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Foundation → Intermediate → Final CA ↗

**CA FOUNDATION
ECONOMICS**

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**MESSAGE TO
STUDENTS**

Dear Students,

Welcome to the world of knowledge - J K Shah Classes.

Economics is a subject which gives ample opportunity to score marks and brace you to achieve desired results.

ABOUT THE BOOK

It gives us immense pleasure of presenting this thoroughly revised & updated study material of CA Foundation Economics. We are sure that this book will increase student access to a very high-quality learning material, maintaining highest standards of academic excellence.

**CONTENT OF
BOOK**

- 1. Exhaustive Theoretical Explanation:-**
All the chapters in this book are explained in detail conceptually which includes diagram and Numerical Formulae
- 2. Module (ICAI) MCQ:-**
All institute module MCQ's are covered with solution
- 3. Additional MCQ's:-**
Each Chapter contains additional classwork MCQ for practice.
- 4. Homework Section:-**
Again we have chapter wise Homework MCQ which are exclusive covering all the topic of each chapter.
- 5. One Mock Paper:-**
For you to solve with solutions
- 6. Two Module Test Paper:-**
We have added two model test papers 60 question each with solution for practice overall there are more than 500+ MCQ is this book.

CA FOUNDATION - ECONOMICS

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BUSINESS ECONOMICS

CONTENTS:

1

Introduction to Business Economics

- a) Definition, scope and nature of Economic
- b) Central problems of an economy and Production possibilities curve

2

Theory of Demand and supply

- a) Meaning and determinants of demand, Law of demand and elasticity of demand - price, income and cross elasticity, and Demand Forecasting
- b) Theory of consumer's behavior –Marshallian approach and indifference curve approach
- c) Meaning and determinants of supply, Law of supply and Elasticity of supply

3

Theory of Production and Cost

- a) Meaning and Factor of Production
- b) Laws of Production – The Law of variable proportions and Law of returns to scale
- c) Concepts of cost – Short-run and long -run costs, Average and marginal costs, Total, fixed and variable costs.

4

Price Determination in Different Markets

- a) Various forms of markets – Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly
- b) Price determination in these markets

5

Business Cycles

- a) Meaning
- b) Phases
- c) Features
- d) Causes behind these Cycles

CHAPTER 1**NATURE AND SCOPE OF
BUSINESS ECONOMICS** **1. INTRODUCTION**

General definition of the study of Economics is individual and social choice in the face of scarcity. The law of scarcity implies that consumer's wants will never be completely satisfied. Economic problems arise due to two reasons:

- a) Unlimited wants
- b) Scarce resources

The term '**Economics**' owes its origin to the Greek word 'Oikonomia' meaning 'household' Management

- Economics is a science that studies those activities, which are, concerned with the efficient consumption, production, exchange and distribution of scarce means which have alternative uses.
- The purpose of economics is to achieve maximum satisfaction of wants and increasing of welfare as well as economic growth.

2. Meaning of Business Economics

- Business Economics is also referred to as **Managerial Economics**. It is application of economic theory and methodology.
- Every business involves **decision – making** as survival and success depends on sound decisions.
- Decision making means the process of –
 1. evaluating various course of action,
 2. making rational judgment on the basis of available information, and
 3. selecting i.e. making choice of a suitable alternative by decision maker.

- Decision making is not simple and straight forward. It has become very complex due to ever changing business environment, growth competition, large scale production, big size of business houses, complex laws, cost awareness, etc. in other words the economic environment in which the firm operates is very complex and dynamic.
- Business Economics provides a scientific base to the professional management of a business activity. It provides tools like budgeting, market analysis, cost-benefit analysis, etc. which can be scientifically applied to take sound business decision. Thus, Business Economics is a sub-branch of Economic which aims at the scientific application of economic knowledge, logic, theories and tools to take rational business decision. Thus it is an APPLIED ECONOMICS.
- Business Economics is closely connected with both viz., Micro-Economic Theory as well as Macro- Economic Theory. It is also useful to the manager of 'not-for-profit' organizations.

3. DEFINITIONS OF BUSINESS ECONOMICS

- "Business Economics in terms of the use of economic analysis in the formulation of business policies. Business Economics is essentially a component of Applied Economics as it includes application of selected quantitative techniques such as linear programming regression analysis, capital budgeting, break-even analysis and cost analysis." (Joel Dean)
- "Business Economics is concerned with the application of economic laws, principles and methodologies to the managerial decision making process within a business firm under the condition of risk and uncertainties." (Evan Douglas)

4. TYPE OF ECONOMICS

1. **Microeconomics:** Microeconomics is the study of particular firm, particular household. Individual price, wages, income, industry and particular commodity. Thus, it is a study of a particular unit rather than all the units combined. Microeconomics theory deals with the problem of allocation of resources. Under microeconomics, we study:
 - a) Theory of product pricing/price theory

- b) Theory of consumer behavior
- c) Theory of factor pricing
- d) Study of a firm

2. **Macroeconomics:** Macroeconomics theory is that part of economics which studies the overall average and aggregates of the system, such as total production, total consumption, total saving and total investment. Thus, macroeconomics is the study of overall phenomena as a whole rather than its individual parts. Macroeconomics deals with growth and development of resources. Under macroeconomics, we study:

- a) Theory of national income, employment and money
- b) Theory of general price level
- c) Theory of economic growth and development
- d) Theory of international trade

5. **Difference Between Microeconomics and Macroeconomics**

Basis	Microeconomics	Macroeconomics
Study of	It is study of individual economics units.	It is study of the economics as a whole and its aggregates.
Deal with	It deals with individual income, individual prices and individual output, etc.	It deals with national income, price level, national output, etc.
Tools	Its main tools are demand and supply of a particular commodity.	Its main tools are aggregate demand and aggregate supply of the economy as a whole.
Central problem	Its central is price determination of commodities of factor of production.	Its central problem is determination of level of income and employment.
Prices	Prices determined under this are called 'relative prices.'	Prices determined under this are called 'absolute price.'

Type of analysis	It is partial equilibrium analysis.	It is general equilibrium analysis.
Scope	Its scope is limited	It is wider in scope.
Example	(a) Lock out in TELCO. (b) Finding the causes of failure of X and CO.	(a) Per capita income. (b) Corporate income tax. (c) Economy growth.

6. Nature of Business Economics:

- Business Economics is a Science:** Science is a systematized body of knowledge which trace the cause and effect relationships. Business Economics uses the tools of Mathematics, Statistics and Econometrics with economic theory to take decision and frame strategies. Thus, it makes use of scientific methods.
- Based on Micro- Economics:** As Business Economics is concerned more with the decision making problem of a particular business establishment. Micro level approach suits is more. Thus, Business Economics largely depends on the techniques of Micro- Economics.
- Incorporates elements of Marco Analysis:** A business unit is affected by external environment of the economy in which it operates. A business is affected by general price level, level of employment, govt. policies related to taxes, interest rates, industries, exchanges rates, etc. A business manager should consider such macro-economic variable which may affect present or future business environment.
- Business Economics is an Art:** It is related with practical application of laws and principles to achieve the objectives.
- Use of Theory of Market & Private Enterprise:** It uses the theory of market and resource allocation in a capitalist economy.
- Pragmatic approach:** Micro- Economics is purely theoretical while, Business Economics is practical in its approach.

7. **Inter-disciplinary in nature:** It incorporates tools from other disciplines like Mathematics, Statistic, Econometrics, Management Theory, Accounting, etc.
8. **Normative in Nature:** Economic theory has been developed along two lines- POSITIVE and NORMATIVE.

7.

Positive science	Normative science
1. Robbins	Alfred Marshall
2. What it is	What should be or ought to be
3. Based on analysis, facts, realistic	Based on ethics
4. Will not pass value Judgement (not give Solution)	Will pass value Judgement (gives solution)
5. e.g. India is an over populated country	Family planning should be started to control population

8. A positive science or pure science deal with the things as they are and their **CAUSE** and **EFFECTS** only. It states 'what is'? It is DESCRIPTIVE in nature. It does not pass any moral or value judgments.

A normative science deals with 'what ought to be' or 'what should be'. It passes value judgments and states what is right and what is wrong/ it is PRESCRIPTIVE in nature as it offers suggestions to solve problems. Normative science is more practical, realistic and useful science.

9. **Scope of Business Economics**

- The scope of Business Economics is wide. Economics theories can be directly applied to two types of business issues namely –
 - Micro –economics is applied to operational or internal issues of a firm.
 - Macro – economics is applied to environment or external issues on which the firm has no control.

1. Micro- economics applied to operational or internal; issues.

Issues like choice of business size of business, plant layout, technology, product decision, pricing, sales promotion, etc. are dealt by Micro- economic theories. It covers –

- Demand analysis and forecasting
- Production and Cost Analysis
- Inventory Management
- Market structure and Pricing Analysis
- Resource Allocation
- Theory of Capital and Investment Decisions
- Profitability Analysis
- Risk and Uncertainty Analysis.

2. Macro – economics applied to environment or external issues.

The major economic factors relate to ----

- the type of economic system
- stage of business cycles
- the general trends in national income, employment, price, saving and investment.
- Government's economic policies
- Working of financial sector and capital market
- Socio-economic organizations
- Social and political environment.

These external issues has to be considered by a firm in business decision and frame its policies accordingly to minimize their adverse effects.

10. Central Economic Problem (scarcity)

1. What to produce (capital goods, consumer goods)
2. How to produce (capital use capital, labour use labourer)
3. For whom to produce (poor or rich, in India it gives to poor for upliftment)
4. What provision should be made for economic growth

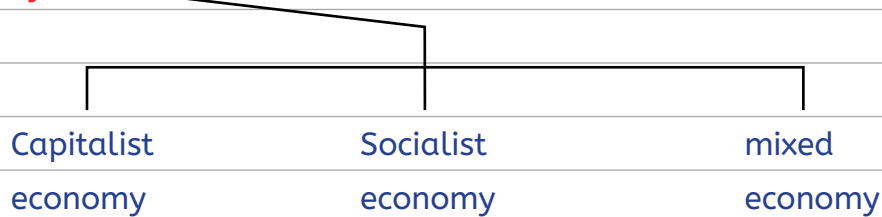
When are goods produced

&

How much to produce

} not an economic problem

11. Economic System



1. Capitalist Economy

Features

1. Means of production are privately owned
2. Freedom of enterprise & freedom of price choice
3. Allocation of resources is as per consumer preference
4. Entrepreneur are guided by profit motive
5. Competition exist among producers
6. Capitalist economy use price mechanism as a principle motive

Merits

1. Greater efficiency & incentive to work hard
2. Faster economic growth possible
3. Consumer are benefitted because of good quality product
4. Higher standard of living
5. Innovation & technological progress

Demerits

1. Uneven distribution of Income & wealth
2. Income inequality & social injustice
3. Exploitation of consumer and labourer
4. Economic instability which may lead to depression
5. Creation of monopoly power

Other names for capitalist economy

1. Market economy
2. Market system
3. Free markets
4. Market mechanism
5. Price mechanism

2. Socialist Economy

Features

1. It is known as command economy, controlled economy, centrally planned economy
2. Collective ownership of means of production
3. Promote welfare of people
4. Lack of competition

Merits

1. Balance economic development
2. No class conflict
3. Economic Fluctuation & unemployment are minimized
4. Right to minimum work
5. No exploitation of consumer & worker

Demerits

1. Corruption, Red tapism, results into inefficiency
2. No freedom of choice
3. Price are administered by state

3. Mixed Economy

Features

1. Combination of both capitalism & socialism
2. Freedom to join any occupation trade or business
3. People are free to consume goods of their choice

Merits

1. Freedom of occupation
2. Encourages enterprise & Risk taking
3. Development of technology through R & D
4. Economic & social equality possible

Demerits

1. Poor implementation of plans
2. High level of taxes
3. Good level of corruption
4. Wastage of Resources

MODULE MULTIPLE CHOICE QUESTIONS

1. **Economist regard decision making as important because:**
 - a. The resources required to satisfy our unlimited wants and needs are finite, or scarce.
 - b. It is crucial to understand how we can best allocate our scarce resources to satisfy society's unlimited wants and needs.
 - c. Resources have alternative uses.
 - d. All of the above.

2. **Business economics is**
 - a. Abstract and applies the tools of microeconomics.
 - b. Involves practical application of economic theory in business decision making.
 - c. Incorporates tools from multiple disciplines.
 - d. (b) and (c) above

3. **In Economics, we use the terms scarcity to mean;**
 - a. Absolute scarcity and lack of resources in less developed countries.
 - b. Relative scarcity i.e. scarcity in relation to the wants of the society.
 - c. Scarcity during times of business failure and natural calamities.
 - d. Scarcity caused an account of excessive consumption by the rich.

4. **What implication(s) does resource scarcity have for the satisfaction of wants?**
 - a. Not all wants can be satisfied.
 - b. We will never be faced with the need to make choice.
 - c. We must develop ways to decrease our individual wants.
 - d. The discovery of new natural resources is necessary to increase our ability to satisfy wants.

5. **Which of the following is a normative statement?**
 - a. Planned economies allocate resources via government department.
 - b. Most transitional economies have experienced problem of falling output and rising price over the past decades.
 - c. There is a greater degree of consumer sovereignty in market economies than planned economies.
 - d. Reducing inequality should be a major priority of mixed economies.

6. In every economic system, scarcity imposes limitations on?
- Households, business firms, governments, and the nation as a whole.
 - Households and business firms, but not the government.
 - Local and state governments, but not the federal government.
 - Households and governments, but not the business firm.
7. Macro- economics are also called?
- Applied
 - Aggregate
 - Experimental
 - None of the above
8. An example of 'positive' economic analysis would be:
- An analysis of the relationship between the price of food and the quantity purchased.
 - Determining how much income each person should be guaranteed.
 - Determining the 'fair' price for the food.
 - Deciding how to distribute the output of the economy.
9. A study of how increase in the corporate income tax rate will affect the national unemployment rate is an example of?
- Macro economics
 - Descriptive Economics.
 - Micro-economics.
 - Normative economics
10. Which of the following does not suggest a macro approach for India?
- Determining the GNP of India.
 - Finding the cause of failure of ABC Ltd.
 - Identifying the causes of inflation in India.
 - Analyse the causes of failure of industry in providing large scale employment.

11. Ram : my corn harvest this year is poor.?

Krishan : Don't worry. Price increases will compensate for the fall in quantity supplied.

Vinod : Climate affects crop yields. Some years are bad, others are good.

Madhu : The Government ought to guarantee that our income will not fall.

In this conversation, the normative statement is made by

- a. Ram b. Krishan
- c. Vinod d. Madhu

12. Consider the following and decide which, if any, economy is without scarcity?

- a. The pre-independent Indian economy, where most people were farmers.
- b. A mythical economy where everybody is a billionaire.
- c. Any economy where income is distributed equally among its people.
- d. None of the above

13. Which of the following is not a subject matter of Micro-economies.?

- a. The price of mangoes.
- b. The cost of producing a fire truck for the fire department of Delhi, India.
- c. The quantity of mangoes produced for the mangoes market.
- d. The national economy's annual rate of growth.

14. The branch of economic theory that deals with the problem of allocation of resources is

- a. Micro-Economic theory
- b. Macro-Economic theory
- c. Econometrics
- d. None of the above

15. Which of the following is not a subject matter of Business-economies?

- a. Should our firm be in this business?
- b. How much should be produced and at price should be kept?
- c. How will the product be placed in the market?
- d. How should we decrease unemployment in the economy?

16. Which of the following is a normative economic statement?
- Unemployment rate decrease with industrialization
 - Economics is a social science that studies human behaviour
 - The minimum wage should be raised to Rs. 200/- per day.
 - India spends a huge amount of money on national defense.
17. Which of the following would be considered a topic of study in Macroeconomics?
- The effect of increase in wages on the profitability of cotton industry.
 - The effect of steel prices when more steel is imported.
 - The effect of an increasing inflation rate on living standards of people in India.
 - The effect of an increase in the price of coffee on the quantity of tea consumed.
18. The difference between positive and normative Economics is:
- Positive Economics explains the performance of the economy while normative Economics finds out the reasons for poor performance.
 - Positive Economics describes the facts of the economy while normative Economics involves evaluating whether some of these are good or bad for the welfare of the people.
 - Positive Economics describes the facts of the economy while positive Economics involves evaluating whether some of these are good or bad for the welfare of the people.
 - Positive economics prescribes while normative Economics describes.
19. Which of the following is not within the scope of Business Economics?
- Capital Budgeting
 - Risk analysis
 - Business cycles
 - Accounting Standards
20. Which of the following statement is incorrect?
- Business economics is normative in nature.
 - Business Economics has a close connection with statistics.
 - Business Economist need not worry about macro variables.
 - Business Economics is also called Managerial Economics

21. Economic goods are considered scarce resources because they
- Cannot be increased in quantity.
 - Do not exist in adequate quantity to satisfy the requirements of the society.
 - are of primary importance in satisfying social requirements.
 - are limited to man made goods.
22. In a free market economy the allocation of resources is determined by
- Voting done by the consumers
 - A central planning authority
 - Consumer preference
 - The level of profits of firms
23. A capitalist economy uses _____ as the principal means of allocation resources.
- a. Demand b. Supply c. efficiency d. prices
24. Which of the following is considered as a disadvantage of allocating resources using the market system?
- Income will tend to be unevenly distributed
 - People do not get goods of their choice.
 - Men of initiative and enterprise are not rewarded.
 - Profits will tend to be low.
25. Which of the following statements does not apply to a market economy?
- Firms decide whom to hire and what to produce.
 - Firms aim at maximizing profits.
 - Households decide which firms to work for and what to buy with their incomes.
 - Government policies are the primary forces that guide the decisions of firms and households.
26. In a mixed economy
- All economic decisions are taken by the central authority.
 - All economic decisions are taken by private entrepreneurs.
 - Economic decisions are partly taken by the state and partly by the private entrepreneurs.
 - None of the above

27. The central problem in economics is that of
- Comparing the success of command versus market economies.
 - Guaranteeing the production occurs in the most efficient manners.
 - Guaranteeing a minimum level of income for every citizen.
 - Allocating scarce resources in such a manner that society's unlimited needs or wants are satisfied in the best possible manner.
28. Capital intensive technique would get chosen in a
- Labour surplus economy where the relative price of capital is lower.
 - Capital surplus economy where the relative price of capital is lower.
 - Developed economy where technology is better.
 - Developing economy where technology is poor.
29. Which of the following is not one of the four central questions that the study of economics is supported to answer?
- Who produce what?
 - When are goods produced?
 - Who consume what?
 - How are goods produced?
30. Large production of _____ goods would lead to higher production in future?
- | | |
|-----------------------|------------------|
| a. Consumer goods | b. Capital goods |
| c. Agricultural goods | d. Public goods |
31. The economic system in which all the means of production are owned and controlled by private individuals for profit.
- | | |
|------------------|---------------|
| a. Socialism | b. Capitalism |
| c. Mixed economy | d. Communism |
32. Macro Economics is the study of _____ -
- All aspects of scarcity
 - The national economy and the global economy as a whole.
 - Big business
 - The decisions of individual businesses and people.

33. Freedom of choice is the advantage of

- a. Socialism
- b. Capitalism
- c. Communism
- d. None of the above

34. Exploitation and inequality are minimal under:

- a. Socialism
- b. Capitalism
- c. Mixed economy
- d. None of the above

35. Administered price refer to:

- a. Price determined by the forces of demand and supply.
- b. Prices determined by sellers in the market
- c. Prices determined by an external authority which is usually the government
- d. None of the above

ANSWERS:

1	d	2	d	3	b	4	a	5	d	6	a
7	b	8	a	9	a	10	b	11	d	12	d
13	d	14	a	15	d	16	c	17	c	18	b
19	d	20	c	21	b	22	c	23	d	24	a
25	d	26	c	27	d	28	b	29	b	30	b
31	b	32	b	33	b	34	a	35	c		

ADDITIONAL MCQ'S FOR PRACTICE

1. The meaning of the word “economic” is most closely connected with the word _____.
a. Extravagant b. Scarce c. Unlimited d. Restrictive

2. In economics, ‘the central economic problem’ means _____.
a. consumers do not have as much money as they would wish
b. there will always be a certain level of unemployment
c. resource are not always allocated in an optimum way
d. output is restricted to the limited availability of resources

3. Which of the following suggests a micro approach for India?
a. identifying the cause of large scale unemployment in India
b. input output analysis for the economy
c. finding causes of high turnover in ABC ltd
d. analysing distribution of coal in the country

4. State whether Economics is _____.
a. a positive science only
b. neither a positive nor normative science
c. a science but not art
d. a science or an art depending on who uses economics and for what purpose

5. State which of the following refers to the macro approach from a national angle
a. unemployment among the educated people in India
b. profitability ratio of bharat heavy electricals limited
c. turnover ratio in Telco
d. none of the above

6. _____ Economic explains economic phenomena according to their causes and effects
a. positive b. normative
c. empirical d. applied

7. State interference is maximum in _____
- a. mixed economy
 - b. socialist economy
 - c. capitalist economy
 - d. none of the above
8. Scarcity can be avoided by making _____
- a. needs unlimited
 - b. wants unlimited
 - c. resource limited
 - d. wants and needs limited
9. Every economy is characterized by _____
- a. unlimited wants and needs
 - b. no energy resources
 - c. unlimited material resources
 - d. abundant productive labour
10. Economics who are concerned about the behavior of individual households, firms and industries are studying _____
- a. microeconomics
 - b. macroeconomics
 - c. nanoeconomics
 - d. neo economics
11. Reasoning proceeds from particular to general under _____
- a. deductive method
 - b. inductive method
 - c. conclusive method
 - d. none of the above
12. A normative economics statement is _____
- a. the federal minimum wages should be raised to \$4.50 per hour
 - b. economic is a social science that studies human behavior
 - c. economics is not a social science that studies human behavior
 - d. the united states spends a \$ 1 trillion on national defence
13. Which one of the following is NOT a feature of mixed economy?
- a. market forces deciding investment and consumption
 - b. reservation of certain areas for public sector investment
 - c. emphasis on social legislation
 - d. strong anti-monopoly legislation
14. Opportunity costs are result of _____
- a. scarcity
 - b. overproduction
 - c. technology obsolescence
 - d. abundance of resources

15. The aim of an entrepreneur is to earn as much profit as possible. The entrepreneur belongs to _____
- a. socialist economy b. capitalist economy
c. mixed economy d. all of the above
16. In which type of economy do consumers and producers make their choices based on the market forces of demand and supply?
- a. open economy b. controlled economy
c. command economy d. market economy
17. Monopoly of state on production and investment is a feature of _____
- a. mixed economy b. socialist economy
c. capitalist economy d. none of the above
18. _____ is also known as price theory
- a. microeconomics b. macroeconomics
c. both of above d. none of above
19. Which of the following statements regarding market economy is not true?
- a. price plays a major role in a market economy
b. the government controls production and distribution of goods
c. consumers choose the goods they want
d. efficiency is achieved through the profit motive

ADDITIONAL MCQ'S BY ICAI

1. Scarcity definition of Economics is given by –
 - (a) Alfred Marshall
 - (b) Samuelson
 - (c) Robinson
 - (d) Adam Smith

2. The definition “Science which deals with wealth of Nation” was given by:
 - (a) Alfred Marshall
 - (b) A C Pigou
 - (c) Adam Smith
 - (d) J B Say

3. Which of the following is not of the features of capitalist economy?
 - (a) Right of private property
 - (b) Freedom of choice by the consumers
 - (c) No profit, No Loss motive.
 - (d) Competition

4. There is need of economic study, because –
 - (a) The resources are limited
 - (b) The wants are unlimited
 - (c) The resources are unlimited
 - (d) Both a and b

5. The benefit of economic study is –
 - (a) It ensure that all problems will be appropriately tackled
 - (b) It helps in identifying problems
 - (c) It enable to examine a problem in its right perspective
 - (d) It gives exact solutions to every problem

6. The managerial economics –
 - (a) Is Applied Economics that fills the gap between economic theory and business practice
 - (b) It is a theory concept
 - (c) Trains managers how to behave in recession
 - (d) Provides the tools which explain various concepts.

7. Which of the following statements is correct?
- (a) Micro economics is important for study of a particular household and a particular firm
 - (b) Macro economics is important for study of economic conditions of a country
 - (c) None of the above
 - (d) Both a and b
8. Mr. Satish hired a business consultant to guide him for growth of his business. The consultant visited his factory and suggested some changes with respect to staff appointment, loan availability and so on. Which approach is that consultant using?
- (a) Micro economics
 - (b) Macro economics
 - (c) None of the above
 - (d) Both a and b
9. Profit motive is a merit of
- (a) Socialism
 - (b) Capitalism
 - (c) Mixed economy
 - (d) None of the above
10. _____ is also called as command economy
- (a) Socialist
 - (b) Capitalist
 - (c) Mixed economy
 - (d) None of the above

Answers:

1	2	3	4	5	6	7	8	9	10
(c)	(c)	(c)	(d)	(c)	(a)	(d)	(a)	(b)	(a)

CHAPTER 2**THEORY OF DEMAND AND
SUPPLY** **1. Law of Demand and Elasticity of Demand****Meaning of Demand**

- In ordinary speech, the term demand is many times confused with 'desire' or 'want'.
- Desire is only a wish to have anything.
- In economics demand means more than mere desire.
- Demand in economics means an effective desire for a commodity i.e. desire backed by the 'ability to pay' and 'willingness to pay' for it.
- Thus, demand refers to the quantity of a goods or service that consumers are willing and able to purchase at different prices during a period of time.
 1. Demand is always with reference to a PRICE.
 2. Demand is to be referred to IN A GIVEN PERIOD OF TIME.
 3. Consumer must have necessary purchasing power to back his desire for the commodity.
 4. Consumer must also be ready to exchange his money for the commodity he desires
- E.g. Mr. A's demand for sugar at Rs. 15 per kgs. Per week.

 **2. What Determines Demand? / Factors Affecting Demand:**

$$D = f (P, Pr, Y, T, E, O)$$

1. Price of the Commodity (P): (ceteris paribus) Other things being equal, demand of a commodity is inversely related to its price because when price increases then demand decreases and when price decreases then demand increases.

2. Price of Related Commodities (Pr): Related commodities are of two types.
- Complementary goods: Complementary goods are those goods, which are consumed together or simultaneously, example, tea and sugar, automobiles and petrol, pen and ink. There is an inverse relation between change in price of one complement and demand of other complementary good. Other things being equal, a fall in the price of one will cause the demand of other to rise and vice versa.
 - Substitutes or Competing goods: Substitutes are those goods which can be used in place of one another, example, tea and coffee, ink pen and ball pen. There is positive relation between change in price of one substitute and demand of other substitute good, i.e., a fall in price of one leads to a fall in the quantity demanded of its substitute and vice versa.

3. Income of the Household (Y):

- Other things being, in case of Normal/Luxury goods, demand for goods increases with increases in household's income and vice versa. So, there is positive relation.
- In case of Inferior goods, increase in income decrease the quantity demanded. So, there is inverse relation.
- In case of Necessaries as the income of household increases, the demand for necessities also increases in the beginning and becomes income inelastic (constant) thereafter.

4. Taste and Preference of Consumers (T):

A positive change in the taste and preference shall lead to an increase in demand and vice versa. Fashion can also demand, and goods which are more in fashion command higher demand than goods which are out of fashion. 'Demonstration effect' plays also an important role in affecting demand for a product.

5. Future Expectations about Price (E) :

If there is future expectation about rise in price than at present, demand rises, and if there is future expectation about fall in price then at present, demand falls. For example, in share market, it happen.

6. Other Factor (O):

- a. Size of population: Generally, larger the size of population of a country, more will be the demand for commodities and vice versa.
- b. Composition of population: If the number of children is large, demand for toys and biscuits will be high; similarly, if there are more old people, goods such as sticks and artificial teeth, etc., will be in more demand.
- c. Distribution of income: While equitable distribution of the income in the community leads to increase in consumption, so APC (Average Propensity to Consume) will rise; an unequal distribution of income brings a fall in the quantity demanded, so consumption decreases and so APC will fall.

Note: 'Quantity supplied' and 'factor price' do not determine demand.



3. The Law of Demand

- The Law of demand expresses the nature of functional relationship between the price of a commodity and its quantity demanded.
- It simply states that demand varies inversely to the changes in price i.e. demand for a commodity expands when price falls and contracts when price rises.
- "Law of Demand states that people will buy more at lower prices and buy less at higher prices, other things remaining the same." (Prof. Samuelson)
- It is assumed that other determinants of demand are constant and **ONLY PRICE IS THE VARIABLE AND INFLUENCING FACTOR.**
- Thus, the law of demand is based on the following main assumptions: -
 1. Consumers income remain unchanged.
 2. Taste and preference of consumers remain unchanged.
 3. Price of substitute goods and complement goods remain unchanged.
 4. There are no expectations of future changes in the price of the commodity.
 5. There is no change in the fashion of the commodity etc.

- The law can be explained with the help of a demand schedule and a corresponding demand curve.
- Demand schedule is a table or a chart which shows the different quantities of commodity demanded at different prices in a given period of time.
- Demand schedule can be Individual Demand Schedule or Market Demand Schedule.



4. Individual Demand Schedule

Individual Demand Schedule is a table showing different quantities of commodity that ONE PARTICULAR CONSUMER is willing to buy at different level of price, during a given period of time.

Table 1: Demand Scheduled of an Individual Buyer

Price of Sugar Rs. Per Kg.	Quantity Demanded Kgs. Per month
1	5
2	4
3	3
4	2
5	1



Market Demand Schedule

- Market Demand Schedule is a table showing different quantities of a commodity that ALL THE CONSUMERS are willing to buy at different prices, during a given period of time.

Table 2: Market Demand Schedule

Price of sugar Rs. Per kg.	Quantity Demanded p.m. kgs.		Market Demand A + B
	Consumer A	Consumer B	
1	5	6	$5 + 6 = 11$
2	4	5	$4 + 5 = 9$
3	3	4	$3 + 4 = 7$
4	2	3	$2 + 3 = 5$
5	1	2	$1 + 2 = 3$

(Assumption: There are only 2 buyer in the market)

- Both individual and market schedules denotes an INVERSE functional relationship between price and quantity demanded. In other words, when price rises demand tends to fall and vice versa.



5. RATIONAL FOR THE LAW OF DEMAND:

WHY DOES DEMAND CURVE SLOPE DOWNWARDS? $PE = SE + IE$

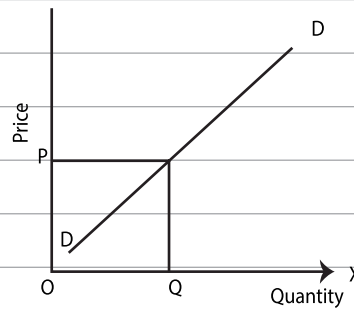
1. **Substitution Effect:** When the price of a commodity falls, it becomes relatively cheaper than other substitute commodities. This induces the consumer to substitute the commodity whose price has fallen for substitute commodities, which have now become relatively expensive. As a result of this substitution effect, the quantity demanded of the commodity, whose price has fallen, rises.
2. **Income Effect:** When the price of a commodity falls, the consumer can buy more quantity of the commodity with his given income. As a result of a fall in price of the commodity, consumer's real income or purchasing power increases. This increase the consumer to buy more of same commodity. This is called income effect. Thus,
Price Effect (PE) = Substitution Effect (SE) + Income Effect (IE)
3. **Number of Consumers:** When price of a commodity is relatively high, only few consumers can afford to buy it, and when its price falls, more numbers of consumers would start buying it because some of those who previously could not afford to buy may now afford to buy it. Thus, when the price of a commodity falls, the number of its consumer's increases and this also tends to raise the market demand for the commodity.
4. **Law of Diminishing Marginal Utility (Law of DMU):** A consumer is in equilibrium (i.e. maximizes his satisfaction) when the marginal utility of the commodity and its price equalize. According to Marshall, the consumer has diminishing utility for each additional unit of a commodity and therefore, he will be willing to pay only less for each additional unit.



6. EXCEPTIONS TO THE LAW OF DEMAND

Exception means law of demand does not apply, and if law of demand does not apply, then at higher price demand will be higher and at lower price demand will be lower.

In this case, direct relation between price and demand is found and slope of demand curve will be positive.



In the above figure, there is positive relation between demand and price.

- 1. Conspicuous Goods:** Some consumers measure the utility of a commodity by its price, i.e., if the commodity is expensive, they think that it has got more utility. As such, they buy less of this commodity at low price and more of it at high price. This concept of 'Conspicuous Consumption' is given by the Veblen and it is called Veblen effect or prestigious goods effect. Diamonds are often given as an example of this case. The higher the price of diamonds, higher is the prestige value attached to them, and hence, higher is the demand for them.
- 2. Giffen Goods:** 'Giffen goods' are those goods, which are considered inferior by consumers, and examples of such are low quality of rice and wheat. Sir Robert Giffen found that when price of bread increased, the British workers purchased more bread not less of it. This was something against the law of demand. Why did this happen? The reason given for this that when the price of bread went up, it caused such a large decline in the purchasing power of the poor people that they were forced to cut down the consumption of meat and other more expensive foods. Since bread, even when its price was higher than before was still the cheapest food article, people consumed more of it and not less when its price went up. Such goods which exhibit direct price- demand relationship are called Giffen goods. In case of a Giffen good, demand curve will upward sloping to the right.
- 3. Conspicuous Necessities:** The demand for certain goods is effected by the demonstration effect of the consumption pattern of a social group. These goods, due to their constant usage, have become necessities of life. For example, the price

of television sets, refrigerators, coolers, cooking gas, etc., have been continuously rising, but their demand does not fall.

4. **Future Expectations about Prices:** It has been observed that when price are rising household expecting that the price in the future will be still higher, tend to buy larger quantities of commodities. For example, when there is an expectation that price of share would rise in future, then demand for the same rises at present.
5. **Irrational and Impulsive Purchases:** Impulsive purchases means 'purchases by impression'. At times, consumers tends to make impulsive (without any calculations about price and usefulness of the product) purchases, the law of demand fails.
6. **Demand for Necessaries:** In case of necessaries, people have to consume the minimum quantity, whatever is the price.
7. **Speculative Goods:** The law of demand also not apply in share market because when price are rising, more will be demanded.
8. **Ignorance Effect:** Generally, it is assumed that a household has perfect knowledge about price and quality of goods. However, in practice, a household may demand larger quantity of a commodity even at a higher price because it may be ignorant of the ruling price of the commodity.

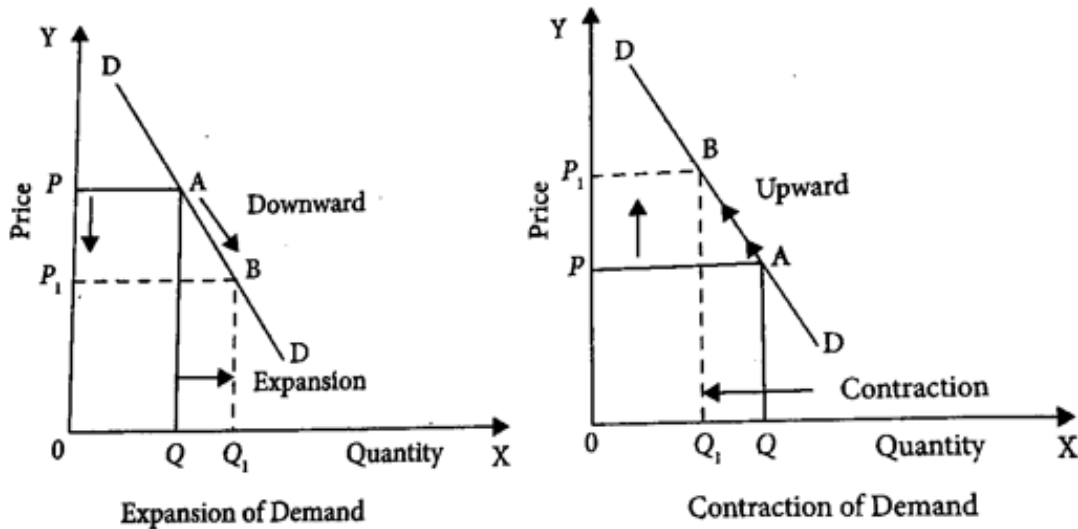
The law of demand also fails if there is a change in income or prices of the related goods or in taste and fashion (Pr, Y, T, E, O), etc.

7. EXPANSION AND CONTRACTION IN DEMAND / MOVEMENT (CHANGE IN QUANTITY DEMANDED) $D = f(P, Pr, Y, T, E, O)$

Due to changes in price alone demand for a commodity changes, it is called movement. Movements are two types.

1. **Expansion in Demand/Increase in Quantity Demand/ Downward Movement on the Same Demand Curve:** Rise in demand due to fall in price is called expansion of demand.

2. Contraction of Demand/ Decrease in Quantity Demand/ Upward Movement along the same Demand Curve: Fall in demand due to rise in its price is called contraction of demand. In other words, contraction of demand is the result of increase in the price of good concerned.

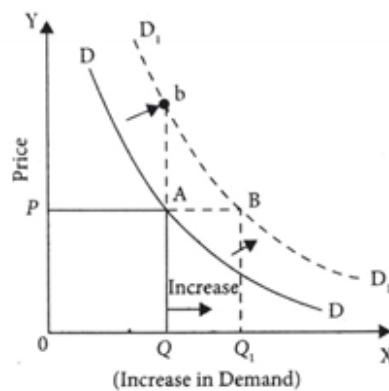


8. INCREASE AND DECREASE IN DEMAND /SHIFTING (CHANGE IN DEMAND)

$D = f(P, P_r, Y, T, E, O)$: When due to change in factors other than price, i.e., P_r, Y, T, E, O demand for a commodity changes, it is called shifting. Shifting is of two types.

1. Increase in Demand/Rightward shift in the Demand Curve:

When there is increase in demand due to change in factors other than price, it is called increase in demand.

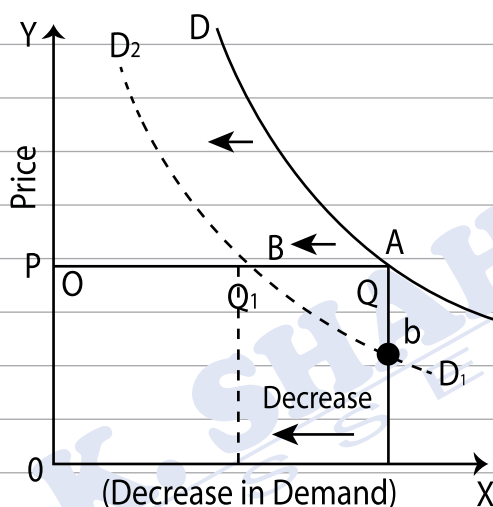


Causes of increase in demand:

- Rise in price of substitutes,
- Fall in price of a complement good,

- Rise in income,
- Taste and preference favour of commodity,
- Increase in population,
- Same price and increase in demand or

2. **Decrease in Demand/ Leftward Shift in Demand Curve:** When decrease in demand is due to changes in factor other than price, it is called decrease in demand.



Causes of Decrease in demand:

- Fall in price of substitutes,
- Rise in price of a complement,
- Fall in income,
- Taste and preference against the commodity,
- Future expectation about fall in price,
- Decrease in population,
- Same price and decrease in quantity demanded or



9. Elasticity of Demand

- Elasticity of demand is defined as the responsiveness or sensitiveness of the quantity demanded of a commodity to the changes in any one of the variable on which demand depends.

- These variables are price of the commodity, prices of the related commodities, income of the consumers and many other factors on which demand depends.
- Accordingly, we have price elasticity, cross elasticity, elasticity of substitution, income elasticity and advertisement elasticity.
- Unless mentioned otherwise, it is price elasticity of demand which is generally referred.



10. Price Elasticity of Demand:

- Price elasticity measures the degree of responsiveness of quantity demanded of a commodity to a change in its price, given the consumer's income, his tastes and prices of all other goods.
- It reflects how sensitive buyers are to change in price.
- Price elasticity of demand can be defined "as a ratio of the percentage change in the quantity demanded of a commodity to the percentage change in its own price".



11. Price Elasticity of Demand (E_d)

It is measured as percentage change in quantity demanded divided by the percentage change in price, other things remaining equal.

$$E_d = \frac{\text{percentage Change in Quantity Demanded}}{\text{Percentage Change in Price}}$$



12. INCOME ELASTICITY OF DEMAND (E_Y)

Income elasticity of demand means the ratio of percentage change in quantity demanded due to percentage change in income of consumers.

$$E_y = \frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Income}}$$



13. CROSS ELASTICITY OF DEMAND (E_c)

The cross elasticity of demand is proportional change in quantity of X demanded resulting from given relative change in the price of the related commodity Y.

$$E_c = \frac{\% \text{ Change in Quantity Demand of 'X'}}{\% \text{ Change in Price of 'Y'}}$$



14. ADVERTISEMENT ELASTICITY

Advertisement elasticity of sales or promotional elasticity of demand is the responsiveness of a good's demand to changes in firm's spending on advertising. It measures the percentage change in demand that occurs given a one percent change in advertising expenditure.

Higher the value of advertising elasticity, greater will be the responsiveness of demand to change in advertisement. Advertisement elasticity varies between zero and infinity. It is measured by using the formula;

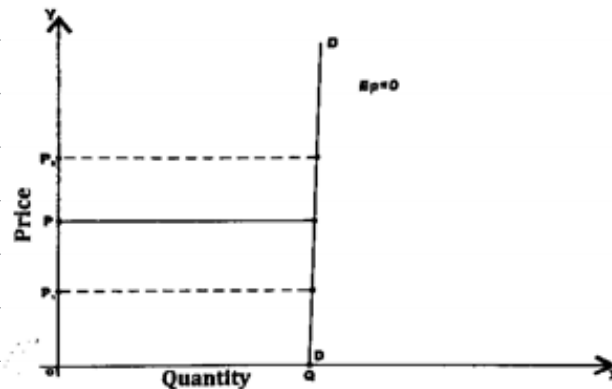
$$E_a = \frac{\% \text{ Change in Quantity Demand}}{\% \text{ Change in Spending on Advertising}}$$



15. The degree (types) of price elasticity of demand.

- Price elasticity measures the degree of responsiveness of quantity demanded of a commodity to a change in its price. Depending upon the degree of responsiveness of the quantity demanded to the price changes, we can have the following kinds of price elasticity of demand.

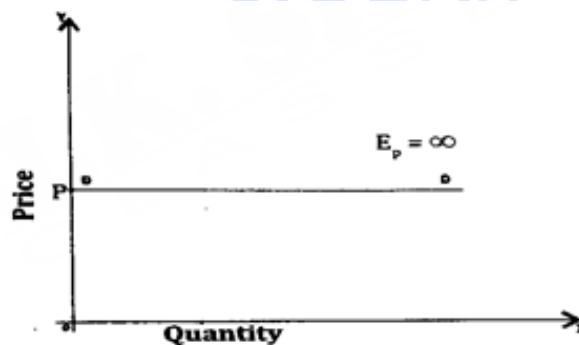
1. Perfectly Inelasticity demand: ($E_p = 0$) :



When change in price has no effect on quantity demanded, then demand is perfectly inelastic. E.g. – If price falls by 20% and the quantity demanded remains unchanged then,

$E_p = 0/20 = 0$. In this case, the demand curve is a vertical straight line curve parallel to y- axis as shown in the figure.

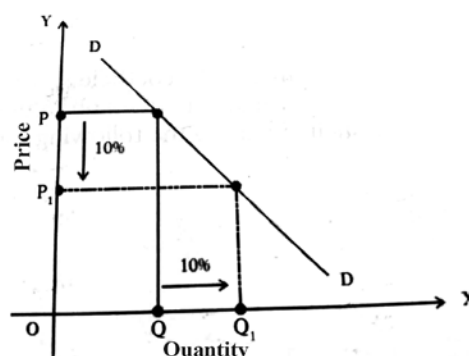
2. Perfectly Elastic Demand: ($E_p = \infty$) :



When with no change in price or with very little change in price, demand for a commodity expands or contracts to any extent, the demand is said to be perfectly elastic. In this case, the demand curve is a horizontal and parallel to X –axis.

The figure shows that demand curve DD is parallel to X- axis which means that at given price, demand is ever increasing.

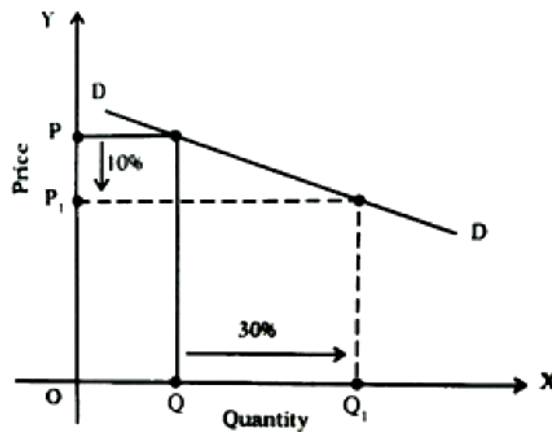
3. Unit Elastic Demand: ($E_p = 1$):



When the percentage or proportionate change in price is equal to the percentage or proportionate change in quantity demanded, then the demand is said to be unit elastic. E.g. If price falls by 10% and the demand rises by 10% then, Demand Curve DD is a rectangular hyperbola curve suggesting unitary elastic demand.

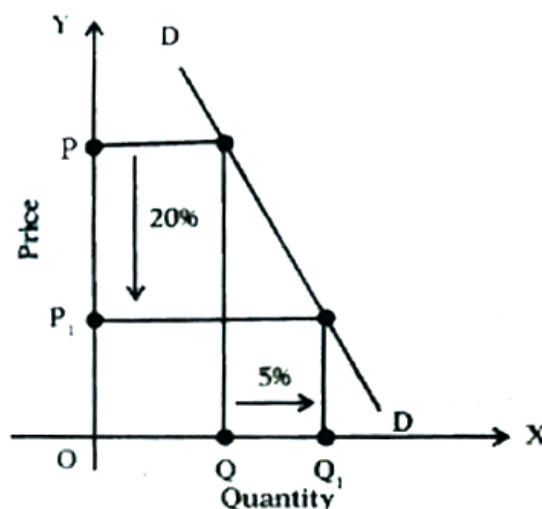
$$EP = 10/10 = 1$$

4. Relatively Elastic Demand: ($EP > 1$):



When a small change in price leads to more proportionate change in quantity demanded then the demand is said to be relatively elastic. E.g. If price falls by 10% and demand rises by 30% then, $EP = 30/10 = 3 > 1$. The coefficient of price elasticity would be somewhere between ONE and INFINITY. The elastic demand curve is flatter as shown in figure Demand curve DD is flat suggesting that the demand is relatively elastic or highly elastic.

5. Relatively Inelastic Demand: ($EP < 1$):



When a big change in price leads to less than proportionate change in quantity demanded, then the demand is said to be relatively inelastic. E.g. If price falls by 20% and demand rises by 5% then,

$EP = 5/20 = 1/4 < 1$. The coefficient of price elasticity is somewhere between ZERO and ONE. The demand curve DD is steeper suggesting that demand is less elastic or relatively inelastic. Relatively inelastic demand occurs in case compulsory goods i.e. necessities of life.



16. Income elasticity of demand:

- i. Zero income elasticity, ($EY=0$)
Ex. Salt, match box, lifesaving drugs
- ii. Negative income elasticity ($EY < 0$)
Eg: -inferior good, second hand products (Inverse relation)
- iii. Unitary income elasticity ($EY = 1$)
e.g. Normal goods
- iv. Income elasticity greater than one ($EY > 1$)
Eg. Luxury goods, superior good (direct relation)
- v. Income elasticity less than one ($EY < 1$)
Eg. Necessaries good, perishable goods.



17. Measurement of price elasticity of demand

- The different methods of measuring price elasticity of demand are:
 1. The Percentage or Ratio or Proportional Method,
 2. The Total Outlay Method,
 3. The Point or Geometrical Method, and
 4. The Arc Method.

1. The Percentage Method:

This method is based on the definition of elasticity of demand. The coefficient of price elasticity of demand is measured by taking ratio of percentage change in demand

to the percentage change in price. Thus, we measure the price elasticity by using the following formula-

$$E_p = \frac{\Delta q}{q} \times \frac{p}{\Delta p} = \frac{\Delta q}{p} \frac{p}{q}$$

Where -

Δq = change in quantity demanded

q = original quantity demanded

Δp = change in price

p = original price

If the coefficient of above ratio is equal to ONE or UNITY, the demand will be unitary.

If the coefficient of above ratio is MORE THAN ONE, the demand is relatively elastic.

If the coefficient of above ratio is LESS THAN ONE, the demand is relatively inelastic.

2. The total Outlay or Expenditure Method or Seller's Total Revenue Method:

The total outlay refers to the total expenditure done by a consumer on the purchase of a commodity. It is obtained by multiplying the price with the quantity demanded.

Thus,

$$\text{Total Outlay (TO)} = \text{Price (P)} \times \text{Quantity (Q)}$$

$$\text{TO} = P \times Q$$

In this method, we measure price elasticity by examining the change in total outlay due to change in price.

Dr. Alfred Marshall laid the following proposition:

- When with the change in price, the TO remains unchanged, $E_p = 1$.
- When with a rise in price, the TO falls or with a fall in price, the TO rises, $E_p > 1$.
- When with a rise in price, the TO also rises and with a fall in price, the TO also falls, $E_p < 1$.

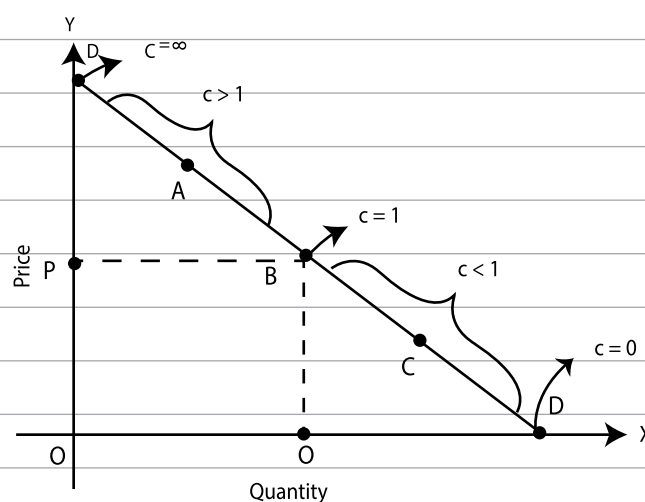
Price per unit (Rs.)	Quantity Demanded	Total Outlay (PXQ)	Elasticity of Demand
5	20 units	100	$E_p = 1$
4	25 units	100	Unitary
5	20 units	100	$E_p > 1$
4	30 units	120	Elastic
5	20 units	100	$E_p < 1$
4	22 units	80	Inelastic

- However, total outlay method of measuring price elasticity is less exact. This method only classifies elasticity into elastic, inelastic and unit elastic.
- The exact and precise coefficient of elasticity cannot be found out with this method.

3. The Point Method or Geometric Method:

- The point elasticity method, we measure elasticity at a given point on a demand curve.
- This method is useful when changes in price and quantity demanded are very small so that they can be considered one and the same point only.
- E.g. If price of X commodity was Rs. 5,000 per unit and now it changes to Rs. 5,002 per unit which is very small changes. In such a situation we measure elasticity at a point on demand curve by using formula $\frac{\Delta q}{q} \times \frac{p}{q}$
- Diagrammatically also we can find elasticity at a point by using the formula –

$$E_p = \frac{\text{Lower Segment of the Demand Curve}}{\text{Upper Segment of the Demand Curve}}$$



(Downward sloping straight line Linear demand curve.)

Figure:

- The figure shows that even though the shape of the demand curve is constant, the elasticity is different points on the curve.

- If the demand curve is not a straight line curve, then in order to measure elasticity at a point on demand curve we have to draw tangent at the given
- point and then measure elasticity using the above formula.
- We can also find out numerical elasticities on different points.

18. The Arc Elasticity Method :

- When there is large change in the price or we have to measure elasticity over an arc of the demand curve, we use the “arc method” to measure price elasticity of demand.
- The arc elasticity is a measure of the “average elasticity” i.e. elasticity at MID-POINT that connects the two points on the demand curve.
- Thus, an arc is a portion of a curved line, hence a portion of a demand curve. Here instead of using original or new data as the basis of measurement, we use average of

The formula used is –

$$E_p = \frac{q_1 - q_2}{q_1 + q_2} \times \frac{P_1 + P_2}{P_1 - P_2}$$

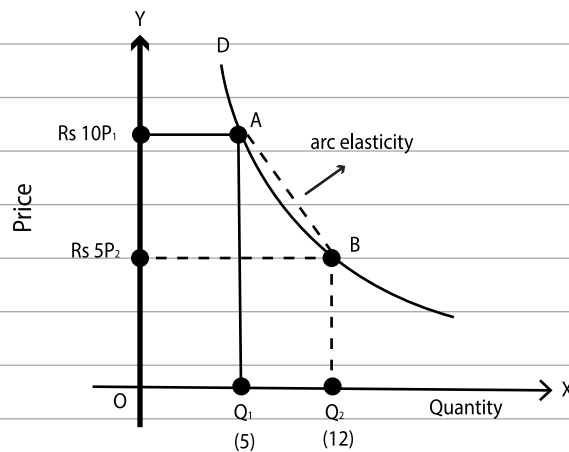


Figure : Arc Elasticity

19. FACTOR AFFECTING/ DETERMINANTS OF ELASTICITY OF DEMAND

1. **Availability of Substitutes:** If commodities have more close substitutes, have more elastic demand. And, if a commodity have less substitutes, have inelastic

demand. For example, Coca Cola, Pepsi have close substitutes, so demand tends to be elastic. Other commodities such as salt have inelastic demand.

It should be noted that while as a group of a good may have inelastic demand, but when we consider its various brands, we say that a particular brand has elastic demand. Thus while demand for petrol is inelastic, the demand for Indian oil's petrol is elastic demand.

2. **Position of a commodity in the Consumer's Budget:** Generally, greater the proportion of income spent on a commodity, the greater will be its elasticity of demand and vice versa. The demand for goods like salt, matches, buttons, etc., tends to be highly inelastic because consumer spends small part of his income. On the other hand, demand for goods like clothing tends to be elastic since consumer spends high part of his income.
3. **Nature of the Commodity:** In general, luxury goods are price elastic while necessities are price inelastic. Thus while the demand for television is relatively elastic, the demand for necessities, e.g. food and housing, is inelastic.
4. **Number of Uses:** The more the possible uses of a commodity the greater will be its price elasticity and vice versa. To illustrate, milk has several uses. If its price falls, it can be used for a variety of purposes like preparation of curd, cream, ghee and sweets. But if its price increases, its use will be restricted only to essential purposes.
5. **The Period:** A person can better adjust himself in the long period. So demand will be elastic in long period. But in the short period, demand will be inelastic because he has no time to adjust his demand.
6. **Consumer Habits:** If a consumer is habitual consumer of a commodity no matter how much its price change, the demand for the commodity will remain inelastic.
7. **Tied Demand/Joint Demand:** The demand for those goods, which are tied/joint to others, is normally inelastic as against those whose demand is independent. For e.g., demand of stationary with computer.

8. **Price Range:** Goods, which are in very high price range or in very low price range have inelastic demand, but those, which are in middle price range have elastic demand. Generally, low price good keeps the price elasticity of demand for a good low.



20. Demand Forecasting

Meaning:

- Demand forecasting is an estimate of the future market demand for a product. The process of forecasting is based on reliable statistical data of past and present behavior, trends, etc.
- Demand forecasting cannot be hundred per cent correct. But, it gives a reliable estimate of the possible outcome with a reasonable accuracy.
- Demand forecasting may be at international level or local depending upon area of operation, cost, time, etc.

Usefulness:

- Demand forecasting is an important function of managers as it reduces uncertainty of environment in which DECISIONS are made. Further, it helps in PLANNING for future level of production. Its significance can be stated as follows:
 1. **Production Planning:** Demand forecasting is a pre-requisite for planning of production in a firm. Expansion of production capacity depends upon likely demand for its output. Otherwise, there may be overproduction or underproduction leading to losses.
 2. **Sales Forecasting:** Sales forecasting depends upon demand forecasting. Promotional effort of the firm like advertisements, suitable pricing etc. should be based on demand forecasting.
 3. **Control of Business:** Demand forecast provide information for budgetary planning and cost control in functional area of finance and accounting.

4. **Inventory Control:** Demand forecasting helps in exercising satisfactory control of business inventories like raw- material, intermediate goods, semi- finished goods, spare parts, etc. Estimates of future requirement of inventories is to be done regularly and it can be known from demand forecasts.
5. **Capital Investment:** Capital investment yield returns over many years in future. Decision about investment is to be taken by comparing rate of return on capital investment and current rate of interest. Demand forecasting helps taking investment decision.



21. Types of forecasts:

- Macro- level forecasting deals with the general economic environment prevailing in the economy as measured by the Index of Industrial Production (IIP), national income and general level of employment, government expenditure, consumption level, consumers spending habits, etc.
 1. **Industry** - level forecasting refers to forecasting the demand of a good of a particular industry as a whole. E.g. - Demand for two -wheelers in India.
 2. **Firm** - level forecasting refers to forecasting the demand of a good of a particular firm. e.g. - Bajaj motor cycle.
- Based on time period, demand forecasting may be –
 1. **Short** – term demand forecasting normally relates to a period not exceeding a year. It is also called as ‘operating forecast’. It is useful for estimating stock requirement, providing working capital, etc.
 2. **Long** - term demand forecasting may cover one to five years, depending on the nature of the firm. It provides information for taking decision like expansion of plant capacity, man-power planning, long- term financial planning, etc.



22. DEMAND FORECASTING

1. Demand Distinctions:

There are following types of demand distinctions

- a. **Producers goods:** Goods used for the production of other goods – machinery.
Consumer goods: Goods for the final consumption – ready –made clothes and foods.
- b. **Durable goods:** Goods that can be consumed more than once, i.e., car, refrigerator, shirts.
Non –Durable goods: Goods that cannot be consumed more than once –milk, bread.
- c. **Derived demand:** Demand originating as a consequence of purchase of original (parent) –demand for cement arises of a consequence of demand for building.
Autonomous demand: Independent demand of other goods –also called direct demand.
- d. **Industry demand:** Demand for the total firms operating under an industry – total demand for steels in the nation.
Company demand: Demand for a single company –demand for TATA steels.
- e. **Short –run demand:** Demand which arises as a result of change in price or income.
- f. **Long –run demand:** Demand ultimately exist and enough time is allowed to adjust the market.



23. Methods of Demanding Forecasting

There is no easy method to predict the future with certainty. The firm has to apply a proper mix of methods of forecasting to predict the future demand for a product. The various methods of demand forecasting are as follows:

- **Survey of Buyer's intentions:** In this method, customers are asked what they are planning to buy for the forthcoming time period usually a year.
 1. This method involve use of conducting direct interviews or mailing questionnaire asking customers about their intension or plan to buy the product.
 2. The survey may be conducted by any of the following method:

- Complete Enumeration where all potential customers of a product are interviewed about what they are planning or intending to buy in future. It is cumbersome, costly and time consuming method.
 - Sample Survey where only a few customers are selected and interviewed about their future plans. It is less cumbersome and less costly method.
 - End –use method or Input – output method where the bulk of good is made for industrial manufactures who usually have definite future plans.
3. This method is useful for short –term forecasts.
 4. In this method burden of forecasting is put on the customers.
- **Collective opinion Method:** The method is also known as sales force opinion method or grass roots approach.
 1. Under this method, salesmen are asked to estimate expectations of sales in their territories. Salesmen are considered to be the nearest person to the customer’s retailers and wholesalers and have good knowledge and information about the future demand trend.
 2. The estimates of all the sales- force is collected are examined in the light of proposed changes in selling price, product design, expected competition, etc. and also factors like purchasing power, employment, population, etc.
 3. This method is based on first hand knowledge of the salesmen. However, its main drawback is that it is subjective.
 - **Expert Opinion Method (Delphi Method):** Under this method of demand forecasting views of specialists/experts and consultants are sought to estimate the demand in future. These experts may be of the firm itself like the executives and sales managers or consultant firms who are professionally trained for forecasting demand.
 1. **The Delphi technique, developed by OLAF HEMLER** at the RAND Corporation of the U.S.A. is used to get the opinion of a number of experts about future demand.

2. Experts are provided with information and opinion feedbacks of other experts at different rounds and are repeatedly questioned for their opinion and comments till consensus emerges.

3. It is a time saving method.

- **Statistical Method:** Statistical methods have proved to be very useful in demand forecasting. **Statistical methods are superior, more scientific, reliable and free from subjectivity.** The important statistical methods of demand forecasting are:

1. **Trend Projection Method:** The method is also known as Classical Method. It is considered as a 'naïve' approach to demand forecasting.

- Under this, data on sales over a period of time is chronologically arranged to get a 'time series'. The time series shows the past sales pattern. It is assumed that the past sales pattern will continue in the future also.

2. **Graphical Method:** This is the simplest technique to determine the trend.

- Under this method, all values of sales for different years are plotted and a free hand curve is drawn passing through as many points as possible. The direction of the free hand curve shows the trend.

- The main drawback of this method is that it may show trend but not measure it.

3. **Fitting Trend Equation/Least Square Method:** This method is based on the assumption that the past rate of change will continue in the future.

- It is a mathematical procedure for fitting a line to a set of observed data points in such a way that the sum of the squared deviation between the calculated and observed values is minimized.

- This method is popular because it is simple and inexpensive.

4. **Regression Analysis:** This is a very common method of forecasting demand.

- Under this method, a quantitative relationship is established between quantity demanded (dependent variable) and the independent variable like income, price of good, price of related goods, etc. Based on this relationship, an estimate is made for future demand.

- **Controlled Experiments:** Under this method, an effort is made to vary certain determinants of demand like price, advertising, etc. and conduct the experiments assuming that the other factors remains constant.

1. The effect of demand determinants on sales can be assessed either by varying them in different market or by varying over a period of time in the same market.
2. The responses of demand to such changes over a period of time are recorded and are used for estimating the future demand for the product.
3. This method is used less as it is expensive and time consuming
4. This method is also called as market experiment method.

- **Barometric Method of forecasting:** This method is based on the assumption that future can be predicted from certain events occurring in the present. We need not depend upon the past observations for demand forecasting.

1. There are economic ups and downs in an economy which indicate the turning points. There are many economic indicators like income population, expenditure, investment, etc. which can be used to forecast demand. There are three types of economic indicators, viz, .

- **Coincidental Indicators** are those which move up and down simultaneously with aggregate economy. It measure the current economic activity. E.g. – rate of unemployment.
- **Leading Indicators** reflect future change in the trend of aggregate economy.

- Lagging Indicators are those indicators which will change after the economic changes.



24. Wants

The wants have some features – wants are unlimited, satiable, competitive, complementary, alternative; wants vary with time, place and person; wants influenced by advertisement.

1. Classification of Wants:

- Necessaries:** Necessaries are those which are essential for living. They are known as 'necessaries of efficiency'. If by custom and tradition, people require some wants, it is known as 'Conventional Necessaries'.
- Comforts:** It lies between necessities and luxuries. These goods are necessary for happy living, but not so essential.
- Luxuries:** They are the addition to efficiency and they are the expensive and superfluous items.



25. UTILITY

Utility is the power of a commodity to satisfy human wants. In other words, utility may be defined as the satisfaction derived from the consumption of a good.

- It is a subjective entity and differs from person to person, time to time and place to place.
- Utility (expected utility) is different from satisfaction (realized utility). But when economists speak of the utility of a certain good, they are referring to the satisfaction gained from consuming the good.
- Utility differs from beneficial/usefulness. For example wine and poison have utility but not beneficial.

- Two theories are:
 - Marginal utility on the basis of cardinal utility – Alfred Marshall
 - Indifference curve analysis on the basis of ordinal utility – Hicks and Allen
1. **Total Utility (TU):** It is sum of utility derived from different units of commodity consumed by a consumer. $TU = \sum MU$ or $TU = MU_1 + MU_2 + MU_3 \dots \dots \dots MU_n$ etc.
 2. **Marginal Utility (MU):** It is additional utility derived from additional unit of a commodity. $MU = \Delta TU / \Delta \text{Quantity}$. Consumed or $TU_n - TU_{n-1}$
 3. Utility is also known as ‘Satiety’ and TU is known as ‘Full Satiety’ and MU is also known as ‘Marginal satiety’
 4. **Relation between TU and MU:** Total utility is the sum of marginal utilities. In the above table, MU always declines, and when MU decreases, when MU is zero, then TU is maximum. This is called ‘saturation point’, and after that when MU becomes negative, TU decreases. MU may be positive, zero or negative, but TU is never negative.

Units Consumed	Total Utility	Marginal utility	Analysis
1	10	10	MU decreases and TU increases
2	18	8	
3	24	6	
4	28	4	
5	30	2	MU is zero, TU maximum
6	30	0	MU is negative, TU decreases
7	28	(-2)	



26. Law of DMU :

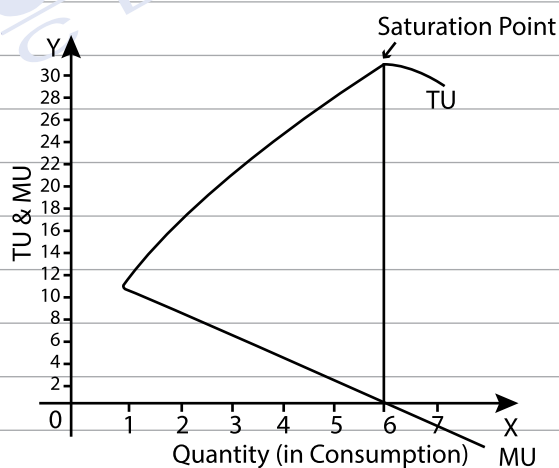
Assumption: This law is based on previously discussed four assumptions of the MU analysis, and further there are also three more assumption:

- Taste, income of the consumer remains unchanged.
- The units of the commodity are identical in all aspects.
- There is no time-gap between consumption.

Law of DMU can be understood with the help of the following table and figure.

Units (in consumption)	Total Utility	Marginal Utility
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2
6	30	0
7	28	-2

In the table and figure as MU decreases, TU increases, and when MU is zero, then TU maximum. This called 'saturation point', after the saturation point when MU becomes negative then TU decreases.



Limitations:

- Cardinal measurement of utility is not possible.
- Marginal utility of money (MUm) does not remain constant.

- c. Law is applicable if there are identical units, no change in habits, taste and income of the consumer.
- d. Law is applicable if there are standard unit- sufficient unit –nether more or less.
- e. Law is applicable if there is no time –gap or interval between the consumption.
- f. Law may not apply to some article like gold, money, music and hobbies.
- g. The shape of utility curve may be affected by the presence of substitutes or complementary goods.

27. CONSUMER'S SURPLUS (CS)

1. **Alfred Marshall:** CS is the difference between maximum price a person is willing to pay for a goods and its market price.

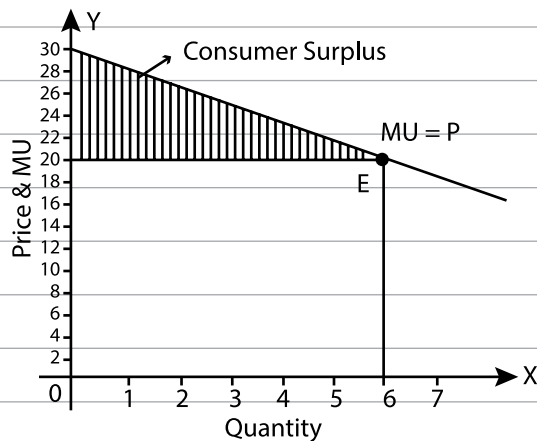
CS = What a Consumer Is Ready to Pay – What He Actually Pays

'What a consumer ready to pay' is taken in terms of 'MU' and what he actually pays' is taken in terms of 'Price'. So,

$$CS = MU - P$$

The concept is derived from the law of diminishing utility. As the consumer purchase more units of a goods, its marginal utility goes on diminishing. The consumer is in equilibrium when $MU = P$. But, for the preceding units, the $MU > P$, he actually pays for them. This is because the price is constant for him.

Number of Units	Marginal Utility (Ready to Pay)	Price Actually Pays (in Rs.)	Consumer Surplus (in Rs.)
1	30	20	10
2	28	20	8
3	26	20	6
4	24	20	4
5	22	20	2
6	20	20	0 (MU -P)
7	18	20	



In the above table and figure, consumer is in equilibrium at the 6th unit because here $MU = P$, i.e., Rs. 20 and in this way when he will consume 6 units, then he is total ready to pay Rs. 150 ($30+28+26+24+22+20$) but total amount actually paid is Rs. 120 ($20+20+20+20+20$). So, total consumer surplus will be Rs. 30 ($150-120$), which is maximum.

2. **Assumption:** The assumption are same as mentioned in law of DMU.

Limitation:

- a. Consumer's surplus cannot be measured because it is difficult to measure the MU.
- b. In the case of necessities, the marginal utilities of the earlier units are highest. In such case, the consumer's surplus is always infinite.
- c. CS is affected by the availability of substitutes.
- d. There is no simple rule of deriving the utility of articles of prestige value diamond [water- diamond paradox]
- e. MU of money does not remains constant and this assumption is unrealistic.



28. INDIFFERENCE CURVE (IC) ANALYSIS

This theory is alternative and more realistic method of expaling consumer demand. It is based on consumer preferences.

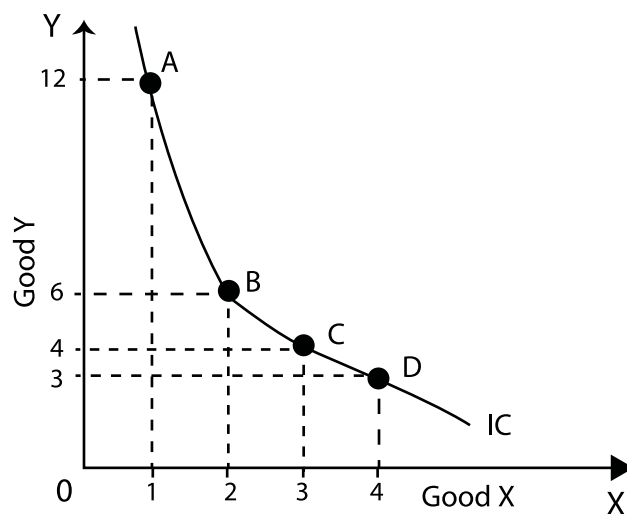
1. Assumptions Underlying IC Approach:

- a. Consumer is rational and possesses full information.
- b. Consumer is capable of ranking all combinations of goods according to the satisfaction.
- c. Consumer has consistent consumption pattern behavior. If he prefers A to B and B to C, then he must be preferable to B.

2. Indifference Curve (IC):

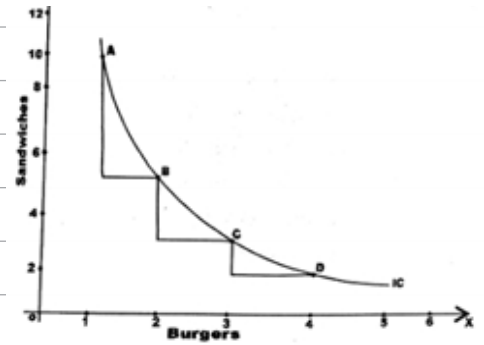
Hick and Allen – Ordinal approach: An IC is the curve, which represents all those combinations of two goods, which give same satisfaction to the consumer. Following table and diagram shows different combination of X and Y which gives same satisfaction to the consumer.

Combination	Food	Clothing	MRS
A	1	12	
B	2	6	6
C	3	4	2
D	4	3	1

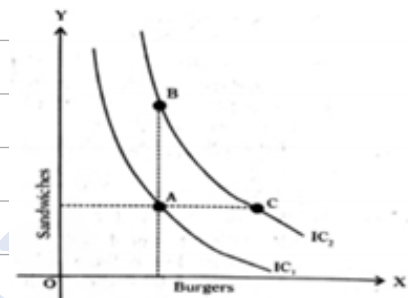


29. Properties of IC

1. IC is downward sloping & Convex



2. Higher IC given higher satisfaction



3. Two IC will never intersect each other

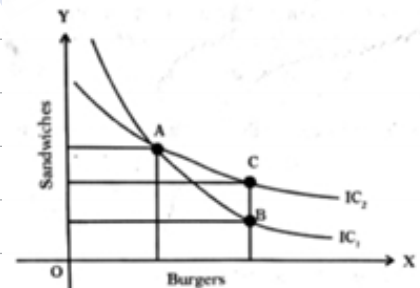
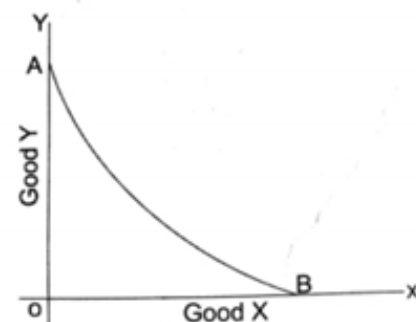


Figure : Intersecting Indifference Curves

4. IC will never touch the axis



30. Exception of IC:

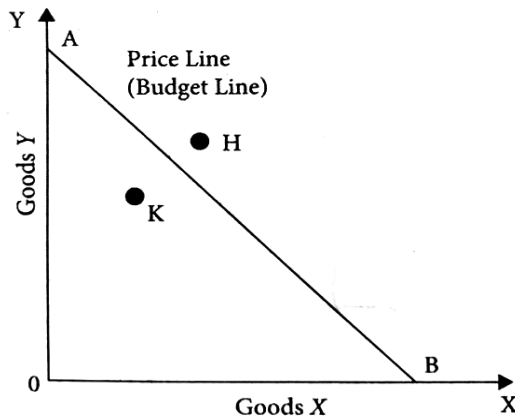
- a. **Perfect substitutes:** When two goods are perfect substitutes then IC will be straight line downward sloping . MRS: Constant
- b. **Perfect complementary:** When two goods are perfect complementary then IC will

be 'L' shaped MRS: 0

But if two goods are normal then IC will be convex to the origin.



31. BUDGET LINE / PRICE LINE



Budget line shows all those combinations of two goods which the consumer can buy spending his given money income on the two goods at their prices.

In the figure AB represents budget line / price line and it should be noted that any point outside the given price line, like 'H' will be beyond the reach of the consumer and any combination lying within the line like 'K' shows underspending by the consumer and it reduces satisfaction of the consumer. It denotes PX PY maximum quantity of X and maximum quantity of Y and also total income of the consumer.



32. CONSUMER'S EQUILIBRIUM UNDER IC ANALYSIS

A consumer is in equilibrium when he is deriving maximum possible satisfaction from the goods and is in no position to rearrange his purchases of goods.

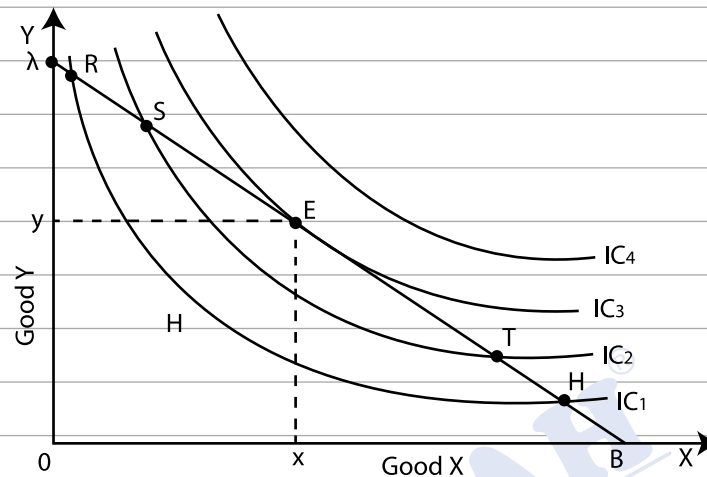
1. Assumption:

- a. The consumer has a given indifference map (ICs).
- b. He has fixed money income.
- c. Price of goods are fixed.
- d. Goods are homogenous and divisible.
- e. The consumer is rational.

Consumer's equilibrium can be understood with the help of IC MAP and BUDGET LINE.

To show which combination of two goods X and Y, the consumer will buy to be in equilibrium, we bring his indifference map and budget line together.

Consider the figure given below in which consumer's indifference map together with the price line 'AB' is depicted.



Goods X is measured on the X-axis and good Y is measured on the Y axis. With given money to be spent and given prices of the two goods, the consumer can buy any combination of the goods which lies on the price line AB. In order to maximize his satisfaction, the consumer will try to reach the highest possible indifference curve.

The highest indifference curve to which the consumer can reach is the indifference curve to which the price line is tangent. Any other possible combination would either lie on a lower indifference curve IC3 at point E.

Thus, at the equilibrium Point E,

$$MRS_{xy} = \frac{MU_x}{MU_y} = \frac{P_x}{P_y}$$



33. SUPPLY

MEANING

Supply of a commodity refers to the quantity of commodity offered for sale at a particular price during a given period of time. Thus, the supply of a commodity may be defined as the amount of commodity which the sellers or producers are able and

willing to offer for sale at a particular price, during a given period of time.

Thus, defined, the term supply shows the following features:

1. Supply of a commodity is always with reference to a PRICE.
2. Supply of a commodity is to be referred to IN A GIVEN PERIOD OF TIME.
3. Supply of a commodity depends on the ABILITY OF SELLER TO SUPPLY A COMMODITY. However, ability of a seller to supply a commodity depends ON THE STOCK available with him.
4. Supply of a commodity also depends on the Willingness OF SELLER TO SUPPLY A COMMODITY. A seller's willingness to supply a commodity depends ON THE DIFFERENCE BETWEEN THE RESERVATION PRICE and the PREVAILING MARKET PRICE. E.g. A dairy farm's daily supply of milk at the price of Rs. 12 per litre is 600 litres.

34. DETERMINANTS OF SUPPLY (FACTORS AFFECTING SUPPLY)

$S = (P, Pr, Pf, T, G, E, O)$

1. **Price of the Product (P):** Other things being equal, when price increases then supply increases and when price decreases then supply decreases. Thus, there is positive relation between price and supply.
2. **Price of Related Goods (Pr):** The supply of a commodity depends upon the price of all other commodities. If prices of related commodities (substitutes or complements) rise, they will become relatively more attractive to produce and the supply of that commodity rises. But, supply of another commodity will fall. So, there is an inverse relation.
3. **Price of Factor of Production (Pf) (Cost of Production):** a rise in price of factors of production of a commodity will make the production of that commodity less profitable, so supply will decrease. If cost of production decrease, then supply will increase. There is also an inverse relation between supply and cost of production.
4. **Technology (T):** Technology advances based on new discoveries and innovations

reduce the cost of production and result in more supply of the commodity. With the traditional technology, supply cannot be increased.

5. **Government Policy (G):** The Government policy may affect the supply by imposing taxes and providing subsidy. If Government policies are favorable (decrease in taxes and increase in subsidy), then supply will increase, and if Government policies are unfavorable (increase in taxes and decrease in subsidy), then supply will fall.
6. **Future Expectation about Price (E):** If there is future expectation about rise in price, then supplier will no increase the supply at present, and if there is future expectation about fall in price, then supplier will increase his supply.
7. **Other Factor (O):** The supply of product also depends upon natural factors government's industrial and foreign policies, infrastructure facilities, market structure and production capacity.



35. LAW OF SUPPLY

Other things being equal, when price increases then supply for a commodity increases, when price decreases then supply for a commodity decreases. Thus, supply has positive relation with price, $S = f(P)$.

1. **Assumption:** (Other thing being equal)
 - a. No change in Price of related goods (Pr)
 - b. No change in Price of factor of Production (Pf)
 - c. No change in Technology (T)
 - d. No change in Government policy (G)
 - e. No change in future Expectation about prices (E)
 - f. No change in Other factors (O)
2. **Types of Supply Schedule and Supply Curve:** There may be two types of supply schedule and supply curve.
 - a. Individual supply schedule and supply curve (Single seller)

b. Market supply schedule and supply curve (Number of sellers)
But, both supply schedule and curve have positive relationship between price and supplied quantity.

3. **Exceptions:** Law of supply not applicable to agricultural products, social distinction goods, and perishable goods like milk or curd. In this case, supply curve will be negative sloped and elasticity of supply will be less than zero ($ES < 0$).



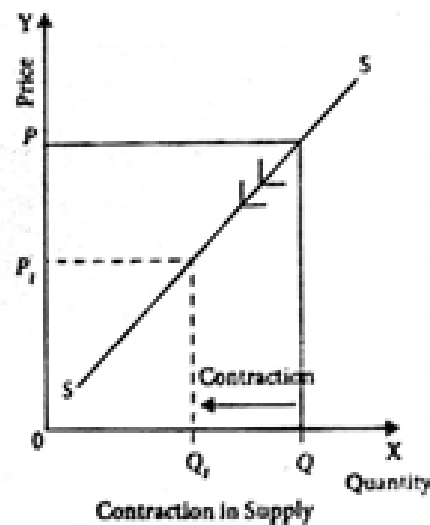
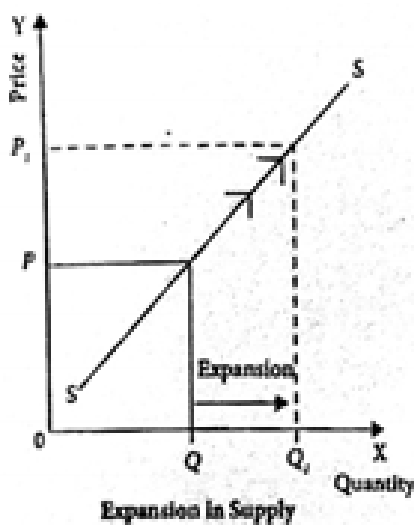
36. MOVEMENT (CHANGE IN QUANTITY SUPPLIED)

$$S = f(P, Pr, T, G, E, O)$$

When supplied quantity changes due to change in only price, it is called movement. Movement are two types.

1. Expansion and Contraction in Supply

- a. **Expansion in supply:** Rise in supply due to rise in its price called “expansion in supply”.
- b. **Contraction in supply:** Fall in supply due to fall in its price is called “contraction in supply”.



SHIFTING (CHANGES IN SUPPLY) $S = f(P, Pr, T, G, E, O)$

When supply of a commodity changes due to change in factors other than price,

i.e. P, Pr, T, G, E, O, following are the factors that can shift a supply curve:

- Changes in the price of related goods.
- Change in factor price (cost of production).
- Change in technology.
- Future expectation about price.
- Others

1. Increase and Decrease in supply:

a. **Increase in supply:** Increase in supply due to change in factors other than price is called “increase in supply”.

b. **Causes of increase in supply:**

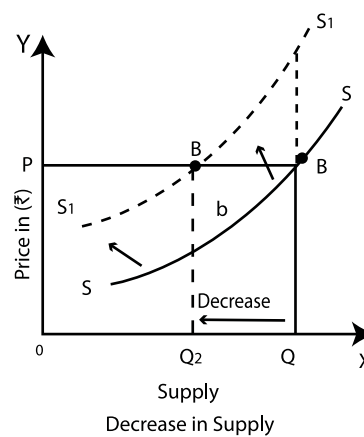
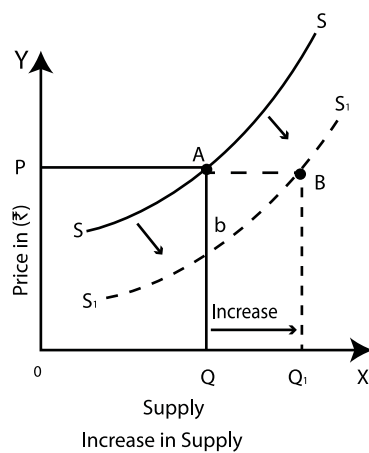
- i. Decrease in price of related goods.
- ii. Decrease in factor price (cost of production)
- iii. Advance technology.
- iv. Favourable Government policy (decrease in taxes and increase in subsidy)
- v. Future expectation about decrease in price.
- vi. Others.

c. **Decrease in Supply:** Decrease in supply due to change in factor other than price is called “decrease in supply”

d. **Causes of decrease in supply:**

- i. Increase in price of related goods.
- ii. Increase in factor price (cost of production)

- iii. Traditional technology.
- iv. Unfavourable Government policy (increase in taxes and decrease in subsidy).
- v. Future expectation about increase in price.
- vi. Others



37. ELASTICITY OF SUPPLY

The elasticity of supply is defined as the responsiveness of the quantity supplied of a good to a change in its price. Elasticity of supply is measured by dividing the percentage change in quantity supplied of a goods by the percentage change in its price.

$$E_s = \frac{\% \text{ Change in Quantity, Supplied}}{\% \text{ Change in Price}}$$

For example, as a result of 10% change in the price of commodity X, the supplier are willing to supply 15% more of the commodity , the elasticity of supply will be

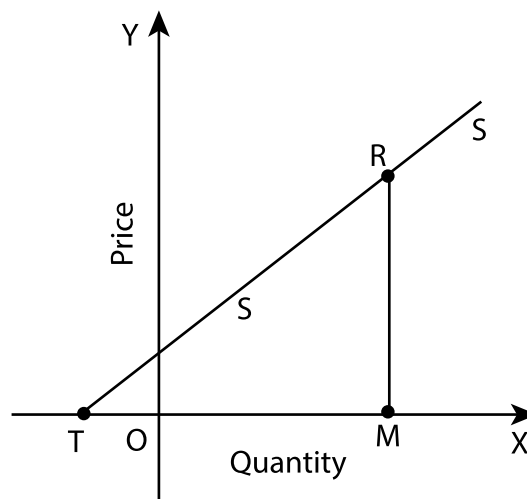
$$E_s = \frac{\% \text{ Change in Quantity, Supplied}}{\% \text{ Change in Price}} = \frac{15\% Q}{10\% P} = (E_s > 1)$$

38. TYPES OF ELASTICITY OF SUPPLY

1. **Perfectly Elasticity Supply ($E_s = \infty$):** It is a situation in which supply of a commodity curve will be horizontal parallel to quantity axis.

2. **Relatively elastic supply ($E_s > 1$):** It refers to a situation by which percentage of change in supply of a commodity is higher than percentage change in price of that commodity.
3. **Unitary Elastic Supply ($E_s = 1$):** When percentage change in supply of a commodity is equal to percentage change in price. For example, change in price is 10% but change in supply is also 10%, then $10\%/10\% = 1$ ($E = 1$).
4. **Relatively inelastic Supply ($E_s < 1$):** When percentage change in supply of a commodity is less than percentage change in price. For example, change in price is 10% but change in supply is 8%, then $8\%/10\% = 0.8$ ($E < 1$) (inelastic supply).
5. **Perfectly Inelastic Supply ($E_s = 0$):** When price of commodity does not influence supply of that commodity that situation is called perfectly inelastic supply. In perfectly inelastic supply curve, the supply curve will be vertical parallel to Y - axis.

39. The Point Or Geometric Method:



In point elasticity method, we measure elasticity at a given point on a supply curve.

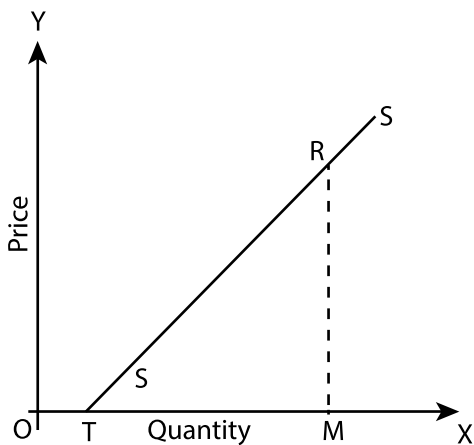
We can measure E at point 'R' in the following manner

- i) Extend the supply curve 'S' towards the extension of X -axis so that it cuts X -axis at T.

- ii) Draw a perpendicular from 'R' cutting X-axis at 'M'
- iii) Take the ratio of intercepts MT and OM.

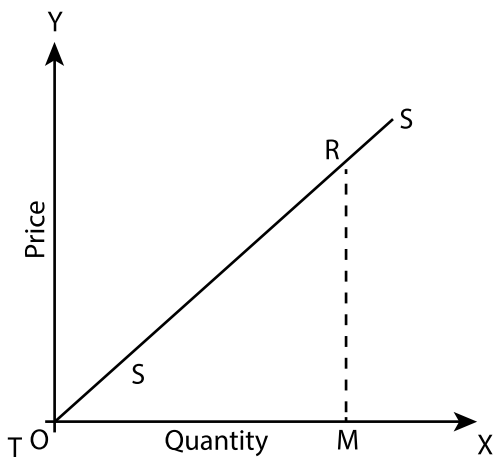
$$Es = \frac{MT}{OM}$$

In the figure $MT > OM$, elasticity is GREATER THAN ONE.



In the adjoining figure, supply curve when extended meets X-axis to the right of the point of origin so that

$Es = \frac{MT}{OM}$ (i.e. $MT < OM$ and so elasticity is LESS THAN UNITY



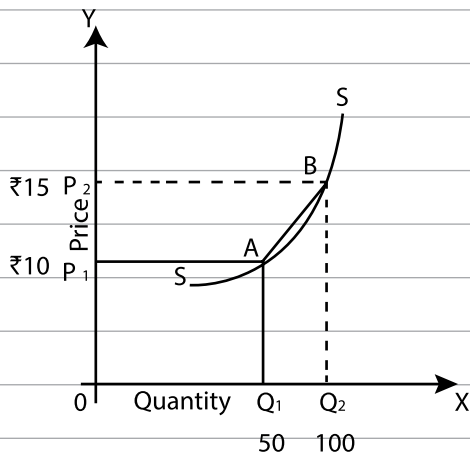
In the adjoining figure, supply curve when extended meets X-axis exactly at the point of origin so that

$$Es = \frac{MT}{OM} = 1$$

i.e. $MT = OM$ and so elasticity of supply is EQUAL TO UNITY / ONE

3. The Arc Elasticity Method:

Under this method elasticity of supply over an ARC of the supply curve. The arc elasticity is a measured of the "average elasticity" i.e. elasticity at MID-POINT that connects the two points on the supply curve. Thus, an arc is a portion of a curved line, hence a portion of supply curve. The formula used is-



$$Es = \frac{(q1-q2)}{(q1+q2)} \times \frac{(P1+P2)}{(P1-P2)}$$

Where - P1 & q1 = Original price quantity

P2 & q2 = New price and quantity.

$$Es = \frac{50-100}{50+100} \times \frac{10+15}{10-15}$$

$$Es = \frac{-50}{150} \times \frac{25}{-5}$$

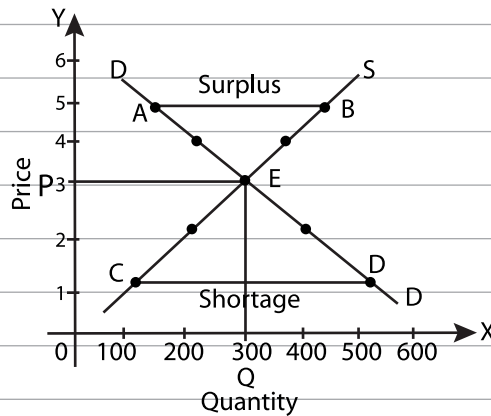
$$= + 1.66$$



40. Equilibrium Price

- Equilibrium means a market situation where the quantity demanded is equal to quantity supplied. Thus, the two factors determining equilibrium price are market demand and market supply.
- Equilibrium price is the price at which the sellers of a goods are willing to sell the quantity which buyers want to buy. Thus, equilibrium price (also called market clearing price) is the price at which demand and supply are equal.
- At equilibrium price both sellers and buyers are satisfied
- At equilibrium price, there is neither SHORTAGE nor SURPLUS. So at equilibrium price, market is said to be CLEARED.
- The following table and figure explains the equilibrium price.

Price of Good -X (Rs)	Quantity Demanded of Goods - X (units)	Quantity Supplied of Goods - X (units)	Effect on Price
5	100	500	Downward
4	200	400	Downward
3	300	300	Equilibrium
2	400	200	Upward
1	500	100	Upward



- Equilibrium is struck at a point E where the demand and supply curve intersect each other.
- At E, equilibrium price is OP i.e. Rs. 3 and equilibrium quantity is OQ i.e. 300 units.
- When the price is Rs. 5 per units, the quantity demanded is 100 units and quantity supplied is 500 units. It is a situation where market demand < market supply and there is excess supply i.e. surplus supply. As a result of pressure of excess supply the market price falls to Rs. 4.
- At a price of Rs. 4, the pressure of excess supply still continues and hence the price falls further to Rs. 3.
- At a price of Rs. 3, the market is CLEARED as the quantity demanded and supplied are equal to each other. There is no SURPLUS.
- Thus, we can conclude that pressure of excess supply (surplus) reduces the price.
- Similarly, if the price is Rs. 1, the quantity demanded is 500 units and quantity supplied is 100 units. It is a situation where market demand > market supply and there is excess demand or SHORTAGE of supply. As a result of excess demand or SHORTAGE of supply the market price will rise. So long as pressure of demand continues price will rise i.e. till point E. At point E, excess demand is eliminated and quantity demanded and supplied are equal to each other. The market has CLEARED.

- Thus, we can conclude that pressure of excess demand (shortage of supply) increases the price.
- The equilibrium price is determined by the intersection between demand and supply therefore, it is also called as the MARKET EQUILIBRIUM.

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CLASSES

MODULE MULTIPLE CHOICE QUESTIONS

1. Demand for the commodity refers to.
 - a. Desire backed by the ability to pay for the commodity.
 - b. Need for the commodity and willingness to pay for it.
 - c. The quantity demanded of that commodity at a certain price.
 - d. The quantity of the commodity demanded at a certain price during any particular period of time.

2. Contraction of the demand is the result of:
 - a. Decrease in the number of consumers.
 - b. Increase in the price of the good concerned.
 - c. Increase in the prices of other goods.
 - d. Decrease in the income of purchasers.

3. All but one of the following are assumed to remain the same while drawing an individual's demand curve for a commodity. Which one is it?
 - a. The preference of the individual.~
 - b. His monetary income
 - c. Price of the commodity
 - d. Price of the related goods

4. Which of the following pairs of goods is an example of substitutes?
 - a. Tea and sugar.
 - b. Tea and coffee
 - c. Pen and ink.
 - d. Shirt and trousers.

5. In the case of straight line demand curve meeting the two axes, the price-elasticity of demand at mid-point of the line would be:
 - a. 0 b. 1 c. 1.5 d. 2

6. The law of demand, assuming other things to remain constant, establishes the relationship between.
- Income of the consumer and the quantity of a good demanded by him.
 - Price of a good and the quantity demanded.
 - Price of a good and the demand for its substitute.
 - Quantity demanded of a good and the relative prices of its complementary goods..
7. Identify the factor which generally keeps the price-elasticity of demand for a good low:
- Variety of uses for that good..
 - Very low price of a commodity.
 - Close substitutes for that good.
 - High proportion of the consumer's income spent on it.
8. Identify the co-efficient of price-elasticity of demand when the percentage increase in the quantity of a good demanded is smaller than the percentage fall in its price.
- | | |
|----------------------|----------------------|
| a. Equal to one | b. Greater than one. |
| c. Smaller than one. | d. Zero. |
9. In the case of an inferior good, the income elasticity of demand is:
- | | |
|--------------|--------------|
| a. Positive. | b. Zero. |
| c. Negative. | d. Infinite. |
10. If the demand for a good is inelastic, an increase in its price will cause the total expenditure of the consumers of the good to:
- Remain the same.
 - Increase.
 - Decrease.
 - Any of these.
11. If regardless of changes in its price, the quantity demanded of goods remains unchanged, then the demand curve for the goods will be:
- | | |
|-----------------------|-----------------------|
| a. Horizontal. | b. Vertical. |
| c. Positively sloped. | d. Negatively sloped. |

12. Suppose the price of the Pepsi increase, we will expect the demand curve of Coca Cola to:
- Shift towards left since these are substitutes.
 - Shift towards right since these are substitutes.
 - Remain at the same level.
 - None of the above.
13. All of the following are determinants of demand except:
- Tastes and preferences.
 - Quantity supplied.
 - Income of the consumer.
 - Price of related goods.
14. A movement along the demand curve for soft drinks is best described as:
- An increase in demand.
 - A decrease in demand.
 - A change in quantity demanded.
 - A change in demand.
15. If the price of the Pepsi decreases relative to the price of Coke and 7-UP the demand for:
- Coke will decrease.
 - 7-Up will decrease.
 - Coke and 7-Up will increase.
 - Coke and 7-Up will decrease.
16. If a good is a luxury, its income elasticity of demand is:
- Positive and less than 1.
 - Negative but greater than -1.
 - Positive and greater than -1.
 - Zero.
17. The price of hot dogs increase by 22% and the quantity of hot dogs demanded falls by 25%. This indicates that the demand for the hot dogs is:
- | | |
|-----------------------|-----------------------|
| a. Elastic. | b. Inelastic. |
| c. Unitarily elastic. | d. Perfectly elastic. |

18. If the quantity demanded of mutton increases by 5 % when the price of chicken increases by 20%, the cross-price elasticity of demand between mutton and chicken is.
- a. - 0.25 b. 0.25 c. - 4 d. 4
19. Given the following four possibilities, which one results in an increase in total consumer expenditure.
- a. Demand is unitary elastic and price falls.
b. Demand is elastic and prices rises.
c. Demand is inelastic and price falls.
d. Demand is inelastic and prices rises.
20. Which of the following statements about price elasticity of supply is correct?
- a. Price elasticity of supply is a measure of how much the quantity supplied of a good responds to a change in the price of that good.
b. Price elasticity of supply is computed as the percentage change in quantity supplied divided by the percentage change in price.
c. Price elasticity of supply in the long run would be different from that of the short run.
d. All the above
21. Which of the following is an incorrect statement?
- a) When goods are substitutes, a fall in the price of one (ceteris paribus) leads to a fall in the quantity demanded of its substitutes.
b) When commodities are complements, a fall in the price of one (other things being equal) will cause the demand of the other to rise.
c) As the income of the consumer increases, the demand for the commodity increases always and vice versa.
d) When a commodity becomes fashionable people prefer to buy it and therefore its demand increases.
22. Suppose the price of movies seen at a theatre rises from Rs. 120 per person to Rs. 200 per person. The theatre manger observes that the rise in price causes attendance at a given movie to fall from 300 persons to 200 persons. What is the price elasticity of demand for movies? (Use Arc Elasticity Method)
- (a) .5 (b) .8
(c) 1.0 (d) 1.2

23. Suppose a department store has a sale on its silverware. If the price of a plate – setting is reduced from Rs. 300 to Rs. 200 and the quantity demanded increases from 3,000 plate- setting to 5,000 plate –settings, what is the price elasticity of demand for silverware? (Use Arc Elasticity Method)
- (a) .8 (b) 1.0
(c) 1.25 (d) 1.50
24. When the numerical value of cross elasticity between two goods is very high, it means
- a) The goods are perfect complements and therefore have to be used together.
b) The goods are perfect substitutes and can be used with ease in place of one another.
c) There is high degree of substitutability between the goods.
d) The goods are neutral and therefore cannot be considered as substitutes.
25. If the local pizzeria raises the price of a medium pizza from Rs.60 to Rs. 100 and quantity demanded falls from 700 pizzas a night to 100 pizzas a night, the price elasticity of demand for pizzas is:
(Use Arc elasticity method)
- a. 67 b. 1.5
c. 2.0 d. 3.0
26. If electricity demand is inelastic, and electricity charges increase, which of the following is likely to occur?
- a. Quantity demanded will fall by a relatively large amount.
b. Quantity demanded will fall by a relatively small amount.
c. Quantity demanded will rise in the short run, but fall in the long run.
d. Quantity demanded will fall in the short run, but rise in the long run.
27. Suppose the demand for meals at a medium-priced restaurant is elastic. If the management of the restaurant is considering raising prices, it can expect a relatively:
- a. Large fall in quantity demanded.
b. Large fall in demand
c. Small fall in quantity demanded
d. Small fall in demand.

28. Points elasticity is useful for which of the following situations?

- a. The bookstore is considering doubling the price of notebooks.
- b. A restaurant is considering lowering the price of its most expensive dishes by 50 percent.
- c. An auto producer is interested in determining the response of consumers to the price of cars being lowered by Rs.100
- d. None of the above

29. A decrease in price will result in an increase in total revenue if:

- a. The percentage change in quantity demanded is less than the percentage change in price.
- b. The percentage change in quantity demanded is greater than the percentage change in price.
- c. Demand is inelastic.
- d. The consumer is operating along a linear demand curve at a point at which the price is very low and the quantity demanded is very high.

30. Demand for a good will tend to be more elastic if it exhibits which of the following characteristics?

- a. It represents a small part of the consumer's income.
- b. The good has many substitutes available.
- c. It is a necessity (as opposed to luxury)
- d. There is little time for the consumer to adjust to the price change.

31. An increase in price will result in an increase in total revenue if ? :

- a) The percentage change in quantity demanded is less than the percentage change in price.
- b) The percentage change in quantity demanded is greater than the percentage change in price.
- c) Demand is elastic.
- d) The consumer is operating along a linear demand curve at a point at which the price is very high and the quantity demanded is very low.

32. Demand for a good will tend to be more inelastic if it exhibits which of the following characteristic.
- The good has many substitutes.
 - The good is a luxury (as opposed to a necessity)
 - The good is a small part of the consumer's income.
 - There is a great deal of time for the consumer to adjust to the change in prices.
33. Suppose a consumer's income increases from Rs.30,000 to Rs.36,000. As a result, the consumer increases her purchases of compact discs (CDs) from 25 CDs to 30 CDs. What is the consumer's income elasticity of demand for CDs? (Use Arc Elasticity Method)
- 0.5
 - 1.0
 - 1.5
 - 2.0
34. Total utility is maximum when:
- Marginal utility is zero.
 - Marginal utility is at its highest point.
 - Marginal utility is negative.
 - None of the above.
35. Which one is not an assumption of the theory of demand based on analysis of indifference curves?
- Given scale a preferences as between different combinations of two goods.
 - Diminishing marginal rate of substitution.
 - Constant marginal utility of money.
 - Consumers would always prefer more of a particular good to less of it, other things remaining the same.
36. The consumer is in equilibrium at a point where the budget line:
- Is above an indifference curve.
 - Is below an indifference curve.
 - Is tangent to an indifference curve?
 - Cuts an indifference curve.
37. An indifference curve slopes down towards right since more of one commodity and less of another result in:
- Same level of satisfaction.
 - Greater satisfaction.
 - Maximum satisfaction.
 - Any of the above.

38. Which of the following statement is incorrect?
- An indifference curve must be downward-sloping to the right.
 - Convexity of a curve implies that the slope of the curve diminishes as one move from left to right.
 - The income elasticity for inferior goods to a consumer is positive.
 - The total effect of a change in the price of a good on its quantity demanded is called the price effect.
39. The second glass of lemonade gives lesser satisfaction to a thirsty boy. This is clear case of
- Law of demand
 - Law of diminishing returns
 - Law of diminishing utility
 - Law of supply
40. What will happen in the rice market if the buyers are expecting higher rice prices in the near future?
- The demand for rice will increase.
 - The demand for rice will decrease.
 - The demand for rice will be unaffected.
 - None of the above
41. If case of Giffen goods, the demand curve will be:
- Horizontal
 - Downward-sloping to the right.
 - Vertical
 - Upward-sloping to the right.
42. By consumer surplus, economist mean
- The area inside the budget line.
 - The area between the average revenue and marginal revenue curves.
 - The difference between the maximum amounts a person is willing to pay for a goods and its market price.
 - None of the above.

43. Which of the following is a property of indifference curve?
- It is convex to the origin.
 - The marginal rate of substitution is constant as you move along an indifference curve.
 - Marginal utility is constant as you move along an indifference curve.
 - Total utility is greatest where the 45 degree line cuts the indifference curve.
44. When the economist speak of the utility of a certain good, they are referring to
- The demand for the goods.
 - The usefulness of the goods in consumption.
 - The expected satisfaction derived from consuming the goods.
 - The rate at which consumers are willing to exchange one good for another.
45. A vertical supply curve parallel to Y axis implies that the elasticity of supply is:
- | | |
|------------------|--|
| a. Zero. | b. Infinity. |
| c. Equal to one. | d. Greater than zero but less than infinity. |
46. The supply of goods refers to:
- Actual production of the goods.
 - Total existing stock of the goods.
 - Stock available for sale.
 - Amount of the goods offered for sale of a particular price unit of time.
47. An increase in the supply of a good is caused by:
- Improvements in its technology.
 - Fall in the prices of other goods.
 - Fall in the prices of factors of production.
 - All of the above.
48. Elasticity of supply refers to the degree of responsiveness of supply of a good to change in its:
- Demand.
 - Price.
 - Cost of production.
 - State of technology.

49. A horizontal supply curve parallel to the quantity axis implies that the elasticity of supply is:
- a. Zero.
 - b. Infinite.
 - c. Equal to one.
 - d. Greater than zero but less than one.
50. Contraction of the supply is the result of:
- a. Decrease in the number of producers.
 - b. Decrease in the price of the good concerned.
 - c. Increase in the prices of other goods.
 - d. Decrease in the outlay of sellers.
51. Conspicuous goods also known as.
- a. Prestige goods.
 - b. Snob goods.
 - c. Veblen goods.
 - d. All of the above.
52. The quantity purchased remains constant irrespective of the change in income. This is known as
- a. Negative income elasticity of demand.
 - b. Income elasticity of demand is less than one.
 - c. Zero income elasticity of demand.
 - d. Income elasticity of demand is greater than one.
53. As income increases, the consumer will go in for superior goods and consequently the demand for inferior goods will fall. This means:
- a. Income elasticity of demand is less than one.
 - b. Negative income elasticity of demand.
 - c. Zero income elasticity of demand.
 - d. Unitary income elasticity of demand.
54. When income increases the money spent on necessities of life may not increase in the same proportion. This means:
- a. Income elasticity of demand is zero.
 - b. Income elasticity of demand is one.
 - c. Income elasticity of demand is greater than one.
 - d. Income elasticity of demand is less than one.

55. The luxury goods like Jewellery and fancy articles will have
- Low income elasticity of demand.
 - High income elasticity of demand.
 - Zero income elasticity of demand.
 - None of the above.
56. A good which cannot be consumed more than one is known as:
- Durable good
 - Non-durable good.
 - Producer good.
 - None of the above.
57. A relative price is.
- Price expressed in terms of money.
 - What you get paid for babysitting your cousin.
 - The ratio of one money price to another.
 - None of the above.
58. A point below the budget line of a consumer.
- Represents a combination of goods which costs the whole of consumer's income.
 - Represents a combination of goods which costs less than the consumer's income.
 - Represents a combination of goods which is unattainable to the consumer given his/her money income.
 - Willingness to pay for a good if income is larger enough.
59. Demand is the
- The desire for a commodity given its price and those of related commodities.
 - The entire relationship between the quantity demanded and the price of a good other things remaining the same.
 - Willingness to pay for a good if income is larger enough.
 - Ability to pay for a good.
60. If, as people's income increases, the quantity demanded of good decreases, the good is called.
- | | |
|----------------------|-------------------|
| a. A substitute. | b. A normal good. |
| c. An inferior good. | d. A complement. |

61. The price of tomatoes increases and people buy tomato puree. You infer that tomatoes puree and tomatoes are:
- Normal goods.
 - Complements.
 - Substitute goods.
 - A complement.
62. Chicken and fish are substitutes. If the price of the chicken increases, the demand for fish will:
- Increase or decrease but the demand curve for chicken will not change.
 - Increase and the demand curve for fish will shift right words.
 - Not change but there will be a movement along the demand curve for fish.
 - Decrease and demand curve for fish will shift leftwards.
63. Potatoes chips and popcorn are substitutes. A rise in the price of potato chips will _____ the demand for the popcorn and the quantity of popcorn will _____
- Increase; increase
 - Increase; decrease.
 - Decrease; decrease.
 - Increase; decrease.
64. If the price of Orange juice increases, the demand for Apple Juice will _____
- | | |
|---------------------|---------------------|
| a. Increase. | b. Decrease. |
| c. Remain the same. | d. Become negative. |
65. An increase in the demand for computers, other things remaining the same. .
- Increase the number of computers bought.
 - Decrease the price but increase the number of computers bought.
 - Increase the price of computers.
 - Increase the price and number of computers bought.
66. When total demand for a commodity whose price has fallen increases, it is due to:
- Income effect.
 - Substitution effect.
 - Complementary effect.
 - Price effect.

67. With a fall in the price of a commodity.
- Consumer's real income increases.
 - Consumer's real income decreases.
 - There is no change in the real income of the consumer.
 - None of the above.
68. With the increase in the price of diamond, the quantity demanded also increases. This is because it is
- Substitution good.
 - Complementary good.
 - Conspicuous good.
 - None of the above.
69. An example of a good that exhibit direct price-demand relationship is.
- Giffen goods.
 - Complementary goods.
 - Substitution goods.
 - None of the above.
70. In Economics, when demand for a commodity increases with a fall in its price it is known as:
- | | |
|---------------------------|-------------------------|
| a. Contraction of demand. | b. Expansion of demand. |
| c. No change in demand. | d. None of the above. |
71. The quantity supplied of a good or service is the amount that.
- Is actually bought during a given time period at a given place.
 - Producer's wish they could sell at a higher price.
 - Producer's plan to sell during a given time period at a given price.
 - People are willing to buy during a given time period at a given place.
72. Supply is the
- Limited resources that are available with the seller.
 - Cost of producing a good.
 - Entire relationship between the quantity supplied and the price of good.
 - Willingness to produce a good if the technology to produce it becomes.

73. In the book market, the supply of books will decrease if any of the following occurs except.
- A decrease in the number of book publishers.
 - A decrease in the price of the book.
 - An increase in the future expected price of the book.
 - An increase in the price of paper used.
74. If the price of computers increases by 10% and supply increases by 25%, the elasticity of supply is
- a. 2.5 b. 0.4 c. (-)2.5 d. (-)0.4
75. An increase in the number of sellers of bikes will increase the.
- The price of a bike
 - Demand for bikes.
 - The supply of bikes.
 - Demand for the helmets.
76. If the supply of bottled water decreases, other things remaining the same, the equilibrium price _____ and the equilibrium quantity _____ .
- Increase; decrease.
 - decrease; Increase
 - Decrease; decrease.
 - Increase; Increase
77. A decrease in the demand for cameras, other things remaining the same will.
- Increase the number of cameras bought.
 - Decrease the price but increase the number of cameras bought.
 - Increase the price of cameras.
 - Decrease the price and decrease in the number of cameras bought.
78. If good growing conditions increase the supply of strawberries and hot weather increase the demand for strawberries, the quantity of strawberries bought. _____ .
- Increases and the price might rise, fall or not change.
 - Does not change but the price rises.
 - Does not change but the price falls.
 - Increases and the price rises.
79. Comforts lies between.
- Inferior goods and necessities.
 - Luxuries and inferior goods.
 - Necessaries and luxuries.
 - None of the above.

80. In a very short period, the supply.

- a. Can be changed.
- b. Cannot be changed.
- c. Can be increased.
- d. None of the above.

81. When supply curve moves to the left, it means.

- a. Smaller supply at a given price.
- b. Larger supply at a given price.
- c. Constant supply at a lower price.
- d. None of the above

82. When the supply curve moves to right, it means.

- a. Supply increase.
- b. Supply decrease.
- c. Supply remains constant.
- d. None of the above.

83. The elasticity of supply is defined as the.

- a. Responsiveness of the quantity supplied of a good to a change in its price.
- b. Responsiveness of the quantity supplied of a good without change in its price.
- c. Responsiveness of the quantity demanded of a good to change in its price.
- d. Responsiveness of the quantity demanded of a good without change in its price.

84. Elasticity of supply is measured by dividing the percentage change in quantity supplied of a good _____.

- a. Percentage change in income.
- b. Percentage change in quantity demanded of goods.
- c. Percentage change in price.
- d. Percentage change in taste and preference.

85. Elasticity of supply is zero means.

- a. Perfect inelastic supply.
- b. Perfectly elastic supply.
- c. Imperfectly elastic demand.
- d. None of the above.

86. Elasticity of supply is greater than one when.

- a. Proportionate change in quantity supplied is more than the proportionate change in price.
- b. Proportionate change in price is greater than the Proportionate change in quantity supplied.
- c. Change in price and quantity supplied are equal.
- d. None of the above.

87. If the quantity supplied is exactly equal to the relative change in price then the elasticity of supply is

- a. Less than one.
- b. Greater than one.
- c. One.
- d. None of the above.

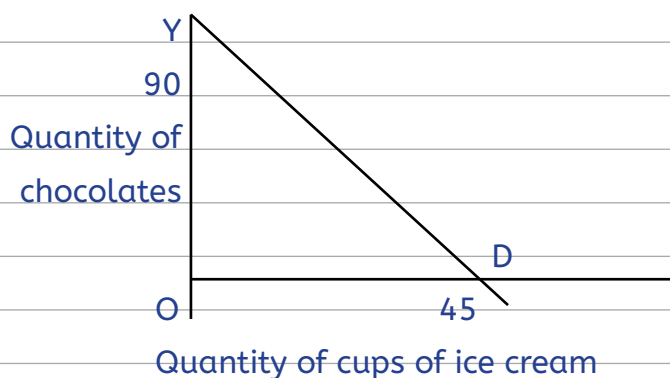
88. The price of the commodity decreases from Rs. 6 to Rs.4 and the quantity demanded of the goods increases from 10 units to 15 units, find the coefficient of price elasticity. (Use Point elasticity Method)

- a. 1.5
- b. 2.5
- c. -1.5
- d. 0.5

89. The supply function is given as $Q = -100 + 10P$. Find the elasticity using point method, when price is Rs. 15.

- a. 4
- b. -3
- c. -5
- d. 3

90. The figure below shows the budget constraint of a consumer with an income of Rs.900/- to spend on two commodities, namely ice cream and chocolates.



The prices of these two commodities respectively are:

- a. Rs.10 and Rs.20.
- b. Rs.20 and Rs.10.
- c. Rs.10 and Rs.5.
- d. Any of the above.

91. Which of the following statements about price elasticity of demand is correct?
- Price elasticity of demand is a measure of how much the quantity demanded of a good responds to change in the price of that good.
 - Price elasticity of demand is computed as the percentage change in quantity demanded divided by the percentage change in price.
 - Price elasticity of demand in the long run would be different from that of the short run.
 - All of the above.
92. The aim of the consumer in allocating his income is to _____ .
- Maximize his total utility.
 - Maximize his marginal utility.
 - To buy the goods he wants most whatever the price.
 - To buy the goods which he expects to be short in supply.
93. At higher prices demand more of certain goods not for their worth but for their prestige value- This is called.
- Veblen effect.
 - Giffens paradox.
 - Speculative effect.
 - None of the above.
94. If the price of air-conditioner increases from Rs.30,000 to Rs.30,010 and resultant change in demand is negligible, we use the measure of _____ to measure elasticity.
- Point elasticity.
 - Perfect elasticity.
 - Perfect in elasticity.
 - Price elasticity.
95. If the percentage change in supply is less than the percentage change in price is called
- Unit elasticity of supply.
 - Perfectly elastic.
 - More elastic supply.
 - Inelastic supply.
96. The supply curve shifts to the right because of _____
- Improved technology.
 - Increased price of factors of production.
 - Increased excise duty.
 - All of the above.

97. Which of the following statements is correct?

- a. When the price falls the quantity demanded falls.
- b. Seasonal changes do not affect the supply of a commodity.
- c. Taxes and subsidies do not influence the supply of the commodity.
- d. With lower cost, it is profitable to supply more of the commodity.

98. If the demand is more than supply, then the pressure on price will be.

- a. Upward.
- b. Downward.
- c. Constant.
- d. None of the above.

99. The supply curve for perishable commodities is _____.

- a. Elastic
- b. Inelastic
- c. Perfectly elastic
- d. Perfectly inelastic.

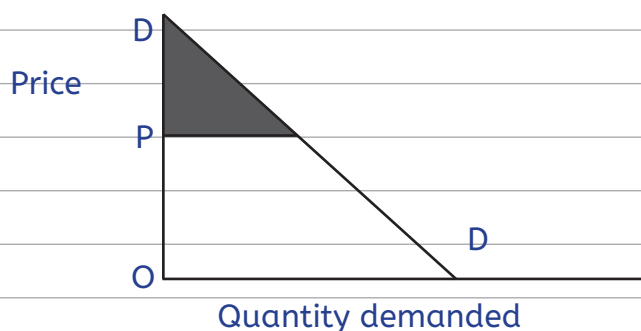
100. Supply is a _____ concept.

- a. Stock.
- b. Flow and stock.
- c. Flow.
- d. None of the above.

101. The cross elasticity between Rye bread and Whole Wheat bread is expected to be:

- a. Positive.
- b. Negative.
- c. Zero.
- d. Can't say.

102. In the diagram given below, the shaded portion represents.



- a. Prices above which there is no demand for the commodity.
- b. Monopoly price of the commodity.
- c. Consumer surplus.
- d. None of the above.

103. The income elasticity of tomatoes is 0.25, it means tomatoes are:

- a. Inferior goods.
- b. Luxury goods.
- c. Normal goods.
- d. Can't say.

104. The cross elasticity between personal computer and soft ware's is:

- a. Positive.
- b. Negative.
- c. Zero.
- d. One.

105. The cross elasticity between Bread and DVDs is:

- a. Positive.
- b. Negative.
- c. Zero.
- d. One.

106. Which of the following statements is correct?

- a. With the help of statistical tools, the demand can be forecasted accurately.
- b. The more the number of substitutes of a commodity, more elastic is the demand.
- c. Demand for the butter is perfectly elastic.
- d. Gold jewellery will have negative income elasticity.

107. Suppose the income elasticity of education in private school in India is 1.6. What does this indicate?

- a. Private school education is a luxury.
- b. Private school education is a necessity.
- c. Private school education is an inferior commodity.
- d. We should have more private schools.

108. Suppose potatoes have (-) 0.4 as income elasticity. We can say from the data given that:

- a. Potatoes are inferior goods.
- b. Potatoes are superior goods.
- c. Potatoes are necessities.
- d. There is a need to increase the income of consumers so that they can purchase potatoes.

ANSWERS :

1	d	2	b	3	c	4	b	5	b	6	b
7	b	8	c	9	c	10	b	11	b	12	b
13	b	14	c	15	d	16	c	17	a	18	b
19	d	20	d	21	c	22	b	23	c	24	c
25	d	26	b	27	a	28	c	29	b	30	b
31	a	32	c	33	b	34	a	35	c	36	c
37	a	38	c	39	c	40	a	41	d	42	c
43	a	44	c	45	a	46	d	47	d	48	b
49	b	50	b	51	b	52	c	53	b	54	d
55	b	56	b	57	c	58	b	59	b	60	c
61	c	62	b	63	a	64	a	65	d	66	d
67	a	68	c	69	a	70	b	71	c	72	c
73	b	74	a	75	c	76	a	77	d	78	a
79	c	80	b	81	a	82	a	83	a	84	c
85	a	86	a	87	c	88	c	89	d	90	b
91	d	92	a	93	a	94	a	95	d	96	a
97	d	98	a	99	d	100	c	101	a	102	c
103	c	104	b	105	c	106	b	107	a	108	a

ADDITIONAL MCQ'S FOR PRACTICE



1. If demand for a good is price elastic, a fall in price will lead to _____
 - a. a rise in total expenditure on the good
 - b. a fall in sales
 - c. a fall in the price expenditure on the good
 - d. no change

2. Which of the following would not, of itself, cause a shift of the demand curve for a product?
 - a. a change in consumers preference
 - b. a change in consumers income
 - c. a change in price of the product
 - d. a change in the price of related products

3. When as a result of decrease in the price of a good, the total expenditure made on it decreases, we say that price elasticity of demand is _____
 - a. less than unity
 - b. unity
 - c. zero
 - d. greater than unity

4. The point at elasticity at the mid-point on the demand curve is _____
 - a. One
 - b. zero
 - c. less than one
 - d. greater than one

5. If the price of apples rises from Rs30 per kg to Rs40 per kg and the supply increases from 240kg to 300kg, elasticity of supply is _____
 - a. 0.75
 - b. 0.67
 - c. (-) 0.67
 - d. (-) 0.75

6. If the price of 'x' rises by 10 per cent and the quantity demanded falls by 10 percent, 'x' has _____
 - a. inelastic demand
 - b. unit elastic demand
 - c. zero elastic demand
 - d. elastic demand

7. The things remaining same, when a consumer's income increases his equilibrium point moves to _____
 - a. a higher indifference curve
 - b. a lower indifference curve
 - c. remains unchanged on the same indifference curve
 - d. moves to the left-hand side on the same difference curve

8. Which of the following, elasticities measure a movement along a curve rather than a shift curve?
- the price elasticity of demand
 - the income elasticity of demand
 - the cross elasticity of demand
 - all of the above
9. A consumer is in equilibrium at the point of tangency of his indifference curve and the price line because_____
- he does not want to go beyond in
 - he cannot go beyond it
 - he cannot go below it
 - he is confused
10. Given the consumer's indifference map and money income, the equilibrium position of the consumer will be on the indifference curve, which is_____
- highest in indifference map
 - lowest in the difference map
 - highest but cut the price line
 - highest but tangent to the price line
11. A change in climatic conditions resulting in hot weather, prices remaining the same, would cause a consumer of cold drinks_____
- to move to lower demand curve
 - to move to a higher demand curve
 - to move up the same demand curve
 - to move lower down the demand curve
12. Extension and contraction of demand mean _____
- movement to a higher demand curve
 - movement to a lower demand curve
 - movement along the demand curve
 - both(a) and (b)

13. Situation where an increase in price of commodity may increase the quantity demanded may be due to _____
- normal law of demand
 - expectation of further rise in price
 - better quality of the product
 - both(b) and (c)
14. The concept of elasticity of demand was developed by _____
- Alfred Marshall
 - Edwin Camon
 - Paul Samuelson
 - Fredric Banham
15. The income of a household rises by 10% the demand for washing machine rises by 20%. This means washing machine (in economics) is a/an _____
- inferior good
 - luxury good
 - necessity
 - cannot say
16. Which of the following pairs of goods is an example of substitutes?
- shirts and trousers
 - pen and ink
 - petrol and diesel
 - coffee and sugar
17. The value of elasticity co-efficient varies between _____
- zero and infinity
 - zero and one
 - one and infinity
 - none of the above
18. Ceteris paribus' clauses in the law of demand does not mean _____
- the price of the commodity does not change
 - the price of its substitution does not change
 - the income of the consumer does not change
 - the price of the complementary goods does not change
19. An exceptional demand curve is one that slopes _____
- upward to the right
 - downward to the right
 - upward to the left
 - horizontally
20. An income demand curve for inferior commodity always slopes _____
- Upward to the right
 - backward to the left
 - downwards to the right
 - horizontally

21. When the demand curve is a rectangular hyperbola, it represents _____
- unitary elastic demand
 - perfectly elastic demand
 - perfectly inelastic demand
 - relatively elastic demand
22. If total consumer expenditure on a good falls as its price falls this indicates that _____
- $ep < 1$
 - $ep > 1$
 - $ep = 1$
 - $ep = 0$
23. Elasticity of demand is equal to unity while marginal revenue is _____
- positive
 - zero
 - negative
 - indeterminate
24. Ceteris Paribus, a change in the price of a commodity causes the quantity purchased of its complements to move _____
- in the same direction
 - in the opposite direction
 - in an insignificant manner
 - cannot be known
25. Which of the following is the method of measuring elasticity of demand when change in price of a commodity is substantial?
- percentage method
 - point method
 - arc method
 - none of these
26. While analysing Marshall's measure of consumer's surplus one assumes _____
- imperfect competition
 - perfect competition
 - monopoly
 - monopsony
27. For a positively sloped straight line supply curve that intersects the price axis elasticity is _____
- equal to zero
 - equal to one
 - greater than one
 - constant
28. Any straight- line supply curve, which cuts the axis, will have _____
- an elasticity greater than one
 - unitary elasticity of supply
 - an elasticity less than one
 - zero elasticity of supply

29. The slopes of indifference curves indicates _____
- Price ratio between two commodities
 - Marginal rate of substitution
 - Factors substitution
 - Level of indifference
30. When the marginal utility is decreasing it means that the total utility is _____
- Increasing
 - decreasing
 - increasing if the marginal utility still remains positive
 - None of the above
31. The Doctrine of consumer surplus is based on _____
- Indifference curve analysis
 - revealed preference theory
 - Law of substitution
 - The law of diminishing marginal utility
32. Consumer has low consumer surplus on _____ of the commodity consume.
- First Unit
 - Second Unit
 - All units
 - Last unit
33. Consumer stops purchasing additional unit of the commodity when _____
- Marginal utility starts declining
 - Marginal utility becomes zero
 - Marginal utility is equal to marginal utility of money ($M_u_x = M_u_m$)
 - Total utility is increasing
34. In difference map is drawn only when _____
- Prices of the commodities are given
 - Income of the consumer is given
 - Taste and preferences of the consumer are given
 - none of the above
35. Which of the following is not a property of indifference curves?
- Convex to the origin
 - Slopes downwards to the right
 - Parallel to the each other
 - cannot intersect each other

36. Shift in demand is associated with _____
- a. Increase in demand b. decrease in demand
c. extension of demand d. both (a) & (b)
37. In case of _____ goods, demand increases with decrease in income of the consumer
- a. Inferior goods b. complementary goods
c. Normal goods d. all the above
38. Consumer surplus is best described as _____
- a. Extra utility b. Price paid
c. Sacrifice of commodities d. All the above
39. Demand for final consumption arises in _____
- a. Household sector only
b. government sector only
c. Both government & household sectors
d. Neither household nor government sector.
40. A necessity is defined as a good having _____
- a. a positive income elasticity of demand
b. a negative income elasticity of demand
c. an income elasticity of demand less than 1
d. an own price elasticity of demand greater than 1
41. Goods which can be consumed more than once are called as
- a. non durable b. circulating goods c. durable goods d. none
42. Consumer surplus is the area _____
- a. below demand curve and above the price
b. above the supply curve and below the price
c. above the demand curve and below the price
d. below the supply curve and above the price
43. Consumer surplus is higher in case of _____
- a. necessities b. luxuries
c. comforts d. conventional necessities

44. All the points on a budget line represent _____
- a. increasing total expenditure
 - b. decreasing total expenditure
 - c. the same total expenditure
 - d. none of the above
45. Forecasting method which is more reliable, superior and free from subjectivity
- a. Expert opinion method
 - b. Statistical method
 - c. Delphi method
 - d. grass root method
46. Controlled experiment method is also known as
- a. Buyers survey method
 - b. Market experiment method
 - c. barometric method
 - d. Graphical method
47. _____ Demand refers to demand with its immediate reaction to changes in product price etc
- a. Short run demand
 - b. long run demand
 - c. Very short run demand
 - d. very long run demand
48. _____ Method is based on assumption that past rate of changes will continue in future
- a. graphical method
 - b. Least square method
 - c. Regression analysis
 - d. Trend projection method
49. Income left after deducting taxes is called as
- a. direct income
 - b. Personal income
 - c. personal disposable income
 - d. indirect income

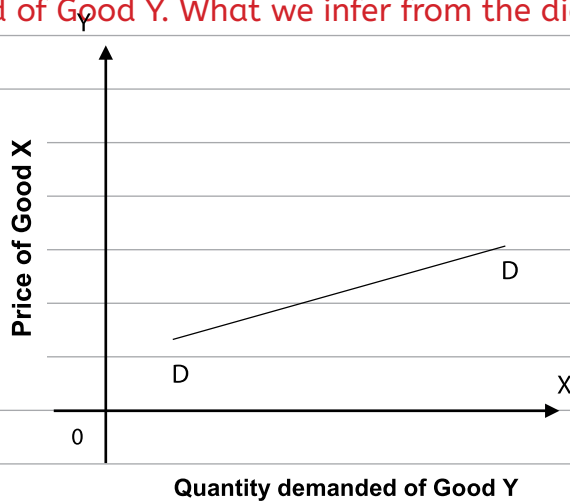
ADDITIONAL MCQ'S BY ICAI



1. If the organizers of an upcoming cricket match decide to increase the ticket price in order to raise its revenue, what they have learned from past experience;
 - (a) The percentage increase in ticket rates will be always equal the percentage decrease in tickets sold
 - (b) The percentage increase in ticket rate will be always greater than the percentage decrease in tickets sold
 - (c) The percentages increase in ticket rate will be less than the percentage decrease in ticket sold
 - (d) (a) and (c) above are true

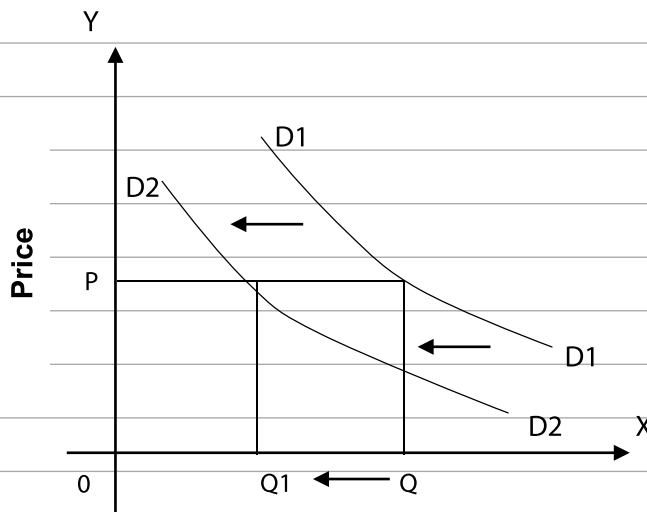
2. Data on production of vegetables for the past two years showed that, despite stable prices, there is a substantial decline in output of cabbage leading to lower supply into the market. Which of the following can possibly be the reason?
 - (a) An increase in the price of cauliflower which is equally preferred by consumers
 - (b) Announcement of a subsidy by government on vegetable production
 - (c) More farmers producing cabbage and the increasing competition among them
 - (d) A substantial decrease in the price of capsicum

3. The following diagram shows the relationship between price of Good X and quantity demanded of Good Y. What we infer from the diagram is;



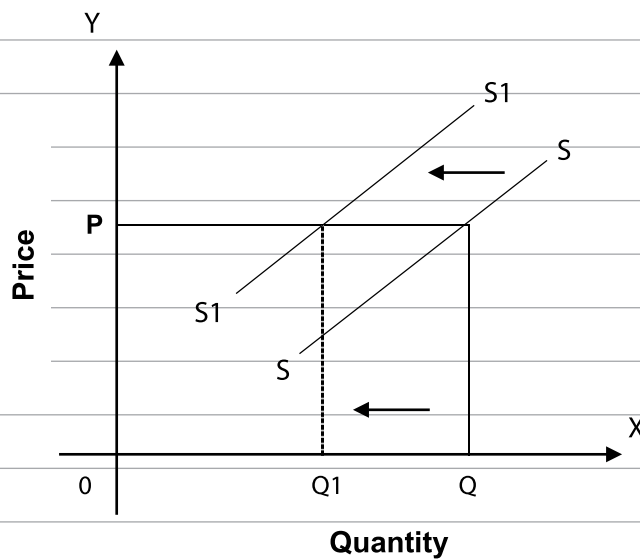
- (a) Good X and Good Y are perfect complements
- (b) Good X and Good Y are perfect substitutes
- (c) Good X and Good Y are remote substitutes
- (d) Good X and Good Y are close substitutes

4. The diagram given below shows



- a) A change in demand which may be caused by a rise in income and the good is a normal good
- b) A shift of demand curve caused by a fall in the price of a complementary good
- c) A change in demand which is caused by a rise in income and the good is an inferior good
- d) A shift of demand curve caused by a rise in the price of a substitute and the good is a normal good.

5. Which of the following alternative would be true if the event presented in the following diagram occurs?



- a) A fall in wage costs of the firm along with a fall in consumer incomes
- b) A shortage of raw material and consequent increase in raw material price
- c) An increase in subsidy by the government and a reduction in taxes
- d) Decrease in the market price of the commodity in question

6. The demand curve of a normal good has shifted to the right. Which of the four events would have the shift?
- A fall in the price of a substitute with the price of the good unchanged.
 - A fall in the nominal income of the consumer and a fall in the price of the normal good
 - A fall in the price of a complementary good with the price of the normal good unchanged
 - A fall in the price of the normal good, other things remaining the same
7. If roller – coaster ride is a function of amusement park visit, then, if the price of amusement park entry falls
- The demand for roller – coaster rides will rise and the demand curve will shift to right
 - The demand for roller coaster ride cannot be predicated as it depends on the tastes of consumers for the ride
 - There will be an expansion in the demand for roller coaster drive as it complementary
 - None of the above
8. If a short run supply curve is plotted for the following table which presents price and quantity of fighter aircraft, what will be its shape?

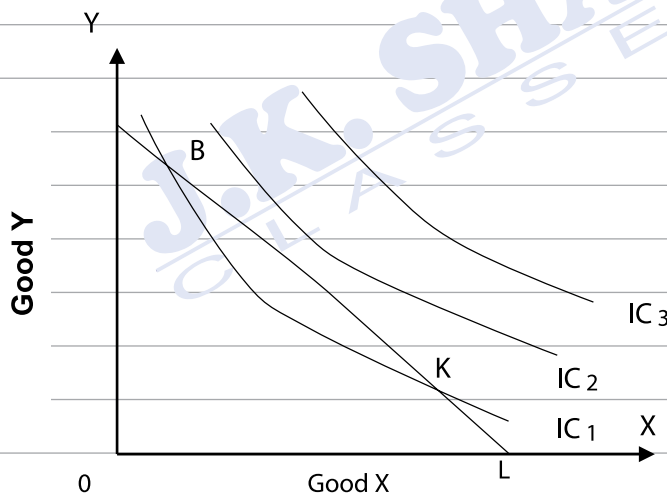
Price in millions of \$	Numbers of Aircraft
124	28
140	28
150	28
160	28
175	28

- Horizontal straight line parallel to the quantity axis
- Steeply rising with elasticity less than one
- Vertical straight line parallel to Y axis
- A perfectly elastic supply curve

9. The average income of residents of two cities A and B and the corresponding change in demand for two goods is given in the following table. Which of the following statements is true?

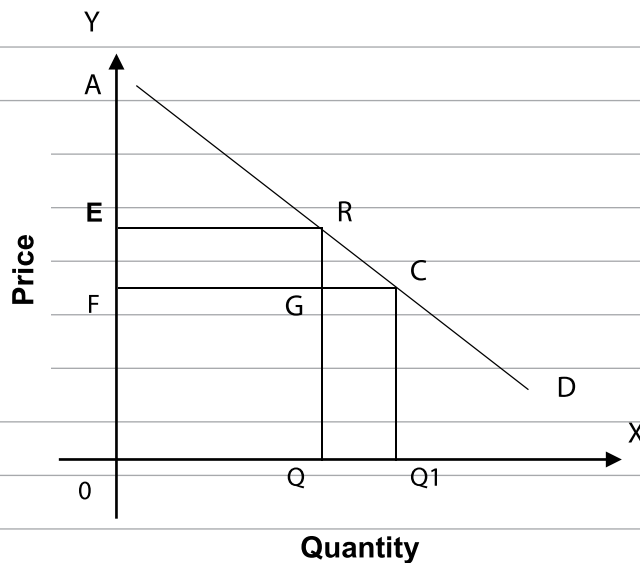
City	% Increase in Income	% change in demand for Good X	% change in demand for Good Y
A	12	6.5	- 2.3
B	9	5.6	1.6

- (a) Both goods are normal goods in both cities A and B
 (b) Good X is a normal good in both cities; good Y is an inferior good in city A
 (c) Good X is a normal good in both cities; good Y is an inferior good in city B
 (d) Need more information to make an accurate comment
10. If this consumer is spending her entire income and consuming at point B, what advise will you her?



- (a) No advise needed, as she is maximizing her utility at B
 (b) Consume more of Good X and less of Good Y
 (c) Consume more of X and less of Y and reach point K
 (d) Consumer same quantity of Good Y and more of Good X
11. Which of the following statements is true about this consumer?
- (a) The consumer is not maximizing her utility at point K
 (b) The consumer is spending her entire income on both goods
 (c) The consumer gets equal pleasure at point B and K
 (d) All the above

12. The effect on consumer surplus of a fall in price from E to F is



- (a) A decrease in consumer surplus by EFGR
- (b) A decrease in consumer surplus by AER
- (c) A decrease in consumer surplus by EFCR
- (d) None of The above

13. When price from F to E, the increase in revenue earned by the seller is

- (a) Equivalent to area EFGR
- (b) Equivalent to area EFCR
- (c) Equivalent to area AER
- (d) None of the above

14. How would that budget line be effected if the price of both goods fell?

- (a) The budget line would not shift
- (b) The new budget line must be parallel to the old budget line
- (c) The budget line must be shifting to the left
- (d) The new budget line will have the same slope as the original so long as the prices of both goods change in the same proportion.

15. During a recession, economies experience increased unemployment and a reduced level of income. How would a recession likely to affect the market demand for new car?

- (a) Demand curve will shift to the right.
- (b) Demand curve will shift to the left.
- (c) Demand will not shift, but the quantity of cars sold per month will decrease.
- (d) Demand will not shift, but the quantity of cars sold per month will increase.

Answers:

1	2	3	4	5	6	7	8
(b)	(a)	(d)	(c)	(b)	(c)	(a)	(c)
9	10	11	12	13	14	15	
(b)	(b)	(d)	(c)	(a)	(d)	(b)	

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CLASSES

CHAPTER 3**THEORY OF PRODUCTION
AND COST**

1.
 - ❖ Production is one of the important economic activity that takes place in any economy apart from consumption and investments.
 - ❖ An individual firm is the micro-economic unit which undertake the production of goods and services.
 - ❖ A firm's survival depends upon whether it is able to achieve optimum efficiency in production by minimizing the cost of production.
 - ❖ Production is the transformation of resources into goods and services. In other words, production is the act of transformation of INPUTS into OUTPUT which satisfies the wants of some people.
E.g.-Inputs of sugarcane, capital and labour are used to produce SUGAR.
Production also includes production of SERVICES like those of lawyers, teachers, doctors, etc.
 - ❖ Man cannot create or destroy matter.
 - ❖ Thus, production means creation of those goods and services which have economic utilities i.e., exchange value.
 - ❖ Professor J. R. Hicks has defined production "as any activity whether physical or mental, which is directed to the satisfaction of other people's wants through exchange."

**2. UTILITIES may be created or added in many ways, such as:-****a) Form Utility**

- ❖ It is created by changing the form of raw materials into finished goods for man's use.

- ❖ E.g. converting raw cotton into cotton fabric.
- ❖ Form utility is created by manufacturing industries.

b) Place Utility

- ❖ It is created by transporting goods from one place to another.
- ❖ E.g. when goods are taken from factory to marketplace, place utility is created.
- ❖ Transport services are involved in creation of place utility.

c) Time Utility

- ❖ It is created by making things available when they are required.
- ❖ E.g. Banks create time utility by granting overdraft facilities.

d) Service Utility (Personal Utility)

- ❖ It is created by providing personal services to the customers by professionals like lawyers, doctors, bankers, shopkeepers, teachers, transporters, etc.

**3. FACTORS OF PRODUCTION****Land:**

- ❖ Generally, land means earth's surface.
- ❖ However, in economics land refers to all the free gifts of nature i.e. natural resources. Land includes natural resources:
 1. on the surface of earth; E.g. Soil, forest, plots of land, etc.;
 2. Below the surface of earth, E.g. mineral deposits, etc., and
 3. Above the surface of earth, E.g. climate, sunshine, rain, etc.

❖ Land has the following characteristics:-

1. **Primary Factor.** Land is the original and primary or natural factor of production. It provides various natural resources for production.
2. **Free Gift of Nature.** Land is the creation of nature and not man made. It is a free gift of nature to mankind.
3. **Inelastic Supply.** Land is fixed in supply. Its supply cannot be either increased or decreased by any human efforts. However, its supply is perfectly inelastic from the point of view of an economy.
4. **Lacks Geographical Mobility.** Land cannot be moved bodily from one place to another. However, land is said to be mobile in the sense it can be put to many alternative uses.
5. **Passive Factor.** Land does not yield any result unless human efforts and capital are employed.
6. **Heterogeneous.** Land differs in nature, fertility, uses and productivity from one place to another.
7. **Permanent.** It means that land cannot be destroyed. The productive power of soil is original and indestructible according to RICARDO.
8. **Diminishing Returns.** The land is subject to the Law of Diminishing Returns more quickly in the cultivation of land.

Labour:

- ❖ Labour in economics means any work whether physical or mental done in exchange for some monetary reward.
- ❖ Anything done out of love and affection is not labour in economic sense.

- ❖ Labour has the following peculiarities (characteristics) which makes it different from other factors:

1. Labour is inseparable from labourer.

- ❖ All other suppliers of factors can be separated from the factors which they supply. E.g. Land can be separated from its owner.
- ❖ However, the labourer cannot be separated from the work which he performs. E.g. A doctor has to attend his patients in person. Labour is connected with HUMAN EFFORTS.

2. Human Factor.

- ❖ It is a live factor of production. Hence, labour has feelings and temperament.
- ❖ So it is very much affected by surroundings, working conditions, motivation, leisure, recreation, working hours, etc.

3. Highly perishable.

- ❖ Labour cannot be stored for future use. It is highly perishable.
- ❖ A day lost without work means a day's work gone forever.
- ❖ Hence, labourer has weak bargaining power and has to accept even low wages.

4. The labourer sells his services and not himself.

- ❖ In the labour market it is labour which is brought and sold and not the labourer.

5. Heterogeneous.

- ❖ Labour power differs from labourer to labourer
- ❖ Labour power depends upon physical strength, education, skill, training, efficiency, etc.
- ❖ Hence, labour can be classified as unskilled, semi-skilled and skilled labour.

❖ The skilled labour is called as human capital.

6. Restricted Mobility.

❖ Labour is a mobile factor.

❖ Labour is much less mobile than capital.

❖ Labourer is human being and hence has attachment with his family, custom, religion, culture, etc. and so is hesitant to move from one place to another.

7. Active Factor.

❖ Labour is the most active factor of production. Other factors are made operative with the use of labour.

8. Labour has sociological characteristics.

❖ Employment of labour involves problems relating to labour welfare.

❖ E.g. Social security like provident fund, gratuity, medical benefits, pension, etc.

❖ Other factors do not have such characteristics.

9. Supply curve of labour is backward sloping.

10. The supply of labour is inelastic in short run.

Capital:

❖ In ordinary language, capital is used in the sense of money.

❖ But in economics the term 'Capital' means man made stock of goods like factories, machines, tools, equipments, raw materials, dams, canals, transport vehicles, etc. which are used in production.

❖ Thus, 'Capital' in economics is used in the sense of real capital i.e. capital goods.

❖ Capital has therefore, been rightly defined as "produced means of production" and as "man made instrument of production".

- ❖ Land and labour are primary or original factors of production. But capital is produced by man working with nature to help in the production of further goods. Following are the main characteristics of capital:-

1. Capital is man-made.

- ❖ Capital is not produced by nature. It is artificial as it is produced by man.

2. Capital is productive.

- ❖ Use of capital increases the overall productivity in a given process. It provides tools and implements to labour for production.

3. Supply of capital is elastic.

- ❖ The supply of capital can be adjusted to demand.
- ❖ The stock of capital depends on capital formation.
- ❖ Thus, by raising the rates of savings and investments the supply of capital can be increased.

4. All capital is wealth.

- ❖ Capital is that part of wealth which is used in further production of wealth.
- ❖ Hence, capital has all the characteristics of wealth like utility, scarcity, transferability and price.

5. Capital is a passive factor.

- ❖ It alone is unable to produce anything. It is ineffective without the use of labour and land.

6. Capital is the most mobile factor.

- ❖ It has both place as well as occupational mobility.

7. Capital is durable.

- ❖ Physical capital assets like plant and machinery, factor buildings, etc. last over a long time in the process of production. However, they are subject to depreciation.

8. Capital involves social cost.

- ❖ In the creation of capital, the money to be used for present consumption has to be diverted.
- ❖ Sacrifice of present consumption and enjoyment of the people is treated as a social cost.

**4. TYPES OF CAPITAL**

- ❖ **Fixed capital.** Those durable physical assets which can be repeatedly used in the process of production for long periods are called fixed capital. E.g. Machinery, Plant, Tools, Factories, Railways, etc.
- ❖ **Circulating or Working Capital.** Working capital refers to those goods which are used up in the single act of production. Such goods are used only ONCE in production. E.g. raw materials, power, fuel, etc. They are single use producer's goods.
- ❖ **Sunk Capital.** Sunk capital is the capital which is used to produce only one single commodity. It can be put to a single specialized use only. E.g. A brick kiln can be used only to bake brick and nothing else. Sunk capital therefore, lacks occupational mobility.
- ❖ **Floating Capital.** Floating capital is that which can be put to several uses. E.g. electricity, money leather, etc.
- ❖ **Real capital.** Real capital refers to the physical capital goods like machinery, raw material, factory buildings, etc. which help in production.
- ❖ **Human capital.** The human capital is in the form of people who are equipped with education, skills, training, good health, etc. A faster economic growth can be achieved with the accumulation of human capital.
- ❖ **Tangible capital.** Tangible capital is one which can be seen and touched. E.g. machinery tools, etc. in other words, it is real capital.
- ❖ **Intangible capital.** It cannot be seen or touched. It can only be felt. E.g. goodwill, etc.

- ❖ **Money capital.** It is in the form of shares, debenture, bonds, stock certificates, etc. Money is invested in expectations of returns.
- ❖ **Individual capital.** Capital resources having personal or private ownership of an individual or group of individuals is called individual capital. E.g. Tata Enterprises.
- ❖ **Social capital.** The capital which is owned by the society as a whole is called social capital. E.g. roads, railways, schools, dams, canals, etc.



5. CAPITAL FORMATION

- ❖ Capital formation means a sustained increase in the stock of real capital in a country.
- ❖ It is thus, an addition of capital goods like machines, tools, factories, transport facilities, power, etc. in the country.
- ❖ Such capital goods are used for further production of goods and thus increase the production capacity of the country.
- ❖ Capital formation is also known as investment.
- ❖ Capital formation plays an important role in the development of an economy generally, higher the rate of capital formation, more economically developed an economy would be.
- ❖ There are mainly three stages of capital formation which are as follows:
 - a) Savings.
 - b) Mobilization of savings
 - c) Investments.



6. ENTREPRENEURSHIP

The entrepreneur owns entrepreneurship. He is that man of production who takes decisions and bears risk. He has also been called the organizer, the manager or risk taker.

Functions of an entrepreneur:

- i. **Initiating a business enterprise and coordination:** The first and foremost function of an entrepreneur is to start a business by collecting various factors of production. Entrepreneur pays remuneration for the various factors of production, remuneration for their services. Whatever surplus is left is his factor payment. If there is no surplus left, he gets no factor payment.
 - ii. **Risk bearing and uncertainty:** Many economists have emphasized that true function of enterprise is to bear risk and uncertainty. According to F.H. Knight, certain risks (insurable risks) like risks of fire, thefts, and accidents, etc., do not cause uncertainty, and thus, do not give rise to profits. It is only non-insurable risks (like risks relating to price decision, output decision, and product variation decision, etc.,) that involve uncertainty and give rise to profits.
 - iii. **Innovation:** some economists regard innovation as the true function of the entrepreneur. In broad sense, innovations include introduction of new production methods, utilization of new sources of raw materials, adoption of new forms of organization, introduction of new product, and discovering new markets.
- 7. Enterprise's objectives and constraints:** The standard assumption about an enterprise is that its business activity is carried out with the sole objective of earning profits. However, in the real world, enterprises do not make decisions based exclusively on profit maximisation objective alone. The objectives of an enterprise may be broadly categorised under the following heads.
- i. **Organic objectives:** The basic minimum objective of all kinds of enterprise is to survive or to stay alive. An enterprise can survive only if it is able to produce and distribute products or services at a price which enables it to recover its costs.
 - ii. **Social objectives:** Since an enterprise lives in a society, it cannot grow unless it meets the needs of the society, say for example- providing employment for society people.
 - iii. **Human objective:** Human beings are the most precious resources of an organisation. If they are ignored, it will be difficult for an enterprise to achieve any of its other objectives.

iv. **National objectives:** An enterprise should endeavour for fulfilment of national needs and aspirations and work towards implementation of national plans and policies.

Enterprise's problems: An enterprise faces a number of problems from its inception, through its lifetime and till its closure, following are a few problems relating to:

- i. **Objectives:** The enterprise faces the problem of not only choosing its objectives but also striking a balance among them.
- ii. **Location and size of the plant:** An enterprise has to decide whether the plant should be located near the source of raw material or near the market.
- iii. **Selecting and organising physical facilities:** Decision on the nature of production process to be employed and the type of equipments to be installed, which further depends upon the design chosen and the required volume of production.
- iv. **Finance:** Financial planning involves
 - Determination of the amount of funds required,
 - Assessment of demand and cost of its products,
 - Estimation of profits on investment and its comparison with existing concerns, and
 - Determining capital structure and the appropriate time for financing the enterprise, etc.
- v. **Organisation structure:** Division of total work of the enterprise into major specialised functions and then constitute proper departments for each of its specialized functions.
- vi. **Marketing:** Problem regarding identification of target market and decision for 4 P's.
- vii. **Legal formalities:** Legal formalities relating to assessing and paying different types of taxes (corporate tax, excise duty, sales tax, custom duty, etc.), maintenance of records, submission of various types of information to the relevant authorities from to time, adhering to various rules and laws formulated by government, etc.

viii. **Industrial relations:** Various problems which an enterprise faces with regard to industrial relations are – the problem of winning workers’ cooperation, the problem of enforcing proper discipline among workers, the problem of dealing with organised labour, etc.



8. MEANING OF PRODUCTION FUNCTION

Production function states the relationship between inputs and outputs, i.e., the amount of output that can be produced with given quantities of inputs under a given state of technical knowledge. Outputs takes the form of volume of goods or services and inputs are the different factor of production, i.e., land, labour, capital and entrepreneurship. In other words, it is the transformation of inputs into outputs.

The production function may be two types.

- a. **Short period production function:** In the short run, at least one factor remain fixed and others are variable. This is done when law of variable proportion is derived.
- b. **Long period production function:** In the long run, all factors are varied in the same proportion and it is the matter of law of returns to scale.

Assumptions:

- Particular unit of time
- Technical knowledge remain constant
- Factors are divisible
- Producer is using best technique



9. Cobb-Douglas production function

This concept is given by Paul H. Douglas and C.W. Cobb of the U.S.A., and in this case, output is manufacturing production and inputs are labour and capital.

$$Q = KL^a C^{(1-a)}$$

Where ‘Q’ is output, ‘L’ the quantity of labour and ‘C’ the quantity of capital. ‘K’ and ‘a’ are positive constants. In this equation, labour contributed 3/4th and capital contributed 1/4th of production. The function is linear and homogeneous. It shows constant returns to scale, so it is called “Linear Homogeneous Production Function”.

10. TYPES OF PRODUCTION

- a. Total production (TP): TP is the total output resulting from the efforts of all the factors of production combined together at any time.
- b. Average production (AP): Average product or average physical product (APP) may be defined as total product per unit employment of the variable input. Thus,

$$AP = \frac{TP}{\text{Units of Variable Input (Labour)}}$$

- c. Marginal production (MP): MP is the change in TP due to change in the quantity of variable factor, i.e., labour. In other words, it is the additional TP due to an additional unit of input.

$$MP = \frac{\text{Change TP}}{\text{Change in Labours}}$$

or say

$$AP = \frac{TP}{\text{Labour}}$$

or

$$MP = TP_n - TP_{n-1}$$

For e.g., TP is 200 units when labour is 10, and TP is 250 when labour is 15, MP will be calculated as follow,

$$MP = \frac{\Delta TP}{\Delta \text{Labour}} = \frac{200 \lambda 250}{15 \lambda 10} = \frac{50}{5} = 10 \text{ units}$$

- d. Relationship between AP and MP
 - i. Both AP and MP can be calculated by TP.
 - ii. When AP rises, the MP also rises but $MP > AP$
 - iii. When AP is maximum, the $MP = AP$ or say MP curve cuts the AP curve at its maximum point.
 - iv. When AP falls, then MP also falls, but $MP < AP$
 - v. There may be a situation when MP decreases and AP increases, but opposite never happened.

11. LAW OF VARIABLE PROPORTION (LAW OF DIMINISHING RETURNS)

According to law of variable proportions, as more and more units of a variable factors are combined with same quantity of fixed factors, total product first increases at an increasing rate, then at diminishing rate and finally starts diminishing. It implies that marginal product first rises and then diminishes eventually. Law of variable proportions is also known as law of returns to a factor. It is short-run concept.

Assumptions:

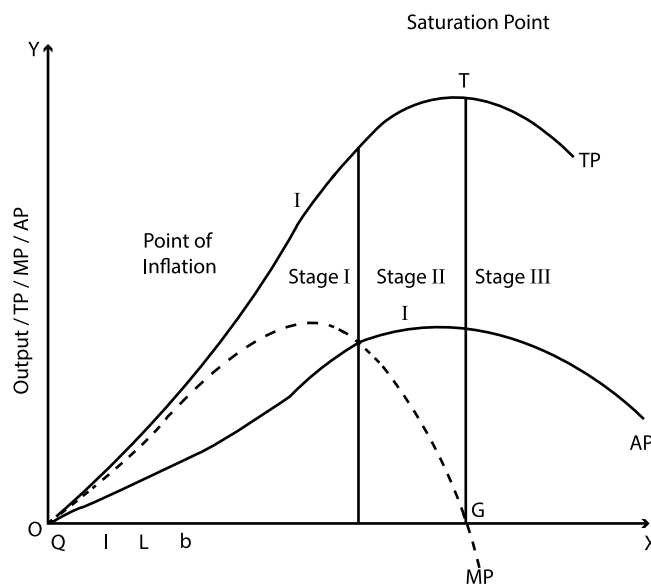
- The technology remains unchanged.
- There must be some inputs whose quantity is kept fixed.
- Law does not apply where factors are used in fixed proportions.
- Only physical input and output are considered.
- All the units of variable factors are homogeneous.
- Law of variable proportion has three stages.

Labour	TP	AP	MP	Analysis for law of variable proportion
1	2	2	2	Stage-I – Law of increasing returns
2	5	2.5	3	
3	9	3	4	
4	12	3	3	State-II – Law of decreasing returns
5	14	2.8	2	
6	15	2.5	1	
7	15	2.1	0	MP = 0, TP is maximum
8	14	1.7	-1	Stage-III – Law of negative returns
9	12	1.3	-2	

Stage	TP	AP	MP
Stage I	Increases at an increasing rate	Increases and reaches at maximum point	Increases and reaches its maximum point
Stage II	Increases at diminishing rate and reaches its maximum point	After reaching its maximum point, begins to decrease	Decreases and becomes zero
Stage III	Begins to fall	Continues to diminish	Becomes negative

1) Explanation of increasing returns (Stage I):

Indivisibility of fixed-factors: The law of increasing returns operates because of indivisibility of fixed factors. It means, in order to produce goods up to a given limit, at least one unit of the fixed factor is a fixed.



Division of labour and specialization: The second reason why we get increasing returns in the initial stages is that with sufficient quantity of variable factor, introduction of division of labour and specialization becomes possible, which results in higher productivity.

Note: Point of inflexion is that point on TP at which MP is maximum.

2) Explanation of diminishing returns (Stage II):

Inadequate relative of fixed factors: Once the point is reached at which the amount of variable factor is sufficient to ensure the efficient utilization of the fixed factor, then further increases in the variable factor will cause marginal and average product to decline because the fixed factor then becomes inadequate relative to the quantity of variable factors.

Imperfect substitutability: Another reason offered for the operation of the diminishing returns is the imperfect substitutability of factors for one another.

Note: Saturation point is the point at which TP is maximum and MP is zero.

3) Explanation of negative returns (Stage III):

Too excessive quantity of variable factor: In this stage, the quantity of variable factor becomes too excessive relative to the fixed factor so that they get in each other's way with a result that the total output falls instead of rising. In such a situation, a reduction in the units of the variable factor will increase the total output.

Stage of operation:

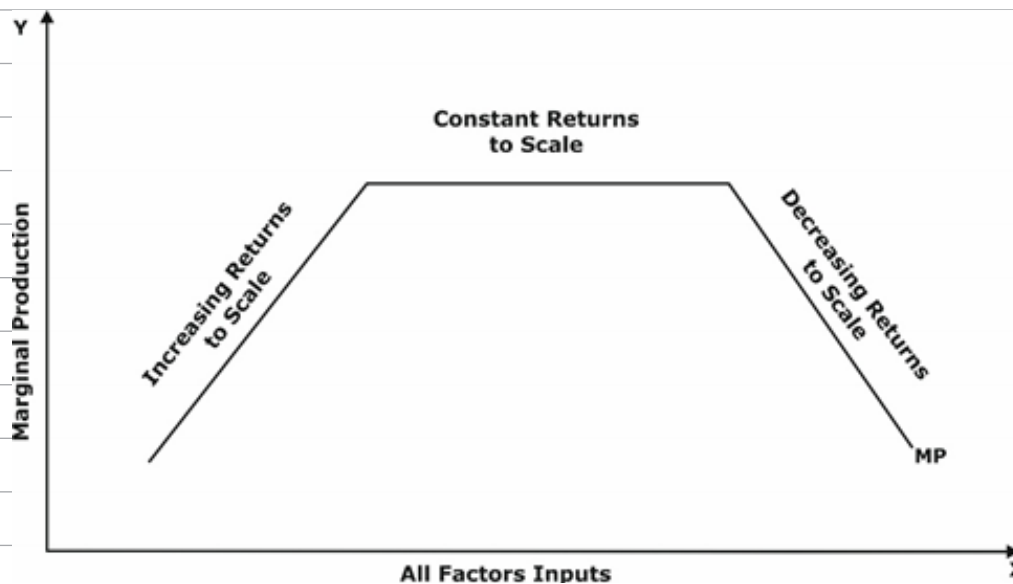
The three stages together constitute the law of variable proportions. Since the second stage is the most important, stage II will be stage of operation, and because of that in practice we normally refer to the law of variable proportion as the law of diminishing returns.



12. LAW OF RETURNS TO SCALE

In the long run, all factor inputs in the production function can be changed. The behaviour of output consequent to change in the quantities of all factor inputs in the same proportion (i.e., keeping, the factor proportions unaltered) is known as 'returns to scale'. Return to scale may be three types.

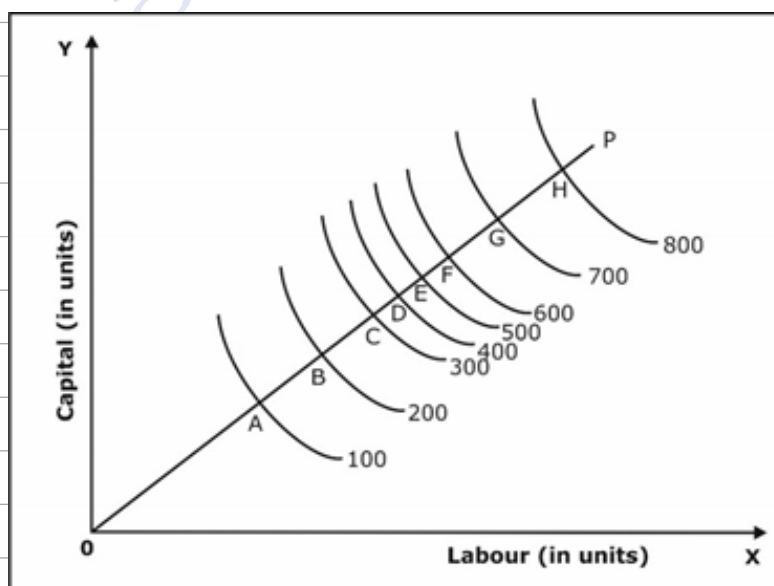
1. **Increasing returns to scale:** Increasing returns to scale occur when a simultaneous increase in all the inputs in the same given proportion result in a more than proportionate increase in the output. For example, if input is increased by 100%, then the output increases by 125%.
2. **Constant returns to scale:** Returns to scale are said to be constant when a proportionate increase in all the inputs results in proportionate increase in output. For example, if input is increased by 100% then the output also increases by 100%. Constant return to scale is also called 'Linear Homogeneous Production Function'.
3. **Diminishing returns to scale:** Diminishing returns to scale occur when simultaneous increase in all inputs in the same given proportion result in a less than proportionate increase in the output. For example, if input is increased by 100%, but the output increases only by 75%.



All the three phase can be shown by one diagram as given above.

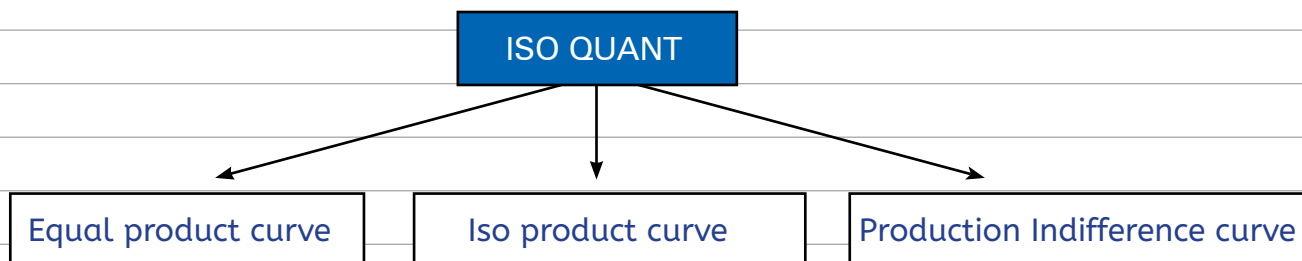
In the above figure from A to B, there is increasing return to scale because MP is increasing, and from B to C, there is constant return to scale because MP is constant, and from C to D there is decreasing returns to scale because MP is decreasing.

The law of increasing, constant and decreasing returns to scale can be understood with the help of ISO Quant Curve (IQC) in this way



In the above figure, all IQC represents equal production curve, i.e., 100 units, but as more units of labour and capital introduced additional output increases in the same manner, but labour and capital firstly introduced in decreasing manner

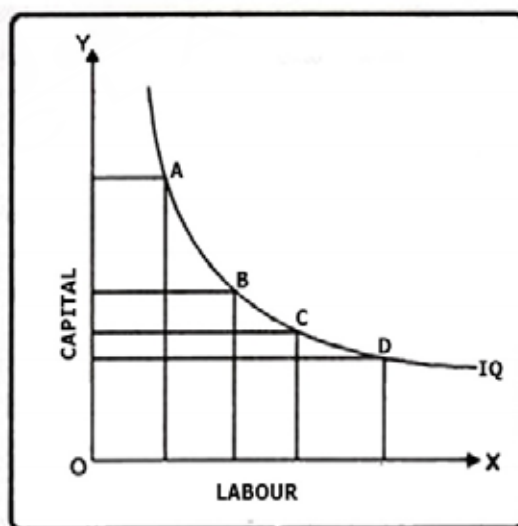
(from A to D) and it gives 'increasing returns to scale', and after that in constant manner (from D to F), it gives 'constant returns to scale', and lastly in increasing manner (from E to H), it gives 'decreasing returns to scale'.



Statements:

Various combinations of two inputs (capital / Labour) that gives same level of output

Combinations	Labour	Capital	DMRTS(Lk)
A	1	12	
B	2	6	6
C	3	4	2
D	4	3	1



'ISO-Cost Line' OR "Equal Cost Lines'

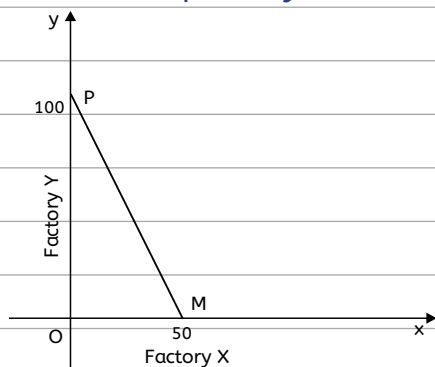
ISO -cost line (also known Equal Cost Line; Price Line; Outlay Line; Factory Line) Shows the various combinations of two factor inputs which the firm can purchase with a given outlay (i.e. budget) and a given prices of two inputs.

Example. A firm has with itself ₹ 1000 which it would like to spend on factor 'X' and factor 'Y'.

Price of factor 'X' is ₹ 20 per unit.

Price of factor 'Y' is ₹ 10 per unit.

Therefore, if the firm spends the whole amount on factor X, it can buy 50 units of X and if the whole amount is spent on factor Y, it can buy 100 units of Y. However, in between these two extreme limits, it can have many combinations of X and Y for the outlay of ₹ 1000. Graphically it can be shown as follows –



In the diagram Op shows 100 units of Y and OM shows 50 units of X. When we join the two points P and M, we get the iso-cost line. All the combinations of factor X and factor Y lying on iso-cost line can be purchased by the firm with an outlay of Rs 1000. If the firm increases the outlay to Rs 2000, the iso-cost line shifts to the right, if prices of two factors remains unchanged. The slope of the iso-cost line is equal to the ratio of the prices of two factors. Thus,

$$\text{Slope of line PM} = \frac{\text{Price of X}}{\text{Price of Y}}$$

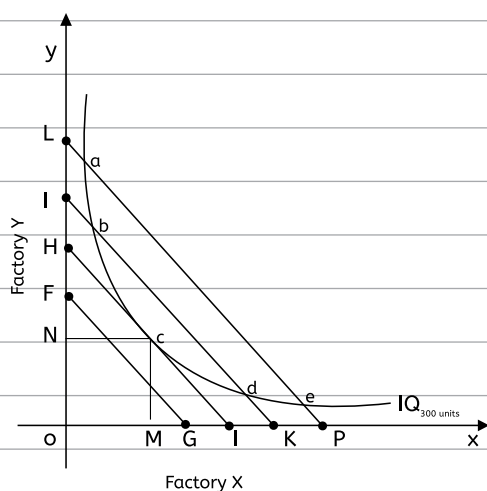
Producer's Equilibrium OR Production Optimization

A firm always try to produce a given level of output at minimum cost. For this it has to use that combination of inputs which minimizes the cost of production. This ensures maximization of profits and produce a given level of output with least cost combination of inputs. The **least-cost combination** of inputs or factors is called producer's equilibrium or production optimization. This is determined with the help of (a) isoquants, & (b) iso-cost line.

An isoquant or iso-product curve is a curve which shows the various combinations of two inputs that produce same level of out. The isoquants are negatively sloped and convex to origin. The slope of isoquants shows the marginal rate of technical substitution which diminishes. Thus, $MRTS_{xy}$

$$= \text{Slope} = \frac{\Delta y = MP_x}{\Delta x \quad MP_y}$$

Iso-cost line shows the various combination of two factor inputs which the firm can purchase with a given outlay and at given prices of inputs. There can be different outlays and hence different iso-cost lines. Slope of iso-cost line shows the ratio of the price of two inputs i.e. $\frac{P_x}{P_y}$



Which will be the least cost combination can be understood with the help of following figure. Suppose firm wants to produce 300 units of a commodity. It will first see the isoquant that represents 300 units.

In the adjoining diagram we find that all combination a, b, c, d and e can be produce 300 units of output. In order to produce 300 units firm with try to find out least cost combination. For this it will super impose the various iso-cost lines on isoquant as shown in the diagram. The diagram shows that combination 'c' is the least cost combination as here isoquant is tangent to iso-cost line HI. All other combinations a, b, d and e lying on isoquant cost more as these points lie on higher iso-cost lines. Hence, the point of tangency of isoquant and iso-cost line shows least cost combination. At the point of tangency.



THEORY OF COST

- There are many force behind the process of price determination for a good.
- One such force is supply, which is directly determined by the costs of the company
- Theory of cost explores the cost concepts, costs in the long and short run and economies of scale.

- d) Cost is best described as a sacrifice made in order to get something. In business, cost is usually a monetary valuation of all efforts, materials, resources, time and utilities consumed, risk incurred and opportunities foregone in production and delivery of goods and services.
- e) More explicitly, the costs attached to resources that a firm uses to produce its product are divided into explicit costs and implicit costs.
- f) All expenses are costs but not all costs are expenses.
- g) Those costs incurred in the acquisition of income generating assets are not considered as expenses.
- h) The theory of costs is better categorized under the traditional and modern theory of cost.



14. Types of costs

1. Accounting cost / explicit cost.

- a. Accounting cost / explicit cost are those costs which are incurred on those factors that are not owned by entrepreneur. He has to purchase from outside.
- b. Recorded in books of account
- c. Out of the pocket expenditure
e.g:- Raw material, Rent paid, Printing & Stationary cost.

2. Implicit cost

- a. Implicit cost is that cost which is incurred by an entrepreneur on those factors which are owned by him
- b. Not recorded in books of account
- c. They are not out of the pocket expenditure
- d. Also known as opportunity cost.
Eg:- owned property, owned capital

3. Economic cost

Explicit cost + implicit cost = Economic cost

4. Outlay cost

It involves actual outlay of funds on wages material, rent known as “Financial expenditure”

5. Opportunity cost

- a. Opportunity cost is a sacrifice or loss of alternative
- b. Value of next best alternative
- c. Known as Trade off, Forgone cost, Implicit cost.

6. Direct cost

- a. Direct cost is also known as “Traceable cost”.
- b. Cost which can be easily identified called as direct cost.
E.g., In production of shoes cost of leather is a direct cost.

7. Indirect cost

- a. Indirect cost is also known as non-traceable cost.
- b. Cost which cannot be easily identified called non-traceable / indirect cost.
E.g., Electricity, Power charges

8. Incremental cost

- a. Incremental cost is related to concept of marginal cost.
- b. It refers to the total additional cost incurred by the business.
E.g., purchase of new equipment, expansion of production capacity.

9. Sunk cost

Sunk cost refers to that cost which has been already incurred for one purpose in the past & cannot be recovered.

E.g., expense on advertisement.

10. Historical cost

Historical cost are those cost which are incurred on the purchase of an asset in the past, may or may not be recovered.

E.g., Machinery, Tools.

11. Replacement cost

Replacement cost refers to expenditure to be made for replacing an old asset.

12. Private cost

Private cost are those cost which are incurred or provided by the firm or organisation.
E.g., cost of manufacturing a product.

13. Social cost

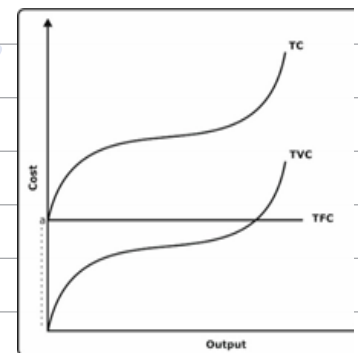
Social cost refers to the total cost to the society due to business activities it includes both private & external cost.
E.g., Pollution of all types.

14. Fixed cost

- a. Fixed cost do not change with output
 - b. It is independent of output
 - c. It cannot become zero also known as supplementary cost or overhead cost.
- E.g., Rent, Property tax, Interest on Capital, Depreciation

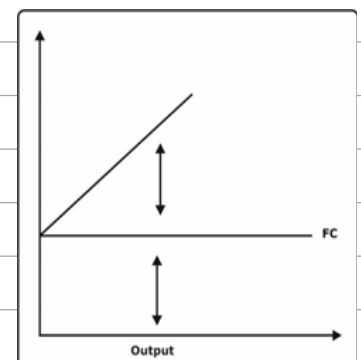
15. Variable cost

- a. Variable cost changes with change in output
 - b. Dependent on output
 - c. It can become zero also known as prime cost.
- E.g., Wages, Raw Material etc.,



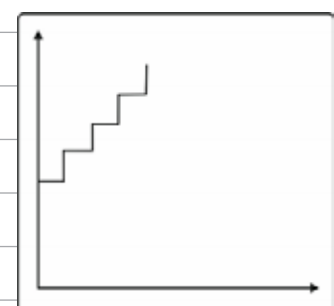
16. Semi variable cost

It is a mixture of fixed cost & variable cost.
E.g., Electricity charges , Post paid Mobile connection



17. Stair step cost

A salary or Remuneration give to a foreman or extra helper represent stair step cost.



Accounting profit = Revenue – Accounting cost
Economic Loss = Accounting profit is less than (<) implicit cost.

	INTERNAL ECONOMICS	EXTERNAL ECONOMICS
1.	Internal economies are the benefits which accrue to a firm when it expands the scale of production.	External economies are those benefits which accrue to all the firms operating in a given industry from the growth and expansion of that industry.
2.	<p>a. Internal economies are called 'internal' because these arise due to the internal efforts of the firm.</p> <p>b. These economies are specific to the individual firm and are different for different firms depending upon the size of the firm.</p>	External economies are called 'external' because they accrue to a firm as a result of factors that are entirely outside the firm i.e. from the expansion of the industry.
3.	<p>a. Internal economies are the result of the firm's OWN EFFORTS INDEPENDENT OF THE ACTIONS OF OTHER FIRMS.</p> <p>b. These economies are peculiar to each firm.</p> <p>c. It reflects the working pattern of the firm.</p>	<p>a. External economies are independent of firm's own efforts and output.</p> <p>b. They are dependent on the general development of the industry.</p> <p>c. They are not restricted to a single firm but are shared by a number of firms.</p>
4.	<p>a. Internal economies cause the long-run average cost to fall in the initial stage and internal diseconomies cause the long-run average cost to rise at the later stage.</p>	<p>a. External economies and diseconomies cause the LAC curve to shift down or up as the case may be.</p> <p>b. When external economies increase, the cost per unit of output falls.</p> <p>c. So, LAC curve shift downwards.</p> <p>d. When external diseconomies are more, the cost per unit of output rises.</p> <p>e. So, LAC curve shift upwards.</p>
5.	If every thing is effectively managed, internal economies can be of long term in nature.	<p>External economies depend upon the conditions of the entire industry and economy.</p> <p>Thus, it can be of short term in nature.</p>

6.	Internal economies are in the form of technical economies like superior techniques, use of by – products, etc., managerial economies; commercial economies; financial economies and risk-bearing economies.	External economies are in the form of cheaper inputs; discovery of new technical knowledge; development of skilled labour; economies of information; growth of ancillary units; better transport and marketing facilities.
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15. SHORT RUN AVERAGE COST

For the purpose of making decision about operations, unit cost functions or average costs are more useful than the total cost functions.

We examine here three of these unit cost functions namely

- a. Average Fixed Cost (AFC)
- b. Average Variable Cost (AVC)
- c. Average Total Cost (ATC)

a. Average Fixed Cost

➤ Average Fixed Cost is the fixed cost per unit of output. Thus,

➤ Average fixed cost = $\frac{\text{Total Fixed Cost}}{\text{Total Input}}$

➤ OR $AFC = \frac{TFC}{Q}$

Table: Average Fixed Cost

Fig: Average Fixed Cost Curve

Output (units)	T F C (Rs.)	A F C (Rs.)
0	60	-
1	60	60
2	60	30
3	60	20
4	60	15
5	60	12
6	60	10

- The above table shows that as the output increases, AFC goes on falling.
- The reason being TFC is spread over larger quantities of output.
- When graphed, the AFC curve slopes downwards from left to right throughout its length.
- The AFC curve comes closer and closer to the X-axis but not touch the X-axis as TFC can never be zero.
- AFC curve will not touch Y-axis also because at zero level of output, TFC is a POSITIVE VALUE. Any positive value divided by zero will provide infinite value.
- The AFC curve is a RECTANGULAR HYPERBOLA

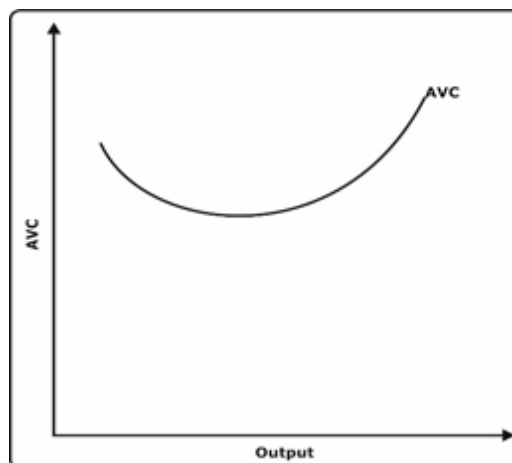
b. Average Variable Cost

- Average Variable Cost is the variable cost per unit of output. Thus,
- Average variable cost = $\frac{\text{Total Variable Cost}}{\text{Total Output}}$
- OR $AVC = \frac{TVC}{Q}$

Table: Average Variable Cost

Fig: Average Variable cost Curve

Output (units)	TVC (Rs.)	AVC (Rs.)
0	0	-
1	40	60
2	76	38
3	102	34
4	132	33
5	170	34
6	22	37



- The above table shows that as the output expands, average variable cost falls initially due to increasing returns to the variable factor.
- It is minimum at the optimum capacity output.
- Beyond optimum capacity average variable cost rises very sharply due to diminishing returns to variable factor.
- Thus, AVC and AVERAGE PRODUCT of variable factor are inversely related.
- Thus, AVC curve is U-shaped indicating three phases decreasing phase, constant phase and increasing phase.

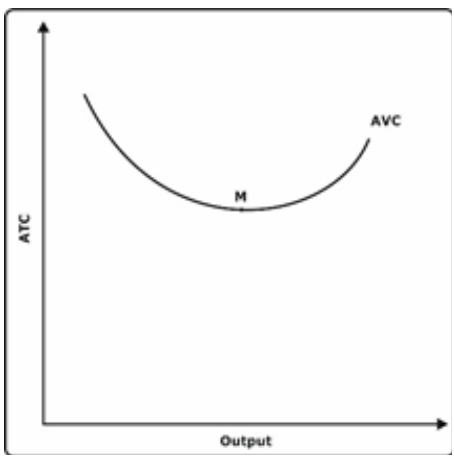
c. Average Total Cost: (or Simply Average Cost):

- Average Total Cost is the cost per unit of output. Thus,
- Average total cost or Average cost = $\frac{\text{Total Cost}}{\text{Total Output}}$
- $ATC \text{ OR } AC = \frac{TC}{Q}$
- $ATC \text{ OR } AC = \frac{TFC}{Q} + \frac{TVC}{Q}$
- $ATC \text{ or } AC = AFC + AVC$

Table: Average Fixed Cost

Fig: Average Total Cost Curve

Output (units)	TC (Rs.)	ATC (Rs.)
0	60	-
1	100	100
2	136	68
3	162	54
4	192	48
5	230	46
6	282	47



- The above table shows that as output increases. ATC falls initially, reach its minimum and then rises due to the law of variable proportions.

d. Marginal Cost.

- Marginal cost is addition to the total cost caused by producing one more unit of output.
- Thus, marginal cost is the cost of the additional unit of output.
- It is measured by the change in total cost resulting from a unit increase in output.

Thus, $MC_n = TC_n - TC_{n-1}$ Or $MC = \frac{\Delta TC}{\Delta Q}$

where, Δ = Change

- The Marginal Cost is INDEPENDENT OF FIXED COST
- In the short period, total fixed cost are constant for all levels of output.
- The only change in total cost when output changes is CHANGE IN VARIABLE COST. Hence, marginal cost is affected only by the variable cost.
- Therefore marginal cost can also be defined as a change in TVC as a result of a unit change in output.

Table: Marginal Cost

Fig: marginal Cost Curve

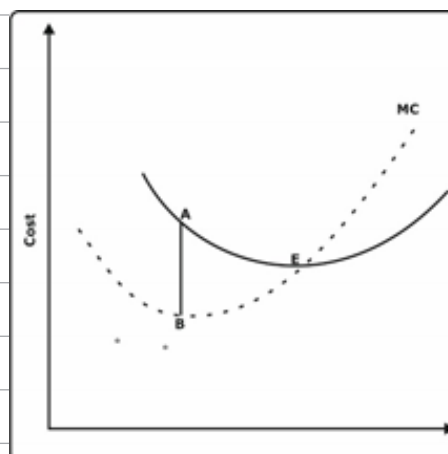
Output (units)	TFC (Rs.)	TVC (Rs.)	TC (Rs.)	MC (Rs.)
1	30	50	80	-
2	30	90	120	40
3	30	120	150	30
4	30	170	200	50
5	30	250	280	80
6	30	360	390	110

- The above table shows that as the output increases, MC initially falls due to increasing returns to factor but finally MC rises due to diminishing returns to factor.
- Thus, marginal cost is the inverse of the marginal product of the variable factor.

16. RELATIONSHIP BETWEEN AC AND MC

From the figure given below, following relation can be explained:

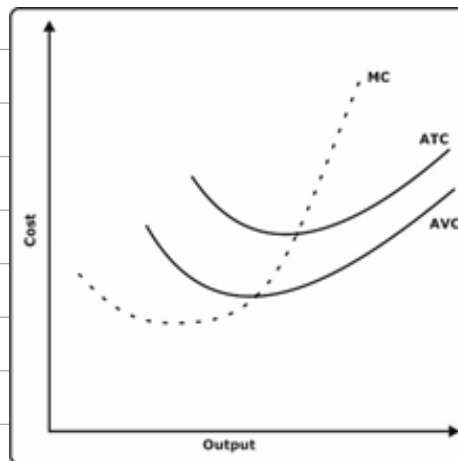
- MC and AC both can be calculated by TC.
- When AC falls, MC also falls, but $AC > MC$.
- When AC rises, MC also rises, but now $MC > AC$.
- When AC is minimum, then $MC = AC$. In other words, MC curve cuts to AC curve at its minimum point (i.e., optimum point).
- There is also abnormal situation when AC falls and MC rises. In the figure given, from 'A' to 'E' AC falls but from 'B' to 'E' MC rises. But, opposite never happened.



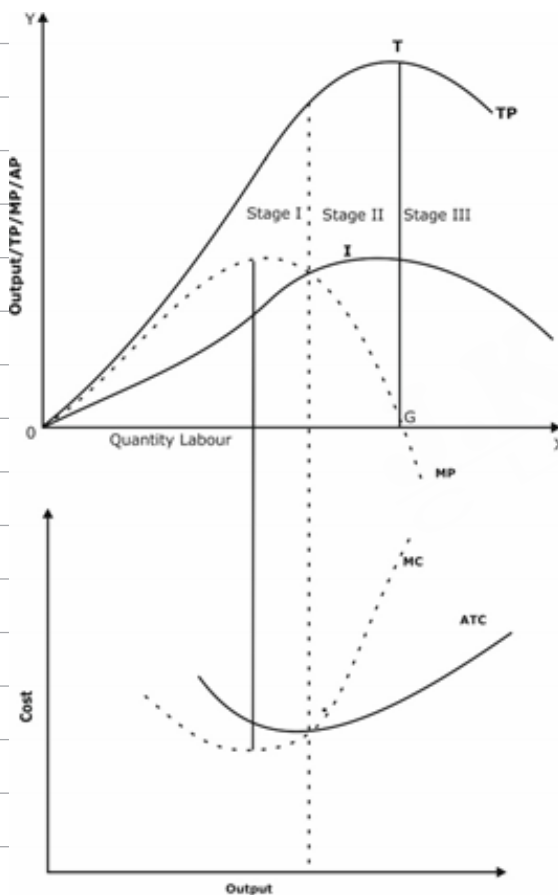
17. RELATIONSHIP BETWEEN ATC, AVC AND MC

From the figure given, following relation can be explained.

- $ATC = AVC + AFC$, but $ATC \neq AVC$, so AVC curve can never touch to ATC curve.
- MC cuts to ATC and AVC's minimum points.



18. WHY ARE AVC, ATC AND MC CURVES U-SHAPED?



Production and Cost function

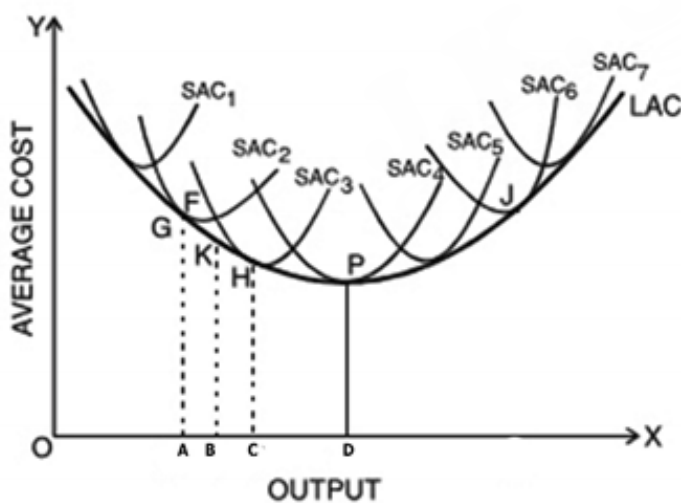
It is due to Law of Variable proportions, law of variable proportions diminishing returns states that as the units of variable factor is increased, MP first rises and then falls. When MP rises, MC falls and when MP falls, MC rises. It is the behaviour of MC, which determines the behaviour of AC.

In the above figure when MP is maximum, then MC is minimum, and when AP is maximum, then AC is minimum. Under IInd stage, MC and AC both raises.


19. LONG RUN AVERAGE COST CURVE

- Long run is a period of time during which the firm can vary all inputs.
- It short run we have seen that, some inputs are fixed and others can be varied to increase the level of output.

- But in long run all inputs are variable.
- In the short run, the size of the plant is fixed. The size of plant cannot be increased or reduced.
- However, in the long run the firm has sufficient time to bring about changes in the size of plant (i.e., machinery building etc.) in order to expand or contract output.
- Thus, in the long run the firm moves from one plant to another. It can increase the size of plant to increase its output or can have smaller plant if it has to reduce output.
- The long run average cost curve shows the minimum possible average cost for producing various levels of output.
- Consider the following figure:



- In the Fig., a smooth long run average cost curve has been shown which has been labelled as LAC.
- The LAC curve envelopes infinite short run average cost curves each representing a plant. Hence, SACs are also called plant curves.
- The Fig., shows that LAC curve is not tangent to the minimum points of the SAC curves.

- When LAC curve is sloping downwards, it is tangent to falling portions of SACs.
- When LAC curve is rising upwards, it is tangent to rising portions of SACs.
- LAC curve is also called planning curve. This is because firm plans output in the long run but operates in the short run i.e., by choosing a plant on LAC corresponding to the given output.
- Thus, LAC helps the firm to make choice about the size of plant for producing a particular output at minimum cost.
- However, modern firms face 'L' shaped cost curve. 



20. WHY LONG RUN AVERAGE COST CURVE IS OF U-SHAPE?

- As seen in the Fig., LAC curve is U-shaped.
- The shape of LAC curve depends on the Law of Returns to Scale.
- As the firm expands, there is increasing returns to scale which means fall in long run average cost due to economies of scale.
- When decreasing returns to scale occur it means rise in long run average cost due to diseconomies of scale.
- This explains why LAC curve is U-shaped.



21 Modern cost curves are L shaped curves

(As technology changes)

MODULE MULTIPLE CHOICE QUESTIONS

1. Which of the following is considered production in Economics?
 - a. Tilling of soil.
 - b. Singing a song before friends.
 - c. Preventing a child from falling into a manhole on the road.
 - d. Painting a picture for pleasure.

2. Identify the correct statement.
 - a. The average product is at its maximum when marginal product is equal to average product.
 - b. The law of increasing returns to scale refers to the effect of changes in factor proportions.
 - c. Economies of scale arising only because of indivisibilities of factor proportions.
 - d. Internal Economies of scale can be accrued when industry expands beyond optimum.

3. Which of the following is not a characteristic of land?
 - a. Its supply of the economy is limited.
 - b. It is immobile.
 - c. Its usefulness depends on human efforts.
 - d. It is produced by our forefathers.

4. Which of the following statements is true?
 - a. Accumulation of capital depends solely on income of individuals.
 - b. Savings can be influenced by government policies.
 - c. External economies go with size and internal economies with location.
 - d. The supply curve of the labour is an upward sloping curve.

5. In the production of wheat, all of the following are variable factors that are used by the farmer except:
 - a. The seed and fertilizers used when the crop is planted.
 - b. The field that has been cleared of trees and in which the crop is planted.
 - c. The factors used by the farmer in planting and cultivating not only wheat but also corn and barley.
 - d. The number of hours that the farmer spends in cultivating the wheat fields.

6. The marginal product of a variable input is best described as:
- Total product divided by the number of units of variable input.
 - The additional output resulting from a one unit increase in the variable input.
 - The additional output resulting from a one unit increase in both the variable and fixed inputs.
 - The ratio of the amount of the variable input that is being used to the amount of the fixed input that is being used.
7. Diminishing marginal returns implies:
- Decreasing average variable costs.
 - Decreasing marginal costs.
 - Increasing marginal costs.
 - Decreasing average fixed costs.
8. The short run, as economists use the phrase, is characterized by:
- At least one fixed factor of production and firms neither leaving nor entering the industry.
 - Generally a period which is shorter than one year.
 - All factors of production are fixed and no variable inputs.
 - All inputs are variable and production is done in less than one year.
9. The marginal, average, and total product curves encountered by the firm producing in the short run exhibit all of the following relationship except:
- When total product is rising, average and marginal product may be either rising or falling.
 - When marginal product is negative, total product and average product are falling.
 - When average product is at a maximum, marginal product equals average product, and total product is rising.
 - When marginal product is at a maximum, average product equals marginal product, and total product is rising.
10. To economists, the main difference between the short run and the long run is that:
- In the short run all inputs are fixed, while in the long run all inputs are variable.
 - In the short run the firm varies all of its inputs to find the least-cost combination of inputs.
 - In the short run at least at least one of the firm's input level is fixed.
 - In the long run, the firm is making a constrained decision about how to use existing plant and equipment efficiently.

11. Which of the following is the best definition of “production function”?

- a. The relationship between market price and quantity supplied.
- b. The relationship between the firm’s total revenue and the cost of production.
- c. The relationship between the quantities of inputs needed to produce a given level of output.
- d. The relationship between the quantities of inputs and the firm’s marginal cost of production.

12. The “law of diminishing returns” applied to:

- a. The short run, but not the long run.
- b. The long run, but not the short run.
- c. Both the short run and the long run.
- d. Neither the short run nor the long run.

13. Diminishing returns occur:

- a. When units of a variable input are added to a fixed input and total product falls.
- b. When units of a variable input are added to a fixed input and marginal product falls.
- c. When the size of the plant is increased in the long run.
- d. When the quantity of the fixed input is increased and returns to the variable input falls.

Use of the following information to answer questions 14 – 16

Hours of labour	Total output	Marginal Product
0	-	-
1	100	100
2	180	80
3	240	-

14. What is the total output when 2 hours of labour are employed?

- a. 80
- b. 100
- c. 180
- d. 200

15. What is the marginal product of the third hour of labour?

- a. 60
- b. 80
- c. 100
- d. 240

16. What is the average product of the first three hours of labour?

- a. 60
- b. 80
- c. 100
- d. 240

17. Which cost increase continuously with the increase in production?
- Average cost.
 - Marginal cost.
 - Fixed cost.
 - Variable cost.
18. Which of the following cost curves is never 'U' shaped?
- Average cost curve.
 - Marginal cost curve.
 - Average variable cost curve.
 - Average fixed cost curve.
19. Total cost in the short run is classified into fixed costs and variable costs. Which one of the following is the variable cost.
- Cost of raw materials.
 - Cost of equipment.
 - Interest payment on past borrowings.
 - Payment on rent on building.
20. In the short run, when the output of a firm increases, its average fixed cost:
- Increases.
 - Decreases.
 - Remain constant.
 - First declined and then rises.
21. Which one of the following is also known as planning curve?
- Long run average cost curve.
 - Short run average cost curve.
 - Average variable cost curve.
 - Average total cost curve.
22. If a firm moves from one point on a production isoquant to another, which of the following will not happen.
- A change in the ratio in which the inputs are combined to produce output.
 - A change in the ratio of marginal product of the inputs.
 - A change in the marginal rate of technical substitution.
 - A change in the level of output.
23. With which of the following is the concept of marginal cost closely related?
- Variable cost.
 - Fixed cost.
 - Opportunity cost.
 - Economic cost.

24. Which of the following statements is correct?

- When the average cost is rising, the marginal cost must also be rising.
- When the average cost is rising, the marginal cost must be falling.
- When the average cost is rising, the marginal cost is above the average cost.
- When the average cost is falling, the marginal cost must be rising.

25. Which of the following is an example of “explicit cost”?

- The wages a proprietor could have made by working as an employee of a large firm.
- The income that could have been earned in alternative uses by the resources owned by the firm.
- The payment of wages by the firm.
- The normal profit earned by a firm.

26. Which of the following is an example of an “implicit cost”?

- Interest that could have been earned on retained earnings used by the firm to finance expansion.
- The payment of the rent by the firm for the building in which it is housed.
- The interest payment made by the firm for funds borrowed from a bank.
- The payment of wages by the firm

Use the following data to answer the questions 27-29.

Output (O)	0	1	2	3	4	5	6
Total cost (TC)	Rs. 240	Rs. 330	Rs. 410	Rs. 480	Rs. 540	Rs. 610	Rs. 690

27. The average fixed cost of 2 units of output is:

- Rs.80
- Rs.85
- Rs.120
- Rs.205

28. The marginal cost of the sixth unit of output is:

- Rs.133
- Rs.75
- Rs.80
- Rs.450

29. Diminishing marginal returns start to occur between units:

- 2 and 3
- 3 and 4
- 4 and 5
- 5 and 6

30. Marginal cost is defined as:

- The change in total cost due to a one unit change in output.
- Total cost divided by output.
- The change in output due to a one unit change in an input.
- Total product divided by the quantity of input.

31. Which of the following is true of the relationship between the marginal cost function and the average cost function?

- If MC is greater than ATC, then ATC is falling.
- The ATC curve intersects the MC curve at minimum MC.
- The MC curve intersects the ATC curve at minimum ATC.
- If MC is less than ATC, then ATC is increasing.

32. Which of the following statements is true of the relationship among the average cost functions?

- | | |
|-----------------------|-----------------------|
| a. $ATC = AFC - AVC.$ | b. $AVC = AFC + ATC.$ |
| c. $AFC = ATC + AVC.$ | d. $AFC = ATC - AVC.$ |

33. Which of the following is not a determinant of the firm's cost function?

- The production function.
- The price of labour.
- Taxes.
- The price of the firm's output.

34. Which of the following statements is correct concerning the relationship among the firm's cost of functions?

- $TC = TFC - TVC.$
- $TVC = TFC - TC.$
- $TFC = TC - TVC.$
- $TC = TVC - TFC.$

35. Suppose output increases in the short run, Total cost will:

- Increase due to an increase in fixed costs only.
- Increase due to an increase in variable costs only.
- Increase due to an increase in both fixed and variable costs only.
- Decrease if the firm is in the region of diminishing returns.

36. Which of the following statements concerning the long-run average cost curve is false?
- It represents the least-cost input combination for producing each level of output.
 - It is derived from a series of short-run average cost curves.
 - The short run cost curve at the minimum point of the long run average cost curve represents the least-cost plant size for all levels of output.
 - As output increases, the amount of capital employed by the firm increases along the curve.
37. The negatively-sloped (i.e. falling) part of the long run average cost curve is due to which of the following?
- Diseconomies of scale.
 - Diminishing returns.
 - The difficulties encountered in coordinating the many activities of a large firm.
 - The increase in productivity that results from specialization.
38. The positively sloped (i.e. rising) part of the long run average cost curve is due to which of the following?
- Diseconomies of scale.
 - Increasing returns.
 - The firm being able to take advantage of large-scale production techniques as it expands its output.
 - The increase in the productivity that results from specialization.
39. A firm's average total cost is Rs.300 at 5 units of output and Rs. 320 at 6 units of output. The marginal cost of producing the 6th unit is:
- a. Rs.20 b. Rs.120 c. Rs.320 d. Rs.420
40. A firm producing 7 units of output has an average total cost of Rs.150 and has to pay Rs.350 to its fixed factors of production whether it produces or not. How much of the average total cost is made up of variable costs?
- a. Rs.200 b. Rs.50 c. Rs.300 d. Rs.100
41. A firm has a variable cost of Rs.1000 at 5 units of output . If fixed costs are Rs.400, what will be the average total cost at 5 units of output?
- a. Rs.280 b. Rs.60 c. Rs.120 d. Rs.1400

42. A firm has a AFC of Rs.20 at 6 units of output. What will be at 4 units of output?
- a. 60 b. 30 c. 40 d. 20
43. Which of the following statements is true?
- a. The services of a doctor are considered production.
b. Man can create matter.
c. The services of a housewife are considered production.
d. When a man creates a table, he creates matter.
44. Which of the following is a function of an entrepreneur?
- a. Initiating a business enterprises
b. Risk bearing.
c. Innovating.
d. All of the above.
45. In describing a given production technology, the short run is best described as lasting.
- a. Up to six months from now.
b. Up to five years from now.
c. As long as all inputs are fixed.
d. As long as at least one input is fixed.
46. If decreasing returns to scale are present, then if all inputs are increased by 10% then:
- a. Output will also decreased by 10%.
b. Output will also increase by 10%.
c. Output will increased by less than 10%.
d. Output will increase by more than 10%.
47. The production function is a relationship between a given combination of inputs and:
- a. Another combination that yields the same output.
b. The highest resulting output.
c. The increased in the output generated by one-unit increase in one output.
d. All levels of output that can be generated by those inputs.

48. If the marginal product of labour is below the average product of labour, it must be true that:
- The marginal product of labour is negative.
 - The marginal product of labour is zero.
 - The average product of labour is falling.
 - The average product of labour is negative.
49. The average product of labour is maximized when marginal product of labour:
- Equals the average product of labour.
 - Equals zero.
 - Is maximized.
 - None of the above.
50. The law of variable proportion is drawn under all of the assumptions mentioned below except the assumption that:
- The technology is changing.
 - There must be some inputs and not economically profitability in monetary terms.
 - We consider only physical inputs and not economically profitability in monetary terms.
 - The technology is given and stable.
51. What is a production function?
- Technical relationship between physical inputs and physical output.
 - Relationship between fixed factors of production and variable factors of production.
 - Relationship between fixed factors of production and utility created by it.
 - Relationship between quantity of output produced and time taken to produce the output.
52. Laws of production does not include_____
- Returns to scale.
 - Law of diminishing returns to a factor.
 - Law of variable proportions.
 - Least cost combination of factors.

53. An ISO quant shows.

- a. All the alternative combinations of two inputs that can be produced by using a given set of output fully and in the best possible way.
- b. All the alternative combinations of two products among which a producer is indifferent because they yield the same profit.
- c. All the alternative combinations of two inputs that yield the same total product.
- d. Both (b) and (c).

54. Economies of scale exist because as a firm increases in its size in the long run.

- a. Labour and management can specialize in their activities more.
- b. As a larger input buyer, the firm can get finance at lower cost and purchase inputs at a lower per unit cost.
- c. The firm can afford to employ more sophisticated technology in production.
- d. All of these.

55. The production function:

- a. Is the relationship between the quantity of inputs used and the resulting quantity of product..
- b. Tells us the maximum attainable output from a given combination of inputs.
- c. Expresses the technological relationship between inputs and output of a product.
- d. All of the above.

56. The production process described below exhibits:

Number of workers	Output
0	0
1	23
2	40
3	50

- a. Constant marginal product of labour.
- b. Diminishing marginal product of labour.
- c. Increasing returns to scale.
- d. Increasing marginal product of labour.

57. Which of the following is a variable cost in the short run?

- a. Rent of the factory.
- b. Wages paid to the factory labour.
- c. Interest payments on borrowed financial capital.
- d. Payment on the lease for factory equipment.

58. The efficient scale of production is the quantity of output that minimizes.

- a. Average fixed cost.
- b. Average total cost.
- c. Average variable cost.
- d. Marginal cost.

59. In the short run, the firm's product curves show that.

- a. Total product begins to decrease when average product begins to decrease but continues to increase at a decreasing rate.
- b. When marginal product is equal to average product, average product is decreasing but at its highest.
- c. When the marginal product curve cuts the average product curve from below, the average product is equal to marginal product.
- d. In stage two, total product increases at a diminishing rate and reaches maximum at the end of this stage.

60. A fixed input is defined as.

- a. That input whose quantity can be quickly changed in the short run, in response to the desire of the company to change its production.
- b. That input whose quantity cannot be quickly changed in the short run, in response to the desire of the company to change its production.
- c. That input whose quantities can be easily changed in response to the desire to increase or reduce the level of production.
- d. That input whose demand can be easily changed in response to the desire to increase or reduce the level of production.

61. Average product is defined as.

- a. Total product divided by the total cost.
- b. Total product divided by marginal product.
- c. Total product divided by the number of units of variable input.
- d. Marginal product divided by the number of units of variable input.

62. Which of the following statement is true?

- a. After the inflection point of the production function, a greater use of the variable input induce a reduction in the marginal product.
- b. Before reaching the inevitable point of decreasing marginal returns, the quantity of output obtained can increase at an increasing rate.
- c. The first stage corresponds to the range in which the AP is increasing as a result of utilizing increasing quantities of variable inputs.
- d. All of the above.

63. Marginal product, mathematically, is the slope of the

- a. Total product curve.
- b. Average product curve.
- c. Marginal product curve.
- d. Implicit product curve.

64. Suppose the first four units of a variable input generate corresponding total outputs of 200, 350, 450, 500. The marginal product of the third unit of input is:

- a. 50
- b. 100
- c. 150
- d. 200

65. Which of the following statements is false in respect cost of a firm?

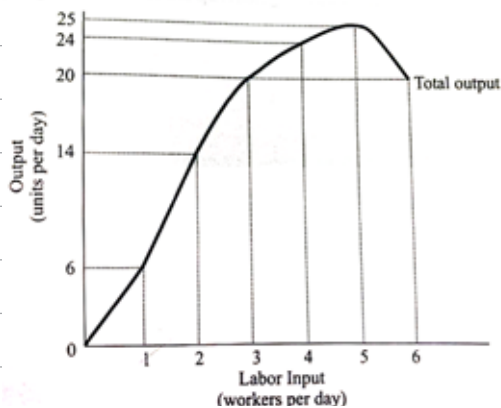
- a. As the fixed inputs for a firm cannot be changed in the short run, the TFC are constant, except when the prices of the fixed inputs change.
- b. TFC continue to exist even when production is stopped in the short run, but they exist in the long run even when production is not stopped.
- c. Total Fixed Cost (TFC) can be defined as the total sum of the costs of all the fixed inputs associated with the production in the short run.
- d. In the short run, a firm's fixed cost cannot be escaped even when production is stopped.

66. Diminishing marginal returns for the first four units of a variable input is exhibited by the total product sequence:

- a. 50, 50, 50, 50.
- b. 50, 110, 180, 260.
- c. 50, 100, 150, 200.
- d. 50, 90, 120, 140.

67. Use of the following diagram to answer the question given below it.

The marginal physical product of the third unit of labour is _____, the MP of the _____ labour is Negative.



- | | |
|-----------------|----------------|
| a. Six; fourth. | b. Six; third. |
| c. Six; fifth. | d. Six; sixth. |

68. In the third of the three stages of production:

- The marginal product curve has a positive slope.
- The marginal product curve lies completely below the average product curve.
- Total product increase.
- Marginal product is positive.

69. When marginal costs are below average total costs.

- Average fixed costs are rising.
- Average total costs are falling.
- Average total costs are rising.
- Average total costs are minimized

70. A firm's long-run average total cost curve is.

- Identical to its long-run marginal cost curve.
- Also its long-run supply curve because it explains the relationship between price and quantity supplied
- In fact the average total cost curve of the optimal plant in the short run as it tries to produce at least cost.
- Tangent to all the curves for short-run average total cost.

71. In the long run, if a very small factory were to expand its scale of productions, it is likely that it would initially experience.
- An increase in pollution level.
 - Diseconomies of scale.
 - Economies of scale.
 - Constant returns to scale.
72. A firm's long-run average total cost curve is:
- Identical to its long-run marginal cost curve as all factors are variable.
 - Also its long-run total cost curve because it explains the relationship cost and quantity supplied in the long run.
 - In fact the average total cost curve of the optimal plant in the short run as it tries to produce at least cost.
 - Tangent to all short-run average total cost the curves and represents the lowest average total cost for producing each level of output.
73. Which of the following statement describes increasing return to scale?
- Doubling of all inputs used leads to doubling of the output.
 - Increasing the inputs by 50% leads to a 25% increase in output.
 - Increasing the inputs by $\frac{1}{4}$ leads to an increase in output of $\frac{1}{3}$
 - None of the above.
74. The marginal cost for a firm of producing the 9th unit of output is Rs.20. Average cost at same level of output is Rs.15. Which of the following must be true?
- Marginal cost and average cost are both falling.
 - Marginal cost and average cost are both rising.
 - Marginal cost is rising and average cost is falling.
 - It is impossible to tell if either of the curves are rising or falling.
75. Implicit costs can be defined as:
- Money payment made to the non-owners of the firm for the self-owned factors employed in the business and therefore not entered into books of accounts.
 - Money not paid out to the owners of the firm for the self-owned factors employed in a business and therefore not entered into books of accounts.
 - Money payment which the self-owned and employed resources could have earned in their next best alternative employment and therefore entered into books of accounts.
 - Money payments which the self-owned and employed resources earn in their best use and therefore entered into book of accounts.

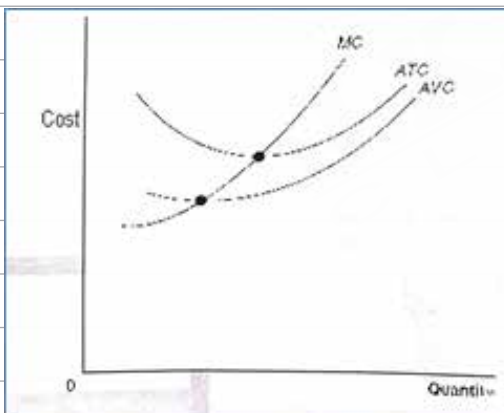
76. The most important function of an entrepreneur is to _____.

- a. Innovate.
- b. Bear the sense of responsibility.
- c. Finance.
- d. Earn profit.

77. Economic costs of production differ from accounting costs of production because:

- a. Economic costs include expenditures for hired resources while accounting costs do not.
- b. Accounting costs include opportunity costs which are deducted later to find paid out costs.
- c. Accounting costs include expenditures for hired resources while economic costs do not.
- d. Economic costs add the opportunity cost of a firm which uses its own resources.

78. In the figure below, possible reason why the average variable cost curve approaches the average total cost curve as output rises is:



- a. Fixed costs are falling while total costs are rising output.
- b. Total costs are rising and average costs are also rising.
- c. Marginal costs are above average variable costs as output rises.
- d. Average fixed costs are falling as output rises.

79. Marginal cost change due to changes in _____.

- a. Total cost.
- b. Average cost.
- c. Variable cost.
- d. Quantity of output.

80. Which of the following statements is correct?

- a. Fixed costs vary with change in output.
- b. If we add total variable cost and total fixed cost we get the average cost.
- c. Marginal cost is the result of total cost divided by number of units produced.
- d. Total cost is obtained by adding up the fixed cost and total variable cost.

81. Which of the following statements is incorrect?

- a. The LAC curve is also called the planning curve of a firm.
- b. Total revenue = price per unit X number of units sold.
- c. Opportunity cost is also called alternative cost.
- d. If total revenue is divided by the number of units sold we get marginal revenue.

ANSWERS:

1	a	2	a	3	d	4	b	5	b	6	b
7	c	8	a	9	d	10	c	11	c	12	a
13	b	14	c	15	a	16	b	17	d	18	d
19	a	20	b	21	a	22	d	23	a	24	c
25	c	26	a	27	c	28	c	29	c	30	a
31	c	32	d	33	d	34	c	35	b	36	c
37	d	38	a	39	d	40	d	41	a	42	b
43	a	44	d	45	d	46	c	47	b	48	c
49	a	50	a	51	a	52	d	53	c	54	d
55	d	56	b	57	b	58	b	59	d	60	b
61	c	62	d	63	a	64	b	65	b	66	d
67	d	68	b	69	b	70	d	71	c	72	d
73	c	74	b	75	b	76	a	77	d	78	d
79	c	80	d	81	d						

ADDITIONAL QUESTIONS FOR PRACTICE

1. Returns to scale will be said to be in operations when quantity of _____
 - a. all inputs are changed
 - b. all inputs are changed in already established proportion
 - c. all inputs are not changed
 - d. one inputs is changed while quantity of all other inputs remains same

2. In a production process, the input combination has 30 per cent of fixed assets, 40 per cent raw material and 10 per cent labour. The quantity of all other except fixed assets has been doubled. The production process would be subjected to _____
 - a. law of variable proportions
 - b. returns to the scale
 - c. decreasing returns
 - d. increasing returns

3. Why the average fixed cost curve does not touch the output axis _____
 - a. because AFC cannot be negative
 - b. because AFC cannot be zero
 - c. because AFC cannot be less than one
 - d. none of these

4. Minimum marginal cost occurs at the output where _____
 - a. the total product is at maximum
 - b. the marginal product of the variable factor is at maximum
 - c. the factors are combined in their best possible proportions
 - d. the average product of the variable factors is at maximum

5. Average fixed cost _____
 - a. remains the same whatever the level of output
 - b. increases as output increases
 - c. diminishes as output increases
 - d. all of the above

6. The difference between the average total cost and average fixed cost shows _____
 - a. normal profits
 - b. implicit cost
 - c. average variable cost
 - d. opportunity cost

7. Which of the following curves is a rectangular hyperbola?
a. ATC b. AFC c. AVC d. MC
8. Of the following which one corresponds to fixed cost?
a. payments for raw material
b. labour costs
c. transportation charges
d. insurance premiums on a property
9. MC is given by _____
a. the slope of the TVC curve
b. the slope of the TVC curve but not by the slope of the TC curve
c. the slope of the TC curve but not by the slope of the TVC curve
d. either the slope of the TVC curve or the slope of the TC curve
10. Marginal cost curve always cuts the average cost curve _____
a. from below on the falling portion of the AC curve
b. from below on the rising portion of the AC curve
c. from below on the minimum point of the AC curve
d. from below on any point of the AC curve
11. marginal cost is found with the help of change in _____
a. total fixed cost b. total variable cost
c. total explicit cost d. total implicit cost
12. When average cost is falling, marginal cost _____
a. may also be falling
b. may be rising
c. may be rising or falling
d. have no relation with average cost
13. when average cost is constant, marginal cost _____
a. is equal to average cost b. may be constant
c. may be rising d. may be falling

14. In the long run,_____
- all factors can be used in different proportions
 - management can be re-organized
 - a firm can experience returns to scale
 - all of these
15. The number of units of capital required in order to produce one unit of output is termed as_____
- capital output ratio
 - input output ratio
 - investment ratio
 - capital input ratio
16. If the LAC curve falls as output expands, this fall is due to_____
- economic of scale
 - the law of diminishing returns
 - diseconomies of scale
 - any of the above
17. Long run average cost curves are broadly_____
- U-shaped
 - inverted U-shaped
 - V-shaped
 - L-shaped
18. The cost of one thing in terms of the alternative given up is known as_____
- opportunity cost
 - real cost
 - actual cost
 - deferred cost
19. opportunity costs are also known as_____
- spill-over costs
 - money costs
 - alternative costs
 - external costs
20. Rakesh inherited 1 arc of land from his grandfather who paid Rs10,000 cash for the land back in 1951.Today, land area in the area sells for Rs 2,00,000 per arc . What is the opportunity cost to Rakesh for keeping the land?
- nothing, since the land was inherited
 - nothing, since the grandfather paid cash
 - Rs 10,000 since this is what is cost Rajesh's grandfather
 - Rs 2,00,000, since this is what Rakesh is giving up by keeping then land

21. When marginal product is zero, total product is_____
- a. maximum
 - b. increasing
 - c. decreasing
 - d. negative
22. Suppose a firm produces 10 units of output and incurs Rs 30 per unit variable cost and Rs 5 in per unit fixed cost. In this case, total costs_____
- a. Rs 300
 - b. Rs 35
 - c. Rs 305
 - d. Rs 350
23. "Production" may be defined as an act of_____
- a. creating utility
 - b. earning profit
 - c. destroying utility
 - d. providing services
24. Economies of scale means_____
- a. reduction in unit cost of production
 - b. reduction in unit cost of distribution
 - c. addition to the unit cost of production
 - d. reduction in the total cost of production
25. When the average product is at its maximum the equity can be reached between_____
- a. the marginal product and total product
 - b. the marginal product and average product
 - c. the marginal product and primary product
 - d. the marginal product and the final product
26. In short run, the law of variable proportion is also known as the_____
- a. law of increasing returns
 - b. law of diminishing returns
 - c. law of constant returns
 - d. law of returns to scale
27. The law of variable proportions comes into being when_____
- a. there are only two variables factors
 - b. there is a fixed factor and a variable factor
 - c. all factors are variable
 - d. variable factors yield less

28. In law of variables proportion in stage III the MP curve becomes negative because of _____
- fixed factor quantity exceeds variable factors
 - variable factor quantity exceeds fixed factor
 - both the factors are used at highest proportion
 - none of the above
29. In case of short period _____ is variable
- Land
 - Labour
 - Capital
 - Enterprise
30. A long run analysis of production is called _____
- economies of scale
 - long period
 - law of increasing return
 - law of returns to scale
31. Increasing returns to scale is not caused by _____
- technological advance
 - specialization of labour
 - marketing economies
 - varying factors proportions
32. The marginal product curve is above to average product curve when the average product is _____
- decreasing
 - increasing
 - becomes constant
 - none of the above
33. The point, which shows the maximum marginal product in the total product curve, represents _____
- least cost combination
 - producer's equilibrium
 - expansion path
 - point of inflexion
34. In the short run analysis, $MP=0$ at the level in which _____
- marginal product is maximum
 - average product is maximum
 - total product is maximum
 - total profit is maximum

35. The average profit is equal to the difference between_____
- a. AC and TC b. AC and VC
c. AC and AR d. AC and TR
36. In short run a firm would remain in business as long as which one of the following of costs is covered?
- a. total costs b. fixed costs
c. variable costs d. constant costs
37. The vertical distance between TVC and TC is equal to_____
- a. MC b. AVC c. TFC d. none of these
38. An entrepreneur will stay in business in the long run as long as he meets_____
- a. his domestic expenditure b. all costs of production
c. fixed costs of production d. variable costs of production
39. The prime cost may be considered as_____
- a. variable cost b. fixed cost
c. direct cost d. sunk cost
40. The MC curve cuts the AVC and ATC curves_____
- a. at the falling part of each
b. at different points
c. at their respective minimum point
d. at the rising part of each

CHAPTER 4**PRICE DETERMINATION IN
DIFFERENT MARKETS** **1. MEANING OF MARKET**

- In ordinary language, a market refers to a place where the buyers and sellers of a commodity gather and strike bargains.
- In economics, however, the term “Market” refers to a market for a commodity. E.g., Cloth market; furniture market; etc.,
- According to Chapman, “the term market refers not necessarily to a place and always to a commodity and buyers and sellers who are in direct competition with one another”.
- The above mentioned definitions reveals the following features of a market:
 - a. A region. A market does not refer to a fixed place. It covers a region, which may be a town, state, country or even world.
 - b. Existence of buyers and sellers. Market refers to the network of potential buyers and sellers who may be at different places.
 - c. Existence of commodity or service. The exchange transactions between the buyers and sellers can take place only when there is a commodity or service to buy and sell.
 - d. Bargaining for a price between potential buyers and sellers.
 - e. Knowledge about market conditions. Buyers and sellers are aware of the prices offered or accepted by other buyers and sellers through any means of communication.
 - f. One price for a commodity or service at a given time.



2. CLASSIFICATION OF MARKET

In economics, classification of market may be on the following basis.

i) Area:

- a. Local Markets: Markets for perishable goods – butter, eggs, milk, vegetables.
- b. Regional Markets: Semi-durable goods – Shirts
- c. National Markets: Durable goods and industrial items.
- d. International Markets: precious commodities – Gold, Silver.

ii) Time: Alfred Marshall conceived the “Time” elements in marketing and on time basis market is classified into:

- a. Very short period market: Perishable – Supply cannot be changed – Market supply $E = 0$
- b. Short-period market: Supply can be changed due to law of variable proportion.
- c. Long-period market: Supply can be changed unlimited due to law of returns to scale.
- d. Very long-period or secular period market: Change in factors – Population, capital supply.

iii) Nature of Transactions:

- a. Spot market: Goods are physically transacted on the spot.
- b. Future market: Transaction at future date.

iv) Regulations;

- a. Regulated market; Transactions are regulated by Government-stock market.
- b. Unregulated market; No restrictions on transactions-Free market.

v) Volume of Business;

- a. Wholesale market; Commodities are bought and sold in bulk or large quantities.
- b. Retail market; Commodities are bought sold in small quantities for ultimate consumers.

vi) Competitions;

- a. Perfectly competitive; characteristics of perfect competition market.
- b. Imperfect market; Characteristics of monopolistic competition market.

**3. TYPES OF MARKET STRUCTURES**

- Perfect competition
- Monopolistic competition/imperfect competition/monopolistic market
- Monopoly/monopolist market
- Oligopoly

**4. REVENUE**

- i) **Revenue:** The revenue of a firm is its sales, receipts or incomes.
- ii) **Total revenue (TR):** TR refers to the amount of money, which a firm realized by selling certain units of a commodity.

$$TR = P \times Q$$

For example: Rs. 5 x 10 units = Rs. 50

- iii) **Marginal revenue (MR):** MR is the change in TR resulting from the sale of an additional unit of a commodity.

$$MR = \frac{\text{Change in TR}}{\text{Change in Quantity sold}} = \frac{\Delta TR}{\Delta Q} \text{ or } TR_n - TR_{n-1}$$

For example:

P = Rs. 10, Q = 50 units and P1 = Rs. 15, Q1 = 52 units the MR will be

$$MR = \frac{(P \times Q)}{Q} = \frac{TR}{\text{Quantity Sold}} = \frac{(15.52)780 - (1.50)500}{52 - 50} = \frac{280}{2}$$

= Rs. 140

iv) Average Revenue (AR): AR is revenue earned per unit of output.

$$AR = TR/Q = P \times Q/Q = P$$

v) MR, AR, TR and Elasticity of demand: Relationship among MR, AR, TR and Price elasticity of demand is as under:

$$MR = AR \leftrightarrow , \frac{E-1}{E} \text{ Where } E = \text{Price Elasticity of demand}$$

If E = 1, then MR = 0.

If E > 1, then MR will be positive.

If E < 1, then MR will be negative.



5. BEHAVIOURAL PRINCIPLES

a. **Principle 1:** A firm should produce at all if TR from its product is equal to or exceeds its TVC or say $TR \geq TVC$ ($Price \geq AVC$). If $TR = TVC$, firm's maximum loss will be equal to its fixed cost as we know $P \times Q = TR$ and $AVC \times Q = TVC$.

b. **Principle 2:** It will be profitable for the firm to increase output whenever $MR > MC$ and decrease output whenever $MR < MC$ and the firm should continue production till

$MR = MC$ and

MC curve should cut to MR from below.

Note: The above principle will be applicable on all types of market structures.

6. MARGINAL REVENUE, AVERAGE REVENUE, TOTAL REVENUE AND ELASTICITY OF DEMAND

The relationship between AR, MR and price elasticity of demand can be examined with the formula –

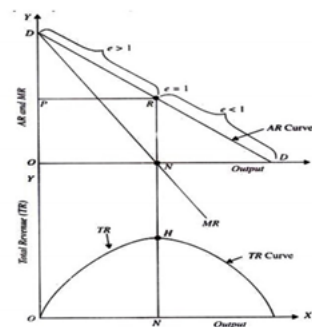
$$MR = AR \times e$$

Where, e = price elasticity of demand.

If e = 1, MR = 0

If e > 1, MR will be positive i.e. MR > 0

If e < 1, MR will be negative i.e. MR < 0



The above figure reveals the following on a straight line demand curve (or AR curve):

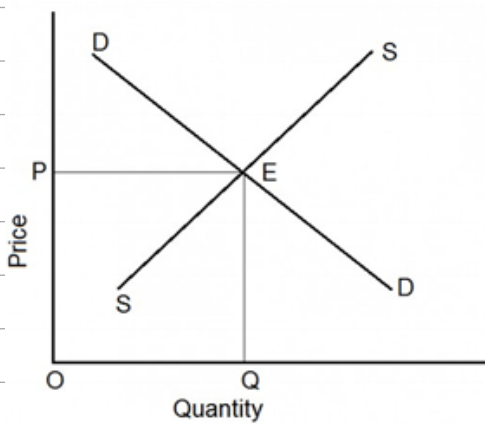
- When e > 1, marginal revenue is positive and therefore total revenue is rising,
- When e = 1, marginal revenue is zero and therefore total revenue is maximum, and
- When e < 1, marginal revenue is negative and therefore total revenue is falling.

7. DETERMINATION OF EQUILIBRIUM PRICE

Law of demand, states an inverse relationship between price and quantity demanded. And law of supply, states direct relationship between price and quantity supplied. Because of this demand curve slopes downwards to the right and supply curve rises upwards to the right. The price at which quantity demanded and quantity supplied are equal, is finally determined as the equilibrium market price.

Demand supply schedule

Equilibrium price	Demand (units)	Supply (units)	Analysis
1	50	10	Excess
2	40	20	Demand
3	30	30	P = 3 = D = S
4	20	40	Excess
5	10	50	Supply



In the table and figure, the equilibrium price is 3 because at this price quantity supplied and quantity demanded are equal, i.e., 30.

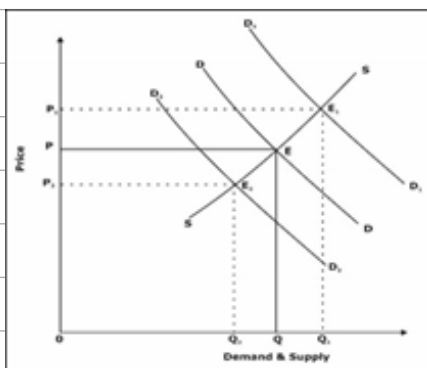


8. EFFECT ON EP AND EQ DUE TO CHANGE IN DEMAND AND SUPPLY

Equilibrium price and quantity may change, either it is because of change in demand or change in supply or changes in both supply and demand. This becomes clear from the following:

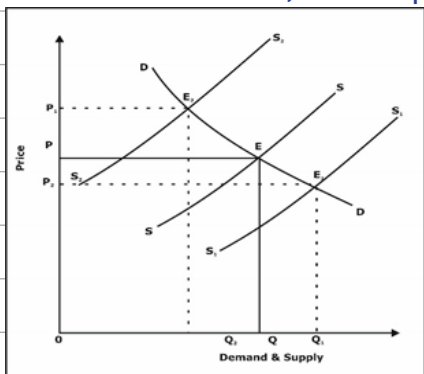
Changes in demand: Changes in demand includes increase or decrease in demand. It may be due to change in price of related goods, income, taste and preference, etc.

- a. **Increase in demand:** If supply curve remains the same and demand curve shifts rightwards, then equilibrium price and output will increase.



In the figure given, when demand curve shifts upwards (when demand increases), from DD to D1D1, new equilibrium is established, according to which equilibrium price rises to OP1 and output to QQ1.

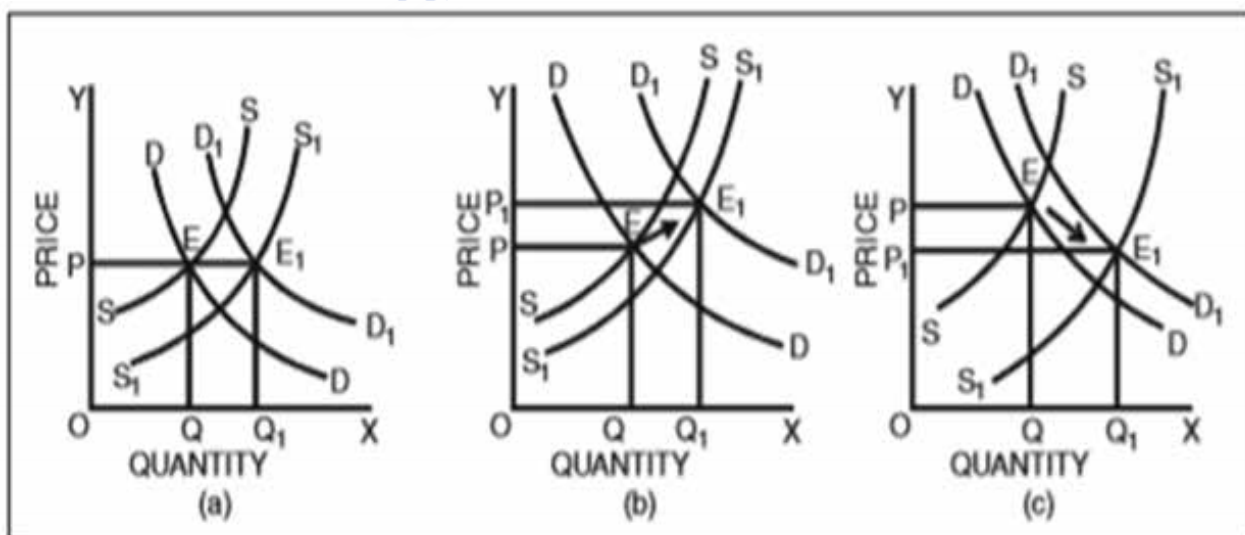
b. **Decrease in demand:** If supply curve remains the same and demand curve shifts leftwards, then equilibrium price and output will decrease.



In the figure given, when demand curve shifts downwards (when demand decreases), from DD to D2D2, new equilibrium is established, according to which equilibrium price and output decline, OP2 and QQ2.

9. EFFECTS OF SIMULTANEOUS SHIFTS IN DEMAND AND SUPPLY ON EQUILIBRIUM PRICE

Sometimes demand and supply conditions may change at the same time changing the equilibrium price and quantity. The changes in both demand and supply simultaneously can be discussed with the help of following diagrams:





10. PERFECT COMPETITION MARKET

Meaning of perfect competition: A market is said to be perfectly competitive when demand and supply forces operate freely to determine the market price. This market price is uniform for the whole market. There is no restriction on entry, no product differentiation and no market concentration.

Characteristics (Features): A market, to be perfectly competitive must comply with certain essential conditions.

- i) Large number of buyers and sellers.
- ii) Homogeneous product
- iii) Free entry and exit
- iv) Perfect knowledge
- v) Perfect mobility
- vi) Uniform price
- vii) No government restrictions
- viii) Industry is price maker and firm is price taker
- ix) Transportations cost and selling costs are not found



11. PURE OR FREE COMPETITION

PURE or FREE competition. These three are

- Large number of buyers and sellers
- Homogeneous product
- Free entry and exit of firms.



12. PRICE DETERMINATION (INDUSTRY IS PRICE MAKER AND FIRM IS PRICE TAKER)

(TR, AR, MR, Price and Demand Curve under perfect competition): Under perfect competition, the industry will decide the price at the equilibrium point where market demand is equal to market supply and each firm will accept the price decided by the industry. So, we can say that industry is price maker and firm is price taker.

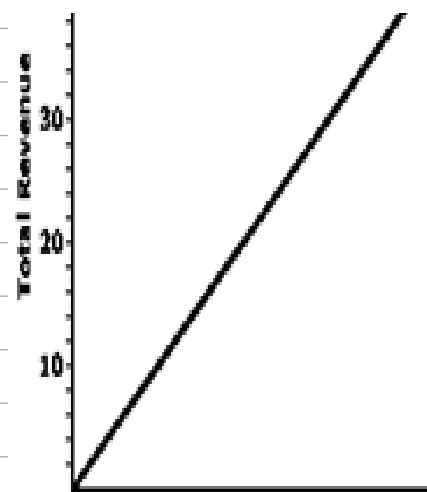
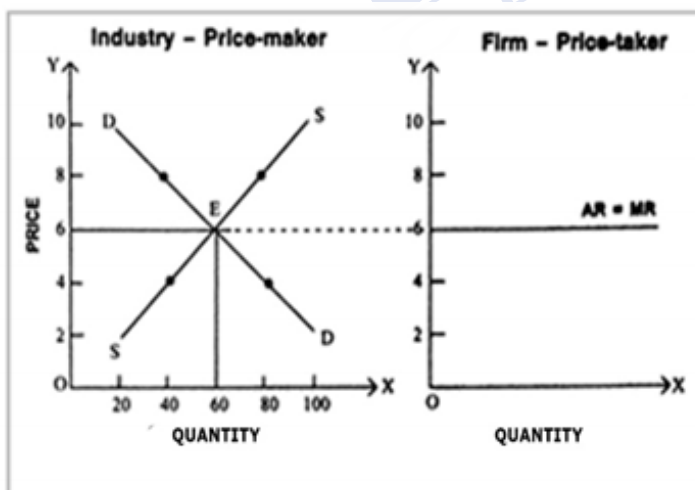
Industry – Price Maker

Equilibrium price	Demand (units)	Supply (units)	Analysis
2	100	20	Excess
4	80	40	Demand
6	60	60	$P = 6 = D = S$
8	40	80	Excess
10	20	100	Supply

Equilibrium price for the industry fixed through the interaction of the demand and supply, i.e., Rs. 6 per unit.

Firm – Price Taker

Price (P)	Quantity sold (Q)	Total Revenue (TR)	Average Revenue = TR/Q	Marginal Revenue = TR/Q
6	1	6	6	-
6	2	12	6	6
6	3	18	6	6
6	4	24	6	6
6	5	30	6	6



It is clear from the above table and figure that in a perfectly competitive market a firm's $AR = MR = PRICE = DD$ and the AR curve is also known as demand curve (DD). In the above figure, it is also clear that industry demand curve is negative sloped and Firm's demand curve is horizontal line.

 13. CONDITIONS FOR EQUILIBRIUM OF A FIRM

- In perfect competition, the firms are price takers and output adjusters.
- This is because the price of the commodity is determined by the forces of market demand and market supply i.e. by whole industry and individual firm has to accept it.
- Therefore firm has to simply choose that level of output which yields maximum profit at the prevailing prices.
- The firm is at equilibrium when it maximises its profit.
- The output which helps the firm to maximise its profit is called equilibrium output.
- There are two conditions for the equilibrium of a firm. They are –
 - a. Marginal revenue should be equal to the marginal cost i.e., $MR = MC$. (first order condition)
 - b. Firm's marginal cost curve should cut its marginal revenue curve from below i.e. marginal cost curve should have positive slope at the point of equilibrium. (Second order condition)
- If $MR > MC$, there is incentive to produce more and add to profits.
- If $MR < MC$, the firm will have to decrease the output as cost of production of additional units is high.
- When $MR = MC$, it is equilibrium output which maximises the profits.

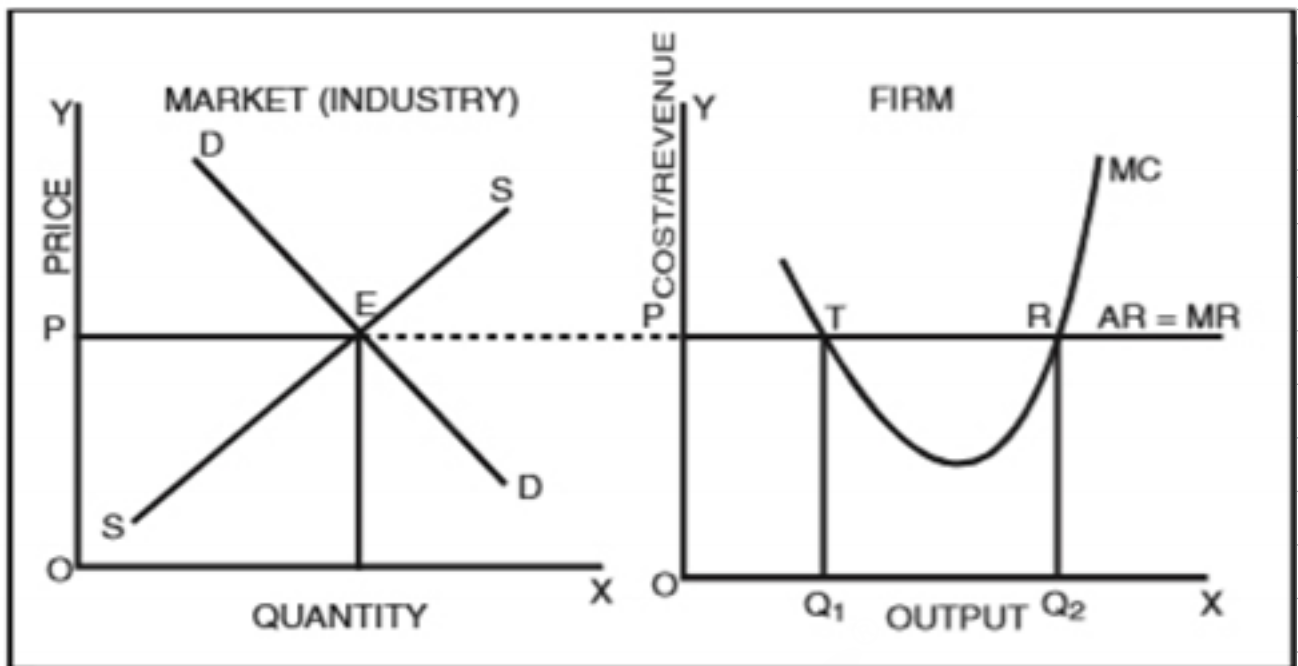


Figure: Equilibrium position of the firm in a competitive market

- Fig. shows that OP is the price determined the industry and firm has to accept it.
- At prevailing price OP the firm faces horizontal demand curve or average revenue curve.
- Since the firm sells every additional unit at the same price, marginal revenue curve coincides with average revenue curve.
- In the fig. at point 'T' $MR = MC$ but second condition is not fulfilled.
- Therefore, OQ1 is not equilibrium output. Firm should expand output beyond OQ1 because
It will result in the fall of marginal cost, and
Add to firm's profits.
- In the fig. at point 'R' not only

$MR = MC$

but MC curve cuts the MR curve from below i.e. it has positive slope.

- Therefore, OQ2 is the equilibrium level of output and point 'R' represents equilibrium of firm.



14. AR / AC APPROACH

$$\begin{aligned} \text{Average cost} &= \text{AFC} + \text{AVC} \\ 20,000 &= 8000 + 12000 \end{aligned}$$

Case	AR	AC	Relation	
1	30000	20000	AR > AC	Super normal profit (Abnormal profit)
2	20000	20000	AR = AC	Normal profits (Zero economic profit)
3	15000	20000	AC > AR > AVC	Sub normal profit
4	12000	20000	AC > AR = AVC	Maximum bearable loss
5	10000	20000	AC > AR < AVC	Shut down point



15. SUPPLY CURVE OF THE FIRM IN A COMPETITIVE MARKET.

In a perfectly competitive industry, the MC curve of the firm is also its supply curve. This can be explained with the help of following figure.

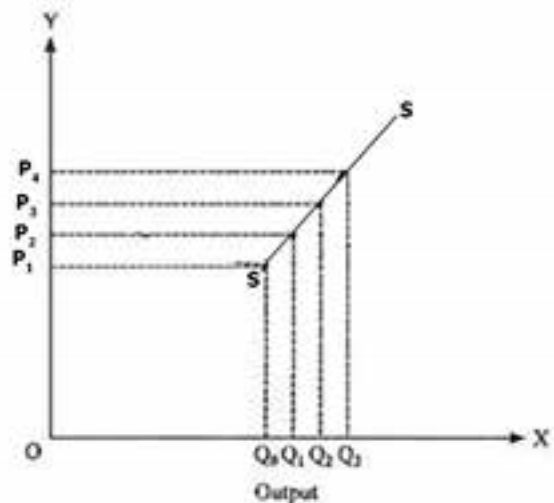
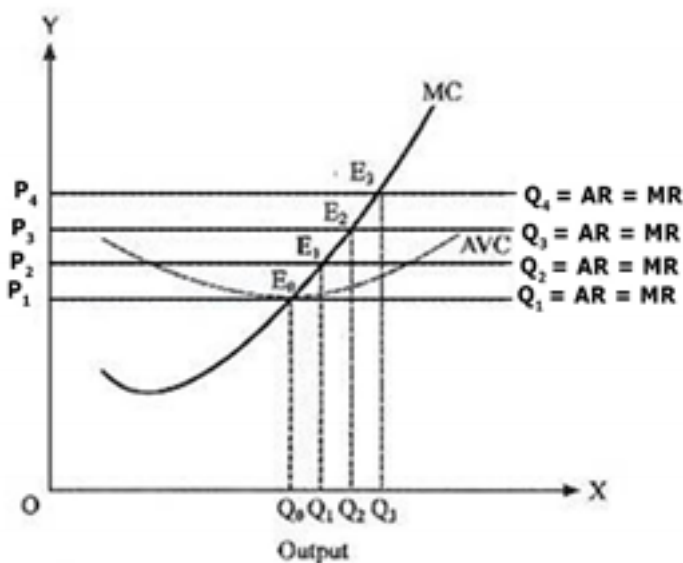


Figure: Marginal cost and Supply curve of a competitive firm

- The fig. shows that at the market price OP1 the firm faces demand curve D1.
- At OP1 price the firm supplies OQ1 quantity because here $MC = MR$
- If the price rises to OP2 the firm faces demand curve D2.
- At OP2 price the firm supplies OQ2 quantity.
- Similarly at OP1 and OP4 price corresponding supplies are OQ3 and OQ4 respectively.
- Thus, the firm's marginal cost curve indicates the quantities of output which it will supply at different prices.
- It can be observed that the competitive firm's short run supply curve is identical only with that portion of MC curve, which lies above the AVC.
- Hence, price > AVC.

3.0.2 Supply Curve of the firm in a Competitive Market

In perfect competition the firm's marginal cost curve above the AVC curve is the firm's supply curve as well.

CONDITIONS FOR EQUILIBRIUM OF A FIRM:

- $MC = MR$ (If MR is greater than MC, there is always an incentive for the firm to expand its production further and gain by sale of additional units. If MR is less than MC, the firm will have to reduce output since an additional unit adds more to cost than to revenues)
- MC curve must cut MR curve from below

1.0.3 CAN COMPETITIVE FIRM EARN PROFITS

SHORT RUN EQUILIBRIUM OF A FIRM

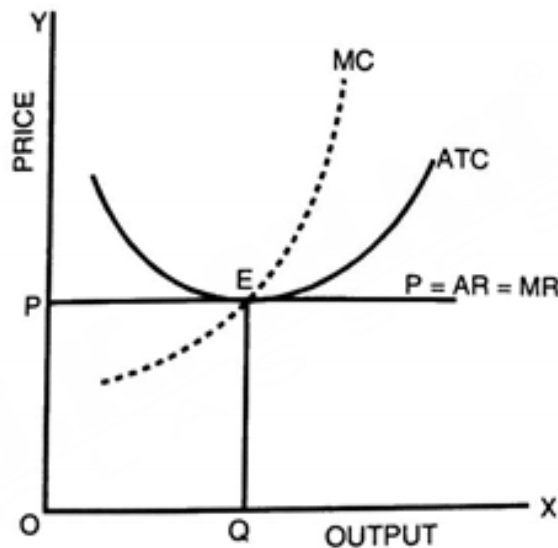
- It should be noted that in the short run the firm in whatever the market structure it is operating has to work with the fixed factors. It can change its level of output only by

changing the variable factors. This does not give it the complete flexibility of operation. As a result, in the short run a firm in perfect competition, monopoly and monopolistic competition may either earn normal profits or supernormal profits or make losses or even face shut down condition. Moreover, in the short run firms cannot enter or leave the industry.

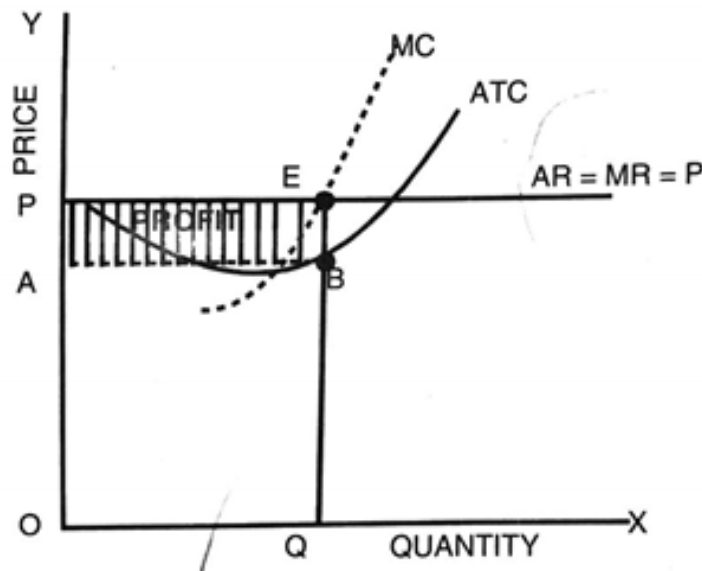
- In the short run a firm may be earning normal profit or abnormal profit or may even be making loss or may be facing shut down condition.

Normal Profits - ($AR = AC$)

POQE= Revenue
POQE= Cost



Abnormal Profits ($AR > AC$)



POQE = Revenue

AOQB = Cost

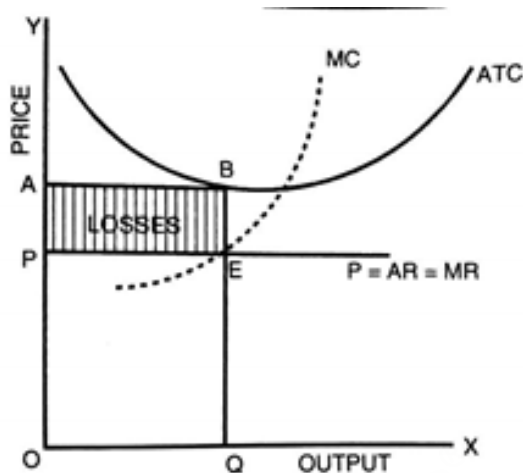
PABE = Super normal profits / Abnormal profits

LOSSES (AR < AC)

AOQB = Cost

POQE = Revenue

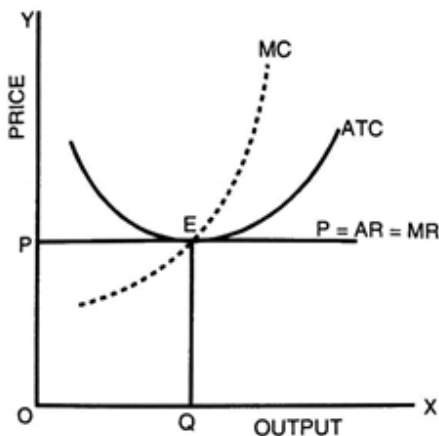
APEB = Loss



LONG RUN EQUILIBRIUM OF A COMPETITIVE FIRM (Perfect Competition)

- In the long run a firm under perfect competition earns only normal profit due to the existence of free entry and free exit of the firms. If the existing firms are earning supernormal profits, new firms are attracted in the industry. The supply of the industry increases. As a result price and supernormal profits start decreasing till normal profit is earned by each and every firm in the industry. On the other hand, if the existing firms are making losses, some firms may decided to quit. The supply of the industry will decrease. As a result price will start increasing and loss will start decreasing till it is converted into normal profit for each firm.

Below given figure shows long run equilibrium of a firm in perfect competition.



Long Run Normal Profit (LAR = LAC)

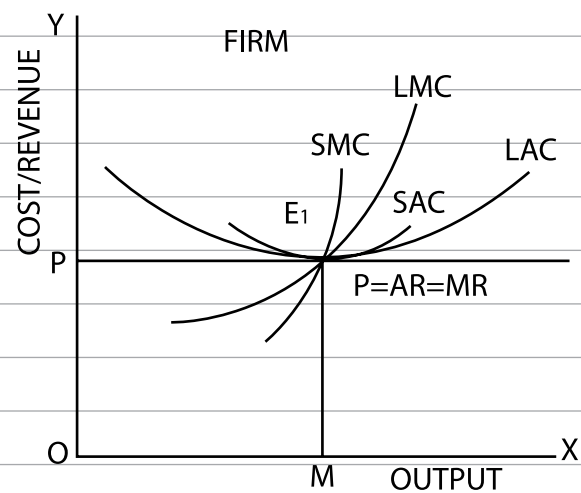
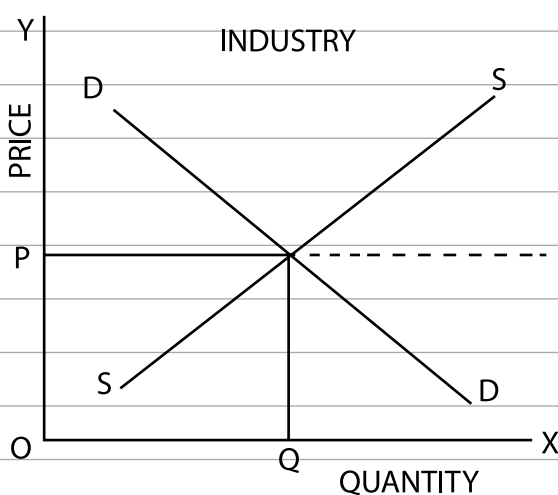
LONG RUN EQUILIBRIUM OF INDUSTRY

The industry is in long run equilibrium when the following conditions are met –

- The long-run demand and supply of the product should be equal.
- All the firms in the industry should be in equilibrium &
- All the firms should be making only normal profits so that there is no tendency for the new firms to enter the industry or the existing firms to leave the industry.
- Following condition is obtained at this equilibrium

$Price = LAR = LMR = LAC = LMC$

- Implications of this condition –
- Price = LAC – firms are earning only normal profit
- LAC = LMC – operating at the lowest possible point of AC curve i.e. optimum utilization of capacity (or absence of excess capacity)
- LAR / Price = LMC – consumer exploitation is zero
- LAR = LMR – firms are price takers



MONOPOLY (Mono means Single , Poly means Seller)

- Monopoly is a market structure characterized by the following –
 - There is a single seller / producer of the commodity (good or service).
 - There is absence of close substitutes. Since most of the commodities have close or remote substitutes, pure monopolies are not possible.
 - There are strong barriers to entry. These barriers exist in the form of patents, trademarks, industrial licenses, copyrights, control over the supplier of raw materials, control over labor supply, etc. They also take form of price wars.
 - Firm and Industry are same
 - Relatively inelastic demand curve (AR)
 - Price maker
 - $AR > MR$
 - Monopolist can decide both Price and Output (But not at the same time)

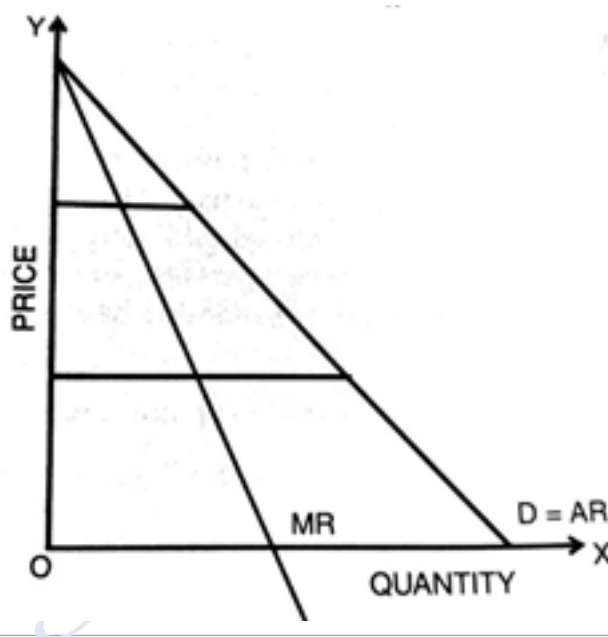
How do monopolies arise?

1. Strategic control over scarce resources or technology
2. Developing or acquiring control over a product that is difficult or costly for others to copy
3. Exclusive rights granted by government to produce and sell
4. Patents and copyrights
5. Business combinations or cartels
6. Extremely large start-up costs and requirement of extraordinarily costly and sophisticated technical know-how
7. Natural monopoly
8. Enormous goodwill enjoyed by a firm
9. Stringent legal and regulatory requirements

10. Use of various anti-competitive practices (e.g. predatory pricing)

Monopolist's revenue curves

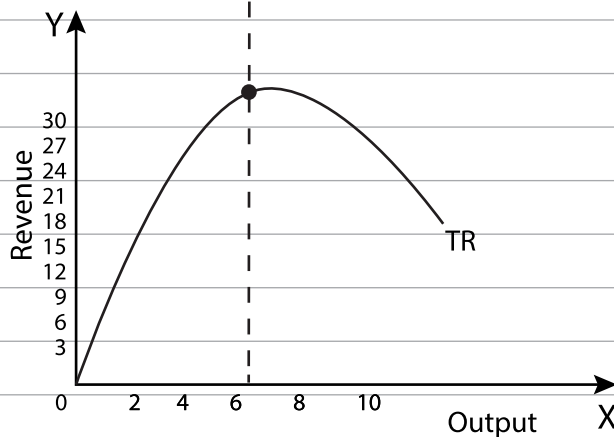
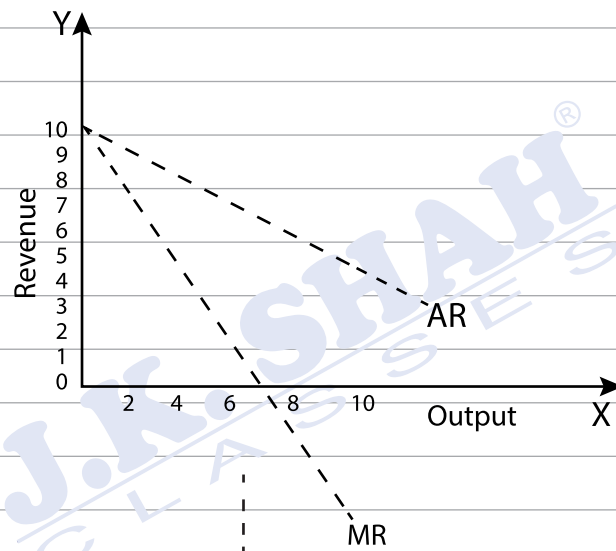
- Monopolist is a price maker. Despite this it cannot decide price and volume of output to be sold simultaneously. It has control over any one of it. This makes the demand curve for a monopolist downward sloping. Moreover, since buyers have no alternatives to monopolists' product, the demand curve for a monopolist is inelastic as shown below –



Monopolist Revenue Curve (Relationship between TR, AR and MR under Monopoly): A monopolist will start from charging the highest price and will go on reducing the price to have more sales. Thus more of a commodity can be sold only by lowering its price. AR is the demand curve and it will slope downward to the right. MR curve will be also downward sloping to the right and MR curve will lie between AR and Y – axis because, the rate of decline of the MR is just double the rate of decline of the average revenue.

- TR curve is inverse –U shaped.
- AR and MR are both negative slopped (straight line downward slopping).
- AR cannot be negative, but MR can be zero or negative.

Price	Output	TR	AR	MR	Analysis
10	0	0	-	-	TR increases AR > MR and Both decreases
9	2	18	9	9	
8	3	24	8	6	
7	4	28	7	4	
6	5	30	6	2	
5	6	30	5	0	MR = 0, TR is maximum
4	7	28	4	-2	TR decreases
3	8	24	3	-4	AR > (-) MR



▪ Monopoly is of two types -

- Simple monopoly - all units of a commodity sold at the same price and
- Discriminating monopoly - all units of a commodity not sold at the same price. The practice of selling different units at different prices is known as price discrimination

3.1.3 Profit Maximization in a Monopolized Market: Equilibrium of the Monopoly firm

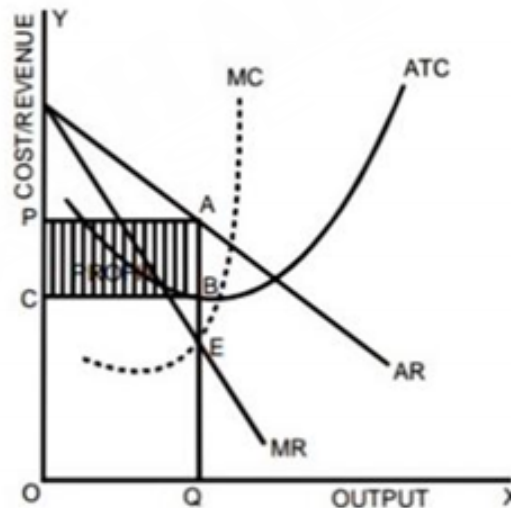
- A firm in monopoly has to determine both the price and the output to be sold as it is a price maker.
- Conditions for equilibrium of a firm
 - $MC = MR$
 - MC curve must cut MR curve from below
- SHORT RUN EQUILIBRIUM OF A FIRM
 - In the short run a firm may be earning normal profit or abnormal profit or may even be making loss or may be facing shut down condition.

Abnormal Profits – ($AR > AC$)

POQA : Revenue

COQB : Cost

PCBA : Super normal Profit

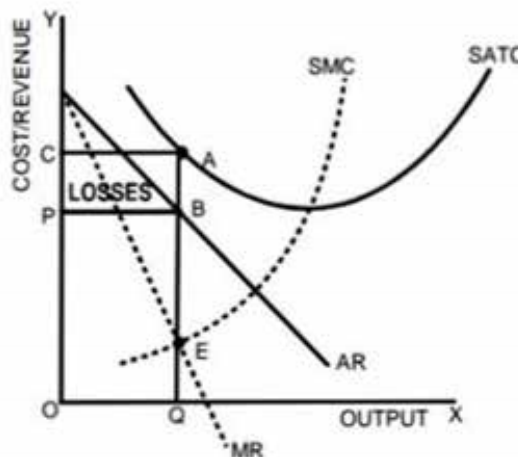


- Losses ($AR < AC$)

COQA: Cost

POQB : Revenue

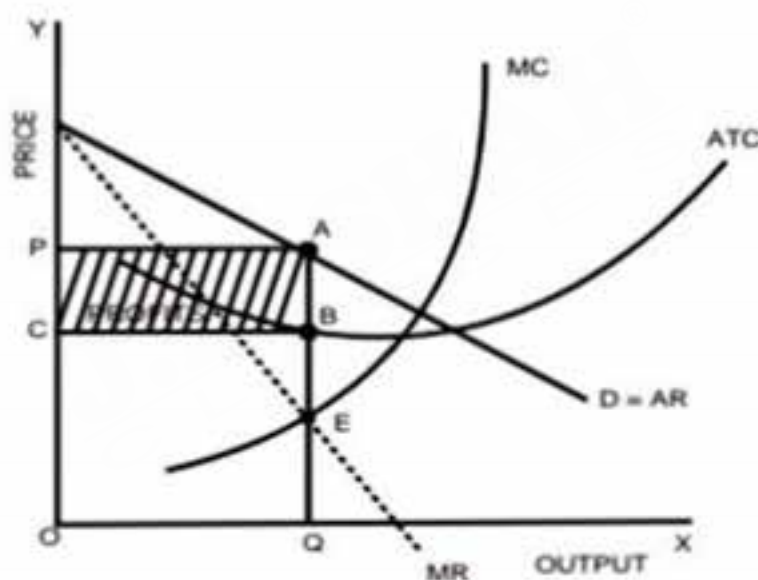
CPBA : Loss



▪ LONG RUN EQUILIBRIUM OF A FIRM

- In the long run a firm in monopoly earns only supernormal profit as it has no competition.
- Below given figure shows long run equilibrium of a firm in monopoly.
- It is seen that in equilibrium, the firm is producing at the decreasing part of AC curve. That means, excess capacity exists in this market structure.

Super normal profits (Long run equilibrium) $LAR > LAC$



3.1.4 PRICE DISCRIMINATION

- **MEANING:** Price discrimination refers to the practice of selling the same product to different buyers (or in different markets) at different prices.
- **EXAMPLES**
 - Railway fares for children under the age of 5, children above 5 years of age and up to 12 years and for those above the age of 60.
 - Electricity sold for residential and commercial purposes.

- TYPES

- Prof. Pigou's three-way classification of Price Discrimination –
 - **FIRST DEGREE PRICE DISCRIMINATION** – monopoly fixes a very high price which makes consumer surplus zero (e.g. personalized services like that of a doctor, teacher, lawyers, etc.) (Takes away entire Consumer Surplus)

 - **SECOND DEGREE PRICE DISCRIMINATION** – Here price varies according to the quantity of output purchased (e.g. wholesale and retail buying) (High Price is Charged which will take away a part of Consumer Surplus)

 - **THIRD DEGREE PRICE DISCRIMINATION** – market is divided into different segments on the basis of age, use, gender, etc. and a different price is charged from each segment of the market (e.g. railways, electricity, etc.) (Different Price in different Submarkets)

- **OBJECTIVES OF PRICE DISCRIMINATION**
 - To maximize profit
 - To sell off surplus stock
 - To enjoy economies of scale (to reduce cost of production)
 - To capture foreign market
 - To secure equity through pricing (equitable distribution of income)

- **POSSIBILITY OF PRICE DISCRIMINATION**

- Following conditions must be fulfilled in order for price discrimination to become possible –
 - It should be possible for the firm to divide the total market into two or more sub-markets on some criterion.

 - The firm should have monopoly power (price making power) in at least one of the many markets in which it is selling its product.

- It should not be possible for the buyers of low-priced market to resell the product to the buyers of high-priced market.

3.1.4 Economic Effects of Monopoly

1. Loss of productive and allocative efficiency – reduction of aggregate economic welfare
2. Relatively high prices and lower output
3. Abnormal profits earned in the long run – non justifiable
4. Price greater than MC – reduction of consumer surplus
5. Restriction on consumer sovereignty
6. Use of unjust means to create barriers to entry – increases AC of production
7. Influences political process in order to obtain favorable legislation
8. No incentives to introduce efficient innovations
9. Pay lower prices to suppliers

IMPERFECT COMPETITION – (MONOPOLISTIC COMPETITION)

- This is a market structure which contains the characteristics of both perfect competition and monopoly. It is observed very commonly in the real world. Examples of monopolistic competition in India include the soap industry, toothpaste industry, biscuit industry, etc.

FEATURES OF MONOPOLISITIC COMPETITION

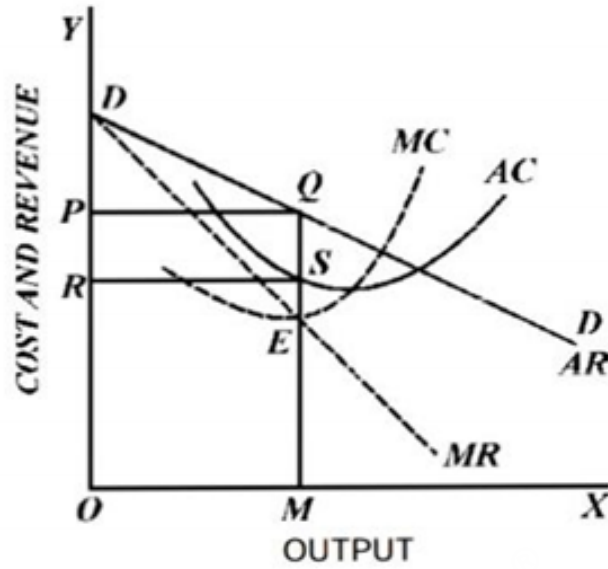
- Large number of buyers and sellers – As under perfect competition, in monopolistic competition also there are large number of buyers and sellers. Each firm has a limited share of the market.
- Product Differentiation – The distinguishing feature of monopolistic competition is product differentiation. Products of different firms differ from one another in respect of color, shape, size, packing, etc. These products are very close substitutes of each other. Because of product differentiation each firm has a partial control over the price of its products. Even buyers have a choice. This feature is responsible for the elastic shape of the demand curve under monopolistic competition as shown below –

- Free Entry and Exit of Firms – Firms are free to enter into or exit from the industry. There are no legal or other restrictions on entry and exit. This ensures that all firms in this market in the long run earn only normal profit.
- Selling Costs – Due to product differentiation each firm has to spend huge sum of money on advertising its product. Brand building process is very important in this market.
- Relatively elastic demand curve
- Concept of Group exist
- Concept of Brand exist under monopolistic competition [®]
- Non price competition
- Close Substitutes
- Price Maker and Price taker of its own Product

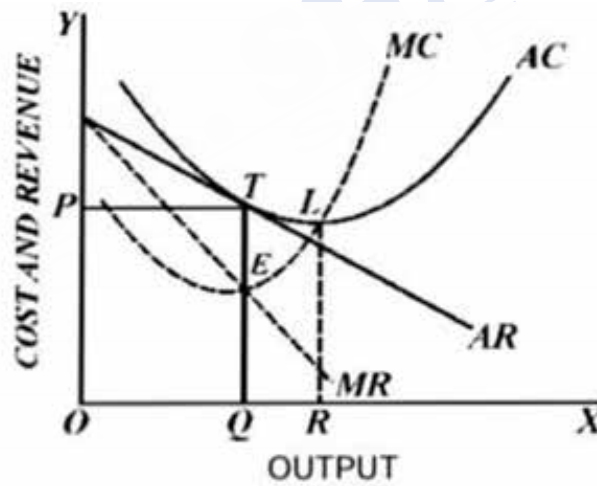
Price and Output Determination under Monopolistic Competition: Equilibrium of a Firm

- Conditions for equilibrium of an individual firm
- $MC = MR$
- MC curve must cut MR curve from below
- SHORT RUN EQUILIBRIUM OF A FIRM
 - In the short run a firm may be earning normal profit or abnormal profit or may even be making loss or may be facing shut down condition.

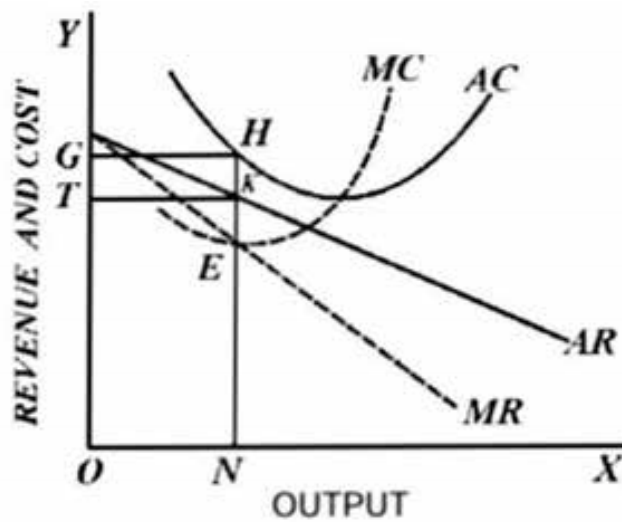
- Abnormal Profits – ($AR > AC$)



- NORMAL PROFITS : ($AR = AC$)

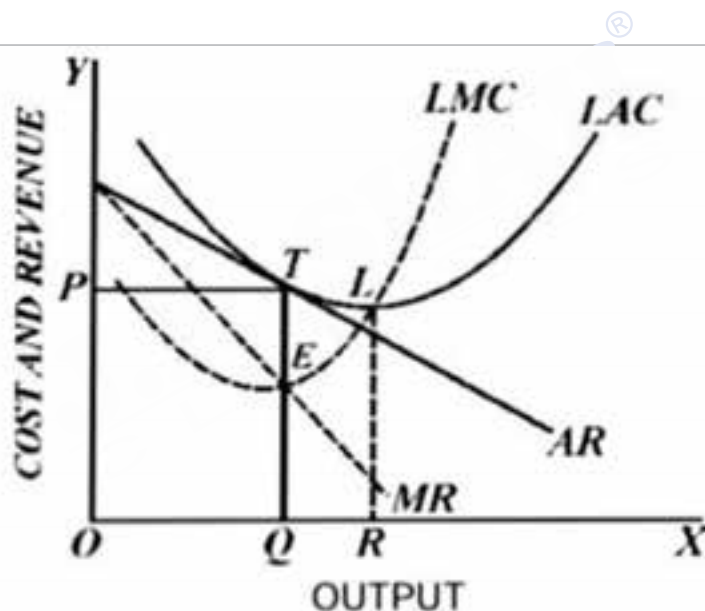


- LOSSES : ($AR < AC$)



▪ LONG RUN EQUILIBRIUM OF A FIRM (NORMAL PROFITS $LAR = LAC$)

- In the long run a firm in monopolistic competition makes only normal profit due the characteristic of free entry and free exit. If the existing firms are earning supernormal profits, new firms are attracted in the industry. The supply of the industry increases. As a result, price and supernormal profits start decreasing till normal profit is earned by each and every firm in the industry. On the other hand, if the existing firms are making losses, some firms may decided to quit. The supply of the industry will decrease. As a result price will start increasing and loss will start decreasing till it is converted into normal profit for each firm.
- Below given figure shows long run equilibrium of a firm in monopolistic competition.



Excess Capacity : Least cost output – Profit maximizing output
(Concept of Excess Capacity exist under Monopolistic market)

- It is seen that in equilibrium, the firm is producing at the decreasing part of AC curve. That means, excess capacity exists in this market.

OLIGOPOLY / Imperfect competition

- Oligopoly is a market structure characterized by the presence of few sellers (two to ten) selling homogenous or differentiated products to large number of buyers.

▪ TYPES OF OLIGOPOLY

- Pure / Perfect Oligopoly – It is a situation in which all firms in the market sell homogenous goods.
- Differentiated / Imperfect Oligopoly – It is a situation in which all firms in the market sell differentiated goods.
- Open Oligopoly – If new firms can enter in an oligopoly market it open oligopoly.
- Closed Oligopoly – If new firms cannot enter an oligopoly market it closed oligopoly.
- Collusive Oligopoly – When the few firms in the oligopoly market come to a common understanding or act in collusion with each other with regard to price fixation, market sharing, profit sharing, etc. it is a case of collusive oligopoly.
- Competitive Oligopoly – When few firms in the oligopoly market compete with each other it is known as competitive oligopoly.
- Partial Oligopoly – When oligopoly industry is dominated by one large firm which is looked upon as a leader, it is a case of partial oligopoly.
- Full Oligopoly – When there is no price leader and all firms are equally dominant, it is a case of full oligopoly.
- Syndicated Oligopoly – A situation in which firms sell their products through a centralized syndicate. Eg: OPEC
- Organized Oligopoly –A situation where the firms organize themselves into a central association for fixing prices, output, etc.

3.2.0 CHARACTERISTICS OF OLIGOPOLY

- Few Number of Sellers - 2 to 10 (Competition among Few)
- Homogeneous or Differentiated Product

- Importance of Advertising / Selling Costs – It will not be advantageous for firms in oligopoly to engage themselves in price wars. So they avoid price-cutting and instead compete on non-price front by spending more money on advertisements and other promotion measures.
- Interdependence - Due to the presence of a few firms, there is a high degree of interdependence among firms in oligopoly market. Any change in price, output, advertising expenses, etc. will have direct effect on profits of the rivals. There will be retaliation by rival firms for the action of one firm. Therefore, reaction of other firms must be considered by a firm in oligopoly before taking a decision.
- Group Behavior – The theory of oligopoly is a theory of group behavior, not of mass or individual behavior. This property derives from the fact that there is great degree of interdependency among few firms in this market structure. Each oligopolist watches the business behavior of other oligopolists in the industry and then decides upon his moves on the basis of some assumptions of they behave or are likely to behave.
- Price Rigidity
- No free entry ,No blocked entry
- Kinked demand curve
- Concept of group

3.2.1 PRICE & OUTPUT DECISIONS IN AN OLIGOPOLISTIC MARKET

- Because of interdependence an oligopoly firm cannot assume that its rival firms will keep their prices and quantities constant, when it makes changes in its price or quantity. When a firm in oligopoly changes its price, its rivals will react and change their prices which in turn will affect the demand of the former firm.
- Therefore, an oligopolistic firm cannot have a determinate demand curve. Therefore, price and output determination of an oligopoly firm cannot be explained by economic analysis alone.
- Economists have established a number of price-output models for oligopoly market depending upon the behavior pattern of other firms in the market.

Following are some of the important oligopoly models :

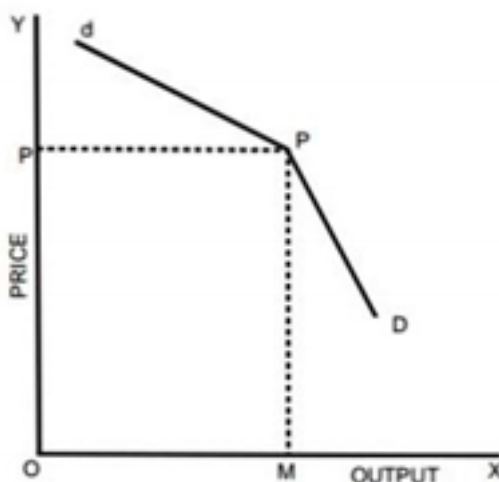
- (a) When the interdependence is ignored and decisions taken independently, the demand curve becomes definite and the equilibrium output is found out by equating MC with MR.
- (b) Cournot model – the firm’s control variable is output
Stackelberg’s model – the leader decides his output before all other firms
Bertrand model – the firm’s control variable is price
- (c) Cartel formation – cartel is a group of firms that explicitly agree (collude) to coordinate their activities.

3.2.2 Price Leadership

- Dominant firm price leadership model
- Low cost price leadership model
- Barometric price leadership model

3.2.3 Kinked Demand Curve

- One of the important features of oligopoly market is that prices of commodities once determined remain fixed or rigid. One of the many theories explaining price rigidity is American economist Paul Sweezy’s Kinked Demand Curve Model.
- According to Sweezy, price in oligopoly market remains fixed because of a peculiar behavior of firms in this market.
- It is observed that when one firm cuts the price, remaining firms also follow the price cut. But if one firm increases its price, other firms do not follow the price increase.
- This behavior of firms gives demand curve a very special shape. Demand curve in oligopoly is not a straight line sloping downwards but it has a kink at the prevailing price.



- Reasons for elastic portion of demand curve
 - When one firm increases the price, other firms find it profitable not to increase price. Many customers will now be diverted to other firms which have not increased their price. The firm which increases price will face a significant reduction in demand. Hence upper part of demand curve is elastic.
- Reasons for inelastic portion of demand curve
 - If one firm cuts the price and other firms do not cut the price then the firm that has cut the price will benefit. Other firms will see a decline in their market share. So they would also cut their prices. When all the firms cut prices, the firm which cut the price first does not benefit much. Hence it would prefer not to cut the price.

From the above arguments it is clear that in oligopoly a firm does not benefit either by increasing or decreasing the price. Prices therefore remain rigid.

Duopoly : It is a market situation in which there are only two firms in the market

Monopsony : It is a market which has only one Single buyer of a Product or Service

Oligopsony : It is a market which has Small number of Large buyers

Bilateral Monopoly : in this market there is only a single buyer and single Seller

(Monopoly market + Monopsony Market)

MODULE MULTIPLE CHOICE QUESTIONS



1. In the table below what will be equilibrium market price.

Price (Rs.)	Demand (tonnes per annum)	Supply (tonnes per annum)
1	1000	400
2	900	500
3	800	600
4	700	700
5	600	800
6	500	900
7	400	1000
8	300	1100

- a. Rs.2 b. Rs.3 c. Rs.4 d. Rs.5
2. Assume that when price is Rs.20, the quantity demanded is 9 units, and when price is Rs.19, the quantity demanded is 10 units. Based on this information, what is the marginal revenue resulting from an increase in output from 9 units to 10 units.
- a. Rs.20 b. Rs.19 c. Rs.10 d. Rs.1
3. Assume that when price is Rs.20, the quantity demanded is 15 units, and when price is Rs.18, the quantity demanded is 16 units. Based on this information, what is the marginal revenue resulting from an increase in output from 15 units to 16 units.
- a. Rs.18 b. Rs.16 c. Rs.12 d. Rs.28
4. Suppose a firm is producing a level of output such that $MR > MC$, what should be firm do to maximize its profits.
- a. The firm should do nothing.
 b. The firm should hire less labour.
 c. The firm should increase price.
 d. The firm should increase output.

5. Marginal revenue is equals to:
- The change in price divided by the change in output.
 - The change in quantity divided by the change in price.
 - The change in $P \times Q$ due to a one unit change in output.
 - Price, but only if the firm is a price searcher.
6. Suppose that a sole proprietorship is earning total revenues of Rs.100,000 and is incurring explicit costs of Rs.75,000. If the owner could work for another company for Rs.30,000 a year, we could conclude that:
- The firm is incurring an economic loss.
 - Implicit costs are Rs.25,000
 - The total economic costs are Rs.100,000.
 - The individual is earning an economic profit of Rs.25,000.
7. Which of the following is not an essential condition of pure competition?
- Large number of buyers and sellers.
 - Homogeneous product.
 - Freedom of entry.
 - Absence of transport cost.
8. What is the shape of the demand curve faced by a firm under perfect competition?
- Horizontal.
 - Vertical.
 - Positively sloped.
 - Negatively sloped.
9. Which is the first order condition for the profit of a firm to be maximum?
- $AC = MR$.
 - $MC = MR$.
 - $MR = AR$
 - $AC = AR$.

10. Which of the following is not a characteristic of a “price-taker”? .
- TR = P X Q.
 - AR = Price.
 - Negatively – sloped demand curve.
 - Marginal revenue = Price.
11. Which of the following statements is false?
- Economic costs include the opportunity costs of the resources owned by the firm.
 - Accounting costs include only explicit costs..
 - Economic profit will always be less than accounting profit if resources owned and used by the firm have any. opportunity costs.
 - Accounting profit is equal to total revenue less implicit costs.
12. With a given supply curve, a decrease in demand causes.
- An overall decrease in price but an increase in equilibrium quantity.
 - An overall increase in price but a decrease in equilibrium quantity.
 - An overall decrease in price and a decrease in equilibrium quantity.
 - No change in overall price but a reduction in equilibrium quantity.
13. It is assumed in economic theory that:
- Decision making within the firm is usually undertaken by the managers, but never by the owners.
 - The ultimate goal of the firm is to maximise profits, regardless of firm size or type of business organization.
 - As the firm’s size increases, so do its goals.
 - The basic decision making unit of any firm is its owners.
14. Assume that consumer’s income and the number of sellers in the market for good A both decreases. Based upon his information, we can conclude, with certainty, that the equilibrium.
- Price will increase.
 - Price will decrease.
 - Quantity will increase.
 - Quantity will decrease.

15. If the supply increases in a greater proportion than demand.
- The new equilibrium price and quantity will be greater than the original equilibrium price and quantity.
 - The new equilibrium price will be greater than the original equilibrium price but equilibrium quantity will be higher.
 - The new equilibrium price and quantity will be lower than the original equilibrium price and quantity.
 - The new equilibrium price will be lower than the original equilibrium and the new equilibrium quantity will be higher.
16. Assume that in the market for goods Z there is a simultaneous increase in demand and the quantity supplied. The result will be:
- An increase in equilibrium price and quantity.
 - A decrease in equilibrium price and quantity.
 - An increase in equilibrium quantity and uncertain effect on equilibrium price.
 - A decrease in equilibrium price and increase in equilibrium quantity.
17. Suppose the technology for producing personal computers improves and, at the same time, individuals discover new uses for personal computers so that there is greater utilization of personal computers. Which of the following will happen to equilibrium price and equilibrium quantity?
- Price will increase; quantity cannot be determined.
 - Price will decrease; quantity cannot be determined.
 - Quantity will increase; price cannot be determined.
 - Quantity will decrease; price cannot be determined.
18. Which of the following is not a condition of perfect competition?
- A large number of firms.
 - Perfect mobility of factors.
 - Informative advertising to ensure that consumers have good information.
 - Freedom of entry and exit into and out of the market.

19. Which of the following is not a characteristic of a perfectly competitive market?
- Large number of firms in the industry.
 - Outputs of the firm are perfect substitutes for one another.
 - Firms faced downward-sloping demand curves.
 - Resources are very mobile.
20. Which of the following is not a characteristic of a Monopolistic competition?
- Ease of entry into the industry.
 - Product differentiation.
 - A relatively large number of sellers.
 - A homogeneous product.
21. Monopoly may arise in a product market because.
- A significantly important resource for the production of the commodity is owned by a single firm.
 - The government has given the firm patent right to produce the commodity.
 - The costs of production and economies of scale makes production by a single producer more efficient.
 - All of the above.
22. Oligopolistic industries are characterised by:
- A few dominant firms and substantial barriers to entry.
 - A few large firms and no entry barriers.
 - A large number of small firms and no entry barrier.
 - One dominant firm and low entry barrier.
23. Price-taking firms, i.e. firms that operate in a perfectly competitive market, are said to be “small” relative to the market. Which of the following best describes this smallness?
- The individual firm must have fewer than 10 employees.
 - The individual firm faces a downward-sloping demand curve.
 - The individual firm has assets of less than Rs.20 lakhs.
 - The individual firm is unable to affect market price through its output decisions.

24. For a price-taking firm:
- Marginal revenue is less than price.
 - Marginal revenue is equal to price.
 - Marginal revenue is greater than price.
 - The relationship between marginal revenue and price is inter determinate.
25. Monopolistic competition differs from perfect competition primarily because.
- In Monopolistic competition, firms can differentiate their product.
 - In perfect competition, firms can differentiate their product.
 - In Monopolistic competition, entry into the industry is blocked.
 - In Monopolistic competition, there are relatively few barriers to entry.
26. The long run equilibrium outcomes in Monopolistic competition and perfect competition are similar, because in both market structures.
- The efficient output level will be produced in the long run.
 - Firms will be producing at minimum average cost.
 - Firms will only earn a normal profit.
 - Firms realize all economic of scale.
27. Which of the following is the distinguishing characteristic of oligopolies?
- A standardize product.
 - The goal of profit maximization.
 - The interdependence among firms.
 - Downward-sloping demand curves faced by firms.
28. In which form of the market structure is the degree of control over the price of its product by a firm very large?
- Monopoly.
 - Imperfect competition.
 - Oligopoly.
 - Perfect competition.

29. Average revenue curve is also known as:
- Profit curve.
 - Demand curve.
 - Average cost curve.
 - Indifference curve.
30. Under which of the following forms of market structure does a firm have no control over the price of its product?
- Monopoly.
 - Monopolistic competition.
 - Oligopoly.
 - Perfect competition.
31. Discriminating monopoly implies that the monopolist charges different prices for his commodity.
- From different groups of consumers.
 - For different uses.
 - At different places.
 - Any of the above.
32. Price discrimination will be profitable only if the elasticity of demand in different sub-market is:
- Uniform.
 - Different.
 - Less.
 - Zero.
33. In the context of oligopoly, the kinked demand hypothesis is designed to explain.
- Price and output determination.
 - Price rigidity.
 - Price leadership.
 - Collusion among rivals.

34. The firm in a perfectly competitive market is a price-taker. This designation as a price taker is based on the assumption that:
- The firm has some, but not complete, control over its product price.
 - There are so many buyers and sellers in the market that any individual firm cannot affect the market.
 - Each firm produces a homogeneous product.
 - There is easy entry into or exit from the market place.
35. Suppose that the demand curve for the XYZ Co. slopes downward and to the right. We can conclude that:
- The firm operates in a perfectly competitive market.
 - The firm can sell all that it wants to at the established market price.
 - The XYZ Co. is not a price-taker in the market because it must lower price to sell additional units of output.
 - The XYZ Co. will not be able to maximise profits because price and revenue are subject to change.
36. If firms in the toothpaste industry have the following market shares, which market structure would best describe the industry?

Market share	(% of market)
Toothpaste	18.7
Dentipaste	14.3
Shinibright	11.6
I can't believe its not toothpaste	9.4
Brighter than while	8.8
Pastystuff	7.4
Others	29.8

- Perfect competition.
- Monopolistic competition.
- Oligopoly.
- Monopoly.

37. The kinked demand curve model of oligopoly assumes that.

- a. The response (of consumers) to a price increase is less than the response to a price decrease.
- b. The response (of consumers) to a price increase is more than the response to a price decrease.
- c. The elasticity of demand is constant regardless of whether price increase or decreases.
- d. The elasticity of demand is perfectly elastic if price increases and perfectly inelastic if price decrease.

38. A firm encounters its “shutdown point” when:

- a. Average total cost equals price at the profit-maximising level of output.
- b. Average variable cost equals price at the profit-maximising level of output.
- c. Average fixed cost equals price at the profit-maximising level of output.
- d. Marginal cost equals price at the profit-maximising level of output.

39. Suppose that, at the profit-maximizing level of output, a firm finds that market price is less than average total cost, but greater than average variable cost. Which of the following statement is correct?

- a. The firm should shutdown in order to minimize its losses.
- b. The firm should raise its price enough to cover its losses.
- c. The firm should move its resources to another industry.
- d. The firm should continue to operate in the short run in order to minimize its losses.

40. When price is less than average variable cost at the profit-maximising level of output, a firm should:

- a. Produce where marginal revenue equals marginal cost if it is operating in the short.
- b. Produce where marginal revenue equals marginal cost if it is operating in the long run.
- c. Shutdown, since it will lose nothing in that case.
- d. Shutdown, since it cannot even cover its variable costs if it stays in business.

41. A purely competitive firm's supply schedule in the short run is determined by.
- Its average revenue.
 - Its marginal revenue.
 - Its marginal utility for money curve.
 - Its marginal cost curve.
42. One characteristic not typical of oligopolistic industry is.
- Horizontal demand curve.
 - Too much importance to non-price competition.
 - Price leadership.
 - A small number of firms in the industry.
43. The structure of the toothpaste industry in India is best described as.
- Perfectly competitive.
 - Monopolistic.
 - Monopolistically competitive.
 - Oligopolistic.
44. The structure of the cold drink industry in India is best described as.
- Perfectly competitive.
 - Monopolistic.
 - Monopolistically competitive.
 - Oligopolistic.
45. Which of the following statements is incorrect?
- Even a monopolistic firm can have losses.
 - Firms in a perfectly competitive market are price takers.
 - It is always beneficial for a firm in a perfectly competitive market to discriminate prices.
 - Kinked demand curve is related to an oligopolistic market.
46. Under perfect competition, in the long run, there will be no _____.
- Normal profits.
 - Supernormal profits.
 - Production.
 - costs.

47. When _____, We know that the firms are earning just normal profits.
- $AC = AR$.
 - $MC = MR$.
 - $MC = AC$.
 - $AR = MR$.
48. When _____, we know that the firms must be producing at the minimum point of the average cost curve and so there will be productive efficiency.
- $AC = AR$.
 - $MC = MR$.
 - $MC = AC$.
 - $AR = MR$.
49. When _____, there will be allocative efficiency meaning thereby that the cost of the last unit is exactly equal to the price consumers are willing to pay for it and so that the right goods are being sold to the right people at the right price.
- $MC = MR$.
 - $MC = AC$.
 - $MC = AR$.
 - $AR = MR$.
50. Agricultural goods markets depict characteristic close to.
- Perfect competition.
 - Oligopoly.
 - Monopoly.
 - Monopolistic competition.
51. Which of the following is not a characteristic of a competitive market?
- There are many buyers and sellers in the market.
 - The goods offered for sale are largely the same.
 - Firms generate small but positive supernormal profits in the long run.
 - Firms can freely enter or exit the market.

52. Which of the following markets would most closely satisfy the requirements for a perfectly competitive market?
- Electricity.
 - Cable television.
 - Cola.
 - Milk.
53. Which of the following statement is accurate regarding a perfectly competitive firm?
- Demand curve is downward sloping.
 - The demand curve always lies above the marginal revenue curve.
 - Average revenue need not be equal to price.
 - Price is given and is determined by the equilibrium in the entire market.
54. The market for hand tools (such as hammers and screwdrivers) is dominated by Draper, Stanely, and Craftsman. This market is best described as.
- Monopolistic competition.
 - A monopoly.
 - An oligopoly.
 - Perfectly competitive.
55. A market structure in which many firms sell products that are similar but not identical is known as .
- Monopolistic competition.
 - Monopoly.
 - Perfect competition.
 - Oligopoly.
56. When an Oligopolist individually chooses its level of production to maximise its profits, it charges a price that is.
- More than the price charged by either monopoly or a competitive market.
 - Less than the price charged by either monopoly or a competitive market.
 - More than the price charged by a monopoly and less than the price charged by a competitive market..
 - Less than the price charged by a monopoly and more than the price charged by a competitive market.

57. In the long run equilibrium of a competitive market, firms operate at.
- The intersection of the marginal cost and marginal revenue.
 - Their efficient scale.
 - Zero economic profit.
 - All of these answer are correct.
58. Which of the following is not a characteristic of a monopolistically competitive market?
- Free entry and exit.
 - Abnormal profits in the long run.
 - Many sellers.
 - Differentiated products.
59. In a very short period market:
- The supply is fixed.
 - The demand is fixed.
 - Demand and supply are fixed.
 - None of the above.
60. Time element was conceived by.
- Adam Smith.
 - Alfred Marshall.
 - Pigou.
 - Lionel Robinson.
61. Total revenue =
- Price X Quantity.
 - Price X income.
 - Income X Quantity.
 - None of the above.
62. Average revenue is the revenue earned.
- Per unit of input.
 - Per unit of output.
 - Different units of input.
 - Different units of output.

63. AR can be symbolically written as:

- a. MR/Q .
- b. Price X quantity.
- c. TR/Q .
- d. None of the above.

64. AR is also known as:

- a. Price.
- b. Income.
- c. Revenue.
- d. None of the above.

65. Marginal revenue can be defined as the change in total revenue resulting from the:

- a. Purchase of an additional unit of a commodity.
- b. Sales of an additional unit of a commodity.
- c. Sale of subsequent units of a product.
- d. None of the above.

66. When $e > 1$ then MR is.

- a. Zero.
- b. Negative.
- c. Positive.
- d. One.

67. When $e = 1$ then MR is .

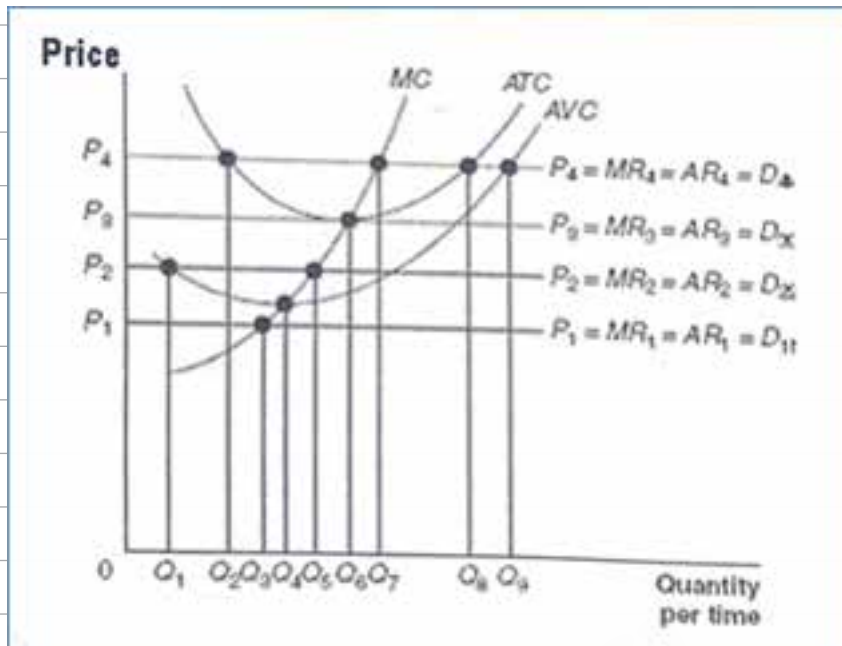
- a. Positive.
- b. Zero.
- c. One.
- d. Negative.

68. When $e < 1$ then MR is:

- a. Negative.
- b. Zero.
- c. Positive.
- d. One.

69. In Economics, the term 'market' refers to a:
- Place where buyer and seller bargain a product or service for a price.
 - Place where buyer does not bargain.
 - Place where seller does not bargain.
 - None of the above.
70. Under perfect competition a firm is the _____.
- Price-maker and non-price-taker.
 - Price-taker and non-price-maker.
 - Neither price-maker nor price-taker.
 - None of the above.
71. A Monopolist is a.
- Price-maker.
 - Price-taker.
 - Price-adjuster.
 - None of the above.
72. Price discrimination is one of the features of _____.
- Monopolistic competition.
 - Monopoly.
 - Perfect competition.
 - Oligopoly.
73. Under monopoly, the degree of control over price is:
- None.
 - Some.
 - Very considerable.
 - None of the above.
74. Generally perishable goods like butter, eggs, milk, vegetables etc., will have
- Regional market.
 - Local market.
 - National market.
 - None of the above

75. At price P_1 , the firm in the figure would produce



- a. Zero output
- b. Q_3
- c. Q_5
- d. Q_6

76. Secular period is also known as

- a. Very short period
- b. short period
- c. very long period
- d. long period

77. Stock exchange market is an example of

- a. Unregulated market
- b. regulated market
- c. spot market
- d. none of the above

78. The market for the ultimate consumers is known as

- a. whole sale market
- b. regulated market
- c. unregulated market
- d. retail market

79. The condition for the pure competition is
- large number of buyer and seller, free entry and exist
 - homogeneous product
 - both (a) and (b)
 - Large number of buyer and seller, homogenous product, perfect knowledge about the product.
80. Pure oligopoly is based on the _____ product
- differentiated
 - homogenous
 - unrelated
 - none of the above
81. In Oligopoly, when the industry is dominated by one large firm which is considered as leader of the group. Then it is called:
- full Oligopoly
 - collusive oligopoly
 - partial oligopoly
 - syndicated oligopoly
82. When the product are sold through a centralized body, oligopoly is known as
- Organized oligopoly
 - partial oligopoly
 - competitive oligopoly
 - syndicated oligopoly
83. When the monopolist divides the consumers into separate sub market and charges different prices in different sub- markets it is known as
- First degree of price discrimination.
 - Second degree of price discrimination.
 - Third degree of price discrimination
 - None of the above

84. Under _____ the monopolistic will fix a price which will take away the entire consumer's surplus
- Second degree of price discrimination
 - first degree of price discrimination
 - third degree of price discrimination
 - none of the above
85. Price discrimination is related to
- time
 - size of the purchase
 - income
 - any of the above
86. The firm and the industry are one and the same in _____
- perfect competition
 - Monopolistic competition
 - Duopoly
 - Monopoly
87. The demand curve of a monopoly firm will be _____
- upward sloping
 - Downward sloping
 - Horizontal
 - Vertical
88. If a average cost is higher than the average revenue then the firm incurs
- Normal profit
 - Abnormal profit
 - Loss
 - No profit, no loss

89. Which of the following statement is correct?

- a. Price rigidity is an important feature of monopoly
- b. Selling costs are possible under perfect competition
- c. Under perfect competition factors of production do not move freely as there are legal restriction.
- d. An industry consists of many firms.

90. Which of the following statements is incorrect?

- a. Under monopoly there is no difference between firm and an industry.
- b. A monopolist may restrict the output and raise the price.
- c. Commodities offered for sale under a perfect competition will be heterogeneous.
- d. Product differentiation is peculiar to monopolistic competition.

ANSWERS:

1	c.	2.	c	3.	c	4.	d	5.	c	6.	a
7.	d	8.	a	9.	b	10.	c	11.	d	12.	c
13.	b	14.	d	15.	d	16.	c	17.	c	18.	c
19.	c	20.	d	21.	d.	22.	a	23.	d	24.	b
25.	a	26.	c	27.	c	28.	a	29.	b	30.	d
31	d	32.	b	33.	b	34.	b	35.	c	36.	c
37	b	38.	b	39.	d	40.	d	41.	d	42.	a
43	c	44.	d	45.	c	46.	b	47.	a	48.	b
49	c	50.	a	51.	c	52.	d	53.	d	54.	c
55	a	56.	d	57.	d	58.	b	59.	a	60.	b
61	a	62.	b	63.	c	64.	a	65.	b	66.	c
67	b	68.	a	69.	a	70.	b	71.	a	72.	b
73.	c	74.	b	75.	a	76	c	77.	b	78.	d
79.	c	80.	b	81.	c	82	d	83.	c	84	b
85.	d	86	d	87	b	88.	c	89.	d	90.	c

ADDITIONAL MCQ'S FOR PRACTICE

1. The AR curve and industry demand curve are same in case of____
 - a. monopoly
 - b. oligopoly
 - c. perfect competition
 - d. none of these

2. A firm will shut down its operation if its____
 - a. revenue is just equal to variable cost and the loss is equal is to fixed costs
 - b. earning covers variable costs as well as a part of the fixed costs
 - c. average revenue falls below average variable cost
 - d. firms, in the short run never shut down their operation

3. Price discrimination is possible____
 - a. only under monopoly situation
 - b. under any market form
 - c. only under monopolistic competition
 - d. only under perfect competition

4. Monopolist's demand curve slopes downward because____
 - a. the industry's demand curve is the monopolist demand curve
 - b. he can influence price
 - c. he can influence output
 - d. all of the above

5. The market, which has large numbers of sellers, selling differentiated product and freedom to entry and exit is an example of____
 - a. perfect competition
 - b. monopoly
 - c. monopolistic competition
 - d. oligopoly

6. The market in which the numbers of sellers, is small and there is interdependence in decision making by the firm is known as____
 - a. perfect competition
 - b. oligopoly
 - c. monopoly
 - d. monopolistic competition

7. In a perfectly, competitive market, the demand curve is_____
- a. relatively elastic b. relatively inelastic
c. unitary elastic d. infinitely elastic
8. In perfect competition, since the firm is a price taker, the _____ curve is straight line.
- a. marginal cost b. total cost
c. total revenue d. marginal revenue
9. Which of the following feature is not seen in imperfect competition?
- a. few seller b. product differentiation
c. price wars d. all goods are homogenous
10. In imperfect competition, the average revenue and marginal revenue curves are_____
- a. different b. same c. identical d. duopoly
11. In which of the following market structure, is the demand curve of the market is represented by the demand curve of the firm?
- a. monopolistic competition b. perfect competition
c. monopoly d. oligopoly
12. The equilibrium level of output for the pure monopolist is where_____
- a. $MR=MC$ b. $MR>MC$ c. $MR<MC$ d. $P < AC$
13. A perfectly competitive firm is operating at an output level where price is greater than marginal cost. Which of the following is/are true?
- a. the firm should increase its output so as to maximize profit
b. the firm should reduce its output so as to maximize profit
c. the firm is neither making profit nor loss
d. the firm is incurring loss
14. In_____, a firm faces an infinitely elastic demand curve which means that the firm can sell any amount of a good at the prevailing market price.
- a. oligopoly market b. monopoly market
c. perfect competition d. monopolistic market

15. Pure monopoly exists_____
- when there is single producer
 - when there is single producer without any close substitute
 - when there is a single producer with close substitutes
 - when a few producers control the industry
16. Under monopoly form of market, TR is maximum when_____
- MR is zero
 - MR is maximum
 - $MR > 0$
 - $MR < 0$
17. If price and marginal revenue are same, then demand curve must be_____
- perfectly elastic and horizontal
 - perfectly inelastic and vertical
 - highly inelastic
 - highly elastic
18. Perfectly elastic demand curve signifies that_____
- the firm does not exercise any control over the price of the market
 - the firm can sell any amount of the product as it likes at the ruling price
 - both (a) and (b)
 - none of these
19. Short-run supply curve of the perfectly competitive firm is represented by_____
- short-run marginal cost curve
 - short-run average cost curve
 - long-run average costs curve
 - only that part of the marginal cost curve which lies above variable cost
20. Highly elastic negatively sloped demand curve is related to_____
- perfect competition
 - monopolistic competition
 - both(a) and (b)
 - none of above
21. Under monopolistic competition, elasticity of demand for the product of a single firm would be_____
- infinite
 - highly elastic
 - highly inelastic
 - zero

22. Excess capacity is a prominent feature of equilibrium under_____
- perfect competition
 - monopoly
 - monopolistic competition
 - oligopoly
23. Different firms charge different prices of their products under_____
- perfect competition
 - monopoly
 - monopolistic competition
 - oligopoly
24. Cigarette industries must be closely related to_____
- perfectly competitive
 - imperfectly competitive market
 - monopolistic market
 - oligopolistic market
25. The marginal product of the variable factors is at maximum, where the marginal cost of the output is_____
- at minimum
 - at maximum
 - at normal profit
 - zero
26. Which of the following is true regarding monopolistic competition?
- $AR = MR$
 - $MR = 0$
 - $AR < MR$
 - $AR > MR$
27. Under perfect competition,_____
- $P > MC$
 - $P < MC$
 - $P = MC$
 - either(a)or(b)
28. If an individual seller, in perfectly competitive market, wishes to double his sales, he would_____
- improve the quality of his product
 - lower his price to half
 - simply offer double the quantity of his product
 - advertise the superiority of his product
29. A queue of a large number of farmers before a single cold storage in the area is a case of_____
- monopoly
 - oligopoly
 - monopsony
 - monopolistic competition

30. Even in long run equilibrium, the pure monopolist can make abnormal profits because of _____
- a. blocked entry b. high price he charges
c. his low LAC d. advertising
31. The average revenue curve of a firm in perfect competition is _____
- a. U shaped b. L shaped
c. vertical d. horizontal
32. If a seller realizes Rs 10,000 after selling 100 units and Rs 14,000 after selling 120 units. What is the marginal revenue here?
- a. Rs 4000 b. Rs 450 c. Rs 200 d. Rs 100
33. Price discrimination is profitable when _____
- a. the elasticity of product in different markets is same
b. the elasticity of product in different markets is different
c. the elasticity of product in different markets is zero
d. none of the above
34. Monopolistic can fix _____
- a. both price and output b. either price or output
c. neither price nor output c. none
35. Selling costs are incurred under monopolistic competition to _____
- a. attract more customers
b. prevent its customers from going to others
c. establish superiority of its product vis-à-vis the others
d. all of the above
36. Negative sloped with higher elasticity demand curve is related to _____
- a. high price level b. monopolistic competitor
c. oligopolistic competitor d. low price level
37. Kinked demand curve in oligopoly market explains _____
- a. price leadership b. price and output determination
c. price rigidity d. collusion among rival firms

38. In general, if the average revenue curve is a straight line, the marginal revenue curve will be _____
- a. U shaped
 - b. a straight line
 - c. C shaped
 - d. bell shaped
39. Using total revenue and total cost curve, the level of output that gives maximum profits will be one where _____
- a. TR and TC curves intersect
 - b. the gap between TR and TC is maximum and TR curves lies below TC curve
 - c. the gap between TR and TC is maximum and TR curve lies above TC curve
 - d. TR= TC curve
40. When AR is constant, MR is _____
- a. equal to AR
 - b. more than AR
 - c. less than AR
 - d. equal to zero
41. The time period an elasticity of time are related _____
- a. indirectly
 - b. directly
 - c. in direct proportion
 - d. none of the above
42. At the shut-down point _____
- a. $P=AVC$
 - b. $TR=TVC$
 - c. the total losses of the firm equal TFC
 - d. all of the above
43. In a competitive firm when $AR = AC$, then firm earns _____
- a. zero economic profit
 - b. abnormal profit
 - c. normal profit
 - d. both A & C

44. In case of consumer's, demand curve determined the price, but in the case of producer,_____
- AR curve determined the price
 - AR curve determined the price and income
 - MR curve determined the price
 - MR curve and AR curve are determined the price
- a. 1 only b. 2 only c. 3 only d. 4 only
45. One would expect a firm to close down rather than continue producing in the short period if_____
- total revenue were more than total variable cost
 - total revenue were less than total variable cost
 - variable cost were to be fall below fixed costs
 - variable costs were to be rise below the fixed costs
46. If more firms enter a competitive industry, the theory predicts that_____
- both marginal and average cost curves rises
 - the industry short-run supply shift upwards to the right
 - output of every firm increases
 - the prices of product rises
47. Long-run equilibrium price of a perfect competitive firm is always_____
- above the LAC
 - below the LAC
 - equal to AFC
 - equal to LAC
48. A monopoly producer has_____
- control over production but not price
 - control over production as well as price
 - control neither on production nor on price
 - control on price, production and consumers
49. A firm can sell as much as it wants at the market price. The situation is related to_____
- perfect competition
 - monopoly
 - monopolistic competition
 - oligopoly

50) when we know firms are earning zero economic profits

a. $MR = MC$

b. $AR = AC$

c. $MR = AR$

d. $MC = AC$

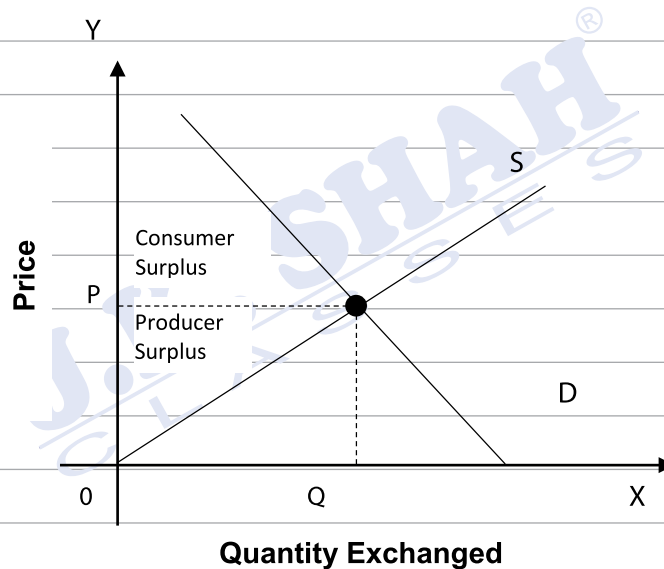
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ADDITIONAL MCQ'S BY ICAI



Market Equilibrium and Social Efficiency

Social efficiency represents the net gains to society from all exchanges that are made in a particular market. It consists of two components: consumer surplus and producer surplus. We have already learned that consumer surplus is measure of consumer welfare. There is welfare gain to producers as well when they participate in the market, namely producer surplus. Producer surplus is the benefit derived by producers from the sale of a unit above and beyond their cost of producing that unit. This occurs when the price they receive in the market is more than the minimum price at which they would be prepared to supply curve and below the price line



Equilibrium Price and Social Efficiency

For all quantities below OQ , we find there is a difference between the price that producers are willing to accept for supplying the good and the price that prevails in the market (P). Producer surplus disappears when market price is at equilibrium i.e. the price at which sellers are willing to offer for sale is equal to the price that they receive.

From figure we find that at price P , when the market is in equilibrium, social efficiency is achieved with both producers and consumers enjoying maximum possible surplus.

1. For market the essential condition is –
 - (a) A particular geographical place
 - (b) Control of the government
 - (c) Close contact between buyers and sellers
 - (d) None of these

2. Assume that when Price is ₹ 10, the quantity demanded is 5 units and when Price is ₹ 12 the quantity demanded is 4 units. Based on this information, what is the Marginal Revenue resulting from increase in output from 4 units to 5 units.
- (a) ₹ 5 (b) ₹ 4
(c) ₹ 2 (d) ₹ 3
3. Average revenue is equal to.
- (a) The change in P & Q due to a one unit change in output
(b) Nothing but price of one unit of output.
(c) The change in quantity divided by change in price
(d) Graphically it denotes the firm's supply curve.
4. Example of a commodity said to have an international Market.
- (a) Perishable Goods
(b) High Value and Small Bulk Commodities.
(c) Product whose trading is restricted by government.
(d) Bulky Articles.
5. Stock Exchange is example of _____ Market:
- (a) Regulated Market
(b) Spot Market
(c) Forward Market
(d) Retail market
6. Conditions for equilibrium of a firm are:
- (a) $MR = MC$
(b) $MC =$ should cut MR from below
(c) $MC = AR$ and MC should cut MR from below
(d) $MR = MC$ and MC should have a positive slope.
7. Natural Monopoly arises when
- (a) There is enormous goodwill by a firm
(b) There are stringent legal and regulatory requirement.
(c) There are very large Economies of cartels
(d) There are Business Combinations and Cartels.

8. Price Discrimination cannot persist under the following market form:
- (a) Perfect Competition
 - (b) Monopoly
 - (c) Monopolistic
 - (d) Oligopoly
9. Sweezy's Model explains the concept of price rigidity relating to following market form:
- (a) Oligopoly Market
 - (b) Perfect Competition Market
 - (c) Monopoly Market
 - (d) Monopolistic market
10. Combination of Monopoly Market and Monopsony Market is called as:
- (a) Duopoly Market
 - (b) Oligopoly Market
 - (c) Bilateral Monopoly Market
 - (d) Monopolistic Market
11. Price varies by attributes such as location or by Customer Segment is _____ degree of Price Discrimination.
- (a) First
 - (b) Second
 - (c) Third
 - (d) Fourth

Answers:

1	2	3	4	5	6
(c)	(c)	(b)	(b)	(a)	(d)
7	8	9	10	11	
(c)	(a)	(a)	(c)	(c)	

CHAPTER 5

BUSINESS CYCLES INTRODUCTION

- Rhythmic fluctuations in aggregate economic activity that an economy experiences over a period of time are called business cycles or trade cycles or Economic cycle
- Business cycle refers to alternate expansion and contraction of overall business activity.
- The Business Cycle is the periodic fluctuations in economic activity measured by the change in real GDP
- Peak and trough are the Turning points of Business Cycle

 PHASES OF BUSINESS CYCLE

A typical business cycle has four distinct phases. These are:

1. Expansion (also called Boom or Upswing)
 2. Peak or Boom or Prosperity
 3. Contraction (also called Downturn or Recession)
 4. Trough or Depression
1. **Expansion**
 - Increase in national output, employment, aggregate demand in capital and consumer expenditure, sales, profit, stock prices and bank credit.
 - Full employment of resources (involuntary unemployment = 0).
 - Increasing prosperity and high standard of living.
 - Business confidence /Profits and Factor income also increases
 - Only Structural unemployment and Frictional unemployment can be seen
 - Growth ultimately slows down reaches peak

2. Peak (Prosperity)

- Increase in input prices
- Increase in output prices
- Increased cost of living
- Actual demand stagnates
- Highest stage in business cycle
- Economy becomes overheated and unsustainable
- Highest GDP and Employment

3. Contraction (Recession)

- Decrease in levels of investment and employment
- Decrease in input prices – Decrease in wage and interest
- Decrease in aggregate demand – Decrease in prices
- Decrease in cost: Decrease in profit expectations (pessimism)
- Decrease in bank credit; stock prices fall
- Income of wage and interest earners gradually declines
- Excess production capacity during Contraction

4. Trough & Depression

- Depression = severe form of recession
 - Negative growth rate
 - Decrease in level of National Income
 - Expenditure declines rapidly
- ✓ Cost decreases – prices are at their lowest
- Firms shutdown
 - Highest level of unemployment
 - Decrease in interest rate – people's demand for holding liquid money (cash) increases
 - Decrease in demand for credit – fall in investors' confidence
 - Banking / financial crisis
 - Excess capacity in capital and consumer durable goods industry
 - Large number of bankruptcies and liquidation
 - Decrease in trade and commerce

5. Recovery

- Business confidence takes off (end of Pessimism and start of optimism)
- Increase in income; increase in employment; aggregate demand increases; price increases; cost increases; banks expand credit



TYPES OF ECONOMIC INDICATORS

- A leading indicator is a measurable economic factor that changes before the economy starts to follow a particular pattern or trend. These variables change before the real output changes. For example, changes in stock prices, profit margins and profits, indices such as housing, interest rates and prices are generally seen as precursors of upturns or downturns.
- Lagging indicators reflect the economy's historical performance and changes in these indicators are observable only after an economic trend or pattern has already occurred. These variables change after the real output changes. Some examples of lagging indicators are unemployment, corporate profits, interest rates, the consumer price index and commercial lending activity.
- Coincident economic indicators, also called concurrent indicators, coincide or occurs simultaneously with the business-cycle movements. Some examples are Gross Domestic Product, industrial production, inflation, personal income, retail sales and financial market trends such as stock market prices.



1.0 FEATURES OF BUSINESS CYCLES

- (a) Business cycles occur periodically although they do not exhibit the same regularity. The duration of these cycles vary. The intensity of fluctuation also varies.
- (b) Business cycles have distinct phases of expansion, peak, contraction and trough. These phases seldom display smoothness and regularity. The length of each phase is also not definite.
- (c) Business cycles generally originate in free market economies. They are pervasive as well. Disturbances in one or more sectors get easily transmitted to all other sectors.
- (d) Some sectors such as capital goods industries, durable consumer goods industry,

etc are disproportionately affected. Moreover, compared to agricultural sector, the industrial sector is more prone to the adverse effects of trade cycles.

- (e) Complex phenomena - they do not have uniform characteristics and causes. Therefore, it is difficult to make an accurate prediction of trade cycles.
- (f) Repercussions of business cycles get simultaneously felt on nearly all economic variables viz. output, employment, investment, consumption, interest, trade and price levels.
- (g) Business cycles are contagious and are international in character. They begin in one country and mostly spread to other countries through trade relations.



1.1 CAUSES OF BUSINESS CYCLES

(A) INTERNAL / ENDOGENOUS CAUSES:

1. **Fluctuations in Effective Demand:** A higher level of aggregate demand will induce businessmen to produce more - more output, income and employment.

As against this, if the aggregate demand is low, there will be lesser output, income and employment.

2. **Fluctuations in Investment:** New inventions may cause entrepreneurs to increase investments in projects which are cost-efficient / more profit inducing. Or investment may rise when the rate of interest is low in the economy. Increases in investment - increases aggregate demand - economic expansion.

Decrease in investment - economic contraction.

3. **Variations in government spending:** increased government spending - expansionary effect and reduced government spending - contractionary effect.

4. **Macroeconomic policies:** Expansionary policies results in boom.

Anti-inflationary measures, such as reduction in government spending, increase in taxes and interest rates cause a downward pressure on the aggregate demand and the economy slows down.

5. **Money supply:** According to Hawtrey, trade cycle is a purely monetary phenomenon. An increase in the supply of money causes expansion in aggregate demand and in economic activities.

Decrease in the supply of money may reverse the process and initiate recession in the economy.

6. **Psychological factors:** According to Pigou, modern business activities are based on the anticipations of business community and are affected by waves of optimism or pessimism. If entrepreneurs are optimistic about future market conditions, they make investments, and as a result, the expansionary phase may begin. The opposite happens when entrepreneurs are pessimistic about future market conditions.

- According to Schumpeter's innovation theory, trade cycles occur as a result of innovations which take place in the system from time to time. The cobweb theory propounded by Nicholas Kaldor holds that business cycles result from the fact that present prices substantially influence the production at some future date.

(B) EXTERNAL / EXOGENOUS CAUSES:

1. **Wars:** production of war goods, like weapons and arms, etc., increases and most of the resources of the country are diverted for their production - production of other goods capital and consumer goods falls - fall in income, profits and employment - contraction in economic activity.

2. **Post War Reconstruction:** Houses, roads, bridges, etc are built and economic activity begins to pick up - effective demand increases due to which output, employment and income go up.

3. **Technology Shocks:** Growing technology enables production of new and better products and services. These products generally require huge investments for new technology adoption. This leads to expansion of employment, income and profits etc. and give a boost to the economy.

4. **Natural factors:** droughts or excessive floods - agricultural output is badly affected. With reduced agricultural output, income of farmers falls and therefore they reduce

their demand for industrial goods. Reduced production of food products also pushes up their prices and thus reduces the income available for buying industrial goods. Reduced demand for industrial products may cause industrial recession.

5. **Population growth:** if the growth rate of population is higher than the rate of economic growth, there will be lesser savings in the economy - reduced investment - income and employment will also be less - the effective demand will be less - slowdown in economic activities.



1.2 RELEVANCE OF BUSINESS CYCLES IN BUSINESS DECISION MAKING

- Knowledge regarding business cycles and their inherent characteristics is important for a businessman to frame appropriate policies.
- Business cycles have tremendous influence on business decisions. The stage of business cycle is crucial while making managerial decisions regarding expansion or down-sizing.
- Different phases of the cycle require different levels of input use, especially labour input.

MODULE MULTIPLE CHOICE QUESTIONS

1. The term business cycle refers to.
 - a. The ups and downs in production of commodities.
 - b. The fluctuating levels of economic activity over a period of time.
 - c. Decline in economic activities over prolonged period of time.
 - d. Increasing unemployment rate and diminishing rate of savings.

2. A significant decline in general economic activity extending over a period of time is.
 - a. Business cycle.
 - b. Contraction phase.
 - c. Recession.
 - d. Recovery.

3. The trough a business cycle occur when _____ hits its lowest point.
 - a. Inflation in the economy.
 - b. The money supply.
 - c. Aggregate economic activity.
 - d. The unemployment rate.

4. The lowest point in the business cycle is referred to as the.
 - a. Expansion.
 - b. Boom.
 - c. Peak.
 - d. Trough.

5. A leading indicator is.
 - a. A variable that tends to move along with the level of economic activity.
 - b. A variable that tends to move in advance of aggregate economic activity.
 - c. A variable that tends to move consequent on the level of aggregate economic activity.
 - d. None of the above.

6. A variable that tends to move later than aggregate economic activity is called
- A leading variable.
 - A coincident variable.
 - A lagging variable.
 - A cyclical variable.
7. Industries that are extremely sensitive to the business cycle are the.
- Durable goods and service sector.
 - Non- durable goods and service sector.
 - Capital goods and non-durable goods sectors.
 - Capital goods and durable goods sector.
8. A decrease in government spending would cause:
- The aggregate demand curve shift to the right.
 - The aggregate demand curve to shift to the left.
 - A movement down and to the right along the aggregate demand curve.
 - A movement up and to the left along the aggregate demand curve.
9. Which of the following does not occur during an expansion?
- Consumer purchases of all types of goods tend to increase.
 - Employment increases as demand for labour rises.
 - Business profits and business confidence tend to increase.
 - None of the above.
10. Which of the following best describes a typical business cycle?
- Economic expansions are followed by economic contractions.
 - Inflation is followed by rising income and unemployment.
 - Economic expansions are followed by economic growth and development.
 - Stagflation is followed by inflationary economic growth.
11. During recession, the unemployment rate and output _____ .
- Rises; falls.
 - Rises; rises.
 - Falls; rises.
 - Falls; falls.

12. The four phrases of the business cycle are:

- a. Peak, recession, trough and boom.
- b. Peak, depression, trough and boom.
- c. Peak, recession, trough and recovery.
- d. Peak, depression, bust and boom.

13. Leading economic indicators.

- a. Are used to forecast probable shifts in economic policies.
- b. Are generally used to forecast economic fluctuations.
- c. Are indicators of stock prices existing in an economy.
- d. All indicators of probable recession and depression.

14. When aggregate economy activity is declining, the economy is said to be in.

- a. Contraction.
- b. An expansion.
- c. A trough.
- d. A turning point.

15. Peak and troughs of business cycle are known collectively as.

- a. Volatility.
- b. Turning points.
- c. Equilibrium points.
- d. Real business cycle events.

16. The most probable outcome of an increase in the money supply is.

- a. Interest rates to rise, investment spending to rise, and aggregate demand to rise.
- b. Interest rates to rise, investment spending to fall, and aggregate demand to fall.
- c. Interest rates to fall, investment spending to rises, and aggregate demand to rise.
- d. Interest rates to fall, investment spending to fall and aggregate demand to fall.

17. Which of the following is not a characteristic of business cycle?

- a. Business cycles have serious consequences on the well being of the society.
- b. Business cycles occur periodically, although they do not exhibit the same regularity.
- c. Business cycles have uniform characteristic and causes.
- d. Business cycles are contagious and unpredictable.

18. Economic recession shares all of these characteristics except.
- Fall in the level of investment, employment.
 - Incomes of wage and interest earners gradually decline resulting in decreased demand for goods and services.
 - Investor confidence is adversely affected and new investments may not be forthcoming.
 - Increase in the price of inputs due to increased demand for inputs.
19. The different phases of the business cycle .
- Do not have the same length and severity.
 - Expansion phase always last more than ten years.
 - Last many years and are difficult to get over in short periods.
 - None of the above.
20. Which of the following is not an example of coincident indicator?
- Industrial production.
 - Inflation.
 - Retail sales.
 - New orders for plant and equipment.
21. According to _____ trade cycles occur due to onset of innovations.
- Hawtrey.
 - ADAM Smith.
 - J M Keynes.
 - Schumpeter.

ANSWERS:

1	b	8	b	15	b
2	c	9	d	16	c
3	c	10	a	17	c
4	d	11	a	18	d
5	b	12	c	19	a
6	c	13	b	20	d
7	d	14	a	21	d

ADDITIONAL MCQ'S BY ICAI

1. Economic indicators are –
 - (a) A one stroke solution to check the phase of economy
 - (b) Indicators showing the movement of economy
 - (c) Some activities which predict the direction of economy
 - (d) Just an illusion

2. Which economic indicator is required to predict the turning point of business cycle-
 - (a) Leading indicator
 - (b) Lagging indicator
 - (c) Coincident
 - (d) All of the above

3. Business cycle generally originate in free market economies, what is a free market economy?
 - (a) The economy where government is in possession of major assets
 - (b) The economy where private firms control major assets
 - (c) The economy where decision of productions are taken by public sector undertakings
 - (d) The economy where price is controlled by government

4. Which of the following statement is correct?
 - (a) The business cycle largely affects the agricultural sector
 - (b) The business cycle largely affect small employees
 - (c) The business cycle generally affect all sectors of economy but business sector in particular.
 - (d) The business cycle affects low wages workers.

5. According to Keynes, fluctuation in Economic activities are due to –
 - (a) Fluctuation in aggregate effective demand
 - (b) Innovations
 - (c) Changes in money supply
 - (d) Fluctuation in agricultural output

6. Which of the following is the cause of business cycles-
- (a) Fluctuations in aggregate effective demand
 - (b) Fluctuation in investments
 - (c) Fluctuations in government spending
 - (d) All of the above

Answers:

1	2	3	4	5	6
(b)	(d)	(b)	(c)	(a)	(d)

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Homework Section

CHAPTER 1

NATURE AND SCOPE OF BUSINESS ECONOMICS

- “Human wants have unlimited wants” & “The means are relatively scarce” form
 - Definition of Economics
 - Meaning of Economics
 - Subject matter of Economics
 - None
- Economics not just deals with how a nation allocates its scarce resources but deals with _____ by which productive capacity of resources can be in-creased:
 - Principles
 - laws
 - decisions
 - Processes
- The term “Economics’ owes its origin to the Greek word
 - Aikonomia
 - Wikonomia
 - Oikonomia
 - None of the above
- Oikonomia means
 - Industry
 - Household
 - Services
 - None of the above
- “Economics is a study of.....in the ordinary business of life.” Alfred Marshall
 - Human
 - Wealth
 - Mankind
 - Agriculture
- The meaning of Greek words “OIKOU & NOMOS”
 - Micro and macro economics
 - The rule of economics
 - House Hold Management
 - The Law of Management
- Economics is called ... of social sciences
 - Branch
 - Queen
 - King
 - None
- Who is the father of Economics?
 - Lionel Robbins
 - Alfred Marshall
 - Adam Smith
 - Paul Samuelson

9. Economics is the study of –
- (a) How society manages its unlimited resources
 - (b) How to reduce our wants until we are satisfied
 - (c) How society manages its scarce resources
 - (d) How to fully satisfy our unlimited wants
10. Professor ____ has defined the concept of Business Economics:
- a) Alfred Marshall b) Samuelson c) Hicks d) Joel Dean
11. Application of quantitative technique like, linear programming, Capital budg-eting, Break-even analysis are the components of _____ Economics
- (a) Pure (b) Business (c) Micro (d) Neither (a) or (b)
12. Business Economics is
- a) Normative in nature b) Interdisciplinary in nature
 - c) Both d) None
13. Business Economics is:
- a) Abstract & applies the tools of Micro economics;
 - b) Practical application of economic theory in business decision making;
 - c) Incorporates tools from multiple decisions
 - d) Both b & c
14. Which one is not within the scope of Business Economics?
- (a) Capital budgeting (b) Risk analysis
 - (c) Business Cycle (d) Accounting Standards
15. Business Economics is _____ as it deals both quantitative tools & practical application for attainment of set objectives:
- a) Science & Art b) Only science c) Only art d) None
16. Business Economics is:
- (a) Branch of general economics (b) Comprising pure economics
 - (c) Combination of “consumption & production units (d) Both b & c

17. Business Economics comprises of:

- (a) Micro economic in nature (b) Pragmatic in nature
(c) Quantitative analysis (d) All of the above

18. Scarcity of resources means?

- (a) Non –existence of resources (b) Limited resources
(c) Both a& b (d) None

19. The Law of scarcity-

- (a) Does not apply to rich/developed countries
(b) Applies only to the less developed countries
(c) Implies that Consumer's wants will be satisfied in a socialistic system
(d) Implies that consumer; wants will never be completely satisfied

20. Business Economics is “_____ in approach” as it not only deals with theory but tackles practical problems of firms:

- (a) Positive b) Inductive c) Realistic d) Pragmatic

21. Business Economics is “_____ in nature” as it incorporates tools from other disciplines such as Mathematics, Management theory, Accounting, Finance etc.:

- (a) Positive b) Inductive
(c) Interdisciplinary d) Pragmatic

22. Demand analysis, forecasting, production & cost analysis, inventory management are _____ Economics applied to operational or internal issues

- (a) Micro b) Macro c) Pure d) Pragmatic

23. “Work in process”, ‘Raw materials’, ‘Finished goods’ are the forms of _____:

- (a) Demand forecasting (b) Inventory management
(c) Market research (d) None

24. The Central Economic problem is –

- (a) What to produce? (b) How to produce?
(c) For whom to produce? (d) All of above

25. Theory of capital & investment decisions, risk & uncertainty are the parts of ____ Economics applied to operational issues:
(a) Pure (b) Macro (c) Micro (d) None
26. The central problem in economics is that of –
(a) Comparing the success of command versus market economies
(b) Guaranteeing that production occurs in the most efficient manner
(c) Guaranteeing a minimum level of income for every citizen
(d) Allocating scarce resources in such a manner that a society's unlimited Needs or wants are satisfied as well possible.
27. Micro Economics is connected with.....
(a) Consumer's Behaviour (b) Product Pricing
(c) Factor Pricing (d) All of these
28. When we are studying how a producer fixes prices of products we deal with:
(a) Macro Economics (b) Micro Economics
(c) Both a& b (d) None
29. Right of private property is found in –
(a) Socialism (b) capitalism
(c) mixed economy (d) none of these
30. Which of the following is a study of particular units rather than all the units combined?
(a) Macro Economics (b) Micro Economics
(c) Welfare Economics (d) None
31. Which of the following refer to the micro economic aspects from a national angle-
(a) Per capita income of the country
(b) Capital-output ratio in steel industry
(c) Income from the railways
(d) Both b),&(c)

32. State which refers to micro economic approaches from a national angle :

- (a) Unemployment among the educated people
- (b) Inflation in the Economy
- (c) Lockout in Indian Airlines
- (d) Distribution of coal in the country

33. Which of the following falls under Micro Economics?

- (a) National Income
- (b) General Price level
- (c) Factor Pricing
- (d) National Saving and investment

34. Price theory is also known as

- (a) Positive Economics
- (b) Normative Economics
- (c) Micro Economics
- (d) Macro Economics

35. Macro Economics is the study of.....

- (a) All aspects of scarcity
- (b) The national Economics and the global Economy as a whole
- (c) Big businesses
- (d) The decisions of individual businesses and people

36. When we study why saving rates are high or low, we are studying

- (a) Macro Economics
- (b) Micro Economics
- (c) Econometrics
- (d) Both a) &b)

37. Identify the correct statement -

- (a) In the deductive method logic proceeds from the particular to the general
- (b) Micro and macro Economics are interdependent
- (c) In a capitalist Economy economic problem are solved by Planning Commission
- (d) Higher the prices, lower is the quantity of a product is a normative statement

38. Economics considered with welfare propositions are called..... economics:

- (a) Socialist
- (b) Capitalist
- (c) Positive
- (d) Normative

39. An example of positive Economic analysis would be-

- (a) An analysis of the relationship between the price of food and the quantity .
- (b) Determining how much income each person should be guaranteed
- (c) Determining the fair price for food
- (d) Deciding how to distribute the output of the Economy

40. Economics as a positive science should be between ends.

- (a) Unique
- (b) socially responsible
- (c) Neutral
- (d) Inspiring

41. Normative aspect of Economics is given by:

- (a) Marshall
- (b) Robbins
- (c) Adam Smith
- (d) Samuelson

42. Which of the following is an example of normative science?

- (a) Rich people should be taxed more
- (b) Free education should be given to the poor
- (c) India should spend more money on defence
- (d) All of the above

43. Positive aspect of Economics is given by:

- (a) Marshall
- (b) Robbins
- (c) Adam Smith
- (d) Samuelson

44. Social insurance, sickness benefits, old age pension, etc are some social benefits provided by ---

- a) State in capitalist economy
- b) State in socialist economy
- c) State in mixed economy
- d) Both b and c

45. Which of the following statements is normative?

- (a) Large government deficits cause an Economy to grow more slowly
- (b) People work harder if the wage is higher
- (c) The unemployment rate should be lower
- (d) Printing too much money cause inflation

46. The difference between positive & normative economics is:

- (a) Positive economics explains the performance of the economy while normative economics finds out the reasons for poor performance
- (b) Positive economics describes the facts of the economy while normative economics involves evaluating whether some of these are good or bad for the welfare of the people
- (c) Normative Economics describes the facts of the economy while positive economics involves evaluating whether some of these are good or bad for the welfare of the people
- (d) Positive economics prescribes while normative economics describes

47. Exploitation & inequality are minimal under :

- (a) Socialism (b) Capitalism (c) Mixed economy (d) None

48. Who gave the positive aspect of science:

- (a) Marshall (b) Robbins (c) Adam Smith (d) Samuelson

49. Inequality of income does not perpetuate in:

- (a) Socialism (b) Capitalism (c) Mixed economy (d) None

50. In which economic system all the means of production are owned and controlled by private individuals for profit:

- (a) Socialism (b) Capitalism (c) Mixed economy (d) Communism

51. Freedom of choice is the advantage of

- (a) Socialism (b) Capitalism (c) Mixed economy (d) Communism

52. In which type of economy do consumers and producers make their choices based on the market forces of demand and supply?

- (a) Open (b) Controlled (c) Command (d) Market Economy

53. In a free market economy, when consumers increase their purchase of a goods and the level of ___ exceeds ___ then prices tend to rise:

- (a) Demand, supply (b) supply, Demand
- (c) Prices, Demand (d) Profit, Supply

54. A Free Market economy solves its central problems through

- (a) Planning authority
- (b) Market mechanism
- (c) Both
- (d) None

55. Find out the correct statement:

- (a) Higher the prices the lower the quantity demanded is “Normative statement”
- (b) Micro & Macroeconomics are interdependent to each other
- (c) In capitalist economy economic problems are solved by Planning Commission
- (d) In deductive method logic proceeds from particular to general

56. Under a controlled economy_____.

- (a) State plays a major role
- (b) Central authority decides how much will be produced
- (c) Both (a) & (b)
- (d) Neither (a) nor (b)

57. Mixed economy.

- (a) All economic decisions are taken by the central authority
- (b) All economic are taken by private entrepreneurs
- (c) Economic decisions are partly taken by the state and partly by the private entrepreneurs
- (d) None

CHAPTER 2**THEORY OF DEMAND AND
SUPPLY**

1. In economics, demand refers to _____
 - (a) Quantity demanded at a particular time
 - (b) Quantity demanded backed by ability to pay
 - (c) Quantity demanded of all goods
 - (d) Quantity demanded at a particular price in a given period of time

2. The concept of demand demonstrates that _____
 - (a) Demand is always with reference to price
 - (b) Demand is reference to in a given period of time
 - (c) Buyer's ability and willingness to pay
 - (d) All the above

3. Individual demand is also called _____
 - (a) Industrial demand
 - (b) Market demand
 - (c) Household's demand
 - (d) All the above

4. _____ means quantity demanded of a good by a single consumer at various prices per unit of time.
 - (a) Market demand
 - (b) Individual demand
 - (c) Industrial demand
 - (d) None of the above

5. _____ means the aggregates of the quantities demanded by all consumers in the market at different prices per unit of time.
 - (a) Market demand
 - (b) Individual demand
 - (c) Industrial demand
 - (d) Household's demand

6. _____ is a tabular presentation showing different quantities demanded by buyers at different levels of prices in a given period.
 - (a) Supply Schedule
 - (b) Demand Schedule
 - (c) Production Schedule
 - (d) Cost Schedule

7. Market demand is the sum total of ____
- (a) All quantities that producers can produce
(b) All quantities actually sold in the market
(c) All quantities demanded by individual household and consumers
(d) All the above
7. Demand of a good of several consumers when added together is called ____
- (a) Individual (b) Market (c) Joint (d) Independent
8. When a good can be used to satisfy two or more wants, it is said to have ____ demand
- (a) Composite (b) Competitive (c) Joint (d) Market
9. If two goods are complementary then rise in the price of one results in ____
- (a) Rise in demand for the other (b) Fall in demand for the other
(c) Rise in demand for both (d) None of these
10. When price of commodity rises, the demand for it ____
- (a) Rises (b) Contracts (c) Remain constant (d) Become negative
11. When the price of petrol goes up, demand for two-wheeler will ____
- (a) Rise (b) Fall (c) Remain same (d) None of these
12. An increase in the income of a consumer has ____ effect on demand in general.
- (a) No (b) Negative (c) Opposite (d) Positive
13. The demand for Scooter and petrol is an example of ____ demand
- (a) Joint (b) Composite (c) Competitive (d) Market
14. ____ goods are those goods which are used for the production of other goods
- (a) Durable (b) Producer's (c) Non-durable (d) Consumer's
15. Bread, Milk, Readymade clothes, T.V., etc. are examples of ____ goods.
- (a) Perishable (b) Producer's (c) Consumer's (d) Inferior

16. The goods which cannot be consumed more than once, like milk are known as ____ goods
- (a) Non-durable consumer goods (b) Producer's
(c) Inferior (d) Durable consumer goods
17. _____ goods meets only our current demand
- (a) Producer's (b) Durable consumer goods
(c) Non-durable consumer goods (d) Inferior
18. The total demand for steel in the country denotes ____ demand
- (a) Industry (b) Company (c) Both (a) and (b) (d) Autonomous
19. If the demand for a product is independent of the demand for other goods, it is called as ____
- (a) Company (b) Industry (c) Autonomous (d) Derived
20. When demand of any good reacts immediately to price changes, income changes, etc. it is said to have _____ demand.
- (a) Short-run (b) Long-run
(c) Very short run (d) Very long run
21. When we draw a market demand curve, we _____
- (a) Do not consider tastes, income and all prices
(b) Assume that tastes, incomes and all other prices change in the same way price changes
(c) Assume that tastes, incomes and all other prices are irrelevant
(d) Assume that tastes, incomes and all other prices remains the same
22. If a fall in price of 'Y' results in a decrease in the sale of 'X', the two good appear to be ____
- (a) Substitute goods (b) Complementary
(c) Inferior goods (d) Neutral goods
23. _____ goods are the goods which can be used with equal case in place of each other.
- (a) Neutral (b) Normal (c) Complementary (d) Substitute

24. If the demand rises with the rises in consumer's real income, such a good is called _____
- (a) Normal goods (b) Neutral goods
(c) Inferior goods (d) Luxury goods
25. As the consumer's income increases, the demand for necessities of life will increase _____ to the increase in income.
- (a) Less than proportionate (b) More than proportionate
(c) Proportionate (d) Nothing can be said
26. As the consumer's income increases, the demand for comforts and luxuries will increase _____ to the increase _____
- (a) Less than proportionate (b) More than proportionate
(c) Proportionate (d) Nothing can be said
27. During boom period in economy, the demand for goods in general _____
- (a) Rises (b) Falls (c) Remains same (d) None of these
28. In case the consumer expects a steep rise in price of Potatoes in future, his current demand for it will _____
- (a) Remain same (b) Fall (c) Rise (d) None of the above
29. If the government increase the rate of indirect taxes on goods and services, the demand for then will _____ in general.
- (a) Rise (b) Fall (c) Remain neutral (d) Be ineffective
30. If the government reduces the tax on any product, the demand for the product _____ in the short run
- (a) Rises
(b) Falls
(c) Remain unchanged
(d) Tax has nothing to do with the demand of any product
31. If the demand for petrol remains unchanged with rise in its price, it means petrol is a _____
- (a) Normal good (b) Necessity good (c) Luxury good (d) Inferior good

32. If quantity demanded of good 'X' is plotted against the price of its substitute good 'Y', the demand curve will be ____
- (a) Vertical Straight line (b) Positively sloped
(c) Horizontal Straight line (d) Negatively sloped
33. When the quantity of a good that a buyer demands rises when there is growth of purchases by other individuals, such an effect is called ____
- (a) Bandwagon Effect (b) Snob effect
(c) Veblen Effect (d) None of the above
34. In case of normal goods the income effect is ____
- (a) Zero (b) Negative (c) Positive (d) Constant
35. Income effect on demand of a good is ____
- (a) Positive for normal goods (b) Always positive
(c) Negative for normal goods (d) Always negative
36. The Laws of Demand refers to functional relation between ____
- (a) Price & supply (b) Price & cost
(c) Price & income (d) Price & demand
37. The term "Ceteris Paribus" in the Laws of Demand means ____
- (a) All factors except one of remain constant (b) All factor remain constant
(c) All factor are variable (d) None of the above
38. Which of the following is a variable and influencing factor in the Laws of demand?
- (a) Consumer's Income (b) Consumer's Tastes and Preferences
(c) Price of related goods (d) Price of the good
39. The phrase "Other things being equal" in the Laws of Demand means ____
- (a) Income of the consumer remain unchanged
(b) Price of related goods remain unchanged
(c) Tastes and preference of consumer remain unchanged
(d) All the above

40. The total effect of price change of a good is ____
- (a) Substitution Effect + Income Effect
 - (b) Substitution Effect + Price Effect
 - (c) Substitution Effect + Demonstration Effect
 - (d) Demonstration Effect + Veblen Effect.
41. _____ refers to the effect of change in the price of a product on the consumer's purchasing power
- (a) Real Income Effect
 - (b) Substitution Effect
 - (c) Consumer's Surplus
 - (d) None of the above
42. When the price of Thumbs-up falls, other things being constant, buyers substitute Thumbs-up for Coca-Cola. This is called-
- (a) Price Effect
 - (b) Substitution Effect
 - (c) Income Effect
 - (d) Veblen Effect
43. _____ refers to the buyer's reaction to a change in the relative price of two products, keeping the total utility constant
- (a) Consumer's Surplus
 - (b) Income Effect
 - (c) Substitution Effect
 - (d) None of the above
44. The Law of Demand can be explained by_____
- (a) The law of Diminishing Marginal utility
 - (b) Indifference Curves
 - (c) Both 'a' and 'b'
 - (d) Neither 'a' nor 'b'
45. Downward slope of the demand curve shows____
- (a) Positive relationship between price and quantity demanded
 - (b) Inverse relationship between price and quantity demanded
 - (c) No relationship between price and quantity demanded
 - (d) None of the above
46. Law of Demand fails in case of ____
- (a) Normal goods
 - (b) Giffen's goods
 - (c) Inferior goods
 - (d) Both 'b' and 'c'

47. A Giffen good is one which a small change in price results in ____
- (a) Zero income effect out weighted by a positive substitution effect
 - (b) Zero income effect being equal to Zero substitution effect
 - (c) Negative income effect weighed by a positive substitution effect
 - (d) None of these
48. Analysis of the relationship between demand of a commodity and price of related commodities is-
- (a) Price Demand analysis (b) Income demand analysis
 - (c) Cross Demand analysis (d) Market Demand analysis
49. _____ observed that when the price of inferior goods fall, the demand for such goods also fall.
- (a) Adam Smith (b) Dr. Alfred Marshall
 - (c) Ragnar Frisch (d) Sir Robert Giffen
50. The tendency of low income group to imitate the consumption pattern off high income group is known as ____ effect.
- (a) Demonstration (b) Copy (c) Prestige (d) Veblen
51. When price changes and proportionate change in market demand is more than proportionate change in individual demand implies that the market demand curve is ____ than the individual demand curves.
- (a) Steeper (b) Flatter (c) Vertical (d) None of the above
52. A positively sloped demand curve implies
- (a) Violation of the law of demand
 - (b) Giffen good
 - (c) Income effect is negative and greater than substitution effect
 - (d) All the above
53. An increase in consumer's income will increase demand for a ____ but decrease demand for a-
- (a) Substitute good; inferior good (b) Normal good; inferior good
 - (c) Substitute good; complementary good (d) Inferior good; normal good

54. Who explained the abnormal shape of demand curve for diamonds through the doctrine of conspicuous consumption?
- (a) Thorstein Veblen (b) Robert Giffen
(c) David Ricardo (d) Alfred Marshall
55. Elasticity of demand is define as the responsiveness of the quantity demanded of a good to changes in ____
- (a) Price of the commodity (b) Price of related goods
(c) Income of the consumer (d) All the above
56. The concept of Elasticity of demand whenever referred unless otherwise specified always means_
- (a) Price Elasticity of Demand (b) Income Elasticity of Demand
(c) Cross Elasticity of Demand (d) All the above
57. The concept of price elasticity of demand analyses_
- (a) Direction of change in response to change
(b) Degree of change in response to change in price of the commodity
(c) Absolute change in response to change in price of the commodity
(d) None of these
58. When there is no change in quantity demanded in response to any change in price. It is a situation of _
- (a) Infinite price elasticity (b) Unitary price elasticity
(c) Zero price elasticity (d) High price elasticity
59. When percentage change demand is less than percentage change in price, demand is ____
- (a) Perfectly elastic (b) Perfectly inelastic
(c) Less than unitary elastic (d) More than unitary elastic
60. When percentage change in demand is equal to percentage change in price, demand is ____
- (a) Perfectly elastic (b) Unitary elastic
(c) Perfectly inelastic (d) More elastic

61. Price Elasticity of demand is always _____ because of _____ relationship between price and quantity demanded
- (a) Negative; inverse (b) Positive; direct
(c) Negative; positive (d) Positive inverse
62. When there is an infinite demand at a particular price and demand becomes zero with a slight rise in the price then _____
- (a) Demand by commodity is perfectly elastic
(b) $E_d = \infty$
(c) Demand curve is horizontal straight line parallel to X – axis
(d) All the above
63. When percentage change in quantity demanded is more than percentage change in price then _____
- (a) Demand of highly elastic
(b) $E_d > 1$ and demand curve is flatter
(c) $E_d < 1$ and demand curve is steeper
(d) Only 'a' and 'b'
64. When demand curve is parallel to X – axis, elasticity of demand is _____
- (a) Unity (b) Zero (c) Greater than unity (d) Infinity
65. Which curve is called rectangular hyperbola?
- (a) Highly Elastic Demand Curve (b) Less Elastic Demand Curve
(c) Unitary Elastic Demand Curve (d) None of the above
66. When the demand curve is vertical straight line, demand is _____
- (a) Perfectly elastic (b) Perfectly inelastic
(c) Relatively elastic (d) Relatively inelastic
67. If the demand of a commodity is less elastic the demand curve will be _____
- (a) Horizontal line
(b) Vertical line
(c) Downward sloping to the right, flatter
(d) Downward sloping to the right, steeper

68. The demand for common salt has low price elasticity because ___
- (a) It has no close substitute
 - (b) It is necessity
 - (c) It constitutes only a small proportion of consumer's expenditure
 - (d) All the above
69. The devaluation of currency would increase the export earning only when demand for the nation's exports in foreign market is ___
- (a) Elastic
 - (b) Inelastic
 - (c) Perfectly elastic
 - (d) Unitary elastic
70. Elasticity is greater than unity for ___
- (a) Necessaries
 - (b) Luxuries
 - (c) Complementary goods
 - (d) Inferior goods
71. Complementary goods exhibit _____ elasticity
- (a) Low
 - (b) High
 - (c) Unitary
 - (d) None of the above
72. All but one of following commodities has elastic demand. Which one has inelasticity demand?
- (a) Coca-Cola
 - (b) Butter for poor person
 - (c) Cigarettes
 - (d) Electricity
73. Demand is _____ in the long period than in the short period
- (a) Less elasticity
 - (b) Perfectly elastic
 - (c) Perfectly inelastic
 - (d) More elastic
74. If the demand for a commodity is _____, the entire burden of indirect tax will fall on the consumer.
- (a) Relatively inelastic
 - (b) Perfectly inelastic
 - (c) Relatively elastic
 - (d) Perfectly elastic
75. Which of the following helps the manager to estimate the demand of a commodity?
- (a) Price of the commodity
 - (b) Price of the substitute commodities
 - (c) Elasticity of the commodity
 - (d) All the above

76. If demand is _____ then price cuts will _____ spending.
- (a) Perfectly inelastic; increase (b) Elastic; increase
(c) Elastic; decrease (d) None of the above
77. Suppose the demand for Dosa at Dosa Plaza is elastic. If the owner of the restaurant is considering raising the price, it can expect relatively-
- (a) Larger fall in quantity demanded (b) Larger fall in demand
(c) Small fall in quantity demanded (d) Small fall in demand
78. If a 10% rise in the price of a commodity causes the demand to fall by 20%
- (a) Demand was elastic (b) Demand was infinitely elastic
(c) Demand was inelastic (d) None of the above
79. On typical straight line demand curve, the elasticity of demand at a point where it meets the price axis is _____
- (a) 2 (b) 0.75 (c) 1 (d) Infinite
80. To measure price elasticity over large changes in price we use _____
- (a) Point elasticity method
(b) Arc elasticity method
(c) Income elasticity method
(d) None of the above
81. If the demand for a good is elastic, an increase in its price will cause the total expenditure of the consumers of the good to _____
- (a) Remain the same (b) Increase
(c) Decrease (d) None of these
82. All but one are the commodities that have both utility and usefulness except_
- (a) Pencil (b) Notebook (c) Tobacco (d) Clothes
83. Utility is _
- (a) A subjective and relative concept
(b) Morally or ethically colourless
(c) Different from pleasure
(d) All the above

84. The utility of a commodity is _____
- (a) Its accepted social value (b) The extent to which it is of practical use
(c) The fact that it is wanted by some people
(d) Its relatively scarcity
85. The cardinal approach postulates that utility can be _____
- (a) Compared (b) Measured (c) Ranked (d) All the above
86. Cardinal Utility Theory is associated with ---
- (a) W.S. Jevons (b) Dr. A. Marshall
(c) H.H. Gossen and Walras (d) All the above
87. Cardinal Utility approach is also known as _____
- (a) Indifferent Curve Analysis (b) Hicks and Allen Approach
(c) Marginal utility Analysis (d) All the above
88. Marginal Utility Approach is also called _____
- (a) Ordinal Utility Analysis (b) Hicks and Allen Approach
(c) Cardinal Utility Analysis (d) All the above
89. Cardinal measure of utility is required in ---
- (a) Marginal Utility Theory (b) Indifferent Curve Theory
(c) Revealed Preference Theory (d) None of the above
90. Which of the theories is applicable under Cardinal Approach to Utility?
- (a) Law of Diminishing Marginal Utility (b) Law of Equi-Marginal Utility
(c) Consumer Surplus Theory (d) All the above
91. Which of the following assumptions ignores the presence of complementary and substitute goods in Cardinal Utility Theory?
- (a) Rational Consumer
(b) Constant Marginal Utility of money
(c) Independent Utilities
(d) None of the above

92. The price that a consumer is ready to pay for a commodity represents the utility he is expecting from the commodity means____
- (a) Utility is measurable (b) Utility is not measurable
(c) Money is the measuring rod of utility (d) Both 'a' and 'c'
93. Consumer makes all calculation carefully and then purchase the commodities in order to maximize his utility means consumer is ____
- (a) Careless (b) Rational (c) Irrational (d) Unpredictable
94. Which of the following statement regarding ordinal utility is true?
- (a) Utility can be measured, but cannot be ranked in order of preferences
(b) Utility can be measured only
(c) Utility can neither be measured nor be ranked in order or preferences
(d) Utility cannot be measured, but can be ranked in order of preferences
95. Marginal utility can be stated by ____
- (a) Additional utility derived from additional unit of a commodity
(b) $TU_n - TU_{(n-1)}$
(c) both A and B (d) none of the above
96. Utility of a good can be termed as the _____
- (a) Monetary value a consumer gains from consuming a particular good
(b) The difference between what a consumers is willing to pay and actually pays
(c) The satisfaction a consumer derives from the consumption of a particular good
(d) The desire to consume a good
97. The supply of perishable goods is____
- (a) Relatively elastic (b) Relatively inelastic
(c) Perfectly elastic (d) Perfectly inelastic
98. The supply function of a commodity is given by $Q = 20 + 3 P_x$. If the price is Rs 6, the quantity supplied is ____
- (a) 35 units (b) 38 units (c) 40 units (d) 42 units

99. When price of a commodity falls by 20%, the quantity supplied falls by 25%, the price elasticity of supply is _____

- (a) 0.75 (b) 1.25 (c) 1.50 (d) 1.75

100. Supply is the _____

- (a) Limited resources that are available with the seller
(b) Cost of producing a good
(c) Entire relationship between the quantity supplied and the price of good
(d) Willingness to produce

101. A perfectly inelastic supply curve shooting up from X - axis shows _____

- (a) Constant supply at higher price (b) Constant supply at lower price
(c) Constant supply at zero price (d) All the above

102. What is correct about advertisement elasticity?

- (a) It is the responsiveness of good's demand to changes in firm's expenditure on advertising
(b) It is also called promotional elasticity of demand
(c) Advertising elasticity of demand is typically positive
(d) All the above

103. All but one are correct about demand forecasting. Which one is not correct?

- (a) Demand forecasting is the art and science of predicting probable demand of a product in future
(b) Demand forecasting is a simple guesses
(c) It considers past behaviour pattern and prevailing trends in the present
(d) Demand forecasting plays an important role in planning and decision making

104. The burden of forecasting is put on customers in _____ method of demand forecasting

- (a) Survey of buyers intention (b) Collective opinion
(c) Expert opinion (d) Controlled experiments

105. Delphi technique was developed by _____

- (a) Schumpeter (b) Nichols Kaldor
(c) Olaf Hamler (d) Hawtrey

106. _____ method of forecasting is useful in use of capital goods.

- (a) Collective opinion (b) Expert opinion
(c) Barometric (d) Survey of buyer's intention

107. Consider demand function $Q = 100 - 0.5 P$. The inverse function is :

- (a) $P = 200 - 2Q$ (b) $\frac{1}{100-0.5 P}$
(c) $\frac{100-0.5 P}{Q}$ (d) None

108. Price of blue jeans and demand for black jeans are shown by diagram as

- (a) Downward sloped (b) Parallel to horizontal axis
(c) Upward sloped (d) none

109. If two commodities are substitutes a change in the price of one, ceteris paribus, causes a change in the quantity purchased of the other.

- (a) In the same direction. (b) In an insignificant manner
(c) In the opposite direction (d) None

110. The price elasticity of demand for cake is:

- (a) The change in the quantity demanded of cake when cake increases by 60 paisa per rupee.
(b) The percentage increase in the quantity demanded of cake when the price of cake falls by a percent per rupee.
(c) The increase in the demand for cake when the price of cake falls by 10 percent per rupee.
(d) The decrease in the quantity demanded of cake when the price of cake falls by 1 per-cent per rupee.

111. A business firm recently decreased price by 50%, assuming no other change & if elasticity of demand is unitary, total revenue will -

- (a) Double (b) Increase by 50%
(c) Remain unchanged (d) Decrease by 50%

112. Name the economists who develop marginal utility theory & indifference curve theory:

- (a) Hicks, Samuleson (b) Marshall, Robins
(c) Marshall, Hicks (d) Hicks & Allen

113. The statement $A = B = 80$ utility implies :

- (a) An ordinal approach (b) A cardinal approach
(c) Both a & b. (d) None

114. Find out Total Utility for 4 units of goods when qty demanded are 1,2,3,4,5 with respective Marginal utilities as 5,4,3,2,1

- (a) 4 units (b) 14 units (c) 15 units (d) None

115. Assume that utility can be measured in rupees. From the utility schedule, find how many cakes the consumer would consume at the price of Rs 9 per cake:

Cakes.	1	2	3	4	5
Total Utility	30	45	54	59	59

(a) 4 (b) 3 (c) 2 (d) 5

116. Consumer's surplus is :

- (a) What is the price before discount minus what a consumer actually pays.
(b) What a consumer is ready to pay minus what he actually pays.
(c) Free gifts received by consumers on purchase of any commodity.
(d) None.

117. Maximum consumer surplus arises on _____ of the commodity consumed.

- (a) First unit (b) 2nd unit (c) All units (d) All except last unit

118. Consumer has no consumer surplus on _____ of the commodity consumed.

- (a) First unit
(b) 2nd unit
(c) All units
(d) Last unit

119. Consumer surplus arises because:

- (a) Consumer has lot of money
(b) Quality of different units of the same commodity differs.
(c) Consumer receives more than what he pays for.
(d) None

120. Consumer surplus is the difference between:

- (a) Price demanded & price paid.
- (b) Price Quoted & price actually paid.
- (c) Price that a consumer is willing to pay & the price actually paid.
- (d) None.

121. Consumer surplus is best described as:

- (a) Extra Utility
- (b) Price paid
- (c) Sacrifice & commodities.
- (d) All of the above.

122. Consumer's surplus is the highest in the case of:

- (a) Necessities
- (b) Comforts
- (c) Luxuries
- (d) Conventional necessities.

123. The concept consumer surplus is useful :

- (a) In monetary policy
- (b) In investment policy
- (c) In fixing remuneration of the factors.
- (d) In tax policy

124. Marginal utilities of goods A & B are 600 & 900 and the price of good B is Rs. 120. If the consumer is in equilibrium the price of good A is :

- (a) Rs. 60
- (b) Rs. 70
- (c) Rs. 80
- (d) Rs. 90

CHAPTER 3**THEORY OF PRODUCTION
AND COST**

1. The term production in economics means _____
 - (a) Creation of physical product only
 - (b) Rendering of a service only
 - (c) Creation of economic utilities
 - (d) None of the above

2. Which of the following is considered production in economics?
 - (a) Singing a song in a birthday party
 - (b) Run for fun
 - (c) Giving tuitions
 - (d) Helping an old man to cross road

3. Making use of personal skill of doctors, lawyers, actors, etc. results in the creation of _____
 - (a) Form utility
 - (b) Place utility
 - (c) Personal/service utility
 - (d) Time utility

4. Which of the following can be considered as labour in economics____
 - (a) Singing for pleasure
 - (b) A teacher teaching his own child at home
 - (c) Looking after, a sick friend
 - (d) A teacher teaching in school

5. Land in economics means____
 - (a) Material and non-material goods
 - (b) Minerals under the surface of earth
 - (c) All natural resources available to man for producing wealth
 - (d) All the above

6. Supply curve of labour is _____
 - (a) Upward sloping
 - (b) Horizontal
 - (c) Backward bending
 - (d) Vertical

7. Which of the following statements is not true?
- (a) Capital is a produced means a production
 - (b) Capital is a man made instrument of production
 - (c) Capital is a primary factor of production
 - (d) Machine tools, factories, dams, canals, etc. are example of capital
8. Tools, machines, etc. are included in ___
- (a) Circulating capital
 - (b) Fixed capital
 - (c) Sunk capital
 - (d) Human capital
9. The capital belongs to the society as a whole is called___
- (a) Individual capital
 - (b) Human capital
 - (c) Social capital
 - (d) Floating capital
10. Raw Material is an example of ___
- (a) Circulating capital
 - (b) Fixed capital
 - (c) Tangible capital
 - (d) Real capital
11. Which capital includes education, training, skill, ability?
- (a) Human capital
 - (b) Individual capital
 - (c) Social capital
 - (d) Real capital
12. Goodwill, patent right, etc. are example of ___
- (a) Tangible capital
 - (b) Real capital
 - (c) Intangible capital
 - (d) Human capital
13. Which of the following statements is true?
- (a) Capital Formation involves production of more capital goods
 - (b) Capital formation is also called investment
 - (c) To accumulate capital goods, some current consumption is to be sacrificed
 - (d) All the above
14. Surplus of production over consumption in an economy in a year is called___
- (a) Capital
 - (b) Capital formation
 - (c) Stock
 - (d) Savings

15. The third stage of capital formation is ____
- (a) Creation of savings (b) Mobilization of savings
(c) Distribution of savings (d) Investment of savings
16. An individual saving level depends upon ____
- (a) Ability to save (b) Willingness to save
(c) Both 'a' and 'b' (d) Only 'a'
17. The factor which mobilize land, labour and capital; combines them in the right proportion and then organizes the production activity is ____
- (a) Owner (b) Labour (c) Manger (d) Entrepreneur
18. The reward of all factors of production is usually pre-determined (pre-fixed) except ____
- (a) Land (b) Labour (c) Capital (d) Entrepreneur
19. The risks which can be anticipated and can be insured against are called ____
- (a) Insurable risks (b) Non-insurable risks
(c) Unforeseeable risks (d) None of the above
20. The risk like change in demand for a commodity, the cost structure, fashion, technological, etc. which an entrepreneur has to bear are called ____
- (a) Uncertainties (b) Insurable risks
(c) Foreseeable risk (d) Both 'a' and 'c'
21. According to ____ innovations introduced by an entrepreneur give rise to profits.
- (a) Prof. F.H. Knight (b) Prof. Joseph A. Schumpeter
(c) Prof. Paul Samuelson (d) Dr. Alfred Marshall
22. Which of the following statement is incorrect?
- (a) Mobilization of savings is done through network of banking and other financial institutions
(b) Land lacks geographical mobility but has occupational mobility
(c) Entrepreneur is also called the organizer, the manager or the risk taker
(d) Labour can be stored

23. Leather in a shoe factory is _____

- (a) Fixed capital (b) Sunk capital
(c) Floating Capital (d) Circulating capital

24. Capital that can be used for several purposes or by several industries is _____

- (a) Working capital (b) Social capital
(c) Floating capital (d) Human capital

25. Addition to the stock of capital goods in a country means _____

- (a) Capital reduction (b) Investment
(c) Capital formation (d) Both (b) & (c)

26. Find the odd out _____

- (a) Capital is man-made (b) All capital is wealth
(c) Capital is durable (d) Mobilization of saving

27. Consider the following group of items:

- (a) Factory building (b) Plant and machinery
(c) Stocks of raw material (d) Wage bills

Which of these are known as working capital?

- (a) 1 and 2 (b) 3 and 4 (c) 1, 2, and 3 (d) 2, 3, and 4

28. The production function means relationship between

- (a) Cost of input
(b) Cost of output
(c) Physical input to physical output
(d) Wages of profit

29. A production function is an expression of _____ relation between inputs and outputs

- (a) Monetary (b) Economic (c) Quantitative (d) Qualitative

30. A short run production function is one in which _____

- (a) At least one factor is fixed (b) All factor are fixed
(c) All factor are variable (d) At least one factor is variable

31. Technically efficient combination of inputs of those which ___
- (a) Minimizes wastage (b) Maximizes profits
(c) Minimizes cost (d) Maximizes revenue
32. In the short period there is no change in _____ factor
- (a) Fixed (b) Variable (c) Human (d) Physical
33. In the _____ period all factor are variable
- (a) Short (b) Long (c) Market (d) Secular
34. In its original form Cobb-Douglas production function applies to _____
- (a) Individual manufacturing firm
(b) Individual firm
(c) Whole of manufacturing in US
(d) None of the above
35. Cobb-Douglas production function revealed that the increase in the manufacturing production was contributed by labour and capital respectively by _
- (a) 3/4th and 1/4th (b) 1/4th and 3/4th
(c) 2/3rd and 1/3rd (d) None of the above
36. Cobb-Douglas production -
- (a) Is linear (b) Is homogenous
(c) Shows constant returns to scale (d) All the above
37. Cobb-Douglas production function exhibits _____ returns to scale
- (a) Increasing (b) Diminishing (c) Constant (d) Negative
38. $50x = f(5L, 4k^-)$
 $55x = f(6L, 4k^-)$
The above equation shows that -
- (a) One factor is fixed and another variable
(b) Both factors are fixed
(c) Both factors are variable
(d) Both factors are semi-variable

39. The main difference between the short period/run and the long period/run is that ____
- (a) In the short period all inputs are fixed, while in the long period all inputs are variable
 - (b) In the short run at least one input is fixed
 - (c) In the short run firm varies the quantities of all inputs
 - (d) In the long run, the firm uses the existing plant capacity
40. The law of variable proportions is a law of production which takes place in the ____
- (a) Market period (b) Short run (c) Long run (d) Very long period
41. All but one are the assumption of the law of variable proportions. Which one is not?
- (a) There is only one factor which is variable
 - (b) All units of variable factor are homogenous
 - (c) State of technology remains constant
 - (d) Applies in long run
42. When there is a fixed factor and a variable factor, then the law would be ____
- (a) Law of increasing returns to scale
 - (b) Law of constant returns to scale
 - (c) Law of decreasing returns to scale
 - (d) Law of variable proportions.
43. The total quantity of goods and services produced by a firm with the given inputs during a specified period of time is called_
- (a) Total Product (
 - b) Average Product
 - (c) Marginal Product
 - (d) Labour Product
44. The change in TP resulting from the employment of an additional unit of a variable factor is called-
- (a) Total Product
 - (b) Marginal Product
 - (c) Average Product
 - (d) All the above

45. The average product of a variable input can be describe as _
- (a) Total product divided by the number of units of variable input
 - (b) Additional output resulting from employment of additional unit of variable factor
 - (c) The total quantity of goods produced with all inputs
 - (d) None of the above
46. Initially TP curve increases at an ____
- (a) Increasing rate
 - (b) Diminishing rate
 - (c) Constant rate
 - (d) Maximum rate
47. AP curve is ____
- (a) U-shaped
 - (b) S-shaped
 - (c) Inverted U-shaped
 - (d) Inverted S-shaped
48. MP Curve is the slope of _____ at each point
- (a) AP curve
 - (b) TP curve
 - (c) TR curve
 - (d) AR curve
49. When TP is maximum, MP is ____
- (a) Rising
 - (b) Falling
 - (c) Zero
 - (d) Negative
50. When TP is falling, MP is ____
- (a) Zero
 - (b) Rising
 - (c) Negative
 - (d) Falling
51. MP curve is _
- (a) U-shaped
 - (b) S-shaped
 - (c) Inverted U-shaped
 - (d) Inverted S-shaped
52. When TP is maximum, the slope of TP curve is ____
- (a) Rising
 - (b) Falling
 - (c) Constant
 - (d) Zero
53. MP is positive so long as TP is _
- (a) Increasing
 - (b) Decreasing
 - (c) Maximum
 - (d) Negative
54. When TP is rising
- (a) AP and MP are rising
 - (b) AP and MP are falling

- (c) AP and MP may be either rising or falling
- (d) Only MP is either rising or falling

55. When MP is negative_

- (a) TP and AP are falling
- (b) TP and AP are rising
- (c) TP and AP are constant
- (d) Only TP is falling

56. When MP is at a Maximum __

- (a) AP = MP and TP is rising
- (b) AP < MP and TP is rising
- (c) AP > MP and TP are rising
- (d) AP and TP are falling

57. If MP goes on increasing, it should be understood that law of _____ is applying

- (a) Increasing returns
- (b) Decreasing returns
- (c) Constant returns
- (d) Diminishing returns

58. If MP goes decreasing it should be understood that law of _____ is not operational

- (a) Decreasing cost
- (b) Constant cost
- (c) Average cost
- (d) Increasing cost

59. When MP is falling, TP will increase at the ___ rate

- (a) Constant
- (b) Increasing
- (c) Diminishing
- (d) Normal

60. When Average product is maximum, marginal product is equal to _____

- (a) Total product
- (b) Zero
- (c) One
- (d) Average product

61. The marginal product is maximum at the _____

- (a) Equilibrium point
- (b) Inflection point
- (c) Focal point
- (d) Optimum point

62. The stage of production where the marginal product is greater than the average product is __

- (a) Stage of increasing returns
- (b) Stage of diminishing returns
- (c) Stage of negative returns
- (d) Stage of constant returns

63. Which of the following statements reveal the diminishing returns?

- (a) The MP of a factor is constant

- (b) The MP of a factor is positive and rising
- (c) The MP of a factor is falling and negative
- (d) The MP of a factor is positive but falling

64. The MP curve is above the AP curve when the average product ____

- (a) Is constant
- (b) Is falling
- (c) Is increasing
- (d) Is negative

65. The actual stage of production under the law of variable proportion is ____

- (a) Stage of increasing returns
- (b) Stage of diminishing returns
- (c) Stage of negative returns
- (d) Stage of either increasing or diminishing returns

66. Reason for rise in both AP and MP curve is ____

- (a) Optimum utilization of the fixed factor
- (b) Under utilization of the variable
- (c) Over utilization of the fixed factor
- (d) Over utilization of the variable

67. When AP and MP curve are falling, MP curve falls ____

- (a) At a faster rate
- (b) At a lower rate
- (c) At a normal rate
- (d) At constant rate

68. When AP and MP curve are rising, AP curve ____

- (a) Lies above the MP curve
- (b) Lies below the MP curve
- (c) Co-inside with the MP curve
- (d) None of the above

69. The reason for increasing returns to factor is ____

- (a) Indivisibility of fixed factor
- (b) Division of labour
- (c) Specialization
- (d) All the above

70. AP increases so long as _

- (a) $MP > AP$
- (b) $MP < AP$
- (c) $MP = AP$
- (d) MP is zero

71. AP may continue to _____ even when MP starts declining

- (a) Rise
- (b) Fall
- (c) Remain constant
- (d) Fluctuate

72. MP Curve cuts AP curve from its top, this means_
- (a) $MP < AP$ (b) $MP > AP$ (c) MP is rising (d) MP is zero
73. Increasing MP implies TP is increasing at _
- (a) Increasing rate (b) Constant rate
(c) Diminishing rate (d) Fluctuating rate
74. MP of labour becoming negative implies_
- (a) Excessive employment (b) Disguised unemployment
(c) Over exploitation (d) All the above
75. TP starts declining only when _
- (a) MP is rising (b) MP is falling
(c) MP is negative (d) MP is constant
76. A right – angled isoquant denotes that the _____
- (a) Two factors are perfect substitute of each other
(b) Two factor are imperfect substitute of other
(c) Two factor are perfect complements
(d) Position between perfect substitutes and perfect complements
77. The MRTS xy is constant if two factors are _____
- (a) Perfect substitutes
(b) Perfect complements
(c) Imperfect substitutes
(d) Imperfect complements
78. Convexity of an isoquant denotes that the two factors are _____ of each other
- (a) Perfect complements (b) Imperfect complements
(c) Perfect substitute (d) Imperfect substitutes
79. _____ is the locus of various combinations of two inputs which a producer can buy with the given outlays and the prices of two inputs
- (a) Iso cost line (b) Opportunity cost line
(c) Production line (d) Profit line

80. Iso cost line also known as _____
- (a) Outlay line (b) Price line
(c) Producer's budget line (d) All the above
81. The iso-cost line in production optimization is ____
- (a) Vertical straight line
(b) Straight line sloping upward toward right
(c) Straight line sloping downwards toward right
(d) Horizontal straight line
82. The slope of isocost line with factor 'Y' on the vertical axis and factor 'X' on the horizontal axis is-
- (a) P_y/P_x (b) X/Y (c) y/x (d) P_x/P_y
83. Where the slope of isocost = the slope of isocost line, it is the _____ combination of inputs
- (a) Maximum cost (b) Least cost
(c) Balanced cost (d) Cost-production
84. If there is perfect substitution between two factors of production the shape of isocost is ____
- (a) Linear (b) Non-linear
(c) Positively sloped (d) Right angled
85. Condition for the producer's equilibrium is ____
- (a) Isoquant should be tangent to the isocost line
(b) At tangency point, isocost should be convex to origin
(c) $MP_x/P_x = MP_y/P_y$
(d) All the above
86. Technically efficient combinations of inputs is those which _____
- (a) Minimizes cost
(b) Minimizes loss
(c) Maximizes profits
(d) Maximizes revenue

87. Internal economies and diseconomies of scale occurs due to _____ causes.

- (a) Endogenous (b) Exogenous (c) Internal (d) External
(a) 1 and 2 (b) 3 and 4 (c) 1 and 3 (d) 2 and 4

88. External economics and diseconomies of scale occurs due to _____

- (a) Endogenous (b) Exogenous (c) Internal (d) Both (b) and (c)

89. When a firm's dependence on external sources of funds increase and it finds difficulty to repay, it is a case of _____

- (a) Financial diseconomies (b) Financial economies
(c) Managerial diseconomies (d) Technical diseconomies

90. From the following find out AP and MP of 4th unit of Labour.

Labour	0	1	2	3	4	5
TP of Labour	0	15	35	50	40	48

- (a) 15;15 (b) 10 ; 15 (c) 10 ; -15 (d) 10; - 10

91. Cost is a _____function

- (a) Direct (b) Derived
(c) Both direct and derived (d) None of the above

92. _____ costs related to those costs which involves cash payment by the entrepreneur of the firm

- (a) Accounting (b) Marginal (c) Economic (d) Implicit

93. Economic cost includes

- (a) Accounting cost + Explicit cost (b) Accounting cost + Implicit cost
(c) Fixed cost + Variable cost (d) Accounting cost + direct Cost

94. _____ cost are the value foregone opportunities that do not involve any contractual obligation of cash payment

- (a) Explicit (b) Implicit (c) Accounting (d) Hidden

95. _____ includes all payments made to factors of production and opportunity cost

- (a) Accounting costs (b) Economic costs
(c) Implicit costs (d) Explicit costs

96. An entrepreneur must recover his _____ cost if he wants to earn normal and abnormal profits

- (a) Accounting (b) Implicit (c) Economic (d) All the above

97. Which of the following are implicit costs?

- (a) A shop taken on rent by entrepreneur
(b) Savings invested to start business
(c) An individual is both owner and manager of business
(d) A farmer takes a farm on rent

- (a) 1 and 2 (b) 3 and 4 (c) 2 and 3 (d) 1 and 4

98. Which of the following are explicit cost?

- (a) A producer borrows money to start a factory
(b) A producer invest his savings to start a factory
(c) Wages paid to workers
(d) An individual is both owner & manager of business

- (a) 1 and 2 (b) 3 and 4 (c) 1 and 3 (d) 2 and 4

99. The difference between Economic Cost and Accounting Cost is equal to ____

- (a) Implicit cost (b) Explicit cost
(c) Marginal cost (d) None of the above

100. Explicit costs are known as ____

- (a) Accounting cost (b) Outlay cost
(c) Out-of-Pocket costs (d) All the above

101. Opportunity cost refer to ____

- (a) Money expenses incurred on purchasing or hiring factor, services
(b) The next best alternative
(c) Involving cash payment
(d) All the above

102. The cost of one thing in terms of the alternative given up is known as _

- (a) Production cost (b) Accounting cost
(c) Opportunity cost (d) Real cost

103. Opportunity costs are a result of _

- | | |
|-----------------------------|---------------------------|
| (a) Abundance of resources | (b) Scarcity of resources |
| (c) Technology obsolescence | (d) Cost control |

104. Accounting process recognizes_

- | | |
|-----------------------|------------------------------------|
| (a) Direct costs | (b) Indirect costs |
| (c) Only direct costs | (d) Both direct and indirect costs |

105. Cost function are derived from ____

- | | |
|-----------------------|-------------------------|
| (a) Demand function | (b) Supply function |
| (c) Isoquant function | (d) Production function |

106. _____ refers to the functional relationship between cost of a product and the various determinants of cost.

- | | |
|-------------------------|-----------------------|
| (a) Cost function | (b) Isoquant function |
| (c) Production function | (d) Supply function |

107. Which one of the following is the dependent variable in a cost function?

- | | |
|-----------------------------------|------------------------|
| (a) Level of capacity utilization | (b) Lot size of output |
| (c) Scale of operations | (d) Total cost |

108. The functional relationship between output and the long -run cost of production is called____

- | | |
|---------------------------|----------------------------------|
| (a) Cost function | (b) Production function |
| (c) Lon-run Cost function | (d) Long-run production function |

109. A cost function determines the behaviour of cost with change in ____

- | | | | |
|------------|-----------|----------------|-----------|
| (a) Output | (b) Input | (c) Technology | (d) Wages |
|------------|-----------|----------------|-----------|

110. Increase in the size of as firm and its production capacity determines____

- | | |
|-----------------------------------|-----------------------------------|
| (a) Short-run production function | (b) Long -run production function |
| (c) Fixed production function | (d) No one of the above |

111. When a firm operates with a given scale of production it affects the ____

- | | |
|-----------------------------------|-------------------------------|
| (a) Long-run production function | (b) Fixed production function |
| (c) Short-run production function | (d) All the above |

112. The costs which do not change with the level output are called:

- (a) Supplementary cost (b) Money costs
 (c) Overhead costs (d) Prime cost
 (a) 1 & 2 (b) 2 & 3 (c) 1 & 3 (d) 1, 2, 3 & 4

113. Fixed costs includes __

- (a) Historical costs (b) Explicit costs
 (c) Implicit costs (d) Both 'b' and 'c'

114. At zero level of output _____ cost can never be zero

- (a) Variable (b) Fixed (c) Direct (d) Real

115. _____ costs are incurred even before production starts

- (a) Fixed (b) Variable (c) Real (d) Marginal

116. At zero level of output Fixed Cost must be greater than Variable Cost

- (a) False (b) Partially True (c) True (d) None of the above

117. Variable Costs are a function of _____

- (a) Time (b) Output (c) Both time and output (d) All the above

118. _____ costs are directly or positively related to output

- (a) Fixed (b) Stair -step (c) Semi-Variable (d) Variable

119. When production level is zero, then fixed cost is____

- (a) Zero (b) Negative (c) Positive (d) Equal to variable cost

120. Individual's saving level depends on:

- (a) Income (b) Inflation
 (c) Ability and willingness to save (d) Government Policy

121. Which production function shows short run features

- (a) $Q = K^2 + L^2$ (b) $Q = \sqrt{K^2} + \sqrt{L^2}$
 (c) $Q = 2K + 3L + 4L^2$ (d) None

122. The production process is :

- (a) Technical relationship between physical inputs & physical output.
- (b) Relationship between fixed factor of production & variable factors of production.
- (c) Relationship between a factor of production & the utility created by it.
- (d) Relationship between quantity of output produced & time taken to produce the output.

123. Labour is defined as

- (a) Any work done without remuneration.
- (b) Any exertion of mind or body to get some reward.
- (c) Helping mother
- (d) Helping friends

124. Economies of scale means:

- (a) Reduction in unit cost of production
- (b) Reduction in unit cost of distribution
- (c) Addition to the unit cost of production
- (d) Reduction in the total cost of production

125. In electricity generation plants, When the plant grows too large, risks of plant failure with regards to output increases disproportionately. This leads to

- | | |
|----------------------------------|---------------------------------|
| (a) Constant Returns to Scale | (b) Increasing Returns to Scale |
| (c) Diminishing Returns to Scale | (d) Balanced Returns to scale |

126. In the long run, if a very small factory were to expand its scale of operating, it is likely that it would initially experience

- | | |
|------------------------------------|-------------------------------|
| (a) An increase in pollution level | (b) Diseconomies of scale |
| (c) Economies of scale | (d) Constant returns to scale |

127. Slope of Isoquant is :

- | | | | |
|-----------------------|-------------------|------------------------|----------------------|
| (a) $\frac{MPL}{MPK}$ | (b) $\frac{w}{r}$ | (c) $-\frac{MPL}{MPK}$ | (d) Both (a) and (c) |
|-----------------------|-------------------|------------------------|----------------------|

128. Total cost is given in short-run as summation of

- | | |
|---------------------|---------------|
| (a) AVCXQ and AFC | (b) TFC & AVC |
| (c) AFCXQ and AVCXQ | (d) None |

129. Shape of TVC curve is

- (a) Upward sloped (b) Inverted 'U' shaped
(c) Inverted 'S' shaped (d) None

130. Which of the following statements is false?

- (a) Marginal cost is equal to the rate of change in variable costs
(b) MC is the same whether it is computed from TVC or from TC
(c) If AC is above MC, MC must be rising
(d) Marginal cost is 'U' shaped due to Law of variable proportion

131. Minimum marginal cost occurs at the output where

- (a) The total product is at a maximum
(b) The marginal product of the variable factor is at a maximum
(c) The factors are combined in their best possible proportions
(d) The average product of the variable factors is at a maximum

131. When average cost is falling, marginal cost

- (a) May also be falling (b) May be rising
(c) May be rising & falling (d) Has no relation with average cost

133. "U" shaped AC Curve is based on

- (a) Law of increasing cost (b) Law of constant returns to scale
(c) Law of diminishing cost (d) Law of variable proportion

134. Which of the following curve is never "U" shaped

- (a) Average variable cost (b) Average fixed cost
(c) Average cost (d) All

135. Long run does not have :

- (a) Average cost (b) Fixed cost (c) Total cost (d) Variable cost

136. Cost function $TC = 500 + 100Q - 0.25Q^3$.

If the current output is 100 unit, AFC is

- (a) Rs. 500 (b) Rs. 10 (c) Rs. 5 (d) Rs. 100

137. A firm's average fixed cost is Rs. 40 at 12 units. What will be the average fixed cost at 8 units.

- (a) Rs. 60 (b) Rs. 70 (c) Rs. 80 (d) Rs. 90

138. Calculate total cost of four units:

Units	Total cost	Marginal Cost
2	80	40
4	—	30

(a) 140 (b) 120 (c) 50 (d) 40

139. Find out TVC for two units

Output	0	1	2
Total cost	20	37	50

(a) 15 (b) 5 (c) 17 (d) 30

140. AFC = Rs. 20, Quantity produced = 10 units. What will be the AFC of 20th Units?

- (a) 10 (b) 20 (c) 5 (d) None

141. Find out Marginal cost of 67 units of production.

Output	0	10	25	37	67
Total cost	160	200	300	500	1400

(a) 10 (b) 20 (c) 30 (d) 50

Read the following & answer question

Raj owns a small potters factory. He can make 1,000 pieces of pottery per year & sell them for Rs. 100 each. It costs Raj Rs. 20,000 for the raw materials to produce the 1000 pieces of pottery. He has invested Rs. 100,000 in his factory & equipment; Rs. 50,000 from his savings & Rs. 50,000 borrowed at 10% (Assume that he could have loaned his money out at 10% too). He can work at a competing pottery factory for Rs. 40,000 per year.

142. The accounting cost at Raj's pottery factory is :

- (a) Rs. 25000 (b) Rs. 50,000
(c) Rs. 80,000 (d) Rs. 75,000

143. The economic cost at Raj's factory is :

- (a) Rs. 75000 (b) Rs. 70000
(c) Rs. 80000 (d) Rs. 30000

144. The accounting profit at Raj's pottery factory is

- (a) Rs. 30000 (b) Rs. 50000
(c) Rs. 80000 (d) Rs. 75000

145. A firm has a variable cost of Rs.1,000 at 5 units of output. If fixed costs are Rs.400, what will be the average total cost at 5 unit of output?

- (a) Rs.250 (b) Rs.60 (c) Rs.120 (d) None

146. Ramesh inherited 1 acre of land from his grandfather who paid Rs.10,000 cash for the land back in 1961. Today, land in the area sells for Rs.2,00,000 per acre. What is the opportunity cost to Ramesh for keeping the land?

- (a) Nothing, since the land was inherited.
(b) Nothing, since the grandfather paid cash.
(c) Rs.1,90,000, since this is what is the difference.
(d) Rs.2,00,000, since this what Ramesh is giving up by keeping the land.

147. Find out AVC for 20 unit of output

Output (unit)	Total cost (Rs.)
0	100
10	200
20	290
30	390

- (a) 9.6 (b) 9.5 (c) 2.9 (d) None

CHAPTER 4

PRICE DETERMINATION IN DIFFERENT MARKET

1. The basic behavioral principle which apply to all market conditions ____
 - (a) A firm should produce only if its $TR \geq TVC$
 - (b) A firm should produce at a level where its $MC = MR$
 - (c) MC curve cuts the MR curve from below
 - (d) All the above

2. Total revenue can be found out by_
 - (a) $AR \times q$
 - (b) $\frac{TR}{q}$
 - (c) $\frac{AR}{dxq}$
 - (d) $\frac{TR}{y}$

3. When marginal revenue is zero, total revenue will be_
 - (a) Lowest
 - (b) Highest
 - (c) Negative
 - (d) Zero

4. The change in the total revenue that results from a one unit change in sales is ____
 - (a) Total revenue
 - (b) Marginal revenue
 - (c) Average revenue
 - (d) None of the above

5. The revenue per unit of one commodity sold is called as _
 - (a) Total revenue
 - (b) Marginal revenue
 - (c) Average revenue
 - (d) None of the above

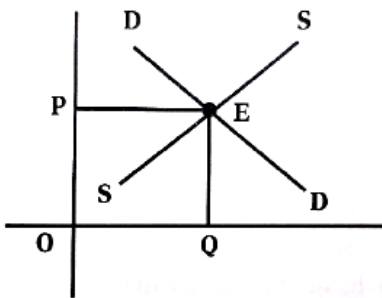
6. AR can be found out by the formula_
 - (a) $TR_n - TR_{n-1}$
 - (b) $\frac{TR}{q}$
 - (c) $MR \times q$
 - (d) $\frac{TR}{q}$

7. If a producer sells 4 units of a good at Rs 10 per unit and 5 units at Rs 8 per unit marginal revenue would be ____
 - (a) 0
 - (b) 1
 - (c) 2
 - (d) 3

8. $\frac{P \times Q}{Q}$ represents-

- (a) Total revenue (b) Marginal revenue
(c) Average revenue (d) Price
(a) 1 & 3 (b) 2 & 4 (c) 2 & 3 (d) 3 & 4

Use the following figure to answer questions



9. In the figure above at the equilibrium point E-

- (a) Demand is more than supply (b) Supply is more than demand
(c) Demand and supply are equal (d) None of the above

10. When demand and supply increase equally, then _

- (a) Both equilibrium price and equilibrium quantity remain unchanged.
(b) Both equilibrium price and equilibrium quantity increase
(c) Equilibrium price remains unchanged but equilibrium quantity increase
(d) Equilibrium price changes but equilibrium quantity remains unchanged

11. If increase in demand is more than increase in supply then _

- (a) Equilibrium price will fall but equilibrium quantity will increase
(b) Equilibrium price will increase but Equilibrium quantity will decrease
(c) Both Equilibrium price and Equilibrium quantity will increase
(d) Both Equilibrium price and Equilibrium quantity will decrease

12. When demand increase equilibrium price will increase only if _

- (a) Supply also increases (b) Supply also decreases
(c) Supply remain same (d) If the elasticity remains the same

13. The equilibrium price remains constant only if demand and supply
- (a) Increase unequally (b) Decrease unequally
(c) Increase equally (d) None of the above
14. The price will decrease if demand remains same and _
- (a) Supply increases
(b) Supply decreases
(c) Supply is more than the previous level
(d) None of these
15. The inter - action of market demand and supply curve determines the -
- (a) Equilibrium price (b) Reserve price
(c) Both a & b (d) None of these
16. Uniform price for homogeneous product at any one time is the essential condition of _____
- (a) Monopolistic competition (b) Oligopoly
(c) Perfect competition (d) Duopoly
17. For maximizing profit, the condition is ____
- (a) $AR = AC$ (b) $MR = AR$ (c) $MR = MC$ (d) $MC = AC$
18. $MC = MR = AR$ means equilibrium position of a firm_
- (a) In the long period
(b) In the short period under imperfect competition
(c) In the short period under perfect competition
(d) Under perfect competition
19. Under perfect competition_____
- (a) $MC = Price$ (b) $MC > Price$ (c) $MC < Price$ (d) None of these
20. An increase in demand for a commodity causes_
- (a) An increase in equilibrium price (b) An increase in equilibrium quantity
(c) Both a & b (d) None of these

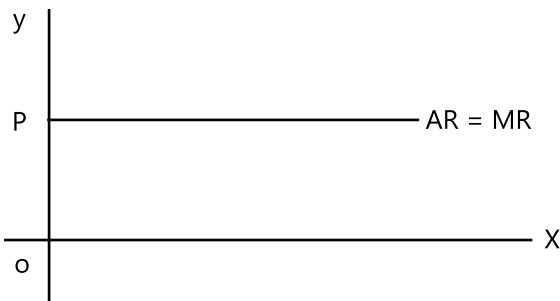
21. The demand curve of a commodity faced by a competitive firm is ____

- (a) Very elastic (b) Perfectly inelastic
(c) Very inelastic (d) Perfectly elastic

22. In the short period, a perfectly competitive firm earns _

- (a) Normal profit (b) Super normal profit
(c) Can incur losses (d) All the above

23. The following figure shows that _



- (a) A firm is a price marker (b) A firm is price taker
(c) An industry is price taker (d) None of these

24. The figure above shows that the firm belong to _

- (a) Imperfect competitive market (b) Monopoly
(c) Oligopoly (d) Perfectly competitive market

25. The firm's short run supply curve is its marginal cost curve above its average variable cost curve is correct about_

- (a) Perfectly competition (b) Oligopoly
(c) Monopoly (d) Duopoly

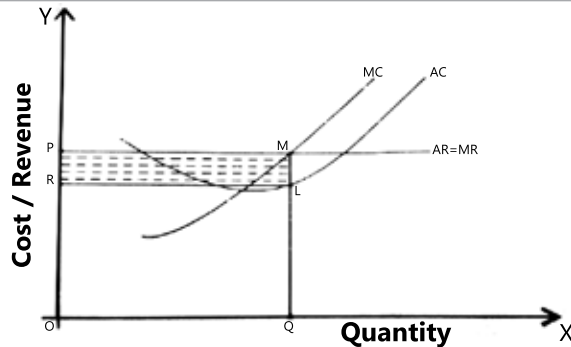
26. Under perfect competition the price of commodity

- (a) Can be controlled by a firm
(b) Cannot be controlled by a firm
(c) Controlled up for some extent by a firm
(d) None of the above

27. AR and MR curve coincide in ____

- (a) Monopoly (b) Monopolistic competition
(c) Perfect competition (d) Oligopoly

28. Consider the following figure_



The shaded area PRLM shows_

- (a) Super normal profit (b) Normal profit
(c) Loss (d) Shut down point

29. Perfectly elastic demand curve implies that _

- (a) The firm has no control over price
(b) The firm can sell any quantity at the ruling price
(c) The firm is price taker and output adjuster at ruling price
(d) All a, b, and c

30. Under perfect competition, if the AR curve lies below the AC curve, the firm would -

- (a) Make only normal profit (b) Incur losses
(c) Make super normal profit (d) Firm cannot determine profit

31. Short run supply curve of a perfectly competitive firm is represented by -

- (a) Short run MC curve (b) Short run AC curve
(c) The part of the MC curve that lies above (d) None of these

32. In the long run, equilibrium for a competitive firm is _

- (a) Perfect competition (b) Monopoly
(c) Both a & b (d) None of these

33. Odd one out of the following:

- (a) Firms are of optimum size earn normal profits only in long run
- (b) Firms sell identical product at uniform price
- (c) Firms are not of optimum size and earn super normal profits in long run
- (d) Firms are free to move in or out of the industry

34. The industry's demand curve and the average revenue curve are same in case of _

- (a) Perfect competition
- (b) Monopoly
- (c) Oligopoly
- (d) None of the above

35. All the characteristic of monopolistic competition except-

- (a) Large number of buyers and sellers
- (b) Freedom of entry and exist
- (c) Excess production capacity in long run
- (d) Full control over price of commodity

36. Kinked demand curve shows_

- (a) Fall in price
- (b) Rise in price
- (c) Stability in price
- (d) Both (a) and (b)

37. The demand curve is undefined / uncertain _____ market structure

- (a) Oligopoly
- (b) Monopoly
- (c) Perfect competition
- (d) Monopolistic competition

38. When demand is elastic, MR is _____

- (a) Negative
- (b) Positive
- (c) Zero
- (d) One

39. The characteristic of monopolistic competition which is compatible with monopoly is ____

- (a) One seller and large number of buyers
- (b) Full control over price
- (c) Freedom of entry and exit
- (d) Demand curve slopes downward

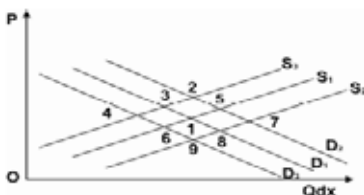
40. Firms have chronic excess production capacity in ____ market
- (a) Duopoly (b) Perfect competition
(c) Monopolistic competition (d) Oligopoly
41. The theory of monopolistic competition is developed by -
- (a) H.E. Chamberlin (b) Mrs. Joan Robinson
(c) Dr. Marshall (d) Nicholas Kaldor
42. The point where $P = AC$ is called-
- (a) Profit earning point (b) Loss making point
(c) Breakeven point (d) Shut down point
43. TR is a straight positively sloping line from origin is under -
- (a) Perfect competition (b) Monopoly (c) Duopoly (d) Oligopoly
44. If a monopolist resorts to price discrimination, price will be higher in the market where demand is-
- (a) Unitary elastic (b) Elastic (c) Inelastic (d) None of these
45. Under collusive oligopoly, price is often decided by-
- (a) The industry (b) The firm (c) Price leader (d) None of these
46. Slope of firm's demand curve = ∞ under perfect competition means demand curve is ____
- (a) Horizontal (b) Vertical (c) Positive (d) Negative
47. Price exceeds MC under monopoly, but not under perfect competition because
- (a) In perfect competition $AR = MR$ (b) In perfect competition $AR = MC$
(c) In monopoly $AR > MR$ (d) All the above
48. IN long run, a monopolist produces _____ level of output and charge a _____ price than a firm under perfect competition market
- (a) Lower; higher (b) Lower; lower
(c) Higher; lower (d) Higher; higher

49. TR minus total explicit cost called _____
- (a) Profit (b) Economic profit
(c) Super normal profit (d) Accounting profit
50. Under perfect competition when price line (AR) passes through minimum point of AVC curve is called _____
- (a) Minimum losses point (b) Shut down point
(c) Breakeven point (d) Profit point
51. At the shut down point, losses of a firm under perfect competition are equal to -
- (a) AVC (b) TFC (c) AC (d) MC
52. In the long run under monopolistic competition, profit maximizing profit is -
- (a) Less than least cost output (b) More than least cost output
(c) Equal to least cost output (d) None of the above
53. A monopolist can determine-
- (a) Price (b) Output
(c) Either price or output (d) Both price and output
54. A monopolistic competitive firm has a position of $ATC = price$ in the _____
- (a) Short run equilibrium (b) Very short run equilibrium
(c) Long run equilibrium (d) Any period of time
55. In perfect competition, in the long run, if new firms enter the industry the supply curve shifts to the right resulting in _____
- (a) Fall in price (b) Rise in price
(c) No change in price (d) None of the above
56. The difference between least cost output and profit maximizing output is called _____
- (a) Reserve capacity (b) Excess capacity
(c) Normal capacity (d) Abnormal capacity
57. The kink occurs at-
- (a) Any price (b) Prevailing price
(c) Any quantity (d) To be determined price

58. Doctors, lawyers, consultants, services like power supply, telecommunication fees to different patients/clients. This is a ___ price discrimination
- (a) First degree (b) Second degree
(c) Third degree (d) Both second and third degree
59. Charging different prices by monopolists' to customers in geographically separate market is a ___ degree of price discrimination
- (a) First (b) Second
(c) Third (d) Price discrimination is not separate markets
60. Monopolist charging a price that takes away the entire consumer surplus is a case of ___ degree of price discrimination
- (a) First (b) Second (c) Third (d) None of the above
61. Which of the following statements refer to 'price leadership'
- (a) Existence of perfect competition
(b) A form of price collusion
(c) Stiff competition
(d) The maintenance of a monopolistic price
62. How many sellers usually exist in an oligopoly market?
- (a) A large number of sellers (b) One seller
(c) Few sellers (d) Two sellers
63. Long-run supply curve in the constant cost industry-
- (a) Slopes downward to the right (b) Slopes upward to the right
(c) Is horizontal straight line (d) None of the above
64. The concept of group equilibrium is related to---
- (a) Paul Sweezy (b) Chamberlin's monopolistic competition
(c) Perfect competition (d) None of the above
65. Dumping is an example of price discrimination which is _____ price discrimination
- (a) Of first degree (b) Of second degree
(c) Of third degree (d) International

66. _____ is the market structure where there is a single buyer:
 (a) Monopsony (b) Monopoly (c) Oligopoly (d) Duopoly
67. At all the level of output $AR = MR$ in _____
 (a) A perfect competition market (b) A monopoly market
 (c) A oligopoly market (d) All the above
68. Under perfect competition, the MC curve at equilibrium will be -
 (a) Constant (b) Rising (c) Falling (d) None of these
69. Market price is the price that prevails in a _____
 (a) Very short period market (b) Short period market
 (c) Long period market (d) Secular period market
70. The market in which normal price prevails is a _____ market
 (a) Market period (b) Short period
 (c) Long period (d) Secular period
71. Excess capacity is not found under _____
 (a) Monopoly (b) Monopolistic competition
 (c) Oligopoly (d) Perfect competition
72. The sale of branded goods is common situation is case of _____
 (a) Perfect competition (b) Monopolistic competition
 (c) Monopoly (d) Pure competition

Consider the following figure as initial equilibrium point 1 for Perk Chocolate and answer.



73. Find out the new equilibrium if there is an increase in price of Dairy Milk Chocolate
 (a) Point 3 (b) Point 5 (c) Point 4 (d) Point 2

74. Find out the new equilibrium if there is economic growth but cost of labour producing Perk also rises
 (a) Point 3 (b) Point 9 (c) Point 2 (d) Point 6
75. Find out the new equilibrium if there is health scare about the effect of Chocolate
 (a) Point 2 (b) Point 9 (c) Point 3 (d) Point 6
76. Find out the new equilibrium if there is new technology for producing Perk Chocolate
 (a) Point 8 (b) Point 9 (c) Point 3 (d) Point 6
77. Find out the new equilibrium if there is an increase in productivity an at the same time price of 5 Star Chocolate falls :
 (a) Point 2 (b) Point 9 (c) Point 3 (d) Point 6
78. When demand & supply both increase in a same proportion
 (a) Equilibrium quantity remains unchanged
 (b) Equilibrium price remains same
 (c) Price slightly increases
 (d) Quantity slightly decreases
79. When equilibrium of market takes place we get
 (a) Excess demand > Excess supply
 (b) Excess supply = Excess demand = zero
 (c) Excess supply = Excess demand = one
 (d) None

Consider table & answer

Production	Price	Total Cost
0	130	45
1	124	88
2	118	125
3	112	159
4	106	193
5	100	230
6	94	273
7	88	325

80. When production = 6 units, the firm's :

- (a) Fixed cost is zero and variable cost is 273
- (b) Fixed cost is zero and variable cost is 228
- (c) Fixed cost is 45 and variable cost is 273
- (d) Fixed cost is 45 and variable cost is 228

81. When production = 5 units, total revenue is :

- (a) Rs. 100
- (b) Rs. 230
- (c) Rs. 500
- (d) None

82. When production = 6 units, the firm's marginal revenue is :

- (a) Rs. 384
- (b) Rs. 94
- (c) Rs. 64
- (d) Rs. 2

83. On production = 7 units, the firm's profit is :

- (a) 0
- (b) Rs. 41.57
- (c) Rs. 291
- (d) None

84. To maximize profit the firm's should produce:

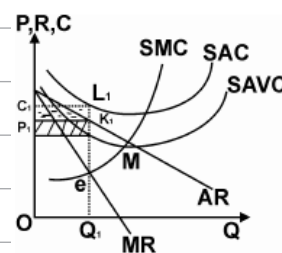
- (a) 0 unit
- (b) 3 units
- (c) 5 units
- (d) 7 units

85. What is the formula for calculating profit per unit ?

- (a) $TC - TR$
- (b) $AR - AC$
- (c) $MC - MR$
- (d) $AVC - AR$

86. In this monopoly market, at equilibrium output 'e', it:

- (a) Incurs loss
- (b) Enjoys profit
- (c) Incurs loss but continues production
- (d) All



87. For a rational monopolist, choose the suitable option from the following:

- (a) Monopolist shuts down production.
- (b) Monopolist continues production till point 'e' is reached.
- (c) Monopolist continues production till 'M' point is reached.
- (d) None.

88. Monopoly has no closed substitutes goods and therefore AR is :

- (a) Parallel (b) Downward (c) Upward (d) None

89. Advertisement costs are

- (a) Not required under Perfect Competition (b) Not required under duopoly
(c) Required under Perfect Competition (d) None

90. Which of the following is not a characteristic of a monopolistically competitive market?

- (a) Free entry & exit (b) Abnormal profits in the longrun
(c) Many sellers (d) Differentiated products

CHAPTER 5**BUSINESS CYCLE**

1. As production & employment expand, economy _____:
a) Gradually decreases b) Gets destructed
c) Revives d) All of the above
2. The state of expansion continues till there is _____ of resources:
a) Full employment b) Under utilisation
c) Scarcity d) None of the above
3. High level of consumer spending, business confidence, production, factor incomes, profit & investment exhibit phase as _____:
a) Peak b) Expansion c) Contraction d) Trough
4. The end of expansion & when economic growth has reached a point where it will stabilise for a short period is known as :
a) Peak b) Expansion c) Contraction d) Both a& b
5. “Producers being aware of the fact that they have indulged in excessive investment & over production respond by holding back future investment plans, cancellation of orders etc.” are known as _____:
a) Peak b) Expansion c) Contraction d) Trough
6. When discrepancy between demand & supply get widened further, we get _____:
a) Trough b) Depression c) Contraction d) None
7. When growth rate becomes negative & the level of National Income & expenditure declines rapidly we observe _____:
a) Recovery b) Expansion c) Trough d) Both a & b

8. The economy cannot continue to contract endlessly, it will go for_____:
- a) Recovery b) Boom c) Peak d) Trough'
9. Expansion is characterised by:
- a) Increase in national output b) Upswing of Trade Cycle
c) Downswing of Trade Cycle d) Both a and b
10. Peak or Boom refers to:
- (a) Lowest of Trade Cycle (b) Turning Point of Trade Cycle
(c) Middle point of Trade Cycle (d) None of the above
11. Contraction is characterised by:
- (a) Decrease in national output (b) Downswing of Trade Cycle
(c) Upswing of Trade Cycle (d) Both a and b
12. Depression occurs when:
- (a) Process of recession on its way
(b) Process of recession is complete
(c) Severe contraction in economic activities
(d) Both b & c
13. Economists use changes in variety of activities to measure Business Cycle, which are called
- (a) Variables (b) Parameters (c) Indicators (d) All
14. Variables that change after real output changes are called:
- (a) Lagging variables (b) Lagging indicators
(c) Lagging parameters (d) All
15. According to Keynes, fluctuations in economic activities are due to fluctuations in aggregate _____
- a) Market Demand b) Effective Demand
c) Volatile Demand d) None
16. According to Hawtrey, Trade Cycle is purely _____ phenomenon.
- (a) Fiscal (b) Monetary (c) Business (d) All

16. Macroeconomic policies which causes Business Cycle are:
- (a) Price and market policies (b) Monetary and fiscal policies
(c) Business policies (d) All
17. According to Professor _____ modern business activities are based on anticipating of business community and are affected by waves of optimism or pessimism
- (a) Samuelson (b) Marshall (c) Hicks (d) Pigou
18. According to Professor _____ Trade Cycles occur as a result of innovations which take place in the system from time to time:
- (a) Samuelson (b) Marshall (c) Schumpeter (d) Allen
19. The term business cycle refers:
- (a) The ups and downs in production of commodities
(b) The fluctuating levels of economic activity over a time period
(c) Decline in economic activities over a prolonged period of time
(d) Increasing unemployment rate and diminishing rate of savings
20. When aggregate activity is declining the economy is said to be in:
- (a) Contraction (b) Expansion (c) Trough (d) Turning point
21. During recession unemployment rate _____ and output _____
- (a) Rises, falls (b) Rises, rises
(c) Falls, rises (d) Falls, falls
22. Peaks and troughs of business cycle are known collectively as:
- (a) Volatility (b) Turning points (c) Equilibrium points (d) None
23. Rampant unemployment is found in:
- (a) Boom (b) Recovery (c) Contraction (d) Depression
24. Greatest depression suffered by economy in:
- (a) 1924 (b) 1930 (c) 1945 (d) 2008
25. Last stage of recession is called:
- (a) Depression (b) Recovery (c) Shutdown (d) All

26. In the long run, a reduction in labour supply would cause output _____ and _____ the aggregate price level.
(a) Fall, rise (b) Fall, fall (c) Rise, fall (d) Rise, rise
27. Which of the following macro-Economic variable would you include in an index of leading economic indicators.
(a) Employment (b) Inflation
(c) Real interest rate (d) Residential investment
28. Business cycle is contagious and _____ in character.
(a) Local (b) Regional (c) National (d) International
29. Which external factor affects business cycle:
(a) Population growth
(b) Variation in government supply
(c) Money supply
(d) Macro Economic policies
30. Which internal factor affect the business cycle:
(a) Fluctuations in investment (b) Natural factor
(c) Technology shocks (d) Population growth
31. Fashion retailer is known as:
(a) Cyclical business (b) Sunrise business
(c) Sluggish business (d) None
32. Features of business cycle include:
(a) Discuss periodically
(b) Have 4 different phases
(c) Originate in free market economy
(d) All
33. Internal causes of depression include:
(a) Fluctuating in investment (b) Money supply
(c) Psychological factors (d) All

34. Whose statement out of these is false ?
- (a) Hawtrey - "Trade cycle is purely monetary phenomenon"
 - (b) Keynes - "Fluctuations in aggregate demand"
 - (c) Pigou - "Fluctuations in investment"
 - (d) Schumpeter - "Innovations"
35. Technology shocks is one of the _____ causes of Business Cycle:
- (a) Internal
 - (b) External
 - (c) Psychological
 - (d) All
36. Change in money supply is one of the _____ causes of Business Cycle:
- (a) Internal
 - (b) External
 - (c) Psychological
 - (d) All
37. Business managers need to work effectively to arrive at sound strategic decisions in complex times across the _____, managing through four phases:
- a) Trade Cycle
 - (b) Business Cycle
 - (c) Both a & b
 - (d) None

FOUNDATION COURSE
MOCK TEST PAPER 1

PAPER – 4: PART I : BUSINESS ECONOMICS

Max. Marks : 60

1. The implication that resource scarcity have for the satisfaction of wants are-
 - (a) Not all wants can be satisfied
 - (b) We will never be faced with the need to make choices
 - (c) We must develop ways to decrease our individual wants
 - (d) The discovery of new natural resources is necessary to increase our ability to satisfy wants

2. A normative economic statement is-
 - (a) Unemployment rate decreases with industrialization
 - (b) Economics is a social science that studies human behaviour
 - (c) The minimum wage should be raised to ₹ 200/- per day
 - (d) India spends a huge amount of money on national defence

3. Administered prices refer to-
 - (a) Price determined by forces of demand and supply
 - (b) Price determined by sellers in the market
 - (c) Prices determined by an external authority which is usually the government
 - (d) None of the above

4. A downward movement along a demand curve indicate-
 - (a) Increase in demand
 - (b) Decrease in demand
 - (c) Contraction of demand
 - (d) Expansion of Demand

5. If price of automobiles increases by 10% and supply increases by 25%. The elasticity of supply is-
 - (a) 2.5
 - (b) 0.4
 - (c) -2.5
 - (d) -0.4

6. The consumer is in equilibrium at a point where the budget line-
- (a) Is above an indifference curve
 - (b) Is below an indifference curve
 - (c) Is tangent to an indifference curve
 - (d) Cuts an indifference curve
7. The second glass of water gives lesser satisfaction to a thirsty boy. This is a clear case of-
- (a) Law of demand.
 - (b) Law of diminishing returns.
 - (c) Law of diminishing utility.
 - (d) Law of supply.
8. When the price of commodity increases by 40% and its quantity demanded falls from 150 to 120 units , then the price elasticity of demand for a commodity is-
- (a) -0.8%
 - (b) 0.8%
 - (c) 0.5%
 - (d) -0.5%
9. If the consumer consumes only one commodity X , he will be in equilibrium when-
- (a) $MU_x > P_x$
 - (b) $MU_x < P_x$
 - (c) $MU_x = P_x$
 - (d) None of these
10. Identify the coefficient of price-elasticity of demand when the percentage increase in the quantity of a good demanded is smaller than the percentage fall in its price-
- (a) Equal to one
 - (b) Greater than one
 - (c) Smaller than one
 - (d) Zero

11. If a good is a luxury, its income elasticity of demand is-
- (a) positive and less than 1
 - (b) negative but greater than -1
 - (c) positive and greater than 1
 - (d) Zero
12. A consumer demands 5 units of a commodity at the price of Rs. 4 per unit. He demands 10 units when the price falls to Rs 3 per unit. Price elasticity of demand is equal to-
- (a) 3
 - (b) 2
 - (c) 1.5
 - (d) 4
13. Availability of close substitutes makes the demand-
- (a) Less elastic
 - (b) More elastic
 - (c) Parallel to X axis
 - (d) Parallel to Y axis
14. The supply curve for perishable commodities is-
- (a) elastic
 - (b) inelastic
 - (c) perfectly elastic
 - (d) perfectly inelastic
15. The slope of consumer's budget line is -
- (a) Positive and constant
 - (b) Negative and decreasing
 - (c) Negative and constant
 - (d) Positive and increasing
16. Demand for water is -
- (a) Elastic
 - (b) Inelastic
 - (c) Perfectly elastic
 - (d) Relatively elastic

17. Inferior goods are those goods whose income effect is-

- (a) Negative
- (b) Positive
- (c) Zero
- (d) None of these

18. Suppose income elasticity of bread is 0.25, it means that bread is-

- (a) Inferior goods
- (b) Luxury goods
- (c) Normal goods
- (d) Can't say

19. The supply curve shifts to the right because of-

- (a) Improved technology
- (b) Increased price of factors of production
- (c) Increased excise duty
- (d) All of the above

20. If the demand is more than supply, then the pressure on price will be-

- (a) Upward
- (b) Downward
- (c) Constant
- (d) None of the above

21. Which of the following goods has inelastic demand-

- (a) Salt
- (b) Food grains
- (c) Medicines
- (d) All of the above

22. Demand for pepsi is elastic because-

- (a) Its falls under luxuries
- (b) Its consumption can be postponed
- (c) Its substitutes are available in the market
- (d) It is a multiple use product

23. A good which cannot be consumed more than once is known as-
- (a) durable good
 - (b) non-durable good
 - (c) producer good
 - (d) none of the above
24. A consumer of two goods X and Y is in equilibrium. The price of good X is Rs. 10 and price of the good Y is Rs. 20 respectively. If the MUX is 60 utils, then the MUY is-
- (a) 30 utils
 - (b) 20 utils
 - (c) 60 utils
 - (d) 6 utils
25. The slope of indifference curve is given by-
- (a) Budget line
 - (b) Marginal rate of transformation
 - (c) Marginal rate of substitution
 - (d) None of these
26. In the third phase of Law of variable proportions, MP becomes-
- (a) Zero
 - (b) Negative
 - (c) Positive
 - (d) None of these
27. Law of variable proportion is related to-
- (a) Short-run
 - (b) Long-run
 - (c) Both a and b
 - (d) Very short run
28. When Marginal product is zero, then Total product is -
- (a) Zero
 - (b) Falling
 - (c) Rising
 - (d) Maximum

29. Long run production function related to-

- (a) Returns to a factor
- (b) Returns to scale
- (c) Both a and b
- (d) None of these

30. Diminishing returns occur-

- (a) When units of a variable input are added to a fixed input and total product falls
- (b) When units of a variable input are added to a fixed input and marginal product falls
- (c) When the size of the plant is increased in the long run.
- (d) When the quantity of the fixed input is increased and returns to the variable input falls.

31. In the production of wheat, all of the following are variable factors that are used by the farmer except-

- (a) The seed and fertilizer used when the crop is planted
- (b) The field that has been cleared of trees and in which the crop is planted
- (c) The tractor used by the farmer in planting and cultivating not only wheat but also corn and barley
- (d) The number of hours that the farmer spends in cultivating the wheat fields

32. When total product is 200 units and units of variable factor are 8, average product will be -

- (a) 25
- (b) 1600
- (c) 96
- (d) 60

33. Economic costs includes-

- (a) Accounting costs
- (b) Implicit costs
- (c) Both a and b
- (d) None of above

34. Which of the following cost curve is termed as a rectangular hyperbola-
- (a) TVC curve
 - (b) AVC Curve
 - (c) TFC curve
 - (d) AFC curve
35. The total cost of producing 30 units of output is Rs. 300. If average fixed cost at this level of output is Rs. 7, then the total variable cost will be -
- (a) Rs. 160
 - (b) Rs. 140
 - (c) Rs. 90
 - (d) Rs. 120
36. Total costs is the vertical summation of -
- (a) TFC and TVC
 - (b) AFC and AVC
 - (c) TVC and AVC
 - (d) None of these
37. Example of Fixed cost is-
- (a) Electricity bill
 - (b) Interest on loans
 - (c) Expenses on raw material
 - (d) Wages of daily workers
38. TVC can be calculate as-
- (a) AVC/Q
 - (b) $TC-TFC$
 - (c) $AC-AFC$
 - (d) None of these
39. The long run average cost curve is also called -
- (a) Envelope curve
 - (b) Plant curve
 - (c) Both a and b
 - (d) None of these

40. Economies of scale exist because as a firm increases its size in the long run-
- (a) Labour and management can specialize in their activities more
 - (b) As a larger input buyer, the firm can get finance at lower cost and purchase inputs at a lower per unit cost.
 - (c) The firm can afford to employ more sophisticated technology in production
 - (d) All of these
41. Example of variable cost is -
- (a) Salary of permanent staff
 - (b) Rent of premises
 - (c) License fees
 - (d) Wages
42. When average revenue is Rs.30 and output is equal to 50 units total revenue will be -
- (a) 2500
 - (b) 1500
 - (c) 1800
 - (d) 2000
43. The Average revenue and price are always equal under-
- (a) Monopoly
 - (b) Monopolistic competition
 - (c) Perfect competition
 - (d) All market forms
44. If total revenue of a firm increases by Rs 65025 due to an increase in sale of good X from 60 units to 75 units , then marginal revenue will be -
- (a) 3000
 - (b) 4335
 - (c) 4000
 - (d) 3335

45. Which of the following is not an essential condition of pure competition?

- (a) Large number of buyers and sellers
- (b) Homogeneous product
- (c) Freedom of entry
- (d) Absence of transport cost

46. Product differentiation is a key feature of-

- (a) Perfect competition
- (b) Oligopoly
- (c) Monopoly
- (d) Monopolistic competition

47. A market induces cartel is -

- (a) Perfect competition
- (b) Monopoly
- (c) Oligopoly
- (d) None of these

48. In the context of oligopoly, the kinked demand hypothesis is designed to explain -

- (a) Price and output determination
- (b) Price rigidity
- (c) Price leadership
- (d) Collusion among rivals

49. A combination of monopoly market and a monopsony market is known as-

- (a) Duopoly
- (b) Monopsony
- (c) Oligopsony
- (d) Bilateral monopoly

50. A firm encounters its "shutdown point" when-

- (a) Average total cost equals price at the profit-maximising level of output
- (b) Average variable cost equals price at the profit-maximising level of output
- (c) Average fixed cost equals price at the profit-maximising level of output
- (d) Marginal cost equals price at the profit-maximising level of output

51. Homogeneous product are sold under-
- (a) Collusive oligopoly
 - (b) Non-collusive oligopoly
 - (c) Perfect oligopoly
 - (d) Imperfect oligopoly
52. A market structure in which many firms sell products that are similar but not identical is known as-
- (a) Monopolistic competition
 - (b) Monopoly
 - (c) Perfect competition
 - (d) Oligopoly
53. In a very short period market-
- (a) The supply is fixed
 - (b) The demand is fixed
 - (c) Demand and supply are fixed
 - (d) None of the above
54. A monopolist is a-
- (a) Price maker
 - (b) Price -taker
 - (c) Price adjuster
 - (d) None of the above
55. The term business cycle refers to-
- (a) The ups and downs in production of commodities
 - (b) The fluctuation levels of economic activity over a period of time
 - (c) Decline in economic activities over prolonged period of time
 - (d) Increasing unemployment rate and diminishing rate of savings
56. The lowest point in the business cycle is referred as the -
- (a) Expansion
 - (b) Boom
 - (c) Peak
 - (d) Trough

57. A indicator which occur simultaneously with the business cycle movements is-

- (a) Lagging indicator
- (b) Coincident indicator
- (c) Leading indicator
- (d) None of these

58. Example of Lagging indicator is-

- (a) Corporate profits
- (b) Interest rates
- (c) Consumer price index
- (d) All of these

59. "Trade cycle is a purely monetary phenomenon", according to-

- (a) Pigou
- (b) Hawtrey
- (c) Keynes
- (d) Schumpeter

60. When aggregate economic activity is declining, the economy is said to be in-

- (a) Contraction
- (b) An Expansion
- (c) Trough
- (d) Turning point

ANSWERS:

1.	a	11.	c	21.	d	31.	b	41.	d	51.	c
2.	c	12.	d	22.	c	32.	a	42.	b	52.	a
3.	c	13.	b	23.	b	33.	c	43.	d	53.	a
4.	d	14.	d	24.	a	34.	d	44.	b	54.	a
5.	a	15.	c	25.	c	35.	c	45.	d	55.	b
6.	c	16.	b	26.	b	36.	a	46.	d	56.	d
7.	c	17.	a	27.	a	37.	b	47.	c	57.	b
8.	d	18.	c	28.	d	38.	b	48.	b	58.	d
9.	c	19.	a	29.	b	39.	a	49.	d	59.	b
10.	c	20.	a	30.	b	40.	d	50.	b	60.	a

MODEL TEST PAPER - 1



1. In describing a given production technology, the short run is best described as lasting.
 - a. Up to six months from now.
 - b. Up to five years from now.
 - c. As long as all inputs are fixed.
 - d. As long as at least one input is fixed.

2. A firm encounters its shut down point “when:
 - a. Average total cost equals price at the profit-maximizing level of output.
 - b. Average variable cost equals price at the profit –maximizing level of output.
 - c. Average fixed cost equals price at the profit maximizing level of output.
 - d. Marginal cost equals price at the profit maximizing level of output.

3. Under _____ market conditions, firms make normal profits in the long run.
 - a. Perfect competition
 - b. .monopoly
 - c. Oligopoly
 - d. None of the above

Use table 1 to answer questions 4-6

Output	Total cost
0	240
1	330
2	410
3	480
4	540
5	610
6	690

4. The average fixed cost of 2 units of output is
 - a. Rs.80
 - b. Rs.85
 - c. Rs.120
 - d. Rs.205

5. The marginal cost of the sixth unit output is;
- a. Rs.133 b. Rs.75 c. Rs.80 d. Rs.450
6. Average variable Cost of 4 units of output is ;
- a. Rs.75 b. Rs.135 c. Rs.60 d. insufficient data
7. Suppose a department store has a sale on its silverware. If the price of a plate – setting is reduced from Rs.300 to Rs 200 and the quantity demanded increase from 3,000 plate-setting to 5,000 plate-settings, what is the price elasticity of demand for silverware.
- a. 8 b. 1.0 c. 1.25 d. 1.50

Read the following paragraph and answer question 8-10

Suppose that a sole proprietorship is earning total revenue of Rs.10,00,000 and is incurring explicit coast of Rs.7,50,000. The owner could work of another company for Rs.3, 00,000 a year.

8. What will be the implicit cost of the firm?
- a. Rs. 3,00,000
b. Rs.2,50,000
c. Rs. 7,50,000
d. insufficient data
9. The above mentioned firm is earning:
- a. Accounting profit of Rs.2,50,000
b. Economic loss of Rs.50,000
c. Both a and b are correct
d. None of the above is correct.
10. Suppose in the above mentioned question, the owner had invested Rs. 500,000 by withdrawing from his saving account on which was earning 5 % interest per annum, the economic profit or loss is
- a. Economic profit of Rs.75,000
b. Economic loss of Rs.75,000
c. Economic profit of Rs.2,50,000
d. Economic loss of Rs.2,50,000

11. If increasing air fares increasing revenue and decreasing them decreases revenue, then the demand for air travel has a price elasticity of ; .
- Zero
 - Greater than Zero but less one
 - One
 - Greater than one
12. Which of the following is not a characteristic of a “price-taker”.
- $TR = P \times Q$
 - $AR = \text{Price}$
 - Negatively – sloped demand
 - Marginal Revenue = price
13. Which cost increase continuously with the increase in production?
- Average cost
 - Marginal cost
 - Fixed cost
 - Variable cost
14. Suppose the demand for meals at a medium-priced restaurant is elastic. If the management of the restaurant is considering raising price, it can expect a relatively;
- large fall in quantity demanded.
 - large fall in demand
 - Small fall in quantity demanded
 - small fall in demand
15. When the perfectly competitive firm and industry are in long run equilibrium the;
- $P = MR = SAC = LAC$
 - $D = MR = SMC = LMC$
 - $P = MR = \text{Lower point on the LAC curve}$
 - All of these

16. In monopoly, the relationship between average and marginal revenue curve is as follows;
- AR curve lies above the MR curve
 - AR curve coincides with MR curve
 - AR curve lies below the MR curve
 - AR curve parallel to the MR curve
17. Production may be defined as an act of _____
- Creating utility
 - Earning profit
 - Destroying utility
 - Providing services
18. Demand for electricity is elastic because _____
- It is very expensive
 - It has a number of close substitutes
 - It has alternative uses
 - None of the above
19. The opportunity cost of a good is.
- the time lost in finding it
 - the quantity of other goods sacrificed to get another unit of that good
 - the expenditure on the good
 - the loss of interest in using savings
20. Micro- economic is concerned with
- the economic as a whole
 - the electronics industry
 - the study of individual economic behavior
 - the interactions within the entire economy
21. _____ and _____ do not directly affect the demand curve
- the price of related goods, consumer incomes
 - Consumer incomes, tastes.
 - the cost of production, bank opening hours.
 - the price of related goods, preference.

22 Relationship between AR, MR and price elasticity of demand.

- a. $MR = AR + (e - 1/e)$.
- b. $MR = AR * (e - 1/e)$
- c. $AR = MR * (e - 1/e)$.
- d. $MR = AR * (e/e - 1)$

23. The slope of indifference Curve indicates.

- a. Marginal Rate of Substitution of X for y.
- b. Price of X and y.
- c. Slope of the budget line.
- d. Change in price

24. In perfect competition the firm's _____ above AVC has the identical shape of the firm's supply curve.

- a. Marginal Rate of Substitution of x and y.
- b. price of x and y
- c. slope of the budget line
- d. none of the above

25. If the demand curve for good X is downward- sloping, an increase in the price will result in

- a. A decrease in the demand for good X
- b. No change in the quantity demanded for good X
- c. A larger quantity demanded for good X
- d. A smaller quantity demanded for good X

26. Yesterday seller A supplied 400 units of a good X at Rs. 10 per unit. Today, seller A supplies the same quantity of units at Rs.5 per unit. Based on this evidence, seller A has experienced a (an).

- a. Decrease in supply
- b. Increase in supply.
- c. Increase in the quantity supplied
- d. Decrease in the quantity supplied

27. Which of the following is a variable cost in the short run?
- wages paid to factory labor
 - Payment on the lease for factory equipment
 - Rent on the factory.
 - Interest payment on the borrowed financial capital
28. Price discrimination is a situation when a producer
- Charges different price in different markets
 - Charges same price
 - Charges many price
 - All of the above
29. Which of the following statement about price and marginal cost in competitive and monopolized market is true?
- In competitive markets, price equals marginal cost; in monopolized markets, price equals marginal cost.
 - In competitive markets, price exceeds marginal cost; in monopolized markets, price exceeds marginal cost.
 - In competitive markets, price exceeds marginal cost; in monopolized markets; price exceeds marginal cost.
 - In. competitive markets, price exceeds marginal cost in monopolized markets; price equals marginal cost.
30. New firms are barred from entering the market in
- Perfect competition
 - Oligopoly
 - Monopolistic competition
 - Monopoly
31. If Oligopolistic engage in collusion and successfully form a cartel, in the market outcome is
- The same as if it were served by a monopoly.
 - The same as if were served by competitive firms
 - Efficient because cooperation improves efficiency
 - Known as Nash equilibrium

32. You are given the following data.

output	0	1	2	3	4	5
Total cost	0	15	30	45	60	75

The above data is an example of:

- Constant returns to scale.
- Decreasing returns to scale
- Increasing returns to scale.
- Globalization

33. Which of the following statement is correct?

- In a perfectly competitive market, firms are price takers.
- Microeconomic is the study of the behavior of the economy as a whole
- Positive economics focuses on welfare of the people of a society
- None of the above.

34. Which of the following statements is incorrect?

- Unlike normative economics, positive economics is based on objective analysis of economic issues.
- The opportunity cost of a good is the quantity of other goods sacrificed to get another unit of that good.
- Microeconomics emphasizes interaction in the economy as a whole.
- None of the above.

35. A rational person does not act unless.

- the action is ethical
- the action produces marginal costs exceed marginal benefits
- the action produces marginal benefits that marginal costs.
- the action makes money for the person.

36. Suppose you find Rs.100. if you choose to use Rs.100 to go to a football match, your opportunity cost of going to the game is _____
- Nothing because you found the money.
 - Rs.100 (because you could have used Rs.100 to buy other thing) plus the value of your time spent at the game.
 - Rs.100 (because you could have used the Rs.100 to buy other things) plus the value of your time spent at the game, plus the cost of the dinner your purchased at the game.
 - Rs.100 (because you could have used the Rs.100 to buy other things).
37. If the consumers always spend 15 percent of their income on food, then the income elasticity of demand for food is _____
- 1.50
 - 1.15
 - 1.00
 - 0.15
38. If a fishermen must sell all of his daily catch before it spoils for whatever price he is offered, once the fish are caught the fisherman's price elasticity of supply for fresh fish is _____.
- Zero
 - Infinite
 - One.
 - Unable to be determined from this information.
39. Which of the following statements is normative?
- Large government deficits cause an economy to grow more slowly.
 - People work harder if the wage is higher.
 - The unemployment rate should be less.
 - Printing too much money causes inflation
40. Total utility is maximum when;
- Marginal utility is Zero
 - Marginal utility is as its highest point
 - marginal utility is equal to average utility
 - average utility is maximum

41. An indifference curve slope down towards right since more of one commodity and less of another result in;
- Same satisfaction.
 - Greater satisfaction.
 - maximum satisfaction
 - decreasing expenditure
42. The consumer is equilibrium when the following condition is satisfied:
- $MU_x/MU_y > P_x / P_y$
 - $MU_x/MU_y < P_x / P_y$
 - $MU_x/MU_y = P_x / P_y$
 - None of the above.
43. In the case of a Giffen good, the demand curve will be;
- Horizontal.
 - Downward sloping to the right.
 - Upward- sloping to the right.
 - Vertical.
44. The law of consumer surplus is base on:
- Indifference curve analysis.
 - Revealed preference theory.
 - Law of substitution.
 - The law of diminishing marginal utility.
45. In the short run, when the output of a firm increases; its average fixed cost.
- Increases.
 - decreases
 - remains constant
 - first decline and then rises
46. In case of an inferior good the income elasticity of demand is;
- Positive
 - Zero
 - negative
 - infinite

47. The elasticity of substitution between two perfect substitutes is;

- a. zero
- b. greater than zero
- c. less than infinity
- d. Infinite

48. Elasticity of supply refers to the degree of responsiveness of supply of a good to change in its;

- a. demand
- b. price
- c. costs of production
- d. state of technology

49. An isoquant slopes:

- a. downward to the left
- b. downward to the right
- c. upward to the left
- d. upward to the right

50. The income of a household rises by 20 per cent, the demand for computer rises by 25 per cent, this means computer (in Economics) is a /an

- a. inferior good
- b. luxury good
- c. necessity
- d. can't say

51. Which of the following is a property of the indifference curve?

- a. Indifference curves are convex to the origin.
- b. Indifference curves slopes downwards from left to right.
- c. No two indifference curves can cut each other.
- d. All of the above are the properties of indifference curves.

52. The structure of the cold drink industry in India is best described as;
- Perfectly competitive
 - monopolistic
 - Oligopolistic
 - Monopolistically competitive
53. If a seller realize Rs.10,000 after selling 100 units and 14,000 after selling 120 units. What is the marginal revenue here?
- a. Rs.4000 b. Rs.450 c. Rs.200 d. Rs.100
54. In economics, what a consumer is ready to pay minus what he actually pays is termed as;
- Consumer's equilibrium
 - Consumer's surplus
 - Consumer's expenditure
 - None of the above
55. What is the shape of the demand curve faced by a firm under perfect competition?
- Horizontal
 - Vertical
 - Positively sloped
 - Negatively sloped
56. The second glass of lemonade gives lesser satisfaction to a thirty boy, this is of:
- Law of demand
 - Law of diminishing returns
 - Law of diminishing marginal utility
 - Law of supply
57. In the case of a straight line demand curve meeting the two axes the price-elasticity of demand at the mid-point of the line would be:
- a. 0 b. 1 c. 1.5 d. 2

58. All of the following are determinants of demand expect

- a. taste and preference
- b. quantity supplied
- c. income
- d. price of related goods

59. Which of the following cost curves is never “U” shaped?

- a. Average cost curve
- b. Marginal cost curve
- c. Average variable cost curve
- d. Average fixed cost curve

60. When aggregate economic activity is increasing, the economy is said to be in.

- a. an expansion
- b. a contraction
- c. a peak
- d. a turning point.

ANSWERS:

1	d	11	b	21	c	31	a	41	a	51	d
2	b	12	c	22	b	32	a	42	c	52	c
3	a	13	d	23	a	33	a	43	c	53	c
4	c	14	a	24	b	34	c	44	d	54	b
5	c	15	d	25	d	35	c	45	b	55	a
6	a	16	a	26	b	36	b	46	c	56	c
7	c	17	a	27	a	37	c	47	d	57	b
8	a	18	c	28	a	38	a	48	b	58	b
9	c	19	b	29	c	39	c	49	b	59	d
10	b	20	c	30	d	40	a	50	b	60	a

MODEL TEST PAPER - 2

1. **At shut down point:**
 - a. Price is equal to AVC.
 - b. Total revenue is equal to TVC.
 - c. Total loss of the firm is equal to TFC.
 - d. All of the above.

2. **The LAC curve.**
 - a. Falls when the LMC curve falls.
 - b. Rises when the LMC curve rises..
 - c. Goes through the lowest point of the LMC curve.
 - d. Falls when $LMC < LAC$ and rises when $LMC > LAC$.

3. **If the price of the Pepsi decreases relative to the price of Coke and Slice, the demand for:**
 - a. Coke will rise.
 - b. Slice will decrease.
 - c. Coke and Slice will increase.
 - d. Coke and Slice will decrease.

4. **The indifference curve approach does not assume:**
 - a. Rationality on the parts of consumers.
 - b. Ordinal measurement of satisfaction.
 - c. Consistent consumption pattern behaviour of consumers.
 - d. Cardinal measurement of utility.

5. **The marginal cost curve intersects the average cost curve when average cost is :**
 - a. Maximum.
 - b. Minimum.
 - c. Raising.
 - d. Falling.

6. In the long run equilibrium the pure monopolistic can make pure profits because of:
- Blocked entry.
 - The high price he charged.
 - The low LAC costs
 - Advertising.
7. The demand for the factor of production is said to be a derived demand because:
- It is a function of the profitability of an enterprise.
 - It depends on the supply of complementary factors.
 - Its seem from the demand for the final product.
 - It arises out of means being scare in relation to wants.
8. Consumer stops purchasing the additional units of the commodity when:
- Marginal utility starts declining.
 - Marginal utility becomes zero..
 - Marginal utility is equal to marginal utility of money.
 - Total utility is increasing.
9. The substitution effect takes place due to change in:
- Income of the consumer
 - Price of the commodity.
 - Relative prices of the commodities.
 - All of the above,
10. Under income effect consumer.
- Moves along the original indifference curve.
 - Move to higher or lower indifference curve.
 - Always purchases higher quantities of the both commodities..
 - None of the above.
- 11 Under the perfect competition of a firm will be in equilibrium when :
- $MC = MR$.
 - MC cuts the MR from below.
 - MC is rising when its cut the MR..
 - All of the above

12. A perfectly competitive firm has control over.
- Price.
 - Production as well price.
 - Production, price and consumer.
 - None of the above.
13. The demand curve facing an industrial firm under monopoly is:
- Horizontal straight line.
 - Interminate.
 - Downward sloping.
 - Upward sloping.
14. Price discrimination is not possible.
- Under monopoly situation.
 - Under any market firm.
 - Under monopolistic competition.
 - Under perfect competition.
15. In the short run, a firm in monopolistic competition.
- Always earns profits.
 - Incurs losses.
 - Earns normal profits only.
 - May earn normal profit, supernormal profit or incur losses.
16. In the case of two perfect substitutes, the indifference curve will be :
- Straight line.
 - L-shaped.
 - U-shaped.
 - C-shaped.
17. In case of inferior goods, income elasticity is:
- Zero.
 - Positive.
 - Negative.
 - None.

18. Cross elasticity of demand between tea and coffee is:
- Positive.
 - Negative.
 - Zero.
 - Infinite
19. If all inputs are trebled and the resultant output is doubled, this is case of:
- Constant return to scale.
 - Increasing return to scale.
 - Diminishing return to scale.
 - Negative returns to scale.
20. In case of monopoly:
- MR curve cannot be defined.
 - AR curve cannot be defined.
 - The short run supply curve cannot be defined.
 - None of the above.
21. If the income elasticity is greater than one, the commodity is
- Necessity.
 - Luxury.
 - Inferior goods.
 - None of these
22. Full capacity is utilized only when there is
- Monopoly.
 - Perfect competition.
 - Price discrimination.
 - Oligopoly
23. Which of the following falls under Micro Economics?
- National Income.
 - General Price Level.
 - Factor pricing.
 - National Saving and Investment.

24. if a point on a demand curve of any commodity lies on X- Axis then price elasticity of demand of that commodity at that point will be:
- Infinite.
 - More than zero.
 - Less than zero.
 - Zero.
25. One characteristic not typical of oligopolistic industry is:
- Too much importance to non-price competition.
 - Price leadership.
 - Horizontal demand curve.
 - A small number of firms in the industry.

A competitive firm sells as much as of its product it chooses at a market price of Rs. 100 per unit. Its fixed cost is Rs. 300 and its variable costs (in rupees) for different levels of production are shown in the following table. Use Table 1 to answer questions 26- 29.

Qty.	Variable Cost	Fixed Cost	Total Cost	Average Variable cost	Average Total cost	Marginal Cost
0	0	-	-	-	-	-
5	270					
10	490					
15	720					
20	1000					
25	1370					
30	1870					
35	2540					
40	3420					
45	4550					
50	5970					

26. When production is 35 units, the average variable cost is:

- a. Rs.7.25. b. Rs.72.25 c. Rs.72.57 d. Rs.85.50

27. In the table marginal cost per unit that corresponds to 25 units of production is

- a. Rs.3.50. b. Rs.74. c. Rs.450. d. Rs.370.

28. To maximize output, the firm should produce.

- a. 30. b. 35. c. 45. d. 50.

29. If the market price drops from Rs. 100 to Rs. 74, the firm should run response should be _____:

- a. Continue to produce the same number of units as before the drop in price.
b. Produce 10 units.
c. Produce 20 units.
d. Produce 25 units.

Read the following data and answer the questions Number 30 - 35

XYZ are there commodities where X and Y are complements whereas X and Z are substitutes. A shopkeeper sells commodity X at RS. 40 per piece. At this price he is able to sell 100 pieces of X per month. After some time he decreases the price of X to Rs. 20. Following the price decreases:

He is able to sell 150 pieces of X per month. The demand for Y increases from 25 units to 50 units. The demand for commodity Z decreases from 150 to 75 units.

30. The price elasticity of demand when the price of X decreases from Rs. 40 per piece to Rs. 20 per piece will be to:

- a. 1.5 b. 1.0 c. 1.66 d. 0.6

31. The cross elasticity of monthly demand for Y when the price of X decrease from Rs.40 to Rs.20 is equal to:

- a. +1 b. -1 c. -1.5 d. +1.5

32. The cross-elasticity of Z when the price of X decrease from 40 to 20 is equal to;

- a. -0.6. b. +0.6. c. -1. d. +1

33. What can be said about price elasticity of demand for X?
- Demand is unit elastic.
 - Demand is highly elastic.
 - Demand is perfectly elastic.
 - Demand is inelastic.
34. Suppose income of the residents of locality increase by 50 % and the quantity of X commodity increases by 20%. What is income elasticity of demand for commodity X?
- a. 0.6. b. 0.4. c. 1.25. d. 1.35
35. We can say that commodity X in economics is a/an
- Luxury good.
 - Inferior Good.
 - Normal good.
 - None of the above.
36. If the total cost of manufacturing commodity 'X' is Rs.150,000. Out of the implicit cost is Rs.80,000 what will be explicit cost.
- Rs.95,000.
 - Rs.125,000.
 - Rs. 80,000.
 - Rs.70,000.
37. Which of the following statements is correct?
- Employment and economic growth are studied in micro-economics.
 - Micro condition deals with balance of trade.
 - Economic condition of section of the people is studied in micro-economics
 - External value of money is dealt with in micro-economics
38. Suppose income of the consumers increase by 50 % and the demand for the commodity X increases by 20%. What will be the income?
- a. 04. b. 0.4. c. 4.00 d. -4.00

39. If the demand for good is in elastic, an increase in its price will cause the total expenditure of the consumers of the good to:
- Remain the same.
 - Increase.
 - Decrease.
 - Any of these.
40. The price of hot dogs increase by 22% and the quantity of hot dog demanded falls by 25%. This indicates that demand for hot dog is.
- Elastic.
 - Inelastic.
 - Unitarily elastic.
 - Perfectly elastic.
41. A firm's average fixed cost at Rs.20 at 6 units of output. What will it be at 4 units of output?
- a. 60. b. 30. c. 40. d. 20.
42. The Kinked demand hypothesis is designed to explain in the context of oligopoly.
- Price and output determination.
 - Price rigidity.
 - Price leadership.
 - Collusion among rivals.
43. The structure of the tooth paste industry in India is best described as;
- Perfectly competitive.
 - Monopolistic.
 - Monopolistically competitive.
 - Oligopoly
44. When _____ we know that the firm are earning just normal profit.
- $AC = AR$.
 - $MC = MR$.
 - $MC = AC$.
 - $AR = MR$

45. Which is the other name that is given to the long run average cost curve?

- a. Profit curve.
- b. Planning curve.
- c. Demand curve.
- d. Indifference curve.

46. The kinked demand curve model of oligopoly assumes that :

- a. Response (of consumers) to a price increase is less than the response to a price decrease.
- b. Response (of consumers) to a price increase is more than the response to a price decrease.
- c. Elasticity of demand is consist regardless of whether price increase or decrease.
- d. Elasticity of demand is perfectly elastic.

47. Diminishing marginal returns imply.

- a. Decreasing average variable cost.
- b. Decreasing marginal cost.
- c. Increasing marginal cost.
- d. Decreasing average fixed cost.

48. Which of the following is an example of an “explicit cost”?

- a. The wages a proprietor could have made by working as an employee of a large firm.
- b. The income that could have been earned in alternative uses by the resources owned by the firm.
- c. The payment of wages by the firm.
- d. The normal profit earned by a firm.

49. Marginal cost is defined as :

- a. The change in the total cost due to one unit change in output.
- b. Total cost divided by output.
- c. The change in output due to one unit change in an output.
- d. Total product divided by the quantity of input.

50. The law of scarcity.

- a. Does not apply to rich developed countries.
- b. Applies only to the less developed countries.
- c. Implies that consumer's wants will be satisfied in a socialistic system.
- d. Implies that consumer's wants will never be completely satisfied.

51. Which of the following statement is incorrect?

- a. Even monopolistic can earn losses.
- b. Firms in a perfectly competitive market are price- taker.
- c. It is always beneficial for a firm in the perfectly competitive market to discriminate price.
- d. Economic laws are less exact than the law of physical science.

52. The producer is in equilibrium at a point where the cost line is;

- a. Above the isoquant.
- b. Below the isoquant.
- c. Cutting the isoquant.
- d. Tangent to isoquant.

53. Which of the following is not an economic activity?

- a. A son looking after his ailing mother.
- b. A chartered accountant doing his own practice.
- c. A soldier serving at the border.
- d. A farmer growing millets.

54. Contraction of demand is result of.

- a. Decrease in the number of consumers.
- b. Increase in the price of the good concerned.
- c. Increase in the price of other goods.
- d. Decrease in the income of purchasers.

55. Which of the following is not characteristic of land?

- a. Its supply for the economy is limited.
- b. It is immobile.
- c. Its usefulness depends on human efforts.
- d. It is produced by our forefathers.

56. If a competitive firm doubles its output, its total revenue:
- Doubles,
 - more than doubles,
 - less than doubles,
 - Cannot be determined because the price of the good may rise or fall.
57. Which of the following involves a trade -off?
- Taking a nap.
 - All of these answers involves trade-offs.
 - Watching a football game on Saturday afternoon.
 - Going to university.
58. A firm's production function:
- Shows how much output and the level of input required for the firm to maximize profits.
 - Establishes the minimum level of output that can be produced using the available resources. .
 - Shows the maximum output that can be produced with a given amount of inputs with available technology.
 - Shows labour force which is employed.
59. In the short run if a perfectly competitive firm finds itself operating at a loss, it will
- Reduce the size of its plants to lower fixed cost.
 - Raise the price of its product.
 - Shutdown.
 - Continue to operate as long as it covers its variable cost.
60. Which of the following is not variable in the Index of leading indicators?
- New consumer's goods order.
 - Delayed deliveries.
 - New building permits.
 - Prime rate.

ANSWERS:

1	D	11	D	21	B	31	B	41	B	51	C
2	D	12	D	22	B	32	D	42	B	52	D
3	D	13	C	23	C	33	D	43	C	53	A
4	D	14	D	24	D	34	B	44	A	54	B
5	B	15	D	25	C	35	C	45	B	55	D
6	A	16	A	26	C	36	D	46	B	56	A
7	C	17	C	27	B	37	C	47	C	57	B
8	C	18	A	28	A	38	B	48	C	58	C
9	C	19	C	29	D	39	B	49	A	59	D
10	B	20	C	30	D	40	A	50	D	60	D