ECONOMICS

BOARD'S QUESTION PAPER (SEPTEMBER 2021)

Time : 3 Hours] **[Total Marks : 80**

Note : *(i) All questions are compulsory.*
(ii) Draw neat tables/diagrams wherever necessary.
(iii) Figures to the right indicate full marks.
(iv) Write answers to all main questions on a new page.

Q. 1. (A) Choose the correct option from given options : **(5) [20]**

(1) The branch of Economics that deals with the allocation of resources.

(a) Micro Economics *(b) Macro Economics*

(c) Econometrics *(d) Monetary Economics*

(1) a, b, c (2) a, b (3) only 'a' (4) None of these

(2) Two or more goods demanded jointly to satisfy a single want.

(a) Direct *(b) Indirect*

(c) Joint/Complementary *(d) Composite demand*

(1) a, d (2) a, b, c (3) a, c (4) only 'c'

(3) Homogeneous product is a feature of this market.

(a) Monopoly *(b) Monopolistic competition*

(c) Perfect competition *(d) Oligopoly*

(1) only 'c' (2) a, b, c (3) a, b, d (4) c, d

(4) Economist who is of the view that public finance is one of those subjects which are on the borderline between economics and politics.

(a) Adam Smith *(b) Alfred Marshall*

(c) Prof. Hugh Dalton *(d) Prof. Findlay Shirras*

(1) only 'a' (2) only 'b' (3) only 'c' (4) only 'd'

(5) Role of foreign trade.

(a) To earn foreign exchange. *(b) To encourage investment.*

(c) Leads to division of labour. *(d) Brings change in composition of exports.*

(1) a, b, c (2) a, b, c, d (3) a, b, d (4) None of these

(B) Complete the following correlations : **(5)**

(1) Micro Economics : Tree : : Macro Economics : [ ]

(2) Single consumer : Individual demand : : Many consumers : [ ]

(3) [ ] : Downward sloping curve : : Supply curve : Upward sloping curve.

(4) Price index : Inflation : : [ ] : Agricultural production.

(5) [ ] : Central Bank : : State Bank of India : Commercial Bank.

(C) Give economic terms for the following descriptions : **(5)**

(1) Utility of a commodity increases with a change in its time of utilisation.

(2) The demand for a commodity which can be put to several uses.

(3) The market where there are a few sellers.

(4) Financial statement showing the expected receipts and proposed expenditure of the government in the coming financial year.

(5) Deposits withdrawable on demand.

(D) Complete and rewrite the following statements : **(5)**

(1) When Marginal Utility (MU) is negative, Total Utility (TU) is ---------- .

(a) rising (b) not changing (c) falling (d) zero

(2) When less units are demanded at high price it shows ---------- .

(a) increase in demand (b) expansion of demand

(c) decrease in demand (d) contraction in demand

(3) Revenue per unit of output sold is ---------- .

(a) Total revenue (b) Marginal revenue

(c) Average revenue (d) Marginal expenditure

(4) Organised sector of money market in India includes ---------- .

(a) indigenous bankers

(b) money lenders

(c) commercial banks

(d) unregulated non bank financial intermediaries

(5) Purchase of goods and services by one country from another country is ---------- .

(a) Export Trade (b) Import Trade

(c) Entrepot Trade (d) Internal Trade

Q. 2. (A) Identify and explain the following concepts : (Any THREE) **(6)** **[12]**

(1) Madhav collected information about monthly expenditure of a family.

(2) Pooja satisfied her need of writing an essay by using pen and notebook.

(3) There are many firms producing soaps in India.

(4) Ramesh prepared share price index number.

(5) Fall in price of sugar by 50% result in 50% rise in demand.

(B) Distinguish between the following : (Any THREE) **(6)**

(1) Form Utility and Knowledge Utility.

(2) Perfect Competition and Monopolistic Competition.

(3) Partial Equilibrium and General Equilibrium.

(4) Direct Tax and Indirect Tax.

(5) Perfectly Elastic Demand and Perfectly Inelastic Demand.

Q. 3. Answer the following questions : (Any THREE) **[12]**

(1) Explain any four features of perfect competition.

(2) Calculate Quantity Index Number from the given data :

Commodity	Quantity in 2010 (q_0)	Quantity in 2011 (q_1)
A	20	55
B	35	60
C	75	110
D	70	75

(3) Explain any four sources of non-tax revenue of the government.

(4) Explain the function of acceptance of deposits of commercial bank.

(5) Explain any four features of National Income.

Q. 4. State, with reasons, whether you agree or disagree with the following statements : (Any THREE) **[12]**

(1) There are exceptions to the Law of Supply.

(2) The scope of Macro Economics is unlimited.

(3) Price Index Number is the only type of Index Number.

(4) Reserve Bank of India performs various functions.

(5) Obligatory function is the only function of the government.

Q. 5. Study the following table, figure, passage and answer the questions given below it : (Any TWO) **[8]**

(1)

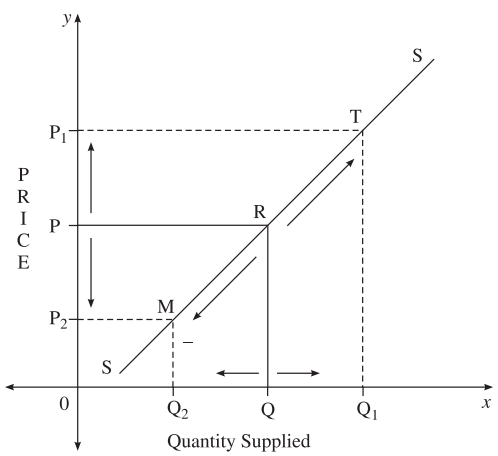
Units of x	Total Utility	Marginal Utility
1	10	10
2	18	08
3	24	06
4	28	04
5	30	02
6	30	00
7	28	– 2

(1) With the help of the given schedule draw total utility and marginal utility curve. **(2)**

(2) When total utility is maximum marginal utility is [ ]. **(1)**

(3) When total utility falls marginal utility becomes [ ]. **(1)**

(2)



(1) The diagram shows direct relationship between quantity supplied and [ ]. **(1)**

(2) In diagram, supply curve 'SS' has [ ] slope. **(1)**

(3) Rise in price leads to upward movement of supply on the same supply curve from point 'R' to point 'T'. This movement is known as [ ]. **(1)**

(4) Fall in price leads to downward movement of supply on the same supply curve from point 'R' to point 'M'. This movement is known as [ ]. **(1)**

(3)

India's economy is very diverse. This includes agriculture, handicrafts, textile mills, industries, manufacturing and a variety of services. Two thirds of the people working in India still depend on agriculture or agro-based industries for their livelihood, but a wide range of services are also contributing to the economy, and more recently services based businesses are playing a very important role in the economy. In recent years, with the advancement of computer technology and information technology in India, as well as the growing number of highly educated and English speaking young people, India has gradually started playing the role of an outsourcing service to the whole world. India is the world's largest exporter of highly skilled technicians. At the same time, India's potential in manufacturing, pharmaceuticals, biotechnology, microtechnology, telecommunications, shipbuilding, aviation and tourism is growing rapidly.

Since the early 1990s, India has begun to open up its economy through economic reforms, gradually reducing its control over foreign investment and trade.

(1) What is the prime source of livelihood for the majority of population in India? **(1)**

(2) Which sector is developing very fast in India in the recent years ? **(1)**

(3) Give your opinion about India's economy with reference to the above passage. **(2)**

Q. 6. Answer the following questions in detail : (Any TWO) **[16]**

(1) Explain the Law of Demand with its assumptions.

(2) Explain the concept of Price Elasticity of Demand and its types.

(3) Explain Income and Expenditure Method of measuring National Income.

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SOLUTIONS : BOARD'S QUESTION PAPER (SEPTEMBER 2021)

Q. 1. (A)

(1) (3) only 'a'

(2) (4) only 'c'

(3) (1) only 'c'

(4) (3) only 'c'

(5) (1) a, b, c.

Q. 1. (B)

(1) Forest

(2) Market demand

(3) Demand curve

(4) Quantity index number

(5) Reserve Bank of India

Q. 1. (C)

(1) Time Utility (2) Composite Demand (3) Oligopoly (4) Government Budget (5) Demand Deposits.

Q. 1. (D)

(1) When Marginal Utility (MU) is negative, Total Utility (TU) is falling.

(2) When less units are demanded at high price, it shows contraction in demand.

(3) Revenue per unit of output sold is Average revenue.

(4) Organised sector of money market in India includes commercial banks.

(5) Purchase of goods and services by one country from another country is Import Trade.

Q. 2. (A)

(1) (A) Identified concept : Study of individual economic unit.

(B) Explanation of concept : The study of economic behaviour of a particular unit by isolating it from the other forces of economy is known as the study of individual economic unit. For example, microeconomics deals with the study of individual economic units such as individual firm, individual price, etc.

(2) (A) Identified concept : Utility.

(B) Explanation of concept : Utility refers to the capacity of a commodity to satisfy a human want.

(3) (A) Identified concept : Monopolistic competition.

(B) Explanation of concept : Monopolistic competition refers to competition among a large number of sellers producing close but not perfect substitutes.

(4) (A) Identified concept : Special purpose index number.

(B) Explanation of concept : Special purpose index number is constructed with same specific purpose to measure change in specific variable in an economy over a period of time.

(5) (A) Identified concept : Unitary elastic demand.

(B) Explanation of concept : When the proportionate change in the price of a commodity brings about exactly equal proportionate change in its quantity demanded, the demand is said to be unitary elastic.

Q. 2. (B)

(1)	**Form Utility**	**Knowledge Utility**
	(1) Meaning	
	Utility increased by changing the shape, size, colour, etc. of a commodity is called form utility.	Utility increased by acquiring knowledge is called knowledge utility.
	(2) Creation	
	Form utility is obtained by changing the structure of an existing material to another structure.	Knowledge utility is obtained by gaining knowledge of a particular thing or a concept.

(2)	**Perfect Competition**	**Monopolistic Competition**
	(1) Meaning	
	A market where a large number of sellers sell homogeneous product at a single price is known as perfect competition.	A market where many sellers sell differentiated products at different prices is known as monopolistic competition.
	(2) Selling cost	
	In perfect competition, a seller does not have to incur selling cost.	In monopolistic competition, a seller has to incur selling cost.

(3) Partial Equilibrium	General Equilibrium
(1) Meaning	
Partial equilibrium is a type of equilibrium used in microeconomics, which explains the equilibrium of a particular unit of an economy.	General equilibrium is a type of equilibrium used in macroeconomics, which explains the equilibrium of the entire economy.
(2) Nature	
Partial equilibrium neglects the functional relationship and interdependence between the economic variables by assuming 'other things being constant'.	General equilibrium assumes the functional relationship and interdependence between economic variables by assuming 'everything depends on everything else'.

(4) Direct Tax	Indirect Tax
(1) Meaning	
A tax which is levied on the income or property of an individual and so in which the impact and incidence of tax is on same head is called direct tax.	A tax which is levied on goods and services and so in which the impact of tax is on one person (seller) and the incidence of tax is on another person (buyer) is called indirect tax.
(2) Examples	
Income tax, property tax, etc. are the examples of direct tax.	Goods and Services Tax, Customs Duty, etc. are the examples of indirect tax.

(5) Perfectly Elastic Demand	Perfectly Inelastic Demand
(1) Meaning	
When a slight proportionate change in the price of a commodity brings an infinite (unlimited) proportionate change in its quantity demanded, the demand is said to be perfectly elastic.	When the proportionate change in the price of a commodity brings no (zero) proportionate change in its quantity demanded, the demand is said to be perfectly inelastic.
(2) Numerical Value	
In the case of perfectly elastic demand, the numerical value of the elasticity of demand is infinite.	In the case of perfectly inelastic demand, the numerical value of the elasticity of demand is zero.

Q. 3. (1) The features of perfect competition are as follows :

(a) Large number of buyers and sellers :

Large number of buyers : In perfect competition, there is a large number of potential buyers buying commodity in market. Their number is so large that a single buyer cannot influence the market price. Thus, in perfect competition, a buyer is a price taker.

Large number of sellers : In perfect competition, there is a large number of potential sellers selling their commodity in the market. Their number is so large that the single seller cannot influence the market price. The price of the product is determined by the interaction of market demand and market supply of a commodity. Thus, in perfect competition, a seller is a price taker.

(b) Homogeneous product : In perfect competition, every firm produces and sells identical products, i.e. units of a commodity produced by each firm are uniform in respect of their size, shape, colour, quality, etc. Therefore, the commodities sold in perfect market are perfect substitutes to one another.

(c) Free entry and exit : In perfect competition, any firm can freely enter or can exit the market without any restrictions. If there is a hope of profit, a new firm can easily enter the market. Similarly, if there is possibility of losses, the existing firm can freely exit the market.

(d) Single price : In perfect competition, all units of a commodity have uniform price and it is determined by the equilibrium of the market demand and market supply.

(e) Perfect knowledge of market : In perfect competition, the buyers as well as sellers have perfect knowledge of market conditions such as price of product, quality of product, source of supply of product, etc.

(f) Perfect mobility of factors of production : In perfect competition, land has occupational mobility and other factors of production viz. labour, capital and entrepreneur have occupational mobility as well as geographical mobility.

(g) Absence of transport cost : It is assumed that there is no transport cost in perfect competition. Therefore, uniform price prevails in perfect competition.

(h) No government intervention : *Laisses-faire* policy prevails under perfect competition. It means that there is no government intervention in economic activities.

(*Write any four points in the answer.*)

(2) Quantity Index Number :

Commodity	Quantity in 2010 (q_0)	Quantity in 2010 (q_1)
A	20	55
B	35	60
C	75	110
D	70	75
	$\sum q_0 = 200$	$\sum q_1 = 300$

Quantity Index Number formula :

$$Q_{01} = \frac{\sum q_1}{\sum q_0} \times 100$$

$$= \frac{300}{200} \times 100$$

$$= 1.5 \times 100$$

$$Q_{01} = 150$$

(3) Non-tax sources of revenue of the government are as follows :

(a) Fees : Fee is paid by citizens in return for certain specific services rendered by the government. For example, education fee, registration fee, etc.

(b) Prices of public goods and services : Modern governments sell various types of commodities and services to the citizens. A price is a payment made by the citizens to the government for the goods and services sold to them. For example, railway fares, postal charges, etc.

(c) Special assessment : The payment made by the citizens of a particular locality in exchange for certain special facilities given to them by the authorities is known as 'special assessment'. For example, local bodies can levy a special tax on the residents of a particular area where extra/special facilities of roads, energy, water supply, etc. are provided.

(d) Fines and penalties : The government imposes fines and penalties on those who violate the laws of the country. The objective of the imposition of fines and penalties is not to earn income, but to discourage the citizens from violating the laws framed by the government. For example, fines for violating traffic rules. However, the revenue from this source is comparatively limited.

(e) Gifts, grants and donations : The government may also earn some income in the form of gifts by the citizens and others. The government may also receive grants from the foreign governments and institutions for general and specific purposes. Foreign aid has become an important source of development finance for a developing country like India. However, this source of revenue is uncertain in nature.

(f) Special levies : The government levies duties on those commodities, the consumption of which is harmful to the health and well-being of the citizens. Like fines and penalties, the objective of special levies is not to earn income, but to discourage citizens from the consumption of harmful commodities. For example, duties levied on wine, opium and other intoxicants.

(g) Borrowings : The government borrows from the citizens in the form of deposits, bonds, etc. Government also gets loans from foreign governments and international organizations such as IMF, World Bank, etc. In modern times, loans are becoming more and more popular source of revenue for the governments.

(*Write any four points in the answer.*)

(4) The function of acceptance of deposits of commercial bank is as follows :

Deposits are the main source of funds for commercial banks. Commercial banks accept the following types of deposits :

(A) Demand deposits : Demand deposits are deposits that are withdrawn on demand. The following are the two types of demand deposits :

(a) Current deposits : Current deposits are generally kept in current account by businessmen, corporations and trusts. The accountholder can deposit money in the current deposit account any number of times and withdraw as many times as demanded. Current deposit accountholders are also given the facility of overdraft, i.e. facility to withdraw in excess of the balance in the account.

(b) Savings deposits : Savings deposits are held mainly by salaried class and small traders. The accountholder can deposit money in the savings deposit account at any number of times and withdraw money as and when required.

(B) Term deposits : Deposits held for a fixed period are called term deposits. The following are the two types of term deposits :

(a) Recurring deposits : Recurring deposits are regularly kept in the recurring deposit account, especially by small savers. Recurring deposits encourage regular savings.

(b) Fixed Deposits : Fixed deposits are kept by the saver for a fixed period. The amount deposited by the saver can be withdrawn after the stipulated period. Interest is paid at the highest rate on fixed deposits.

(5) The features of national income are as follows :

(a) Macroeconomic concept : National income represents income of the economy as a whole rather than that of an individual. Therefore, national income is a macroeconomic concept.

(b) Inclusion of value of only final goods and services : In order to avoid double counting, the value of only final goods and services produced in the economy are considered while calculating national income. While calculating national income, the value of intermediate goods or raw materials is not considered. For example, while estimating the value of sugar, the value of sugar cane is not taken into account, as it is already included in the price of the sugar.

(c) Inclusion of net aggregate value : National income includes net value of goods and services produced and does not include depreciation cost (i.e. wear and tear of capital assets).

(d) Inclusion of net income from abroad : National income includes net income from abroad, i.e. difference between export value and import value (X – M) and net difference between receipts from abroad and payments made abroad (R – P).

(e) Expressed with reference to financial year : National income is always expressed with reference to a specific time period. In India, it is calculated for every financial year, i.e. from 1st April to 31st March.

(f) Flow concept : National income is a flow concept. It shows flow of goods and services produced in the economy during a financial year.

(g) Expressed in monetary terms : National income is always expressed in monetary terms. It represents only those goods and services which are exchanged for money.

(*Write any four points in the answer.*)

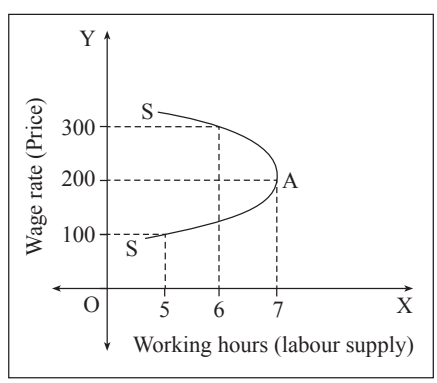
Q. 4. (1) Yes, I agree with this statement.

The exceptions to the Law of Supply are as follows :

(a) Labour supply : In the initial stages, labour supply increases as wage rate increases. However, at a later stage, workers would prefer leisure to work. They prefer to earn same amount of income by working for less hours.

Therefore, in the initial stage, the labour supply curve slopes upwards from the left to the right. However, in the later stage, the labour supply curve bends backward. This is explained in the following schedule and diagram :

Wage Rate (₹) (Per Hour)	Hours of Work (Per Day)
100	5
200	7
300	6



From the schedule and diagram, it can be seen that in the initial stages as wage rate rises from ₹ 100 to ₹ 200, the supply of labour also rises from 5 hours to 7 hours.

However, when the wage rate rises from ₹ 200 to ₹ 300, the supply of labours do not rise further; rather it is reduced from 7 hours to 6 hours. Thus, after the wage level ₹ 200, the supply curve slopes backwards from the point A towards Y-axis indicating that at higher prices fewer labour hours are supplied.

(b) Agricultural goods : Agricultural goods require suitable climatic conditions and sufficient period of growth. Therefore, the supply of agricultural goods cannot be increased overnight though their prices rise. Similarly, due to favourable conditions, the supply of agricultural goods may rise even at their constant prices. Therefore, in case of agricultural goods the law is inapplicable. Therefore, agricultural goods are exception to the Law of Supply.

(c) Urgent need for cash : If a seller needs cash urgently he is forced to sell more even at less prices / below market prices. Therefore, the sale of goods influenced by the need for cash is considered as an exception to the Law of Supply.

(d) Perishable goods : Perishable goods like vegetables, flowers, eggs, etc. cannot be stored for a long period of time. Seller has to bear a huge loss, if perishable goods do not get sold. Therefore, in case of perishable goods, the supplier would offer to sell more quantities at lower prices to avoid losses. Therefore, the sale of perishable goods at low price is considered as an exception to the Law of Supply.

(e) Rare goods : The seller shows less willingness to sell the rare and precious articles like rare paintings, old coins, antique goods, etc. even though their prices are high. The supply of rare articles remains unchanged though their prices are high. Therefore, rare articles are exceptions to the Law of Supply.

(*Write any three points in the answer.*)

(2) Yes, I agree with this statement.

The scope of macroeconomics is as follows :

(a) Theory of Income and Employment : Macroeconomics explains how the level of national income and employment is determined. It also examines the causes for fluctuations in national income and employment. To understand the determination of the level of national income and employment, it also studies the consumption function, investment function and trade cycles. Macroeconomics studies the interrelationship between the level of output, national income and the employment level and suggests policies to solve the problems related to these macro variables.

(b) Theory of General Price Level and Inflation : Macroeconomics shows how the general price level is determined and further explains what causes fluctuations in it. The theory of general price level studies the causes and effects of inflation and depression and suggests economic policies to tackle these problems.

(c) Theory of Growth and Development : Macroeconomics studies the causes of underdevelopment and poverty in poor countries as well as developing countries

and suggest theories and strategies for accelerating growth and development in them. It also explains how the higher rate of growth with stability can be achieved.

(d) Macro Theory of Distribution : Macroeconomics deals with determination of relative shares of various social classes in the total national income. Macro theory of distribution deals with the relative shares of rent, wages, interest and profit in the total national income.

(*Write any three points in the answer.*)

(3) No, I disagree with this statement.

The types of index numbers are as follows :

(a) Price index number : Price index number measures the general changes in the prices of goods over a period of time. It compares the level of prices between the base year and the current year.

(b) Quantity index number : Quantity index number is also called volume index number. It measures changes in the level of output or physical volume of production in the economy over a period of time. For example, changes in agricultural production and industrial production, etc. over a period of time.

(c) Value index number : The value of a commodity is the product of its price and quantity ($p \times q$). The value index number measures the changes in the value of a variable in terms of rupee over a period of time. It is a more informative index as it combines both, changes in the price as well as quantity.

(d) Special purpose index number : Special purpose index number is constructed with some specific purpose. For example, import-export index numbers, labour productivity index numbers, share price index number, etc.

(4) Yes, I agree with this statement.

The functions of RBI are as follows :

(a) Issue of currency notes : The Reserve Bank of India has a monopoly on printing of all rupee notes except one rupee note and all coins. According to the Minimum Reserve Policy of 1957, the Reserve Bank of India has to reserve at least ₹ 200 crore. Of this, ₹ 115 crore is kept in terms of gold and ₹ 85 crore are kept in terms of foreign currency.

(b) Acting as a banker to the government : The Reserve Bank of India acts as a banker to the government. The Reserve Bank of India accepts deposits from the Central and State Governments and makes payments on their behalf as a representative of the Government. The Reserve Bank of India assists the government in managing public debt and provides advice on a number of financial issues.

(c) Acting as a banker to banks : The Reserve Bank of India has statutory control over all banks in India. All Scheduled Banks in India are required to reserve

minimum cash with the Reserve Bank of India as per their demand and term liabilities. The Reserve Bank of India provides financial assistance to banks by discounting of eligible bills, providing advances against approved securities.

(d) Acting as a custodian of foreign exchange reserves : The Reserve Bank of India acts as the custodian of foreign exchange reserves. The Reserve Bank of India conducts the buying and selling of currencies of all member countries of the International Monetary Fund. The Reserve Bank of India helps in maintaining the official rate of exchange of rupee as well as ensure its stability.

(e) Controlling credit : As the Supreme bank in the country, the Reserve Bank of India controls the credit creation process of commercial banks. The Reserve Bank of India uses quantitative techniques to control the volume of credit, such as bank rates, open market operations, Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR). The Reserve Bank of India uses qualitative tools to regulate the use of credit, such as fixing margin requirements, credit rationing, moral suasion, etc.

(f) Collection and publication of data : The Reserve Bank of India collects and publishes statistical information related to banking and other financial sectors of the economy.

(g) Carrying out promotional and developmental functions : The Reserve Bank of India carries out promotional and developmental functions such as extending banking services in semi-urban and rural areas of India, providing financial securities to depositors, providing agricultural credit to farmers, providing industrial credit to boost industries.

(h) Performing other functions : The Reserve Bank of India acts as a clearing house for settling the accounts between its member banks. The Reserve Bank of India acts as the lender of last resort to all banks in India and provides liquidity to banks experiencing financial difficulties.

(*Write any three points in the answer.*)

(5) No, I disagree with this statement.

(1) In modern times, modern government performs many other optional functions in addition to the traditional obligatory functions of defence and civic administration.

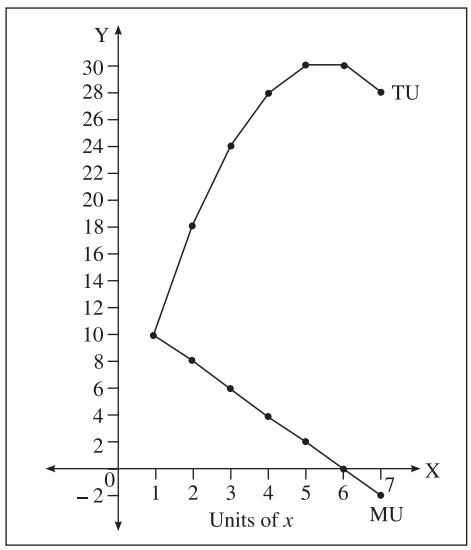
(2) The government performs optional functions for the purpose of boosting economic and social development in the country. The optional functions of the government are constantly increasing.

(3) Provision of education and health services, implementation of social security schemes, promotion of industrial development, employment generation, etc. optional functions are carried out by the government.

Thus, obligatory function is not the only function of government; it is one of many functions.

Q. 5. (1)

(1)



(2) Zero (3) Negative.

(2)

(1) Price (2) Positive

(3) Expansion of supply (4) Contraction of supply.

(3)

(1) Agriculture or agro-based industries.

(2) Service sector.

(3) There is diversity in Indian economy. Most of the people working in India are dependent on agriculture or agro-based industries. The contribution of service sector in India's economy is also increasing.

Q. 6. (1)

(A) Statement of the Law of Demand : According to **Dr. Alfred Marshall**, "*Other things being equal, the amount demanded rises with a fall in price; and diminishes with a rise in price*."

(B) Assumptions : The following are the assumptions to the Law of Demand :

(a) Constant level of income : If there is rise in the income of a consumer, demand for different goods and services tends to rise even at a higher prices. In that case, the law becomes inapplicable. Therefore, to prove the law, it is assumed that there is no change in consumer's income.

(b) No change in the size of population : Due to a rise in the size of population, the demand for all goods and services tends to rise at their constant prices. In such a situation, the Law of Demand becomes inapplicable. Therefore, to prove the

validity of the law, it is assumed that the size and the composition of population remain constant.

(c) No change in prices of substitute goods : Due to the availability of cheaper substitute goods, the demand for a commodity in question tends to fall at its existing price and vice versa. Therefore, the law assumes that there is no change in the prices of substitute goods of a commodity in question.

(d) No change in prices of complementary goods : If the prices of complementary goods rise, the demand for a commodity in question tends to fall at its existing price and vice versa. Therefore, the law assumes that there is no change in the prices of complementary goods of a commodity in question.

(e) No expectations regarding future price : If a consumer anticipates a fall in price of the commodity in the near future, the demand for the commodity in question falls at the present price and vice versa. Therefore, the law assumes that consumers do not have any expectations regarding rise or fall in the price of a commodity in the near future.

(f) No change in tastes, habits, fashions : If consumer's liking for a particular commodity increases, then the demand for such a commodity tends to rise even at a higher price and vice versa. In such circumstances, the Law of Demand does not hold good. Therefore, to maintain the validity of the law, it is assumed that there is no change in tastes, habits, preferences of the consumer.

(g) No change in government policy : Rise in the taxes leads to decrease in the disposable income of the consumer. This in turn decreases the demand for goods and services at their current prices and vice versa. Therefore, to prove the law, it is assumed that there is no change in government's taxation policy.

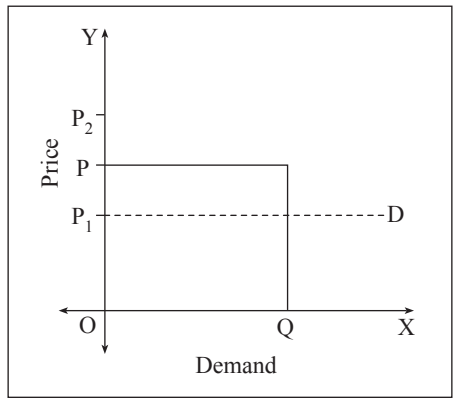
(2)

(A) Concept of price elasticity of demand : Price elasticity of demand can be defined as the percentage change in the quantity demanded of a commodity in response to a percentage change in the price of a commodity only. It can be measured with the help of the following formula :

$$\text{Formula : } Ed = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$

(B) Types : The types of price elasticity of demand are as follows :

(a) Perfectly / Infinite Elastic Demand : When a proportionate change in the price of a commodity brings infinite (unlimited) proportionate change in the quantity demanded, the demand is said to be perfectly elastic.



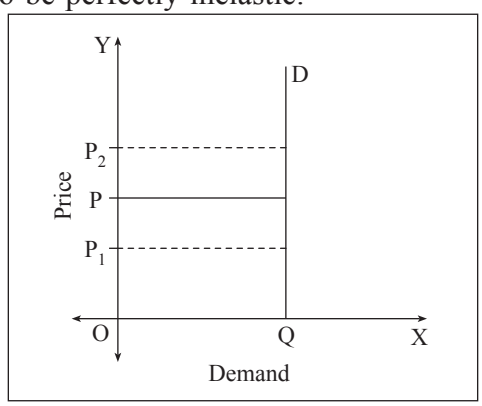
Explanation of Diagram : From the diagram, it can be seen that the original price of a commodity is OP and the original demand of a commodity is OQ. When the price of a commodity rises from OP to OP_2, the demand of a commodity falls and becomes zero. When the price of a commodity falls from OP to OP_1, the demand of a commodity rises up to infinity. In the case of perfectly elastic demand, the demand curve is a horizontal straight line, parallel to X-axis.

Measurement of Elasticity :

$$Ed = \frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}} = \frac{\alpha}{0} = \alpha$$

The numerical value of perfectly elastic demand is infinity. ($Ed = \alpha$) Perfectly elastic demand is only a theoretical possibility.

(b) Perfectly Inelastic Demand : When the proportionate change in price of a commodity brings no (zero) proportionate change in its quantity demanded, the demand is said to be perfectly inelastic.



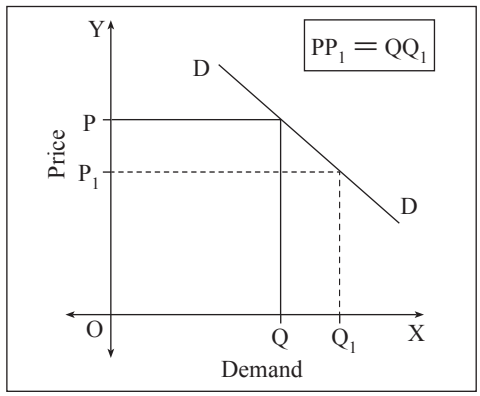
Explanation of Diagram : From the diagram, it can be seen that the original price of a commodity is OP and the original demand of a commodity is OQ. When the price of a commodity rises from OP to OP_2 (by 20 per cent) the demand remains constant i.e. OQ. Similarly, when the price of a commodity falls from OP to OP_1 (by 20 per cent) the demand remains constant. In the case of perfectly inelastic demand, the demand curve is a vertical straight line, parallel to Y-axis.

Measurement of Elasticity :

$$Ed = \frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}} = \frac{0}{20} = 0$$

The numerical value of perfectly inelastic demand is zero. (Ed = 0) Perfectly inelastic demand is also only a theoretical possibility.

(c) Unitary Elastic Demand : When the proportionate change in the price of a commodity brings about exactly equal proportionate change in its quantity demanded, the demand is said to be unitary elastic.



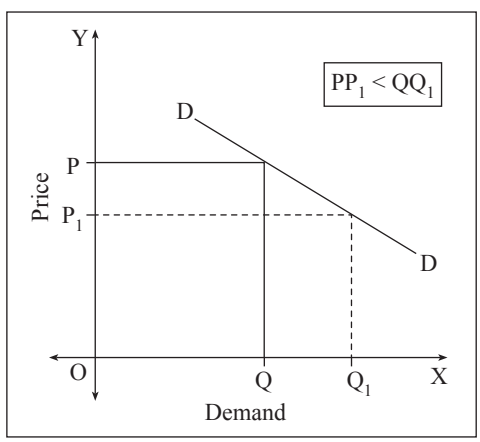
Explanation of Diagram : From the diagram, it can be seen that the original price of a commodity is OP and the original demand of a commodity is OQ. When the price of a commodity falls from OP to OP_1 (by 25 per cent) the demand of a commodity rises from OQ to OQ_1 (by 25 per cent). In the case of perfectly inelastic demand, the demand curve is a rectangular hyperbola.

Measurement of Elasticity :

$$Ed = \frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}} = \frac{25}{25} = 1$$

The numerical value of unitary elastic demand is one. (Ed = 1)

(d) Relatively Elastic Demand : When the proportionate change in the price of a commodity brings about greater than proportionate change in its quantity demanded, the demand is said to be relatively elastic.



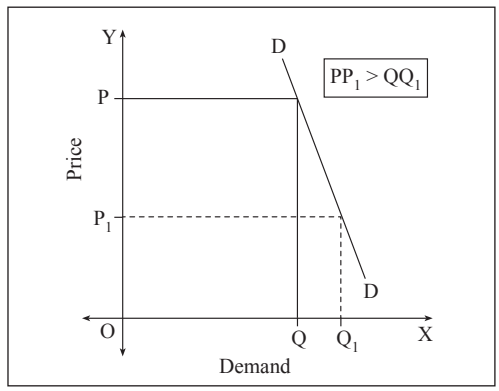
Explanation of Diagram : From the diagram, it can be seen that the original price of a commodity is OP and the original demand of a commodity is OQ. When the price of a commodity falls from OP to OP_1 (by 25 per cent) the demand of a commodity rises from OQ to OQ_1 (by 50 per cent). In the case of relatively elastic demand, the demand curve is a flatter line.

Measurement of Elasticity :

$$Ed = \frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}} = \frac{25}{25} = 2$$

The numerical value of relatively elastic demand is greater than one. (Ed > 1)

(e) Relatively Inelastic Demand : When the proportionate change in the price of a commodity brings about less than proportionate change in its quantity demanded, the demand is said to be relatively inelastic.



Explanation of Diagram : From the diagram, it can be seen that the original price of a commodity is OP and the original demand of a commodity is OQ. When the price of a commodity falls from OP to OP_1 (by 50 per cent) the demand of a commodity rises from OQ to OQ_1 (by 25 per cent). In the case of relatively inelastic demand, the demand curve is a steeper line.

Measurement of Elasticity :

$$Ed = \frac{\text{Percentage change in Quantity Demanded}}{\text{Percentage change in Price}} = \frac{25}{50} = 0.5$$

The numerical value of relatively inelastic demand is less than one. (Ed < 1)

(3) Income Method of measuring national income.

Income method of measuring national income is also known as factor cost method. This method approaches national income from the distribution side. This method can be explained with the help of the following points :

(1) According to this method, the income payments received by all citizens of a country, in a given year are added up. The data pertaining to income are obtained from income tax returns, reports, books of accounts as well as estimates from small income.

(2) In this method, the incomes accrued to land, labour, capital and entrepreneur in the forms of rents, wages, interest and profits are all added together. The sum of factor income is treated as Gross National Product. However, in this method, the income received in the form of transfer payments is ignored.

(3) In India, the national income committee of the Central Statistical Organization uses the income method for adding up the income arising from trade, transport, professional and liberal arts, public administration and domestic services.

(4) GNP according to income method is calculated as follows : NI = Rent + Wages + Interest + Profit + Mixed Income + Net income from abroad.

(B) Expenditure Method of measuring National Income.

Expenditure method of measuring national income is also known as Outlay Method. According to this method, national income is calculated by summing up all consumption expenditure and investment expenditure made by all individuals, firms as well as the government of a country during a year. Thus, gross national product is found by using the following formula : NI = C + I + G + (X — M) + (R — P). The expenditure method can be explained with the help of the following points :

(a) Private Final Consumption Expenditure (C) : Private final consumption expenditure by households may be on non-durable goods such as food which are used immediately, or on durable goods such as car, computer, television set, washing machine, which are generally used for a longer period of time or on services such as transport services, medical services, etc. National income takes into account the private final consumption expenditure.

(b) Gross Domestic Private Investment Expenditure (I) : It refers to expenditure made by private businesses on replacement, renewals and new investments. National income takes into account the gross domestic private investment expenditure.

(c) Government's Final Consumption and Investment Expenditure (G) : Government's final consumption expenditure refers to the expenditure incurred by government on various administrative services like law and order, defence, education, etc. Government's investment expenditure refers to the expenditure incurred by government on creating infrastructural facilities such as construction of roads, railways, bridges, dams, canals, which are used by the business sector for production of goods and services in any economy. National income takes into account the government's final consumption expenditure and investment expenditure.

(d) Net Foreign Investment/Net Exports (X — M) : It refers to the difference between exports and imports of a country during a period of one year. National income takes into account the value of net exports.

(e) Net receipts (R — P) : It refers to the difference between expenditure incurred by foreigners in the country (R) and expenditures incurred abroad by residents (P). National income takes into account the value of net receipts.

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