto various tasks in the process of production, his time is not wasted unnecessarily.
 - As the work is broken down into individual tasks, it is likely that new and more efficient techniques will be developed.
 - Under division of labour, one person will only be involved in one task. Therefore training and development is only needed in the particular task. There is no need to spend a long period of time on training in every task. This will save both time and money.

iv. **Explain how entrepreneurship contributes to aggregate supply in an economy and how it differs from the other factors of production. (4 marks)**

- Entrepreneurship is the factor of production that takes the risk of production and organises the other factors.
- Aggregate supply, also known as total output, is the total supply of goods and services produced within an economy in a given time period.
- Enterprise will utilise the other factors of production to produce goods and services that increase aggregate supply. Aggregate supply will increase through an increase in productive potential or a fall in unused resources.
- In order to contribute to aggregate supply enterprise organises the other factors of production and takes the risk that costs will not exceed revenue leading to negative profit.

Difference:

- Profit is the reward to enterprise for its services. Labour is rewarded with wages, land which is the natural resource rewarded with rent and capital which is rewarded with interest
- Profit is the reward for enterprise, but profit is the reward for risk and in loss making firms there will be no profit. This contrasts with the rewards to labour, land and capital.

v. **Distinguish between the following,**

a) **Money costs and opportunity costs (3 marks)**

| Money costs | Opportunity costs |
|--|---|
| These are the monetary payments made by a firm or an individual to suppliers in producing and consuming a good or service. | This is the cost of the next best alternative of a selection among alternatives or the highest value alternative given up. Opportunity cost is related in both with production and consumption. |

b) **Productivity and level of production (3 marks)**

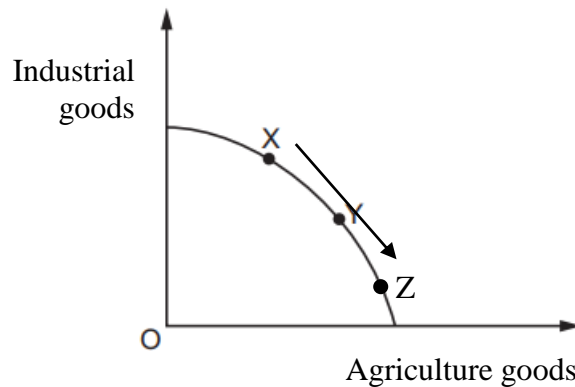
- Production describes the level of output of goods and services in a particular time period.
- Productivity describes the efficiency obtained when producing this particular level of output. Efficiency would be measured by the unit of output produced per unit of input in a given time period.

2.

i. **Discuss whether an economy would benefit from allocating more of its resources to agriculture. Provide graphical evidence. (4 marks)**

Advantages:

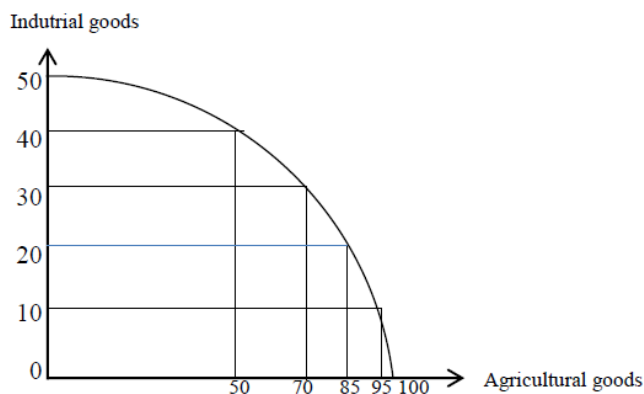
- specialisation may increase efficiency, raise output, increase exports
- may improve the current account of the balance of payments
- imports of food may be reduced, reduced reliance on other countries for basic necessities
- health and safety standards may be maintained
- the industry is labour intensive in some countries and so may reduce unemployment



- ii. A certain country produces industrial goods (vertical axis) and agricultural goods (horizontal axis) by utilizing the stock of resources fully and efficiently. The details regarding that production possibilities curve has been stated below.

| Industrial goods | Amount of agricultural goods sacrificed |
|------------------|---|
| 0 | - |
| 10 | 5 |
| 20 | 10 |
| 30 | 15 |
| 40 | 20 |
| 50 | 50 |

- a) Draw the production possibilities curve associating the above details. (02 marks)

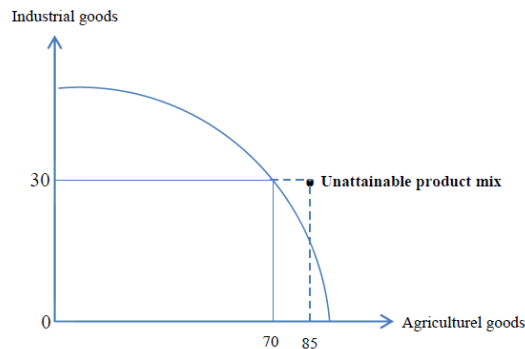


- b) What can you tell about the manner of resources and the production methods in the above economy? (02 marks)

- Resources are not homogeneous
- The resources that are used in the production of industrial goods cannot be used in the same productivity in the agricultural goods.
- The production strategies and methodologies are different from one another. The methodology used in the production of industrial goods cannot be used in the same manner in the production of agricultural goods.

- c) If the society expects a product combination of 30 industrial and 85 agricultural goods explain the problem that the economy has faced. (02 marks)

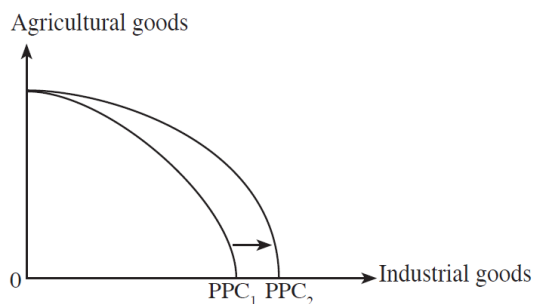
- When 30 industrial goods are produced 10 agricultural goods are produced.
- A product combination of 30 industrial goods and 85 agricultural goods cannot be produced. The major reason is the scarcity of resources.



d) “The production possibilities curve shifts to the right with the economic growth of the country. By that, the problem of scarcity does not further create”. Explain. (02 marks)

- No. When the production capacity increases the produceable goods may increase in a certain amount. But relatively to that, human wants rapidly grow. As a sufficient amount of resources are not available to satisfy those increased human wants the problem of scarcity further prevails unsolved.

iii. For an economy which has currently attained the efficiency in production, the factor requirement to produce industrial goods decreased in its production process. Explain this situation using a production possibilities frontier. (4 marks)



- Due to the decrease in the factor requirement, the productivity increases and as a result the production possibilities frontier pivots to the right only from the axis that shows the output of industrial goods.
- iv. 'The only condition needs to be satisfied to achieve economic efficiency is productive efficiency'. Explain the validity of this statement. (4 marks)
- This statement is wrong. To fulfill economic efficiency both production efficiency and resource allocation efficiency should be achieved.
 - When production efficiency is occurred the output should be maximum under the given amount of resource or minimize the required amount of resource for producing the given level of output.
 - To obtain production efficiency it should be satisfied two conditions
 1. Full employment
 2. Full production

- The meaning of the allocation of resources efficiency is the allocation of resources for the highly preferred goods by the people. So the production is determined under the social preference.
- To fulfill allocative efficiency of resources, price of all units of commodity should be equal to its marginal cost ($P = MC$).

3.

i. **Discuss whether or not strict rules and regulations imposed by a government will benefit an economy. (5 marks)**

- Advantages:
- Environmental rules (e.g. cap on carbon emission, tax on polluting industries) will reduce external costs (e.g. could decrease pollution / protect natural resources / less health problems for the society / better standards of living).
- Anti-competition rules (e.g. restrictions on monopoly power) will lead to improved consumer choice, lower prices, better quality, foreign companies will not dominate the market opportunities for domestic firms to develop and increase future economic growth.
- Restrictions on imports may protect domestic industries and allow growth of domestic industries.
- Bans (e.g. prohibiting smoking in public places) may reduce market failure and reduce external costs.
- Labour market legislation will protecting workers' rights.

Disadvantages

- Strict regulation discourages business and will lead to lack of investment, lower productivity, lack of competition, lack of employment opportunities, decreased total demand, decreased economic growth, lower GDP and lower standards of living.
- Bureaucracy increases the time and effort of doing business. It increases cost of production and lowers profit
- Rules and regulations may lack clarity causing them to be implemented incorrectly
- Takes time for the government to administer rules and regulations and the opportunity cost of government spending
- Import restrictions reduce competition and may result in higher prices and lower quality

ii. **Under which condition is the market economic system not perfect as a method of solving -basic economic problems? (3 marks)**

- A market economy becomes inefficient on the following situations
 - Inefficiency in resource allocation/market failure.
 - Economic disparities/ disparity in income distribution.
 - Creating economic instabilities.

iii. **Explain how the problem of distribution of the output is solved by alternative economic systems. (4 marks)**

- In a traditional economic system, the output is distributed in accordance with the directions of the leader/s, together with traditions and cultures.
- In a command system, the output is distributed by the directions of the central planning authority to maximize the social welfare.

- A market economy the distribution of income in a factor market, rations and distributes the output.
- iv. **Analyse how the price mechanism answers the three key resource allocation questions. (4 marks)**
- Price mechanism allows forces of demand and supply determine the prices of goods and services in a market economy
 - What to produce:
The price mechanism acts a signal. The price mechanism acts as an incentive on what to produce, rations goods and services. Price will rise for products in higher demand encouraging more to be made.
 - How to produce:
More labour-intensive/more capital intensive methods of production will be used depending on whether if wages fall or if cost of capital goods fall
 - Who to produce for:
Those whose services are most in demand will have the highest income and who will be able to buy the most of it.
- v. **Analyse the advantages that consumers may gain from a competitive market. (4 marks)**
- Wide choice of producers producing a similar product
 - Efficiency
 - Better quality
 - Greater choice of products
 - Firms may innovate as firms try to gain a larger share of the market
 - Lower price as firms try to beat competition
 - Increase in consumers' purchasing power/standard of living
 - Raise consumer sovereignty firms may respond quickly to changes in consumer demand
- 4.
- i. **"Market demand is constructed by private demand". Explain this statement (3 marks)**
- Individual demand is the expected quantities of demand for a good by a consumer at alternative prices.
 - Market demand is the total of demand of all the individual buyers for commodity at the market.
- ii. **Explain the causes of a shift of a product's demand curve to the left. (4 marks)**
- Decrease in price of substitutes
 - Increase in price of complements
 - Decrease in income - decrease in purchasing power
 - Changing trends - decrease popularity,

- Changing seasons
- Decrease in population size - fewer people to buy the product
- Rise in the rate of interest - less able to borrow to buy the product

iii. The details of market demand and supply regarding a certain good have been stated below.

| Price of a unit | Quantity demanded | Amount of excess supply |
|-----------------|-------------------|-------------------------|
| 10 | 1000 | -1000 |
| 40 | 400 | 200 |

What is the market equilibrium price and the equilibrium quantity of the above good? (5 marks)

The quantity supply at the price of Rs.10/=

$$\begin{array}{rcl}
 \text{Excess Supply} & = & \text{quantity supplied} - \text{quantity demanded} \\
 -1000 & = & \text{quantity supplied} - 1000 \\
 -1000 + 1000 & = & \text{quantity supplied} \\
 0 & = & \text{quantity supplied}
 \end{array}$$

The quantity supply at the price of Rs. 40/=

$$\begin{array}{rcl}
 \text{Excess supply} & = & \text{quantity supplied} - \text{quantity demanded} \\
 200 & = & \text{quantity supplied} - 400 \\
 200 + 400 & = & \text{quantity supplied} \\
 600 & = & \text{quantity supplied}
 \end{array}$$

iv. Why does the quantity demanded of a certain product become a negative function of the price of that product? (4 marks)

- There is an inverse relationship between the quantity demanded and the price of the commodity. This relationship is described as the Law of Demand.
- There are two reasons for consumers to demand less of a commodity as its price falls. substitution effect income effect. (01 mark)
- Substitution effect: When the price of the good rises, other things remaining the same, its relative price rises. People buy less of a relatively expensive commodity and buy (substitute) more of its relatively cheap substitutes. (02 marks)
- Income effect: When the price of the good rises, other things remaining the same, consumers real income (purchasing power of his money income) falls. They cannot afford to buy all the things they previously bought. Therefore, they must decrease the quantities demanded of normal goods.

v. The following are the demand and supply information of a certain product.

| Price (Rs) | Quantity demanded (units) | Quantity supplied (units) |
|------------|---------------------------|---------------------------|
| 16 | 120 | 40 |
| 20 | 100 | 60 |

a) Derive the demand and supply equations by using above data (Marks 02)

$$Q_d = a - bP$$

$$b = \frac{\Delta Q_d}{\Delta P} = \frac{20}{4} = 5$$

$$Q_d = a - 5P$$

$$100 = a - 5(20)$$

$$100 = a - 100$$

$$200 = a$$

$$Q_d = 200 - 5P$$

(Mark 01)

$$Q_s = a + bP$$

$$b = \frac{\Delta Q_s}{\Delta P} = \frac{20}{4} = 5$$

$$Q_s = a + 5P$$

$$60 = a + 5(20)$$

$$60 = a + 100$$

$$60 - 100 = a$$

$$-40 = a$$

$$Q_s = -40 + 5P$$

(Mark 01)

- b) Find the equilibrium price and quantity by using the demand and supply equations (Marks 02)**

$$Q_d = Q_s$$

$$Q_d = 200 - 5P$$

$$Q_s = -40 + 5P$$

$$200 - 5P = -40 + 5P$$

$$Q_d = 200 - 5(24)$$

$$Q_s = -40 + 5(24)$$

$$200 + 40 = 5P + 5P$$

$$Q_d = 200 - 120$$

$$Q_s = -40 + 120$$

$$240 = 10P$$

$$Q_d = 80$$

Or

$$Q_s = 80$$

$$24 = P$$

(Mark 01)

(Mark 01)

5.

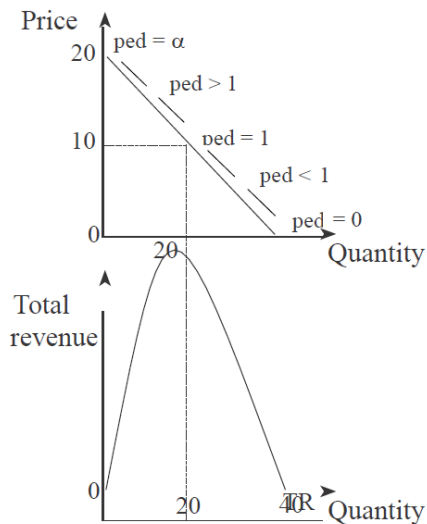
- i. Discuss whether or not the fall in the price of a product is a disadvantage in terms of elasticity. (4 marks)**

- Why it might be a disadvantage:
- It depends on size of fall in price and elasticity of demand for the product and upon the importance of the product to the economy
- If demand is price inelastic there will be a decrease in total revenue (e.g. basic items / necessity), cannot cover the costs, firms may go out of business, less employment opportunities.
- Why it might not be a disadvantage:
- It depends on size of fall and whether it is short or long term.
- If demand is elastic there will be an increase in total revenue (e.g. luxury goods)

- ii. Identify the product categories described by each of the following statements. (4 marks)**

- a) **The products which have the coefficient of income elasticity of demand which is less than 1** - Essentials
- b) **The products which have the coefficient of income elasticity of demand which exceeds 1** - Luxuries
- c) **The products which have the coefficient of cross price elasticity of demand which takes a positive value** - Substitutes
- d) **The products which have the coefficient of cross price elasticity of demand which takes a negative value** – Complements

- iii. Use a graph to explain the changes in the price elasticity of demand and producers total revenue along a downward sloping straight lined demand curve. (4 marks)



$$\text{at Rs:0 } ped = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} = \frac{20}{10} \times \frac{0}{40} = 0$$

$$\text{at Rs:10 } ped = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} = \frac{20}{10} \times \frac{10}{20} = 1$$

$$\text{at Rs:20 } ped = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} = \frac{20}{10} \times \frac{20}{0} = \alpha$$

For graphs (Marks 02)

- The price decrease on the elastic portion of demand curve affects to increase firm revenue.
 - Firm revenue becomes maximum on the unitary elastic point of the demand curve.
 - The Price decrease on the inelastic portion of the demand curve affects to decrease firm revenue.
- iv. Suppose the market demand function for a certain consumer good is represented by $Q_d = 500 - 10P$. Calculate the arc price elasticity of the demand of this good over the price range of Rs. 20 and Rs. 30. (4 marks)

$$\text{Arc price elasticity of demand} = b \times \frac{P_1 + P_2}{Q_{D1} + Q_{D2}}$$

Working 1 - Q_d at Rs. 20:

$$\begin{aligned} Q_d &= 500 - 10P \\ &= 500 - (10 \times 20) \\ &= 500 - 200 \\ &= 300 \end{aligned}$$

Working 2 – Q_d at Rs. 30

$$\begin{aligned} Q_d &= 500 - 10P \\ &= 500 - (10 \times 30) \\ &= 500 - 300 \\ &= 200 \end{aligned}$$

$$\text{Arc price elasticity of demand} = b \times \frac{P_1 + P_2}{Q_{D1} + Q_{D2}}$$

$$= -10 \times \frac{20+30}{300+200}$$

$$= -10 \times \frac{50}{500}$$

$$= -10 \times 0.1$$

$$= \underline{\underline{-1}}$$

- v. **Cross elasticity of demand for bread with respect to the price of rice is +1.4 while the cross elasticity of demand for bread with respect to the price of butter is -0.7. Explain why the cross elasticity of demand figures for bread differ. (4 marks)**
- Cross elasticity of demand (XED) refers to at a specific time, other factors being constant, and the responsiveness of demand of the concerned good with regard to a specific change in the price of the related good.
 - If the value of the XED co-efficient is negative (-) the related good is a complementary good. In other words a good which has a negative/ indirect relationship between price of the related good and the quantity demanded of the concerned good.
 - If the value of the XED co-efficient is positive (+) the related good is a substitute good. In other words, a good which has a positive/direct relationship between price of the related good and the quantity demanded of the concerned good.
 - In this case, rice is a substitute good to bread while butter is a complementary good with bread.
- 6.
- i. **Identify the three resource allocation decisions. (3 marks)**
- what to produce
 - how to produce
 - who to produce for
- ii. **What kind of function is fulfilled by the price mechanism towards the economic agents in a market economy? (3 marks)**
- Signaling function.
 - Rationing function.
 - Incentive function.
- iii. **What are the benefits of the free market? (5 marks)**
- Consumer sovereignty - consumers deciding what goods and services are produced (1).
 - Low prices due to competition
 - High quality due to innovation
 - Consumer choice from variety of products produced
 - Greater efficiency due to the profit motive
 - Automatic adjustment to changes in demand and supply / quick response to changes in demand and supply via changes in price with use of the price mechanism
 - Increase consumer satisfaction
- iv. **Briefly mention how the problem of production is solved by the alternative economic systems (5 marks)**
- The market economy that functions with the Self – interest motive always selects a cost minimized production methodology according to the guidance of the price mechanism. There, decisions on factor combinations are concerned paying attention on the relative factor price.

- A planned economy functions with the motive of social welfare chooses the production methodology under the guidance of the planning mechanism. Here, the production methodology which maximized the social welfare is selected considering about the unemployment rate in the economy, production cost, allocating resources for the future etc.
 - In a mixed economy, the private sector according to the market forces and the government sector according to the planning process find solutions for the problem of production.
- v. **What are the salient characteristics of a mixed economic system? (4 marks)**
- Basic economic problems are solved by using both price mechanism and the central plan of the government.
 - Both the private sector and government sector own factors.
 - Both private enterprises and public enterprises exist.
 - The private sector prioritizes the profit motive whereas the public sector considers the social welfare, employment creations, political objectives etc
- 7.
- i. **Analyse the advantages of selling a product which is price inelastic in demand. (4 marks)**
- Price-inelastic demand means when price increases, quantity demanded falls by a less than proportionate amount or vice versa
 - When demand is price-inelastic, price and revenue move in the same direction.
 - PED of less than one may indicate lack of competition / substitutes. Necessities often have inelastic demand
 - Firms can increase prices and total revenue increases.
 - May increase in profits if revenue rises faster than cost
 - Less market volatility - stability of income/revenue making it easier to plan.
- ii. **Explain the cross elasticity of demand for the following incidents with relation to cars. (2 marks each)**
- a) **Impact on the demand for cars when there is a rise in the price of fuel for cars**
- Cars and fuel are complementary good, hence, the coefficient of XED will be negative.
 - Complementary goods have a negative/ indirect relationship between price of the related good and the quantity demanded of the concerned good.
- b) **Impact on the demand for cars when there is a rise in the price of public transport**
- Cars and public transport are substitute goods, hence, the coefficient of XED will be positive.
 - Substitute goods have a positive/direct relationship between price of the related good and the quantity demanded of the concerned good.
- iii. **Explain the use of the concept of income elasticity of demand in a market relation to the different types of goods when consumer income increases. (4 marks)**
- YED is the percentage change in the quantity demanded of a product divided by the percentage change in incomes.
 - For a normal good, the YED will be positive for normal goods. In other words, as consumer incomes rise, the demand for products will rise.

- For an inferior good, the YED will be negative for. That is, as consumer incomes rise, the demand for products will fall.
 - If there is an increase in consumer income, a market is likely to stock more normal goods and fewer inferior goods.
 - Essential goods have a positive YED, but it is rather low, e.g. less than one (inelastic). Hence, even if there is an increase in incomes, it is unlikely to be very much of an effect on the available stocks.
- iv. **“A Giffen good is an inferior good, but an inferior good is not necessarily a Giffen good.” Explain. (4 marks)**
- The effect of a change in price of an inferior good is different. For an inferior good, the income effect is negative. Thus for an inferior good, a lower price does not always lead to an increase in the quantity demanded.
 - The lower price has a substitution effect that always increases quantity demanded. This substitution effect is offset to some degree by the negative income effect. The final result depends on the relative strengths of the two effects.
 - Thus, for some inferior goods, the negative income effect only partially offsets the substitution effect, and therefore, quantity demanded increases as a result of the price decrease, though not as much as for a normal good. This is the typical pattern for inferior goods, and it too leads to negatively sloped demand curves.
 - When the negative income effect actually over weighs the substitution effect, and thus leads to a positively sloped demand curve. This is the case of Giffen goods. For this to happen, the good must be inferior. But that is not enough; the change in price must have a negative income effect strong enough to more than -offset the substitution effect. Therefore all inferior goods are not Giffen goods.
- v. **The price elasticity of supply for a new smartphone is estimated at 0.8 in the short run and 1.5 in the long run. Explain. (4 marks)**
- Time lapsed after the price change is a main determinant of price elasticity of supply.
 - Most of the time suppliers are unable to change its production capacity as soon as price of a concerned good is increased or decreased.
 - Immediately after a price change, price elasticity of supply is relatively inelastic.
 - With the time, elasticity becomes more elastic.