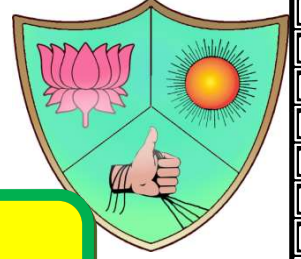


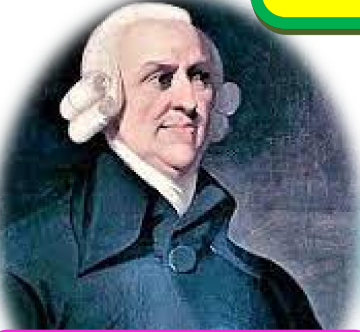
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FATHER OF ECONOMICS



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முகவுரை

மாணவ நண்பர்களுக்கு,

பொருளியல் பாடத்தில் நல்ல மதிப்பெண்களை பெற வேண்டும் என்ற நோக்கத்தில் எளிமையான முறையில் படிப்பதற்கு வசதியாக எனது 10 வருட பணி அனுபவத்தை கொண்டு இந்த **material** - யை தொகுத்துள்ளேன். எனது பாணியில் எனது மாணவர்களுக்கு ஏற்றவாறு தயார் செய்த இந்த தொகுப்பை அனைத்து மாணவர்களும் பயன்பெற வேண்டும் என்ற நோக்கத்திலேயே வெளியிட்டுள்ளேன். எனது இந்த தொகுப்பில் ஏதேனும் பிழைகள் குறைகள் இருந்தால் சரிசெய்து கொள்ளவும். பின் தங்கிய மாணவர்களும் நல்ல மதிப்பெண்களை பெற வேண்டும் என்ற நோக்கத்திலேயே இதை தொகுத்துள்ளேன்.

தற்பொழுது அரசு வெளியிட்டுள்ள புதிய பாடத் திட்ட தொகுப்பின் அடிப்படையில் இந்த வினா விடை தொகுப்பை என்னால் இயன்ற அளவிற்கு மிக எளிமையாக உருவாக்கியுள்ளேன். முழு மதிப்பெண்கள் பெற இதுவே போதுமானது. மேலும் பொதுத்தேர்வில் பின்தங்கிய மாணவர்களும் நல்ல மதிப்பெண்களை பெற வைக்க முடிந்தது. எனவே இதை உபயோகப்படுத்தி நல்ல மதிப்பெண்களை பெறவும்.

மாணவ நண்பர்களே!! நேரத்தை சரியாக பயன்படுத்தி கொள்ளுங்கள். சரியான நேரத்தில் சரியான முறையில் படித்து வெற்றி பெற்று அடுத்த கட்ட நிலைக்கு செல்ல வேண்டிய இறுதி நிலையில் உள்ளாய். நேரத்தை வீணாக்காதே! அடுத்து என்ன செய்ய போகிறாய் என்பதை முதலில் தீர்மானி. மதிப்பெண்களை பெறுவதிலேயே கவனத்தை வை. முயன்றால் முடியாதது எதுவுமில்லை. கடினமாக தான் இருக்கும். கஷ்டப்பட்டு படித்தால் நல்ல முன்னேற்றத்தை அடைவாய்.

பள்ளி பருவத்தில் நீ பெறும் வெற்றியே உன் வாழ்க்கை முழுவதையும் தீர்மானிக்க போகிறது என்பதை நன்றாக கவனம் கொள். தினமும் காலையில் படிப்பதற்கு முன் உன் இலக்கு என்ன என்பதை இரு நிமிடம் யோசித்து பார். நீ செல்வது சரியான பாதையா என்று சிந்தி!!!! நல்ல பாதையே நல்ல முடிவை தரும். நல்ல மதிப்பெண்களை பெறுவதே உன் நோக்கமாக இருக்கட்டும். அதுவே உன் வாழ்க்கை என்னும் பாதைக்கு நல்வழிகாட்டும். பள்ளி வாழ்க்கையின் கடைசி நிலையில் உள்ளாய்!!!! இங்கு நீ பெறும் மதிப்பெண்களே உன் அடுத்த கட்ட பாதையை உருவாக்க போகின்றன என்பதை நினைவில் எப்பொழுதும் வை.

உன் பெற்றோரின் உழைப்பையும் சிந்தித்துப் பார். பிறகு படிக்க ஆரம்பி. கவனம் சிதறாமல் படிப்பில் கவனத்தை செலுத்துவாய். பிறகு நீயாகவே முயற்சி செய்து நல்ல மதிப்பெண்களையும் பெறுவாய்.

உங்களுக்காக நாங்கள்!!!!

உன் வெற்றியே எங்கள் வெற்றி!!!!

உங்கள் வெற்றியில் பெருமைப்பாட நாங்களும் காத்திருக்கிறோம்!!!!!!

WISH YOU ALL THE BEST FOR YOUR EXAMINATION


ஆசிரியர்

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CHAPTER 1**INTRODUCTION TO MICRO ECONOMICS****1. MULTIPLE CHOICE QUESTIONS:**

1. 'Economics is a study of mankind in the ordinary business of life' -It is the statement of
 - a. Adam Smith
 - b. Lionel Robbins
 - c. **Alfred Marshall**
 - d. Samuelson
2. The basic problem studied in Economics is
 - a. Unlimited wants
 - b. Unlimited means
 - c. **Scarcity**
 - d. Strategy to meet all our wants
3. Microeconomics is concerned with
 - a. The economy as a whole
 - b. Different sectors of an economy
 - c. **The study of individual economic units behavior**
 - d. The interactions within the entire economy
4. Which of the following is a microeconomics statement?
 - a. The real domestic output increased by 2.5 percent last year.
 - b. Unemployment was 9.8 percent of the labour force last year.
 - c. **The price of wheat determines its demand**
 - d. The general price level increased by 4 percent last year.
5. Find the odd one out:
 - a. "An inquiry into the nature and the causes of the Wealth of Nations"
 - b. "Principles of Economics"
 - c. "Nature and Significance of Economic Science"
 - d. **"Ceteris paribus"**
6. The equilibrium price is the price at which
 - a. Everything is sold
 - b. Buyers spend their money
 - c. Quantity demanded equals quantity supplied
 - d. Excess demand is zero
7. Author of "An Inquiry into the Nature and Causes of Wealth of Nations"
 - a. Alfred Marshall
 - b. Adam Smith
 - c. **Lionel Robbins**
 - d. Paul A Samuelson
8. "Economics studies human behavior as a relationship between ends and scarce means which have alternative uses" is the definition of economics of
 - a. **Lionel Robbins**
 - b. Adam Smith
 - c. Alfred Marshall
 - d. Paul A Samuelson
9. Who is the Father of Economics?
 - a. Max Muller
 - b. **Adam Smith**
 - c. Karl Marx
 - d. Paul A Samuelson
10. "Economics is a science" The basis of this statement is _____
 - a. Relation between cause and effect

- b. Use of deductive method and inductive method for the formations of laws
 c. Experiments
d. All of the above

11. Utility means

- a. Equilibrium point at which demand and supply are equal
 b. Want-satisfying capacity of goods and services
 c. Total value of commodity
 d. Desire for goods and services

12. A market is

- a. Only a place to buy things
 b. **Only a place to sell things**
 c. Only a place where prices adjust
 d. A system where persons buy and sell goods directly or indirectly

13. Which one of the following is not a point in the Welfare Definition of Economics?

- a. Study of an ordinary man
 b. Economics does not focus on wealth alone.
 c. Economics is the study of material welfare
d. Economics deals with unlimited wants and limited means

14. Growth definition takes into account

- a. The problem of choice in the dynamic framework of Economics**
 b. The problem of unlimited means in relation to wants
 c. The production and distribution of wealth
 d. The material welfare of human beings

15. Which theory is generally included under micro economics ?

- a. Price Theory** b. Income Theory c. Employment Theory d. Trade Theory

16. have exchange value and their ownership rights can be established and exchanged

- a. Goods** b. Services c. Markets d. Revenue

17. Identify the correct characteristics of utility

- a. It is equivalent to 'usefulness' b. It has moral significance
 c. It is same as pleasure
d. It depends upon consumer's mental attitude

18. Who has given scarcity definition of economics?

- a. Adam Smith b. Marshall **c. Robbins** d. Robertson

19. The process of reasoning from particular to general is

- a. Deductive method **b. Inductive method**
 c. Positive economics d. Normative economics

20. Total revenue is equal to total output sold multiplied by

- a. Price b. Total cost c. Marginal revenue d. Marginal cost

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. What is meant by Economics?

- ❖ The term 'Economics' means 'management of households'.
- ❖ The 'Political Economy', is renamed as 'Economics'.

22. Define microeconomics.

- ⊛ Micro Economics is the study of the economic actions of individual units say households, firms or industries.

23. What are goods?

- ❖ Goods are also called 'products', 'commodities', 'things' etc.
- ❖ Goods and services satisfies human wants.

24. Distinguish goods from services.

S.No	Goods	Service
1	Goods are produced	Service are performed
2	It's are tangible	It's are intangible

25. Name any two types of utility.

- ⊛ Time utility ⊛ Form utility
- ⊛ Place utility ⊛ Service utility

26. Define positive economics.

- ♣ An increase in money supply implies a price-rise in an economy.
- ♣ As the irrigation facilities and application of chemical fertilizers expand, the production of food-grains increases.

27. Give the meaning of deductive Method

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

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.

28. Explain the scarcity definition of Economics and assess it.

"Economics is a science which studies human behavior as a relationship between ends and scarce means which have alternative uses".

- Lionel Robbins

Features:

- ♣ Ends refer to human wants.
- ♣ Resources or means that go to satisfy the unlimited human wants.

29. What are the crucial decisions involved in 'what to produce?'

- ♣ Whether to produce more of food, clothing and housing or to have more luxury goods
- ♣ Whether to have more agricultural goods or to have industrial goods and services
- ♣ Whether to have more consumption goods or to have investment goods
- ♣ Whether to spend more on basic education or higher education

30. Explain different types of economic activities.

- ♣ **Consumption:** Human wants coming under consumption is the starting point of economic activity.
- ♣ **Production:** Production is the process of transformation of inputs into output.
- ♣ **Exchange:** Human activities which are performed in exchange for money.
- ♣ **Distribution:** the produced wealth has to be distributed

31. What are the different features of services?**i). Intangible:**

- ❖ Intangible things are not physical objects but exist in connection to other things.
- ❖ Example: Brand Image, Goodwill

ii). Heterogeneous:

- ♣ A single type service yields multiple experiences.
- ♣ Example: Music, Consulting Physicians.

iii). Perishable:

- * Services cannot be stored as inventories like assets.
- * Example: Cricket-match.

32. What are the important features of utility?

- ♣ Utility is psychological
- ♣ Utility is not the same as pleasure
- ♣ Utility is not equivalent to usefulness.
- ♣ Utility is personal and relative.

33. Distinguish between microeconomics and macroeconomics.

S.no	Micro Economics	Macro Economics.
1	Micro means small	Macro means large
2	It covers value theory and economic welfare	It is the study of aggregates national output
3	Price theory	Income theory

34. Compare positive economics and normative economics.

S.no	Positive Economics	Normative Economics.
1	Positive science deals with what it is	It's concerned with what ought to be.
2	It analyses problem on the basis of facts and examines its causes.	Here the conclusions and results are not based on facts.
3	It would be looked into why and how?	It would be seen whether goods or bad.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE

35. Compare and contrast various definitions of Economics.

Basis	Wealth Definition	Welfare Definition	Scarcity definition	Growth definition
Author	Adam Smith	Alfrad Marshal	Lionel Robbins	Paul Samuelson
Year	1776	1890	1932	1948
Definition	Economics as the science of wealth	It is a study of mankind in the ordinary business of life	"It is a science which studies human behavior as a relationship between ends and scarce means which have alternative uses".	The study of how men and society choose, with or without the use of money, to employ scarce productive resources to produce various commodities over time, and distribute them for consumption.
Key concept	Man is guided and led by an invisible hand.	Man promotes primarily welfare and not wealth.	Human beings have unlimited wants	He makes his definition dynamic
	It means that each person works for his own good.	It contains the concern of ordinary people.	Resources are limited	It covers production distribution and consumption
Criticisms	It is a dismal science	Does not consider immaterial things	Does not make any distinction between goods conducive human welfare and goods that are not.	Samuelsons definition is applicable also in a barter economy.

36. Explain various Steps of Deductive and Inductive methods.

i). Steps of Deductive method:

Step 1: The analyst must have a clear and precise idea of the problem to be inquired into.

Step 2: The analyst clearly defines the technical terms used in the analysis.

Further, assumptions of the theory are to be precise.

Step 3: Deduce hypothesis from the assumptions taken.

Step 4: Hypotheses should be verified through direct observation of events in the real world and through statistical methods.

ii). Steps of Inductive methods:

Step 1: Data are collected about a certain economic phenomenon.

These are systematically arranged and the general conclusions are drawn from them.

Step 2: By observing the data, conclusions are easily drawn.

Step 3: Generalization of the data and then Hypothesis Formulation

Step 4: Verification of the hypothesis (eg.Engel's law)

37. Elaborate the nature and scope of Economics.

Nature:

- ♣ A Law expresses a causal relation between two or more than two phenomena.
- ♣ Marshall states that the Economic laws are statement of tendencies, the laws function with cause and effect.
- ♣ Economic laws are not as precise and certain.
- ♣ Economic laws are not inviolable
- ♣ The use of the assumption other things remaining the same.

Scope:

- ❖ All human activities related to wealth constitute the subject matter of economics.
- ❖ Production consumption and capital formation are called the basic economic activities.
- ❖ The flow chart gives the scope of economics.
- ❖ Human activities not related to wealth are not treated in economics.

38. Explain basic problems of the economy with the help of production possibility curve.

Meaning:

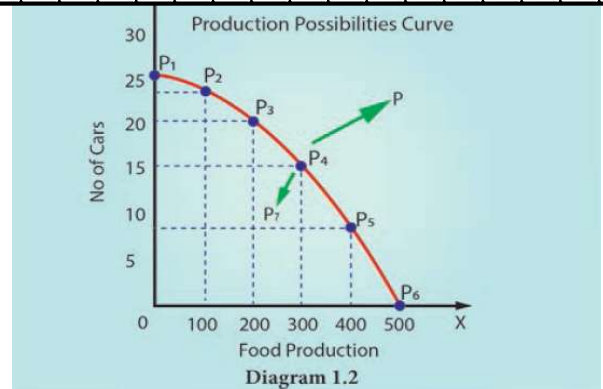
Production possibility curve shows the menu of choice along which a society can choose to

Production possibilities	Quantity of food production	No of car production
I	0	25
II	100	23
III	200	20
IV	300	15
V	400	8
VI	500	0

substitute one good for another.

Assumptions:

- The time period does not change
- Techniques of production are fixed
- There is full employment in the economy
- Resource of production is fully mobile.



Explanation:

- ♣ The quantity of food is shown on x-axis and the number of cars is shown on y-axis.
- ♣ The different six production possibilities are being shown as P₁, P₂, P₃, P₄, P₅, P₆.
- ♣ A maximum of 500 tons of food can be produced given the existing technology.
- ♣ All resources are instead used for producing cars, 25 cars can be produced.
- ♣ In between these two existences possibilities exist.

CHAPTER 2

CONSUMPTION ANALYSIS

I. Multiple Choice Questions

1. Pick the odd one out

- a. Luxuries b. Comforts c. Necessaries **d. Agricultural goods**

2. Choice is always constrained or limited by the ____ of our resources.

- a. Scarcity b. Supply c. Demand d. Abundance

3. The chief exponent of the Cardinal utility approach was

- a. J.R.Hicks b. R.G.D.Allen **c. Marshall** d. Stigler

4. Marginal Utility is measured by using the formula of

- a. $TU_n - TU_{n-1}$ b. $TU_n - TU_{n+1}$ c. $TU_n + TU_{n+1}$ d. $TU_n - TU_{n+1}$

5. When marginal utility reaches zero, the total utility will be

- a. Minimum **b. Maximum** c. Zero d. Negative

6. Gossen's first law is known as.

- a. Law of equi-marginal utility. **b. Law of diminishing marginal utility**
c. Law of demand. d. Law of Diminishing returns.

7. The basis for the law of demand is related to

- a. Law of diminishing marginal utility b. Law of supply
c. Law of equi-marginal utility. d. Gossen's Law.

8. The concept of consumer's surplus is associated with

- a. Adam Smith **b. Marshall** c. Robbins d. Ricardo

9. Given potential price is Rs.250 and the actual price is Rs.200. Find the consumer surplus.

- a. 375 b. 175 c. 200 **d. 50**

10. Indifference curve approach is based on

- a. Ordinal approach b. Cardinal approach
c. Subjective approach d. Psychological approach

11. The concept of elasticity of demand was introduced by

- a. Ferguson b. Keynes c. Adam Smith **d. Marshall**

12. Increase in demand is caused by

- a. Increase in tax **b. Higher subsidy** c. Increase in interest rate d. decline in population

13. The movement on or along the given demand curve is known as ____

- a. Extension and contraction of demand. b. shifts in the demand.
c. increase and decrease in demand. d. all the above

14. In case of relatively more elastic demand the shape of the curve is
 a. Horizontal b. Vertical c. Steeper **d. Flatter**
15. A consumer is in equilibrium when marginal utilities from two goods are
 a. Minimum b. Inverse **c. Equal** d. Increasing
16. Indifference curve was first introduced by
 a. Hicks b. Allen c. Keynes **d. Edge worth**
17. Elasticity of demand is equal to one indicates
 a. **Unitary Elastic Demand** b. Perfectly Elastic Demand
 c. Perfectly Inelastic Demand d. Relatively Elastic Demand
18. The locus of the points which gives same level of satisfaction is associated with
 a. **Indifference Curves** b. Cardinal Analysis
 c. Law of Demand d. Law of Supply
19. Ordinal Utility can be measured by
 a. **Ranking** b. Numbering c. Wording d. None of these
20. The indifference curve are
 a. vertical b. horizontal c. positive sloped **d. Negatively sloped**

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. Define Utility.

- ♣ In economic utility is the want satisfying power of a commodity or a service.
- ♣ It is in the goods and service for an individual consumer at a particular time and at a particular place.

22. Mention the classifications of wants.

- ❖ **Necessaries:** Food, Clothing and Shelter
- ❖ **Comforts:** Tv, Fan, Refrigerator and Air conditioner.
- ❖ **Luxuries:** Jewelry, Diamonds and cars

23. Name the basic approaches to consumer behavior.

- ⊛ Cardinal Approach
- ⊛ Ordinal Approach

24. What are the degrees of price elasticity of Demand?

- * Perfectly Elastic Demand
- * Perfectly Inelastic Demand
- * Relatively Elastic Demand
- * Relatively Inelastic Demand

25. State the meaning of indifference curves.

- ♣ An indifference curve is the locus of all combinations of commodities from which the consumer derives the same level of satisfaction.
- ♣ It is also called ISO-Utility Curve or Equal Satisfaction Curve”.

26. Write the formula of consumer's surplus.

Consumer's Surplus = Potential price – Actual Price

Consumer's Surplus = $TU - (P \times Q)$

27. What are Giffen goods? Why it is called like that?

- It is an exception to the law of demand.
- When the price of inferior goods falls, the poor will buy less and vice versa.

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH:**28. Describe the feature of human wants.**

- ♣ **Wants are unlimited:**

Human wants are countless in number and various in kinds.

- ♣ **Wants become habits :**

When a man starts reading news paper in the morning, it becomes a habit.

- ♣ **Wants are Alternative:**

There are alternative ways to satisfy a particular want

29. Mention the relationship between marginal utility and total utility.

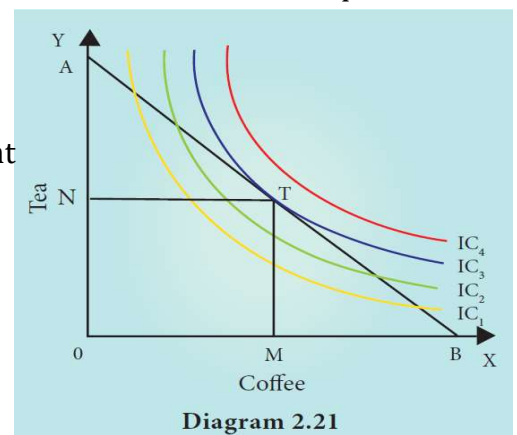
S.no	Marginal Utility	Total Utility
1	It declines	It increases
2	It reaches zero	It reaches maximum
3	It becomes negative	It declines.

30. Explain the concept of consumer's equilibrium with a diagram.**Meaning:**

Consumer will attain equilibrium when he gets maximum satisfaction from his expenditure on different goods is highest.

Consumer Equilibrium: $MRS_{xy} = P_x / P_y$

- ❖ T is the point of equilibrium as budget line AB is tangent on indifference curve IC_3 the upper IC which implies maximum possible level of satisfaction.
- ❖ At equilibrium point
- ❖ The slope of IC refers to MRS_{XY} and the slope of AB



refers to ratio of price of X to price of Y ie. P_x/P_y .

- ❖ Therefore $MRS_{x,y} = P_x/P_y$

31. Explain the theory of “consumer’s surplus” .

The excess of price which a person would be willing to pay rather than go without the thing, over that which he actually does pay, is the economic measures of this surplus of satisfaction.

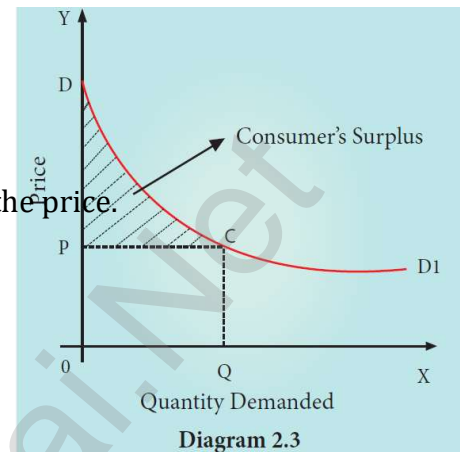
Consumer Surplus = Potential price - Actual price

Consumer Surplus = $TU - (P \times Q)$

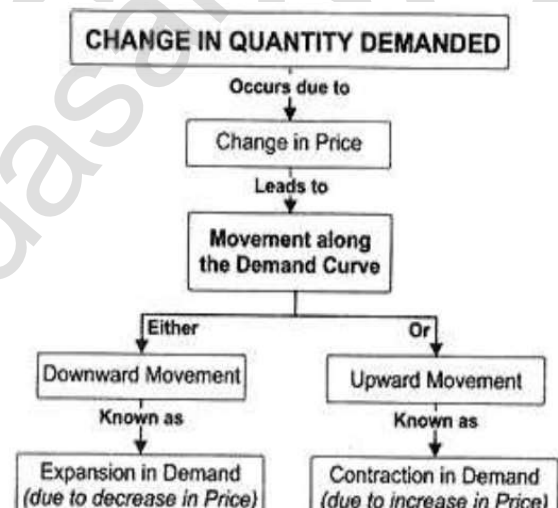
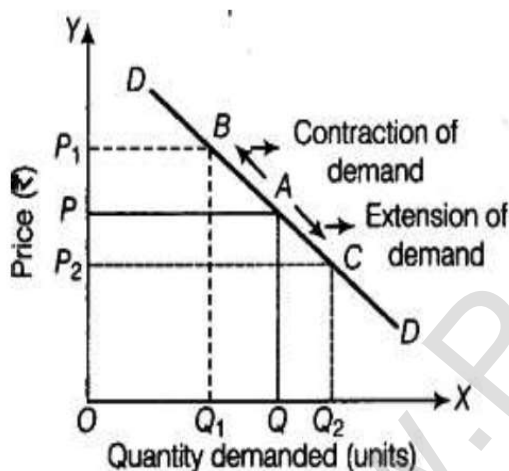
Where, TU - Total Utility, P = Price, Q= Quantity

Assumptions:

- ⊛ X axis shows the amount demanded and Y axis represents the price.
- ⊛ DD1 shows the utility which the consumer derives from the purchase of different amounts of commodity.
- ⊛ When price is OP, the amount demanded is OQ.
- ⊛ Hence, actual prices OPCQ ($OP \times OQ$). Total utility is ODCQ.



32. Distinguish between extension and contraction of demand.



The changes in the quantity demanded for a commodity due to the change in its price alone are called Extension and Contraction of Demand.

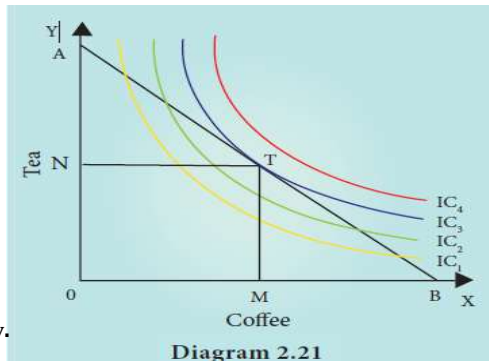
33. What are the properties of indifference curves?

- ❖ Indifference curve must have negative slope
- ❖ Indifference curves are convex to the origin
- ❖ Indifference curve cannot intersect.
- ❖ Indifference curves do not touch the horizontal or vertical axis.

34. Briefly explain the concept of consumer’s equilibrium.

The consumer reaches equilibrium at the point where the budget line is tangent on the indifference curve.

- T is the point of equilibrium as budget line AB is tangent on indifference curve IC_3 the upper IC which implies maximum possible level of satisfaction.
- At equilibrium point, the slope of IC refers to MRS_{XY} and the slope of BL (Budget Line) refers to ratio of price of X to price of Y ie P_x/P_y . Therefore $MRS_{x,y} = P_x/P_y$.



IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE:

35. Explain the law of demand and its exceptions.

Definitions

The Law of Demand says as “the quantity demanded increases with a fall in price and diminishes with a rise in price”.

-Marshall

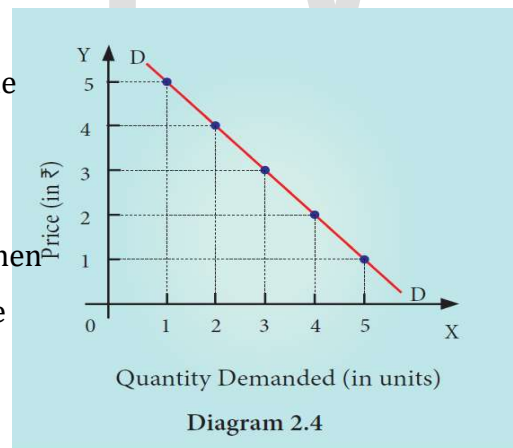
Assumptions of Law of Demand:

- 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.

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

Explanation:

- Quantity demanded and Y axis represents the price of the commodity
- DD is the demand curve, which has a negative slope.
- Slope downward from left to high which indicates that when price falls the demand expands and when price rises, the demand contracts.



Conclusions:

There is an inverse relationship between the price and the quantity demanded of a commodity.

36. Elucidate the law of diminishing marginal utility with diagram.

Definition:

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.

Assumption:

- Utility can be measured by cardinal number.

- ❖ The marginal utility of money remains constant.
- ❖ The consumer should be a rational consumer.
- ❖ The units of the commodity must be reasonable in size.

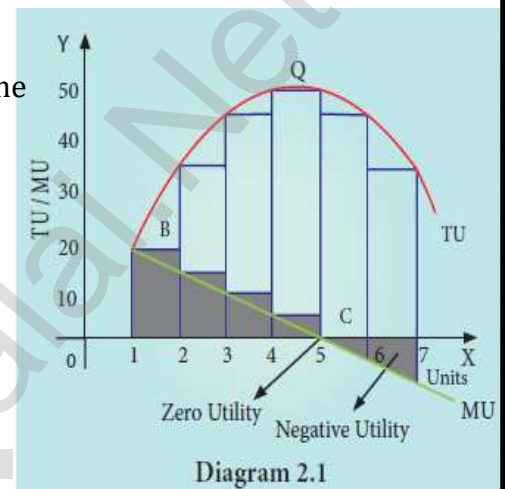
Explanation:

- ♣ 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 (15 = 35-20), third apple (10= 45-35) 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)

Criticism

- ♣ Utility cannot be measured numerically, because utility is subjective.
- ♣ Law is based on the unrealistic assumptions.
- ♣ This law is not applicable to indivisible commodities.



37. Explain the law of Equi-marginal utility.

Meaning:

- ☞ To analyze such a situation, the law of diminishing marginal utility is extended and is called "Law of Equi- Marginal Utility".
- ☞ It is also called the "Law of Substitution".

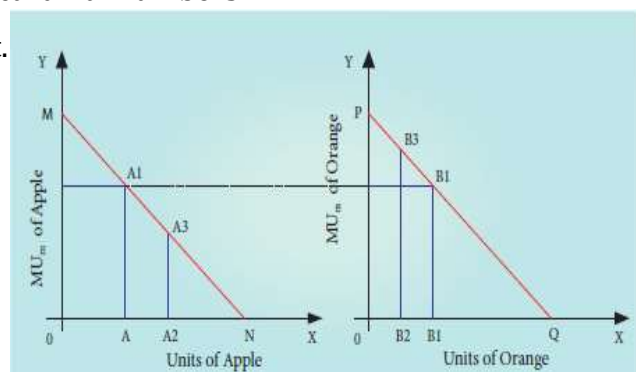
$$\text{Equi-marginal} = \frac{MU_A = MU_O = K}{P_A = P_O}$$

Assumption:

- The consumer is rational in the sense that he wants to get maximum satisfaction.
- The utility of each commodity is measurable in cardinal numbers.
- The marginal utility of money remains constant.

Explanation:

- ❖ X axis represents the amount of money spent and Y axis represents the marginal utilities of apple and orange respectively.
- ❖ If the consumer spends ₹10 on Apple and ₹4 on Orange, the marginal utilities of both are equal i.e., AA1=BB1 (5=5).



❖ Hence, he gets maximum utility.

38. What are the methods of measuring Elasticity of demand?

Methods :

- ❁ The percentage method
- ❁ Total outlay method
- ❁ Point elasticity method

i). The percentage method:

$$e_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

It is also known as ratio method, when we measure the ratio as:

$$e_p = \frac{\% \Delta Q}{\% \Delta P} \text{ where,}$$

$\% \Delta Q$ = percentage change in demand

$\% \Delta P$ = Percentage change in price

ii). Total outlay Method:

The examines the change in total outlay of the consumer or total revenue of the firm.

Total revenue = (Price x Quantity sold)

TR = (P x Q)

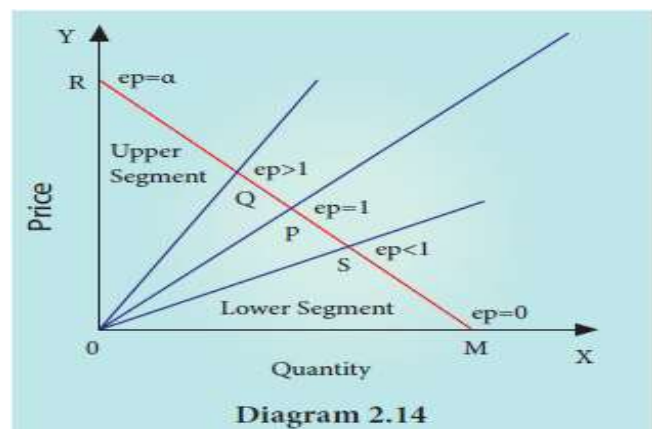
Table 2.6 Total Outlay Method

Price	Quantity Demanded	Total Outlay	Elasticity
150	3	450	} $e > 1$
125	4	500	
100	5	500	} $e = 1$
75	6	450	

iii). Point Elasticity Method:

It is a linear demand curve is shown by the ratio of the segments of the line to the right and to the left of the particular point.

$$E_p = L / U$$



ⓐ*ⓐ*ⓐ*ⓐ*ⓐ*ⓐ*ⓐ

23. State the production function.

“It is the relationship between inputs of productive services per unit of time and outputs of product per unit of time.”

- George J. Stigler

24. Define Marginal Product of a factor.

It is the addition or the increment made to the total product when one more unit of the variable input is employed.

25. What is Iso-cost line?

It illustrates all the possible combinations of two factors that can be used at given costs and for a given producer's budget.

26. What are the conditions for producer's equilibrium?

- ♣ It must be tangent to iso-quant curve.
- ♣ At point of tangency, the iso-quant curve must be convex to the origin.

27. What are the reasons for upward sloping supply curve?

- ♣ As the price of the commodity increases, the quantum supplied of the commodity also increases.
- ♣ Thus the supply curve has a positive slope from left to right.

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.**28. What are the characteristics of land?**

- ♣ „Land is a primary factor of production.
- ♣ „Land is a passive factor of production.
- ♣ „Land is the free gift of Nature.
- ♣ „Land is permanent.
- ♣ „Land is immovable

29. What are the factors governing elasticity of supply?

- | | |
|---------------------------|-----------------------|
| ♣ Nature of the commodity | ♣ Technical condition |
| ♣ Cost of production | ♣ Time factor |

30. What are the functions of Entrepreneur?

- Initiation
- Innovation
- Co-Ordination
- Control, Direction & Supervising
- Risk- Taking

31. State and explain the elasticity of supply.

- ♣ It may be defined as the degree of responsiveness of change in supply to change in price on the part of sellers.
- ♣ **Elasticity of Supply = Proportionate change in supply/ proportionate change in price**

$$e_s = (\Delta Q_s / Q_s) / (\Delta P / P); e_s = \Delta Q_s / \Delta P \times P / Q_s$$

32. Bring out the Relationship among Total, Average and Marginal Products.

Stages	TP	AP	MP
I	increases at an increasing rate	Beginning it increases, reaches maximum and starts to decrease	Increases then attain maximum
II	Increases at admonishing rate and reaches maximum	Diminish and becomes equal to zero	Equal to MP and then begins to diminish
III	Diminishes	Become negative	Continues to diminish but always greater than zero

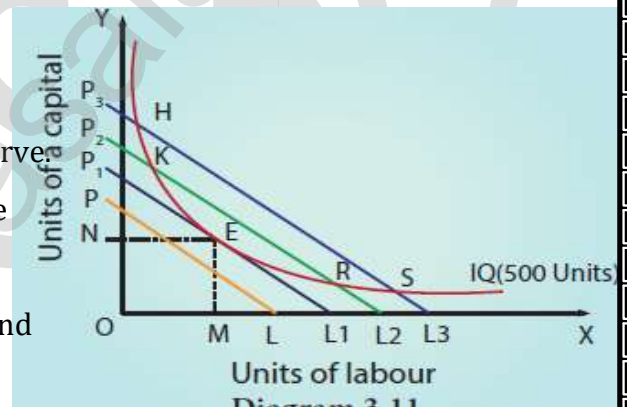
33. Illustrate the concept of Producer's Equilibrium.

Meaning:

The producer manufactures a given amount of output with 'least cost combination of factors', with his given budget.

Conditions for Producer's Equilibrium:

- ♣ The iso-cost line must be tangent to iso-quant curve.
- ♣ At point of tangency, the iso-quant curve must be convex to the origin.
- ♣ At point E the firm employs OM units of labour and ON units of capital.
- ♣ The other points such as H, K, R and S lie on higher iso cost lines indicating that a larger outlay is required.



34. State the Cobb-Douglas Production Function.

Meaning:

It is a linear homogeneous production function which implies that the factors of production can be substituted for one another up to a certain extent only.

The Cobb-Douglas production function can be expressed as follows.

$$Q = AL^\alpha K^\beta$$

Where, Q = output; A = positive constant; K = capital; L = Labor α and β are positive fractions showing, the elasticity coefficients of outputs for the inputs labor and capital, respectively.

- $\beta = (1 - \alpha)$ since $\alpha + \beta = 1$. denoting constant returns to scale.
- Factor intensity can be measured by the ratio β / α .

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE

35. Examine the Law of Variable Proportions with the help of a diagram.

Meaning:

The law of variable proportions states that as the quantity of one factor is increased, keeping the other factors fixed, the marginal product of that factor will eventually decline.

Assumptions:

- Only one factor is variable while others are held constant.
- All units of the variable factor are homogeneous.
- The product is measured in physical units.
- There is no change in the price of the product.

Total Product (TP)

- ♣ It refers to the total amount of commodity produced by the combination of all inputs in a given period of time.

♣ $TP = \sum MP$

Average Product (AP)

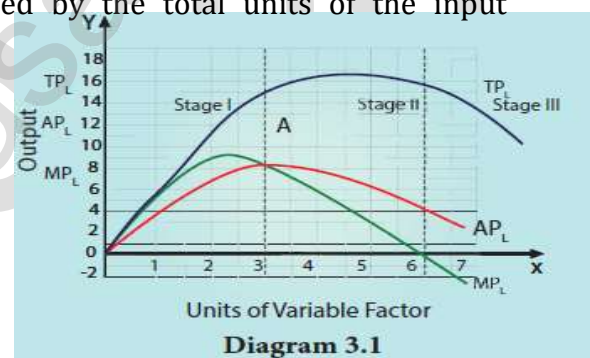
- ♣ It is the result of the total product divided by the total units of the input employed.

♣ $AP = TP/N$

Marginal Product (MP)

- ❖ It is the addition or the increment made to the total product.

❖ $MP = \Delta TP / \Delta N$



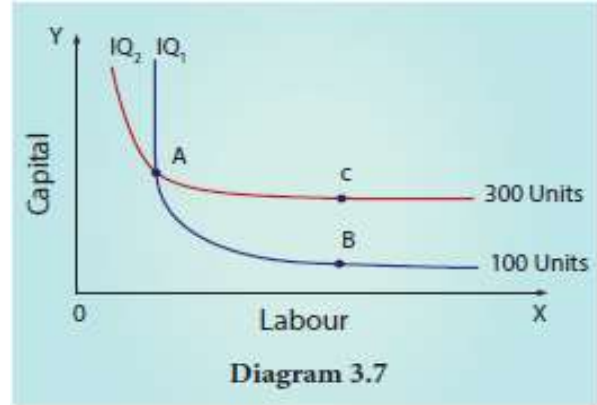
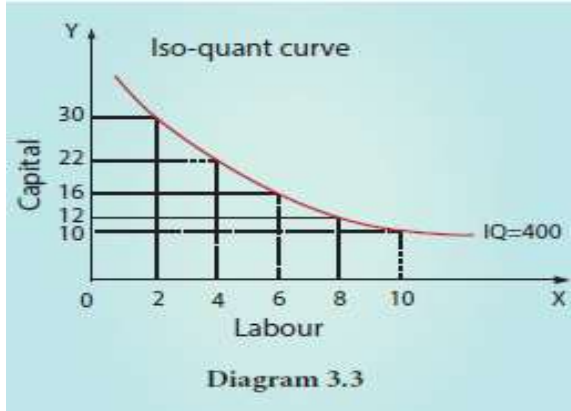
36. List out the properties of iso-quants with the help of diagrams.

Meaning:

- An iso-quant curve can be defined as the locus of points representing various combinations of two inputs capital and labour yielding the same output.
- The iso-quant is also called as the "Equal Product Curve".

Properties of iso-quant curve:

- The iso-quant curve has negative slope.
- Convex to the origin
- Non inter-section of iso quant curves
- An upper iso-quant curve represents a higher level of output.
- Iso-quant curve does not touch either x axis and y axis.



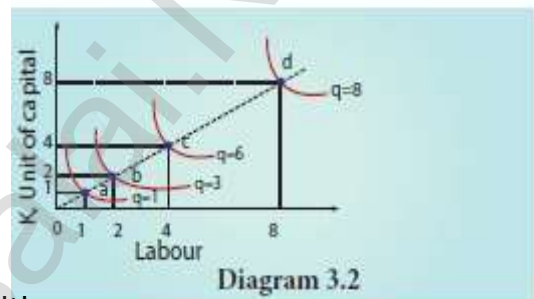
37. Elucidate the Laws of Returns to Scale. Illustrate.

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.

Assumptions:

- ❖ All the factors of production are variable but organizations are fixed.
- ❖ There is no change in technology
- ❖ There is perfect competition in the market.
- ❖ Outputs or returns are measured in physical quantities.



Three phases of return to scale:

- Increasing returns to scale
- Constant returns to scale
- 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:

- ♣ In the movement from point a to point b represents increasing returns to scale.
- ♣ The law of constant returns to scale is implied by the movement from the point b to point c
- ♣ Decreasing returns to scale are denoted by the movement from the point c to point d

38. Explain the internal and external economies of scale.

Basic	Internal	External
Technical Economies	There is possibility to introduce up to date technologies.	Increased transport facilities.
Financial economies	Big firms can float shares in the market for capital expansion.	Banking facilities.
Managerial	Large scale production facilitates	Development of townships.

economies	specialization and delegation.	
Labour econom	Large scale production implies greater and minute division of labour.	Development of information communication.
Marketing economies	The producer can both buy raw materials in at cheaper cost.	Expansion of the plant size.

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CHAPTER 4

COST AND REVENUE ANALYSIS

I. MULTIPLE CHOICE QUESTIONS:

1. Cost refers to _____.
 - a. price
 - b. value
 - c. fixed cost
 - d. cost of production**
2. Cost functions are also known as _____ function.
 - a. production**
 - b. investment
 - c. demand
 - d. consumption
3. Money cost is also known as _____ cost.
 - a. explicit**
 - b. implicit
 - c. social
 - d. real
4. Explicit cost plus implicit cost denote _____ cost.
 - a. social
 - b. economic**
 - c. money
 - d. fixed
5. Explicit costs are termed as
 - a. out of pocket expenses**
 - b. real cost
 - c. social cost
 - d. sunk cost
6. The costs of self-owned resources are termed as _____ cost.
 - a. real
 - b. explicit
 - c. money
 - d. implicit**
7. The cost that remains constant at all levels of output is _____ cost.
 - a. fixed**
 - b. variable
 - c. real
 - d. social
8. Identify the formula of estimating average variable cost.
 - a. TC/Q
 - b. TVC/Q**
 - c. TFC/Q
 - d. TAC/Q
9. The cost incurred by producing one more unit of output is _____ cost.
 - a. variable
 - b. fixed
 - c. marginal**
 - d. total
10. The cost that varies with the level of output is termed as _____ cost.
 - a. money
 - b. variable cost**
 - c. total cost
 - d. fixed cost
11. Wage is an example for _____ cost of the production.
 - a. fixed
 - b. variable**
 - c. marginal
 - d. opportunity
12. The cost per unit of output is denoted by _____ cost.
 - a. average**
 - b. marginal
 - c. variable
 - d. total
13. Identify the formula of estimating average cost.
 - a. AVC/Q
 - b. TC/Q**
 - c. TVC/Q
 - d. AFC/Q
14. Find total cost where $TFC=100$ and $TVC = 125$.
 - a. 125
 - b. 175
 - c. 225**
 - d. 325
15. Long-run average cost curve is also called as _____ curve.
 - a. demand
 - b. planning**
 - c. production
 - d. sales

16. Revenue received from the sale of products is known as _____ revenue.

- a. profit **b. total revenue** c. average d. marginal

17. Revenue received from the sale of additional unit is termed as _____ revenue.

- a. profit b. average **c. marginal** d. total

18. Marginal revenue is the addition made to the

- a. total sales **b. total revenue** c. total production d. total cost

19. When price remains constant, AR will be _____ MR.

- a. equal to** b. greater than c. less than d. not related to

20. A book seller sold 40 books with the price of Rs. 10 each. The total revenue of the seller is

- a. 100 b. 200 c. 300 **d. 400**

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. Define cost.

- ♣ Cost refers to the total expenses incurred in the production of a commodity.
- ♣ Cost analysis refers to the study of behavior of cost in relation to one or more production.

22. Define cost function.

- The functional relationship between cost and output is expressed as cost function.
- $C = f(Q)$
- Where, c = cost and Q = quantity of output.

23. What do you mean by fixed cost?

- ♣ Fixed cost does not change in the quality of output.
- ♣ Fixed cost is also called as supplementary cost.

24. Define Revenue.

- ★ The amount of money that a producer receives in exchange for the sale of goods is known as revenue.
- ★ It means sales revenue.
- ★ $TR = P \times Q$

25. Explicit Cost - Define.

- ❖ It refers to the actual expenditure of the firm to purchase the inputs the firm needs.
- ❖ Examples: Wages, payment for raw material

26. Give the definition for 'Real Cost'.

- ♣ 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 landlords in the use of land.

27. What is meant by Sunk cost?

- ☞ A cost incurred in the past and cannot be recovered in future is calls as sunk cost.
- ☞ They are unrecoverable.

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.**28. Distinguish between fixed cost and variable cost.**

s.no	Fixed cost	Variable cost
1	It refers to the incurred on the fixed factors production.	It refers to the cost incurred on the variable factors of production.
2	This Cost Remains Constant irrespective of the levels of outputs.	It varies with levels of outputs
4	This is also known as supplementary cost.	This is also known as prime cost

29. State the differences between money cost and real cost.

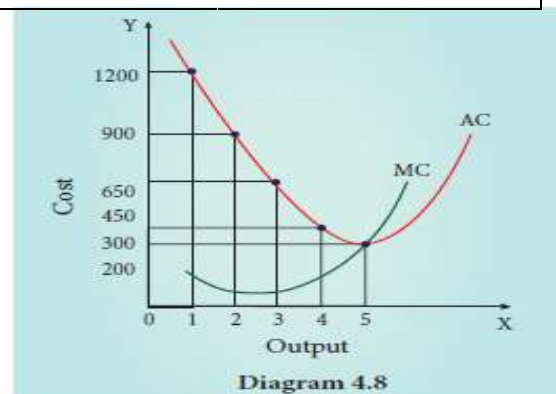
s.no	Money cost	Real cost
1	Production cost expressed in money terms is called money cost.	The efforts and sacrifices of all factor owners for their services in production.
2	It includes the expenditure such as cost of raw materials, payment of wages and salaries.	It includes the efforts and sacrifices of landlords in the use of land, capitalist.
4	It is also called as prime cost or direct cost.	It is also called opportunity cost

30. Distinguish between explicit cost and implicit cost.

s.no	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.	It is not actual money expenditure but is the cost of factors owned by the firm and used by the form in its production process.
2	It is a payment concept	It is a receipt concept
4	Examples: Wages, rent, Interest	Examples: Wages of self labour

31. Define opportunity cost and provide an example.

- ♣ It refers to the cost of next best alternative use.
- ♣ It is the value of the next best alternative foregone.
- ♣ Ex: A farmer can cultivate both paddy and sugarcane in a farm land.
- ♣ Opportunity cost is also called as Alternative cost.
 - When $MC < AC$, AC falls



- When $MC = AC$, AC is constant and at its minimum point.
- When $MC > AC$, AC rises.

32. State the relationship between AC and MC .

- ❖ When AC is falling, MC lies below AC .
- ❖ When AC becomes constant, MC also becomes equal to it.
- ❖ When AC starts increasing MC lies above the AC .
- ❖ MC curve always cuts AC at its minimum point from below.

33. Write a short note on Marginal Revenue.

- ♣ Marginal cost is the addition made to the total cost by producing one extra unit of output.
- ♣ $MC = \Delta TC / \Delta Q$
- ♣ Where MC denotes Marginal cost, ΔTC denotes change in the total cost and ΔQ denotes change in total quantity.
- ♣ The other method of estimating MC is : $MC = TC_n - TC_{n-1}$.
- ♣ MC – Marginal Cost, TC_n – Total cost of n^{th} item, TC_{n-1} – Total cost of 1^{th} item.

34. Discuss the Long run cost curves with suitable diagram.

- In the long run all factors of production become variable.
- The existing size of the firm can be increased in the case of long run.
- There are either fixed inputs nor fixed costs in the long run.
- LAC is equal to long run total costs divided by the level of output.

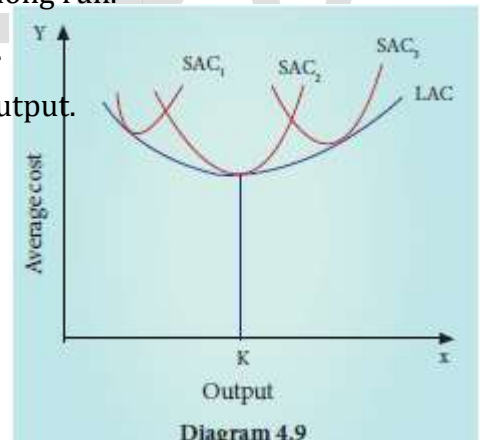
$$LAC = LTC/Q$$

LAC – Long run Average Cost

LTC – Long run Total Cost

Q – Quantity of output

- The LAC curve is called “Plant Curve” or Boat Shape Curve” or Planning Curve



IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE

35. If total cost = $10 + Q^3$, find out AC , AVC , TFC , AFC when $Q=5$.

$$TC = TFC + TVC$$

$$10 + (5)^3$$

$$TC = 10 + 125$$

$$TC = 135$$

$$135 = 10 + TVC$$

$$135 - 10 = TVC$$

$$125 = TVC$$

$$TVC = 125, TC = 135, \text{ therefore } TFC ?$$

$$TC = TFC + TVC$$

$$135 = x + 125$$

$$135 - 125 = 10$$

$$TFC = 10$$

$$AFC = TFC / Q$$

$$AFC = 10/5 = AFC = 2$$

$AVC = TVC / Q$

$= 125 / 5$

$AVC = 25$

$AC = TC / Q$

$= 135 / 5$

$AC = 27$

36. Discuss the short run cost curves with suitable diagram.

Short Run Cost Curves:

i). Total Cost:

Total cost is the sum of Total Fixed Cost and Total Variable Cost

$TC = TFC + TVC$

ii). Average Fixed Cost Curve:

It is the fixed cost per unit of output.

$AFC = TFC / Q$

iii). Average Variable Cost:

It is the variable cost per unit of output

$AVC = TVC / Q$

iv). Average Cost:

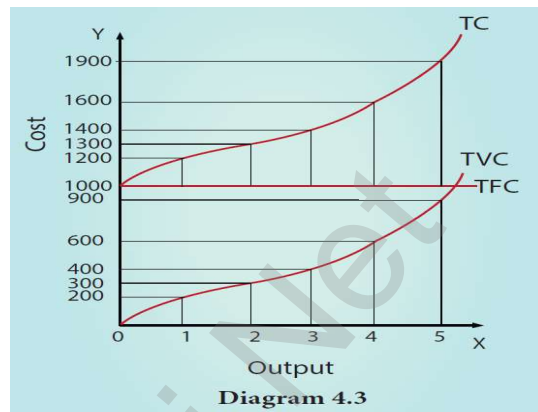
It is the total cost divided by the number of units of output produced.

$AC = TC / Q$

v). Marginal Cost:

It is the additional made to the total cost by the production of one additional unit of output.

$MC_n = TC_n - TC_{n-1}$



37. Bring out the relationship between AR and MR curves under various price conditions.

Average Revenue:

- It is the revenue per unit of the commodity sold. It is calculated by dividing the total revenue by the number of units sold.

• $AR = TR / Q$

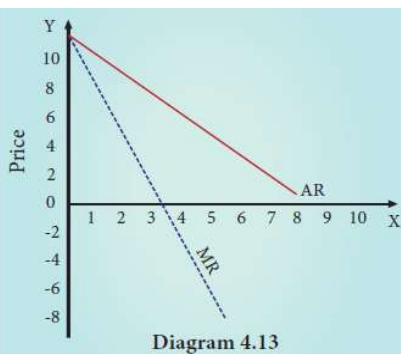
Marginal revenue:

- ♣ It is the addition made to the total revenue by selling one more unit of a commodity

♣ $MR_n = TR_n - TR_{n-1}$

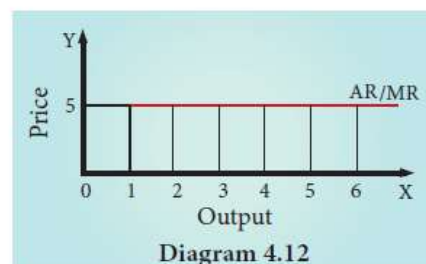
AR, TR, MR at declining price

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



TR, AR, MR - Constant price

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



- If a firm is able to sell additional units at the same price then AR and MR will be constant and equal.
- If the firm is able to sell additional units only by reducing the price, both AR and MR will fall and be different.

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CHAPTER 5**MARKET STRUCTURE AND PRICING****I. MULTIPLE CHOICE QUESTIONS**

1. In which of the following is not a type of market structure Price will be very high?
 - a. Perfect competition
 - b. Monopoly
 - c. Duopoly
 - d. Oligopoly
2. Equilibrium condition of a firm is.....
 - a. $MC = MR$
 - b. $MC > MR$
 - c. $MC < MR$
 - d. $MR = Price$
3. Which of the following is a feature of monopolistic competition?
 - a. One seller
 - b. Few sellers
 - c. **Product differentiation**
 - d. No entry
4. A firm under monopoly can earn in the short run.
 - a. Normal profit
 - b. Loss
 - c. **Super normal profit**
 - d. More loss
5. There is no excess capacity under
 - a. Monopoly
 - b. Monopolistic competition
 - c. Oligopoly
 - d. **Perfect competition**
6. Profit of a firm is obtained when
 - a. $TR < TC$
 - b. $TR - MC$
 - c. **$TR > TC$**
 - d. $TR = TC$
7. Another name of price is.....
 - a. **Average Revenue**
 - b. Marginal Revenue
 - c. Total Revenue
 - d. Average Cost
8. In which type of market, AR and MR are equal
 - a. Duopoly
 - b. **Perfect competition**
 - c. Monopolistic competition
 - d. Oligopoly
9. In monopoly, MR curve lies below
 - a. TR
 - b. MC
 - c. **AR**
 - d. AC
10. Perfect competition assumes
 - a. Luxury goods
 - b. Producer goods
 - c. Differentiated goods
 - d. **Homogeneous goods**
11. Group equilibrium is analysed in
 - a. **Monopolistic competition**
 - b. Monopoly
 - c. Duopoly
 - d. Pure competition
12. In monopolistic competition, the essential feature is
 - a. Same product
 - b. **selling cost**
 - c. Single seller
 - d. Single buyer
13. Monopolistic competition is a form of
 - a. Oligopoly
 - b. Duopoly
 - c. **Imperfect competition**
 - d. Monopoly
14. Price leadership is the attribute of
 - a. Perfect competition
 - b. Monopoly
 - c. **Oligopoly**
 - d. Monopolistic competition

15. Price discrimination will always lead to.....

- a. Increase in output b. Increase in profit c. Different prices **d. b and c**

16. The average revenue curve under monopolistic competition will be.....

- a. Perfectly inelastic b. Perfectly elastic **c. Relatively elastic** d. Unitary elastic

17. Under perfect competition, the shape of demand curve of a firm is.....

- a. Vertical **b. Horizontal** c. Negatively sloped d. Positively sloped

18. In which market form, does absence of competition prevail?

- a. Perfect competition **b. Monopoly** c. Duopoly d. Oligopoly

19. Which of the following involves maximum exploitation of consumers?

- a. Perfect competition **b. Monopoly** c. Monopolistic competition d. Oligopoly

20. An example of selling cost is ...

- a. Raw material cost b. Transport cost **c. Advertisement cost** d. Purchasing cost

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. Define Market.

In economics the term market refers to a system of exchange between the buyers and the sellers of a commodity directly or indirectly.

22. Who is price-taker?

- ♣ It is a seller who has no control to fix price for a good or service.
- ♣ A price taker simply has to accept the market price.

23. Point out the essential features of pure competition.

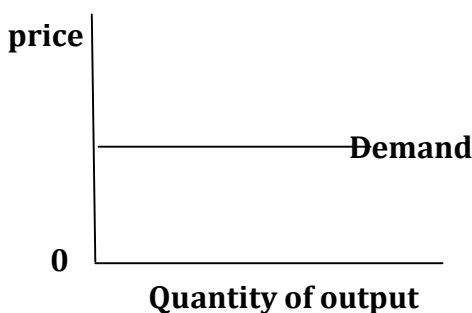
- ❖ Large number of buyers and sellers
- ❖ Homogeneous product and uniform price
- ❖ Free entry and exit
- ❖ Absence of transport cost.

24. What is selling cost?

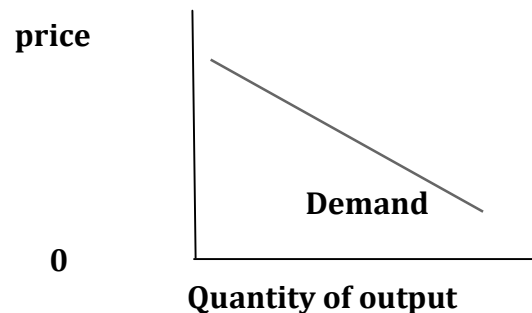
It refers to those expenses which are incurred for popularizing the differentiated product and increasing the demand for it.

25. Draw demand curve of a firm for the following:

a) Perfect Competition



b) Monopoly



26. Mention any two types of price discrimination

- * Personal - different prices are charged for different individuals.
- * Geographical - Different prices are charged at different places for the same product.

27. Define "Excess capacity".

A monopolistic firm produces deliberately output which is less than the optimum output that is the output corresponding to the minimum average cost.

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.**28. What are the features of a market?**

- ❖ Buyers and sellers of a commodity or a service
- ❖ A commodity to be bought and sold
- ❖ Price agreeable to buyer and seller
- ❖ Direct or indirect exchange

29. Specify the nature of entry of competitors in perfect competition and monopoly.

Nature of Entry of competitor	
Perfect competition	Monopoly
It is possible for the very efficient producer producing the product at a very low cost, to earn super normal profit.	There is strict barrier for entry of any new firm

30. Describe the degrees of price discrimination.**i). First degree price discrimination**

- ♣ A monopolist charges the maximum price that a buyer is willing to pay.
- ♣ For example, Auctions

ii) Second degree price discrimination

- ☉ Under this degree, buyers are charged prices in such a way that a part of their consumer's surplus is taken away by the sellers.
- ☉ For example, Cinema theatres

iii) Third degree price discrimination

- ♠ The monopolist splits the entire market into a few sub-market and charges different price in each sub-market.
- ♠ For example, railways

31. State the meaning of selling cost with an example.

- ❖ It was Chamberlin who introduced the analysis of selling costs.
- ❖ Selling cost play the key role in monopolistic competition.

- ❖ The firms have to compete to promote their sale by spending on advertisement and publicity ads to the demand of the product.
- ❖ In selling cost we include the salaries, allowance.

32. Mention the similarities between perfect competition and monopolistic competition.

S.No	Basis	Perfect Competition	Monopolistic competition
1	Number of products	Innumerable	Large
2	Entry	Free	Free
3	Quantity	Very large	Substantial

33. Differentiate between 'firm' and 'industry'.

S.No	Basis	Firm	Industry
1	Meaning	It refers to a single production unit in an industry	It refers to a group of firms
2	Production	Producing a large or a small quantum of a commodity or service in an economy.	Producing the same product or service in an economy.
3	Example	A single cement firm	Cement industry

34. State the features of duopoly.

- Each seller is fully aware of his rival's motive and actions.
- Both sellers may collude.
- They may enter into cut throat competition.
- They fix the price for their product with a view to maximizing their profit.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE

35. Bring out the features of perfect competition.

a. Large Number of Buyers and Sellers:

- ☼ The term, 'large number of sellers' implies that share of each individual seller is a very, very small quantum of a product.
- ☼ This means that he has no power to fix the price of the product.

b. Homogeneous Product and Uniform Price

- ♣ All the units of the product are identical of the same size, shape, colour, quality etc.
- ♣ Therefore, a *uniform price* prevails in the market.

c. Free Entry and Exit

- ❖ Efficient producer, producing the product at a very low cost, to earn *super normal profits*.
- ❖ Attracted by such a profit, new firms enter into the industry.

d. Absence of Transport Cost

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

e. Perfect Knowledge of the Market

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

36. How price and output are determined under the perfect competition?

Meaning:

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

Important Features:

- ❖ Large number of buyer and sellers
- ❖ Free entry and exit
- ❖ Homogeneous product and uniform price
- ❖ Absence of transport cost

Price and output determination – perfect competition during short run:

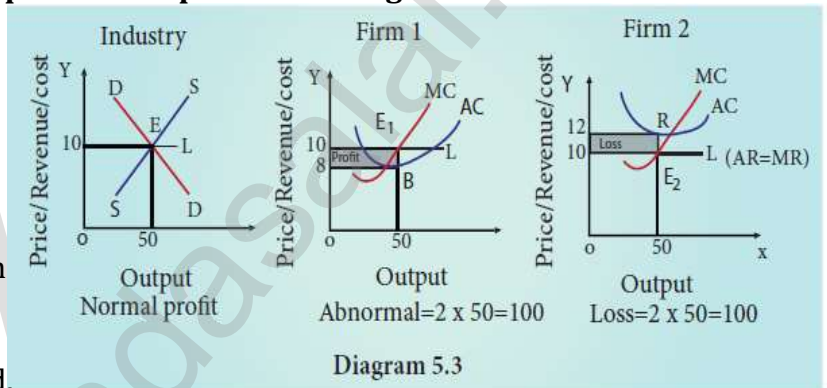
AR – Average Revenue

AC – Average Cost

MR – Marginal Revenue

MC – Marginal Cost

The firms under perfect competition take price (10) from the industry and start adjusting their quantities produced.



37. Describe the features oligopoly.

i). Few large firms

Very few big firms own the major control of the whole market by producing major portion of the market demand.

ii). Interdependence among firms

The price and quality decisions of a particular firm are dependent on the price and quality decisions of the rival firms.

iii). Group behavior

The firms under oligopoly realize the importance of mutual co-operation.

iv). Advertisement cost

The oligopolist could raise sales either by advertising or improving the quality of the product.

v). Nature of product

Perfect oligopoly means homogeneous products and imperfect oligopoly deals with heterogeneous products.

38. Illustrate price and output determination under Monopoly.

Meaning:

- * It is a market structure characterized by a single seller, selling the unique product with the restriction for a new firm to enter the market.

Features:

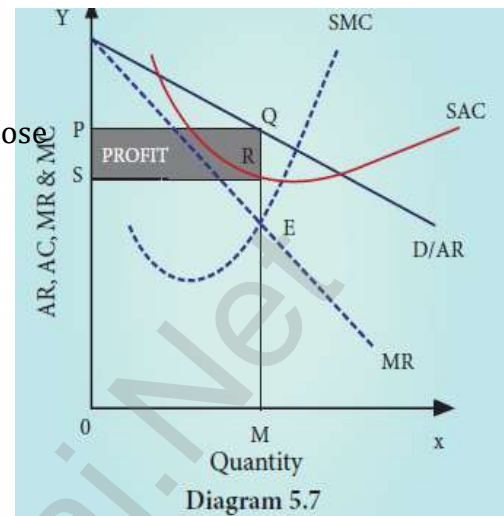
- ❖ There is a single producer/seller of a product.
- ❖ The product of monopolies is unique and has no close substitute.
- ❖ There is strict barrier for entry of any new firm.
- ❖ The monopolist is a price-maker.

Price and Output Determination under Monopoly

Explanation:

- ☛ The diagram shows that MC cuts MR at E to give equilibrium output as OM.
- ☛ At OM, the price charged is OP.
- ☛ Also at OM, the cost per unit is MS.
- ☛ Therefore, profit per unit is SQ.

$$\text{Total Profit} = \text{Average Revenue} - \text{Average Cost} \times \text{Total output}$$



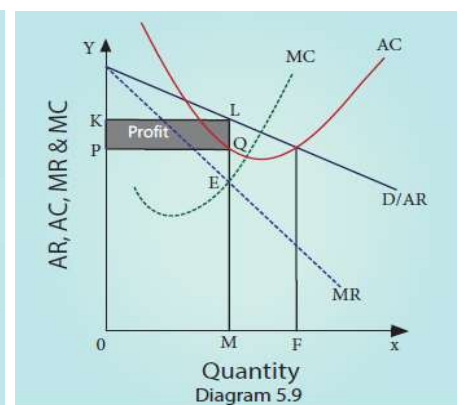
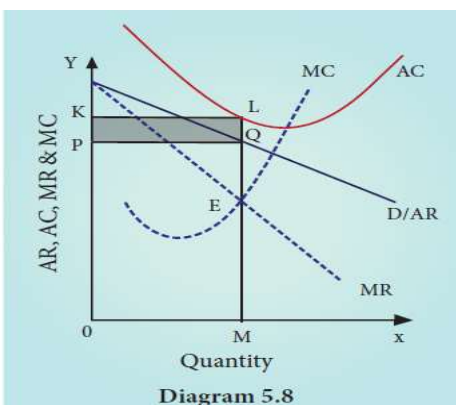
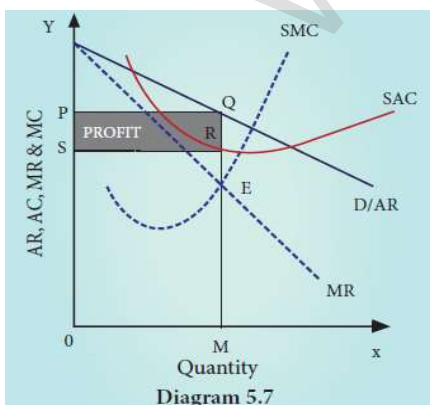
39. Explain price and output determined under monopolistic competition with help of diagram.

Meaning:

It refers to a market situation where there are many firms selling's differential product.

Important features:

- Large number of buyers and many sellers
- Firms produce differentiated products.
- Firms compete with each other by incurring selling cost.
- Non-price competition.



Explanation:

- The profit maximization is achieved when $MC = MR$
- Total profit is PQRS. This is super normal profit under short run.
- Total loss is PQLK. This firm incurs loss in the short run.
- In the long run AR curve is more elastic.

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CHAPTER 6**DISTRIBUTION ANALYSIS****I. MULTIPLE CHOICE QUESTIONS**

1. In Economics, distribution of income is among the
 - a. factors of production
 - b. individual
 - c. firms
 - d. traders
2. Theory of distribution is popularly known as,
 - a. Theory of product-pricing
 - b. Theory of factor-pricing
 - c. Theory of wages
 - d. Theory of Interest
3. Rent is the reward for the use of
 - a. capital
 - b. labour
 - c. land
 - d. organization
4. The concept of 'Quasi-Rent' is associated with
 - a. Ricardo
 - b. Keynes
 - c. Walker
 - d. Marshall
5. The Classical Theory of Rent was propounded by
 - a. Ricardo
 - b. Keynes
 - c. Marshall
 - d. Walker
6. 'Original and indestructible powers of the soil' is the term used by
 - a. J.S.Mill
 - b. Walker
 - c. Clark
 - d. Ricardo
7. The reward for labour is
 - a. rent
 - b. wage
 - c. profit
 - d. interest
8. Money wages are also known as
 - a. real wages
 - b. nominal wages
 - c. original wages
 - d. transfer wages
9. Residual Claimant Theory is propounded by
 - a. Keynes
 - b. Walker
 - c. Hawley
 - d. Knight
10. The reward given for the use of capital
 - a. rent
 - b. wage
 - c. interest
 - d. profit
11. Keynesian Theory of interest is popularly known as
 - a. Abstinence Theory
 - b. Liquidity Preference Theory
 - c. Loanable Funds Theory
 - d. Agio Theory
12. according to the Loanable Funds Theory, supply of loanable funds is equal to
 - a. $S + BC + DH + DI$
 - b. $I + DS + DH + BM$
 - c. $S + DS + BM + DI$
 - d. $S + BM + DH + DS$
13. The concept of meeting unexpected expenditure according to Keynes is
 - a. Transaction motive
 - b. Precautionary motive
 - c. Speculative motive
 - d. Personal motive
14. The distribution of income or wealth of a country among the individuals are
 - a. functional distribution
 - b. personal distribution
 - c. goods distribution
 - d. services distribution

15. Profit is the reward for

- a. land **b. organization** c. capital d. labour

16. Innovation Theory of profit was given by

- a. Hawley **b. Schumpeter** c. Keynes d. Knight

17. Quasi-rent arises in

- a. Man-made appliances** b. Homemade items c. Imported items d. None of these

18. "Wages as a sum of money are paid under contract by an employer to a worker for services rendered" -Who said this?

- a. Benham** b. Marshall c. Walker d. J.S.Mill

19. Abstinence Theory of Interest was propounded by

- a. Alfred Marshall **b. N.W Senior** c. Bohm-Bawerk d. Knut Wicksell

20. Loanable Funds Theory of Interest is called as

- a. Classical Theory b. Modern Theory c. Traditional Theory **d. Neo-Classical Theory**

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. What is meant by distribution?

- ❖ Division of income among the four factors of production.
- ❖ Distribution is given in terms of rent to landlords, wage to labour, interest to capital and profit to entrepreneurs.

22. Mention the types of distribution.

- Personal Distribution
- Functional Distribution

23. Define 'Rent'.

It is that portion of the product of the earth which is paid to the landlord for the use of original and indestructible powers of the soil.

24. Distinguish between real and money wages.

S.No	Money wages	Real wages
1	It's referred to the wages paid in terms of money.	The wages paid in terms of goods and services.
2	<i>Example:</i> Money received by a worker per unit of time	<i>Example:</i> real wages = money wages – effect of inflation on the purchasing power.

25. What do you mean by interest?

- Interest is the price paid for the use of capital in any market.
- Interest is the reward paid by the lender for the use of capital.

26. What is profit?

- ❖ Profit is a return to the entrepreneur for the use of his entrepreneurial ability.
- ❖ It is the net income of the organizer.

27. State the meaning of liquidity preference.

The preference of the people to hold wealth in the form of liquid cash other than bonds, securities gold and etc.,

III. ANSWER THE FOLLOWING QUESTIONS IN A PARAGRAPH**28. What are the motives of demand for money?****i). The transaction motive:**

It relates to the desire of the people to hold cash for the current transaction.

ii). The precautionary motive:

It relates to the desire of the people to hold cash to meet unexpected.

iii). The speculative motive:

It relates to the desire of the people to hold cash in order to take advantage of market movements.

29. List out the kinds of wages.

- ☼ Money wages
- ☼ Real wages
- ☼ Piece wages
- ☼ Time wages

30. Distinguish between rent and quasi-rent.

s.no	Rent	Quasi-rent
1	Rent accrue to land	It accrue to manmade appliances
2	The supply of land is fixed forever.	The supply of manmade appliances is fixed for a short period only.
3	It enters into price.	It does not enter into price.

31. Briefly explain the Subsistence Theory of Wages.

- ☉ Wage must be equal to the subsistence level of the laborer and his family.
- ☉ The minimum amount of food, clothing and shelter which workers and their family require for existence.
- ☉ If workers are paid higher wages than the subsistence level, the workers would be better off and they will have large families.

32. State the Dynamic Theory of Profit.

- * Population is increasing
- * Volume of capital is increasing
- * Methods of production are improving
- * Forms of industrial organization are changing.
- * The wants of consumer are multiplying

33. Describe briefly the Innovation Theory of Profit.

- ♣ Introduction of a new product

- ♣ Introduction of a new method of production.
- ♣ Opening up of a new market.
- ♣ Discovery of new raw materials

34. Write a note on Risk-bearing Theory of Profit.

- ❖ Profit is the reward for “risk taking” in business. Risk taking is an essential function of the entrepreneur and is the basis of profit.
- ❖ Since the entrepreneur undertakes the risks, he receives profits.
- ❖ It is the profit that induces the entrepreneur to undertake such risks.

IV. ANSWER THE FOLLOWING QUESTIONS IN ONE PAGE

35. Explain the Marginal Productivity Theory of Distribution.

Meaning:

The price or the reward for any factor of production is equal to the marginal productivity of that factor.

Assumptions:

- All the factors of production are homogeneous.
- Factors of production can be substituted for each other.
- There is perfect competition both in the factor market and product market.

Marginal Product:

- The addition made to the total product by employment of an additional unit of that factor.
- The marginal product may be expressed as $MMP = MPP \times MR$

MP: Under Perfect Competition:

- ♣ When there is perfect competition in the factor market, the firm is in equilibrium only when $MFC = MRP$.
- ♣ Hence in the diagram, the firm reaches equilibrium at point Q by employing ON units of factors and paying OP price (NQ) where $MFC = MRP$.
- ♣ At the point Q, $MRP = ARP$.
- ♣ The price paid to the factor (NQ) is also equal to marginal revenue product and average revenue product.

Under Imperfect Competition:

- ❖ At the point Q, $MFC = MRP$, where the employer attains his maximum profit and so he stops employment of the factors at the point.

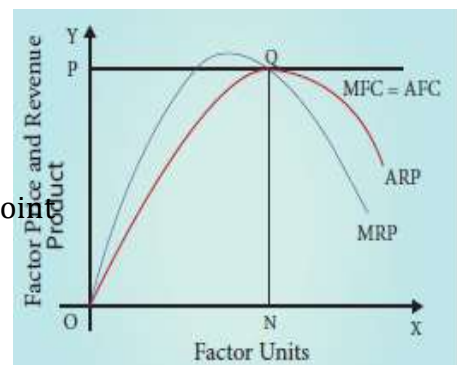


Diagram 6.1

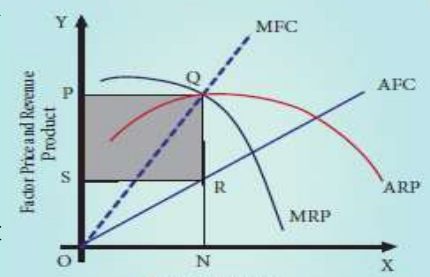


Diagram 6.2

- ❖ The total exploitation of factor by the employer is $RQ \times SR = PQRS$.
- ❖ Thus under imperfect competition, factor is exploited at the equilibrium position.

36. Illustrate the Ricardian Theory of Rent.

Meaning:

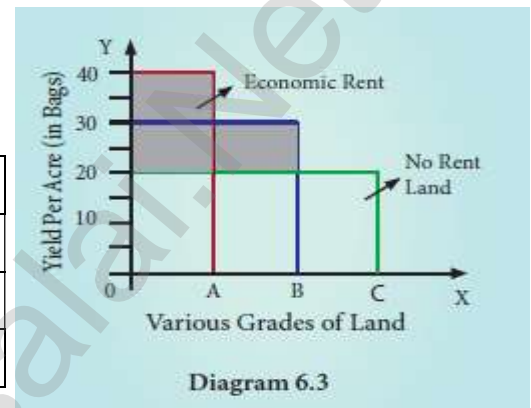
Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil.

Assumption:

- Land differs in fertility
- The law of diminishing returns operates in agriculture.
- Rent depends upon fertility and location of land.
- Theory assumes perfect competition.

Schedule of Ricardian Theory of Rent

Grades of lands	Production	Surplus
A	40	$40 - 20 = 20$
B	30	$30 - 20 = 10$
C	20	$20 - 20 = 0$



Explanation:

- ✿ In diagram, X axis represents various grades of land and Y axis represents yield per acre.
- ✿ OA, AB and BC are the A grade, B grade and C grade lands respectively.
- ✿ The application of equal amount of labour and capital on each of them gives a yield represented by the rectangles standing just above the respective bases.
- ✿ The C grade land is the no-rent land, A and B grade lands are intra-marginal lands

37. Elucidate the Loanable Funds Theory of Interest.

Definition:

The rate of interest is determined by the equilibrium between demand for and supply of loanable funds in the credit market.

Demand for Loanable Funds

- ✿ Demand for Investment
- ✿ Demand for Consumption
- ✿ Demand for Hoarding

Supply loanable Fund

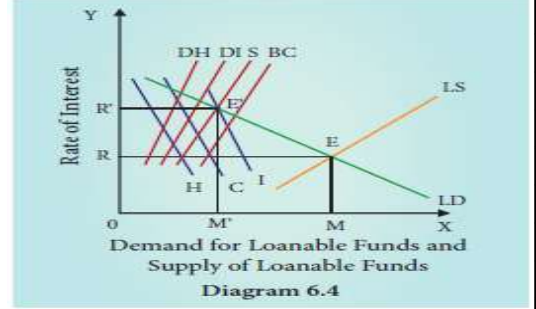
- ✿ Savings
- ✿ Bank Credit
- ✿ Disharding

Equilibrium:

- The rate of interest is determined by the equilibrium between the total demand for and the total supply of

loanable funds.

- $E = S + BC + DH + DI = I + C + H$
- In diagram X axis represents the demand for and supply of loanable funds and Y axis represents the rate of interest.
- The LD and LS curves, interest each other at the point E the equilibrium point.
- At this point OR rate of interest and OM is the amount of loanable funds.



Criticisms:

- ♣ The loanable funds theory is “indeterminate unless the income level is already known.
- ♣ Difficult to combine real factors like savings and investment with monetary factors like bank credit.

38. Explain the Keynesian Theory of Interest.

Liquidity preference means the preference of the people to hold wealth in the form of liquid cash rather than in other non-liquid asset like bonds, securities, bills of exchange, land, building, gold etc.

Motives of Demand Motive:

i). The Transaction Motive:

The desire of the people to hold cash for the current transaction $M_t = f(y)$

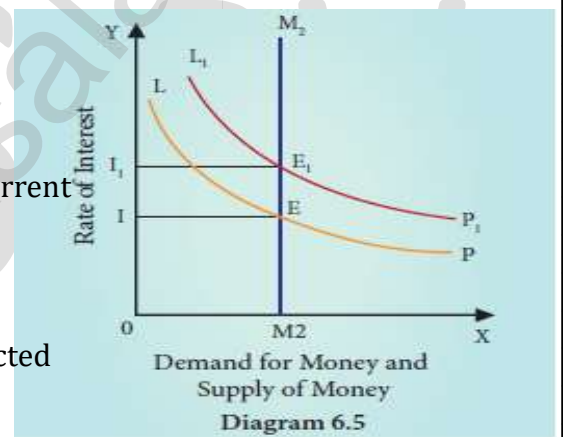
ii). The precautionary Motive:

Desire of the people to hold cash to meet unexpected or unforeseen expenditures. $M_p = f(y)$

iii). The speculative Motive:

It relates to the desire of the people to hold cash in order to take advantage of market movements regarding the future. $M_s = f(i)$.

- The rate of interest would increase from 0 1 to 011.
- The supply of money remains constants.
- Total demand for money = $M_t + M_p + M_s$



Demand for money = supply of money at equilibrium point:

- * Equilibrium point 1 = $E = LP = M_2 = I = \text{Rate of Interest} \dots\dots\dots (1)$
- * Equilibrium point 2 = $E_1 = L_1P_1 = M_2 = I_1 = \text{Rate of Interest} \dots\dots\dots (2)$

CHAPTER 7

INDIAN ECONOMY

I. Multiple Choice Questions

1. The main gold mine region in Karnataka is
 - a. Kolar
 - b. Ramgiri
 - c. Anantpur
 - d. Cochin
2. Economic growth of a country is measured by national income indicated by
 - a. GNP
 - b. GDP
 - c. NNP
 - d. Per capita income
3. Which one of the following is a developed nations ?
 - a. Mexico
 - b. Ghana
 - c. France
 - d. Sri Lanka
4. The position of Indian Economy among the other strongest economies in the world is ..
 - a. Fourth
 - b. Seventh
 - c. Fifth
 - d. Tenth
5. Mixed economy means
 - a. Private sectors and banks
 - b. Co-existence of Public and Private sectors
 - c. Public sectors and banks
 - d. Public sectors only
6. The weakness of Indian Economy is
 - a. Economic disparities
 - b. Mixed economy
 - c. Urbanisation
 - d. Adequate employment opportunities
7. A scientific study of the characteristics of population is
 - a. Topography
 - b. Demography
 - c. Geography
 - d. Philosophy
8. The year 1961 is known as
 - a. Year of small divide
 - b. Year of Population Explosion
 - c. Year of Urbanisation
 - d. Year of Great Divide
9. In which year the population of India crossed one billion mark ?
 - a. 2000
 - b. 2001
 - c. 2005
 - d. 1991
10. The number of deaths per thousand population is called as ...
 - a. Crude Death Rate
 - b. Crude Birth Rate
 - c. Crude Infant Rate
 - d. Maternal Mortality Rate
11. The number of births per thousand population is called as
 - a. Crude death rate
 - b. Mortality rate
 - c. Morbidity rate
 - d. Crude Birth Rate
12. Density of population =
 - a. Land area / Total Population
 - b. Land area / Employment
 - c. Total Population / Land area of the region
 - d. Total Population / Employment
13. Who introduced the National Development Council in India?
 - a. Ambedkar
 - b. Jawaharlal Nehru
 - c. Radhakrishnan
 - d. V.K.R.V. Rao

14. Who among the following propagated Gandhian Economic thinkings.

- a. Jawaharlal Nehru b. VKRV Rao c. **JC Kumarappa** d. A.K.Sen

15. The advocate of democratic socialism was

- a. **Jawaharlal Nehru** b. P.C. Mahalanobis
c. Dr. Rajendra Prasad d. Indira Gandhi

16. Ambedkar the problem studied by in the context of Indian Economy is

- a. Small land holdings and their remedies **b. Problem of Indian Currency**
c. Economics of socialism d. All of them

17. Gandhian Economics is based on the Principle

- a. Socialistic idea **b. Ethical foundation**
c. Gopala Krishna Gokhale d. Dadabhai Naoroji

18. V.K.R.V Rao was a student of

- a. **J.M. Keynes** b. Colin Clark c. Adam smith d. Alfred Marshal

19. Amartya Kumara Sen received the Nobel prize in Economics in the year

- a. **1998** b. 2000 c. 2008 d. 2010

20. Thiruvalluvar economic ideas mainly dealt with

- a. Wealth b. Poverty is the curse in the society c. Agriculture **d. All of them**

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. Write the meaning of Economic Growth.

A country's economic growth is usually measured by national income, indicated by Gross domestic Product.

22. State any two features of developed economy.

- ♣ High national income ♣ High standard of living
- ♣ High per capita income ♣ Full employment

23. Write the short note on natural resources.

- ♠ Any stock or reserve that can be drawn from nature is a natural resource.
- ♠ The major natural resources are land, forest, water, mineral and energy.

24. Point out any one feature of Indian Economy.

- ⊙ Indian economy is a mixed economy.
- ⊙ This means both private and public sectors co-exist and functions smoothly.

25. Give the meaning of non-renewable energy.

- As the name suggests, the sources of energy which cannot be renewed or re-used are called non-renewable energy resources.
- Example: Coal, oil, gas, etc...

26. Give a short note on Sen's 'Choice of Technique'.

It is a research work where he argued that in a labour surplus economy, generation of employment cannot be increased at the initial stage by the adaptation of capital-intensive technique.

- Sen's

27. List out the reasons for low per capita income as given by V.K.R.V. Rao.

- Uneconomic holdings with sub-divisions and fragmentation
- Low levels of water availability for crops
- Excess population pressure on agriculture due to the absence of a large industrial sector.
- Absence of capital

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.**28. Define Economic Development.**

- ♣ It is indicated not just by GDP, but by an increase in citizens quality of life or well beings.
- ♣ The quality of life is being assessed by several indices such as Human Development Index, Physical Quality of Life Index and Gross national happiness index.

29. State Ambedkar's Economic ideas on agricultural economics.

- ◆ In 1918, Ambedkar published a paper Small Holding in India and their Remedies.
- ◆ Citing Adam Smith's Wealth of Nations, he made a fine distinction between consolidation of Holdings and Enlargement of Holdings.

30. Write a short note on village sarvodaya.

- According to Gandhi, Real India was to be found in village and not in towns or cities.
- So he suggested the development of self-sufficient, self dependent villages.
- Sarvodaya is a Sanskrit term meaning universal uplift or progress of all.

31. Write the strategy of Jawaharlal Nehru in India's planning.

- ❖ The plan was essentially an integrated approach for development
- ❖ The essence of planning is to find the best way to utilize all resources of manpower, of money and so on.
- ❖ Economic growth on a self-accelerating growth.

32. Write the V.K.R.V.Rao's contribution on multiplier concept.

- ★ Rao's examination of the interrelation between investment, income and multiplier in an under developed economy.
- ★ Dr.Rao argued that whereas a primary increase in investment would take place, a subsequent, secondary and tertiary effects through the expansion of output in the consumption goods sector would not take place.

- ☛ Consequently, the multiplier process would not ne operation.

33. Write a short note on Welfare Economics given by Amartya Sen.

- ☉ The distribution of income among the persons below the poverty line is to be taken into account.
- ☉ The concept of capabilities developed by sen has been cited as abetter index of wellbeing than commodities or utilities.
- ☉ The concept of entitlement items like nutrition, food, medical and health care, employment, security of food supply in times of famine etc.

34. Explain Social infrastructure.

- ☛ To those structures which are improving the quality of manpower and contribute indirectly towards the growth of an economy.
- ☛ These structures are outside the system of production and distribution.
- ☛ For example, schools, colleges, hospitals and other civic amenities.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE

35. Explain the strong features of Indian economy

i). India has a mixed economy

- ★ Indian economy is a typical example of mixed economy.
- ★ This means both private and public sectors co-exist and function smoothly.

ii). Agriculture plays the key role

- ☛ Around 60% of the people in India depend upon agriculture for their livelihood.
- ☛ In fact, about 17% of our GDP today is contributed by the agricultural sector.

iii). An emerging market

- ☛ India has a high potential for prospective growth.
- ☛ This also makes it an emerging market for the world.

iv). Fast Growing Economy

- ◆ India's economy is well known for high and sustained growth.
- ◆ It has emerged as the world's fastest growing economy in the year 2016-17 with the growth rate of 7.1% in GDP next to People's Republic of China.

v). Demographic dividend

- The human capital of India is young.
- This means that India is a pride owner of the maximum percentage of youth.

36. Write the importance of mineral resources in India

i). Iron-Ore:

- ✓ India possesses high quality iron-ore in abundance.

- ✓ Hematite iron is mainly found in Chhattisgarh, Jharkhand, Odisha, Goa and Karnataka.

ii). Coal and Lignite

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

iii). Bauxite

- ✪ Major reserves are concentrated in the East Coast bauxite deposits of Odisha and Andhra Pradesh.

iv). Crude Oil

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

v). Gold

- ✦ India possesses only a limited gold reserve.
- ✦ There are only three main gold mine regions—Kolar Goldfield, Hutti Goldfield and Ramgiri Goldfield.

37. Bring out Jawaharlal Nehru's contribution to the idea of economic development.

- ◆ Jawaharlal Nehru, one of the chief builders of Modern India,
- ◆ He was the first Prime Minister of Independent India
- ◆ He was a great patriot, thinker and statesman.
- ◆ His views on economics and social problems are found in the innumerable speeches he made and in the books he wrote.
- ◆ Jawaharlal Nehru was a firm believer in democracy.
- ◆ Secularism is another signal contribution of Nehru to India.
- ◆ Jawaharlal Nehru was responsible for the introduction of planning in our country.

38. Write a brief note on the Gandhian economic ideas.

S.no	Gandhian Thoughts	Gandhian Economic Ideas
1	Village Republics	India lives in villages. He was interested in developing the villages as self sufficient units.
2	On Machinery	Gandhi described machinery as great sin
3	Industrialization	Gandhi considered industrialism as accurse on mankind.
4	Decentralization	He advocated a decentralized economy
5	Village sarvodaya	He suggested the development of self sufficient self dependant villages.

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CHAPTER 8 INDIAN ECONOMY BEFORE AND AFTER INDEPENDENCE

I. MULTIPLE CHOICE QUESTIONS:

1. The arrival of Vasco da Gama in Calicut, India
 - a. 1498
 - b. 1948
 - c. 1689
 - d. 1849
2. In 1614 Sir Thomas Roe was successful in getting permission from
 - a. Akbar
 - b. Shajahan
 - c. Jahangir
 - d. Noorjahan
3. The power for governance of India was transferred from the East India Company (EIC) to the British crown in
 - a. 1758
 - b. 1858
 - c. 1958
 - d. 1658
4. Ryotwari system was initially introduced in
 - a. Kerala
 - b. Bengal
 - c. Tamil Nadu
 - d. Maharashtra
5. First World War started in the year
 - a. 1914
 - b. 1814
 - c. 1941
 - d. 1841
6. When did the Government of India declared its first Industrial Policy ?
 - a. 1956
 - b. 1991
 - c. 1948
 - d. 2000
7. The objective of the Industrial Policy 1956 was
 - a. Develop heavy industries
 - b. Develop agricultural sector only
 - c. Develop private sector only
 - d. Develop cottage industries only
8. The industry which was de-reserved in 1993 ?
 - a. Railways
 - b. Mining of copper and zinc
 - c. Atomic energy
 - d. Atomic minerals
9. The father of Green Revolution in India was
 - a. M.S. Swaminathan
 - b. Gandhi
 - c. Visweswaraiah
 - d. N.R. Viswanathan
10. How many commercial banks were nationalized in 1969 ?
 - a. 10
 - b. 12
 - c. 14
 - d. 16
11. The main objective of nationalization of banks was
 - a. Private social welfare
 - b. Social welfare
 - c. To earn
 - d. Industries monopoly
12. The Planning Commission was setup in the year
 - a. 1950
 - b. 1955
 - c. 1960
 - d. 1952
13. In the first five year plan, The top priority was given to Sector.
 - a. Service
 - b. Industrial
 - c. Agriculture
 - d. Bank
14. Tenth Five year plan period was.....
 - a. 1992-1997
 - b. 2002-2007
 - c. 2007-2012
 - d. 1997-2002

15. According to HDR (2016), India ranked out of 188 countries.

- a. 130 b. **131** c. 135 d. 145

16. Annual Plans formed in the year

- a. 1989-1991 b. **1990-1992** c. 2000-2001 d. 1981-1983

17. The Oldest large scale industry in India

- a. **cotton** b. jute c. steel d. cement

18. Human development index (HDI) was developed by

- a. Jawaharlal Nehru b. M.K. Gandhi c. **Amartiya Sen** d. Tagore

19. The main theme of the Twelfth Five Year Plan

- a. faster and more inclusive growth b. growth with social Justice
c. socialistic pattern of society d. **faster, more inclusive and sustainable growth**

20. The PQLI was developed by

- a. Planning Commission b. Nehru
c. **Morris** d. Morrisd.Biswajeet

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. What are the Phases of colonial exploitation of India?

- * Period of merchant capital
- * Period of Industries capital
- * Period of finance capital

22. Name out the different types of land tenure existed in India before Independence.

- ☉ Zamindar system
- ☉ Mahalwari system
- ☉ Ryotwari system

23. State the features that distinguish a land tenure system from other system.

- ♣ Who owns the land
- ♣ Who cultivate the land
- ♣ Who is responsible for the land

24. List out the weaknesses on Green Revolution.

- ☼ Indian agriculture was still a gamble of the monsoon.
- ☼ Wide spread unemployment among agricultural laborers
- ☼ The income gap between large

25. What are the objectives of Tenth five year plan?

- * It aimed to reduce the poverty to 15% by 2012
- * Its growth target was 8.0% but it is achieved only 7.2%

26. What is the difference between HDI and PQLI?

S.No	Basic	PQLI	HDI
1	Meaning	It refers to overall well being of people	It refers to composite measures of economic to find out the quality of human life.
2	Made by	Morris D. Morris in 1979	Mahabub - Ul -Haq in 1990 for UNDP

27. Mention the indicators which are used to calculate HDI.

- Life expectancy at birth
- Adult literacy rate
- Gross Enrolment ratio
- GDP percapita

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.

28. Explain about the Period of Merchant Capital.

- ◆ The period of merchant capital was from 1757 to 1813
- ◆ The only aim of the East India Company was to earn profit.
- ◆ India had been considered as the best hunting ground for capital by ELC

29. The Handicrafts declined in India in British Period. Why?

- ✿ Through discriminatory tariff policy the British government purposefully destroyed the handicrafts.
- ✿ With the disappearance of nawabs and kings, there was no one to protect Indian handicrafts.
- ✿ Indian handicraft products could not compete with machine made products.

30. Elucidate the different types of land tenure system in colonial India.

i). Zamindar system:

Zamindar was declared as the owners of the land and they were responsible to pay the land revenue to the government.

ii). Mahalwari system:

The ownership of the land was maintained by the collective body usually the villagers which served as a unit of management.

iii). Ryotwari system:

Under this system the ownership rights of use and control of land were held by the tiller himself.

31. State the reasons for nationalization of commercial banks.

- ✦ The main objective of nationalization was to attain social welfare.
- ✦ Nationalization of banks helped to curb private monopolies.
- ✦ Needed to encourage the banking habit among the rural populations.

32. Write any three objectives of Industrial Policy 1991.

- ❖ Reduce disparities in income and wealth
- ❖ Higher employment generation
- ❖ Focus on development of small scale sector
- ❖ Rural industrialization

33. Give a note on Twelfth Five Year Plan.

- ☉ Its main theme is Faster, More inclusive and sustainable growth.
- ☉ Its growth rate target is 8%.
- ☉ Better performance in agricultural
- ☉ Stronger efforts at health, education and infrastructure.

34. What is PQLI?

- ♣ Morris D Morris developed the Physical quality of Life Index.
- ♣ It is a measure to calculate the quality of life.
- ♣ A scale of each indicator ranges from the number 1 to 100.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE**35. Discuss about the Indian economy during British Period.**

Periods under British rule	Period	State of Indian Economy
Period of Merchant Capital	1757-1813	<ul style="list-style-type: none"> ⚡ Aim of the East India Company was to earn profit. ⚡ The best hunting ground for capital. ⚡ The officers of the company were unscrupulous and corrupt.
Period of Industrial Capital	1813-1858	<ul style="list-style-type: none"> ♦ India had become a market for British textiles. ♦ Indians were exploited. ♦ India's traditional handicrafts were thrown out of gear.
Period of Financial Capital	1858-1947	<ul style="list-style-type: none"> ♣ Finance imperialism began to entrench itself. ♣ Britain decided to make massive investments in various fields. ♣ Railway construction policy of the British led to unimaginable as well as uneconomic

36. Explain the role of SSIs in economic development?**i). Provide employment:**

- ☉ SSIs use labour intensive techniques.
- ☉ Hence they provide employment opportunities to a large number of people.

ii). Bring Balanced Regional Development:

- ★ SSIs promote decentralized development of industries as most of the SSIs are set up in backward and rural areas.

iii). Help in Mobilization of Local Resources:

- ♣ SSIs help to mobilize and utilize local resources like small savings, entrepreneurial talent etc.

iv). Pave for Optimization of Capital

- ❖ SSIs require less capital per unit of output.
- ❖ They provide quick return on investment

v). Develop Entrepreneurship:

- ⌘ SSIs help to develop a class of entrepreneurs in the society.

37. Explain the objectives of nationalization of commercial banks.

- The main objective of nationalization was to attain social welfare.
- To encourage the banking habit among the rural population.
- To reduce the regional imbalances where the banking facilities were not available.
- After nationalization, new branches were opened in both rural and urban.
- Credit facilities mainly to the agriculture sector and its allied activities.

38. Describe the performance of 12th five year plan in Indi

- ⦿ Its main theme is “faster, more inclusive and sustainable growth”.
- ⦿ Its growth rate target is 8%.

Major Objectives:

- ★ For growth to be more inclusive we need.
- ★ Better performance in agriculture.
- ★ Faster creation of jobs, especially in manufacturing.
- ★ Stronger efforts at health education and infrastructure

Major Achievements:

- Implementation of pandit Madan Mohan malaviya national Mission on teachers & teaching.
- Uchchar Aavishkar Abhiyan programme to promote industry specific need based research.
- Free and compulsory education to all children in the age group of 6 to 14 years.
- Construction of school toilets under swachh vidyalaya initiative.
- Implementation of udaan programme to ensure quality education for girl child.

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CHAPTER 9**DEVELOPMENT EXPERIENCE IN INDIA****I. MULTIPLE CHOICE QUESTIONS:**

1. Which of the following is the way of Privatization?

- a. Disinvestment b. Denationalization c. Franchising **d. All the above**

2. Countries today are to be ____ for their growth.

- a. Dependent **b. Interdependent** c. Free trade d. Capitalist

3. The Arguments against LPG is _____

- a. Economic growth b. More investment
c. Disparities among people and regions d. Modernization

4. Expansion of FDI _____

- a. Foreign Private Investment b. Foreign Portfolio
c. Foreign Direct Investment d. Forex Private Investment

5. India is the largest producer of _____ in the world.

- a. fruits b. gold c. petrol d. diesel

6. Foreign investment includes _____

- a. FDI only b. FPI and FFI **c. FDI and FPI** d. FDI and FFI

7. The Special Economic Zones policy was announced in _____

- a. April 2000 b. July 1990 c. April 1980 d. July 1970

8. Agricultural Produce Market Committee is a _____

- a. Advisory body **b. Statutory body** c. Both a and b d. None of above

9. Goods and Services Tax is _____

- a. a multi point tax b. having cascading effects
c. like Value Added Tax **d. a single point tax with no cascading effects.**

10. The New Foreign Trade Policy was announced in the year _____

- a. 2000 b. 2002 c. 2010 **d. 2015**

11. Financial Sector reforms mainly related to _____

- a. Insurance Sector b. Banking Sector **c. Both a and b** d. Transport Sector

12. The Goods and Services Tax Act came in to effect on _____

- a. 1st July 2017** b. 1st July 2016 c. 1st January 2017 d. 1st January 2016

13. The new economic policy is concerned with the following

- a. foreign investment b. foreign technology c. foreign trade **d. all the above**

14. The recommendation of Narashimham Committee Report was submitted in the year _____

- a. 1990 **b. 1991** c. 1995 d. 2000

15. The farmers have access to credit under Kisan credit card scheme through the following except
- a. co-operative banks b. RRBs c. Public sector banks d. all the above
16. The Raja Chelliah Committee on Trade Policy Reforms suggested the peak rate on import duties at _____
- a. 25% b. 50% c. 60% d. 100%
17. The first ever SEZ in India was set up at
- a. Mumbai b. Chennai c. Kandla d. Cochin
18. 'The Hindu Rate of Growth' coined by Raj Krishna refers to
- a. low rate of economic growth b. high proportion of Hindu population
c. Stable GDP d. none
19. The highest rate of tax under GST is _____ (as on July 1, 2017)
- a. 18% b. 24% c. 28% d. 32%
20. The transfer of ownership from public sector to private sector is known as ____.
- a. Globalization b. Liberalization c. Privatization d. Nationalization

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. Why was structural reform implemented in Indian Economy?

Indian economy responded to the crises by introducing a set of policies known as structural reforms.

22. State the reasons for implementing LPG.

Basic reasons behind liberalization, privatization could be summarized as nations believe that globalization and nation – states are not in contradiction.

23. State the meaning of Privatization.

It means transfer of ownership and management of enterprises from public sector to private sector.

24. Define disinvestment

It selling of government securities of public sector undertakings to other PSUs.

25. Write three policy initiative introduced in 1991 – 92 to correct the fiscal imbalance.

- ☛ Reduction in fertilizer subsidy
- ☛ Abolition of subsidy on sugar
- ☛ Disinvestment of a part of the government holdings

26. State the meaning of Special Economic Zones.

- ☛ It is an area in which business and trade laws are different from the rest of the country.
- ☛ Their aims include increased trade, increased investment, job creation.

27. State the various components of Central government schemes under post – harvest measures.

- Mega Food Parks
- Scheme for Quality Assurance

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.

28. How do you justify the merits of Privatization?

- ◆ Helps in reducing the burden on government.
- ◆ Makes the public sector units competitive.
- ◆ Greater autonomy for public sector units.
- ◆ Industrial growth

29. What are the measures taken towards Globalization?

- Import liberalization through reduction of tariff and non-tariff barriers.
- Opening the doors to FDI and FPI are some of the measures towards globalization.
- The economic activity of multinational firms and internationalization of technology

30. Write a note on Foreign investment policy?

Red carpet welcome to foreign investment and foreign technology enhanced the industrial competition and improved business, including FDI and FPI were allowed automatic permission was granted for a specified list of high technology and high-investment priority industries.

31. Give short note on Cold storage.

- ◆ India is the largest producer of fruits and second largest producer of vegetables in the world.
- ◆ Most of the problems relating to the marketing of fruits and vegetables can be traced to their perishability.
- ◆ In order to overcome this constraint, the government of India and the ministry of agriculture promulgated an order known as cold storage order 1964.

32. Mention the functions of APMC.

- ★ To promote public private partnership in the ambit of agricultural markets.
- ★ To provide market led extension services to farmer.
- ★ To bring transparency in pricing system
- ★ To promote agricultural activities

33. List out the features of new trade policy.

Free imported and exports:

Prior to 1991, in India imports were regulated from 1992, imports were regulated by a limited negative list.

Rationalization of tariff structure and removal of quantitative restrictions:

- ◆ Free imports and exports
- ◆ Reducing tariffs
- ◆ Liberalization of the exchange rate regime.

34. What is GST? Write its advantages.

- ✿ It is defined as the tax levied when a consumer buys a goods and service.
- ✿ The act came into effect on 1st July 2017.
- ✿ The Motto is *"one nation, one market, one tax"*.

Advantages:

- ♣ Removing cascading tax effect
- ♣ Single point tax
- ♣ Higher threshold for registration
- ♣ Composition scheme for small business

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE:

35. Discuss the important initiatives taken by the Government of India towards Industrial Policy.

Meaning:

Any government action aimed at affecting industry may be considered to be part of industrial policy which makes it a limits field.

Important initiative:

i). Industrial Policy Resolution:

- ✪ It ushered India as the system of mixed economy.
- ✪ Industries are classified into Public sector, Public-cum-Private sector, Controlled private Sector, private and co-operative sector.
- ✪ This policy endeavored to protect cottage and small scale industries.

ii). Industrial Policy Resolution 1956:

- ◆ It assured a fair treatment to the private sector.
- ◆ Support and encourage cottage and small scale enterprises.
- ◆ Indignation of foreign concerns.

iii). The New industrial Policy of 1991:

- ☉ Industrial licensing will be abolished for all projects except for a short list of industries.
- ☉ The policy provides for automatic clearance for import of capital goods.

36. Explain the objectives and characteristics of SEZs.

Meaning:

It is an area in which business and trade laws are different from the rest of the country.

Objectives:

- To enhance foreign investment
- To increase shares in global export
- To generate additional economic activity.
- To create employment opportunities.
- To develop infrastructure facilities.

Characteristics:

- ✿ Geographically demarked area with physical security.
- ✿ Administrated by single body
- ✿ Streamlined procedures
- ✿ Having separate custom area
- ✿ Governed by more liberal economic laws.

37. Describe the salient features of EXIM policy (2015 - 2020)?

- Reduce export obligations by 25% and give boost to domestic manufacturing supporting the “Make in India” concept.
- As a step to Digital India concept, online procedure to upload digitally signed document by CA/CS/Cost Accountant are developed and further mobile app for filing tax, stamp duty has been developed.
- Repeated submission of physical copies of documents available on Exporter Importer Profile is not required.
- Export obligation period for export items related to defense, military store, aerospace and nuclear energy to be 24 months.
- EXIM Policy 2015-2020 is expected to double the share of India in World Trade from present level of 3% by the year 2020. This appears to be too ambitions.

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CHAPTER 10**RURAL ECONOMY****I. MULTIPLE CHOICE QUESTIONS**

1. Which is considered as the basic unit for rural areas?

- a. Panchayat **b. Village** c. Town d. Municipality

2. Which feature is identified with rural areas?

- a. Low population density** b. High population density
c. Low natural resources d. Low human resources

3. Identify the feature of rural economy.

- a. Dependence on agriculture** b. High population density
c. Low level of population d. Low level of inequality

4. What percentage of the total population live in rural area, as per 2011 censuses?

- a. 40 b. 50 **c. 60** d. 70

5. How do you term people employed in excess over and above the requirements?

- a. Unemployment **b. Underemployment or Disguised Unemployment**
c. Full employment d. Self-employment

6. What is the term used to denote the coexistence of two different features in an economy?

- a. Technology b. Dependency **c. Dualism** d. Inequality

7. The process of improving the rural areas, rural people and rural living is defined as

- a. Rural economy b. Rural economics c. Rural employment **d. Rural development**

8. Identify the agriculture related problem of rural economy.

- a. Poor communication **b. Small size of landholding**
c. Rural poverty d. Poor banking network

9. The recommended nutritional intake per person in rural areas.

- a. 2100 calories b. 2100 calories c. 2300 calories **d. 2400 calories**

10. Indicate the cause for rural poverty.

- a. Lack of non-farm employment** b. High employment
c. Low inflation rate d. High investment.

11. What is the other name for concealed unemployment?

- a. Open **b. Disguised** c. Seasonal d. Rural

12. How do you term the employment occurring only on a particular season?

- a. Open b. Disguised **c. Seasonal** d. Rural

13. Identify an example for rural industries?

- a. Sugar factory **b. Mat making industry** c. Cement industry d. Paper industry

14. How much share of rural families in India is in debt?

- a. Half b. One fourth c. Two third **d. Three fourth**

15. Identify the cause for rural indebtedness in India.

- a. Poverty** b. High population c. High productivity d. Full employment

16. In which year, Regional Rural Banks came into existence?

- a. 1965 b. 1970 **c. 1975** d. 1980

17. Identify the year of launch of MUDRA Bank?

- a. 1995 b. 2000 c. 2010 **d. 2015**

18. Identify the year in which National Rural Health Mission was launched.

- a. 2000 **b. 2005** c. 2010 d. 2015

19. Identify the advantages of rural roads.

- a. Rural marketing b. Rural employment c. Rural development **d. All the above**

20. "An Indian farmer is born in debt, lives in debt, dies in debt and bequeaths debt"-who said this?

- a. Adam Smith b. Gandhi c. Amartya Sen **d. Sir Malcolm Darling**

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES

21. Define Rural Economy.

- ◆ Rural areas are geographical areas located outside towns and cities.
- ◆ Rural economy refers to village and rural community refers to people living in village.

22. What do you mean by Rural Development?

Rural development is a process of improving the rural areas, rural people and rural living.

23. Rural Poverty - Define.

The situation in which an individual fails to earn sufficient income to buy the basic minimum of subsistence.

- Poverty in India

24. Define Open Unemployment.

- ◆ Unemployed persons are identified as they remain without work.
- ◆ This type of unemployment is found among agricultural labors.

25. What is meant by Disguised Unemployment?

In rural areas many are employed below their productive capacity and even if they are withdrawn from work the output will not diminish.

26. Define Cottage Industry.

- ◆ It's generally associated with agriculture and provide both part-time and full time jobs in rural areas.
- ◆ Example: Pottery, Coir products

27. What do you mean by Micro Finance?

It is financial service that offers loans savings and insurance to entrepreneurs and small business owners who do not have access to traditional sources of capital like banks or investors.

28. State any two causes of housing problem in rural areas.

- ✿ Rapid adaptation of nuclear families.
- ✿ Lack of proper water supply
- ✿ Lack of good sanitation
- ✿ Lack of proper disposal of sewage.

29. Define Rural Electrification.

The main aims of rural electrification are to provide electricity to agricultural operations and to enhance agricultural productivity.

30. State any two factors hindering Rural Electrification in India.

- ✧ Lack of funds
- ✧ Interstate disputes
- ✧ Uneven terrain
- ✧ High transmission loss

III. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PARAGRAPH EACH**31. State the importance of Rural Development.**

- A major share of population contributes are very much supportive for the nation building activities.
- The rural economy supports the urban sectors
- Improvements in education health and sanitation in villages can help avoid many urban problems.
- Provide gainful employment in rural areas.
- Rural urban migration can be reduced.

32. Explain the causes for Rural Backwardness.

- ◆ The distribution of land is highly skewed in rural areas.
- ◆ Non-farm employment opportunities do not match the increasing labour force.
- ◆ Lack of public sector investment on human resource development.
- ◆ Low productivity of rural labour.

33. Enumerate the remedial measures to Rural Poverty.

- ◆* Creation of employment.
- ◆* To help the poor to become more productive.

- ☛ Necessary changes in the economic structure.
- ☛ Control the unproductive expenditures by villagers
- ☛ Effective implementation of assets.

34. What are the remedial measures for Rural Unemployment?

- ☞ To reduce the seasonal unemployment rural people should be encouraged to adopt subsidiary occupations.
- ☞ Rural works programme such as construction and maintenance of roads, digging of drains canals, etc.
- ☞ The increased cropping intensity creates additional demand for labour.
- ☞ To provide employment new industries should be set up in rural areas.

35. Write a note on Regional Rural Banks.

- Regional rural banks came into existence in 1975.
- At present there are 64 regional rural banks in India.
- To develop rural economy by providing credit.

36. Mention the features of SHGs.

- ❖ SHG is generally an economically homogeneous group formed through a process of self-selection based upon the affinity of its members.
- ❖ Most SHGs are women's groups with membership ranging between 10 and 20.
- ❖ SHGs have well-defined rules and by-laws, hold regular meetings and maintain records and savings and credit discipline.
- ❖ SHGs are self-managed institutions characterized by participatory and collective decision making.

37. List out the objectives of MUDRA Bank.

- ★ Regulate the lender and the borrower of microfinance.
- ★ Bring stability to the microfinance system.
- ★ Lend money to small business, retailers, self help groups and individuals
- ★ Introduce a system of performance rating.

IV. ANSWER FOR EACH QUESTION IN ABOUT A PAGE

38. 'The features of Rural Economy are peculiar'- Argue.

Meaning:

Rural economy refers to villages and rural community refers to people living in villages.

Features:

i). Dependence on Agriculture:

The rural economy depends much on nature and agricultural activities.

ii). life on Rural People:

Lifestyles in villages are very simple.

iii). Population Density:

Population density measured by number of persons living per sq.km is very low and houses are scattered in the entire villages.

iv). Poverty:

About 22 crores of people in rural areas are poor and live below the poverty line.

v). Employment:

Exists unemployment seasonal unemployment and under employment in rural areas.

39. Discuss the problems of Rural Economy.

- The problems related to individuals and their standard of living consists of illiteracy etc.
- Agricultural problems as one lakh excepted awareness, knowledge, skill and attitude unavailability of inputs and so on.
- Poor infrastructure facilities like water, electricity, transport, educational institutions communication, health and etc.
- The economic problems related to rural areas are inability to adopt high cost technology.
- Leadership among the hands of inactive and incompetent people, self interest of leaders.

40. Analyze the causes for Rural Indebtedness.**Meaning:**

Rural indebtedness refers to the situation of the rural people unable to repay the loan accumulated over a period.

Causes:**i). Poverty of Farmers:**

The vicious circle of poverty forces the farmers to borrow for consumption, cultivation and celebrations.

ii). Failure of Monsoon:

It is a curse to the farmers and they have to suffer due to the failure of nature.

iii). Litigation:

Due to land disputes litigation in the court compels them to borrow heavily.

iv). Money lenders and High rate of Interest:

The rate of interest charged by the local money lenders is very high and the compounding of interest leads to perpetuate indebtedness of the farmer.

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CHAPTER 11

TAMILNADU ECONOMY

I. Multiple Choice Questions

1. In health index, Tamil Nadu is ahead of

- a) Kerala b) Punjab c) Gujarat d) all the above

2. In sex ratio, Tamil Nadu ranks

- a) first b) second c) third d) fourth

3. Tamil Nadu is rich in

- a) Forest resource b) human resource c) mineral resource d) all the above

4. The main source of irrigation in Tamil Nadu is

- a) river b) tank c) well d) canals

5. Knitted garment production is concentrated in

- a) Coimbatore b) Tiruppur c) Erode d) Karur

6. Which of the following is wrongly matched?

- a) Gateway of Tamil Nadu – Thoothukudi b) Home textile city - Erode
c) Steel city – Salem d) Pump city – Coimbatore

7. Which of the following cities does not have international airport?

- a) Madurai b) Tiruchirappalli c) Paramakudi d) Coimbatore

8. TN tops in the production of the following crops except

- a) Banana b) Coconut c) plantation crops d) cardamom

9. Largest area of land is used in the cultivation of

- a) Paddy b) sugarcane c) Groundnut d) Coconut

10. In literacy rate, TN ranks

- a) second b) fourth c) sixth d) eighth

11. In investment proposals filed by MSMEs, TN ranks

- a) I b) II c) III d) IV

12. Which district in TN has the highest sex ratio?

- a) Nagapattinam b) Nilgiris c) Tiruchirappalli d) Thanjavur

13. Which district has the lowest child sex ratio?

- a) Madurai b) Theni c) Ariyalur d) Cuddalore

14. Which Union Territory has the highest sex ratio?

- a) Chandigarh b) Pondicherry c) Lakshadweep d) Andaman Nicobar

15. The largest contribution to GSDP in Tamil Nadu comes from

- a) agriculture b) industry c) mining d) services

16. In human development index, TN is ranked

- a) Second b) fourth c) sixth d) seventh

17. SPIC is located in

- a) Chennai b) Madurai c) Tuticorin d) Pudukkottai

18. The TICEL park is

- a) Rubber Park b) Textile park c) Food park d) Bio park

19. In India's total cement production, Tamil Nadu ranks

- a) third b) fourth c) first d) second

20. The Headquarters of Southern Railway is at

- a) Tiruchirappalli b) Chennai c) Madurai d) Coimbatore.

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES.

21. State any two districts with favorable sex ratio. Indicate the ratios.

S.No	District	Sex Ratio
1	Nilgiris	1041
2	Thanjavur	1031
3	Nagapatinam	1025
4	Tirunelveli	1024

Source: Census of India 2011

22. Define GSDP.

- ♣ It refers to the total money value of all the goods and service produced annually in the state.
- ♣ Tamil Nadu is the 2nd largest economy in India.

23. Mention any four food crops which are favorable to Tamil Nadu.

- ♣ Rice ♣ Corn ♣ Oil seeds
- ♣ Kambu ♣ Sugarcane

24. What are major ports in Tamil Nadu?

- ☉ Chennai ☉ Ennore ☉ Tuticorin

25. What is heritage tourism?

It is traveling to experience the places artifacts and activities that authentically represent the stories and people of the past and present.

26. What are the nuclear power plants in Tamil Nadu?

- ♣* Kalpakkam Nuclear power plant
- ♣* Koodankulam Nuclear Power plant

27. Define Micro industry

Enterprise with the capital investment not exceeding 25 lakhs is called micro industry.

- MSMED act 2006

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH.

28. Write a note on mineral resources in Tamil Nadu.

- ◆ It has a few mining projects based on titanium, Lignite, Magnesite, Graphite, Limestone, Granite and Bauxite.
- ◆ The first one is the Neyveli lignite corporation that has led development of large industrial complex around neyveli in cuddalore district.
- ◆ Magnesite mining is at Salem from which mining of bauxite ores are carried out at Yercard.

29. Explain GSDP in Tamil Nadu.

- ★ Tamil Nadu is a second largest economy in India with a GSDP of Rs. 207.8 billion in 2016-17.
- ★ The GSDP of Tamil nadu is equal to the GDP of Kuwait on nominal term and GDP of UAE on PPP terms.
- ★ The GSDP of Tamil Nadu is far higher compared to many countries as show below.
- ★ This is mainly due to population effect.

30. Describe development of textile industry in Tamil Nadu.

- ✿ Tamilnadu is the largest textile hub of India.
- ✿ Employment to an estimated 35 million people.
- ✿ The textile sector contributes to 14% of the manufacturing sector.

31. Compare productivity of any two food crops between Tamil Nadu and India.

- ☆ The government of Tamil Nadu lays emphasis on agricultural production and productivity.
- ☆ As a result, Tamilnadu tops in productivity in food crops as well as non-food crops among the states in India.

32. Explain the prospect for development of tourism.

- ◎ Tamil Nadu has since ancient past been a hub for tourism.
- ◎ In recent years the state has emerged as one of the leading tourist destinations for both domestic and foreign tourists.
- ◎ The state currently ranks the highest among Indian state with about 25 crore arrivals.

33. What are the renewable sources of power in Tamil Nadu?

i). Hydel Energy:

- There are about 20 hydro electric units in Tamilnadu.
- The prominent units are Hundah, Mettur, Periyar, Parson Valley.

ii). Solar Energy:

- ✧ Southern Tamil Nadu is considered as one of the most suitable region in the country for developing solar power projects.

iii). Wind Energy:

- ❁ Tamil nadu has the highest installed wind energy capacity in India.
- ❁ The state has very high quality of off shore wind energy.

34. Describe the performance of Tamil Nadu economy in health

- ✘ Tamilnadu has a three tier health infrastructure comprising hospitals, primary health centers, health units, community health centre and sub-centers.
- ✘ As of March 2015, the state had 34 districts hospitals, 229 sub divisional hospitals, 1254 primary health centers.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE**35. Describe the qualitative aspects of population.****i). Density**

- * The density of population which measures population per sq.km is 555 in 2011 against 480 in 2001.
- * Tamil Nadu ranks 12th in density among the Indian States and 382 is the national average.

ii). Sex ratio

- ♣ Balanced sex ratio implies improvement in quality of life of female population.
- ♣ The sex ratio in Tamil Nadu is nearing balance with 995 which is far better compared to most of the States and all India level.
- ♣ Tamil Nadu stands third next only to Kerala state and Puduchery Union Territory in sex ratio.

iii). Maternal Mortality Rate:

- ☼ Tamil Nadu has a good record of controlling MMR, ranking third with 79 against national average of 159 again half of the national average.

iv). Life Expectancy at birth:

- The average period that a person may expect to live is called life expectancy.
- However, life expectancy in India still falls short of most developed and developing nations.

v). Literacy:

- ❖ The literacy rate of Tamil Nadu is higher than in many States

36. Explain the various sources of energy in Tamil Nadu.

- Tamil Nadu tops in power generation among the southern states.
- Tamil Nadu is in the forefront of all other Indian States in installed capacity.
- There are about 20 hydro electric units in Tamil Nadu.

- The Kalpakkam Nuclear Power plant and the Koodankulam Nuclear power plant are the major nuclear energy plants for the energy grid.
- The thermal power plants are at Ennore, Mettur, Neyveli and Thoothukudi.
- Tamil Nadu has the higher installed wind energy capacity in India.

37. Explain the public transport system in Tamil Nadu.

a. Road

- There are 28 national highways in the State, covering a total distance of 5,036 km.
- It ranks second in India with a share of over 20% in total road projects under operation.

b. Rail

- Tamil Nadu has a well-developed rail network as part of Southern Railway, Headquartered at Chennai.
- Tamil Nadu has a total railway track length of 6,693 km and there are 690 railway stations in the State.
- Main rail junctions in the State include Chennai, Coimbatore, Erode, Madurai, Salem, Tiruchirapalli and Tirunelveli.

c. Air

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

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.
- ★ Ennore Port was recently converted from an intermediate port to a major port.

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CHAPTER 12 MATHEMATICAL METHODS FOR ECONOMICS

I. MULTIPLE CHOICE QUESTIONS:

1. Mathematical Economics is the integration of
 - a. Mathematics and Economics
 - b. Economics and Statistics
 - c. Economics and Equations
 - d. Graphs and Economics
2. The construction of demand line or supply line is the result of using
 - a. Matrices
 - b. Calculus
 - c. Algebra
 - d. Analytical Geometry
3. The first person used the mathematics in Economics is
 - a. Sir William Petty
 - b. Giovanni Ceva
 - c. Adam Smith
 - d. Irving Fisher
4. Function with single independent variable is known as
 - a. Multivariate Function
 - b. Bivariate Function
 - c. Univariate Function
 - d. Polynomial Function
5. A statement of equality between two quantities is called
 - a. Inequality
 - b. Equality
 - c. Equations
 - d. Functions
6. An incremental change in dependent variable with respect to change in independent variable is known as
 - a. Slope
 - b. Intercept
 - c. Variant
 - d. Constant
7. $(y - y_1) = m(x - x_1)$ gives the
 - a. Slope
 - b. Straight line
 - c. Constant
 - d. Curve
8. Suppose $D = 50 - 5P$. When D is zero then
 - a. P is 10
 - b. P is 20
 - c. P is 5
 - d. P is -10
9. Suppose $D = 150 - 50P$. Then, the slope is
 - a. -5
 - b. 50
 - c. 5
 - d. -50
10. Suppose determinant of a matrix 0, then the solution
 - a. Exists
 - b. Does not exist
 - c. is infinity
 - d. is zero
11. State of rest is a point termed as
 - a. Equilibrium
 - b. Non-Equilibrium
 - c. Minimum Point
 - d. Maximum Point
12. Differentiation of constant term gives
 - a. one
 - b. zero
 - c. infinity
 - d. non-infinity
13. Differentiation of x^n is
 - a. $nx(n-1)$
 - b. $n \times (n+1)$
 - c. zero
 - d. one
14. Fixed Cost is the -----term in cost function represented in mathematical form.
 - a. Middle
 - b. Price
 - c. Quantity
 - d. Constant

15. The first differentiation of Total Revenue function gives
 a. Average Revenue b. Profit c. Marginal Revenue d. Zero
16. The elasticity of demand is the ratio of
 a. Marginal demand function and Revenue function
 b. Marginal demand function to Average demand function
 c. Fixed and variable revenues
 d. Marginal Demand function and Total demand function
17. If $x+y = 5$ and $x-y = 3$ then, Value of x
 a. 4 b. 3 c. 16 d. 8
18. Integration is the reverse process of
 a. Difference b. Mixing c. Amalgamation d. Differentiation
19. Data processing is done by
 a. PC alone b. Calculator alone c. Both PC and Calculator d. Pen drive
20. The command Ctrl + M is applied for
 a. Saving b. Copying c. getting new slide d. deleting a slide

II. ANSWER THE FOLLOWING QUESTIONS IN ONE OR TWO SENTENCES:

II. Very Short Answer Questions:

21. If $62 = 34 + 4x$ what is x ?

Solution :

$$\begin{aligned} 62 &= 34 + 4x \\ 62 - 34 &= 4x \\ 28 &= 4x \\ x &= \frac{28}{4} \\ \therefore x &= 7 \end{aligned}$$

23. Find the average cost function where

$$TC = 60 + 10x + 15x^2.$$

[BE]

Solution :

$$TC = 60 + 10x + 15x^2$$

$$\text{Formula} = \frac{TC}{x}$$

$$\begin{aligned} \text{Average cost function} &= \frac{60}{x} + \frac{10x}{x} + \frac{15x^2}{x} \\ &= \frac{60}{x} + 10 + 15x \end{aligned}$$

22. Given the demand function $q = 150 - 3p$, derive a function for MR.

Solution :

$$\text{Demand function } q = 150 - 3p, \text{ MR} = ?$$

$$\begin{aligned} \frac{dq}{dp} &= -3 \\ \eta_d &= \frac{-p}{q} \frac{dq}{dp} = \frac{-p}{150-3p} (-3) \\ &= \frac{3p}{150-3p} \end{aligned}$$

$$\begin{aligned} MR &= p \left[1 - \frac{1}{\eta_d} \right] = p \left[1 - \frac{1}{\frac{3p}{150-3p}} \right] \\ &= p \left[1 - \frac{(150-3p)}{3p} \right] \\ &= p \left[\frac{3p-150+3p}{3p} \right] \\ &= p \left[\frac{6p-150}{3p} \right] \\ &= \frac{6}{3} [p-25] \\ &= 2[p-25] \end{aligned}$$

24. The demand function is given by $x=20 - 2p - p^2$ where p and x are the price and the quantity respectively. Find the elasticity of demand for $p = 2.5$

[Govt. MQP-2018]

Solution :

$$\eta_d = \frac{p}{x} \frac{dx}{dp}$$

$$\frac{dx}{dp} = -2 - 2p$$

$$\eta_d = \frac{-p}{20-2p-p^2} (-2-2p)$$

$$= \frac{2p(p+2)}{20-2p-p^2}$$

When $p = 2.5$

$$\eta_d = \frac{2(2.5)(1+2.5)}{20-2(2.5)-(2.5)^2}$$

$$= \frac{5(3.5)}{20-5-6.25}$$

$$= \frac{17.5}{15-6.25}$$

$$\eta_d = \frac{17.5}{8.75}$$

25. Suppose the price p and quantity q of a commodity are related by the equation $q = 30 - 4p - p^2$ find

- (i) e_d at $p = 2$ (ii) MR

Solution :

$$(i) \quad \frac{dq}{dp} = (-4 - 2p)$$

$$\eta_d = \frac{-p}{q} \left(\frac{dq}{dp} \right)$$

$$= \frac{-p}{30 - 4p - p^2} (-4 - 2p)$$

$$= \frac{4p + 2p^2}{30 - 4p - p^2}$$

Put $p = 2$,

$$= \frac{4(2) + 2(2)^2}{30 - 4(2) - 4} = \frac{8 + 8}{30 - 8 - 4}$$

$$= \frac{16}{18} = \frac{8}{9}$$

(ii) MR = ?

$$MR = \frac{dq}{dp} (-4 - 2p)$$

$$R = pq$$

$$= p(30 - 4p - p^2)$$

$$= 30p - 4p^2 - p^3$$

$$MR = \frac{dR}{dp}$$

$$= 30(1) - 4(2p) - 3(p)^2$$

$$= 30 - 8p - 3p^2$$

$$MR = 30 - 8p - 3p^2$$

26. What is the formula for elasticity of supply if you know the supply function? [BEQ]

Solution :

$$\text{Elasticity of supply} = \frac{p}{q} \frac{dq}{dp}$$

$P_s = X_0 P_0$ - integration of supply function within limited

$$= X_0 P_0 - \int_0^x g(x) dx$$

27. What are the Main menus of MS Word?

- Home menu
- Insert
- Page Layout
- Reference
- Review
- View

III. ANSWER THE FOLLOWING QUESTIONS IN ONE PARAGRAPH:

1. Illustrate the uses of Mathematical Methods in Economics.

- ☛ It helps to present the economic problems in a more precise form.
- ☛ It helps to explain economic concepts.
- ☛ It helps to use a large number of variables in economic analyses.

2. 29. Solve for x quantity demanded if $16x - 4 = 68 + 7x$ 3.

Solution :

$$16x - 4 = 68 + 7x$$

$$16x - 7x = 68 + 4$$

$$9x = 72$$

$$x = \frac{72}{9}$$

$$\therefore x = 8$$

30. A firm has the revenue function $R = 600q - 0.03q^2$ and the cost function is $C = 150q + 60,000$, where q is the number of units produced. Find AR, AC, MR and MC. [BEQ]

Solution :

$$MR = \text{Marginal Revenue} = \left(\frac{dR}{dq} \right)$$

$$R = 600q - 0.03q^2$$

$$R' = 600 - (0.03) 2(q) = 600 - 0.06q$$

$$AR = \frac{R}{q}$$

$$= \frac{600q - 0.03q^2}{q}$$

$$= \frac{600}{q} - \frac{0.03q^2}{q}$$

$$AR = 600 - 0.03q$$

$$\text{Average cost (AC)} = \frac{\text{Total cost}}{\text{output}}$$

$$= \frac{150q + 60000}{q}$$

$$AC = \frac{150}{q} + \frac{60000}{q}$$

$$AC = 150 + \frac{60000}{q}$$

$$\text{Marginal cost (MC)} = \frac{d}{dq} (C)$$

$$= \frac{d}{dq} (150q + 60000)$$

$$MC = 150$$

4. 31. Solve the following linear equations by using Cramer's rule.

$$\begin{aligned}x_1 - x_2 + x_3 &= 2; \\x_1 + x_2 - x_3 &= 0; \\-x_1 - x_2 - x_3 &= -6\end{aligned}$$

Solution :

$$\begin{aligned}x_1 - x_2 + x_3 &= 2; & (1+4-3) \\x_1 + x_2 - x_3 &= 0; \\-x_1 - x_2 - x_3 &= -6\end{aligned}$$

$$\begin{bmatrix} 1 & -1 & 1 \\ 1 & 1 & -1 \\ -1 & -1 & -1 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 2 \\ 0 \\ -6 \end{bmatrix}$$

$$AX = B$$

$$A = \begin{bmatrix} 1 & -1 & 1 \\ 1 & 1 & -1 \\ -1 & -1 & -1 \end{bmatrix}$$

$$\Delta = \begin{vmatrix} 1 & -1 & 1 \\ 1 & 1 & -1 \\ -1 & -1 & -1 \end{vmatrix}$$

$$= 1(-1-1) + 1(-1-1) + 1(-1+1)$$

$$= -2-2+0$$

$$\therefore \Delta = -4$$

5. 32. If a firm faces the total cost function $TC = 5 + x^2$ where x is output, what is TC when x is 10?

Solution :

$$\begin{aligned}TC &= 5 + (10)^2 \\ &= 5 + 100\end{aligned}$$

$$\therefore TC = 105$$

6. 33. If $TC = 2.5q^3 - 13q^2 + 50q + 12$ derive the M function and AC function.

Solution :

$$\frac{dc}{dq} = \text{M.C.}$$

$$\text{A.C} = \frac{\text{Total cost}}{\text{output}}$$

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

$$\text{M.C} = 7.5q^2 - 26q + 50$$

$$\text{A.C} = \frac{2.5q^3 - 13q^2 + 50q + 12}{q}$$

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

$$\therefore \text{A.C} = 2.5q^2 - 13q + 50 + \frac{12}{q}$$

7. What are the steps involved in executing a MS Excel Sheet?

- Plan the keystrokes needed to complete the tasks.
- Click tools
- Assign a name for the macro
- Assign a shortcut key for the macro
- Click OK
- Perform the steps needed to create your report
- Click on the stop button on the macro toolbar to stop recording and save the macro.

IV. ANSWER THE FOLLOWING QUESTIONS IN ABOUT A PAGE:

1. A Research scholar researching the market for fresh cow milk assumes that $Q_t = f(P_t, Y, A, N, P_c)$ where Q_t is the quantity of milk demanded, P_t is the price of fresh cow milk, Y is average household income, A is advertising expenditure on processed pocket milk, N is population and P_c is the price of processed pocket milk.

(a) What does $Q_t = f(P_t, Y, A, N, P_c)$ mean in words?

(b) Identify the independent variables.

(c) Make up a specific form for this function.

(Use your knowledge of Economics to deduce whether the coefficients of the different independent variables should be positive or negative.)

- a). i). Q_t is the functions of P_t, Y, A, N, P_c

ii). Other determinants of demands are,

Pt – Price of fresh cow milk. Y- Average household income

A- Advertising expenditure on processed pocket milk.

N – Population

Pc – Price of processed pocket milk.

b). i). Y and N are independent variables

ii). Pc – depending on Pt, A and N

iii). A is depending on N

c). When price of fresh cow milk increases quantity of milk demanded decreases.

When average household income increases and quantity of milk demanded is also increases.

2. 36. Calculate the elasticity of demand for the demand schedule by using differential calculus method

$P = 60 - 0.2Q$ where price is

(i) zero (ii) Rs. 20 (iii) Rs. 40.

Solution : [Govt. MQP-2018; HY-20]

Elasticity of demand

$$e_d = \frac{q}{p} \frac{dp}{dq}$$

$$p = 60 - 0.2q$$

$$\frac{dp}{dq} = -0.2$$

$$\frac{dp}{dq} = -0.2$$

(i) $q = 0$
 $p = 60 - 0.2(0) = 60 - 0$

$$e_d = \frac{0}{60} \times (-0.2)$$

$$e_d = 0$$

(ii) $q = 20$
 $p = 60 - 0.2(20)$

$$p = 60 - 4$$

$$p = 56$$

$$e_d = \frac{20}{56} \times (-0.2) = -\frac{4}{56}$$

$$e_d = 0.071$$

(iii) $q = 40$
 $p = 60 - 0.2(40)$

$$p = 60 - 8$$

$$p = 52$$

$$e_d = \frac{40}{52} \times -0.2 = -\frac{8}{52}$$

$$e_d = 0.153$$

37. The demand and supply functions are $P_d = 1600 - x^2$ and $P_s = 2x^2 + 400$ respectively. Find the consumer's surplus and producer's Surplus at equilibrium point. [BEQ]

Solution :

$$P_d = 1600 - x^2$$

$$P_s = 2x^2 + 400$$

$$P_d = P_s$$

$$1600 - x^2 = 2x^2 + 400$$

$$1600 - x^2 - 2x^2 - 400 = 0$$

$$-3x^2 + 1200 = 0$$

$$+3x^2 = +1200$$

$$x^2 = \frac{1200}{3}$$

$$x = \pm\sqrt{400}$$

$$x_0 = 20$$

$$q = \frac{60 - 10}{0.2} \times \frac{10}{10} = \frac{600}{2} = 300$$

$$q = 300$$

$$\eta_d = \frac{-p}{q} \cdot \frac{dq}{dp} = \frac{-60}{300} \times \frac{-1}{0.2}$$

$$= \frac{0}{60} = 0$$

$$\eta_d = 0$$

When P = 20

$$0.2q = 60 - 20$$

$$0.2q = 40$$

$$q = \frac{40}{0.2} \times \frac{10}{10} = \frac{400}{2}$$

$$q = 200$$

$$\eta_d = \frac{-p}{q} \cdot \frac{dq}{dp} = \frac{-20}{200} \cdot \frac{1}{0.2}$$

$$= \frac{20}{40} = \frac{1}{2} = 0.5$$

$$\eta_d = 0.5$$

When P = 40

$$0.2q = 60 - 40$$

$$0.2q = 20$$

$$q = \frac{20}{0.2} \times \frac{10}{10} = \frac{200}{2} = 100$$

$$q = 100$$

$$\eta_d = \frac{-p}{q} \cdot \frac{dq}{dp} = \frac{-40}{100} \cdot \frac{1}{0.2} = -\frac{40}{20}$$

$$\eta_d = 2$$

P	0	20	40
q	300	200	100
η_d	0	0.5	2

4. What are the ideas of information and communication technology used in economics?

- ◆ Information and Communication Technology (ICT) is the infrastructure that enables computing faster and accurate.
- ◆ The following table gives an idea of range of technologies that fall under the category of ICT.

S. No	Information	Technologies
1	Creation	Personal Computers, Digital Camera, Scanner, Smart Phone
2	Processing	Calculator, PC, Smart Phone
3	Storage	CD, DVD, Pen Drive, Microchip, Cloud
4	Display	PC, TV, Projector, Smart Phone
5	Transmission	Internet, Teleconference, Video conferencing, Mobile Technology, Radio
6	Exchange	E mail, Cell phone

@*@*@*@*@*@*

Important 2 marks

1. Define Micro economics

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