HALF YEARLY EXAM - DECEMBER -2024 – ANSWER KEY

XI STANDARD – ECONOMICS – ENGLISH MEDIUM

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Time Allowed : 3 Hours

Maximum Marks : 90

I. Choose the most suitable from the given four alternatives and write the option code and the corresponding answer **20 x 1 = 20**

1	D	All of the Above	11	A	M.S. Swaminathan
2	D	Edge Worth	12	A	Cotton
3	C	Knight	13	C	Disparities among People and Regions
4	B	Variable	14	A	1^{st} July 2017
5	D	Homogeneous Goods	15	B	Village
6	C	Imperfect Competition	16	D	All the Above
7	D	Marshall	17	D	Bio-Park
8	D	Neo-classical Theory	18	C	Gujarat
9	C	France	19	C	Equations
10	B	Ethical Foundation	20	A	$nX^{(n-1)}$

II. Answer any seven questions. Question No.30 is compulsory. **7 x 2 = 14**

21. Deductive Method - Meaning:

1. It is also named as analytical or abstract method.
2. It consists in deriving conclusions from general truths; it takes few general principles and applies them to draw conclusions.

22. Production Function:

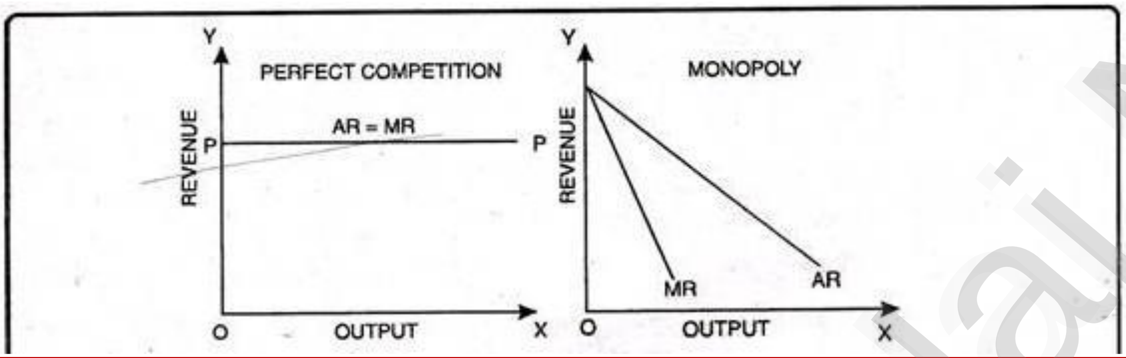
- According to George J. Stigler, **"Production function is the relationship between inputs of productive services per unit of time and outputs of product per unit of time."**
- Production function may be expressed as:
- **Q = f (N, L, K, T)**
- Where, Q = Quantity of output, N = Land; L = Labour; K = Capital; and T = Technology.

23. Real Cost - Meaning:

- **Real cost refers to the payment made to compensate the efforts and sacrifices of all factor owners for their services in production.**

- It includes the efforts and sacrifices of landlords in the use of land, capitalists to save and invest, and workers in foregoing leisure.
- Adam Smith regarded pains and sacrifices of labour as real cost of production.

24. a) Perfect Competition b) Monopoly



25. Interest – Meaning:

- **According Alfred Marshall,** "Interest is the price paid for the use of capital in any market"
- **Interest is the reward paid by the borrower to the lender for the use of capital.**

26. Features of developed economy: (Any 2)

1) High National Income
2) High Per Capita Income
3) High Standard of Living
4) Full Employment of Resources
5) Dominance of Industrial Sector
6) High Level of Technology
7) High Industrialisation
8) High ConsumptionLevel
9) High Level of Urbanisation
10) Smooth Economic Growth
11) Social Equity, Gender Equality and Low Levelsof Poverty
12) Political Stability and Good Governance

27. List the Weaknesses on Green Revolution.

- Indian Agriculture was still a gamble of the monsoons.
- This strategy needed heavy investment in seeds, fertilizers, pesticides and water.
- The income gap between large,
- Widespread unemployment among agricultural labourers in the rural areas.
- Larger chemical use and inorganic materials reduced the soil fertility

28. Reason for structural reform implemented in Indian Economy:

1) Indian economy responded to the crisis by introducing a set of policies known as Structural Reforms.
2) 2. These policies were aimed at correcting the weaknesses and rigidities in the various sectors of the economy such as Industry, Trade, Fiscal and Agriculture.

29. Rural Economy.

1. Rural economy refers to villages, and rural community refers to people living in villages.
2. Rural areas have problems like backwardness of agriculture, low income , low employment opportunities, poverty, low infrastructural development, low literacy and etc.,

30. Consumer Surplus Formula:

- Consumer's Surplus = What a person is willing to pay – What he actually pays.

(OR)

- Consumer's Surplus = Potential Price – Actual Price.

- Mathematically – Consumer's Surplus = TU – (P x Q)

TU = Total Utility, P = Price and Q= Quantity of the commodity

PART - III

III. Answer any seven questions. Question No.40 is compulsory. 7 x 3 = 21

31. Difference between Micro Economics and Macro Economics: (Any 3)

Micro Economics	Macro Economics
1. It is that branch of economics which deals with the economic decision-making of individual economic agents such as the producer, the consumer etc.	1. It is that branch of economics which deals with aggregates and averages of the entire economy. E.g., aggregate output, national income, aggregate savings and investment, etc.
2. It takes into account small components of the whole economy.	2. It takes into consideration the economy of the country as a whole.
3. It deals with the process of price determination in case of individual products and factors of production.	3. It deals with general price-level in any economy.
4. It is known as price theory	4. It is also known as the income theory.
5. It is concerned with the optimization goals of individual consumers and producers	5. It is concerned with the optimization of the growth process of the entire economy.

32. Feature of Human Wants. (Any 3)

1) **Wants are unlimited**
   - Human wants are countless in number and various in kinds.
2) **Wants become habits**
   - Wants become habits; for example, when a man starts reading news paper in the morning, it becomes a habit.
3) **Wants are Satiable**
   - Though we cannot satisfy all our wants, at the same time we can satisfy particular wants at a given time.
4) **Wants are Alternative**
   - There are alternative ways to satisfy a particular want
5) **Wants are Competitive**
   - All our wants are not equally important.
6) **Wants are Complementary**
   - Sometimes, satisfaction of a particular want requires the use of more than one commodity.
7) **Wants are Recurring**
   - Some wants occur again and again.

33. Functions of Entrepreneur: (Any 3)

1.Initiation:
- **An organizer is the initiator of the business, by considering the situation and availability of resources and planning the entire process of business or production.**

2.Innovation:
- **A successful entrepreneur is always an innovator.**
- **He introduces new methods in the production process.**

3.Coordination:
- **An organizer applies a particular combination of the factors of production to start and run the business or production.**

4.Control, Direction and Supervision:
- **An organiser controls so that nothing prevents the organisation from achieving its goal**

5.Risk-taking and Uncertainty-bearing:
- There are risk-taking and uncertainty-bearing obstacles.

34. Difference between Explict cost and Implicit cost : (Any 3)

Explicit Cost	Implicit Cost
1) It includes actual money expenditure incurred by a firm in hiring or buying the factors it needs in the production process.	1) It is not actual money expenditure but is the cost of factors owned by the firm and used by the firm in its production process.
2) It is explicitly shown in the firm's books of accounts and is thus, called accounting costs.	2) It does not enter in the firm's books of accounts.

3) It is a payment concept. *4)* Examples : Wages, Rent, Interest, Insurance, etc.,	3) It is a receipt concept. *4)* Examples : Wages of Self Labour, Rent for self owned Premises, etc.,

35. Difference Between Firm and Industry:

FIRM	*INDUSTRY*
1) A firm refers to a single production unit in an industry., producing a large or a small quantum of a commodity or service, and selling it at a price in the market.	1) An industry refers to a group of firms.
2) Producing a large or a small quantum of a commodity or service, and selling it at a price in the market.	2) Producing the same product or service in an economy.
3) A single cement firm.	*3)* For example, a group of firms producing cement is called a cement industry.

36. Ambedkar's economic ideas an agricultural economics:

1) In 1918, Ambedkar published a paper "**Small Holding in India and their Remedies".**
2) Citing Adam Smith's 'Wealth of Nations", he made a fine distinction between **"Consolidation of Holdings" and "Enlargement of Holdings".**
3) This paper attempts to **deal with the problem of the size of holding it affects agricultural productivity.**

37. Reasons for nationalization of commercial banks.

1) The main objective of nationalization was **to attain social welfare**.
2) Nationalisation of banks helped **to curb private monopolies**
3) Needed **to encourage the banking habit among the rural** population.
4) **To reduce the regional imbalances** where the banking facilities were not available.
5) **Credit facilities mainly to the agriculture sector** and its allied activities

38. The merits of Privatisation:

1) 1.Helps in reducing the burden on government.
2) Makes the public sector units competative.
3) Greater automomy for public sector units.
4) Industrial growth.
5) Better service to customers.

39. Importance of Rural Development: (Any 3)

1) A major share of population contributions are very much supportive for the **nation building activities.**
2) The rural economy **supports the urban sectors**
3) Improvements in education, health and sanitation in **villages can help avoid many urban problems**
4) **providing gainful employment** in rural areas and improving overall food production.
5) rural-urban **migration can be reduced**
6) To better **utilise the unused and under-utilised resources**
7) **To improve the nation's status in the global arena (level).**

40. Motives of Demand for Money

1) **The Transaction Motive**
   - The desire of the people to hold cash for the current transactions (or day–to- day expenses). **Mt = f (y)**
2) **The Precautionary Motive**
   - Desire of the people to hold cash to meet unexpected or unforeseen expenditures such as sickness, accidents). **Mp = f (y)**
3) **The Speculative Motive**
   - The speculative motive relates to the desire of the people to hold cash in order to take advantage of market movements regarding the future. **Ms = f (i)**

PART - IV

IV. Answer all the questions. 7 x 5 = 35

41.a. Compare and Contrast various definition of Economics:

PART I	Wealth Definition	Welfare Definition
Author	Adam Smith	Alfred Marshal
Year	1776	1890
"Definition"	**"Economics as the science of wealth"**	**"Economics is a study of mankind in the ordinary business of life"**
Key Concepts	1. Individual in the society wants to promote his own gain and in this process 2. Man is guided and led by an "invisible hand". 3. It means that each person works for his own good.	1. Economics studies on one side a study of wealth, on the other, and more important side, a part of the study of man 2. Man promotes primarily welfare and not wealth. 3. Economics contains the concerns of ordinary people.
Criticisms	1. Economics as a 'dismal science', "pig science" etc. 2. As it teaches selfishness which is against ethics.	1. Does not consider immaterial things, 2. Welfare varies from person to person, country to country and one period to another.

PART II	Scarcity Definition	Growth Definition
Author	Lionel Robbins	Paul Samuelson
Year	1932	1948
"Definition"	**"Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses".**	**"Economics is the study of how men and society choose, with or without the use of money, to produce various commodities over time, and distribute them for consumption, now and in the future"**
Key Concepts	1. Human beings have unlimited wants 2. Resources are limited or scarce. 3. the scarce means are capable of having alternative uses.	1. Samuelson makes his definition dynamic. 2. Covers various aspects like production, distribution and consumption.
Criticisms	1. Does not make any distinction between goods conducive to human welfare and goods that are not	1. Samuelson's definition is applicable also in a barter economy, where money is not used.

[OR]

41.b) Law of diminishing marginal utility with diagram.

Marshall states the law as, —the additional benefit which a person derives from a given increase of his stock of a thing, diminishes with every increase in the stock that he already has‖.

Assumptions

1) **Utility can be measured by cardinal numbers such as 1, 2, 3 and so on.**
2) **The marginal utility of money of the consumer remains constant.**
3) **The consumer should be a rational consumer and his aim is to attain maximum satisfaction with minimum expenditure.**
4) **The units of the commodity consumed must be reasonable in size.**
5) **The commodity consumed should be homogeneous or uniform in character like weight, quality, taste, colour etc.**
6) **The consumption of goods must take place continuously at a given period of time.**

Explanation

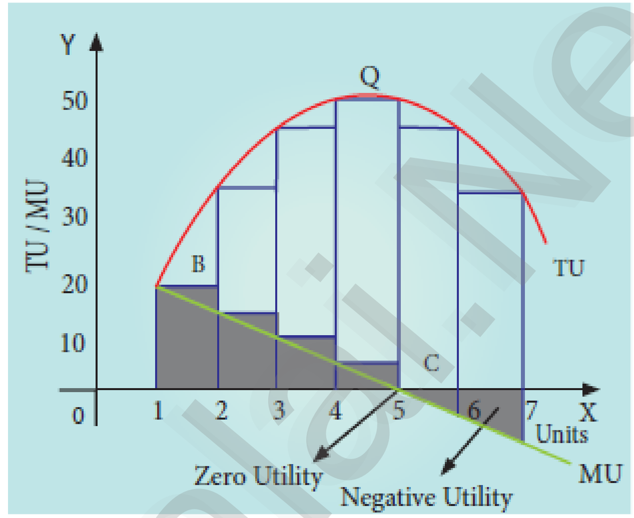
➢ **The Law of Diminishing Marginal Utility states that if a consumer continues to consume more and more units of the same commodity, its marginal utility diminishes.**

Illustration

- **The law can be explained with a simple illustration.**
- **Suppose a consumer wants to consume 7 apples one after another.**
- **The utility from the first apple is 20.**

- But the utility from the second apple will be less than that of the first (say 15), the third less than that of the second (say 10) and so on.
- Finally, the utility from the fifth apple becomes zero and the utilities from sixth and seventh apples are negative.

Units of Apple	Total Utility	Marginal Utility
1	20	20
2	35	15 (35-20)
3	45	10 (45-35)
4	50	5 (50-45)
5	50	0 (50-50)
6	45	-5 (45-50)
7	35	-10(35-45)



- ➢ In Table, we find that the total utility goes on increasing but at a diminishing rate.
- ➢ On the other hand, marginal utility goes on diminishing.
- ➢ When marginal utility becomes zero, the total utility is maximum and when marginal utility becomes negative, the total utility diminishes.

Criticisms

1. Utility cannot be measured numerically, because utility is subjective.
2. This law is based on the unrealistic assumptions.
3. This law is not applicable to indivisible commodities.

42.a. Law of demand and its exceptions.

- The Law of Demand says as ―the quantity demanded increases with a fall in price and diminishes with a rise in price. –Marshall

Assumptions of Law of Demand

- The income of the consumer remains constant.
- The taste, habit and preference of the consumer remain the same.
- The prices of other related goods should not change.
- There should be no substitutes for the commodity in study.
- The demand for the commodity must be continuous.
- There should not be any change in the quality of the commodity.

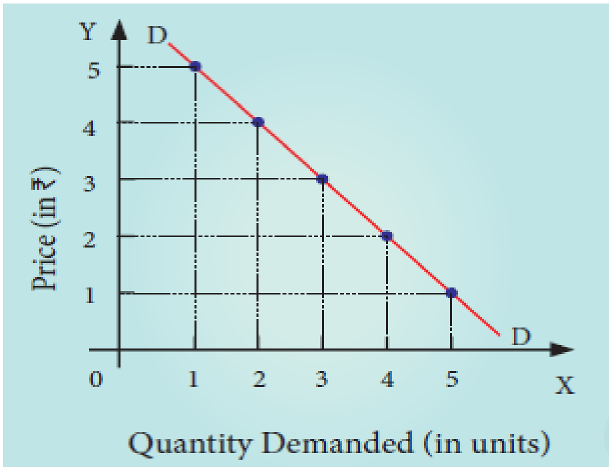
Demand Schedule

Price	Quantity Demanded
5	1
4	2
3	3
2	4
1	5

Explanation

- **The law of demand explains the relationship between the price of a commodity and the quantity demanded of it.**
- **This law states that quantity demanded of a commodity expands with a fall in price and contracts with a rise in price.**

Demand Curve



Explanation

- **In the diagram, X axis represents the quantity demanded and Y axis represents the price of the commodity.**
- **DD is the demand curve, which has a negative slope i.e., slope downward from left to right which indicates that when price falls, the demand expands and when price rises, the demand contracts.**

[OR]

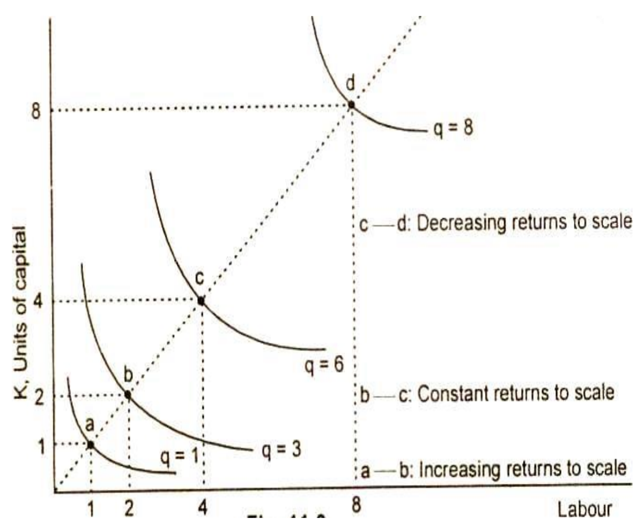
42.b). Law of returns to scale:

Meaning

The laws of returns to scale explain the relationship between output and the scale of inputs in the long-run when all the inputs are increased in the same proportion.

Assumption

1. All the factors of production are variable but organization is fixed.
2. There is no change in technology.
3. There is perfect competition in the market.
4. Outputs or returns are measured in physical quantities.



Three Phases of Returns to Scale

(1) Increasing Returns to Scale:

(2) Constant Returns to Scale:

(3) Diminishing Returns to Scale:

Stages	Input	Output	Returns to Scale
a to b	100% ↑	200% ↑	Increasing
b to c	100% ↑	100% ↑	Constant
c to d	100% ↑	33.33% ↑	Decreasing

Explanation

1. In the the movement from point **a to point b** represents increasing returns to scale.

2. The law of constant returns to scale is implied by the movement from the point ***b*** to point ***c***.

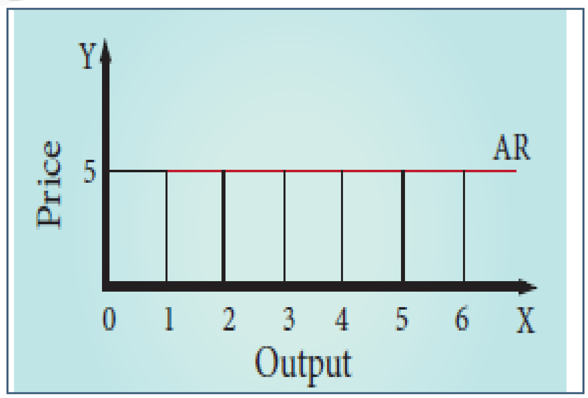
3. Decreasing returns to scale are denoted by the movement from the point c to point d.

43.a) The relationship between AR and MR curves under various price conditions.

Constant AR and MR (at Fixed Price)

- **When price remains constant or fixed, the MR will be also constant and will coincide with AR.**
- **Under perfect competition as the price is uniform and fixed, AR is equal to MR and their shape will be a straight line horizontal to X axis.**

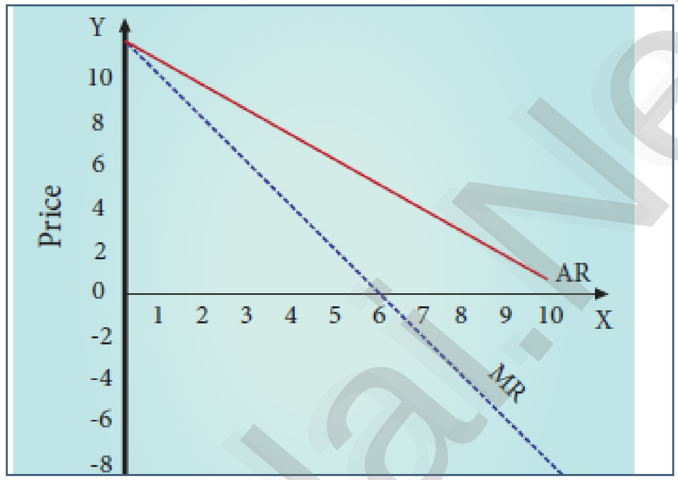
Quantity Sold (Q)	Price (P) ₹	Total Revenue (TR) ₹	Average Revenue (AR) ₹	Marginal Revenue (MR) ₹
1	5	5	5	5
2	5	10	5	5
3	5	15	5	5
4	5	20	5	5
5	5	25	5	5
6	5	30	5	5



Declining AR and MR (at Declining Price):

- **When a firm sells large quantities at lower prices both AR and MR will fall but the fall in MR will be more steeper than the fall in the AR.**
- **It is to be noted that MR will be lower than AR.**
- **Both AR and MR will be sloping downwards straight from left to right.**
- **The MR curve divides the distance between AR Curve and Y axis into two equal parts.**
- **The decline in AR need not be a straight line or linear.**
- **If the prices are declining with the increase in quantity sold, the AR can be nonlinear, taking a shape of concave or convex to the origin.**

Quantity Sold (Q)	Price (P)/ Average Revenue (AR) ₹	Total Revenue (TR) ₹	Marginal Revenue (MR) ₹
1	10	10	-
2	9	18	8
3	8	24	6
4	7	28	4
5	6	30	2
6	5	30	0
7	4	28	-2
8	3	24	-4
9	2	18	-6
10	1	10	-8



[OR]

43.b) Features of perfect competition.

1. Large Number of Buyers and Sellers

- A large number of buyers' implies that each individual buyer buys a very, very small quantum of a product as compared to that found in the market.
- This means that he (he includes she also) has no power to fix the price of the product.
- He is only a price-taker and not a price-maker.

2. Absence Of Transport Cost

- The prevalence of the uniform price is also due to the absence of the transport cost.

3. Perfect Mobility of Factors of Production

- The prevalence of the uniform price is also due to the perfect mobility of the factors of production.

4. Perfect Knowledge of the Market

- All buyers and sellers have a thorough knowledge of the quality of the product, prevailing price etc.

5. No Government Intervention

- There is no government regulation on supply of raw materials, and in the determination of price etc.

44.a) Price and output are determined under the perfect competition:

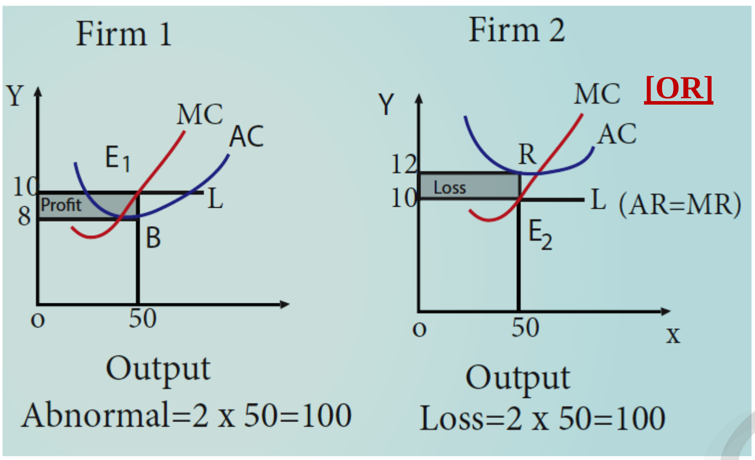
Meaning of Perfect Competition

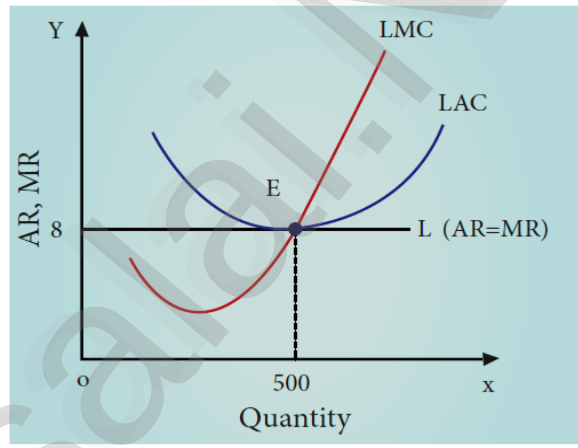
Perfect Competition market is that type of market in which the number of buyers and sellers is very large, all are engaged in buying and selling a homogenous product at uniform price.

Important Features

1. Large Number of Buyers and Sellers
2. Homogeneous Product and Uniform Price
3. Free Entry and Exit
4. Absence Of Transport Cost

Price & Output Determination-Perfect Competition during Short Run





AR – Average Revenue	AC – Average Cost
MR – Marginal Revenue	MC – Marginal Cost

- The firms under Perfect Competition take the price (10) from the industry and start adjusting their quantities produced. **For example Qd= 100 – 5P and Qs=5P. At equilibrium Qd=Qs. Therefore 100-5P=5P.**

100 = 10P; 100/10 = P Qd = demand
P = 10 P = Price
Qd = 100-5(10) Qs = Supply
100-50 = 50
Qs = 5(10)=50
Therefore 50 = 50

Price = AR=MR = Minimum AC
In the long run, all the factors are variable.
1. First, the firms will earn only normal profit.

2. Secondly, all the firms in the market are in equilibrium.

3. At point E, LMC = MR = AR = LAC.

Its total revenue is 50X10=500. Its total cost is 50X12=600. Therefore, its total loss is 600-500=100.

44.b) Keynesian Theory of Interest:

- **Keynes propounded the Liquidity Preference Theory of Interest in his famous book, —The General Theory of Employment, Interest and Money in 1936.**

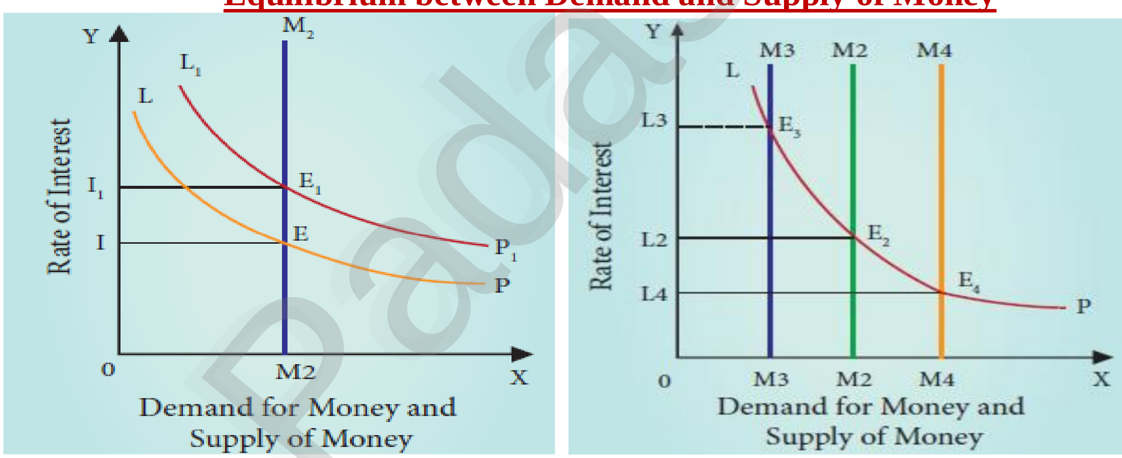
Meaning of Liquidity Preference

- Liquidity preference means the preference of the people to hold wealth in the form of liquid cash rather than in other non- liquid assets like bonds, securities, bills of exchange, land, building, gold etc.
    1) The Transaction Motive The transaction motive relates to the desire of the people to hold cash for the current transactions.
    2) The Precautionary Motive The precautionary motive relates to the desire of the people to hold cash to meet unexpected or unforeseen expenditures such as sickness, accidents, fire and theft.
    3) The Speculative Motive The speculative motive relates to the desire of the people to hold cash in order to take advantage of market movements regarding the future changes in the price of bonds and securities in the capital market.

Interest

- According to Keynes, the rate of interest is determined by the demand for money and the supply of money.
- The demand for money is liquidity preference.

Equilibrium between Demand and Supply of Money



Explanation:

- LP is the liquidity preference Curve (demand curve).
- $M_2 M_2$ shows the supply curve of money to satisfy speculative motive.
- Both curves intersect at the point E, which is the equilibrium point.
- Hence, the rate of interest is 2.5.
- If liquidity preference increases from LP to L_1P_1 the supply of money remains constant, the rate of interest would increase from OI to OI_1.
- Numerical examples given above can also be used for better understanding.
- Total demand for money=$M_t+M_p+M_s$
- In reality, interest rate is also influenced by national income and commodity sector equilibrium.

- However, they are not included here for making the understanding easier.

Criticisms

- This theory does not explain the existence of different interest rates prevailing in the market at the same time.
- It explains interest rate only in the short-run.

45.a) Detailed note on the Gandhian economic ideas.

1.Village Republics:

- To Gandhi, India lives in villages.
- He was interested in developing the villages as self-sufficient units.

2.Industrialism:

- Gandhi considered industrialism as a curse on mankind.
- He thought industrialism depended entirely on a country's capacity to exploit.

3.Decentralization:

- He advocated a decentralized economy, i.e., production at a large number of places on a small scale or production in the people's homes.

4. Village Sarvodaya:

- According to Gandhi, Real India was to be found in villages and not in towns or cities.

5.Bread Labour:

- Gandhi realized the dignity of human labour.
- He believed that God created man to eat his bread by the sweat of his brow.

[OR]

45.b) Importance of mineral resources in India.

1.Iron-Ore

- India possesses high quality iron-ore in abundance.
- Hematite iron is mainly found in Chattisgarh, Jharkhand, Odisha, Goa and Karnataka.

2.Coal and Lignite

- Coal is the largest available mineral resource.
- India ranks third in the world after China and USA in coal production.
- The main centres of coal in India are the West Bengal, Bihar, Madhya Pradesh, Maharashtra,Odisha and Andhra Pradesh.

3.Bauxite

- Bauxite is a main source of metal like aluminium.
- Major reserves are concentrated in the East Coast bauxite deposits of Odisha and Andhra Pradesh.

4.Mica

- Mica is a heat resisting mineral which is also a bad conductor of electricity.
- It is used in electrical equipments as an insulator.
- India stands first in sheet mica production and contributes 60% of mica trade in the world.

5.Crude Oil

- Oil is being explored in India at many places of Assam and Gujarat.

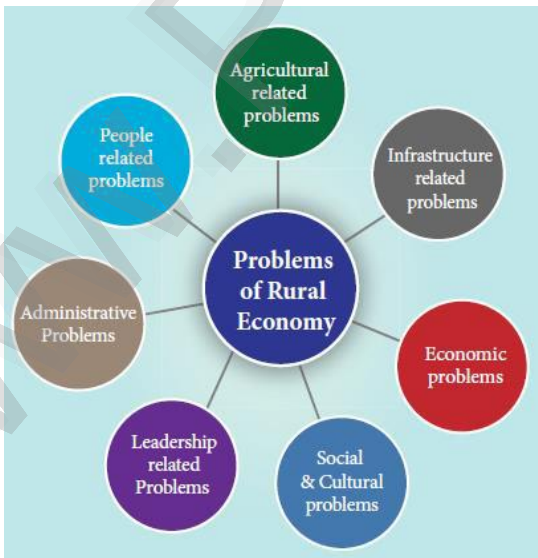
46.a) Role of SSIs in Economic Development:

1. ***Provide Employment***
   - SSIs use labour intensive techniques.
   - Hence, they provide employment opportunities to a large number of people.
2. ***Bring Balanced Regional Development***
   - SSIs promote decentralized development of industries as most of the SSIs are set up in backward and rural areas.
3. ***Help in Mobilization of Local Resources***
   - SSIs help to mobilize and utilize local resources like small savings, entrepreneurial talent etc.,
4. ***Pave for Optimisation of Capital***
   - SSIs require less capital per unit of output.
   - They provide quick return on investment.
5. ***Promote Exports***
   - SSIs do not require sophisticated machinery.

   There is a great demand for goods produced by SSIs in international market.

[OR]

46.b) Problem of Rural Economy



1. The problems related to individuals and their standard of living consist of illiteracy etc.,

2. Agricultural problems as
   - Lack of expected awareness, knowledge, skill and attitude.
   - Unavailability of inputs and so on.

3. Poor infrastructure facilities like, water, electricity, transport.

4. Poor infrastructure facilities like, water, electricity, transport, educational institutions, communication, health and etc.,

5. The economic problems related to rural areas are: inability to adopt high cost technology, high cost of inputs and so on.

6. Leadership among the hands of inactive and incompetent people, self-interest of leaders, biased political will.

7. Political interference, lack of motivation and interest, low wages in villages, improper utilization of budget, and absence of monitoring.

47.a) Public Transport System in Tamil Nadu:

- Tamil Nadu has a well established transportation system that connects all parts of the State.
- Tamil Nadu is served by an extensive road network in terms of its spread and quality, providing links between urban centres, agricultural market-places and rural habitations in the country side.

a. Road

✓ There are 28 national highways in the State, covering a total distance of5,036km.
✓ The State has a total road length of 167,000 km, of which 60,628 km are maintained by Highways Department.

b . Rail

✓ Tamil Nadu has a well-developed rail network as part of Southern Railway, Headquartered at Chennai.
✓ The present_Southern Railway network extends over a large area of India's Southern.
✓ Tamil Nadu has a total railway track length of 6,693 km and there are690 railway stations in the State.
✓ The system connects it with most major cities in India.

c. Air

✓ Tamil Nadu has four major international airports.
✓ Chennai International Airport is currently the third largest airport in India, Mumbai and Delhi.

- ✓ **Other international airports in Tamil Nadu include - Coimbatore International Airport, Madurai International Airport and Tiruchirapalli International Airport.**

d. Ports

- ✓ **Tamil Nadu has three major ports; one each at Chennai, Ennore, and Tuticorin, as well as one intermediate port in Nagapattinam, and 23 minor ports.**
- ✓ **The ports are currently capable of handling over 73 million metric tonnes of cargo annually (24 per cent share of India).**

[OR]

47.b) . (i) If TC= $2.5q^3 - 13q^2 = 50q + 12$ derive the MC function and AC Function

$$\frac{dc}{dq} = MC$$

$$AC = \frac{\text{Total Cost}}{\text{Output}}$$

$$\frac{dc}{dq} = 2.5(3)q^3 - (13 \times 2)q + 50$$

$$MC = 7.5q3 - 26q + 50$$

$$AC = \frac{2.5q^3 - 13q^2 + 50q + 12}{q} = \frac{2.5q^3}{q} + \frac{13q^2}{q} + \frac{50q}{q} + \frac{12}{q}$$

$$AC = 2.5q2 - 13q + 50 + \frac{12}{q}$$

(ii) Demand Function q = 150 – 3p; MR = ?

$$\eta d = \frac{-p}{q}\frac{dq}{dp} = \frac{-p}{150-3p}(-3) = \frac{3p}{150-3p}$$

$$MR = p\left[1 - \frac{1}{\eta d}\right]$$

$$= p\left[1 - \frac{1}{\frac{3p}{150-3p}}\right] = p\left[1 - \frac{(150-3p)}{3p}\right] = p\left[\frac{3p - 150 + 3p}{3p}\right]$$

$$= p\left[\frac{6p - 150}{3p}\right] = P\left[\frac{P - 50 + P}{P}\right]$$

$$MR = 2P - 50$$

************** All The Best **************