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Chapter 1

Nature and Scope of Business Economics

1. Economics originated from **Greek work** ''*Oikonomia*'. '*Oiko*'-'House' & '*Nomia*'-'Management'.
2. Till 19th century, Economics was also known as '**Political Economy**'
3. Basic Economics problem **unlimited wants**, and **Scarce resources**.
4. Resources shall be allocated to their **highest valued uses**.
5. Economics is study of **transformation of the scarce resources** into G&S to satisfy the most important of our **infinite wants**
6. The book named '**An Inquiry into the Nature and Causes of the Wealth of Nations**' (1776), by **Adam Smith** is considered as the first modern work of Economics.
7. **Decision making** - process of **selecting an appropriate alternative** that will provide the most efficient means of attaining a desired end, **from two or more alternative** courses of action'.
8. **Decision making** arises only if there is choice available. No alternatives no decision making- e.g.- Continue or shut down decision, New Product, Make or buy, Marketing
9. **Joel Dean** defined Business Economics as the use of economic analysis to make business decisions involving the best use of an **organization's scarce resources**.-
10. Business Economics is referred as **Managerial Economics**, generally refers to the integration of economic theory with business practice.
11. **Economic theories are hypothetical** and **simplistic** in since based on simplifying assumptions.
12. Business Economics enables application of economic logic and analytical tools to **bridge the gap** between theory and practice.
13. Business Economics is not only valuable to business decision makers, but also useful for managers of '**not-for-profit**' organizations
14. **Difference between Micro and Macro Economics**

Micro Economics	Macro Economics
Greek work ' Mikros ' which means ' Small '	Greek work " Makros ' which means ' large '
"Study of particular firm , particular household, individual price, wages, income, individual industries, particular commodities"- Prof. Boulding	"Macro Economics examines the Forest and not the Trees. Large aggregates "- Prof. Mc. Connel
Behavior of individual firm or industry	Overall economic phenomena
It is also called as ' Price Theory '	It is also called as ' Income Theory '

15. **The Nature of Business Economics is described as under-**
 - (a) **Business Economics is a Science**- Explains cause and effect relationships.
 - (b) **Business Economics is an art** -application of rules and principles
 - (c) **Micro Economics based and Macro Analysis based**
 - (d) **Analysis from Private Enterprises Economy viewpoint**
 - (e) **Inter-Disciplinary**- Integrates the tools of decision sciences such as Mathematics, Statistics and Econometrics with Economic.
 - (f) **Pragmatic Approach-**

16. Normative and positive –

Positive Economics or Pure economics	Normative Economics
It is based on facts and there is no point of ambiguity or second view	It tells us about how the things should be.
Descriptive in nature & It states 'what is'	Prescriptive in nature & describes 'what ought to be'.
It explains cause & effect relationship and there will be no value judgments/suggestions.	It passes value judgments /suggestions and offers advice.
It is based on past data and can be checked with data	Cannot be verified because it is opinion based and not fact based
No Matter of debate	Matter of Debate
According to Robbins, Economics is neutral between ends.	It is based on welfare economics - (Marshall & Pigou) Complete neutrality between ends is, however, neither feasible nor desirable.

17. Scope of Business Economics

a. Microeconomics applied to operational or internal Issues- issues within the organization and fall within the purview and control of the management.

1. Demand Analysis	2. Demand Forecasting	3. Cost analysis
4. Theory of Capital and Investment Decisions	5. and Uncertainty Analysis	6. Market Structure and Pricing Policies
7. Resource Allocation	8. Production analysis	9. Inventory Management
10. Profit analysis		

b. Macroeconomics applied to environmental or external issues- issues out of preview of an organization The major macro-economic factors relate to

- 1) The type of economic system.
- 2) Stage of business cycle.
- 3) The general trends in national income, employment, prices, saving and investment.
- 4) Government's economic policies like industrial policy, competition policy, monetary and fiscal policy, price policy, foreign trade policy and globalization policies.
- 5) Working of financial sector and capital market.
- 6) Socio-economic organizations like trade unions, producer and consumer unions and cooperatives.
- 7) Social and political environment.

Central Economic Problems

1. All countries, without exceptions, face the problem of scarcity because their resources are **limited** and these resources have **alternative uses**.
2. If a resource has only a single use, then also the economic problem would not arise.
3. The central economic problem is further divided into four basic economic problems.
 - a) **What to produce? Which goods and in what quantities**
 - b) **How to Produce? Method of production**, (labour- intensive or capital - intensive)
 - c) **For whom to produce?** How the G&S should be distributed among members of the society. Also **shares of different people** in the national product.
 - d) **What provisions (if any) are to be made for economic growth?-saving and investment**
4. **Understanding different types of Economies**

Particular	Capitalist economy	Socialist economy	Mixed Economy
Also Known as	Free market economy or laissez-faire economy	Karl Marx and Frederic Engels in their work 'The Communist Manifesto' published in 1848	Depends on both markets and govt.
Most imp Feature	Private Ownership	Collective Ownership/ Public ownership	<i>Include the best features of both the controlled economy and the market economy while excluding the demerits of both.</i>
Other points	Private property is the mainstay. Profit motive is its driving force		
How CEP are solved	Impersonal forces of market demand and supply or the price mechanism		
What To produce	Decided by consumers	Decided by CPE	
How to produce	Cost of production minimum. Labor or capital Intensive		
For Whom to produce	Those who have buying capacity		
What provision are to be made for economic growth?	Depends upon level of interest rate for consumer and rate of return in Market for business firm		

5. Characteristics of each type of economy

Capitalist economy	Socialist economy	Mixed Economy
<ol style="list-style-type: none"> a. Right to private property b. Freedom of enterprise c. Freedom of economic choice d. Profit Motive e. Consumer Sovereignty f. Competition 	<ol style="list-style-type: none"> a. Collective Ownership of means of production by state however, small farms, workshops & trading firms which may remain in private hands. b. Profit- motive and self- interest are not the driving forces c. The resources are used to achieve certain socio-economic objectives. 	<ol style="list-style-type: none"> a. Government itself must run important and selected industries and eliminate the free play of profit motive and

g. Absence of Government Interference	d. Centrally planned economy e. Absence of Consumer Choice- f. Relatively Equal Income Distribution- g. Minimum role of Price Mechanism or Market forces- h. Absence of Competition	self-interest.
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6. Merits of each type of economy

Capitalist economy	Socialist economy	Mixed Economy
a) Self-regulating through price mechanism. b) Rewards efficiency and punishes inefficiency. c) Faster economic growth d) Optimum allocation of resources e) Operative efficiency. f) Lower cost of production g) Better standard of living of consumers h) Incentive for innovation and Technological progress. i) Right to private Property j) No costs for collecting and processing of information	a) Equitable distribution of wealth and income b) Rapid and balanced economic development c) Planned Economy- d) Minimum Wastage and optimum utilisation of resource- e) Unemployment is minimized, f) Absence of profit motive g) Right to work and minimum standard of living h) High Social security	a) Economic freedom and existence of private property b) Price mechanism c) Consumer sovereignty and freedom of choice. d) Appropriate incentives e) Encourages enterprise and risk taking. f) Advantages of economic planning g) Comparatively greater economic and social equality and freedom h) No cut throat competition

7. Demerits of each type of economy

Capitalist economy	Socialist economy	Mixed Economy
a) Precedence of property rights over human rights. b) Inequality and social injustice c) Wide differences in economic opportunities. d) Does not represent the real needs of the society. e) Exploitation of labour f) Consumer sovereignty is a myth g) Misallocation of resources h) Less of merit goods i) Unplanned production. j) Waste of productive resources k) Formation of monopolies l) Environmental degradation.	a) Inefficiency and delays, corruption, red-tapism, favoritism, b) All material means of production are under the control and direction of state. c) Takes away right of private property. d) No incentive for hard work e) Administered prices f) State monopolies become uncontrollable g) Consumers have no freedom of choice. h) No importance to personal efficiency and productivity. i) The extreme form of socialism is not at all practicable	a) Excessive controls the private sector. b) Poor implementation c) Undue delays

Chapter 2A

Consumer Behaviour & Utility Analysis

1. Utility is **want satisfying power** of a commodity is called as utility.
2. Utility is **subjective** term and differs from person to person
3. **Utility does not mean usefulness.**
4. Utility is **ethically neutral.**
5. Human beings have virtually unlimited wants, Each single want is **satisfiable (capable of being satisfied)**
6. **Consumer spends his income** on different G&S to attain **maximum satisfaction.**
7. **Difference Between Cardinal and Ordinal Approach**

	Cardinal Approach	Ordinal Approach
Assumptions	Measurable and quantifiable	Utility is not quantifiable
Rationale	Human satisfaction can be expressed in monetary terms,	Human Satisfaction is psychological phenomenon
Economists	Alfred Marshall	Hicks and Allen

CARDINAL APPROACH

Refer Table for further discussion :(Table 2.1)

Quantity of Oranges consumed per day	Total utility	Marginal Utility	Price	Consumer's Surplus in Rs.
0	0	0	0	0
1	60	60	40	20
2	110	50	40	10
3	150	40	40	0
4	180	30	40	-10
5	200	20	40	-20
6	210	10	40	-30
7	210	0	40	-40
8	200	-10	40	-50
9	180	-20	40	-60

8. **Total Utility-** The **sum total** of utility derived from different units of commodity
9. **Marginal Utility-** Additional utility derived from additional unit of a commodity.
Marginal Utility can also be defined as **change in the total utility resulting from one- unit change ($TU_n - TU_{(n-1)}$)** in consumption of commodity, **per unit of time or, Change in Utility/ change in Qty.**

10. Assumptions under Marginal utility analysis and cardinal approach

- a) **Cardinal Measurability of Utility**- Utility is measurable and quantifiable.
- b) **Comparability of Utility across the goods**- Satisfaction derived by a person from different commodities can be compared.
- c) **Independence of Utilities**-
- d) **Constant Marginal Utility of Money**-

11. Law of diminishing Marginal utility states -*as a consumer consumes more of stock, the extra satisfaction that he derives from an extra unit, declines with the increase in consumption of that item.*

12. If same goods have capacity to satisfy other wants then their marginal utility would not have decreased.

13. Conclusion as per law of Diminishing marginal utility

- a) Total Utility increases at **diminishing rate**.
- b) Marginal Utility is **Downward Sloping curve**, moving from **left to right**
- c) Marginal utility is **negatively sloped curve**.
- d) **Where Marginal Utility is negative, Total utility decreases**.
- e) **MU goes on decreasing & becomes negative beyond a certain point of time.**

14. Assumptions and Exception to Law of Marginal utility

- a) Standard Units- Suitable size.
- b) Homogeneous units-
- c) Constant Income-
- d) Constant Taste/ fashion- Continuous consumption-
- e) Cardinal approach- Utility is quantifiable

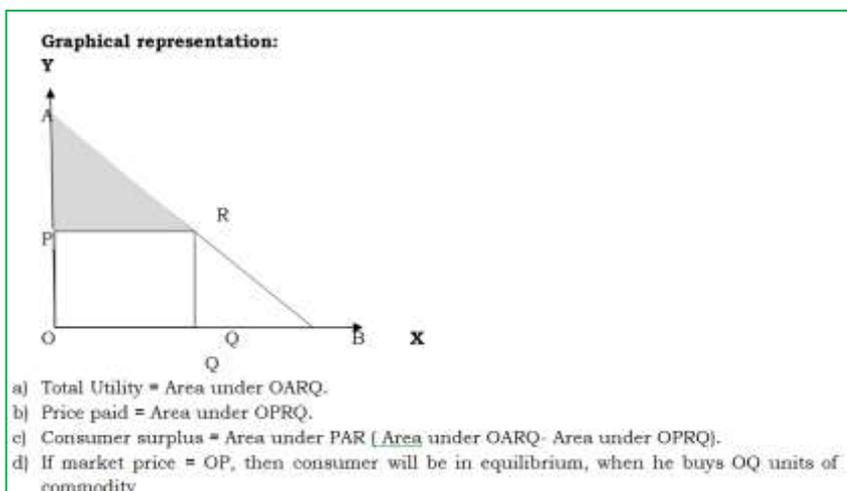
15. Exceptions to Law-

- a) **Personal Aspects**- music, hobbies, etc
- b) **Money is excluded**-
- c) **Other possessions**- substitute or complimentary.

16. Significance of Law

- a) Law of diminishing marginal utility forms the basis of **Law of demand**.
- b) Law of diminishing marginal utility **indicates consumer's equilibrium and price**.
- c) Law of diminishing marginal utility explains the concept of **consumer surplus**
- d) **Price and MU moves together** up and down.
- e) Marginal utility varies **inversely with the supply**.
- f) MU of the goods increases as the quantity of **complementary goods** increases
- g) MU of the goods decreases as the quantity of **substitute goods** with the consumer increases.

17. **Law of Equi- marginal utility** - As per the law of Equi- marginal utility, If marginal utility of money spent on commodity X is greater than marginal utility of money spent on commodity Y, then the consumer will withdraw some money from purchase of Product Y and will spent on purchase of X, till MU of money in two cases becomes equal.
18. **Maximum Satisfaction**- The consumer will attain maximum satisfaction, and will be in equilibrium when MU of money spent on various goods that he buys, are equal.
19. **Consumer's Equilibrium**: Consumer is in equilibrium when **price of the commodity = MU**.
Similarly for more than two products, consumer will be in equilibrium if-
- $$\frac{MU_x}{Price_x} = \frac{MU_y}{Price_y} = \frac{MU_z}{Price_z}$$
20. The consumer will attain maximum satisfaction, and will be in equilibrium when **MU of money spent on various goods that he buys, are equal**.
21. **Consumer Surplus: What a consumer is ready to pay - what he actually pays**.(refer table 2.1)
- The consumer continues to buy a commodity till MU = Price of the commodity
 - For all the earlier units purchased, MU > price paid. This difference is called as consumer's surplus
22. **Limitations to Consumer surplus**
- Relevant only if cardinal approach to measurement of utility** is assumed.
 - Consumer's surplus cannot be **measured precisely**
 - Consumer's surplus derived is affected by availability of **substitutes**.
 - In case of **necessaries**, consumer's surplus is infinite
 - Not applicable to **prestigious items**
 - It is assumed that MU of the **money is constant**, which is unrealistic.
23. **Graphical Interpretation: refer schedule above (2.1)**
- Consumer is in equilibrium at 3 units, where price = MU.
 - Consumer surplus is INR 20 and INR 10 at consumption level of 1 Orange and 2 oranges respectively.



Ordinal Approach- Hicks and Allen Approach

24. Indifference curve analysis- Assumptions

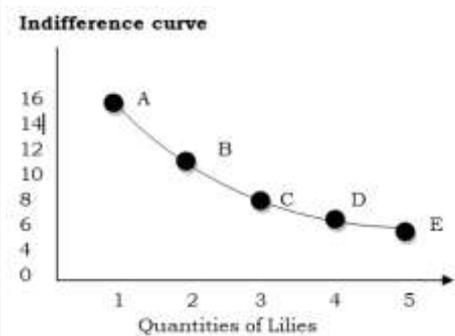
- Ordinal Approach to utility- UTILITY is not measurable in monetary terms.
- Consistency in ranking- If a consumer prefers X to Y and Y to Z , this automatically means that he must prefer X to Z.
- Rational Consumer-Ranking and preferences-
- Number of Goods- Customer prefers that combination which has more commodity in combination and tries to maximize his satisfaction.

25. Indifference curve analysis

- An Indifference curve is a curve which represents all those combination of goods which gives **same satisfaction** to the consumer.
- He remains **indifferent** among those combinations.

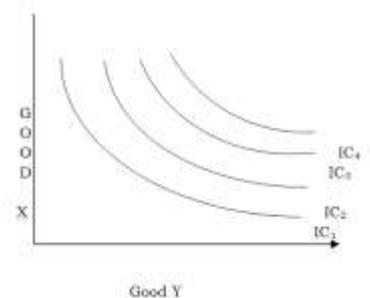
Example:

Combination	Roses	Lilies	Marginal Rate of substitution (MRS)
A	15	1	-
B	11	2	4 Roses per lily
C	8	3	3 Roses per lily
D	6	4	2 Roses per lily
E	5	5	1 Roses per lily



26. Indifference Map:

- A set of indifference curves is called as **Indifference Map**.
- An indifference map depicts complete **picture of customer's taste and preferences**.
- The consumer is **indifferent for any combination lying on same IC**.
- However he prefers **combination on Higher IC to combinations on lower IC**, as the combinations of higher IC give more satisfaction. So $IC_4 > IC_3 > IC_2 > IC_1$.
- Farther the IC from the origin, higher is the satisfaction level.**



27. Marginal rate of Substitutions

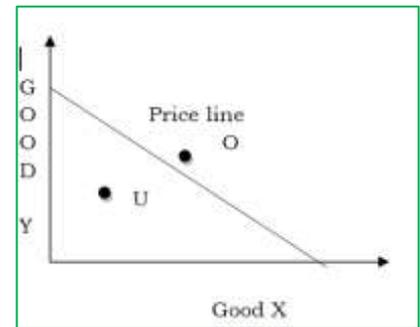
- Marginal rate of substitutions (**MRS**) indicates how much of one commodity is substituted for how much of another commodity.
- MRS is indicated by **Slope of IC curve** at a particular point.
- MRS show **decreasing trend** similar to concept of diminishing marginal utility.

28. Property of indifference curve

- Downward sloping to right- negatively sloped.**
- Convex to the origin-** due to **diminishing nature of MRS**.
- All point on an **IC gives same satisfaction-**
- Higher IC gives Higher level of satisfaction-
- Non Intersecting**

29. Budget line - Price line, Price opportunity line, Price- income line, Budget constraint line.

- a) A Budget line shows all those combinations of two goods which a consumer **can buy** spending **his given money income** on **two goods** at their given prices.
- b) Budget line is also called as Every point on Budget line represents **full** spending by the consumer.



30. Consumer Equilibrium under indifference curve approach

- a) Consumer will try to reach the **highest possible IC**.
- b) However his objective of buying higher quantity of goods is **restricted by Budget line**.
- c) Thus a consumer is in **equilibrium when he derives maximum possible satisfaction** from the goods, and is in **no position to re-arrange his purchase** of goods.



31. Assumptions under Ordinal Approach:

- a) The consumer has fixed money income which he has to spend wholly on **2 Goods**
- b) Prices are constant.
- c) The consumer has given an indifference map which shows his scale of preferences

32. Relationship of MRS and price at equilibrium,

- a) At equilibrium, slope of price line is equal to slope of Indifference curve.
- b) Slope of the line is P_x/P_y .
- c) Slope of indifference curve indicates Marginal rate of substitution of X for Y.
 $MRS_{xy} = MU_x/MU_y$.
- d) Hence at equilibrium $MRS_{xy} = MU_x/MU_y = P_x/P_y$, alternatively, $MU_x/P_x = MU_y/P_y$.

Chapter 2B - Demand Analysis

1. **Demand = Willingness (Desire) and ability (Resources/Mean) + willingness to use those means**
2. Demand is determined at certain, (i) **Price** (ii) **place** or (iii) **time**.
3. The quantity demanded is a **flow**.
4. **Types of Demand**
 - a. **Individual Demand/ Company demand**- sub-system of total demand.
 - b. **Market Demand/ Industry demand**. sum total demand of all individual demand
 - c. **Price Demand** -Demand of consumer at various prices
 - d. **Income demand**- DD at various income levels. *According to this superior goods have greater demand and as the level of income lowers, inferior goods have higher demand.*
 - e. **Cross demand**- Demand due to availability of **Substitute goods or complementary goods**.
 - f. **Short run demand**- refers to the demand with its **immediate reaction**
 - g. **Long run demand**- refers to demand which exists over a long period.
 - h. **Derived demand**-The demand because of the **demand for some other commodity called 'parent product'**,
 - i. **Autonomous demand**- **Independent of the demand for other goods**.
 - j. **Producer goods** are used for the production of other goods - either consumer goods or producer goods themselves.
 - k. **Consumer goods** are used for final consumption.
 - ✎ **Durable goods** are those which can be consumed more than once.
 - ✎ **Non-durable** goods are those which cannot be consumer more than once
5. **Factors of Demand**
 - a. **Price of the commodity**: demand for a commodity is **inversely related** to its price.
 - ✎ **Complementary goods Inversely Related**
 - ✎ **Competing goods or substitutes- Directly Related**
 - b. **Income of the consumer**-
 - ✎ *As the level of income rises, increase in demand of necessities is proportionally less than increase in income.*
 - ✎ As the income level increase importance of food and other non durable goods in the overall consumption basket and a rise in the importance of durable goods
 - ✎ There are some commodities for which the quantity demanded decreases with an increase in money income beyond this level. These goods are called **inferior goods**. [Also called as **Giffen goods**]
 - c. **Tastes and preferences of consumers**-
 - ✎ Tastes and preferences of consumers are also influence by **'Demonstration effect'** or **'bandwagon effect'**, i.e. by seeing another person use a particular product/ commodity.
 - ✎ Sometimes, when a product becomes common among all, some people decrease or altogether stop its consumption. This is called **'snob effect'**.

- Highly priced goods are consumed by status seeking rich people to satisfy their need for conspicuous consumption. This is called '**Veblen effect**'

d. Population aspect-

- Size of the population**-Directly related
- Composition of population**: Directly if composition is in favor of demand
- The level of National Income and its Distribution**: Even Distribution More DD, uneven distribution less Demand
- Consumer-credit facility and interest rates**: Cheaper interest rate and larger availability of credit increases DD

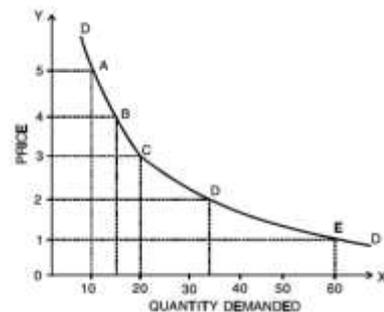
6. Law of Demand

- Other things being equal, **inverse relationship between price and quantity demanded**,
- The other things which are assumed to be equal or constant are:-
 - Prices of related commodities (complementary goods or substitute goods)
 - Income of consumers
 - Tastes and preferences of consumers, and
 - Such other factors which influence demand.

7. Schedule:-

1. Illustration:

Price	Quantity demanded
5	10
4	15
3	20
2	35
1	60



8. Features of the Demand Curve

- Slopes downwards from left to right**
- Negatively sloped**
- May sometimes be a **straight-line** or sometimes a **free hand curve**
- Demand curve is also called **Average Revenue curve (ARC)**.
- The Market Demand curve is a **lateral summation** of individual Demand curve.

9. Rationale of the Law of Demand

- Law of diminishing marginal utility
- Substitution effect**:-When the price of a commodity falls, it becomes **relatively cheaper** than other commodities.
- Income effect**: As a result of fall in the price of the commodity, consumer's **real income or purchasing power** increases.
- Arrival of new consumer**: Rise in number and rise in buying capacity
- Different uses**:

10. Exceptions to the Law of Demand

- Conspicuous goods:** Prestige value or snob appeal or conspicuous consumption or Veblen effect or prestige goods effect.
- Giffen goods:** Inferior goods, with no close substitutes easily available and which occupy a substantial place in consumer's budget are called 'Giffen goods'
- Conspicuous necessities:** The demand for certain goods is affected by the demonstration effect of the consumption pattern of a social group to which an individual belongs.
- Future expectations about prices:**
- Irrational consumer-**
- Demand for necessities**
- Ignorant consumer:**
- Speculative goods**

11. Expansion and contraction in Demand VS Increase and decrease in Demand

Term	Meaning	Effect
Expansion/ Extension of Demand	Quantity demanded Increases , due to decrease in price	Downward movement along same Demand curve
Contraction of Demand	Quantity demanded decreases , due to increase in price	Upward movement along same Demand curve
Increase in DD	Quantity demanded Increases , due to change in any factor other than price	Rightward Shift of Demand Curve
Decrease in DD	Quantity demanded decreases , due to change in any factor other than price	Leftward Shift of Demand Curve

12. Elasticity of Demand

- Elasticity of demand is defined as the **responsiveness of the quantity demanded of a good to changes in one of the variables on which demand depends.**
- the percentage change in quantity demanded divided by the percentage change in one of the variables on which demand depends**

13. Factors affecting demand and name of their elasticity

Factors	Name of Elasticity	Denoted by
Price of the commodity	Price Elasticity	E_P
Income of the consumer	Income Elasticity	E_I
Price of the related product	Cross Elasticity	E_C
Availability of the substitute	Substitution Elasticity	E_S

14. Methods of calculation of Price Elasticity of Demand

Methods	Formula	Used when	Diagram
Percentage change or proportional Method	$[E_p] = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in Price}}$	<ol style="list-style-type: none"> 1. Responsiveness of quantity demanded of a commodity, to a change in Price 2. % change in quantity demanded divided by the % change in price, other things remaining equal 	Answer will be in negative denoting Inverse relation
Point Elasticity- Method of derivative	$E_p = -dq \cdot p \div dp \cdot q$	<ol style="list-style-type: none"> 1. change in price is infinitesimal (very small) 2. Makes use of derivative rather than finite changes in price and quantity 	
Point Elasticity - Method of Graph	$E_p = \frac{\text{Lower segment}}{\text{Upper segment}}$	1. Applicable only for Straight- line Demand curve touching both the axes.	
Arc Elasticity Method	1. $E_p = \frac{q_1 - q_2}{q_1 + q_2} \times \frac{p_1 + p_2}{p_1 - p_2}$	<ol style="list-style-type: none"> 1. Arc Elasticity is a measure of average responsiveness 2. Large change in prices and quantities 	
Total Outlay Method	<ol style="list-style-type: none"> 1. Elasticity is calculated by analysing the change in Total expenditure or Outlay of the household. 2. By this method we can only say whether the demand for a good is elastic or inelastic; we cannot find out the exact coefficient of price elasticity 		
$E_p < 1$	<ul style="list-style-type: none"> • Price and Expenditure moves in same direction. • Demand is said to be less elastic, or inelastic 	<ul style="list-style-type: none"> ▪ Price Increase and TR increase ▪ Price Decrease and TR decrease 	
$E_p = 1$	<ul style="list-style-type: none"> • Total Expenditure remains Unchanged. • Demand is said to be unit elastic 	<ul style="list-style-type: none"> • Price Increase and TR unchanged • Price Decrease and TR unchanged 	
$E_p > 1$	<ul style="list-style-type: none"> • Price and Expenditure moves in opposite direction. • Demand is said to be elastic 	<ul style="list-style-type: none"> • Price Increase and TR decrease • Price Decrease and TR increase 	

15. Interpretation of Elasticity of Demand

Description	Numerical value	Interpretation	Nature of Curve
Perfectly inelastic	$EP = 0$	Qty. demanded does not changes as price changes	Vertical line Parallel to Y axis
Inelastic or less elastic	$0 < EP < 1$	Qty demanded changes by smaller percentage than price	Relatively steeper Demand curve
Unit Elastic	$EP = 1$	Qty demanded changes exactly by same % as price	45 degree straight line Or rectangular hyperbola
Elastic	$1 < EP < \infty$	Quantity demanded changes by larger percentage than price	Relatively flatter demand curve
Perfectly elastic	$EP = \infty$	Small change in price will bring infinite change in quantity demanded	Parallel to X axis

16. Determinants of price Elasticity

- Availability of substitutes:** _____ relationship
- Position of a commodity in a consumer's budget:**
 - Goods having higher proportion of consumers' spending are _____ to demand.
 - Goods having lower proportion of consumers' spending are _____ to demand.
- Number of uses to which a commodity can be put:**
 - Multiple uses have _____ to demand.
 - Specified or particular use have _____ to demand.
- Time period:**
 - The long run demand for a commodity is _____.
 - The short run demand for a commodity is _____ to change in price.
- Consumer habits:**
 - Habitual Goods _____ Demand
- Tied demand:**
 - Goods which have autonomous demand on their own are _____
 - Goods which have tied or joint demand are _____
- Nature of the need that a commodity satisfies:**
 - Luxury goods are price _____-while necessities are price _____ to price change.
- Price range:**
 - Goods which are in medium range of price level are _____ to price change.
 - Goods which are in very high price range or in very low price range have _____ DD.

17. Income Elasticity of Demand

Responsiveness of quantity demanded of a good to changes in the income of consumers

$$E_i = \frac{\text{Percentage change in quantity Demand} \times 100}{\text{Percentage change in income}}$$

18. Income Elasticity of Demand

Type	Relation between income & demand	Example	Formula	Curve
Positive Income Elasticity	Positive	Normal and Luxury goods	$E_y = 1$ $E_y > 1$ $E_y < 1$	
Negative Income Elasticity	Inverse	Inferior goods	$E_y < 0$	
Zero Income Elasticity	Constant (No change in demand though there is change in income)	Necessaries goods	$E = 0$	

19. Cross Elasticity of Demand

Cross elasticity of demand is degree of responsiveness of demand for one good to a change in price of other good.

$$E_c = \frac{\% \Delta Q_x}{\% \Delta P_y}$$

Positive Cross Elasticity	Direct or Positive relation (Goods must be substitute)	Tea & Coffee,	$CED = 1$ $CED > 1$ $CED < 1$	
Negative Cross Elasticity	Inverse relation (Goods must be complementary goods)	Car & Petrol	$CED < 0$	
Zero Cross Elasticity	Constant (No change in demand of one product though there is change in price of other product) goods must be unrelated	Cloth & salt	$CED = 0$	

20. Methods of demand Forecasting

1. Survey of Buyers' Intentions: direct interview of potential customers.
 - a. Complete enumeration method
 - b. Sample survey method

- c. **End-use method**, especially used in forecasting **demand for inputs**, involves identification of all final users,
2. **Collective opinion method:**
- Sales force opinion method** or **grass roots approach**. Firms having a wide network of **sales personnel** can use the knowledge, experience and skills of the sales force.
 - Although this method is simple and based on first-hand information of those who are directly connected with sales, it is **subjective as personal opinions**.
3. **Expert Opinion method:**
- Delphi Technique**
- The **Delphi technique**, developed by **Olaf Helmer** at the **Rand Corporation of the USA**, provides a useful way to obtain informed judgments from diverse experts
4. **Statistical methods:**
- Forecasts using statistical methods are considered as superior methods because they are more scientific, reliable and free from subjectivity.
 - Trend Projection method:** This method, also known **classical method**, is considered as a 'naive' approach to demand forecasting.
- Graphical Method:**
 - Fitting trend equation: Least Square Method:** sum of the squared differences between the calculated and observed value is minimised.
5. **Regression analysis:** Relationship is established between the quantity demanded (dependent variable) and the independent variables (explanatory variables) such as income, price of the good, prices of related goods etc. Once the relationship is established, we derive regression equation assuming the relationship to be linear. The equation will be of the form $Y = a + bX$.
6. **Controlled Experiments:** also known as **market experiment method**.
- Under this method, future demand is estimated by conducting market studies and experiments on consumer behaviour under actual, though controlled, market conditions.
7. **Barometric method of forecasting:**
- Just as meteorologists use the barometer to forecast weather, the economists use economic indicators to forecast trends in business activities. This information is then used to forecast demand prospects of a product, though not the actual quantity demanded.
 - For this purpose, an **index of relevant economic indicators** is constructed.
 - Movements in these indicators are used as basis for forecasting the likely economic environment in the near future. There **are leading indicators, coincidental indicators and lagging indicators**. The leading indicators move up or down ahead of some other series.

21. For Quick Practice

Factors	Explanation	Elasticity
Nature of the commodity	Necessities.	Inelastic
	Luxurious goods.	Elastic
Level of income	Goods demanded by high income group.	Inelastic
	Goods demanded by low income group.	Elastic
Proportion of	Commodity on which Proportion of expenditure is low.	Inelastic

expenditure		
	Commodity on which Proportion of expenditure is large.	Elastic
Level of price and change in price	When price level of a commodity is too high and change in price is smaller.	Inelastic
	If price level is low and change in price is large.	Elastic
Number of uses	Commodity which has limited uses.	Inelastic
	Commodity which used to satisfy several wants.	Elastic
Substitutes	Commodity which have less substitutes.	Inelastic
	Commodity having several substitutes.	Elastic
Urgency	Commodity which is required urgently.	Inelastic
	Commodity which is not required urgently.	Elastic
The Period	Demand for commodity is inelastic in long run.	Inelastic
	Demand for commodity is elastic in short period.	Elastic
Tied demand or Joint demand	Demand for those goods, which are tied to others.	Inelastic
Consumer habits	Demand for commodity used by habitual consumer.	Inelastic

Chapter 2C- Supply Analysis

- Supply refers to amount of a commodity seller is
 - **Able to sell** - depends upon stock of a commodity
 - **And willing to sell**- depends upon price of a commodity

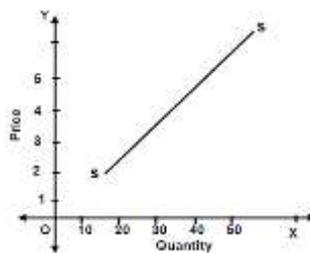
2. Determinants of supply on Factors affecting supply

Factors	Relation	Factor	Relation
Price		Cost of Production***	
Stock		Techniques of	
Time		Taxation policy	
Natural Resources		Trade policy	
Production		Infrastructure	
Weather conditions		Monetary Policy	

- Law of supply** states that "other things being equal" **there is a direct relationship between price and supply.**
- The law of supply is explained by **Dr. Alfred Marshall.**

5. Supply Schedule and Graph

Price	Supply
1	10
2	20
3	30
4	40
5	50



6. Features of Supply curve

- Slopes upwards from left to the right.
- Positively slope
- Straight—line or sometimes a free hand curve.
- The Market Supply Curve is a lateral summation (totaling) of Individual Supply Curves

7. Assumptions of Law of supply

- No change in cost of production
- No change in technology
- Normal weather conditions
- No change in infrastructural facilities
- No change in amount of Natural Resources
- No change in Taxation policy
- No change in monetary and trade policy

8. Increase and Decrease VS Expansion and contraction in the Quantity Supplied

Increase In SS	Decrease In SS	Expansion in SS	Contraction in SS
Increase in Supply take place as a result of changes in factors other than price , while price remains constant.	Decrease in Supply take place as a result of changes in factors other than price , while price remains constant.	Rise in the quantity supplied takes place as a result of changes in price	Fall in the quantity supplied takes place as a result of changes in price
_____Shift	_____Shift	Upward Movement along same SS curve	Downward Movement along same SS curve

9. Exceptions to law of Supply

Labour Supply		
Wage rate	Labour supply	Total income
Rs.100/hr	12 hr.	1200/day
Rs.250/hr.	15 hr.	3750/day
Rs.700/hr.	10 hr.	7000/day

This is Backward bending supply curve

Need for cash-	Seller may sell at lower price and supply more Qty if needs more cash
Savings	If a person wants a fixed amount of income in the form of interest then, he will save more at a lower rate of interest and save less at a higher rate of interest
Future Expectations	With a small rise in price, if seller expects a further rise in future he will decrease the supply & vice-versa

10. Methods of measurement of Elasticity of supply

Methods of measurement of Elasticity of supply	
<p>1. Percentage / Proportionate Method: According to this method elasticity of supply is calculated by dividing a % or proportionate change in supply with the % or proportionate change in price. As explained above</p>	
$\frac{\% \text{ Change in supply}}{\% \text{ Change in Price}}$	$\frac{S1 - S2}{S1} \times 100$ <hr/> $\frac{P1 - P2}{P1} \times 100$

2. Point Method: This method is used to find out elasticity at a point on supply curve. The elasticity at a point on the supply curve can be measured with the help of following formula.

$$ES = \frac{dq}{dp} \times \frac{p}{q}$$

3 Arc Elasticity: when the price change is somewhat larger and we have to measure elasticity over an arc rather than at a specific point on it, in such cases, the concept of arc elasticity is used. In arc elasticity we use the average of the two prices and quantities (Original & new)

$$ES = \frac{Q_1 - Q_2}{Q_1 + Q_2} \times \frac{P_1 + P_2}{P_1 - P_2}$$

Where P1 and Q1 are original price and quantity respectively and P2 and Q2 are new price and quantity respectively.

11. Elasticity of Supply refers to degree of **responsiveness of supply to change in its price.**

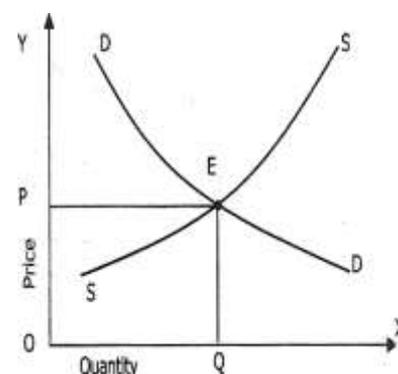
Or, Elasticity of Supply refers to the *ratio between percentage or proportionate change in supply and percentage or proportionate change in price.*

Perfectly Elastic Supply	Relatively Elastic Supply Or, More Elastic	Unitary Elastic Supply	Relatively Inelastic Supply Or, less Elastic	Perfectly Inelastic Supply
$Es = \infty$	$Es > 1$	$Es = 1$	$Es < 1$	$Es = 0$

12. Equilibrium Price:

The determination of Equilibrium Price using Demand and Supply is explained in the following manner -

- ✦ Demand Curve slopes downwards from left to right, while Supply Curve slopes upwards from left to right.
- ✦ Point E constitutes the **Stable Equilibrium** for the product, other things remaining equal.
- ✦ The Equilibrium Price is OP, and the quantity bought and sold at that level is OQ units.



Chapter 3A - Production Concepts

1. According to James Bates and J.R. Parkinson "Production is the organized activity of transformation of Raw material into Finished G&S to satisfy the demand
2. Production is any economic activity, which satisfy human wants.
3. Production = **Creation of Utility or Addition of utility.**
4. **Methods of Creation of Utility-**
 - a) Form Utility
 - b) Place Utility
 - c) Time Utility
 - d) Personal Utility

5. Factors Of Production

I. Land

- a) Every free gift of nature on Surface of the earth + below the surface of the earth+ above the surface of the earth
- b) No Social Cost: Since no sacrifice is made in creation of land.
- c) Permanent factor:
- d) Passive factor:
- e) Heterogeneous factor and site value differs from place to place
- f) Mobility: Geographically land is _____ but occupationally it is _____.
- g) Subject to diminishing returns:
- h) Supply: Supply of land is perfectly _____.

II. Labour

- a) Mental or physical exertion to produce G&S, for economic reward.
- b) Perishable Nature- Labourer cannot store his Labour
- c) Labour is said to have no reserve price
- d) Weak bargaining power.
- e) Self- Source- Labour is inseparable from the Labourer himself.
- f) Variations in skill and productivity
- g) Productivity differs from person to person
- h) Peculiar relationship between labour supply and Wage rate- Backward bending Supply curve
 - i. **Direct Relationship: Generally**
 - ii. **Reverse Relationship at Higher Prices**
 - iii. **Reverse Relationship at Lower Prices**

III. Capital

- a) Part of wealth which is used for further production of wealth, or which yields an income.
- b) Capital is a stock concept
- c) Capital refers to only that part of wealth, that is used for further production. Therefore not all wealth is capital but all capital is wealth.
- d) Produced means of Production
- e) Man-made means / factor
- f) Mobility
- g) Perishable factor- that's why we charge depreciation

h) Types of Capital:

Fixed Capital:	Working Capital:	Sunk Capital:	Floating Capital:	Money Capital:	Real Capital:
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j) Stages in capital Formation

- i. **Savings:** Ability to save depends upon the income capacity of individual.
- ii. **Mobilization of Savings:** network of banking and other financial institutions
- iii. **Investments:**

IV. Entrepreneur-

- a) Person who **combines the various factors of production** in the right proportions, **initiates the process of production** and **bears the risk involved** in it.
- b) Also Called as **Organiser, Manager** or the **Risk-Taker**.
- c) Without the Entrepreneur, the other factors of production would remain unutilized or idle.
- d) Holds **final responsibility** of the business.
- e) Entrepreneurship gets its **reward (i.e. Profit)**, only after all other factors of production have been rewarded, i.e. after Rent, Wages and Interest.

f) Functions of an Entrepreneur

- i. **Initiating and Running the business:**
- ii. **Risk-Bearing:**
- iii. **Innovations:**

g) Enterprise Objective

- i. **Organic Objectives** - Survival then Growth and Expansion
- ii. **Economic Objectives**- Profit Maximizing Objective
- iii. **Social Objectives:** Avoid anti-social practices, opportunities for gainful employment, continuous and sufficient supply of unadulterated goods, does not cause any type of pollution.
- iv. **Human Objectives:** All the objectives towards its employees
- v. **National Objectives:**

h) Constrains and Problems in achieving objective

Constrains in achieving the objectives	Enterprise's Problems
a) Information b) Infrastructure c) Factors of Production d) Economic Aspects	a) Objective b) Location of Plant c) Size of Plant: d) Physical Facilities e) Finance: f) Organisation Structure: g) Legal Compliance: h) Industrial Relations:

PART B - PRODUCTION FUNCTION

1. Production Function is the **functional relationship** between **physical inputs and physical outputs**
2. The maximum amount of output that can be produced with given quantities of inputs, in the existing state of technology.
3. Production Function gives the minimum quantities of various inputs that are required to yield a given quantity of output.
4. **Cobb-Douglas Production Function**
 - a) Output is manufacturing production and **inputs used are Labour and Capital**.
 - b) Cobb-Douglas Production Function is $Q = KL^a C^{1-a}$.
 Where, **Q** is output, **L** is Quantity of Labour and **C** the qty of Capital. **K** and **a** are Positive Constants.
 - c) Labour contributed about $3/4^w$ and Capital about $1/4^{th}$ of the increase in the Manufacturing Production.

5. Short run and long run production function

	Short Run	Long Run
Fixed Factor	Only one Factor of Production is kept constant or fixed. [Generally and, Capital or Enterprise is taken as fixed.]	There is no Fixed Factor of Production in the long—run planning horizon. all the factors production are variable.
Proportion between Factors	Production is increased by increasing proportion of variable factor only, keeping fixed factor constant	Production is changed by changing all the Factor of Production simultaneously
Theory	Law of Variable Proportions is applicable in the short—run.	Law of Returns to Scale is applicable in the long—run.

6. Assumptions:

- It is related to a **particular unit of time**.
- The **technical knowledge** during that period of time **remains constant**.
- The factors of production are **divisible into most viable units**.
- The producer is using the **best technique available**.

7. Understanding Short term production function

Total Production	Total Output
Average Production	$AP = TP / \text{Units of variable input (labour)}$
Marginal Production (MP)	Additional TP due to an additional unit of input. $MP = \text{Change TP} / \text{change in Labors}$ Or, $Mp = MP = TP_n - TP_{n-1}$
Relationship between AP and MP	<ol style="list-style-type: none"> Both AP and MP can be calculated by TP. When AP rises then MP also rises but $MP > AP$. When AP is maximum then $MP = AP$ or say MP curve cuts the AP curve at its maximum point When AP falls then MP also falls but $MP < AP$. There may be a situation when MP decreases and AP increases but opposite never happened.



Schedule	Labour	TP	AP	MP	Analysis
	1	2	2	2	2
2	5	2.5	3	3	
3	9	3	3	4	
4	12	3	3	3	MP=AP, AP = maximum
5	14	2.8	2	2	MP & AP both decreases, $MP < AP$; TP increases MP = 0, TP=maximum
6	15	2.5	1	1	
7	15	2.1	0	0	
8	14	1.7	-1	-1	AP > MP both decreases TP decreases
9	12	1.3	-2	-2	

Rule	Relationship between TP and MP
1	When TP increases at an increasing rate , MP shows an increase.
2	When TP increases at a decreasing rate , MP shows a decrease.
3	When TP is maximum , MP is zero .
4	When TP decreases , MP becomes negative .

Relationship between Average Product and Marginal Product	<ol style="list-style-type: none"> When AP rises, $MP > AP$. When AP is maximum, $MP = AP$. MP declines slightly earlier than AP MP Curve cuts AP Curve from above when AP is maximum. When AP decreases, $MP < AP$. MP Curve declines steeply than AP. MP may become zero and negative later, but AP continues to remain positive
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Note: The point on the TP Curve when MP is maximum, is called Point of Inflexion

8. Law of Variable Proportion/ Law Of Proportionality/ Law Of Diminishing Returns /Law Of Diminishing Marginal Physical Productivity.

- (a) The **Law of Variable Proportions** operates in short run only
- (b) Output is increased by varying the quantity of one input.

9. Explanation to Various Stages

a) Explanation to Stage 1

01. **Full Use of Fixed Indivisible Factors**- Fixed Factors are more intensively and effectively utilized. This causes the production to increase at a rapid rate.
02. **Efficiency of Variable Factors**- Through Specialization
03. **No Scarcity of Variable factor**
04. **Reaching the right combination**

b) Explanation to Stage 2-

01. **Inadequacy of Fixed Factor**
02. **Less efficiency of Variable Factor**
03. **Imperfect Substitutes**
04. **Wrong combinations**

Note: Stage II is called Law of Diminishing Returns since MP and AP both show decreasing trend. However, both MP and AP remain positive

c) Explanation to Stage 3

01. **Variable Factor becomes too excessive, Due to this, the total output falls instead of rising.**
02. **Stage III is called Law of Negative Marginal Returns**

Since the second stage is the most important, So 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.

Stage I and III is the stage of economic absurdity or stage of economic nonsense

Law of Return to scales- Operates in Long Run Only

1. All factor inputs in the production function can be changed. **The behavior 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'.

Increasing Returns to Scale:	Simultaneous increase in <u>all</u> the inputs in the same given proportion result in a more than proportionate increase in the output.	
Constant Returns to Scale:	<ol style="list-style-type: none"> 1. Proportionate increase in <u>all</u> the inputs results in proportionate increase in output. 2. Constant return to scale is also called 'Linear Homogeneous Production Function'. 	
Diminishing Returns to scale:	Simultaneous increase in <u>all</u> inputs in the same given proportion result in a less than proportionate increase in the output	

2. **Internal Economies and Diseconomies to Scale-** Use of greater degree of division of Labour and specialised machinery at higher levels of output are generally termed as **Internal Economies**.

Technical	Managerial	Commercial	Risk— bearing	Financial
All these factors are within the control of an organization and thus are internal Factors. These factors initially acts Economies but after a pint becomes diseconomies				

3. **External Economies are explained below —**

Cheaper Raw Materials and Capital Equipment for entire industry	Technological development for entire industry	Development of Skilled Labour	Growth of ancillary industries	Better transportation and marketing
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4. **External Diseconomies:**

Rise in Factor Prices:	Higher Costs:	Government Restrictions:
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Production Optimisation

1. Isoquant Curve:- "Iso" means equal and "quant" means quantity.

(a) An Isoquant is a Curve that shows all the combinations of inputs that **yield the same level of output**.

2. MRTS=Marginal Rate of Technical Substitution

(a) MRTS always shows diminishing trend.

(b) MRTS= Change in units of capital/ change in units of labour

Combination	Units of Labour (x)	Units of Capital (y)	Product Output	MRTS (See Note)
A	5	9	100 units	
B	10	6	100 units	$(9-6)/(10-5) = 0.6$
C	15	4	100 units	$(6-4)/(15-10) = 0.4$
D	20	3	100 units	$(4-3)/(20-15) = 0.2$

3. Features of Isoquants:

(a) Isoquants are **convex** to the origin, due to diminishing trend of MRTS

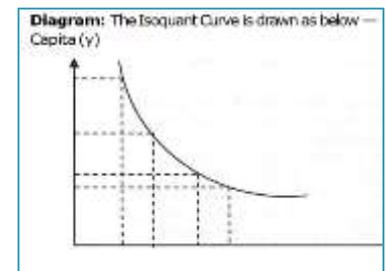
(b) Isoquants are **negatively sloped**, i.e. downwards from left to right.

(c) Isoquant **do not touch either axis**.

(d) Isoquants **need not be parallel**.

(e) Two Isoquants cannot cut each other, i.e. Isoquants are **non—intersecting**.

(f) An Isoquant lying **above** and to the **right** represents a **higher level of output**.



4. Isocost Lines: Equal—Cost Lines or Budget Line or the Budget Constraint Line.

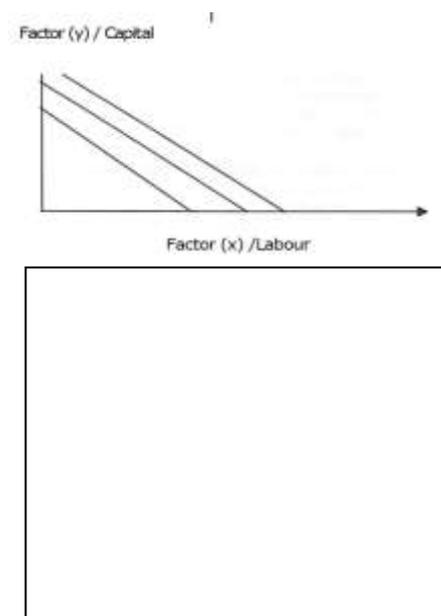
Isocost Line shows the various alternative combinations of two Factor Inputs, which a Firm can buy with given amount of money.

5. Production Optimisation

1. A Profit Maximising Firm is **interested to know what combination of factors of production** would minimise its Cost of Production for a given output, and also the optimum level of output.

2. *This is obtained by combining the Firm's Production and Cost Functions, namely Isoquants and Isocost Lines respectively.*

3. Isoquants represent the technical conditions of production for a product, and Isocost Lines represent various "**levels of cost**"(given the prices of two factors). Together, these can help the Firm to optimize its production.



Meaning

1. Business decisions are generally based on **cost of production** i.e. the money value of inputs and output is considered.
2. In other words, **cost analysis is concerned with the financial aspects of production.**

3. Types of cost

Name	Explanation
<ul style="list-style-type: none"> • Explicit cost • Out-of-Pocket Costs • Outlay Costs. • Accounting Costs 	<ol style="list-style-type: none"> 1. Costs which involve cash payment towards factors of production. 2. Recorded in books of accounts. 3. Rent, Wages & Salaries, Interest on Loans borrowed for business, etc.
<ul style="list-style-type: none"> • Implicit cost • Notional cost • Imputed cost • Opportunity Costs. 	<ol style="list-style-type: none"> 1. Costs do not involve any cash payment to outsiders. 2. It is the monetary reward for all factor of production <u>owned by entrepreneur himself</u> 3. Not recorded in books of account. 4. Interest on own Capital, Rent of own premises, Salary to Entrepreneur, etc.
Economic Costs	Explicit Costs + Implicit Costs.
Opportunity Cost	<ol style="list-style-type: none"> 1. It refers to the value of sacrifice made, or benefit of opportunity foregone in accepting a next best alternative course of action. 2. Opportunity Cost arises only when alternatives are available. If a resource can be put only to a particular use, there are no Opportunity Costs. 3. Opportunity Costs do not involve any cash payment as such. 4. It is considered only for decision—making and analytical purposes. 5. Examples: A person quits his job and enters into business. Here, the Salary foregone from employment constitutes Opportunity Cost.
<ul style="list-style-type: none"> • Direct cost • Traceable cost 	<ol style="list-style-type: none"> 1. Direct costs are those which have direct relationship with a component of operation like manufacturing a product, organizing a process or an activity etc. 2. They are charged directly to product 3. They can be generally quantified and expressed per unit of output, e.g. 5 kg of Raw Materials per unit of product, etc.
<ul style="list-style-type: none"> • Indirect cost • Non-traceable cost 	<ol style="list-style-type: none"> 1. Indirect costs are those which are not easily and definitely identifiable in relation to a plant, product, process or department. 2. Therefore, such costs are not visibly traceable to specific goods, services, operations, etc.; but are nevertheless charged to different jobs or products in standard accounting practice and Apportioned on suitable basis. 3. Factory Rent, Electric Power, and other Common Costs incurred for general operation of business benefiting all products jointly.

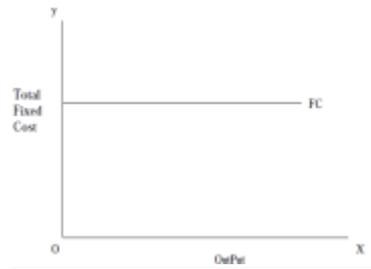
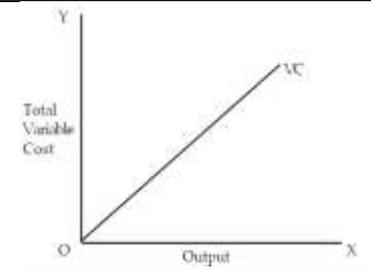
Committed Fixed Costs	Also known as " Unavoidable " Fixed Costs. These costs cannot be controlled.
Discretionary Fixed Costs	Also known as " Avoidable " Fixed Costs. These costs can be controlled.
Historical cost / Sunk Cost	Historical cost refers to the cost incurred in the past on the acquisition of a productive asset such as machinery, building etc.
Replacement cost	Replacement cost is the money expenditure that has to be incurred for replacing an old asset .
Incremental cost	Incremental cost refers to the additional cost incurred by a firm.
Private cost	Private costs are costs actually incurred or provided for by firms and are either explicit or implicit .
Social Cost	<ol style="list-style-type: none"> Social cost = private cost + external cost. It includes the cost of resources for which the firm is not required to pay price such as atmosphere, rivers, roadways etc. and the cost in terms of dis-utility created such as air, water and environment pollution.

4. Strike the incorrect

- Rent is paid to the Landlord, Salary/ wages paid to employee/ workers, Interest on Capital is borrowed and used in business is **Explicit / Implicit** cost.
- Land is owned by the Entrepreneur, Own people are employed in the firm, Entrepreneur employs his own funds as Capital is **Explicit / Implicit** cost.
- Entrepreneur himself manages the business is **Explicit / Implicit** cost.

5. Important types of cost

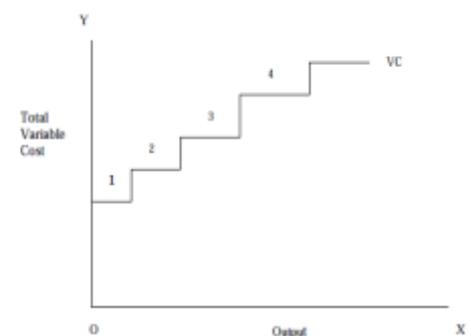
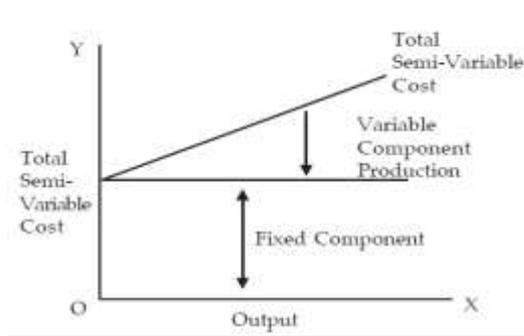
Output (Unit)	Total fixed cost TFC	Total variable TVC	Total cost TC	Average fixed cost AFC	Average variables AVC	Average Total Cost AC	Marginal Cost Rs. MC
0	10	-	10	-	-	-	-
1	10	10	20	10	10	20	10
2	10	18	28	5	9	14	8
3	10	24	34	3.33	8	11.3	6
4	10	28	38	2.5	7	9.5	4
5	10	32	42	2	6.4	8.4	4
6	10	38	48	1.67	6.33	8	6
7	10	46	56	1.43	6.57	8	8
8	10	56	66	1.25	7	8.25	10
9	10	68	78	1.11	7.55	8.67	12

Type	Nature
Fixed Costs	<ol style="list-style-type: none"> Fixed Costs are costs that do not vary with output. They are period—related. They are taken as a function of time and not of output. They are incurred even at zero level of output. Fixed Cost per unit of output decreases with increase in output, and vice—versa. Rent, Insurance, Interest on Loans, Depreciation, etc. are Fixed Costs.
Variable Costs	<ol style="list-style-type: none"> Variable Costs are costs that vary, based on the level of output. They are product—related. They are taken as a function of output and not of time. They are incurred only when production commences. Variable Costs are avoidable costs. Variable Cost per unit of output generally remains constant, if Total Variable Costs vary proportionately with output. Cost of Raw Materials and Wages are Variable Costs.
Marginal Costs	<ol style="list-style-type: none"> Marginal Cost is the addition made to the total cost by production of an additional unit of output. Marginal Costs per unit = $\frac{\text{Difference in Total Cost (TC) between two output levels}}{\text{Difference in Output Quantity at those levels}}$ $TC_n - TC_{n-1}$ Marginal Cost (MC) Curve of a Firm declines first, reaches its minimum and then rises. Hence, Marginal Cost Curve of a Firm is U—shaped.
Cost Function	Mathematical relationship between cost of a product and the various determinants of cost
Short Run	<ol style="list-style-type: none"> Period in which some factors are fixed and some factors are variable. Fixed factor have <i>fixed cost</i> and variable factor have <i>variable cost</i>. <i>So, law of variable proportion applies</i> here. In short-run, output can be increased or decreased by changing variable factors only but fixed factors cannot be varied
Total Fixed cost (Short run)	<p>TFC is parallel to X-axis. In the figure given below, even at zero output-fixed cost remain the same in the short run. e.g. rent and insurance</p> 
Total Variable cost (TVC)	<p>Variable Costs are those costs that change with changes in level of output. It has inverse's' shape and start from origin. Figure given below shows that as output is zero cost is also zero and as output increases cost increases. e.g. raw material, power etc.</p> 

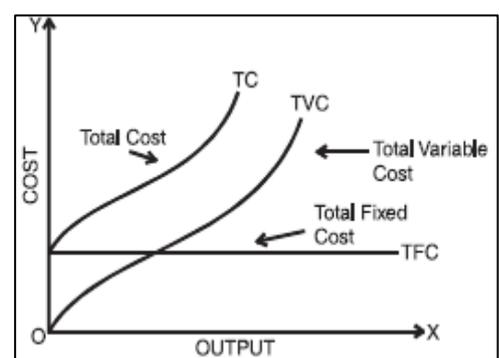
Semi-variable

There are some costs which are neither perfectly variable, nor absolutely fixed in relation to the changes in the size of output.

Example: Elasticity charges include both a fixed charge and a charge based on consumption.

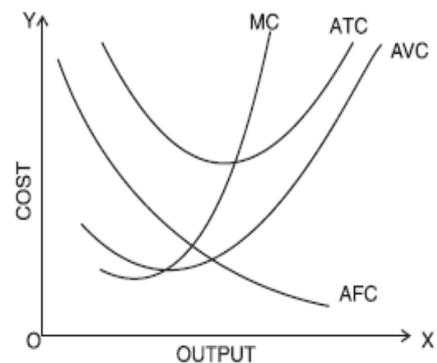
**Short run Total cost behaviour**

1. It can be noticed that TFC is constant at all levels of output.
2. TVC increases with the increase in output but rate of increase is changing.
3. Initially TVC increases at decreasing rate but after some time it increases at increasing rate.
4. Behaviour of TVC is determined by law of variable proportion.
5. TC increases with increase in output. Changes in TC are determined by TVC.
6. TFC curve is a horizontal line starting from y-axis.
7. TVC curve is upward sloping. Initially it is fatter and later on steeper.
8. TC curve is upward sloping starting from y-axis.



6. Short Run Average Cost

Average Fixed Cost (AFC)	<ol style="list-style-type: none"> 1. Average fixed cost is the <u>total fixed cost divided by the output</u>. 2. TFC/Q. 3. The general shape of the AFC curve is downward sloping it does not touch the X-axis as AFC cannot be zero. 4. It is not 'U' shape. This curve is also called Rectangular Hyperbola.
Average Variable Cost (AVC)	<ol style="list-style-type: none"> 1. Average variable cost is the <u>total variable cost divided by the output</u>. 2. TVC/Q. 3. The average cost curve will first fall, then reach a minimum and then rise again. 4. It has 'U' shape.
Average Total Cost (ATC)	<ol style="list-style-type: none"> 1. Average total cost is <u>total cost divided by the output</u>. 2. TC/Q or $AFC+AVC$. 3. The ATC curve first falls, reaches it's minimum and then rises. 4. The ATC curve is 'U' shape due to law of variable proportions.
Marginal Cost (MC)	<ol style="list-style-type: none"> 1. Marginal cost is the <u>change in total cost due to change in the output</u>. 2. $MC = \text{Change in Total Cost} / \text{Change in Qty. produced}$ 3. $MC = \text{Change Total Variable Cost} / \text{Change Qty. produced}$. 4. The MC curve is also 'U' shape
Behavior of Average - costs in Short - Run	<ul style="list-style-type: none"> • AFC goes on diminishing with the increase in output but it never becomes zero. • AVC initially declines but later on goes on increasing. • ATC initially decreases, constant for a while & finally goes on increasing. • MC initially decreases & finally increases. • The point at which ATC is minimum. It is equal to MC. • AFC curve is a 'rectangular hyperbola' because $AFC \times Q$ is always constant.



7. Relationship between Average Cost and Marginal Cost Curves

1. When AC falls as a result of an increase in output, MC is less than AC.
2. When AC is minimum, $MC = AC$. So, MC Curve cuts the AC Curve at its minimum.
3. When AC increases due to increase in output, MC is greater than AC.

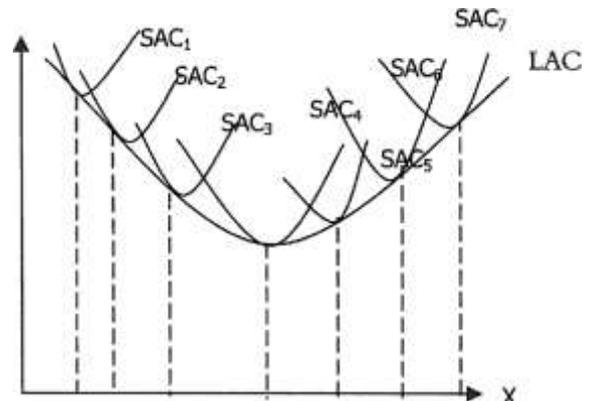
8. Relationship between ATC and MC

- ✓ Initially ATC & MC both decline with increase in output. In this situation $ATC > MC$.
- ✓ When ATC is minimum $ATC = MC$.
- ✓ When ATC & MC both are increasing $MC > ATC$.

- ✓ When AC is decreasing, MC may be decreasing or increasing.
- ✓ When AC is increasing MC must be increasing.

9. Long run average cost curve

- a) **LAC Curve:** A Long Run Average Cost Curve (denoted as **LAC Curve**) depicts the functional relationship between output and the long-run cost of production.
- b) **No distinction of Fixed - Variable:** All factors of production are variable in long-run.
- c) AC **cannot** be higher in the long-run, than in the short-run. Thus, LAC is the **least-cost** combination, for any particular output level.
- d) **Planning Curve:** LAC Curve is called Planning Curve.
- e) **SAC (Short-Term Average Cost) Curves are called Plant Curves.**
- f) **LAC derived from SAC:** LAC Curve is derived as an envelop / tangent of all SAC Curves. Further, the
- g) LAC Curve is a **U-Shaped Curve**, due to the operation of Law of Returns to Scale.
- h) **Selecting the suitable SAC Curve at different output levels:**
 - i) **Note:** The Firm should select the SAC, not the lowest point of that SAC.
 - j) **Deriving LAC Curve in case of numerous / infinite SAC Curves:**
- k) In the diagram, the LAC Curve is drawn as a smooth curve, so as to be **tangent** to each of the SAC Curves.
- l) **Note:** LAC Curve is tangent to each of the SAC Curves, not the minimum points of the SAC Curves. So



When LAC Curve is –	LAC will be tangent to	Principle
Declining	The falling portions of the SAC Curves.	Returns to Scale will first increase, due to internal and external economies. So, LAC will decline.
Rising	The rising portions of the SAC Curves.	Returns to Scale will decrease later, due to internal and external diseconomies. So, LAC will rise.

Thus, as a result of initial fall and subsequent increase in LAC, it will be a **U-shaped Curve**.

REVENUE CONCEPT

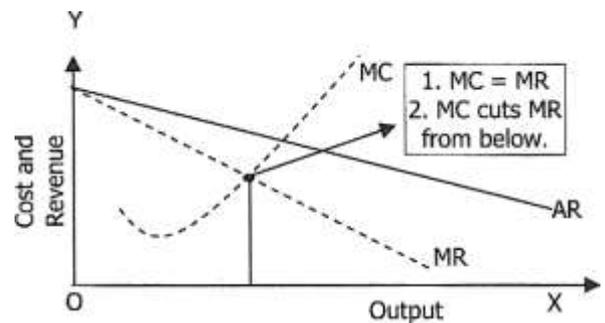
Qty (Q)	Price pu (AR=P)	TR = P×Q	MR	Space for Diagram
1	22	22	22	
2	20	40	18	
3	18	54	14	
4	16	64	10	
5	14	70	6	
6	12	72	2	
7	10	70	-2	
8	8	64	-6	
9	6	54	-10	
10	4	40	-14	
Meaning	<ol style="list-style-type: none"> Revenue refers to money received by a seller by selling his product in the market. Hence, revenue is sales receipts or sales proceeds. 			
Total Revenue	<ol style="list-style-type: none"> It is the total money received from the sale of all units of the product. Total Revenue = Price × Quantity (P × Q) 			
Average Revenue (AR)	<ol style="list-style-type: none"> Average Revenue = Total Revenue/Quantity (TR/Q) Average Revenue is always equal to Price 			
Marginal Revenue (MR)	<ol style="list-style-type: none"> MR is the <u>change in TR resulting from the sale of an additional unit of a commodity.</u> Marginal Revenue = Change in TR/ Change in Qty. Marginal Revenue = TR_n - TR_{n-1} 			
MR, AR, TR and Elasticity of Demand	Marginal Revenue = Average Revenue (E - 1/E) Where E = Price elasticity of demand <ol style="list-style-type: none"> If E = 1, Then MR = 0 If E > 1, Then MR will be Positive If E < 1, Then MR will be Negative 			
Behaviour of TR, AR & MR	<ol style="list-style-type: none"> A firm should produce at all if Total Revenue(TR) from its product is equal to or exceeds its Total Variable Cost (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 $AVC \times Q = TVC$ 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. 			

Summary of Relationships:

TR and MR	<ul style="list-style-type: none"> If TR increases, MR will be positive. When TR is maximum, MR = 0. If TR decreases, MR will be negative.
MR and AR	<ul style="list-style-type: none"> MR and AR both decline, but MR falls rapidly than AR AR Curve is flatter than MR. MR can be zero and even negative, while AR will never cross below the X axis. At the point where MR = 0, Elasticity of Demand on AR Curve will be 1.

Equilibrium Point of the Firm

- It will be profitable for the Firm to expand its output whenever Marginal Revenue (MR) is greater than Marginal Cost (MC), and to keep on increasing output **until MR = MC**.
- If any unit of production adds more to Revenue than to Cost, production and sale of that unit will **increase** profits. Similarly, if it adds more to Cost than to Revenue, it will decrease profits.
- Profits will be **maximum** at the point where Additional Revenue (MR) from a unit equals its Additional Cost (MC). So, **MC = MR**.
- Further, the **MC Curve should cut the MR Curve from below** (and not from above). This is so because, upto this point $MR > MC$, hence there is an incentive for further production. Beyond this point, $MC > MR$.
- This position (i.e. where $MC = MR$, and MC cuts MR from below) is called **Equilibrium position** for the Firm.
- Thus, Note: For achieving Equilibrium Position, the conditions to be satisfied are **$MC = MR$, and MC Curve should cut MR Curve from below**, i.e. MC should have +ve slope.
- Merely being in Equilibrium position does not mean that the Firm is making profits. The actual position of



Situation	Interpretation
If $AR > AC$	The Firm makes super-normal profits , i.e. over and above normal profits.
If $AR = AC$	The Firm makes normal profits , since AC includes normal profits.
If $AR < AC$	The Firm makes losses , but it need not shut down in the short—run. (See Para C.5) Note: Here, Loss means Economic Loss , and not Loss as per Books of Accounts.

profits can be known only on the basis of AR and AC Curves

Chapter 4 - Meaning and Types of Market



A. Market basics

Meaning:

- 1) Market is a **place where Buyers and Sellers meet and bargain** over a commodity for a price.
- 2) Also, market can be defined simply as all those **buyers and sellers** of a good or **service who influence price**.

Elements of a Market: The elements of a Market are-

- 1) Buyers and Sellers,
- 2) Product or Service,
- 3) Bargaining for a Price,
- 4) Knowledge about market conditions, and
- 5) One Price for a Product or Service at a given time.



B. Types of Market

The Market Structures analysed in Economics are --

Perfect Competition	Monopoly:	Monopolistic Competition	Oligopoly	Monopsony-
Many Sellers selling identical products to many Buyers.	Single Seller producing differentiated products for many Buyers.	Many Sellers offering differentiated products to many Buyers.	A Few Sellers selling competing products to many Buyers.	Single Buyer of a product or service.
				

Other forms of the market are

1. **Duopoly-** Duopoly is a market situation in which there are only two Firms in the market. It is a sub-set of Oligopoly.
2. **Oligopsony-** Oligopsony is a market characterized by a small number of large buyers.
3. **Bilateral Monopoly-** It is a market structure in which there is only a Single Buyer and a Single Seller. Thus, it is a combination of Monopoly Market and a Monopsony Market

Classification of Market:

Markets are generally classified into-

- a. **Product markets**- markets for goods and services in which households buy the goods and services they want from firms. Product markets allocate goods to consumers,
- b. **Factor markets**- those in which firms buy the resources they need - land, labour, capital and entrepreneurship- to produce goods and services. Factor markets allocate productive resources to producers. The prices in factor markets are known as factor prices.

Area	Time	Nature of Transaction	Regulation	Volume of Business	Types of Competition
Local market	Very Short period- Also Known as MARKET PERIOD	Spot Market	Regulated Market	Wholesale market	Perfectly competitive
Perishable and Bulky Goods	Market for Flower, fish etc. Supply is Fixed				
Regional Market	Short period	Future Market	Unregulated Market	Retail Market	Imperfectly Competitive
Kolhapuri Chappal					
National Market	Long Period				
Hindi books					
International Market	Very long/ Secular Period				
High Value Small Bulk					

Alfred Marshall conceived the 'Time' element in markets and on the basis of this, markets are classified into

Do You Know??

- Difference between 'value in use' and 'value in exchange'.
 - Value in use refers to usefulness or utility i.e the attribute which a thing may have to satisfy human needs.
 - Value in exchange or economic value is the amount of goods and services which we may obtained in the market in exchange of a particular thing. It is measured by the amount someone is willing to give up in other goods and services in order to obtain a good or service.
- In Economics, we are only concerned with exchange value. Considerations such as sentimental value mean little in a market economy

C. Perfect Competition

Features of Perfect Competition

1. Large number of Buyers & Sellers
2. Sellers offer Homogeneous/ identical Products
3. No individual Buyer or Seller will be in a position to influence the demand or supply in the market.
4. Firm is free to enter the market or to go out of market.
5. There is a perfect knowledge, on the part of Buyers and Sellers.
6. There are adequate facilities for the movement of goods from one center to another
7. All Firms individually are Price Takers. Because-

If he lowers the price

and if he increases the price

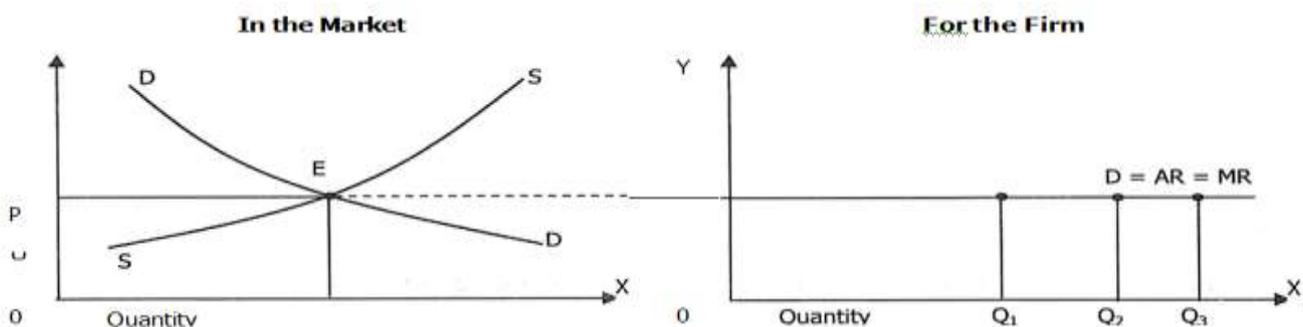
8. The goods are dealt on at a uniform price throughout the market
9. Buyers have no preference as between different Sellers
10. Sellers are indifferent as to whom they sell
11. There is perfect mobility of factors of production.

Why? _____

12. Perfect Competition is a **MYTH**

How Demand Curve is determined

1. In Perfect competition there is Uniform Market Price
2. All the firms are Price Taker and same price prevails in the market.
3. Price Elasticity of Demand is infinity.
4. Hence, the Equilibrium Price determined by Market Demand and Supply forces, constitutes the Demand Curve for the Firm. This Price is also the Average Revenue (AR).
5. and Marginal Revenue (MR) for the Firm, since the price is uniform in the market. So, in Perfect Competition, $D = AR = MR = Price$



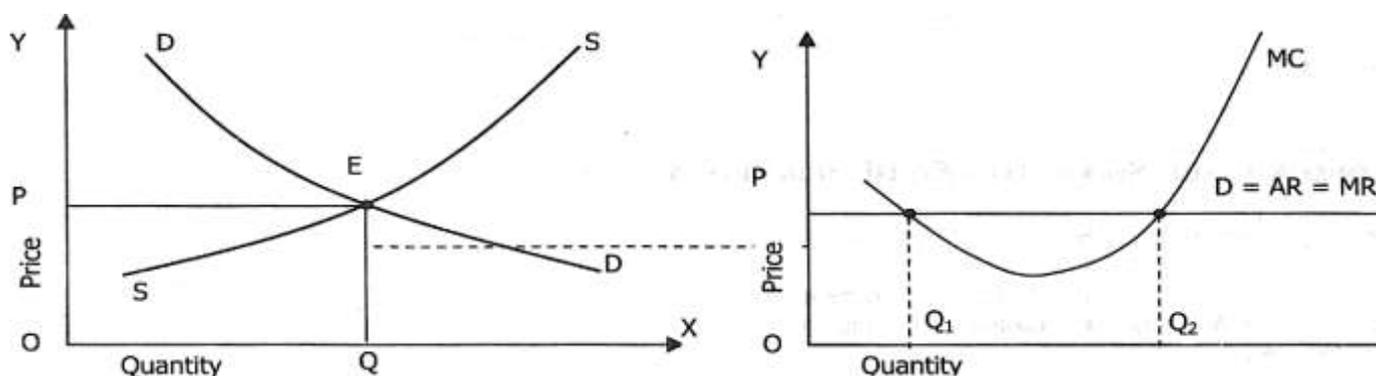
Quick Recap

Draw MC curve		Draw demand/Average Revenue/ Marginal revenue curve	
Draw Average cost curve		Draw short run equilibrium price curve in Market	

Short Run price determination, Optimum output/Equilibrium and profit Determination

For achieving **Equilibrium**, the conditions to be satisfied are –

1. $MC = MR$, and
2. MC Curve should cut MR Curve from below, i.e. MC should have positive slope.

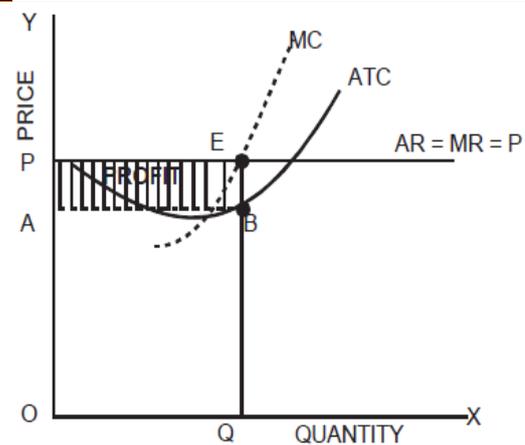


For Profit determination

1. Merely being in **Equilibrium position** does not mean that the Firm is making **profits**. The actual position of profits can be known only on the basis of **AR and AC** Curves.
2. In the short run, a firm may earn supernormal profits, normal profits or losses depending upon its cost conditions.

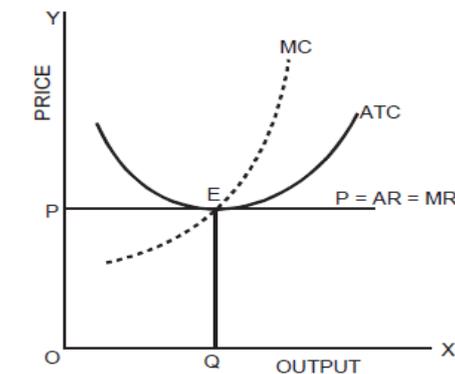
Super profits/ Economic Profits/ abnormal profits and super normal profits:

- When a firm earn super normal profits its **Average revenue are more than average total cost** or,
- $AR > ATC$.



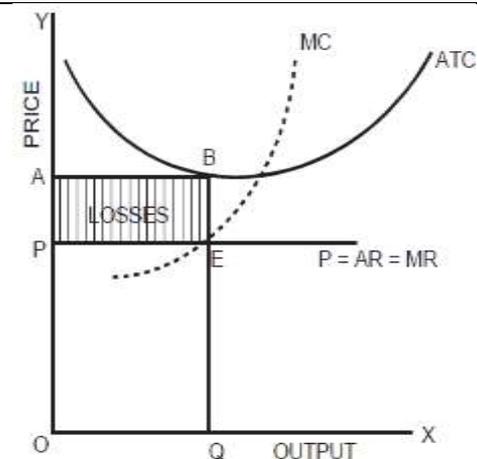
Normal profits:

- When the firm **just meets its average total cost**, it earns normal profits
- Normal profit is normal rate of return on capital and the remuneration for the risk bearing function of the entrepreneur.
- Here $AR = ATC$.
- It is also called **B.E.P (Break-even-Point)** means No Loss No Profit.
- It is called **Marginal Firm**.



Losses:

- A firm may incur losses if $AR < ATC$.
- At losses the firm shall cover at least its variable cost. IF variable cost is covered Max loss will be = FC or part of it
- If firm is unable to meet its variable cost, it will be better for it to shut down.



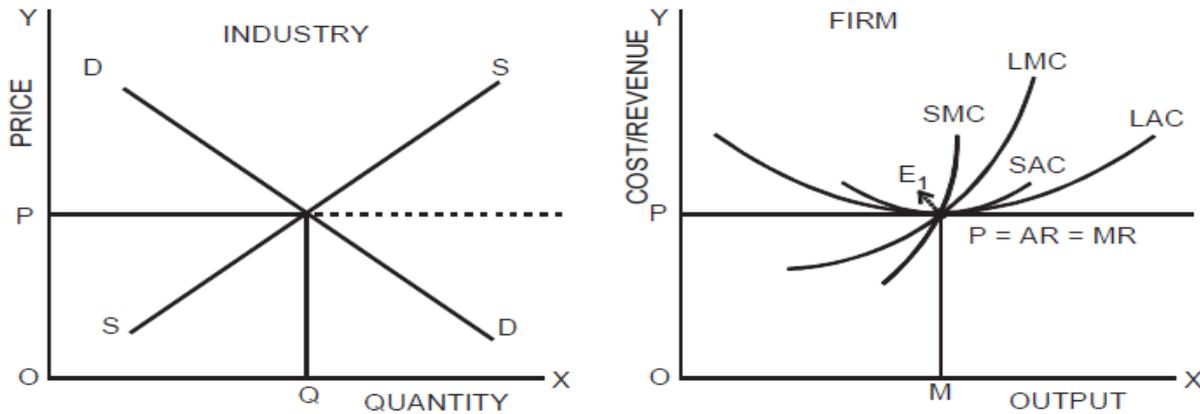
Shut Down point:

- A Firm will shut down, if $AR < AVC$, at a point where $MC = MR$ (MC cutting from below).

In perfect competition firm, MC curve above AVC is considered the supply curve

Long - run Equilibrium of a firm under Perfect Competition.

In the Long run the firms will be earning just **NORMAL PROFITS**.



In the above figure industry has decided the price 'P' and firm has taken over the same price at the same time firm is earning just normal profits.

In the long run, following conditions are satisfied: **The Firm is called as Optimal Firm**

- The output is produced at the **minimum feasible cost or minimum LAC**
- Consumers pay the **minimum possible price** which just covers Marginal cost = $MC = AR = P$
- Full utilization of plants is possible, $MC = AC$
- There is no wastage of resources. **optimal allocation**
- Firms earn **only normal profits i.e. $AC = AR$** .
- Firms maximize profits i.e. $MC = MR$, but level of profits will be normal.
- There are Optimum Number of firm in Industry
- In the long run **$LMC = LMR = P = LAR = LAC = SMC = SAC$**
- When LAC falls $LAC > LMC$ and when LAC raises $LMC > LAC$.

Long Run Equilibrium in the Industry

The **Industry** is said to have attained **long—run equilibrium** when —

1. All the Firms are earning normal profits only, i.e. all the Firms are in long—run equilibrium, and
2. There is **no further entry or exit of Firms** to / from the market.

Question 1: What can be the profit/ loss condition in long run in Perfect competition?

Answer: _____

Question 2: Why not Super- Normal profit?

Answer- Super profit will attract new firms>>>> Supply will increase>>>>>>>>>> Market Price will fall>>>>>>>> upward shift of Cost Curves>>>>>>>> super profit will be wiped out

Question 3: Why Not Losses?

Answer- Existing Firms will leave the industry >>>>>reduction in supply>>>>>>>> increase in Market Price>>>>>>>>Cost Curves may fall>>>>>>>>loss will be recovered

Relationship between AR, MR, TR and Price Elasticity of Demand

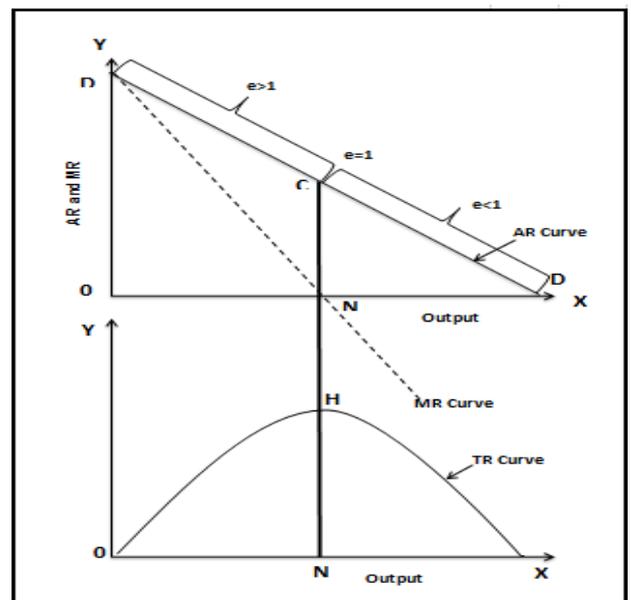
It is to be noted that marginal revenue, average revenue and price elasticity of demand are uniquely related to one another through the formula:

$MR = AR (e - 1) / e$

e = elasticity

Thus when

- i. $e > 1$, MR is positive
- ii. $e = 1$, MR = 0
- iii. $e < 1$, MR is Negative



Behavioral Principal

1. Principle 1- A firm should not produce at all if its total variable costs are not met.
2. Principle 2 - The firm will be making maximum profits by expanding output to the level where marginal revenue is equal to marginal cost.

D. Monopoly

i. Features of Monopoly

- a) Single Seller
- b) Firm = Industry
- c) Entry Restrictions- (i) economic, (ii) institutional, (iii) legal, or (iv) artificial.
- d) No substitutes. - Cross Elasticity of Demand for the Monopolist's Product and any other product is _____
- e) Elasticity of demand- Price Elasticity of Demand for Monopolist's Product is less than one.
- f) Monopolist is a Price—Maker, not a Price—Taker.
- g) Imperfect Mobility due to fewer substitutes.
- h) May or May not be optimal Firm



ii. Why Monopoly exists?

Monopoly is caused by "barrier to entry". Some reasons for occurrence of Monopoly are -

1. **Strategic Control** over scarce resources
2. **Control over a unique product**.
3. **Patents and Copyrights**
4. Governments granting **exclusive rights**
5. **Substantial Goodwill**
6. **Natural Monopoly** e.g. Natural Gas Supply, Electrical Power Distribution, etc.
7. **Stringent Legal and Regulatory Requirements**
8. Very **high initial start—up costs**
9. Use of **Anti—Competitive Practices** or Predatory Tactics.
10. Business Combinations or **Cartels**

iii. Note:

In the practical world, Monopolies are either regulated or fully prohibited. Hence, Pure Monopolies are not common. However, a single Producer may dominate the supply of a good or group of goods. In Public Utilities, e.g. Transport, Water, Electricity Generation, etc. Monopolistic Markets existed earlier in India, so as to reap the benefits of large scale production. But these markets have now been deregulated and opened to competition. In India, Indian Railways has monopoly in Rail Transportation. Government has monopoly in Nuclear Power production.

iv. Negative Effects of Monopoly-

1. **Higher Prices** for Consumers,
2. Loss of Consumer Surplus,
3. **Inability of Consumers to substitute** the goods or services, with a more reasonably priced alternative,
4. Transfer of Income from Consumers to Monopolists,
5. **Restriction of Consumer Sovereignty** and reduction in opportunities for Consumers to consume goods they desire,
6. **Payment of lower prices by Monopolies to their Suppliers** (of goods and services), i.e. lower Factor Payments,
7. **Lower levels of Output**, that what would be produced in a competitive environment,
8. Ability of Monopolist to **influence political process** and thereby obtain a favourable legislation,
9. **Lack of Innovation**,
10. **Higher Costs of Output**, the burden of which will be shifted to Consumers
11. **Lack of Productive and Allocative Efficiency**,
12. **Possibility of misuse of scarce resources**,
13. Earning of Economic Profits (**above Normal Profits**) in the long run, which is unjustifiable,
14. Use of Monopoly Power to create barriers to entry by undue means,
15. Scope for **X—Inefficiency**, i.e. the difference between efficient behaviour of businesses assumed or implied by economic theory and their observed behavior in practice caused by a lack of competitive pressure, etc.

v. Determination of Demand/ Revenue curve

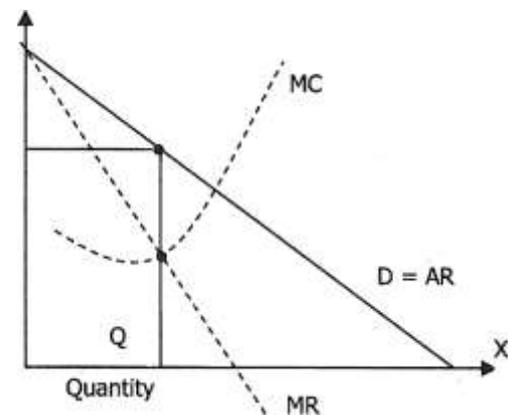
Qty (Q)	Price	TR = P×Q	AR = TR/Q	MR	Diagram
1	22	22	22	22	
2	20	40	20	18	
3	18	54	18	14	
4	16	64	16	10	
5	14	70	14	6	
6	12	72	12	2	
7	10	70	10	-2	
8	8	64	8	-6	
9	6	54	6	-10	
10	4	40	4	-14	

1. It shall be noted that **price elasticity of DD was infinite in Perfect competition** thus the DD curve was **parallel to Quantity axis**.
2. **In Monopoly**, the monopolist in order to increase his sale may lower the price. Thus the elasticity exists. However since there is no Close substitute, the **DD curve is Flatter as compared** to that in Monopolistic competition
3. Firm's Demand Curve = Average Revenue (AR).
4. **Relationship between AR & MR under Monopoly:**
 - a) Both AR and MR are **negatively sloped** (downward sloping) curves.
 - b) MR Curve **lies half-way between the AR Curve and the Y-axis**, i.e. it cuts the horizontal line between Y axis and AR into **two equal parts**.
 - c) In other words, Slope of MR is twice of AR
 - d) **AR cannot be zero, but MR can be zero or even negative**.

vi. Short Run price determination, Optimum output and profit Determination

a. **For achieving Equilibrium**, the conditions to be satisfied are-

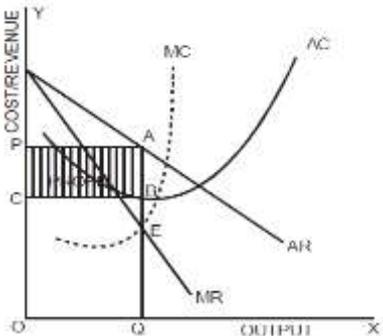
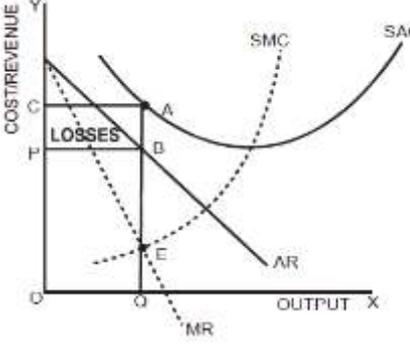
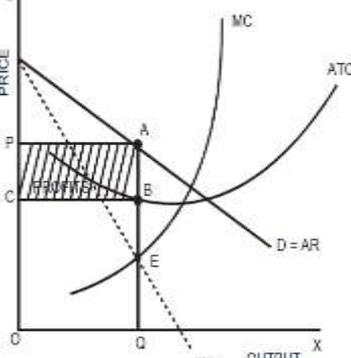
1. $MC = MR$, and
2. MC Curve should cut MR Curve from below, i.e. MC should have positive slope.



b. **For Profit determination**

1. Merely being in **Equilibrium position does not mean** that the Firm is making **profits**. The actual position of profits can be known only on the basis of **AR and AC** Curves.
2. In the short run, a firm may earn supernormal profits, normal profits or losses depending upon its cost conditions.

Short Run Positions		Long Run Positions
<p>Super profits:</p> <ul style="list-style-type: none"> • Here, $AR > ATC$. • Here area PABC denotes super profit. 	<p>Losses:</p> <ul style="list-style-type: none"> • Here, $AR < ATC$. • The Shaded area PBAC denotes Loss 	<p>Only Super profit ($LAR > LAC$):</p> <ul style="list-style-type: none"> • Monopoly firm in the long run gets abnormal profits because, the new firms are not allowed to enter the market.. • Under long-run a monopoly firm can produce at optimal or sub-optimal level. • In other words it can

		produce at minimum LAC curve and also he can produce before or after the minimum LAC curve.
		

Price Discrimination

1. Meaning:

- a) Price Discrimination occurs when a Producer sells a commodity to different Buyers, at different prices, for reasons not related to differences in cost.

2. Objectives:

- To earn Maximum Profit
- To Dispose of Surplus stock
- To enjoy Economies of Scale
- To capture foreign markets
- To secure equity thorough pricing.

3. Examples:

- Doctors** may charge more from a rich patient than from a poor patient, for the same treatment.
- Electricity Rates** for home consumption are less than that for industrial use.
- Export Prices** of Products are cheaper than the domestic market selling price.
- Railways charge** different rates from different type of passengers e.g. AC, Non-AC, Tatkal, etc.

4. Conditions for Price discrimination

- Full control over supply of commodity**
- Division of market into two or more sub-markets:** A seller can practice price discrimination only when he is able to divide the markets into two or more sub-markets.
- Different price elasticity under different markets:** Monopolist charge higher price from that market whose price elasticity is less than one and can charge lower price from that market whose price elasticity is greater than one.
- No possibility to resale:** It should not be possible for the buyers of low-priced market to resell the product to the buyers of the high priced market

Degrees of price Discrimination

Prof. Pigou classified three degrees of price discrimination.

- a. **First degree price discrimination**, the monopolist separates the market into each individual consumer and charges them the price they are willing and able to pay and thereby extract the entire consumer surplus.

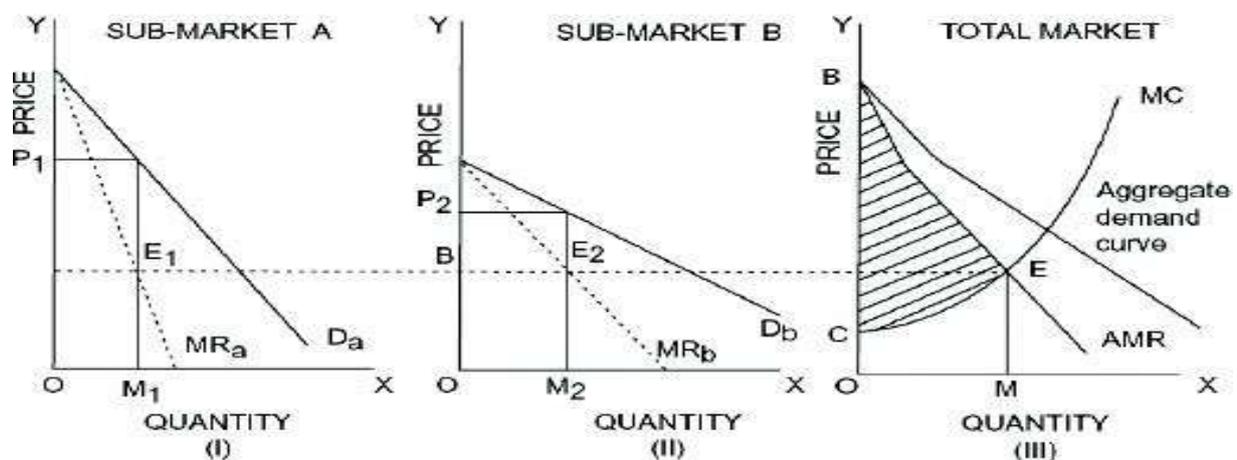
Eg. Doctors, lawyers, consultants etc., charging different fees, prices decided under 'bid and offer' system, auctions, and through negotiations are examples of first degree price discrimination.

- b. **Second degree price discrimination**- different prices are charged for different quantities of sold. The monopolist will take away only a part of the consumers' surplus. The two possibilities are: a) Different consumers pay different price if they buy different quantity. b) Each consumer pays different price for consecutive purchases.

- c. **Third degree price discrimination** - price varies by attributes such as location or by customer segment. Here the monopolist will divide the consumers into separate sub-markets and charge different prices in different sub-markets. Examples: Dumping, charging different prices for domestic and commercial uses, lower prices in railways for senior citizens, etc.

Equilibrium under price discrimination

- a. Under simple monopoly, a single price is charged for the whole output; but under price discrimination the monopolist will charge different prices in different sub-markets.
- b. First of all, the monopolist has to divide his total market into various sub-markets on the basis of differences in elasticity of demand.



In order to reach the equilibrium position, the discriminating monopolist has to make three decisions:

- How much total output should he produce?
- How the total output should be distributed between the two sub-markets? And
- What prices he should charge in the two sub-markets?

E. Monopolistic Competition

1. Imperfect competition is found in the industry where there are a large numbers of small sellers, selling differentiated but close substitutes products. E.g. LUX, HAMAM, LIRIL etc. This market contains features of both competitive and monopoly markets.
2. Large number of sellers and buyers
3. Free entry and exit of firms.
4. Product differentiation:
5. Non price competition:
6. Every firm is price maker and price taker of his own product
7. Imperfect mobility:
8. **AR and MR:** In monopolistic competition AR/MR will be more elastic than monopoly market.



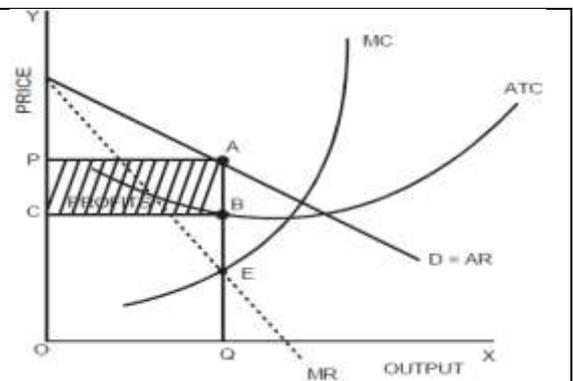
Determine Condition for Equilibrium

1. _____
2. _____

Short Run Equilibrium

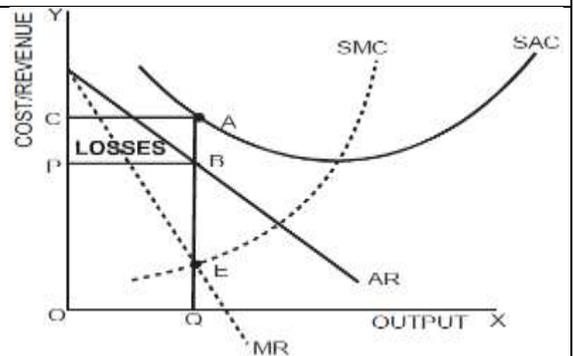
Super profits-

- To earn super profits $AR > ATC$.
- Normal profit is equal to the area PABC.



Losses:

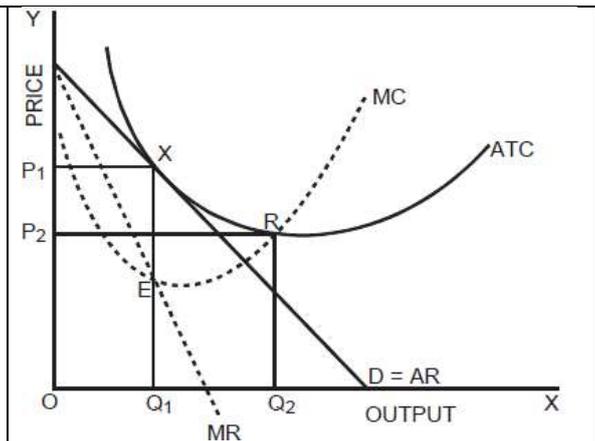
- But if the $AR < AC$ then firm will incur losses.
- In the figure given Shaded area PABC denotes loss.



Long Run Equilibrium

Normal profit (LAR = LAC/ TAC)

1. In long Run the firm will earn **normal profits**, because there is free entry and exit of firms.
2. The AR curve in the long-run is not tangent to the ATC curve at the lowest point.
3. This shows each firm produces at before the lowest TAC/LAC or **produces less than the optimum output** and Charges from the customers a price higher than the competitive price.
4. A firm under monopolistic petition has **always excess capacity** and thus is never an optimum firm, but perfect competition never has excess capacity and monopoly mayor may not be



F. OLIGOPOLY MARKET

Meaning- An oligopoly is a market in which there are **few producers (two to ten)** of a product.

- ✓ Oligopoly is an important form of imperfect competition.
- ✓ Sellers sell homogeneous or differentiated but close substitutes products
- ✓ Example- cold drinks industry or automobile industry.
- ✓ It shows the concept of group behaviour
- ✓ There is large entry barrier



Types of Oligopoly

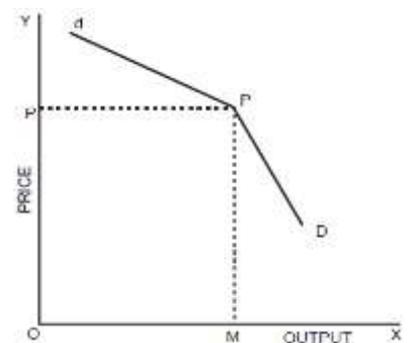
1. **Pure / Perfect oligopoly** - deals in homogeneous products- Aluminum industry
2. **Differentiated / imperfect oligopoly** - deals in product differentiated.
3. **Open oligopoly** - New firms can enter the market and compete with existing firms
4. **Closed oligopoly** - new entry is restricted.
5. **Collusive oligopoly** - common understanding or collusion in fixing price and output
6. **Competitive oligopoly** - Lack of understanding and compete with each other.
7. **Partial oligopoly** - when industry is dominated by one large firm i.e. price leader
8. **Full oligopoly** - absences of price leadership.
9. **Syndicated oligopoly**- Firms sells their products through centralized syndicate/ channel
10. **Organized oligopoly**: Firms organize into a central association for fixing price, output etc.

Features

- **Few sellers**
- **Interdependence:** In oligopoly, firm must consider the market demand and the reactions of the firms in the industry to any major decision it takes.
- **Advertising and selling costs (Non price competition):** There is a great importance advertising and selling costs in an oligopoly market. They avoid price cutting and try to compete on non-price basis
- **There is no generally accepted theory of group behaviour.** In oligopoly, the members of a group agree to pull together in promotion of common interest or they fight to promote their individual interests.
- **Substantial barriers to entry:** In oligopoly there is no free entry and no blocked entry, we can say that there is substantial barriers to the entry.

Kinked demand curve / Indeterminateness of demand curve-

1. Because interdependence of the firms in oligopoly and because of inability of a particular firm to pre the behaviour, the demand curve facing an oligopolist may have a 'kink' at the level of the prevailing suggesting stickiness in the price level.
2. The kink is formed at the prevailing price level at because the segment of the demand curve above the 'K' is highly elastic and the below the 'K' is inelastic.



3. Price rigidity:

- a) **When an oligopolist lowers the price-** its competitors will feel that, if they do not follow the price cut their customers will run away and buy from the firm, which has lowered the price. Thus in order to maintain their customers they will also lower their prices. **Thus the upper portion of the demand curve is price elastic.**
- b) **When firm increases the price-** there will be a substantial reduction in its sales because as a result of the rise in its price, its customers will withdraw from it and go to its competitors, which will welcome the customers and will gain in sales. These happy competitors will have, therefore, no motivation to match the price rise.

Summary of Different Market

Aspect	Perfect Competition	Monopoly	Monopolistic Competition	Oligopoly
Number of Sellers	Very large	Only One	Large	A Few
Nature of Product	Homogeneous / Identical Product. No differentiation.	Highly differentiated / specialized product.	Slightly differentiated / specialized product.	Nature of Differentiation varies.
Product differentiation	None	Extreme	Slight	None to substantial
Ease of Entry / Exit	Free Entry / Exit.	Only One Seller.	Free Entry / Exit.	Only Few Sellers.
Control over Price	Nil	Total	Each Firm is a Price-Maker for its own product.	Reasonable.
Elasticity of Demand	Infinity.	Less Elastic.	More Elastic.	Kink
Demand Curve	Horizontal Line.	Negatively Sloped	Negatively Sloped.	Kinked Curve.
Examples	Foodgrains, Vegetables, etc.	Railways, Electricity Supply.	Cars, Soaps, Toothpaste, etc.	Pharma, Cold Drinks, etc.
Profit in Long-Run	Normal Profits Only.	Super-Normal Profits	Normal Profits Only.	—
Optimality in Long-Run	Each Firm is an Optimal Firm.	Can operate at sub-optimal level also.	Idle Capacity. Not an Optimal Firm.	—

Chapter 5 - Business Cycle



A. Meaning, Phases of Business cycle

- ✿ **Fluctuations in aggregate economic activity** that an economy experiences over a period of time, i.e. periods of prosperity alternating with periods of economic downturns, are called **Business Cycles** or **Trade Cycles**.
- ✿ Business Cycles refer to **alternate expansion and contraction of overall business activity** as reflected in fluctuations in measures of aggregate economic activity, like Gross National Product, Employment and Income.
- ✿ **Phases:** The four distinct phases of the Business Cycle are-
 - a) **Expansion** / Boom / Upswing),
 - b) **Peak** / Prosperity,
 - c) **Contraction** / Downswing / Recession), and
 - d) **Trough** / Depression).
- ✿ A Trade Cycle is composed of periods of
 - a) **Good trade** characterized by rising prices and low unemployment levels.
 - b) **Bad trade** characterized by falling prices and high unemployment levels.



B. Features of Business cycle

- a) Business cycles **occur periodically**
- b) **Do not exhibit the same regularity.**
- c) The **duration** of these cycles **vary**.
- d) The **intensity** of fluctuations also **varies**.
- e) The **length of each phase is also not definite**.
- f) Business cycles are **exceedingly complex phenomena**;
- g) Business cycles generally originate in free market economies*****.
- h) They are **pervasive** as well. Disturbances in one or more sectors get easily **transmitted to all other sectors**.
- i) Although all sectors are adversely affected by business cycles, some sectors such as



- capital goods industries, durable consumer goods industry** etc, are disproportionately affected.
- j) Moreover, compared to agricultural sector, **the industrials sector is more prone to the adverse effects of trade cycles.**
- k) It is **difficult to make an accurate prediction** of trade cycles before their occurrence.
- l) Repercussions of business cycles get simultaneously felt on nearly all economic variables
- m) Business cycles have **serious consequences on the well-being of the society.**
- n) Business cycles are **contagious and are international in character.**

C. Phases of Business cycle

1. Expansion: Features

- a) Increase in **national output, employment, aggregate demand, capital and consumer expenditure, sales, profits, rising stock prices and bank credit.**
- b) This state **continues till there is full employment of resources and production is at its maximum** possible level using the available productive resources.
- c) Involuntary unemployment is almost zero and whatever unemployment is there is either frictional or structural. Prices and costs also tend to rise faster. Good amounts of net investment occur.
- d) Increasing prosperity and people enjoy high standard of living due to high levels of consumer spending, business confidence, production, factor incomes, profits and investment.
- e) The growth rate **eventually slows down and reaches its peak.**



2. Peak:

- a) Peak refers to the **top or the highest point** of the business cycle.
- b) Output prices also rise rapidly leading to increased cost of living and greater strain on fixed income earners.
- c) **Actual demand stagnates.**



3. Contraction:

- a) During contraction, there is **fall in the levels of investment and employment.**
- b) **Supply far exceeds demand.** Initially, this happens only in few sectors and at a slow pace, but rapidly spreads to all sectors.
- c) **Producers holds back future investment** plans, cancellation and stoppage of orders for equipment and all types of inputs including labour.
- d) **Decrease in input demand** pulls input prices down; incomes of wage and interest earners

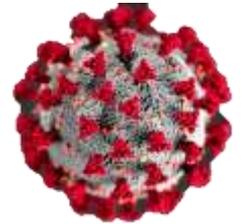


gradually decline resulting in decreased demand for goods and services.

e) The process of recession is complete and **economy into the phase of depression.**

4. Trough and Depression:

- Depression is the **severe form of recession** and is characterized by **extremely sluggish economic activities.**
- During this phase of the business cycle, **growth rate becomes negative**
- National income and expenditure declines rapidly.
- Demand for products and services decreases, prices are at their lowest and decline rapidly forcing firms to **shutdown several production facilities.**
- A typical feature of depression is the **fall in the interest rate.**
- Large number of bankruptcies and liquidation** significantly reduce the magnitude of trade and commerce.
- Greatest depression occurred in 1929- 1933 - Reason lower aggregate Expenditure**



D. Question: How does the economy recover?

The economy cannot continue to contract endlessly. Economic activity reaches Trough and then starts **recovering** >>>> marks the end of pessimism and the beginning of optimism >>>> Reversal is first felt in the **Labour Market** >>>> workers accepts wages lower than the prevailing rates. >>>> **Business Confidence** slowly increases, >>>> spurring of investment causes **recovery** of the economy. >>>> **Banking System** now slowly starts expanding credit, matching with the business confidence. >>>> Employment, Factor Payments, Disposable Incomes, Consumer Spending, Aggregate Demand, etc. all rises



E. Indicators- 3 Indicators (Leading, Lagging, concurrent)

Leading Indicators:

- It is a measurable economic factor that changes before the economy starts to follow a particular pattern or trend. **Variables that change before the Real Output changes**
- However, Indicators are not always accurate and Experts disagree on the timing of these Leading Indicators.
- Eg. -Change in stock price, profit Margin, Indices, housing interest rate, prices, value of new orders of plant and machinery/ consumer goods, building permits of private house



🌿 Lagging Indicators:

- ⚡ Changes in these indicators are observable **only after** an economic trend or pattern has already occurred. **variables that change after the Real Output changes**
- ⚡ E.g. - Unemployment, corporate profit, labour cost per unit, interest rate, Consumer price index, Commercial Lending



🌿 Coincident or Concurrent Indicators:

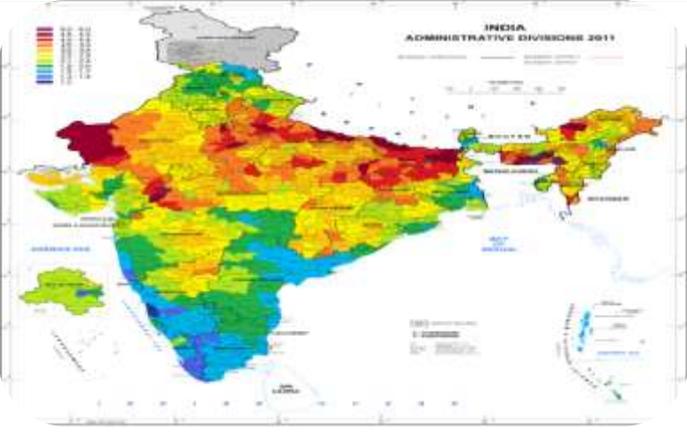
- ⚡ It **coincides or occurs simultaneously** with the business—cycle movements.
- ⚡ It gives information about the rate of change of the expansion or contraction of an economy more or less at the **same point of time** it happens.
- ⚡ It describes current state of Economy
- ⚡ E.g. - GDP, Industrial productions, Inflation, personal Income, Retail Sales, Stock Market prices



F. Role/ Importance of Business cycle in Business Decision making

1. **Demand Impact:** Business Cycles affect demand of the products.
 2. **Decision** regarding Expansion of business.
 3. **Policies:** Knowledge of Business Cycles and their inherent characteristics is important for a Business Firm to frame appropriate policies.
 4. **Production Aspects:** Businesses have to properly respond to the need to alter production levels relative to demand.
 5. **Market Entry / Product Launch:** The phase of the Business Cycle is important for a new business to decide on entry into the market.
6. **Cyclical Businesses:**
- ❖ Some businesses are more vulnerable to changes in the Business Cycle than others.
 - ❖ Businesses whose fortunes are closely linked to the rate of economic growth are called "Cyclical" Businesses. Examples: House—Builders, Construction, Infrastructure, Restaurants, Advertising, Overseas Tour Operators, Fashion Retailers, etc.
 - ❖ During a boom, such businesses see a strong demand for their products but during a slump, they usually suffer a sharp drop in demand.
 - ❖ Some Businesses may actually benefit from an economic downturn, e.g. when their products are perceived by Customers as representing good value for money, or a cheaper alternative compared to more expensive products.

G. Causes of Business Cycle

H. Internal causes- Endogenous factor	I. External Causes- Exogenous factor
Internal causes of Business Cycle are those cause which are generated <u>within the NATION</u> itself and are <u>not international in character</u>	External causes of Business Cycle are those cause which are generated <u>out of the NATION</u> and are <u>international in character</u>
✚ Fluctuations in Effective Demand	✚ Wars
✚ Fluctuations in Investment- According to some economists this the primary cause of Business Cycle	✚ Post War Reconstruction
✚ Variations in government spending	✚ Technology shocks
✚ Macroeconomic policies	✚ Natural Factors
✚ Money Supply	✚ Population Growth
✚ Psychological factors	
	

5. Some important Points for MCQ

- a) **According to Pigou**, modern business activities are based on the anticipations of business community and are affected by waves of optimism or pessimism.
- b) **According to Schumpeter's innovation theory**, trade cycles occur as a result of innovations which take place in the system from time to time.
- c) **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.
- d) **According to Hawtrey**, trade cycle is purely Monetary Phenomenon

Chapter -6 National Income Fast Track/ Marathon

National Income: Basics

- National Income measure **short-run performance of an economy**.
- National income gives us an idea of the working of an economy .
- National income accounts provide a **comprehensive, conceptual and accounting framework**.
- National Accounts help us to understand **how the various transactions from the stage of production of goods and services to the stage of their final disposal are interrelated**.
- It helps to meet the needs of **Government, private analysts, policy makers and decision takers**.
- National Income Accounting was pioneered by the Nobel prize-winning economists **Simon Kuznets and Richard Stone**
- The task to measure National Income is undertaken by **Central Statistical Organization (CSO)**, a department of The **Ministry of Statistics and Programme Implementation (MoSPI)**
- At the State level, **State Directorates of Economics and Statistics (DESs)** have the responsibility of compiling their State Domestic Product and other aggregates.

Distinguish between Non-economic activities and economic activities

- Economic Activities- Goods and services that **can be purchased / exchanged with money**.
- Non-economic activities are those which **produce goods and services but are not exchanged** in a market.

What is the national Income ?

National Income is defined as money value¹ of final goods and services² produced by the normal residents³ of a country, whether operating within the domestic territory⁴ of the country or outside produced within in an accounting year⁵.

a. Expressed in Money Value-

- * It becomes necessary to measure their value against **some commonly accepted denominator**.
- * Thus, money being the measuring rod.

b. Final Value of Goods and services-

- Value final goods and services** are included to avoid double counting.
- Intermediate goods are those goods and services which are used by producers as input into further stage of production**

The final products are of two types- Consumer Goods and Services and Producer Goods-

- Consumer Goods-** Where the goods and services are used for final consumption by the consumer, it is called as Consumer Goods and services.
E.g. - TV, Food, Home appliances.

2. **Producers Goods-** Where the final product is used in production of other goods/ service in future, it is called as Producers goods.

E.g. Computer used for developing programs or software, Plant and Machinery used in manufacturing of goods

c. Normal resident-

1. **Normal resident of a country** refers to **an individual** or an institution who ordinarily resides in the country and whose center of **economic interest** also lies in that country.

2. **Normal residents** include both, **individuals and institutions**.

3. Here the word '**Resident**' is used and not the word 'Citizen'. Hence, they may or may not be citizen of that country

d. Domestic territory:

1. Domestic territory refers to **geographical or political boundary** of country.

2. It however does not include- **international institutional** (United nations, WHO, WTO) and **foreign embassies** located within geographical territory but includes embassies of this country located outside its geographical territory

3. **Indian Ship and Indian aircrafts** performing operations outside country is also included in domestic territory.

e. Current output:

While calculating National income value of only current production is included, this is because the value of previous year's production is included in Previous year's National Income.

National income does not include the following transactions:

1. **Pure purchase transaction** such as **sale and purchase of used goods/ second- hand goods**, this is because nothing new is produced in the current year.

However, where the goods are refurbished the added value must be taken in calculation of National Income.

2. **Sale, purchase of securities** is also excluded because it is just a change of ownership.

3. **Transfer payments** are included as there is no economic activity involved. E.g Pocket money by Parents, Gift to Son in law.

Transfer Payment-

1) Transfer payments are unilateral payments for which no productive services are rendered in return in the **current year**.

2) The recipient of this transfer payment **does not make any contribution to current production** in return for these payments

3) E.g Pension is given to a person in C.Y for rendering services in past, Unemployment allowance.

There are two types of transfer payments Viz. Current transfer and Capital transfer

4) **Current transfer** refers to the transfer made out of current income of payer and is added to current income of payee.

5) **Capital transfer** refers to transfer made out of the wealth of the payer and added to wealth of the **receiver**. (not in our syllabus).

Flow concept vs stock concept

Flow concept: - National income is a flow concept because it is measured over a period of time.

USEFULNESS OF NATIONAL INCOME ESTIMATES

➤ **It is helpful in many ways such as**

- a) **Helps business Businesses to forecast the future demand** for their products.
- b) shows the **composition and structure** of different sectors and the broad **sectoral shifts in an economy over time**.
- a) **Shows income distribution and the possible inequity in the distribution among different income categories** .
- b) **Helps government to make various sector-specific development policies, make macroeconomic modeling, comparisons of structural statistics and analysis to increase growth rates.**
- c) **Policy Formulation -Combined with financial and monetary data**, national income data provides a guide to make policies for growth and inflation.
- c) **International comparisons** in respect of incomes and living standards assist

Limitation of National Income

1. **Income Distribution is not clearly reflected:** implies that the gap between rich and poor is widening
2. If the increase in GDP is on account of **long working hours, Employment of child labour, and polluted working environment, exclusion of leisure** such increase in GDP is not the real sign of welfare.
3. **'How much is produced'** determines GDP. It does not reflect **'what is produced'**.
4. If more of capital goods are produced the GDP will rise but the welfare may not increase in same manner.
5. **Avoids importance of Non-Market Transaction-** Example, Such as providing music class to society children for fun and other similar activity.

Explain the conceptual difficulties or challenges in measurement of national Income

The conceptual difficulties or challenges in measurement of national Income are:

1. **Lack of an agreed definition of National Income.** (like GDP, GNP, NDP, NNP etc)
2. **Non-availability of accurate distinction between final and intermediate goods.**
3. **Issue of transfer payments.**
4. **Service of durable goods.**
5. **Valuation of New goods at constant price**
6. **Valuation of Government services -**
7. **Data available** are either **inadequacy** or **unreliable** for calculation of national Income
8. **Presence of non-monetize sector**
9. **Production for self-consumption**

6: GDP AND WELFARE

Can the GDP of a country be taken as an index of the welfare of people in that country?

Answer:

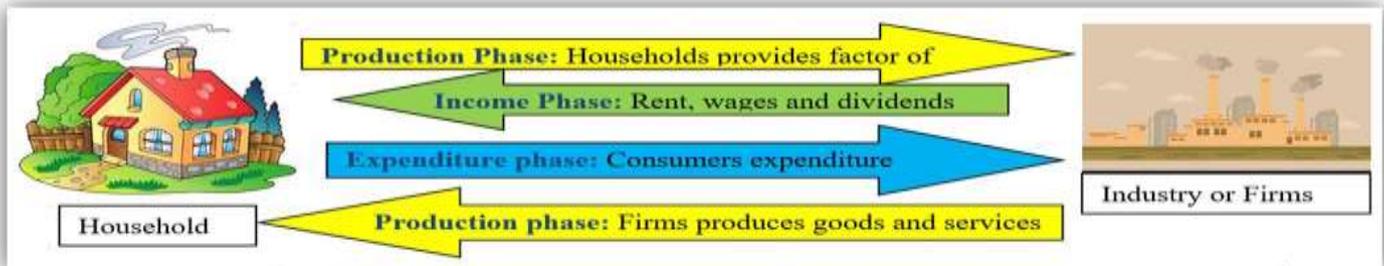
GDP is the sign of welfare increase in GDP Increases welfare yet.

- **Countries may have Same national income and per** capital income but their welfare may vary significantly .
- **Welfare may increase many times but not GDP.**
- **GDP may increase many times but not Welfare -**

THE SYSTEM OF REGIONAL ACCOUNTS IN INDIA

1. All the **states and union territories** of India compute **state income estimates and district level estimates**.
2. Regional accounts **provide an integrated database** on the many transactions taking place at state level.
3. State Income or **Net State Domestic Product (NSDP)**- volume of all goods and services produced in the state.
4. The state level estimates are prepared by respective **State Directorates of Economics and Statistics (DEs)** with assistance of **The Central Statistical Organization assists the States**.
5. **Per Capita State Income** = NSDP (State Income) / midyear projected population of the state
6. Certain activities such as are **railways, communications, banking and insurance and central government administration**, gives services to many states and their economic contribution cannot be assigned to any one state directly are known as the '**Supra-regional sectors**' of the economy. The estimated value in these cases calculated and distributed to the states on the basis of relevant indicators

CIRCULAR FLOW OF INCOME



- ▲ Circular flow of income refers to the **continuous circulation of production, income generation and expenditure** involving different sectors of the economy.
 - ▲ There are three different interlinked phases in a circular flow of income, namely: production, distribution and disposition.
1. **In Production phase-** firms produce goods and services with the help of factor services.
 2. **In Income or distribution phase,** the flow of factor incomes in the form of rent, wages, interest and profits from firms to the households occurs
 3. **In Expenditure or disposition phase,** the income received by different factors of production is spent on consumption of goods and services and investment goods. This expenditure leads to further production of goods and services and sustains the circular flow.

Circular flow of income can be viewed from two different angles-

- 1. What is Real Flow?** Real flow consists of flow of factor service and flow of goods and services among different sector of economy- **Yellow Arrows**
- 2. What is Money flow?** Money flow consists of flow of money for factor services in form of wages, rent, dividend (Green arrow) and money expenditure incurred on purchase of goods and services (Blue arrow/green).

ECONOMIC SECTORS OF AN ECONOMY

- 1. Household Sector:**
- 2. Business Sectors/ Firm/ Producer:**
- 3. Government Sector:**
- 4. Foreign Sector/ Rest of the World**

Models of circular flow of Economy

2 Sector	3 Sector	4 Sector
Household Sector Firm Sector	Household Sector Firm Sector Government	Household Sector Firm Sector Government Rest of the world
	Closed Economy	Open economy

Two Sector Model without savings- Refer Diagram below**Assumptions:**

- There are **only two sectors** in an economy. **Households and the firms.**
- No savings** is made by either by Household or by Firm.
- Households **spend entire income** on goods and services and **firm distributes entire proceeds** in the form of factor payments.

In this two-sector model without investment it is assumed that all the income earned by the **Household** is spent on buying **Consumer Goods** from the firm, while all the proceed are distributed as factor payments to households. Thus, the equilibrium will be achieved.

In other words, there is **no leakage in income** and the below mentioned equations hold good-

- Total production of Goods and services by firm = Total consumption of goods and services by households.
- Factor Income of household = Total factor payments.
- Income of the firm = Expenditure of the households.
- Real flow = Money flow

Two Sector Model with Savings and Investment**Assumptions**

- We have assumed that savings is done only by Households and not firms.**
- All the savings made by the households are invested in capital Market.**

Savings, Leakage, reduction in flow of income and investment $S=I$

Savings made by the households and the investments may not be equal in all the time. There are three

possible situations mentioned below-

- i. If Savings = Investment, equilibrium is achieved
- ii. If Savings > Investment, the flow of income declines
- iii. If Savings < Investment, the flow of income rises

Three Sector Model of circular flow of income

The three-sector model consists of Households, Firms and Government.

1. The equilibrium condition of circular flow of income in 3 sector economy model is: $S+T = I+G$.
2. If $(S+T) > (I+G)$ - Decline in flow of income
3. If $(S+T) < (I+G)$ - Increase in flow of income

Four Sector Model of circular flow of income

It is also called as open economy model as it is engaged in international operations too.

Explanation:

- * Export is denoted by **X** while Import is denoted by **M**.

Thus, it can be said that **X** constitutes injection while **M** creates leakage into circular flow of income.

1. At equilibrium = $S+T+M = I+G+X$
2. If $S+T+M > I+G+X$, there is decline in flow of income.
3. If $S+T+M < I+G+X$, there is increase in flow of income

Distinction between three and four sector Economy model:

Importance of Circular Flow of Income

1. **Easy to view** the entire system as circular flow of income.
2. Circular flow of income pinpoints the condition of **macroeconomics equilibrium**.
3. It gives an idea as to **how different sectors of economy interacts**
4. It shows how different sectors of economy (Household sector, Business sector, Government and Rest of the world) are **interdependent and are interrelated**.
5. It helps in determining **size of income**. We can estimate national income with the help of output, income and expenditure phases of circular flow of income

Thus,

National Income refers to -

1. Money Value of all the **final goods and services produced** by a country during a year. (Production Phase)
2. **Total Flow of Earnings** of the Factor Owners, in the form of Wages, Salaries, Rent, Interest and Profits, which they receive through the production of goods and services. (Income Generation Phase)

Unit 2- National Income Aggregates

Domestic Product and National Product (Domestic income and National Income)

Particulars	Domestic Products	National Products
Meaning	Money value of Final Goods and service produced by both, nationals of the country as well as foreign national located within domestic territory of a country during a year	Money value of Final Goods and service produced by Normal Resident of a country whether operating within domestic territory of a country or outside.
Basis of differentiation	<ul style="list-style-type: none"> ▲ Addressed with the question of where the income is generated. ▲ It is geography or territory oriented 	<ul style="list-style-type: none"> ▲ It can be addressed with the question of who generates the income. ▲ It is Nationality Oriented. ▲ It excludes foreign national

Net factor Income Earned from Abroad

Net factor Income Earned from Abroad or **NFIA** is the difference between the factor income received and the factor income accruing to rest of the world

National Product at Market Price and National Product at Factor Cost

- 1) Factor cost refers to **factor payment made by the business to the owners of factor of production in the form of rent, wages, interest and profit**
- 2) **National product at Market price = National Product at factor cost + Indirect tax* - Subsidies, or**
- 3) **National product at Market price = National Product at factor cost + Net Indirect tax****

Factor Cost vs Basic Price vs Market Price

- 1) **Factor cost = Sum total of factor income in form of rent, wages, interest and profit**
- 2) **Base Price: = Factor cost + Production tax (License, Stamp duty, municipal tax, property tax) - Production subsidies**
- 3) **Market price = base price + Product tax (Indirect tax/ GST) - product subsidy**
- 4) **Market Price: Basic Price + Product tax - Product Subsidy = Market Price.**
- 5) **MP = FC + Net Indirect tax (when production tax and production subsidies are not given)**

Gross Vs Net

Net domestic Product = Gross domestic Product - Depreciation

Net national Product = Gross national Product - Depreciation

1- Gross Domestic Product at Market Price - GDP^{MP}

2- Gross National Product at Market Price - GNPMP

3- Net Domestic Product at Market Price - NDPMP

4- Net National Product at Market Price - NNPMP

5- Gross Domestic product at Factor cost - GDPFC

6- Gross National product at Factor cost - GNPFC

7- Net Domestic product at Factor cost - NDPFC

8- Net National product at Factor cost - NNPFC

Why NNP at factor cost is better measure of National Income than NNP at Market Price?

Answer: NNP at Market price is affected by factor called as Net indirect tax. If there is change in tax rate and subsidy then NNP at market price figure will change accordingly **without** actual increase in Factor cost. Also, different countries have different tax rate and thus for **international comparison** of relative income level.

Types of Income:

Disposable income	Income available for disposable and it includes transfer payments . <i>Example, Income may be 10,000 but one may also receive transfer payment which will increase the money received by him to the extent of transfer payment say 2000. Therefore, Income is 10000 while Disposable income is 12000</i> <i>Thus,</i> Disposable income = Income + Net Transfer payment** Disposable income may be more or less depending upon whether Net transfer payment is positive or negative		
National Disposable Income	National Disposable income is the sum total of National Income at Market price and net of Current transfer received from rest of the world $GNDI = GNP_{MP} + \text{Net transfer Payments received from rest of the world}$ $NNDI = NNP_{MP} + \text{Net transfer Payments received from rest of the world}$ $NNDI = GNP_{MP} + \text{Net transfer Payments received from rest of the world} - \text{depreciation}$		
Disposable income of Private sectors	There are three disposable income aggregates, namely- 1. Private Income 2. Personal Income 3. Personal Disposable income		
	Less	Miscellaneous receipts of Govt. department. Fines, fees etc.	30
	Less	Personal taxation	60
		Personal Income	640
Per Capital Income	a) It serves as an indicator of the standard of living of a country. b) Per capita income = $\frac{NNP_{FC}}{\text{Population}}$		

Summary

GNDI = $GDP_{MP} + \text{Net transfer payment received from rest of the world}$

NNDI = $NDP_{MP} + \text{Net transfer payment received from rest of the world}$

Private Income = $NNP_{FC} - \text{Income from property and entrepreneurship accruing to govt. commercial enterprises and admin department} - \text{Savings of non- Departmental enterprises of government} + \text{Interest on national debt} + \text{Net Current Transfer payment received from Govt. dept} + \text{Net transfer payment received from rest of the world}$

Personal Income = $\text{Private Income} - \text{Undistributed profits} - \text{Corporate taxes}$

Personal disposable income = $\text{Personal income} - \text{Personal taxes} - \text{Miscellaneous receipts of Govt. department.}$

***Interest that Govt. pays on National debt:** Sometimes govt. borrows fund from private institution and pays the interest on the same. The interest shall be included in factor payment by it is argued that the monies are utilized for welfare purpose and thus shall be treated as Transfer payment.

******The private sector receives transfer payment both from Govt. and rest of the world. Reverse is also true in many cases.

	Nominal GDP	Real GDP
Also known as	GDP at Current price	GDP at Constant price
Meaning	GDP at Current price is the value of all final goods and services produced within the domestic territory of a country by normal residents, whether nationals or non- nationals, inclusive of depreciation during a year at market price prevailing in that year	GDP at Constant price is the value of all final goods and services produced within the domestic territory of a country by normal residents, whether nationals or non- nationals, inclusive of depreciation during a year at market price prevailing in base year
		$\text{GDP at constant price} = \frac{\text{GDP at Current price}}{\text{Price index of current year}} \times 100$

GDP Deflator: It is the ratio of Nominal GDP (at Current Prices) to Real GDP (at Constant price)

GDP Deflator:
$$\frac{\text{Nominal GDP}}{\text{Real GDP}}$$

- GDP Deflator takes out the Inflation out of Nominal GDP. It deflates the GDP.
- It converts Nominal GDP to Real GDP

Inflation:

- Using the GDP deflator, the inflation rate between two consecutive years can be compute using the following procedure:
- Inflation rate in year 2 =
$$\frac{\text{GDP deflator in year 2} - \text{GDP deflator in year 1}}{\text{GDP deflator in year 1}} \times 100$$

Methods of Measuring National Income

There are three ways to measure National Income

1. **Product method or Value-added method**- Flow of Goods and services
2. **Income Method**- Flow of income generated
3. **Expenditure Method**- Flow of Expenditure on Goods and services

Net product or Value-Added Method

Meaning	National income by value added method is the sum total of net value added at factor cost across all producing units of the economy less intermediate purchases from all other industries.
Steps 1	Identifying the producing enterprises and classifying them into different sectors according to the nature of their activities <ol style="list-style-type: none"> (i) Primary sector- production units which produces goods and commodities by exploiting natural resources. Examples- farming, Mining, Fishing, etc. (ii) Secondary sector- This sector transforms one form of commodity into other forms such as manufacturing (iii) Tertiary sector or service sector- Provides services which are intangible in nature.
Step 2	Estimating the gross value added (GVA MP) by each producing enterprise. Gross value added (GVA MP) = Gross Value of production - value of Purchase = Value of output - Intermediate consumption = (Sales + change in stock) - Intermediate consumption. This will Give us GDPMP
Step 3	Conversion: <ul style="list-style-type: none"> • $GDP_{MP} - \text{depreciation} = NDP_{MP}$ • $NDP_{MP} - \text{Net indirect tax} = NDP_{FC}$ • $NDP_{FC} + NFIA = NNP_{FC}$
Inclusion and exclusions	Precaution in Estimation of National Income by Value-added Method- <ol style="list-style-type: none"> 1. Production for self- consumption 2. Own account production of fixed assets. 3. Imputed rent of owner-occupied houses. 4. Service of House wives shall. 5. Sale and purchase of existing commodities or second-hand goods shall not be included. However. 6. Sale and purchase of Share and Bonds

Income Method/ Factor Payment Method/ Distributed Share Method

Meaning	National income is calculated by summation of factor incomes paid out by all production units within the domestic territory of a country as wages and salaries, rent, interest, and profit.
Steps 1	Classify the income into appropriate income categories namely, <ol style="list-style-type: none"> 1. Labour Income or Compensation to employees 2. Capital or Property income or Operating surplus

3. Mixed Income of self employed This will give NDP^{FC}

Step 3

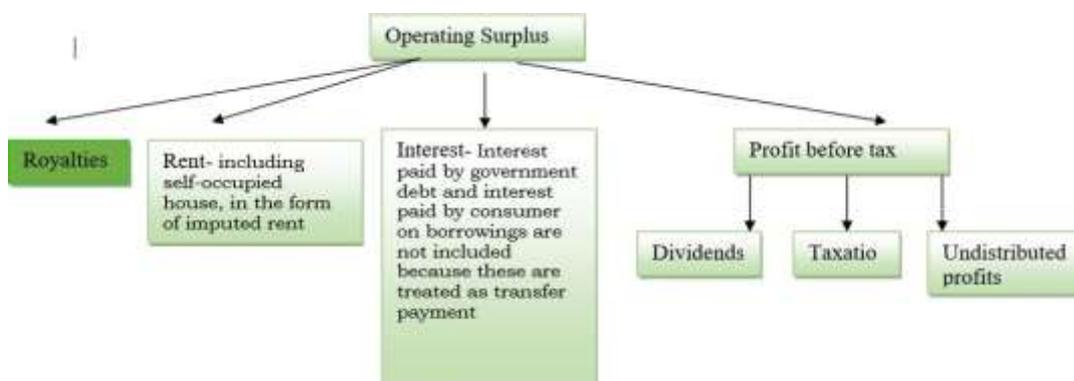
The above exercise will give NDP_{FC} . The adjustment of NFIA will give National Income

Labour Income

- This is the **compensation paid to the labour/ employee** for the services rendered by them.
- It is the payment made by the producer to employees or labour, for the services rendered by them, in cash, kind and social security benefits.

Included	Excluded
Salaries and wages in cash including Bonus, DA, HRA	Old age pension shall not be considered while calculating Labour income as it is a transfer payment
Current year pension provision shall be considered.	TA shall be excluded if it is for business work or on reimbursement basis.
Travelling allowance shall be included if it is for travel from office to home and home to work	Contribution of employee to social security fund shall not be added as it is already part of salary.
Contribution of employer to social security fund shall be added. E.g. Provident fund	Interest free loan given to employee
Commission paid to sales staff	Old age pension
Payment in kind- Rent free accommodation, Free Meal coupon	Income tax of employee
LIC premium paid by employer	Old age pension shall not be considered while calculating Labour income as it is a transfer payment

Operating Surplus



It is the income earned from **ownership and control of Capital**. Therefore, it is also known as income from **property** and **entrepreneurship**.

	<p>It includes</p> <ul style="list-style-type: none"> ▪ Rent- including self-occupied house, in the form of imputed rent ▪ Interest ▪ Royalties for ▪ Profit before tax <p>Note:</p> <ul style="list-style-type: none"> ✓ If the question mentions about Profit before tax than Undistributed profit, dividend and corporate taxes shall be ignore. ✓ If the question does not mention about the profit before tax- add all three ✓ If nothing is prefixed to profit, assume it to be PBT ✓ Interest paid by government debt and interest paid by consumer on borrowings are not included because these are treated as transfer payment 															
<p>Mixed Income</p>	<ul style="list-style-type: none"> ➤ Mixed income is the income generated by own account workers and income of unincorporated enterprises. ➤ Example of such mixed income are legal service, agriculture, trading, proprietorship, Plumber, carpenter etc. ➤ Mixed income contains both components of income namely capital income and labour income of those who provides capital and labour service in production process. ➤ It is the composite of both labor income and capital income and arises in case where it is difficult to differentiate between labour element and capital element I factor of production. <p>Example of such incomes are own account workers like CA, Lawyer, Shopkeeper etc.</p>															
<p>Inclusion and exclusion</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center; color: #0070C0;">Include</th> <th style="width: 50%; text-align: center; color: #0070C0;">Exclude</th> </tr> </thead> <tbody> <tr> <td style="background-color: #D9EAD3;">Imputed rent of self-occupied house by owner of this house</td> <td style="background-color: #F4CCCC;">Transfer payment- Refer earlier part of the chapter</td> </tr> <tr> <td style="background-color: #D9EAD3;">Value of production for self-consumption</td> <td style="background-color: #F4CCCC;">Illegal Income like, smuggling, drug dealing etc.</td> </tr> <tr> <td style="background-color: #D9EAD3;">Imputed value of service provided by owner of production unit</td> <td style="background-color: #F4CCCC;">Interest on loan taken for meeting consumption expenditure- eg. Loan to buy house, loan to buy car, etc.</td> </tr> <tr> <td style="background-color: #D9EAD3;">Interest on loan taken for meeting business needs</td> <td style="background-color: #F4CCCC;">Interest on national debt- refer earlier discussion</td> </tr> <tr> <td style="background-color: #D9EAD3;">Brokerage service in facilitating the transaction of second-hand goods</td> <td style="background-color: #F4CCCC;">Income in respect of second-hand commodities</td> </tr> <tr> <td style="background-color: #D9EAD3;">Income tax and TDS to show gross income</td> <td style="background-color: #F4CCCC;">Income arising from transfer of shares and other securities.</td> </tr> </tbody> </table>		Include	Exclude	Imputed rent of self-occupied house by owner of this house	Transfer payment- Refer earlier part of the chapter	Value of production for self-consumption	Illegal Income like, smuggling, drug dealing etc.	Imputed value of service provided by owner of production unit	Interest on loan taken for meeting consumption expenditure- eg. Loan to buy house, loan to buy car, etc.	Interest on loan taken for meeting business needs	Interest on national debt- refer earlier discussion	Brokerage service in facilitating the transaction of second-hand goods	Income in respect of second-hand commodities	Income tax and TDS to show gross income	Income arising from transfer of shares and other securities.
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<p>Difficulties</p>	<ol style="list-style-type: none"> 1. It is very difficult to estimate Mixed income in vast country with unincorporated sectors and un-organized sector. 2. Many economists criticize the non-inclusion of interest on national debt in calculation of national Income. 3. The data collected for calculation of NI is highly unreliable and 															

understated.

Expenditure Method/ Income disposal Method

Meaning	In the expenditure approach, national income is the aggregate final expenditure in an economy during an accounting year. This approach gives GDP at market price.
Explanation:	Expenditure on final goods and services in the economy is divided into four broad categories, namely <ol style="list-style-type: none"> Private final consumption expenditure- Consumption expenditure done by households. Investment Expenditure- Investment expenditure done by producers and Government in an economy. Government final consumption expenditure- Consumption expenditure done by government. Net exports- foreign component of expenditure in the form of net exports.
Private Final consumption expenditure Denoted By C	The volume of final sales of goods and services to consumer households and nonprofit institutions serving households acquired for consumption (not for use in production) are multiplied by market prices and then summation is done. It also includes the value of primary products which are produced for own consumption by the households, payments for domestic services which one household renders to another.
Government final consumption expenditure Denoted By G	Government means general government and not the government enterprises Since the collective services provided by the governments such as defense, education, healthcare etc. are not sold in the market, the only way they can be valued in money terms is by adding up the money spent by the government in the production of these services. This total expenditure is treated as consumption expenditure of the government. Government expenditure on pensions, scholarships, unemployment allowance etc. should be excluded because these are transfer payments.
Investment Expenditure Denoted By I	Gross domestic fixed capital formation includes final expenditure on machinery and equipment and own account production of machinery and equipment, expenditure on construction, expenditure on changes in inventories, and expenditure on the acquisition of valuables such as, jewelry and works of art. It comprises of- <ol style="list-style-type: none"> Gross fixed investment- Expenditure on machinery and equipment, expenditure on construction, and expenditure on the acquisition of valuables such as, jewelry and works of art. Inventory Investment- This means change in inventory. Expenditure on residential investment- Expenditure on purchase or construction of new houses. Own account production of houses, expenditure on major repairs and renovation are to be included in

	expenditure on residential houses
Net Export Denoted by $X-M$	Net exports are the difference between exports and imports of a country during the accounting year. It can be positive or negative.
Formula	$GDP_{MP} = C+I+G+(X-M)$ Therefore National Income $Y = C + I + G + (X-M) + NFIA - \text{Depreciation} - NIT$
Precautions	<ol style="list-style-type: none"> 1. Goods meant for self-consumption shall be added and proper value shall be assigned in that case. 2. Own account production of machinery and equipment shall be added to calculate final expenditure on machinery and equipment. 3. Transfer payments shall be excluded. 4. Expenditure on second-hand goods should be excluded. 5. Expenditure on intermediate products should be excluded.

Question: Why are net exports added when computing national income by expenditure Method?

Choice of Different method

In many economies, it **may not be possible** to estimate National Income using any **one method exclusively**.

- a) **Income Method** is more suitable in **Developed Economies**.
- b) **If Commodity Flow and Expenditure** then Expenditure Method can be used.
- c) An effective procedure is to arrive at National Income using all these three approaches / methods, which serves the following purposes -
 - i. to permit cross-checking of different methods, ensuring greater accuracy of data,.
 - ii. to provide more details and insights - e.g. Sectoral Contribution to Production, Income Group Distribution, Consumption and Investment Patterns, etc .

In India, a **combination of the three methods** is used, e.g. *Production Method is used for Agricultural Sector, Income Method is used for Small Scale Sector and Expenditure Method is used for Construction Sector*, to determine Net Value Added in that Sector.

Keynesian Theory of Income determination

Background:

- ✚ The Great Depression of the 1930's, was the greatest economic crisis the western world had experienced.
- ✚ Many economists then recommended **government spending** as a way of reducing unemployment, but they had no macroeconomic theory by which to justify their recommendations.
- ✚ A comprehensive theory to explain Income determination was first put forward by the British economist John **Maynard Keynes** in his masterpiece '**The General Theory of Employment Interest and Money**' published in 1936.

- ✚ The Keynesian theory of income determination is presented in two sector model, three sector model and four sector mode.
- ✚ *Equilibrium output occur when the desired amount of output demanded by all the agents in the economy exactly equals the amount produced in a given time period. In other words, an economy is said to be in equilibrium when the production plans of the firms and the expenditure plans of the households match.*

Key Words:

Consumption Function	<p>1. Functional relationship between aggregate consumption expenditure and aggregate disposable income, expressed as $C = f(Y)$. shows the level of consumption (C) corresponding to each level of disposable income (Y).</p> <p>2. The consumption function describes the functional relationship between consumption spending and disposable income.</p>				
Saving Function	Income not spent on consumption is saved. Thus, saving function denotes the balance after impact of consumption				
Marginal Propensity to consume	<p>The concept of MPC describes the relationship between change in consumption (ΔC) and the change in income (ΔY). The value of the increment to consumer expenditure per unit of increment to income is termed the Marginal Propensity to Consume (MPC).</p> <p>$MPC = \text{Consumption} / \text{Income}$</p>				
Marginal propensity to Save (MPS)	<p>(1 - b) is called (Marginal Propensity to Save) MPS.</p> <p>$MPS = S / Y$</p>				
Average propensity to consume	<p>The average propensity to consume is a ratio of consumption defining income consumption relationship. The ratio of total consumption to total income is known as the average propensity to consume (APC)</p> <p>$APC = \text{Total consumption} / \text{Total income}$</p>				
	Income (Y)	Consumption (C)	APC (C/Y)	MPC ($\Delta C / \Delta Y$)	MPS ($\Delta S / \Delta Y$) $= (1 - MPC)$
	0	500	$500/0 = \infty$	-	-
	1000	1250	$1250/1000 = 1.25$	$750/1000 = 0.75$	0.25
	2000	2000	$2000/2000 = 1.00$	$750/1000 = 0.75$	0.25
	3000	2750	$2750/3000 = 0.92$	$750/1000 = 0.75$	0.25
	6000	5000	$5000/6000 = 0.83$	$1500/2000 = 0.75$	0.25
	10,000	8000	$8000/10,000 = 0.80$	$3000/4000 = 0.75$	0.25
Autonomous Expenditure	<p>Autonomous consumption expenditure is the minimum expenditure to sustain life irrespective of size of income, thus it is income inelastic. The expenditure which do not vary with the level of income. They are determined by factors other than income such as business expectations and economic policy. They are generally made by ----- in the public sector with a view to provide public utilities & to make maximum social benefit.</p>				

Keynesian theory of determination of National Income in two Sector Model.

- i. According to Keynes $AD=AS$ _____ (1)
- ii. $AD = C+ I$ _____ (2)
- iii. Aggregate Supply in terms of Money = Quantity Produced x Price.
- iv. Value of Aggregate Supply = National Income. _____ (3)
- v. Income (Y) = C+ S _____ (4)
- vi. Therefore from (1), (2), (3) & (4)
- vii. $C+S = C+I$
- viii. $S=I$
- ix. $C = a + by$

❖ Why any other point cannot be Equilibrium NI?

❖ **Case 1:** $AS > AD$ i.e $C+S > C+I$

Ans: The firm will not be able to sell its stock & firm will reduce the production and cut down on expenditure, as a result demand for factor of production will decrease, in case of Factor will

✚ reduce and thus spending will fall. This process will continue till equilibrium is reached.

❖ **Case 2:** $AS < AD$ i.e $C+S < C+I$

Ans: Here Demand is greater than supply and hence producer will increase the production leading to higher National income. This will cause upward moment along the line to achieve the equilibrium

Keynesian theory of determination of National Income in three Sector Model.

$$Y = AS = C + S + T \text{ _____ (2)}$$

$$Ad = C + I + G \text{ _____ (3)}$$

∴ Consumption will be- $C = a + b (Y_d)$

Keynesian theory of determination of NI in Four Sector Model.**In 4 Sector Economy**

$$AS = AD$$

$$C + S + T = C + I + G + (x - m)$$

$$S + T = I + G + (x - m)$$

$$\text{OR } S + I + m = I + G + x$$

Investment Multiplier:

1. The multiplier refers to the **phenomenon whereby a change in an injection of expenditure will lead to a proportionately larger change** (or multiple change) in the level of national income.
2. Multiplier explains how many times the aggregate income increases as a result of an increase in investment.
3. The ratio of ΔY to ΔI is called the investment multiplier, k.
4. $\Delta Y = k \Delta I$.

5. The value of the multiplier is found from the equation $k = 1 / (1 - MPC)$. Or $K = 1 / MPS$
6. The multiplier shows how shocks to one sector are transmitted throughout the economy.

Effect of Changes in Autonomous Investment

1. an increase in autonomous investment by ΔI shifts the aggregate demand schedule from $C+I$ to $C+I+\Delta I$.
2. Correspondingly, the equilibrium shifts from E to E^1 and the equilibrium income increases more than proportionately from Y_0 to Y_1 .

Till how long these processes go?

1. The more powerful these leakages are, the smaller the value of the multiplier. The leakages are caused due to:
 - a) Progressive rates of taxation
 - b) High liquidity preference and idle saving or holding of cash balances
 - c) Demand met out of the existing stocks or through imports.
 - d) Additional income spent on purchasing existing wealth or purchase of government securities and shares from shareholders or bondholders, income used for payment of debts
 - e) case of full employment additional investment will only lead to inflation, and scarcity of goods and services despite having high MPC

In underdeveloped countries value of multiplier is low, due to structural inadequacies, increase in consumption expenditure is not generally accompanied by increase in production.

Relationship between Investment Multiplier and Marginal Propensity to consumer

Higher the MPC, Higher will be the Value of Multiplier, and Vice versa. Maximum Value of Multiple will be Infinite when MPC is 1. We conclude that value of Multiplier is reciprocal of MPS (1-MPC)

Deflationary Gap

1. If the aggregate demand is for an amount of output less than the full employment level of output, then we say there is deficient demand.
2. Deficient demand gives rise to a 'deflationary gap' or 'recessionary gap'.
3. Recessionary gap also known as 'contractionary gap' arises in the Keynesian model of the macro economy when the equilibrium level of aggregate production achieved in the short-run falls short of what could be produced at full employment.
4. Recessionary gap occurs when the economy is in a business-cycle contraction or recession.

Public finance – Market Failure and Government Intervention

2.1.1 Market Failure

- Economists presume that people will make choices in their **own self-interest**, in their **greatest personal benefit** and **behave rationally**.
- **Prices provide the accurate signals** for right quantity and right price.
- The term "**market failure**" does not mean the market is not working at all, it only means that the market does not function in the way that it should.
- Market failure - **misallocation of society's scarce resources** - either **overproduction** or **underproduction**.
- There are two types of market failure namely;
 - 1) Complete market failure. This is a case of "missing markets" and occurs when the market does not supply products at all.
 - 2) Partial market failure occurs when the market does actually function, but it produces either the wrong quantity of a product or at the wrong price..

2.1.2 Four major reasons for Market Failure

Market power

Externalities

Public Goods

Incomplete Info

Market Power

Point	Explanation
Meaning	<ol style="list-style-type: none"> 1) Market power or monopoly power is the ability of a firm to profitably raise the market price of a good or service over its marginal cost and can charge a price that gives them positive economic profits. 2) These profits are not achieved due to operating efficiency, but due to market power and dominance. 3) <i>For Buyers: Market Power is the ability of Buyers to influence the Seller into the production of certain goods and services, over and above optimum levels of consumption. (Generally, Market Power is viewed from the Sellers' Perspective)</i>
Techniques	<ol style="list-style-type: none"> 1. Lower output: (artificial scarcity) 2. Higher Price: 3. Missing Markets:

Externalities | Spillover effects | Neighborhood effects | Third-party effects | side-effect

(Kare koi aur bhare koi aur)

Point	Explanation
Meaning and concept	<ol style="list-style-type: none"> 1. When actions of either Consumers or Producers result in costs or Benefits that do not reflect as part of the Market Price, such costs or Benefits which are not recognized by, and accounted for, by the Market Price are called "Externalities"

	<p>2. An Externality occurs, when a Consumption or Production Activity has an <u>indirect effect on other's consumption or Production activities</u> and such effect are not reflected directly in Market Prices.</p> <p>3. Externalities are costs (negative externalities) or benefits (positive externalities), which are not reflected in free market prices.</p>	
Consequences of Negative Externalities	<p>1) In Case of Negative Externalities- Marginal Social Cost > Marginal Private Cost.</p> <p>2) In Case of positive Externalities- Marginal Social Cost < Marginal Private Cost.</p>	
Unidirectional and reciprocal Externalities	Unidirectional Externalities	Reciprocal Externalities
	Occurs when Originator imposes costs or Benefits on another (Recipient) and there is no externality imposed by the Recipient back on the Originator.	It occurs when 2 persons impose there is costs or on one another.
Production Externalities & Consumption Externalities	Production Externalities	Consumption Externalities
	Production externality initiated in production which imposes an external cost/ benefit on others may be received by another in consumption or in production.	Consumption externalities initiated in consumption which produce external costs/ benefits on others may be received in consumption or in production.
Externalities can be positive or negative.	Positive externalities	Negative externalities
	occur when the action of one party confers benefits on another party	occur when the action of one party imposes costs on another party.
	It is socially desirable	It is socially undesirable

2. Goods

Characteristics of Private goods: Private goods refer to those goods that yield utility to people. Anyone who wants to consume them must purchase them.

A few examples are: food items, clothing, movie ticket, television, cars, houses etc.

Properties of Private goods:

1. **Property Right:**
2. **Rivalrous:**
3. **Excludable:**
4. **No Free riding problem:**
5. **Rejectable:**
6. **Additional resource costs**
7. **Efficient Allocation-**
8. **There is no Market Failure.**

Public Goods - Paul A. Samuelson who introduced the concept of 'collective consumption good' in his path-breaking 1954 paper 'The Pure Theory of Public Expenditure' is usually recognized as the first economist to develop the theory of public goods.

a) Characteristics of Public Goods:

1. **Collective in nature:**

2. **No direct payment**
3. **Non-rival in consumption.**
4. **Public goods are non-excludable.**
5. **Public goods are characterized by indivisibility.**
6. **Free Riding Problem & Externalities:**
7. **Example:** Defence, Highways, Education, Scientific Research, Law Enforcement, Lighthouse, Fire Protection, Disease Prevention, Public Sanitation etc. **[Note:** Public Goods are divided into Public Consumption Goods and Public Factors of Production.]

Pure and Impure Public Goods

sn	Pure Public Goods	Impure Public goods
1.	A pure public good is non-rivalrous and non-excludable .	There are many hybrid goods that possess some features of both public and private goods . Impure public goods are partially rivalrous or congestible.

Free Riding

1. Free riding is '**benefiting from the actions of others without paying**'.
2. Consumers can take advantage of public goods **without contributing sufficiently** to their production.
3. The **absence of excludability** in the case of public goods and the **tendency of people to act in their own self-interest** will lead to the problem of free riding.
4. If every individual plays the same strategy of free riding, the strategy will fail because nobody is willing to pay and therefore, nothing will be provided by the market. Then, a free ride for any one becomes impossible.
 1. No public good will be provided in private markets
 2. Private markets will seriously under produce public goods even though these goods provide valuable service to the society.

Information failure

- a) **Complex nature:**
- b) **Information not available quickly and cheaply:**
- c) **Ignorant Buyer/seller:**
- d) **Inaccuracy:**
- e) **Misunderstanding:**

Asymmetric information

- a) Asymmetric information occurs when there is an **imbalance in information between buyer and seller** i.e. when the buyer knows more than the seller or the seller knows more than the buyer can distort choices.
- b) This lead to Problem of **Adverse Selection - wrong product selected**

'Lemons problem' developed by **George Akerlof** in relation to the used car market

- a) Second-hand cars may be good quality cars or poor quality cars defined as "**lemons**". The owner of a car knows much more about its quality than anyone else & he may not disclose all the mechanical defects of the vehicle.
- b) Based on the probability that the car on sale is a 'lemon', the buyers' willingness to pay for any particular car will be based on the '**average quality**' of used cars. Since there is quality uncertainty, to account for this risk, the price offered for any used car is likely to be less.



Adverse Moral Hazard - seen in case of Insurance

1. Moral Hazard is **opportunism** characterized by an informed person's taking **advantage of a less-informed person through an unobserved action**.
2. It arises from lack of information about someone's future behavior.
3. Moral hazard occurs when there is distortion of incentives to take care or to exert effort when **someone else bears the costs of the lack of care or effort**.

Role of Government

Objectives of Government Interventions:

1. To control potential rise in prices. (MRTP Act)
2. To bring in welfare to the under privileged sections of the Society by ensuring equity and fairness, (Subsidy)
3. To provide Incentives to promote production / use of Resources in a socially desirable direction etc. (Organic vegetable).
4. One of the most important activities of the government is to redistribute incomes so that there is equity and fairness in the society.

Argument in favor of Government Interventions:

1. The role of government **improves the wellbeing of individuals and households**.
2. **Under production** of certain goods & higher prices than would exist under conditions of competition(Generic Medicine)
3. **Non-production of public goods** (or collective goods) in sufficient quantities by the market. (Parks and Playground)
4. Production and Consumption of a Good or Service affects People and they cannot influence through Markets decision about how much of the Good or Service should be produced e.g. Pollution
5. Reduction or Distortion in choices available to consumers, and consequently lower welfare. (Only Private mode of Transport)
6. Equity and Fairness- to Curb Inequalities in the distribution of Income and Wealth.
7. Instabilities caused by Business cycles and fluctuations which lead to recession, inflation, etc. for prolonged periods, and cannot be corrected by Market system as such.
8. Market's inability to rectify "**Stagflation**" i.e. a State of affairs in which inflation and Unemployment co-exist,
9. Market's inability to rectify "**Contagious Effect**" i.e. forces of instability transmitted from one country to other countries, due to increased international interdependence

Arguments against government interventions:

- Government intervention does not imply that Markets are replaced by Government action. Government can act only as **complement rather than as a substitute** to the Market System in an economy,
- Governments may **not always** be **unbiased and benevolent**.
- Individuals may use Government as a Mechanism for maximizing their **self interest**
- In certain cases, the **cost** incurred by Government to deal with some Market failure could be greater than the cost of Market Failure itself.
- Government intervention may produce **fresh and more serious problems** that the ones sought to be rectified.
- Government intervention is ineffective if it causes **wastage of resources** expended for the intervention
- Governments are likely to commit **serious errors** in its attempt to correct Market failure.

Types of Government interventions

Government interference can be-

- ∂ **Direct** as a buyer or supplier of public goods / information
- ∂ **Indirectly** in the form of **subsidies / taxes** and regulation / influence to correct distortion in the market which occurs when there are deviations from the ideal perfectly competitive state.

Market Power- Government control

1. **Setting maximum prices** that firms can charge.
2. Price regulation is most often used for **natural monopolies**.
3. **Rate-of-return regulation**. Another approach to regulation is setting **price-caps**.
4. Market liberalization by introducing competition in previously monopolistic sectors such as energy, telecommunication etc.
5. Controls on mergers and acquisitions if there is possible market domination
6. Price capping and price regulation
7. Profit or rate of return regulation
8. Patronage to consumer associations
9. Tough investigations into cartelization and unfair practices such as collusion and predatory pricing
10. Restrictions on monopsony power of firms
11. Reduction in import controls and
12. Nationalization



Government intervention to Correct Externalities

A. Direct Control: (also known as command solutions) - Direct controls **prohibit** specific activities that explicitly create negative externalities or require that the negative externality be limited to a certain level.

Examples Include:

- Smoking is completely banned in many public places.
- Stringent rules are in place in respect of tobacco advertising, packaging and labeling etc.
- fix emissions standard which is the legal limit on how much pollutant a firm can emit
- Licensing, production quotas and mandates regarding acceptable production processes are other examples of direct intervention by governments.

B. Indirect/ market-based Control:

- ✓ These provide economic incentives to Market Participants, to achieve the socially optimal solution.
- ✓ In other words, the government tries to alter the prices of goods through taxes and subsidies and thus change the behaviour of market participants.
 1. Setting the price directly through a pollution tax. These taxes are named Pigouvian taxes after A.C. Pigou.
 2. Setting the price indirectly through the establishment of the cap-and-trade system.

a) The second approach to establishing prices indirectly is 'tradable emissions permits'.

You might have heard of 'carbon credits'. The use of tradable permits to limit emissions is often called 'cap and trade'.

- a) Marketable Licenses (called permits) to emit limited quantities of pollutants can be bought at a specified price from the Regulatory Agency, by Polluters

- b) A high polluter has to either- i) pay monetary penalties, or ii) buy more permits both leading to increase in costs and decrease in profits.
- c) A low polluter can- i) avoid Monetary Penalties, and ii) sell permits and earn revenue, both making such firm profitable.

i. Problems in administering an efficient pollution tax.

- ∂ Difficult to Administer-
- ∂ Complex-
- ∂ No Genuine solution-
- ∂ Failure in case of inelastic demand-
- ∂ Adverse effect on employment-

Government Intervention to correct externalities Positive externalities:

Though positive externality is associated with **external benefits**, we still call it a **market failure** because, left to market, there will be less than optimal output.

A. Direct Control:- Production & Supply

- a) Government enters the market directly as an Entrepreneur, to produce items whose externalities are vastly positive & pervasive.
- b) Examples: R&D, afforestation, Sewage Treatment, Cleaning up Rivers etc.

B. Indirect control:- Subsidies:

- a) Subsidies given by Government reduce the Production Costs of firms.
- b) This leads to higher output and supply.
- c) Thus, such goods will be produced in higher quantities i.e. socially optimum level of output

Government intervention in case of Merit Goods

Meaning and Example

1. Merit Goods- a) are **socially desirable**, b) involve substantial **positive externalities** in their consumption.



Need for Intervention

1. **Lower Output:**
2. **Equity Fairness:**
3. **Uncertainty in consumption:**
4. **Imperfect information:**



Government can regulate the supply of merit goods in following manner

1. **Direct government provision:**
2. **Regulation:**
3. **Subsidies:**
4. Governments also engage in direct production of environmental quality.



Government intervention in De-merit Goods

Meaning and Example

1. Demerit goods are goods which are believed to be **socially undesirable** and involve **high level of negative externalities**.
2. However, it should be kept in mind that all goods with negative externalities are not essentially demerit goods; e.g. Production of steel causes pollution, but



steel is not a socially undesirable good.

3. More than optimal production and consumption.
4. Misallocation of society's scarce resources.
5. Consumers overvalue demerit goods because of imperfect information.

ways for Intervention

1. Complete ban.
2. Persuasion.
3. Through legislations
4. Strict regulations \.
5. Regulatory controls.
6. Imposing unusually high taxes

Reason why Govt. fails to provide such measures -

1. Addiction level
2. Inelastic nature of demand.
3. Sellers can always shift the taxes to consumers without losing customers.
4. Banned goods are secretly driven underground and traded in a hidden market.

Government intervention in other areas **Goods**

Reason why certain goods are produced by government despite the fact that it can be produced by Private sector

1. Left to the markets and profit motives, these may prove dangerous to the society..
2. In the case of such pure public goods where entry fees cannot be charged, direct provision by governments through the use of general government tax revenues is the only option.



Price intervention: non-market pricing

1. Very often, there is strong political demand for governments to intervene in markets for various goods and services on grounds of fairness and equity.
2. Price floor (a minimum price buyer is required to pay). Price floor means the lowest price fixed by government for a product. The Government fixes floor price for farm products. This regulates income of the farmers.
3. Price ceiling (a maximum price seller is allowed to charge for a good or service). When prices of certain essential commodities rise extremely, government may resort to controls in the form of price ceilings for making a resource or commodity available to all at reasonable prices.
4. In the case of many crops the government has initiated the Minimum Support Price (MSP) programme as well as procurement by government agencies at the set support prices. The objective is to guarantee steady and assured incomes to farmers. In case the market price falls below the MSP, then the guaranteed MSP will prevail.

Government Intervention for Incomplete Information

For combating the problem of market failure due to information problems following interventions are resorted to:

- Government makes it mandatory to have accurate labeling and content disclosures.
- Mandatory disclosure of information,
- Regulation of advertising and setting of advertising standards to make advertising more responsible, informative and less persuasive.

FISCAL FUNCTIONS: AN OVERVIEW CENTRE AND STATE FINANCE

1. The governments of all nations have important economic functions even where markets constitute the basic resource allocation mechanism.
2. There are three main macroeconomic goals for any nation.
 - a. The first is economic growth.
 - b. The second goal is high levels of employment
 - c. third macroeconomic goal is stable price levels.

View of Economists

Adam Smith

Adam Smith is often described as a bold Advocate of Free Markets and Minimal Governmental Activity except in areas of-

- National Defense, Establishment and Maintenance of Highly beneficial Public, Maintenance of Justice, Public Works

Richard Musgrave

Richard Musgrave, in his classic treatise "**The Theory of Public Finance**" (1959) introduced the three-branch taxonomy of the role of Government functions in a Market Economy. -

1. **Allocation Function (Efficiency Focus)**- Aims to correct the sources of inefficiency in the Economic System
2. **Distribution Function (fairness focus)**- Ensures that the Distribution of Wealth and Income is fair and equitable.
3. **Stabilization Function (to ensure price stability)**- Covers Monetary and Fiscal Policy, ensuring Macro-economic stability, Maintenance of High Levels of Employment and Price Stability etc.

The allocation and distribution functions are primarily microeconomic functions, while stabilization is a macroeconomic function.

Allocation Function

1. **Meaning: Optimal or efficient allocation of scarce resources** means that the available resources are put to their best use and no wastages are there.
2. The private sector resource allocation is characterized by market supply and demand and price mechanism as determined by consumer sovereignty and producer profit motives.
3. The state's allocation, on the other hand, is accomplished through the revenue and expenditure activities of governmental budgeting.
4. In its allocation role, the government acts as a complement rather than as a substitute to the market system in an economy.

Reason for Government Intervention in allocation:

1. Public goods will not be produced in sufficient quantities by the market.
2. Nonexistence of markets in a variety of situations.
3. Government intervention will improve in social welfare.

Market failures which hold back the efficient allocation of resources

1. **Imperfect competition and presence of monopoly power**
2. Incomplete markets
3. Externalities Factor
4. Imperfect information
5. Inequalities in the distribution of income and wealth

A variety of allocation instruments are available by which governments can influence resource allocation in the economy.

1. Government may **directly produce** the economic good
2. Government may **influence private allocation** through incentives and disincentives
3. Government may influence **allocation through its competition policies**,
4. Government **sets legal and administrative frameworks**, and

Re-distribution Function

1. The distributive function of budget is related to the basic question of 'for whom' should an economy produce goods and services.
2. Governments can redistribute income and wealth either through the **expenditure side or through the revenue side of the budget**.
3. On the expenditure side, **governments may provide free or subsidised education, healthcare, housing, food and basic goods etc. to deserving people**.
4. On the revenue side, **redistribution is done through progressive taxation**.

The distribution function of the government aims at-

1. **Equitable Distribution** ensuring increased overall social welfare
2. **Well-being** of those members of the society who suffer from deprivations of different types
3. Providing **equality** in income, wealth and opportunities
4. Providing security for people who have **hardships**, and
5. Ensuring that everyone enjoys **a minimal standard of living**.

Redistribution function/ market intervention for socio- economic reasons performed by governments are:

1. **Progressive taxation** policies of the government
2. Proceeds from progressive taxes used for financing public services, especially those that benefit low-income households
3. **Employment reservations**
4. families below the poverty line are provided with monetary aid and aid in kind
5. **Special schemes for backward regions** and for the vulnerable sections of the population

However, Redistribution measures should be accomplished with minimal efficiency costs by carefully balancing **equity and efficiency** objectives-comment

Stabilization Function

1. Macroeconomic stability is said to exist when:
 - a) an economy's output matches its production capacity,
 - b) the economy's total spending matches its total output
 - c) the economy's labour resources are fully employed, and
 - d) Inflation is low and stable.

2. Stabilization function of the government is derived from the Keynesian proposition that *a market economy does not automatically generate full employment and price stability and therefore the governments should pursue deliberate stabilization policies.*
3. Business cycles are *natural phenomena & market mechanism is limited in its capacity* to prevent it.
4. In the absence of appropriate corrective intervention it may be *prolonged for longer periods.*
5. The stabilization issue also becomes more complex as the increased international interdependence ("*Contagion effect*").
6. Thus, The stabilization function is one of the key functions of fiscal policy and *aims at eliminating macroeconomic fluctuations arising from suboptimal allocation.*
7. The stabilization function is concerned with the performance of the aggregate economy in terms of:
 - a) labour employment and capital utilization,
 - b) overall output and income,
 - c) general price levels,
 - d) balance of international payments, and
 - e) the rate of economic growth.
8. Monetary policy works through controlling the size of money supply and interest rate in the economy.
9. Fiscal policy by means of its expenditure and taxation decisions.

Centre and State Finance

- 1) **Fiscal federalism**, a term introduced by Richard Musgrave, deals with the division of governmental functions and financial.
- 2) Musgrave argued that the **federal or central government should be responsible for economic stabilization and income redistribution**, and the **allocation of resources** should be the **responsibility of the state and local governments.**
- 3) India is a federation of 28 states and 8 union territories.
- 4) **The constitution of India** has provided for the division of powers between the central and the state governments.
- 5) **Article 246 of the Constitution demarcates the powers of the union and the state** by classifying their powers into three lists, *namely union list, state list and the concurrent list.*
 - i. **The union list** contains items on which the union parliament alone can legislate
 - ii. **The state list** has items on which the state legislative assemblies alone can legislate
 - iii. **The concurrent list**, on which both the parliament and the legislative assemblies can legislate. In the event of conflicting legislation in concurrent list, the law passed by the centre prevails.
- 6) The central government has greater revenue raising powers. The union government can levy taxes such as *tax on income, other than agricultural income, customs and export duties, excise duties on certain goods, corporation tax, tax on capital value of assets excluding agricultural land, terminal taxes, security transaction tax, central GST, union excise duty, taxes other than stamp duties etc.*
- 7) The state governments can levy taxes *on agricultural income, lands and buildings, mineral rights, electricity, vehicles, tolls, professions, collect land revenue and impose excise duties on certain items.*
- 8) The property of the union is exempt from state taxation. The property and income of the states are not liable to be taxed by the centre.
- 9) Articles 268 to 281 of the constitution contain specific provisions in respect of distribution of finances among states.

Distribution of revenue between the union and states is based on the constitutional provisions as follows:

- 1) The **Finance Commission** is a constitutionally mandated body that is at the centre of fiscal federalism.
- 2) The Finance Commission helps in maintaining fiscal federalism in India by performing following functions:
 - (a) The **distribution between the union and the states of the net proceeds of taxes.**
 - (b) **Determination of principles and quantum** of grants-in-aid to states which are in need of such assistance.
 - (c) To **make recommendations to the President** on measures needed to augment (increase) the consolidated fund of a state.
- ∅ *The Fifteenth Finance Commission was constituted on 27, November 2017 against the background of the abolition of Planning Commission and the introduction of the goods and services tax (GST). The commission recommended the share of states in the central taxes (vertical devolution) for the 2021-26 to be 41%, which is the same as that for 2020-21.*
- ∅ *The criteria for distribution of central taxes among states for 2021-26 period are same as that for 2020-21. They is **Income Distance i.e the distance of a state's income from the state with the highest income.***

Area , **Population** (2011), **Demographic** performance (to reward efforts made by states in controlling their population), **Forest** and ecology, **Tax** and fiscal efforts:

GST: - Background and facts

1. The introduction of GST, which was rolled out across the country on 1 July 2017.
2. The GST subsumes the majority of indirect taxes - excise, services tax, sales tax, octroi (entry tax). The GST has made India's indirect tax regime unitary in nature.
3. The states levy and collect state GST (SGST) and the union levies and collects the central GST (CGST).
4. For any particular good or service or a combination of the two, the SGST and CGST rates are equal. An integrated GST (IGST) is applied on inter-state movement of goods and services and on imports and exports..
5. During the five-year transition period, the top five GST compensation-receiving states were Maharashtra, Karnataka, Gujarat, Tamil Nadu, and Punjab.
6. As per the supreme court verdict in May 2022, the Union and state legislatures have "equal, simultaneous and unique powers "to make laws on Goods and Services Tax (GST) and the recommendations of the GST Council are not binding on them.

THE PROCESS OF BUDGET MAKING: SOURCES OF REVENUE, EXPENDITURE MANAGEMENT AND MANAGEMENT OF PUBLIC DEBT

1. A Budget is a statement that presents the details of '**where the money comes from**' and '**where the money goes to**'.
2. The government budget is a document presented for approval and legislation by a government.
3. The budget also contains estimates of the government's accounts for the next fiscal year called **budgeted estimates.**
4. Need for Government Budget: Budget is required -
 - a) To efficiently allocate limited resources to ensure maximum social welfare.

- b) To reallocate resources in accordance with its declared priorities.
- c) To ensure redistribution of Income and Wealth.
- d) For Reduction/ elimination of economic fluctuations to bring in stability, sustainable increase in real GDP and reduction in regional Disparities.

THE PROCESS OF BUDGET MAKING

1. The budget is prepared by the Ministry of Finance in consultation with NITI Aayog and other relevant ministries.
2. Despite the fact that the union budget is presented on 1st February, the process of budget preparation commences in August-September of the previous year.
3. **Annual Financial statement:**
4. The budgetary procedures are -
 - a. *Preparation of the budget*
 - b. *Presentation and enactment of the budget and*
 - c. *Execution of the budget*
5. The budget process mainly consists of two types of activities:
 - a. The administrative process,;
 - b. The legislative process.

The budget speech of the Finance Minister is usually in two parts.

The finance minister makes a detailed budget speech at the time of presenting the budget before the Lok-Sabha.

- A. **Part A of the budget speech gives an outline of the prevailing macro economic situation of the country and the budget estimates for the next financial year**
- B. **Part B of the budget speech details the progress**
- C. **The Annual Financial Statement** shows the **receipts and expenditure** of government in three separate parts under which government accounts are maintained, namely:
 - a. Consolidated Fund of India
 - b. Contingency Fund of India, and the
 - c. Public Account.
- D. The expenditures of certain categories (e.g. the emoluments and allowances of the President of India and his/her office, and emoluments of Judges of supreme courts and high ranking personnel of constitutional bodies across India) are 'charged' on the Consolidated Fund of India and are not subject to the vote of parliament, are also indicated separately in the budget.
- E. *By convention in an election year, the budget may be presented twice. The first one is to first to secure a Vote on Account for a few months. This is followed by the Annual financial statement for that year or the full-fledged Budget.*
- F. The Parliament has to pass the Finance Bill within 75 days of its introduction.

SOURCES OF REVENUE

The broad sources of revenue are:

1. The **Department of Revenue of the Ministry of Finance** exercises control in respect of the revenue matters relating to **direct and indirect union taxes**. The department is also administering goods and services tax (GST), central sales tax, stamp duties too.

2. The Department of Revenue exercises control in respect of matters relating to all the direct and indirect union taxes through two statutory boards, namely,
- the Central Board of Direct Taxes (CBDT) - Matters relating to the levy and collection of all direct taxes
 - the Central Board of Indirect Taxes and Customs (CBIC). - Matters relating to the levy and collection of all indirect taxes (GST, Customs and central excise duties, service tax)

3. Government receipts are classified under two categories:

a) Revenue receipts		b) Capital receipts	
Tax revenue	Non tax revenue.	debt capital receipts	non debt capital receipts
<ol style="list-style-type: none"> Corporation tax Taxes on income Wealth tax Customs duties Union excise duties Goods and services tax including GST compensation cess Taxes on union territories 	<ol style="list-style-type: none"> Interest receipts, Dividends and profits from public sector enterprises and surplus transfers from Reserve Bank of India Other Non-tax revenues and Receipts of union territories 	<ol style="list-style-type: none"> Market loans for different purposes Short term /Treasury bill borrowings Securities issued against small savings, State provident fund (Net) Net external debts Other receipts (Net) 	<ol style="list-style-type: none"> Recoveries of loans and advances Miscellaneous capital receipts (disinvestments and others)

- ❖ **Debt capital receipts** Comprise of market loans and short term borrowings by the government, borrowing from the Reserve Bank of India and loans taken from foreign governments/institutions.
- ❖ **Non debt capital receipts** include recoveries of loans advanced by the government to PSEs, state governments, foreign governments and union territories and sale proceeds of government assets, including those realized from divestment of government equity in public sector undertakings (PSUs).

PUBLIC EXPENDITURE MANAGEMENT

1. The **Department of Expenditure of the Ministry of Finance** is the nodal department for overseeing the public financial management system. It is responsible for
- the implementation of the recommendations of the Finance Commission,
 - monitoring of audit comments/observations, and preparation of central government accounts.
 - Additionally, it also assists central ministries/departments in
 - controlling the costs and prices of public services,
 - reviewing systems and procedures to optimize outputs and outcomes of public expenditure.

In Expenditure budget, the Central government expenditure is classified into six broad categories as below:

A. Centre's Expenditure:

- Establishment Expenditure of the Centre- includes establishment-related expenditure of the ministries/departments, and attached and subordinates offices.
- Central sector schemes- include those schemes which are entirely funded and implemented

by the central agencies under union government ministries/departments.

- c) Other central expenditures including those on CPSEs and Autonomous Bodies

B. Centrally Sponsored Schemes and other Transfers: The transfers include

- a) Centrally sponsored schemes
b) Finance Commission transfers and
c) Other transfers to states

PUBLIC DEBT MANAGEMENT

- In emerging market and developing economies, **the government is generally the largest borrower.**
- Government debt from internal and external sources contracted in the Consolidated Fund of India is defined as Public Debt.
- Public debt management refers to the task of determining and implementing the strategy, by the fiscal and monetary authorities, the size and composition of debt, the maturity pattern, interest rates, redemption of debt etc**
- Debt management strategy is based on three broad pillars namely, low cost of borrowing, risk mitigation and market development.
- The **institutions responsible for public debt management are:**
 - Internal Debt Management Department (IDMD) (28 states and 2 UT)** - Division of RBI
 - External Debt - Department of Economic Affairs in Ministry of Finance (MOF)**
 - Ministry of Finance; Budget** Division and Reserve Bank of India - Other liabilities such as small savings, deposits, reserve funds etc.
- The Fiscal Responsibility and Budget Management (FRBM) was passed in 2003** to provide a legislative framework for reduction of deficit and thereby debt of the central government. The objectives of the act are:
 - inter-generational equity in fiscal management,
 - long run macroeconomic stability,
 - better coordination between fiscal and monetary policy, and
 - Transparency in fiscal operation of the government.

Budget concepts (Type of budgets)

surplus budget	<ul style="list-style-type: none"> When estimated government receipts are more than the estimated government expenditure it is termed as surplus budget.
deficit budget	<ul style="list-style-type: none"> When estimated government receipts are less than the government expenditure.
Balanced budget	<ul style="list-style-type: none"> A balanced budget is a budget in which revenues are equal to expenditures.
Unbalanced budget	The budget may either be surplus or deficit.
Capital Receipts	<ul style="list-style-type: none"> Capital receipts are those receipts that lead to a reduction in the assets or an increase in the liabilities of the government.
Revenue Receipts	<ul style="list-style-type: none"> Revenue receipts can be defined as those receipts which neither create any liability nor cause any reduction in the assets of the government. There are two sources of revenue receipts for the government – tax revenues and non-tax revenues.
Capital	<ul style="list-style-type: none"> There are expenditures of the government which result in creation of physical

Expenditure	or financial assets or reduction in financial liabilities.
Revenue Expenditure	<ul style="list-style-type: none"> Revenue expenditure is expenditure incurred for purposes other than creation of physical or financial assets of the central government.
Revenue Deficit	<ul style="list-style-type: none"> The revenue deficit refers to the excess of government's revenue expenditure over revenue receipts. Revenue deficit = Revenue expenditure - Revenue receipts
Budgetary Deficit or Overall Deficit	<ul style="list-style-type: none"> Budgetary Deficit is defined as the excess of total estimated expenditure over total estimated revenue, both revenue and capital.
Fiscal Deficit	<ul style="list-style-type: none"> Fiscal deficit is the difference between the government's total expenditure and its total receipts excluding borrowing (non-borrowed receipts). Fiscal Deficit = Revenue Deficit + (Capital Expenditure - Capital Receipts excluding borrowing) The fiscal deficit will have to be financed by borrowing.
Primary Deficit	<ul style="list-style-type: none"> Primary deficit is defined as fiscal deficit of current year minus interest payments on previous borrowings. Primary deficit = Fiscal deficit - Net Interest liabilities
Finance Bill	The Bill produced immediately after the presentation of the union budget detailing the Imposition, abolition, alteration or regulation of taxes proposed in the budget.
Outcome budget	<ul style="list-style-type: none"> The outcome budget measures budgetary allocations of schemes and its annual performance targets measured through output and outcome indicators.
Guillotine	<ul style="list-style-type: none"> The parliament has very limited time for examining the expenditure demands of all the ministries. Once the prescribed period for the discussion on demands for grants is over, the speaker of Lok Sabha puts all the outstanding demands for grants, whether discussed or not, to the vote of the house. This process is popularly known as 'Guillotine'.
Cut Motions	<ul style="list-style-type: none"> Motions for reduction to various demands for grants are made in the form of cut motions seeking to reduce the sums sought by government on grounds of economy or difference of opinion on matters of policy or just in order to voice a grievance.
Consolidated Fund of India	<ul style="list-style-type: none"> All revenues received, loans raised and all moneys received by the government in repayment of loans are credited to the Consolidated Fund of India All expenditures of the government are incurred from this fund.
Contingency Fund of India	<ul style="list-style-type: none"> A fund placed at the disposal of the President to enable him/her to make advances to the executive/Government to meet urgent unforeseen expenditure. Contingency fund enables the government to meet unforeseen expenditure and does not require prior legislative approval.
Public Account	<ul style="list-style-type: none"> Under provisions of Article 266(1) of the Constitution of India, public account is used in relation to all the fund flows where government is acting as a banker. Examples include Provident Funds and Small Savings. This money does not belong to government but is to be returned to the depositors. The expenditure from this fund need not be approved by the parliament.

Fiscal Policy - Meaning and Objective

Meaning:

1. Fiscal policy involves the use of **government spending, taxation and borrowing** to influence both the pattern of economic activity and level of growth of aggregate demand, output and employment.
2. Fiscal policy is in the nature of a demand-side policy.
3. An economy which is producing at full-employment level does not require government action in the form of fiscal policy.

Objective of Fiscal policy:

1. Achievement and maintenance of full employment,
2. Maintenance of price stability,
3. Acceleration of the rate of economic development, and
4. Equitable distribution of income and wealth,

The importance as well as order of priority of these objectives may vary from country to country and from time to time.

Discretionary fiscal policy

- 1) Discretionary fiscal policy refers to a **deliberate policy actions** on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment, and prices.
- 2) Discretionary Policies seek to address the GDP measure [i.e. $GDP = C + I + G + (X - M)$], Where C = Private Consumption, I = Private Investment, G = Government spending, $(X - M)$ = Net exports.
- 3) Governments can influence economic activity (GDP) by controlling G directly and influencing C , I , and $(X - M)$ indirectly through changes in taxes, transfer payments and expenditure policies.

Non- Discretionary fiscal policy

- 1) Non- discretionary fiscal policy or automatic stabilizers are part of the structure of the economy and are **'built-in'** fiscal mechanism that operates **automatically** to reduce the expansions and contractions of the business cycle.
- 2) It occurs when there is changes in economic conditions cause government expenditures and taxes automatically.
- 3) Example: personal income tax, corporate income tax, and transfer payment.

Explanation

1. **Automatic Stabilizers during Recession when incomes are reduced**
 - a) **Progressive tax structure**
 - b) Government expenditures & **transfer payments**
2. **Automatic Stabilizers during Inflation/ Demand-pull inflation**
 - a) **Progressive tax structure**
 - b) Government expenditures & **transfer payments**

Four Instruments/ tools of Fiscal Policies

Taxes

Taxes determine the size of disposable income in the hands of the general public.

Action during Inflation-
Action during Recession

Government expenditure	<p>Government expenditures include:</p> <ol style="list-style-type: none"> 1. current expenditures to meet the day to day running of the government, 2. capital expenditures which are in the form of investments made by the government in capital Equipments and infrastructure, and 3. Transfer payments i.e. pension, unemployment allowance <p>During a recession and impact of Multiplier</p> <p>During Expansion/ Inflation phase-</p> <p>There are two concepts of public spending during depression- 'pump priming' and 'compensatory spending'.</p> <ol style="list-style-type: none"> 1. Pump priming assumes that when private spending becomes deficient, certain volumes of public spending will help to revive the economy. 2. Compensatory spending is said to be resorted to when the government spending is carried out with the obvious intention to compensate for the deficiency in private investment.
Public Debt	<p>Meaning and Types:</p> <ol style="list-style-type: none"> 1. Public debt may be <u>internal</u> or <u>external</u>; 2. when the government borrows from its own people in the country, it is called internal debt. 3. When the government borrows from outside sources, the debt is called external debt. 4. Public debt takes two forms namely, market loans and small savings. 5. In the case of market loans, the government issues treasury bills and government securities . 6. The small savings represent public borrowings, which are not negotiable and are not bought and sold in the market. <p>Action During Inflation:</p> <p>Action During Recession:</p>
Budget	<p>Action during Recession:</p> <p>Action during Inflation:</p>

Types of Fiscal

There are two basic types of Fiscal- **Expansionary and contractionary**

	Expansionary Fiscal policy	Contractionary Fiscal Policy
When Used?	<p>Expansionary fiscal policy is designed to stimulate the economy-</p> <ol style="list-style-type: none"> 1. During the contractionary phase of a business cycle. 2. When there is an anticipation of a business cycle contraction. 	<p>Designed to restrain the levels of economic activity of the economy -</p> <ol style="list-style-type: none"> 1. During an Inflationary phase. 2. When there is anticipation of a business-cycle expansion which is likely to induce inflation.
Scenario	<ol style="list-style-type: none"> 1. Decline / slump in overall economic activity, 2. Decline in Real Income (Real GDP) 	<ol style="list-style-type: none"> 1. Increase in Aggregate Demand (i.e. Demand-pull inflation) 2. Increase in economic activities of

	<ol style="list-style-type: none"> 3. Higher rates of unemployment 4. Fall in aggregate demand (i.e demand-deficit recession), 5. Production of lower quantity of goods and services 	<p>consumption and Investment, due to higher levels of disposable incomes with households and firms,</p> <ol style="list-style-type: none"> 3. higher factor prices, leading to higher cost of producing goods.
Tools	<ul style="list-style-type: none"> • Lower personal and corporate taxes, • Higher levels of Government spending. • Reduction in Government borrowing and • Higher budget deficit or reduced surplus 	<ul style="list-style-type: none"> • Higher personal and corporate taxes • Reduced levels of Government spending • Increase in Government Borrowing, and • Smaller Budget deficit or higher surplus
Gap	<ol style="list-style-type: none"> 1. A recessionary gap, also known as a contractionary gap, is said to exist if the existing levels of aggregate production is less than what would be produced with full employment of resources. 	<ol style="list-style-type: none"> 1. Inflationary Gap or Expansionary Gap- 2. It arises Aggregate demand rises beyond what the economy can potentially produce by fully employing its given resources.

National Debt

- A Nation's debt is the difference between its Total Past Deficits and its total Past surpluses
- If a government has borrowed money over the years to finance its deficits and has not paid it back through accumulated surplus, then it is said to be in Debt.
- A surplus budget reduces National Debt and a deficit budget will add to the National Debt.

FISCAL POLICY FOR LONG-RUN ECONOMIC GROWTH

- When government supports building a modern infrastructure, the private sector is provided with the requisite overheads it needs.
- Government provision of public goods such as education, research and development etc. provide momentum for long-run economic growth.
- A well-designed tax policy that rewards innovation and entrepreneurship, without discouraging incentives will promote private businesses who wish to invest and thereby help the economy grow.

Fiscal policy for Reducing Inequality

Means and Methods:

1. **Direct Tax:**
2. **Indirect taxes**

Government Spending on Expenditure:

1. Redistributing income from the rich to the poorer sections of the society.
2. Poverty alleviation programmes. free or subsidized medical care, education, housing, essential commodities etc. to improve the quality of living of poor
3. Infrastructure provision on a selective basis
4. Various social security schemes such as old-age pensions, unemployment relief.
5. Subsidized production of products of mass consumption
6. Public production and/ or grant of subsidies to ensure sufficient supply of essential goods, and
7. Strengthening of human capital for enhancing employability etc.

Shortcoming and Limitations of Fiscal policy

1. **Timing Problem:** Discretionary fiscal policy may create more problems due to time delays (i.e lags) which include-
 - a) Recognition Lag- Delay in recognizing the economy's problems, and the need for Government Intervention,
 - b) Decision Lag- Delay in evaluating the possible alternative policies, and in deciding the most appropriate policy
 - c) Implementation Lag- Delay in evaluating the possible alternative policies, and in deciding the most appropriate policy,
 - d) Impact Lag- outcomes of a policy are not visible for some time.
2. The effect of this is that Fiscal Policy changes may at times be badly timed, so that it is highly possible that an expansionary policy is initiated when the economy is already on a path of recovery and vice-versa
3. **Government constrains:**
 - Difficulties in instantaneously changing governments' spending and taxation policies.
 - Difficult to reduce government spending on various items such as defense and social security as well as on huge capital projects which are already midway.
 - Public works cannot be adjusted easily along with movements of the trade cycle because many huge projects such as highways and dams have long gestation period. Besides, some urgent public projects cannot be postponed for reasons of expenditure cut to correct fluctuations caused by business cycles.
4. There are **possible conflicts** between different objectives of fiscal policy.
5. Supply-side economists are of the opinion that certain fiscal measures will cause disincentives. For example, increase in profits tax may adversely affect the incentives of firms to invest and an increase in social security benefits may adversely affect incentives to work and save.
6. **Negative effect of Deficit financing:** Deficit financing increases the purchasing power of people. The production of goods and services, especially in under developed countries may not catch up simultaneously to meet the increased demand. This will result in prices spiraling beyond control.
7. Increase in government borrowing creates perpetual burden on even future generations as debts have to be repaid.
8. **"Crowding Out" Effect:** If Governments compete with the private sector to borrow money for spending, this may cause interest rates to go up. Firms' willingness to invest may be reduced. Individuals too may be reluctant to borrow and spend and the desired increase in Aggregate demand may not be realized.

Crowding out

Meaning and Example:

1. When spending by government in an economy **replaces** private spending, the private sector is said to be crowded out. (Note: Government spending has to "Support" and "enhance" private spending not merely "replace" it.)
2. "Crowding out" effect is the negative effect that a fiscal policy may generate, when money from the private sector is "crowded out" to the public sector.

Impact on Investment:

1. **High Interest Rate-**
2. **Impact on market's ability of self-correction:**

Positive Aspects-

- a) during deep recessions, crowding-out is less likely to happen as private sector investment is already minimal and therefore there is only insignificant private spending to crowd out.
- b) Moreover, during a recession phase the government would be able to borrow from the market without increasing interest rates.

CHAPTER- 8 MONEY MARKET

1. Money- Meaning and Basics

1. Money refers to assets which are commonly used and accepted **as a means of payment** or **Exchange medium of transferring purchasing power store of value**, which means people can save it and use it later—smoothing their purchases over time
2. For **policy purposes**, money may be defined as the **set of liquid financial assets** .
3. **Anything that would act as a medium of exchange is not necessarily money.**
4. **Currency which represents money does not necessarily have intrinsic value.**
5. In modern days, money is not necessarily a physical item; it may also constitute **electronic records**.
6. Fiat money is **materially worthless**, but has value simply because a nation collectively agrees to **ascribe a value to it**. In short, money works because people believe that it will.

2. Characteristics of Money

Money, though not having any inherent power to directly satisfy human wants, by acting as a medium of exchange, it commands purchasing power and its possession enables us to purchase goods and services to satisfy our wants.

Following are the important characteristics of Money-

- Generally **A**ceptable
- Durable or **L**ong-lasting
- Effortlessly **R**ecognizable.
- Difficult to **C**ounterfeit i.e. Not easily reproducible by people
- Relatively **S**carce, but has elasticity of supply
- **P**ortable or easily transported
- Possessing **U**niformity;
- **D**ivisible into smaller parts in usable quantities or fractions without losing value.

There are few other features of money

- **Better than barter:** money eliminates the need for **double coincidence of wants**.
- Money also facilitates Separation of transactions Both in **time and place**
- **Common Measure of value:** It is convenient to measure the prices of all commodities in terms of a single unit, rather than record the relative price of every good in terms of every other good.
- **Comparability:** Goods and services which are otherwise not comparable are made comparable through expressing the worth of each in terms of money.
- **Liquidity and Reversibility:** Additionally, money also commands reversibility as its value in payment equals its value in receipt. All assets other than money lack perfect reversibility in the sense that their value in **payment is not equal to their value in receipt**
- Liquidity refers to the extent to which financial assets can be sold at close to full market value at short notice. That is, they can easily be converted into another form of money, such as cash.



Unit 2: Demand for Money

1. Demand for Money

- If people desire to hold money, we say there is demand for money.
- As we are aware, the demand for money is in the nature of derived demand .
- The Demand for Money is because of two reasons-
 - Demand for **liquidity and demand to store value**.
 - People wish to have **command over real goods and services** with the use of money.
- Demand for money has an important role in the determination of **interest, prices** and **income** in an economy.



2. Variables/ Factors on which Demand for Money depends

Sr. no	Factor	Nature of relationship
1	Income and Expenditure	Direct
2	General price Index	Direct
3	Interest (Opportunity cost)	Inverse
4	Degree of Financial Innovation	Inverse

3. Theories of Demand for Money

Theories of Demand for Money:

- Quantity theory of Money (QTM) - Classical Approach or Fisher's Approach
- Cash Balance Approach - Neo-classical Approach or Cambridge Approach
- Liquidity Preference Theory - Keynesian Theory

Post Keynesian Theories -

- Inventory Approach- Baumol
- Friedman Theory, and
- Demand for Money as Behavior towards Risk-Tobin

4. Quantity Theory of Money [QTM]

- propounded by **Irving Fisher of Yale University** in his book '**The Purchasing Power of Money**' published in 1911.
- QTM demonstrate that there is **strong relationship between money and price level**.
- Fisher's version, also termed as '**equation of exchange**' or '**transaction approach**' is formally stated as follows :
- As per Fisher's approach-
 - **Quantity of Money demanded = price level (P) × Total volume of transaction (T)= Supply of Money (MV+M'V')**
 - **Therefore, MV= PT** (where only Actual money is considered and not credit money)
 - **And MV+M'V' = PT** (where both Actual and Credit money is used)(Credit money means demand deposits by bank)

Here,

- i. M = Total Amount of Money in circulation
- ii. V = Transaction Velocity of Circulation- means average number of times a **unit of money** is spent in purchasing goods and services
- iii. M' = Total quantity of Credit Money
- iv. V' = Velocity of Circulation of Credit money.
- v. P = Average Price Level
- vi. T = Total Number of Transactions- T is a function of national income. Since full employment prevails, the volume of transactions T is fixed in the short run.

5. Thus, more the number of transactions people want, greater will be the demand for money.

5. Cash balance approach/ Neo classic Approach/ Cambridge approach

1. In the early 1900s, Cambridge Economists **Alfred Marshall**, **A.C. Pigou**, **D.H. Robertson** and **John Maynard Keynes** forward **neo-classical theory or cash balance approach**.
2. As per the Cambridge version the demand of the money is because of the following two reasons-
 - a) enabling the possibility of split-up of sale and purchase to two different points of time rather than being simultaneous. i.e. avoiding double coincidence of wants. since the sale and purchase of commodity does not place simultaneously, they need temporary abode of purchasing power, **Transaction need**
 - b) being a hedge against uncertainty. **Precautionary need**.
3. **Demand for Money = Proportion of income that people want to hold as cash (k) \times income (PY).**
 $(M^d) = k PY$

Where,

- Y = Real national income
 - P = Average price level of currently produced Goods & services
 - PY = Nominal Income
 - K = Proportion of PY that people want to hold as Cash Balances
4. The term '**k**' in the above equation is called '**Cambridge k**'. This represents the portion of nominal income that people want to hold as cash balance.
 5. Higher the income, higher will be the quantity purchased and thus greater money amount of money will be needed.

Liquidity theory of demand/ Keynesian Theory of Demand for Money

'**Liquidity preference**', a term that was coined by **John Maynard Keynes** in his masterpiece '**The General Theory of Employment, Interest and Money**' (1936), denotes people's desire to hold money rather than securities or long-term interest-bearing investments.

According to Keynes, people hold money (M) in cash for three motives:

- (i) Transactions motive,
- (ii) Precautionary motive, and
- (iii) Speculative motive.



Description

Transaction Motive

- a) It is need for cash for current transaction for **personal and business (trade) exchange**.
- b) This need arises due to timing gap between Receipt of Income and Planned Expenditures.

- c) This need is further classified into- i) Income motive (for individuals & households), and ii) Trade Motive (for Business Firms).
- d) Transaction Demand is directly related to the level of Income not affected by interest rates.
- e) Transactions Demand (L_r) = Earnings (Y) \times Ratio of income which is kept for transaction purposes (k)
- f) Keynes considered the aggregate demand for money for transaction purposes as the sum of individual demand and therefore, the aggregate transaction demand for money is a function of national income.

Precautionary Motive

- a) Individuals & businesses keep a portion of their income to finance unforeseen, unpredictable and unanticipated Expenditures.
- b) Precautionary demand depends on the **size of income, prevailing economic & political conditions and personal traits of the individual such as Optimism / pessimism, farsightedness etc.**
- c) Precautionary Motive Cash Balances are considered **Income-Elastic** and by itself **not very sensitive to Rate of Interest.**

Speculative Motive

- a) This need reflects people's desire to hold cash, in order to be equipped to **exploit any attractive investment opportunity requiring cash expenditure.** i.e. to take advantage of favorable business situation
- b) The theory explains the portion of cash to be kept in asset portfolio depending upon the interest rate prevailing.
- c) Higher the interest rate, lower the speculative demand for money, and vice-versa.

Explanation

- According to Keynes, people demand to hold money balances to take advantage of the future changes in the rate of interest, which is the same as future changes in bond prices. It is implicit in Keynes theory, that the 'rate of interest', i , is really the return on bonds.
- Keynes assumed that the expected return on money is zero, while the expected returns on bonds are of two types, namely:
 - the interest payment
 - the expected rate of capital gain.
- The market value of bonds and the market rate of interest are inversely related. A rise in the market rate of interest leads to a decrease in the market value of the bond, and vice versa.
- Investors have a relatively fixed conception of the '**normal**' or '**critical**' interest rate R_c and compare the **current rate of interest R_n** with such 'normal' or 'critical' rate of interest

Situation	If current Rate (R_n) > Critical Rate (R_c)	If Current rate (R_n) < Critical Rate (R_c)
Process	Investors expect a fall in the Interest Rate (rise in Bond Prices), and now they will convert their cash into Bonds since- <ol style="list-style-type: none"> They can earn high rate of return on Bonds. They expect Capital Gains resulting from a rise in Prices. 	Investors expect a rise in Interest Rate (fall in Bond Prices), and hence they hold their wealth in Liquid Cash because- <ol style="list-style-type: none"> Loss, i.e Interest foregone is small. Anticipated capital losses (fall in prices) is avoided. Return on Money will be high than that on Bonds, Idle Cash held can be used to buy bonds at lower price and thereby.

Action

Asset Portfolio would consist only of **Bonds**.

Asset portfolio would consist wholly of **Money/Cash**.

Summing up,

- ✓ so long as the current rate of interest is higher than the critical rate of interest, a typical wealth-holder would hold in his asset portfolio only government bonds,
- ✓ if the current rate of interest is lower than the critical rate of interest, his asset portfolio would consist wholly of cash.
- ✓ When the current rate of interest is equal to the critical rate of interest, a wealth-holder is indifferent to holding either cash or bonds.
- ✓ In this case discontinuity of Individual curve disappears & a continuous downward sloping function showing the Inverse Relationship between Interest Rate & Demand is obtained.

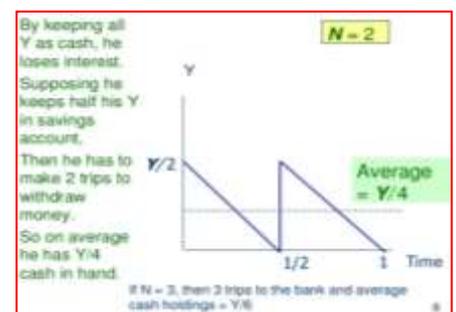
The concept of Liquidity Trap

1. Liquidity trap is a situation when expansionary monetary policy (increase in money supply) does not increase the interest rate, income and hence does not stimulate economic growth.
2. It is a situation in which the general public is prepared to hold on to whatever amount of money is supplied, at a given rate of interest. They do so because of the fear of adverse events like deflation, war. In a liquidity trap, the monetary policy is powerless to affect the interest rate.
3. There is a liquidity trap at short term zero percent interest rate. When interest rate is zero, public would not want to hold any bond, since money, which also pays zero percent interest, has the advantage of being usable in transactions.
4. In other words, investors would maintain cash savings rather than hold bonds. The speculative demand becomes perfectly elastic with respect to interest rate and the speculative money demand curve becomes parallel to the X axis. This situation is called a 'Liquidity trap'.
5. Since the opportunity cost of holding money is zero, even if the monetary authority increases money supply to stimulate the economy, people would prefer to hoard money.
6. Consequently, excess funds may not be converted into new investment. The liquidity trap is synonymous with ineffective monetary policy .
7. The Bank of Japan's experience is a real-life example of the Keynesian economic theory of a liquidity trap.

POST-KEYNESIAN DEVELOPMENTS

6. Inventory Approach

1. Baumol (1952) and Tobin (1956) developed a deterministic theory of transaction demand for 'real cash balance', known as Inventory Theoretic Approach.
2. Inventory models assume that there are two media for storing value-
 - a. money & interest-bearing alternative financial asset.
3. As per Baumol, receipt of income, say Y takes place once per unit of time but expenditure is spread at a constant rate over the entire period of time.
4. There is a fixed cost of making transfers between money and the alternative assets e.g. broker charges.
5. Individual or business firms try to hold optimum cash balance so that balance between opportunity cost and transaction cost is met.
6. As per Baumol model, optimum cash balance is given by $(2AT/i)^{1/2}$.



Where A= annual cash requirement

T= transaction cost/ transaction

I= interest/annum

7. FRIEDMAN'S THEORY

1. Milton Friedman (1956) extended **Keynes' speculative** money demand within the framework of asset price theory.
2. **Milton Friedman** (1956) treats the demand for money as for demand for **capital assets**.
3. Demand for money is affected by the same factors as demand for any other asset, namely
 - a) Permanent income.
 - b) Relative returns on assets. (which incorporate risk)

Explanation:

As per Friedman there are Four determinant of demand-

Factor	Particulars
Permanent Income	<ol style="list-style-type: none"> 1. Friedman maintains that it is permanent income - and not current income as in the Keynesian theory - that determines the demand for money. 2. Permanent income which is Friedman's measure of wealth is the present expected value of all future income. 3. Permanent Income is calculated by discounting future cash incomes. 4. discount rate, defined as the average return on the five assets, namely money, bonds, equity, physical capital and human capital
Price level	<ul style="list-style-type: none"> <input type="checkbox"/> If the price level rises the demand for money increases and vice versa. <input type="checkbox"/> Thus, it's directly related to price level
Opportunity cost	<ul style="list-style-type: none"> <input type="checkbox"/> Nominal demand for money rises if the opportunity costs of money holdings (i.e. returns on bonds and stock) decline and vice versa. <input type="checkbox"/> Thus, there is an inverse relationship between demand for money and opportunity cost
Inflation	<ul style="list-style-type: none"> <input type="checkbox"/> Nominal Demand for Money is influenced by inflation. A positive Inflation Rate reduces the real value of Money Balances, thereby increasing the opportunity cost of Money Holdings. <input type="checkbox"/> Thus, there is an inverse relationship between demand for money and inflation

8. Demand for money as a behaviour towards risk

1. According to Tobin, an individual's behaviour shows risk aversion. (risk avoiding behavior)
2. If an individual chooses to hold a greater proportion of risky assets such as bonds or shares in his portfolio - then higher average return but higher degree of risk.
3. Therefore, people prefer a mixed or diversified portfolio of money, bonds and shares, with each person opting for a little different balance between risk and return.

Tobin's Liquidity Preference Function

Basics of theory: Tobin analysed that the **Risk - Avoiding behaviour of Individuals** provided the basis-

- a. For the Liquidity Preference, and
- b. For a negative relationship between the Demand for Money and the Interest Rate. If this payment is increased, Investor is willing to put a greater proportion of the Portfolio into the Risk Asset (i.e

Bonds) and thus a smaller proportion into money.

- c. Thus, Demand for Money is primarily based on the Portfolio Management Principles.

Unit 3: Supply of Money

1. Meaning and introduction

1. "Money supply" denotes the **Total Quantity** of **Money** available to **the people in the economy**. The Quantity of money at any point of time is a measurable concept.
2. Supply of Money- Stock or Flow concept- It refers to the total amount of money **at any particular point of time**, thus it is a Stock Concept.
3. Change in the Stock of Money (i.e. increase or decrease per month or year), is a Flow Variable.
4. **Stock of Money in General Parlance**- Generally, Stock of money refers to the Stock of money available to 'Public' as means of payments and store of value. Such stock of money is always less than the Total Stock of Money that really exists in an Economy.

5. Meaning of Public-

The term 'Public' includes all Economic Units-	The term 'Public' excludes Producers of Money
<ol style="list-style-type: none"> a) Households, Firms, and Institutions, b) Quasi-Governmental Institutions, c) Non- banking Financial Institutions, d) Non- Departmental Public Sector Undertakings, e) Foreign Central Banks and Foreign govt. f) International Monetary Fund which holds a part of Indian Money in India in the form of Deposits with RBI. 	<ol style="list-style-type: none"> a) Government, which includes- <ul style="list-style-type: none"> • Central Government • All State Governments • Local Bodies. b) Banking System - <ul style="list-style-type: none"> • Reserve Bank of India & • All banks that accept Demand Deposits (Note)

Rationale of measuring supply of Money in Market-

Measurement of money is important because of two reasons-

1. Money supply analysis facilitates analysis of Monetary Developments to provide a **deeper understanding of the causes of Money Growth**.
2. It is important from monetary policy perspective as it provides a framework to evaluate **whether the stock of money in market is consistent with standard for price stability** and to understand nature of **deviation from standard**.
3. Also, the other reason is to **stabilize Price level and GDP growth**.

2. Sources of Money supply

Supply of the money in an economy depends upon-

- a) Decision of **central bank**, and
- b) The **supply responses of Commercial banking system** of country wrt. to policy of central bank. Commercial banks create **Credit Money** in an economy.

1. There are two broad sources of Money Supply, i.e **High Powered Money**, and **Credit Money**. These are explained as under-

	High Powered Money / Fiat Money i.e. Currency issued by the Central Bank	Credit Money, i.e. Money created by Commercial Banks
1	The Central Banks of all the countries are	Total Money Supply in the Economy is also

	empowered to issue Currency. Therefore, the Central Bank is primary source of Money Supply in all Counties.	determined by the extent of Credit created by the Commercial Banks.
2	The Currency issued by the Central Bank is ' Fiat Money ' and is backed by supporting Reserves and its value is guaranteed by the Government. ***	Banks create Money Supply in the process of borrowing and lending transactions with the public.

Central Board Digital Currency and Crypto Currency

1. RBI is going step by step for the issuance of its own CBDC (Digital Rupee (e₹)), with minimal or no disruption to the financial system.
2. Reserve Bank broadly defines CBDC as the legal tender issued by a central bank in a digital form. It is akin to sovereign paper currency but takes a different form, exchangeable at par with the existing currency and shall be accepted as a medium of payment, legal tender and a safe store of value.
3. CBDCs would appear as liability on a central bank's balance sheet.

3. MEASUREMENT OF MONEY SUPPLY IN INDIA

1. From April 1977, following the recommendations of the Second Working Group on Money Supply (SWG), the RBI has been publishing data on four alternative measures of money supply denoted by M1, M2, M3 and M4 besides the reserve money. These are known as **Monetary Aggregates**.
2. Different aggregates represent different level of Liquidity. **M1 being most liquid and M4 being least liquid.**
3. The following table will explain what is included in Monetary Aggregates

Item	Computation
M1 - Narrow Money	Currency notes and coins with the Public + Net Demand Deposits of Banks (CASA Deposits) + Other Deposits with RBI. (Other than those held by government) Note: Net Demand Deposits = Total Demand Deposits Less Inter - Bank Deposits (Also refer note below)
M2	MI + Savings Deposits with Post Office Savings Banks.
M3- Broad Money	MI + Net time Deposits with the Banking System.
M4	M3 + Total deposits with Post Office Savings banks (excluding National Savings Certificates)

1.

NEW MONETARY AGGREGATES and LIQUIDITY AGGREGATES-

On the recommendations of the working' Group on Money (1998), RBI has started publishing 4 set of new Monetary aggregates on the basis of the Balance Sheet of the Banking Sector as per Progressive Liquidity Norms.

Reserve Money, NM1, NM2, NM3

1. **Reserve Money-** Reserve Money can be computed in two ways as under- Note: Net result is same in both.

Method 1 -	Method 2-
Currency in Circulation / held by public + Bankers' Deposits with the RBI - Note: These are	Net RBI Credit to Government +RBI Credit to Commercial Sector

Commercial Banks Deposits with RBI for maintaining Cash Reserve Ratio (CRR) & as Working Funds for clearing adjustments. +Other Deposits with the RBI	+RBI's Claims on Banks +RBI's Net Foreign Assets +Government's Currency Liabilities to the Public -RBI's Net Non- Monetary Liabilities.
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- a) Reserve Money is also known as **Central bank Money, Base Money** or **High- Powered Money**.
b) Management of Reserve Money is important to stabilize Liquidity, Growth & Price Level in an Economy.

Currency with the Public

Add: Demand Deposits with the Banking System

Add: Other Deposits with RBI

New Monetary Aggregate 1 (denoted as NMI)

Add: Short term Time Deposits of Residents (including and up-to Contractual maturity of 1 Year)

New Monetary Aggregate 2 (denoted as NM2)

Add: Long term time deposits of Residents

Add: Call / Term Funding from Financial Institutions

New Monetary Aggregate 3 (Denoted as NM3)

Add: All deposits with the Post Office Savings Banks (excluding National Saving certificates)

Liquidity Aggregate 1 (Denoted as L1)

Add: Term Deposits with Term Lending Institutions and Re-financing Institutions

Add: Term Borrowing by Financing Institutions and Certificates of Deposits issued by Financing Institutions

Liquidity Aggregate 2 (Denoted as L2)

Add: Public Deposits of Non- Banking Financial Companies

Liquidity Aggregate 3 (Denoted as L3)

4. DETERMINATION OF MONEY SUPPLY

The alternative approaches in respect of determination of Money Supply, are as under-

1. According to the first view, money supply is determined **exogenously** by the central bank.
2. According to Second view money supply is determined **endogenously** by changes in the economic activities which affect people's desire to hold currency relative to deposits, rate of interest etc.
3. Accordingly, supply of nominal money in the economy is determined by the **joint behavior** of the central bank, the commercial banks and the public.

Money Multiplier approach to supply of money- Milton Friedman & Anna Schwartz.

1. A one-rupee increase in the monetary base causes the money supply to increase by more than one rupee.
2. **Money multiplier m** is defined as ratio that relates change in money supply to the given change in monetary base. It denotes by how much money supply will change with change in monetary base

$$M = m \times MB$$

Money Multiplier = $1 / R$

3. For example, if $R = 10\%$, the value of money multiplier will be 10. If the reserve ratio is only 5%, then money multiplier is 20.
4. Thus, the higher the reserve ratio, the less of each deposit banks loan out, and the smaller the money multiplier.

Credit Multiplier approach to supply of money-

1. Credit Multiplier:

- It describes the amount of Additional Money created by Commercial Bank through the process of lending available Money in excess of the Reserve Requirement.
- It reflects the bank's ability to increase the Money Supply.
- It is also called "Deposit Multiplier" or "Deposit Expansion Multiplier".
- Credit Multiplier =
$$\frac{1}{\text{Required Reserve Ratio}}$$

1. Reserves may be as the result of-

- The regulations of the Central Bank (RBI) - referred as Statutory Reserves, or
- Decisions taken by the Commercial Banks themselves - referred as Excess Reserves.

2. Excess Reserves and its Impact: Excess reserve represents the additional reserve maintained by commercial bank with RBI over and above the minimum required ratio to be kept. 'Excess reserves' are the difference between total reserves (TR) and required reserves (RR). Therefore, $ER=TR-RR$.

- Excess Reserve is affected by the Cost and Benefits of holding such Reserves. For this purpose-
 - Cost** = Interest that could have been earned by giving these amounts as Loans, i.e Opportunity Cost,
 - Benefit** = Assurance as to adequate liquidity in the banking system, to meet withdrawal of Deposits by Public.
3. These costs and benefits are influenced by two factors, viz. **Market Interest Rates and Expected Deposits Outflows**, which have following impact-

Situation	Effect on excess Reserves
If interest rate increases	Banks will prefer to reduce Excess Reserves and give them as Loans to have higher earnings. So, the ratio of Excess Reserves to Deposits falls.
If Interest Rate decreases	Opportunity Cost of holding excess Reserves declines and Excess reserves will rise.
If deposit outflows are expected to increase	Banks will want more assurance against the possibility and will increase the Excess Reserves Ratio.
If deposit Outflows are expected to decrease	Decline in Expected Deposit Outflows will reduce Excess Reserves

Therefore, we conclude that the banking system's excess reserves ratio r is negatively related to the market interest rate.

5. DETERMINATION OF MONEY SUPPLY

Three factor as immediate determinants (also called as 'proximate determinants') of money supply are-

- the stock of high-powered money (H)
- the ratio of reserves to deposits or reserve-ratio $r = \{\text{Reserves/Deposits } R/D\}$ and
- the ratio of currency to deposits, or currency-deposit ratio $c=\{C/D\}$

A. Stock of High- Powered Money (H)

- H (High-powered money) represents the behavior of the **Central Bank**.
- With all other variables unchanged, Total Supply of Nominal Money will **vary directly with the Supply** of Nominal High - Powered Money.

B. Ratio of Reserves to Deposits (RDR)

- a) RDR (Reserves to Deposits Ratio) represents the behaviour of the **Commercial Banks**, in determining Money Supply through "Credit Money".
- b) Thus the **Inverse relation exists**.

C. Ratio of Currency to Deposits (CDR)

- a) CDR represents the behaviour of the **General Public**, in determining Money Supply. It represents the behaviour of public to hold money in form of cash.
- b) The time deposit-demand deposit ratio i.e. how much money is kept as time deposits compared to demand deposits, also has an important implication for the money multiplier and, hence for the money stock in the economy. An increase in **TD/DD ratio** means that greater availability of free reserves and consequent enlargement of volume of multiple deposit expansion and monetary expansion.

Impact of Other factors on Money Supply & Money Multiplier**Effect of Government expenditure on Money supply-**

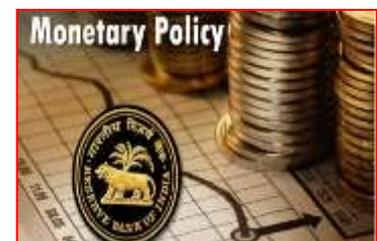
- a) Whenever the Central and State Governments' cash balance falls short of the Minimum requirement, they are eligible to avail of the facility called **Ways & Means Advances (WMA) / Overdraft (OD) Facility**.
- b) When Government incurs expenditure, it involves debiting Government balances with RBI, and Crediting the Receiver (e.g. Salary Account of Employee) Account with the Commercial Bank.
- c) So, it results in generation of Excess Reserves, (i.e. excess balances of Commercial Banks with RBI).
- d) Excess reserves thus created can potentially lead to an increase in Money supply through the Money Multiplier process e.g. When the Employee uses this money for making payments for purchase of goods etc.

Unit 4: Monetary Policy

Reserve Bank of India uses **monetary policy** to manage **economic fluctuations** and **achieve price stability**, which means that inflation is low and stable.

Reserve Bank of India conducts monetary policy by adjusting the supply of money, usually through buying or selling securities in the open market.

When central banks lower interest rates, monetary policy is easing.
When it raises interest rates, monetary policy is tightening.

**1. Monetary Policy**

1. **Meaning:** Monetary Policy refers to the use of **Monetary Policy Instruments** which are at the **disposal of the Central Bank** for achieving various objectives.
2. **Monetary Policy refers to-** **Action programme** of the Monetary Authorities (Generally central bank), to **control and regulate Demand & Supply** of Money with the Public and flow of credit, With the view to **achieve predetermined Macro-Economic Goals**.
3. Monetary Policy encompasses all actions of the Central bank which are aimed at -
 - **Directly** controlling the **Money supply**, and
 - **Indirectly** at regulating the **Demand** for Money.

4. Monetary Policy is in the nature of "demand-side" Macro-economic Policy and works by stimulating or discouraging Investment and Consumption spending on Goods & services.

2. Monetary Policy Framework

In the execution of Monetary Policy, the Central Bank functions within a specified monetary policy Framework which has 3 components as under-

1. **Monetary Policy Objectives-** providing explicit Guidance to the Policy Makers.
2. **Analytics of Monetary Policy-** which focus on Transmission Mechanisms for implementation.
3. **Operating procedures-** which focus on operating targets and instruments.

Monetary Policy Objectives

1. The Reserve Bank of India Act, 1934 in its preamble sets out the objectives of RBI as "to **regulate the issue of Bank notes** and the **keeping of Reserves** with a view to securing **Monetary Stability** in India generally to **operate Currency and Credit System** of the country to its advantage".
2. **Prima Objectives:** The most common objectives of Monetary Policy of the Central Banks across the World are -
 - **Price Stability-** Establishment and Maintenance of stability in Prices (or controlling inflation)
 - **Economic Stability-** Maintenance of Full Employment and achievement of high level of economy's growth
5. for the following objectives-
 - a. to **regulate** the availability, cost and use of Money & Credit,
 - b. to promote **economic growth**,
 - c. ensuring an adequate flow of credit to the productive sectors,
 - d. sustaining - a moderate structure of interest rates to encourage investments, and
 - e. creation of an efficient market for government securities.
 - f. to ensure **Price Stability**,
 - g. to achieve **optimum levels** of output and employment,
 - h. to obtain Balance of Payments **equilibrium**,
 - i. to ensure **stable currency**, or

What is an Impact of Conflicting Objectives?

Based on the pre-determined National Priorities, the Monetary Policy Makers must exercise appropriate trade-offs to balance the conflicting objectives.

3. Analytics of Monetary Policy - Transmission Mechanism for Implementation

The process or **Channels** through which the **change of Monetary Aggregate** affects the level of **Product and Prices** is known as "Monetary Transmission Mechanism". It describes how policy - induced changes in the nominal Money Stock / Short - Term Nominal Interest Rates impact real variables like Aggregate Output and Employment.

In simple terms, the transmission can be summarised in two stages.

- i.Changes to monetary policy affect interest rates in the economy.
- ii.Changes to interest rates affect economic activity and inflation.

A. Saving and Investment Channel

Monetary policy influences economic activity by **changing the incentives for saving and investment**.

- **Lower interest rates on bank deposits**- induce to **save Less** their money >>>> Induce to **spend their money more** on goods and services >>>> encourage households to borrow more
- **Lower lending rates** - can increase investment spending by businesses as the cost of borrowing is lower >>>> Increases demand too >>>> returns on these projects are now more than the cost of borrowing.

B. Cash-flow Channel

Monetary policy **influences interest rates**, which affects the decisions of households and businesses by changing the amount of cash they have available to spend on goods and services.

- A reduction in lending rates - reduces interest repayments on debt >>>> increasing the amount of cash available for households and businesses >>>> leaving them with more disposable income.
- A reduction in lending rates - reduces the amount of income from deposits >>>> and restrict their spending.
- These two effects work in opposite directions, but a reduction in interest rates can be expected to increase spending in the Indian economy through this channel (with the first effect larger than the second)

C. Asset Prices and Wealth Channel

- The asset prices and wealth channel typically affects consumption and investment.
- Lower interest rates support asset prices (such as housing and equities) by encouraging demand for assets than debt instruments.
- Higher asset prices also increase the equity (collateral) of an asset that is available for banks to lend against. This can make it easier for households and businesses to borrow.
- An increase in asset prices increases people's wealth. This can lead to higher consumption and housing investment as households generally spend some share of any increase in their wealth.

D. Exchange Rate Channel

- The exchange rate can have an important influence on economic activity and inflation.
- It is typically more important for sectors that are export-oriented or exposed to competition from imported goods and services.
- If the Reserve Bank lowers the cash rate it means that interest rates in India have fallen compared with interest rates in the rest of the world
- Lower interest rates reduce the returns investors earn from assets in India. Lower returns reduce demand for assets in India, with investors shifting their funds to foreign assets (and currencies) instead.
- A reduction in interest rates (compared with the rest of the world) results in a lower exchange rate, making foreign goods and services more expensive compared with those produced in India. This leads to an increase in exports and domestic activity. A lower exchange rate also adds to inflation because imports become more expensive in Indian rupees.

Effectiveness: The effectiveness of different Channels function depends on

1. Stage of Development of the Economy, and
2. Underlying Financial Structure of the Economy.

4. Operating Procedures and Instruments

Quantitative tools - The tools applied by the policy that impact money supply in the entire economy, including sectors such as manufacturing, agriculture, automobile, housing, etc.

1. **Reserve Ratio** Banks are required to keep aside a set percentage of cash reserves or RBI approved assets. Reserve ratio is of two types:
 - a. **Cash Reserve Ratio (CRR)** - Banks are required to set aside this portion in cash with the RBI. The bank can neither lend it to anyone nor can it earn any interest rate or profit on CRR.
 - b. **Statutory Liquidity Ratio (SLR)** - Banks are required to set aside this portion in liquid assets such as gold or RBI approved securities such as government securities. Banks are allowed to earn interest on these securities, however it is very low.
2. **Open Market Operations (OMO)** -In order to control **money supply and inflation**, the RBI buys and sells government securities in the open market. These operations conducted by the Central Bank in the open market are referred to as Open Market Operations.
 - a. When the RBI sells government securities, the liquidity is sucked from the market,
 - b. when RBI buys securities the liquidity is injected from the market
 - c. The objective of OMOs are to keep a check on temporary liquidity mismatches in the market, owing to foreign capital flow.
3. **Qualitative tools** - Unlike quantitative tools which have a direct effect on the entire economy's money supply, qualitative tools are selective tools that have an effect in the money supply of a specific sector of the economy.
 - a. **Margin requirements** - The RBI prescribes a certain margin against collateral, which in turn impacts the borrowing habit of customers. When the margin requirements are raised by the RBI, customers will be able to borrow less.
 - b. **Moral suasion** - By way of persuasion, the RBI convinces banks to keep money in government securities, rather than certain sectors.
 - c. **Selective credit control** - Controlling credit by not lending to selective industries or speculative businesses.
4. **Market Stabilisation Scheme (MSS)** -
 - a. It was introduced following MOU between RBI and the Government of India with the primary aim of aiding the Sterilization Operations of RBI.
 - b. Sterilization is the process by which the Monetary Authority (RBI) sterilizes the effects of significant Foreign Capital Inflows on Domestic Liquidity, by off - loading a portion of the Stock of Government Securities held by it.
 - c. Government borrows from RBI (additional to its Normal Borrowing) and issues Treasury Bills / Dated Securities for absorbing the excess liquidity from the market arising from Large Capital Inflows. MSS absorbs the excess liquidity from the market
5. **Policy Rates** -
 - a. Fixed Repo Rate quoted for sovereign Securities in the overnight segment of LAF is considered as the Policy Rate. (India has many other Repo Rates in operation)
 - b. RBI uses this rate for balancing liquidity.
 - c. Its change gets transmitted through Money Market to the entire Financial System & alters all

other Short-Term Interest Rates & Influences aggregate Demand - key determination of level of Inflation & Economic Growth.

- d. If RBI wants to make it more expensive for banks to borrow money, it increases the Repo Rate. Similarly, if it wants to make it cheaper for Banks borrow money, it reduces the Repo Rate. In other words, an increase in the Repo Rate will lead to higher Liquidity and vice - versa, other things remaining constant.

6. **Bank rate** - The interest rate at which RBI lends long term funds to banks is referred to as the bank rate. However, presently RBI does not entirely control money supply via the bank rate. It uses Liquidity Adjustment Facility (LAF) - repo rate as one of the significant tools to establish control over money supply. Bank rate is used to prescribe penalty to the bank if it does not maintain the prescribed SLR or CRR.

7. **Liquidity Adjustment Facility (LAF)** - RBI uses LAF as an instrument to adjust liquidity and money supply. The following types of LAF are:

- a. **Repo rate:** Repo rate is the rate at which banks borrow from RBI on a short-term basis against a repurchase agreement. Under this policy, banks are required to provide government securities as collateral and later buy them back after a pre-defined time.
- b. **Reverse Repo rate:** It is the reverse of repo rate, i.e., this is the rate RBI pays to banks in order to keep additional funds in RBI.
- c. It is linked to repo rate in the following way: **Reverse Repo Rate = Repo Rate - 1**

8. **Marginal Standing Facility (MSF) Rate:** MSF Rate is the penal rate at which the Central Bank lends money to banks, over the rate available under the rep policy.

- a. **Banks availing MSF Rate can use a maximum of 1% of SLR securities.**
- b. **MSF Rate = Repo Rate + 1MSF Rate = Repo Rate + 1 .**

Monetary Policy Framework Agreement (MPFA)

1. The Reserve Bank of India (RBI) Act, 1934 was amended on June 27, 2016, for giving a statutory backing to the Monetary Policy Framework Agreement (MPFA) and for setting up a Monetary Policy Committee (MPC).
2. It is an Agreement reached between the Government of India and RBI on the Maximum tolerable Inflation Rate that RBI should target to achieve price stability.
3. The amended RBI 2016 Act provides for a statutory basis for the implementation of the 'Flexible Inflation targeting Framework'.
4. Announcement of an Official Target Range for Inflation is known as Inflation Targeting.
5. The Expert Committee under Urijit Patel, in January, 2014, suggested RBI abandoned the '**Multiple Indicator**' Approach and made Inflation Targeting the primary objective of its Policy.

Inflation Target

1. Inflation target is set once in every 5 years.
2. Central Government has notified 4% Consumer Price Index (CPI) Inflation as the target for the period from 5 August 2016 to 31 March 2021 (Upper Tolerance Limit - 6%, Lower Tolerance Limit - 2%)
3. RBI is mandated to publish a Monetary Policy report every 6 months, explaining the Sources of Inflation and the Forecast of Inflation for the coming period of 6 - 18 months.
4. Following Factors are notified by the Central Govt. as constituting failure to achieve Inflation Target
 - Average Inflation > Upper Tolerance Level of Inflation Target for any 3 consecutive quarters, or
 - Average Inflation < Lower Tolerance level for any 3 Consecutive Quarters.

5. CPI is chosen for Inflation Target, since it closely reflects cost of Living and has larger influence on Inflation Expectation compared to other Indicators / Anchors.

9. Challenges in Implementation of Monetary policy

Following are the main challenges in implementation of Monetary Policy

1. Rudimentary and Non - competitive Financial System
2. Lack of Integrated Money and Inter - Bank Markets,
3. Uncertainties surrounding the economy, due to both Internal & external sources.
4. Issues related to Operational Autonomy of the Central Bank
5. Extent of co-ordination between Fiscal and Monetary authorities.

CH 9: INTERNATIONAL TRADE

Distinction between International Trade and Domestic trade

Point	International Trade	Domestic Trade
Meaning	Exchange of goods, services, resources etc. between / amongst different countries.	Exchange of goods, services, resources, etc within domestic territory of a country.
Persons	Transactions between Residents of different countries.	Transactions between / amongst Residents of the same country.
Currency	2 or more currencies are involved.	Only one currency (Local Currency) is involved.
Regulations	This involves multiple Legal Systems, detailed documentation, procedural formalities, Trade Barriers, Shipping and Transportation issues etc.	This involves law of only one country and less documentation and procedural formalities.
Tariff	Customs Tariff is applicable.	Domestic Tariff/ taxes are applicable.

Advantages and Disadvantages of International trade

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. Powerful stimulus to economic efficiency. 2. Efficient use of productive resources. 3. Provides access to new markets and new materials. 4. Enables nations to acquire foreign exchange reserves. 5. Opening up of new markets. 6. Human resource development. 7. Strengthens bonds between nations. 8. Wide range of Products. 9. Innovation. 10. Employment. 11. Competition. 	<ol style="list-style-type: none"> 1. Not equally beneficial to all nations. 2. Economic exploitation by strong country. 3. Threatens local infant industries. 4. Substantial environmental damage. 5. Trade cycles and the associated economic crises get transmitted. 6. Risky dependence of underdeveloped countries. 7. Lack of transparency and predictability. 8. Negative impact on Labour class, exploitation of Resources, unsustainable production and consumption, excessive exports may cause shortages of many, Import of unwanted and harmful goods.

Theories of International Trade

A. Mercantilist approach- 16th and 18th century

1. Mercantilism, which is derived from the word mercantile, "trade and commercial affairs".
2. **Exports were viewed favorably** if they resulted in inflow of Gold, while Imports were not considered conducive for Balance of economic growth, since it resulted in outflow of Gold.
3. As per this approach one country can grow economically, only at the expense/ detriment of another, and there is no **"win-win"** favorable situation in International Trade. The Trade according to Mercantilism is **"Zero-Sum Game"**, as one country's gain is the other Country's loss.

1.2.2 The Theory of Absolute Advantage

(they get more from international trade from what they can get doing production individually)

1. Theory of Absolute Cost Advantage was propounded by **Adam Smith**
2. Under this Theory, an exchange of goods will take place **only if each of the two countries can**

produce one commodity at an absolutely lower production cost than the other country.

3. Each Country which has an absolute advantage over another country in the production of **an item**, can trade such item, and hence gain in terms of International Trade.
4. Absolute Advantage refers to the ability of a Party (an Individual, a firm, or Country) to produce more of a good or service than the competitors, using the same amount of resources.
5. **Assumptions of the Absolute Advantage Theory:**
 - a. Trade between the **two countries** and **two-commodity** framework for his analysis.
 - b. There is no transportation cost.
 - c. Used **labour as the only input**.
 - d. He assumed that labour was mobile within a country but immobile between countries.

Comparative advantage theory- Ricardo's Theory

1. **David Ricardo** developed the classical theory of comparative.
2. The law of comparative advantage states that **even if one nation is less efficient than (has an absolute disadvantage with respect to) the other nation in the production of all commodities, there is still scope for mutually beneficial trade.**
3. The first nation should specialize in the production and export of the commodity in which its **absolute disadvantage is smaller** (this is the commodity of its comparative advantage) and import the commodity in which it's absolute disadvantage is greater (this is the commodity of its comparative disadvantage).
4. Because of comparative advantage, trade raises the living standards of both countries. Douglas Irwin (2009) calls comparative advantage "good news" for economic development.
5. This theory also assumed that Labour is the only factor of Production.

Advantages	Disadvantages
Trade can take place, even if one country has absolute disadvantage in both products.	It is too simplistic a Model to consider. It does not recognize many practical barriers to International Trade.
One country's Gain need not be another country's Loss.	Labour is considered as the only Factor Input in the analysis of Absolute Advantage.
This theory recognizes the importance of division of labour, specialization and consequent benefits.	It emphasizes only Supply-side conditions and ignores domestic demand in respective countries
Global output is maximized.	

HECKSHER-OHLIN theory (H-O Theory) or Modern Theory

1. This theory is also known as **factor-endowment theory of trade or Modern Theory of Trade.**
2. **Factor endowment means Availability of usable resources** including both natural and man-made means of production.
3. Accordingly, **international trade occurs because different countries have different factor endowment.**

4. The Heckscher-Ohlin (H-O) model studies the case that **two countries have different factor endowments under identical production function and identical preferences.**
5. If a country is a capital abundant one, it will produce and export capital-intensive goods relatively more cheaply than another country. Capital-abundant countries have comparative cost advantage in the production of goods that need capital-intensive technology.
6. According to this theory, international trade is but a **special case of inter-regional trade.**
7. The Heckscher-Ohlin Trade Theorem establishes that **a country tends to specialize in the export of a commodity whose production requires intensive use of its abundant resources and imports a commodity whose production requires intensive use of its scarce resources.** (this is the crux of the theory)
8. *The Factor-Price Equalization Theorem states that international trade equalizes the factor prices between the trading nations. Therefore, with free trade, wages and returns on capital will converge across the countries.*

Comparison of Theory of Comparative Costs and Modern Theory

Theory of Comparative Costs	Modern Theory
Difference between countries arises because of comparative costs of Labour and differences in productive efficiency of workers	Difference between countries arises because of differences in factor endowments . This is 2-factor model and can be extended to more factors.
Based on labour theory of value	Based on money cost which is more realistic.
Treats international trade as quite distinct from domestic trade	International trade is only a special case of inter-regional trade .
Normative ; tries to demonstrate the gains from international trade	Positive ; concentrates on the basis of trade

New Trade Theory

- ▲ American economist and journalist Paul Krugman received the 2008 Nobel Prize for Economics for his work in economic geography and in identifying international trade patterns.
- ▲ Krugman defended free trade. He was passionate and showed deep concern for the well-being of which can be understood from his book "In Praise of Cheap Labor," published in Slate in 1997.

NEW TRADE THEORY (NTT)

Concept: New Trade Theory developed in the late 1970s and early 1980s focuses on the role of increasing returns to scale and network effects.

NTT explains that there are two reasons for advantages to countries by engaging in International Trade.

Economies of scale- supply side	Network effect - demand Side
<ol style="list-style-type: none"> 1. As a firm produces more of a product, its cost per unit keeps going down. 2. So if the firm serves domestic as well as foreign market instead of just one, then it can reap the benefit of large scale of production consequently the profits are likely to be higher. 3. They shall produce and export too. 4. This happens because of governmental support and various other factors. 	<ol style="list-style-type: none"> 1. One person's value for a good or service is affected by the value of that good or service to others. 2. The value of the product or service is enhanced as the number of individuals using it increases. 3. This is also referred to as the 'bandwagon effect'. Consumers like more choices, but they also want products and services with high utility, and the network effect increases utility obtained from these products over others.

4. A good example will be Mobile App such as What's App and software like Microsoft Windows.

Unit 2 – Instruments of Trade Policy

1. Trade liberalization refers to opening up of domestic markets to goods and services from the rest of the world by bringing down trade barriers.

Basics

Meaning of Trade policy: Policy that encompasses all instruments those governments may use to *promote or restrict imports and exports*.

Objectives: The main purpose of trade policy is typically to *restrict imports and/or encourage exports*.

Other objectives include:

1. The highest possible degree of free trade.
2. An efficient internal market and open trade policy.
3. A strengthened multilateral trade system the world trade organization (WTO)
4. Increasing trade among different countries and greater investment.

Tariff

1. Tariffs, *also known as customs duties*, are basically *taxes or duties* imposed on import or export.
2. Tariffs are often identified with import duties.
3. **Purpose of tariff:** Tariffs are aimed at altering the relative prices of goods and services imported. Tariffs leave the world market price of the goods unaffected; while raising their prices in the domestic market.
 1. *To protect the domestic import-competing industries.*
 2. *The main goals of tariffs are to raise revenue for the government.*
 3. Discourage import, increase price of imported goods and reduce volume of imported goods.

There are few disadvantages of imposing tariff

1. Tariff decrease the volume of international trade.
2. The prospect of market access of the exporting country is worsened.
3. Tariffs discourage domestic consumers from consuming imported foreign goods.
4. Domestic market incorrectly increases prices than would be possible in the case of free trade.
5. Tariffs discourage efficient production in the rest of the.

Forms of Import Tariff

- A. Specific Tariff (irrespective of Value):** A specific tariff is an import duty that assigns a **fixed monetary tax per physical unit** of the good imported.
- B. Ad valorem (on value):** An *ad valorem* tariff is levied as a **constant percentage of the monetary value** of one unit of the imported good.

- C. Mixed Tariffs:** It is the combination of **Specific tariff** or **Ad Valorem** tariffs.
For example, duty on cotton: 5 per cent *ad valorem* Or Rs. 3000/per ton, whichever is higher.
- D. Compound Tariff or a Compound Duty:** Ad valorem + specific tariff. : Fixed + Variable
For example: duty on cheese at 5 per cent *ad valorem* plus 100 per kg.
- E. Technical Tariff:** Duty is calculated on the components of the imported item
1. E.g. Rs. 3000/ on each solar panel plus Rs.50/ per kg on the battery.
- F. Tariff Rate Quotas:** Imports entering under the specified quota portion are usually subject to a lower (sometimes zero) tariff rate. Imports above the quantitative threshold of the quota face a much higher tariff.
- G. Variable Tariff:** A duty typically fixed to bring the price of an imported commodity up to the domestic support price for the commodity.
- H. Escalated Tariff:** Duty Rates on raw materials, semi processed goods and final products are **progressively higher**.
1. For example, a four percent tariff on iron ore or iron ingots and twelve percent tariff on steel pipes.
- I. A prohibitive tariff** is one that is set so high that no imports will enter.
- J. Anti-dumping Duties**
1. It is applicable when article is **imported at less than its nominal value**, foreign seller dumps goods in a country at less than sale prices in his market, or less than Full average cost.
2. Dumping is done to
a) Constitutes international price discrimination.
b) Harms the domestic producers of the importing country.
c) drive out established domestic producers from the market and to establish monopoly position.
d) Promotes consumption of foreign goods at undesirable levels.
e) Affects national interest in certain situations.
- K. Safeguard Duties:** There may be genuine case where the other country is not dumping their product but actually producing at lower cost. This will still create negative effect in domestic economy of importing company.
- L. Countervailing Duties**
1. It is levied on imports from any country which pays directly or indirectly, **any subsidy on the manufacture, production** etc. of an article
- M. Tariffs as Response to Trade Distortions:** when some countries engage in 'unfair' foreign-trade practices, the affected importing countries, respond quickly by measures in the form of tariff responses referred to as "trigger-price" mechanisms.

- N. MFN Tariffs:** MFN tariffs are what countries promise to impose on imports from **other members of the WTO**, unless the country is part of a preferential trade agreement (such as a free trade area or customs union).
1. This means that, in practice, MFN rates are the **highest** (most restrictive) that WTO members charge one another.
- O. Preferential tariff:** Under **Preferential Tariff** countries promise to give another country's products lower tariffs than their MFN rate. Many time even **nil rate**.
- P. Bound Tariff:** A bound tariff is a tariff which a WTO member binds itself with a **legal commitment not to raise it above a certain level**.
- Q. Applied Tariff:** An 'applied tariff' is the duty that is actually charged on imports on a most-favored nation (MFN) basis. Applied tariff can also be lower than Bound tariff.

Non-Tariff Measures (NTM) and Non-tariff barriers (NTB)

- ▲ The non- tariff measures constitute the hidden or 'invisible' measures that interfere with free trade.

<ul style="list-style-type: none"> ▲ Non-Tariff Measures (NTM) - a. These are policy measures, other than Ordinary Custom Tariff,. b. NTMs include regulations that restrict trade or that facilitate higher trade. These have a wider scope. 	<ul style="list-style-type: none"> ▲ Non-tariff barriers (NTB) - a. Non-tariff barriers which are simply discriminatory non-tariff measures imposed by governments to favor domestic over foreign suppliers. b. NTBs are thus a subset of NTMs that have a 'protectionist or discriminatory intent'.
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- ▲ **Depending on their scope NTMs are categorized as Technical Measures & Non-technical Measures:**

- ▲ **Technical Measures:**

Meaning- Technical measures refer to **product-specific properties such as characteristics of the product, technical specifications and production processes**.

TYPES OF TECHNICAL NTMs

Technical Barriers to Trades- (TBT)

1. Technical Barriers to Trade (TBT) cover **both food and non-food traded products**.
2. It refers to mandatory 'Standards and Technical Regulations' that define the specific characteristics that a product should have, such as its size, shape, design, labeling / marking / packaging, functionality or performance and production methods.

Sanitary and Phytosanitary (SPS) Measures

1. SPS measures are applied to protect human, animal or plant life from risks arising from additives, pests, contaminants, toxins or disease-causing organisms and to protect biodiversity.

Non-technical Measures:

Meaning- Non-technical measures relate to trade requirements; for example; *shipping requirements, custom formalities, trade rules, taxation policies*, etc.

It is further distinguished as-

1. **Hard measures** (e.g. Price and quantity control measures),
2. **Threat measures** (e.g. Anti-dumping and safeguards) and
3. **Other measures** such as trade-related finance and investment measures.

Furthermore, categorization also distinguish between-

1. **Import-related measures**- imposed by the importing country, and
2. **Export-related measures**- imposed by the exporting country itself.
3. **Procedural obstacles (PO)** which are practical problems in administration, transportation, delays in testing, certification etc. that may make it difficult for businesses to adhere to a given regulation.

TYPES OF NON-TECHNICAL NTMs

Import Quotas

1. **Import quota** is a direct restriction which specifies that only a certain physical amount of the good will be allowed into the country during a given time period.
 2. **Binding Quota** is set below the free trade levels of imports, is enforced by issuing licenses.
 3. **Absolute Quotas** of a permanent nature limit the quantity of imports to a specified level during a specified period of time and the imports can take place any time of the year. No condition is attached to the country of origin of the product.
 4. **A Tariff Rate Quota** When country allocation is specified, a fixed volume or value of the product must originate in one or more countries.
 5. **Unilateral Quota**, a country unilaterally fixes a ceiling on the quantity of the import of a particular commodity.
 6. **A Bilateral Quota** results from negotiations between the importing country and particular Supplier Country, or between the Importing Country and export groups within the supplier Country.
1. **Price Control Measures:** These are also known as 'para-tariff' measures.
 2. **Non-automatic Licensing and Prohibitions:**
 3. **Financial Measure:** The objective of financial measures is to increase import costs by regulating the access to and cost of foreign exchange for imports and to define the terms of payment.
 4. **State Trading:** These measures grant exclusive privileges an special preferences to a few Operators/ Agencies.
 5. **Local Content Measure:** These measures include rules on local content requirements that mandate a specified fraction of a final good should be produced domestically.
 6. **Distribution Restrictions:** Distribution restrictions are limitations imposed on the distribution of goods in the importing country involving additional license or certification requirements. These may relate to geographical restrictions or restrictions as to the type of agents who may resell.
 7. **Service Restrictions:** Producers may be restricted from providing after- sales services for exported goods in the importing country.
 8. **Procedural Obstacles:** There are procedural obstacles which increase the transaction costs thereby discouraging imports e.g. Licenses, Administrative Delay, Permission of Foreign Exchange Remittance etc.

9. **Licensing:** Prospective Importers are required to apply and obtain a license from the Licensing Authorities.
10. **Rule of origin:** Rules of origin are the criteria needed by governments of importing countries to determine the national source of a product.
11. **Embargos:** An embargo is a total ban imposed by government on import or export of some or all commodities to particular country.

Exports related Measures

1. **Export Quotas:** A quota on the export of a product from a country.
2. **Ban on exports**
3. **Export tax**
4. **Export Subsidies**
5. **Voluntary Export Restraints (VERs):** Voluntary Export Restraints (VERs) refer to a type of *informal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of that country during a specified period of time.*

Unit 3 – Trade Negotiation

Trade Agreement

- a. **Trade negotiations-** It is a process in which Nations meet to discuss the possibility of trade, with the goal of reaching a Trade Agreement.
- b. The aim of both the nations is to reach mutual consciences and establish trade agreement and promote international trade.

Types of Trade Agreements

1. **Unilateral trade agreements** under which an importing country offers trade incentives in order to encourage the exporting country to engage in international economic activities that will improve the exporting country's economy. E.g. Generalized System of Preferences.
2. **Bilateral Agreements** are agreements which set rules of trade between two countries, two blocs or a bloc and a country. These may be limited to certain goods and services or certain types of market entry barriers. E.g. EU-South Africa Free Trade Agreement; ASEAN-India Free Trade Area
3. **Multilateral Trade agreement** are the trade agreement between Many nations at one time
4. **Pluri-lateral trade agreement:** Agreement between more than two countries, but not many.
5. **Regional Preferential Trade Agreements** among a group of countries reduce trade barriers on a reciprocal and preferential basis for only the members of the group. E.g. Global System of Trade Preferences among Developing Countries (GSTP)

General agreement on tariff and trade (GATT) 1948 to 1994

1. GATT is a Multilateral Trade Agreement created in January 1948 to achieve a broad, multilateral and free worldwide system of trading.
2. GATT governed international trade, working along with the **World Bank & International Monetary Fund**.
3. The Goods Council has **10 committees** dealing with specific subjects.
4. **The GATT lost its relevance by 1980s because**
 - a. It was **obsolete** to the fast-evolving globalization.
 - b. **International investments** had expanded substantially.
 - c. **Intellectual property rights** and trade in services **were not covered by GATT**.
 - d. The **ambiguities in the multilateral system** could be heavily exploited.
 - e. Efforts at liberalizing **agricultural trade were not successful**.
 - f. there were **inadequacies in institutional structure** and dispute settlement system
 - g. It was not a treaty and therefore terms of **GATT were not fully binding**

World Trade Organisation (WTO) 1 July 1995.

Introduction of WTO - Uruguay Round

1. The Round started in Punta del Este in Uruguay in September 1986. The final act concluding the Uruguay Round establishing the WTO Regime was signed 15 April 1994, during the ministerial meeting at Marrakesh, Morocco, and hence is known as the Marrakesh Agreement.

WTO - Aim and Objectives

a. The WTO has six key objectives:

- (i) to **set and enforce rules** for international trade,
- (ii) to **provide a forum for negotiating** and monitoring further trade liberalization,
- (iii) to **resolve trade disputes**,
- (iv) to **increase the transparency** of decision-making processes,
- (v) to **cooperate with other major international economic** institutions involved in global economic management, and
- (vi) to **help developing countries** benefit fully from the global trading system.

The Structure of the WTO

- a. The WTO activities are supported by a Secretariat located in Geneva, headed by a Director General.
- b. The WTO accounting for about 95% of world trade currently has 164 members, of which 117 are developing countries.

MINISTERIAL CONFERENCE

1. It is the highest-Level Body, which can take decisions on all matters under any of the multilateral trade agreements.
2. It meets at-least once every two years.

GENERAL CONFERENCE:

1. It acts as the Trade Policy Review Body and the Dispute Settlement Body. It refers to the

Ministerial Conference.

2. It meets several times a year.

The Goods Council, Services Council, Intellectual Property

1. These councils oversee the implementation of WTO Agreements in Goods, Services and IPRs.

2. These councils report to the General Council.

Committees and Working Groups:

1. There are many Specialized Committees working under each council (eg. 11 committees under Goods Council)

2. These committees deal with individual agreements and specific areas, eg. Membership Application, Development etc.

Guiding principles of WTO

1. **Most-favoured-nation (MFN) Treatment:**

2. **National Treatment Principle (NTP)**

3. **Progressive Liberalization : Freer trade: gradually, through negotiation**

4. **Transparency**

a. WTO members are required- i) to publish their Trade Regulations, ii) to maintain institutions allowing for the review of administrative, iii) to respond to requests for information by other members, and iv) to notify changes in trade policies to the WTO.

b. These internal transparency requirements are supplemented and facilitated by periodic country- specific reports (Trade Policy reviews) through the Trade Policy review Mechanism (TPRM).

5. **No Quantitative Restrictions:**

6. **Protection of Domestic Industries** Trade control is permissible for protection of domestic industries, but only through Tariff Rates, which should be generally reduced through "reciprocal and mutually advantageous" negotiations.

7. **Market Access:**

8. **Protection of Health & Environment:**

9. **Dispute Settlement Mechanism**

WTO Agreement- An Overview of few

The WTO agreements cover goods, services and intellectual property and the permitted exceptions. These agreements are often called the WTO's trade rules, and the WTO is often described as "rules-based", a system based on rules.

1. **Agreement on Agriculture**

2. **Agreement on the Application of Sanitary and Phytosanitary (SPS)**

3. **Agreement on Textiles and Clothing (ATC)** replaced the Multi-Fiber Arrangement (MFA)

4. Agreement on Technical Barriers to Trade (TBT)
5. Agreement on Trade-Related Investment Measures (TRIMs) -
6. Anti-Dumping Agreement
7. Customs Valuation Agreement
8. Agreement on Pre-shipment Inspection (PSI)
9. Agreement on Rules of Origin
10. Agreement on Import Licensing Procedures
11. Agreement on Subsidies and Countervailing Measures
12. Agreement on Safeguards
13. General Agreement on Trade in Services (GATS)
14. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS):
15. Trade Policy Review Mechanism (TPRM)

➤ The most controversial topic in the Doha Agenda was agriculture trade.

Concerns regarding WTO by Member countries

1. Real expansion of trade in the three key areas of **agriculture, textiles** and **services has been dismal.**
2. **Protectionism and lack of willingness** among developed countries **to provide market access.**
3. **Tariff escalation'**
4. Developing countries complain that they **face exceptionally high tariffs** on selected products
5. LDCs are hugely disadvantaged and vulnerable due to **lack of factor inputs, lack of capital, lack of infrastructure,** etc.
6. Significant issues like **Climate Change, high and volatile Food Prices,** and **energy production and consumption** are all issues that have not been effectively addressed.

International Capital Movement

Foreign Flow of Capital - This is far Wider than Foreign Investment

Foreign aid or assistance	Borrowings	Investments	Deposits from non-resident Indians (NRI)
Tied aid with strict mandates regarding the use of money	Direct inter government loans	Foreign direct investment (FDI)	
Untied aid where there are no such	External commercial borrowing		
voluntary transfer stipulations from institutions like IMF, WB	Soft Loans for e.g. from affiliates of World Bank such as IDA	Foreign portfolio investment (FPI) in bonds, stocks and securities	
Multilateral aid from many governments who pool funds to international organizations like the World Bank	Loans from international institutions (e.g. world bank, IMF)		

Bilateral or direct inter government grants.	Trade credit facilities		
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Foreign Direct Investment (FDI)

1. **Meaning** - Foreign direct investment is defined as a process whereby the **resident of one country** (i.e. home country) **acquires ownership of an asset in another country** (i.e. the host country) and such movement of capital involves **ownership, control as well as management** of the asset in the host country.
2. Direct investments are **real investments** in factories, assets, land, inventories etc.
3. It Has a **long-term interest** and therefore remains invested for long.
4. **Control** According to the IMF, the acquisition of **at least ten percent** of the ordinary shares or voting power in a public or private enterprise by non-resident investors makes it eligible to be categorized as foreign direct investment (FDI).
5. **Components:** FDI has three components-
 - (a) Equity Capital,
 - (b) Reinvested Earnings,
 - (c) Other direct Capital in the form of intra-company loans between Direct Investors (Parent) and Affiliate Enterprises.
6. **Who can be Foreign Direct Investors**
 - (a) Individuals,
 - (b) Private and Public Enterprises, incorporated or unincorporated
 - (c) Associated Groups of Individuals or Enterprises,
 - (d) Governments or Government Agencies,
 - (e) Estates, Trusts or other organizations, or
 - (f) Any combination of the above-mentioned entities.
7. **Modes or Forms of FDI**
 - (a) **Opening of a subsidiary or associate** company in a foreign country,
 - (b) **Equity injection** into an overseas company,
 - (c) **Acquiring a controlling interest** in an existing foreign company,
 - (d) **Mergers and acquisitions(M&A)**
 - (e) **Joint venture** with a foreign company.
 - (f) **Green field investment** (establishment of a new overseas affiliate for freshly starting production by a parent company).
 - (g) **Brownfield investments** (a form of FDI which makes use of the existing infrastructure by merging, acquiring or leasing, instead of developing a completely new one . For e.g. in India 100% FDI under automatic route is allowed in Brownfield Airport projects.

Types of FDI

Horizontal FDI

1. when the investor establishes the same type of business operation in a foreign country as it operates in its home country.
2. For example, a cell phone service provider based in the United States moving to India to provide the same service.



Vertical FDI

1. A vertical investment is one under which the investor establishes or acquires a business activity in a foreign country which is different from the investor's main business activity yet in some way supplements its major activity.
2. For example; an automobile manufacturing company may acquire an interest in a foreign company that supplies parts



Conglomerate FDI

1. A conglomerate type of foreign direct investment is one where an investor makes a foreign investment in a business that is unrelated to its existing business in its home country
2. For example; an automobile manufacturing company may acquire an interest in a foreign company that make furniture.



Yet another category of investment is '**two-way direct foreign investments**' which are reciprocal investments between countries. These investments occur when some industries are more advanced in one nation (for example, the computer industry in the United States), while other industries are more efficient in other nations (such as the automobile industry in Japan).

Foreign Portfolio Investment (FPI)

1. **Meaning**- Foreign portfolio investment is the flow of '**financial capital**' rather than '**real capital**' and does not involve ownership, control, or management on the part of the investor.
2. **Concept** -FPI is a process in which the Resident of One Country (i.e Home Country) acquires ownership of **Financial Assets / Securities** in another country (i.e Host Company).
3. **Example** - European Citizen buying Bonds of Indian company in Indian Market.
4. **Characteristics of FPI**
 - (a) The singular intention of a foreign portfolio investor is to **earn a remunerative return through investment in foreign securities** and is primarily concerned about the safety of their capital, the likelihood of appreciation in its value, and the return generated.
 - (b) Such investors also **do not have any intention of exercising voting power or controlling or managing the affairs of the company** in whose securities they invest
 - (c) **Lower stake** in companies with their total stake in a firm **at below 10 percent**.
 - (d) FPI have **immediate impact on balance of payment** or exchange rate rather than on production or income generation.
 - (e) Portfolio investments are, to a large extent, expected to be speculative. Once investor confidence is shaken, such capital has a tendency to speedily shift from one country to another, occasionally creating financial crisis for the host country.

Reasons/factor for FDI and FPI	Factors discouraging FDI in host Country
<ol style="list-style-type: none"> 1. Higher rate of return: 2. Interdependency- 	General ⇒ Political instability

<ol style="list-style-type: none"> 3. Economies of scale- 4. Desire to control- 5. Risk diversification 6. Desire to control IPR- 7. Penetration into the markets ('getting behind the tariff wall'). 8. Strategy to obtain control of strategic raw material 9. Labour cost advantage- 10. Tax differentials 11. Shared common language or common boundaries 	<ul style="list-style-type: none"> ⇒ Poor infrastructure ⇒ Small size of market with lack of growth potential. ⇒ Poor track-record of investments <p>Macro-Economic Factors</p> <ul style="list-style-type: none"> ⇒ High rates of inflation ⇒ Exchange rate volatility ⇒ Low income levels and lower demand <p>Labour related</p> <ul style="list-style-type: none"> ⇒ Poor literacy and low labour skills, ⇒ Dominance of labour unions ⇒ Language barriers <p>Law/ Governance related</p> <ul style="list-style-type: none"> ⇒ Higher degree of Non - Tariff barriers ⇒ Unfavorable tax regime ⇒ Law not favorable to IPR protection ⇒ Double taxation
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FDI in Host Country- Advantages	FDI in Host Country- Disadvantages
<ol style="list-style-type: none"> 1. <i>Labour</i> 2. <i>International capital supporting by domestic savings.</i> 3. <i>Technology up gradation</i> 4. <i>Domestic Industry becomes competitive</i> 5. <i>Access to Global Market</i> 6. <i>Domestic resources are utilised more efficiently</i> 7. <i>Consumer gets better goods at lower price</i> 8. <i>Competition among government to get FDI</i> 9. <i>Promotion of ancillary units/ support industries</i> 10. <i>Promote the exports of developing countries</i> 11. <i>Act as a source of new tax revenue</i> 12. <i>FDI reduces the established monopoly</i> 13. <i>Favourable impact on the host country's balance of payment position</i> 14. <i>Better work culture and higher productivity standards</i> 	<ol style="list-style-type: none"> 1. <i>Labour class gets affected due to capital-intensive methods of production</i> 2. <i>Monopoly of foreign firm-</i> 3. <i>Domestic resources are ruthlessly exploited.</i> 4. <i>Transferring outdated technology.</i> 5. <i>Domestic Industry face stiff challenges -</i> 6. <i>FDI move towards regions or states which are well endowed in terms of natural resources, creating more regional disparity.</i> 7. <i>FDI may cause the domestic governments to slow down its efforts to generate more domestic savings and investment.</i> 8. <i>Foreign firms may partly finance their domestic investments by borrowing funds in the host country's capital market. 'Crowding-out' effect.</i> 9. <i>FDI usually involves domestic companies 'off-shoring', or shifting jobs and operations abroad in pursuit of lower operating costs and consequent higher profits..</i> 10. <i>Foreign entities are usually accused of being anti-ethical.</i> 11. <i>Adverse impact on the host country's commodity terms of trade</i>

FDI in India

- ▲ **Routes for FDI** - An Indian Company can obtain FDI through-
 - a. **Automatic Route**- i.e without any prior approval of the Government or RBI.
 - b. **Approval Route**- i.e with prior approval of the Government

- ▲ **Instruments** - FDI can be obtained through issue of "FDI - Compliant instruments" viz **Equity Shares, fully and mandatorily Convertible Preference Shares and Debentures, Partly Paid Equity Shares and Warrants**, issued in accordance with the Companies Act 2013 and SEBI Guidelines, as applicable.

- ▲ **Prohibition** - In India, Foreign Investment is prohibited in the following sectors-
 - (a) Lottery Business including Government/ private Lottery, Online Lotteries etc
 - (b) Gambling and Betting including Casinos etc
 - (c) Chit Funds
 - (d) Nidhi Company
 - (e) Trading in Transferable Development Rights (TDRs)
 - (f) Real Estate Business or Construction of Farm Houses
 - (g) Manufacturing of cigars, Cheroots, Cigarillos and Cigarettes, of Tobacco or of Tobacco substitutes
 - (h) Activities / sectors not open to Private Sector Investment eg. Atomic Energy and Railway Operations (other than permitted activities)

Overseas Direct Investment by Indian Business

1. There has been progressive relaxation of the capital controls and simplification of procedures for outbound investments from India.
2. As a result, Outbound Foreign Direct Investments (OFDIs) from India have undergone substantial increase in terms of size, geographical spread and sectorial composition.

EXCHANGE RATE AND ITS ECONOMIC EFFECTS

- A. **Currency** - Currency is the **legal tender** of any country within its national Frontier buy or sell goods. Major traded currencies in the world are- Dollar, Yen, Pound and Euro
- B. **Home Currency** - A **country's own currency** is known as home currency / domestic currency.
- C. **Foreign Currency** - any currency **other than home currency** is a foreign currency.
- D. **Foreign Exchange** - A foreign currency transaction is a transaction that is denominated in or requires settlement in a foreign currency:
 - (a) buys or sells goods or services in a foreign currency.
 - (b) borrows or lends funds in a foreign currency.
 - (c) becomes a party to an unperformed forward exchange contract; or
 - (d) otherwise acquires or sells of assets, or incurs or settles liabilities, denominated in a foreign currency.

E. Foreign exchange Market -

- The wide-reaching collection of markets and institutions that handle the exchange of foreign currencies is known as the foreign exchange market.
- Foreign exchange market comprises of buyers and sellers of foreign currency.

F. Features of Foreign exchange Market -

- It is a wide-reaching market and operates worldwide.
- It is largest market in the world in terms of cash value traded.
- It is an Over-the-Counter market and not a physical place as such. (OTC)
- There is no central trading location and no set hours of trading.
- Market participants who demand and supply currencies represent themselves through their Banks and Key Forex Dealers.
- Forex Market operates on very narrow spreads between buying & selling prices.

G. Vehicle Currency

- A currency that is widely used to denominate international contracts made by parties even when it is not the national currency of either of the parties. Example - Dollar/ USD

H. Major Participants in Forex market and their role

- Central banks and Government- To stabilize the excessive volatility in exchange rate
- Commercial banks - executing orders from exporters, importers, investment institutions, insurance and retirement funds, hedgers, and private investors. Commercial banks also perform trading operations in their own interests and at their own expense.
- Foreign exchange Dealers- Intermediaries between different dealers or banks.
- Arbitrageurs- To earn profit by discovering price differences between pairs of currencies with different dealers or banks
- Speculators /Bulls or bears - are deliberate risk-takers who participate in the market to make gains
- MNCs that engage in international trade and investments -For normal trade
- Note: Commercial Banks and Brokerage are also called market makers as they set their own exchange price too.

I. Spot Exchange rate

- A spot exchange rate is the rate at which the currencies are being traded for delivery on the same day.

J. Future Exchange rate

- Contracts to buy or sell currencies for future delivery which are carried out in forward and/or futures markets.
- The elements which get fixed on the date are- rate of exchange, Amount and Date of execution

K. Forward Premium and Forward Discount

- A forward premium is said to occur when the forward exchange rate is more than a spot trade rate. E.g.- Spot rate Rs/Dollar = 63 and future rate 67
- Forward discount is where the trade is quoted at a lower rate than the spot trade. E.g.- Spot rate Rs/Dollar = 63 and future rate 61

L. **Bid rate/ Buying rate:** It is the rate at which the dealer is ready to buy the foreign currency in exchange for domestic currency. Therefore, it is the buying rate.

M. **Ask rate/ Selling rate :** It is the rate at which the foreign dealer 'asks' its customers to pay in local currency in exchange of the foreign currency. Therefore, it is the **selling rate or offer rate** at which foreign currency can be purchase from the dealer.

Bid rate/Buying rate and Ask rate/selling rate is considered from banker's point

N. Spread or Bid-Ask Spread

The **difference between bid price and the offer price** is called spread.

O. **Cross rate :** There may be two pairs of currencies with one currency being common between the two pairs and is called 'cross rate'

P. Base currency and Counter currency

- In an expression Currency of one country/ Currency of Another country, the currency in denominator is Base currency and that in numerator is Counter currency
- Therefor in Direct Quote FC is base currency and HC is counter currency.**
- Therefor in Indirect Quote HC is base currency and FC is counter currency**

Difference between Direct and Indirect Quote

Point	Direct Quote	Indirect Quote
Meaning	A Direct Quote is the number of units of a Local Currency exchangeable for one unit of a Foreign Currency.	An Indirect Quote is the number of units of a Foreign Currency exchangeable for one unit of local Currency.
Also known as	European Currency Quotation	American Currency Quotation
Base Currency	Foreign Currency (i.e. Rupee in the above case)	Local Currency (i.e. US \$ in the above case)
Counter Currency	Local Currency (i.e. US \$ in the above case)	Foreign Currency (i.e. Rupee in the above case)
Relationship	Direct quote= 1/Indirect Quote	Indirect quote= 1/ Direct Quote
Example	Rs. 67/ US \$ means 67 is required to buy 1	\$ 0.0143 per Rupee means 1 is obtained by selling \$ 0.0143

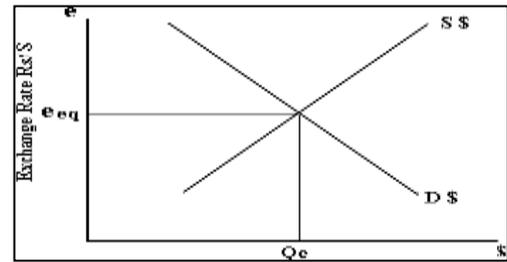
Arbitrage - Buy low sell high

Meaning

- Arbitrage refers to the practice of making **risk-less profits** by intelligently exploiting price differences of an asset at different dealing places.
- Outcome of Arbitrage:** On account of arbitrage, regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency.

Determination of Exchange rate

Exchange rate is determined by **equilibrium of Demand and Supply**. RBI intervenes the market only to stabilize the exchange rate and prevent wide fluctuations.



Demand for Foreign currency arises due to	Supply of Foreign currency arises due to
<ul style="list-style-type: none"> ∂ Purchase of goods and services from another country- Import ∂ Unilateral transfers such as gifts, awards, grants, donations or endowments ∂ Make investment income payments abroad ∂ Purchase financial assets, stocks or bonds abroad ∂ Open a foreign bank account and ∂ Acquire direct ownership of real capital ∂ for speculation and hedging activities related to risk-taking or risk-avoidance activity. 	<ul style="list-style-type: none"> ∂ Sale of goods and services from another country- Export ∂ Unilateral transfers Inward such as gifts, awards, grants, donations or endowments ∂ Receive investment income payments abroad ∂ Sale financial assets, stocks or bonds abroad ∂ Sale direct ownership of real capital

Difference between HC appreciation and HC depreciation

The terms, 'currency appreciation' and 'currency depreciation' describe the movements of the exchange rate.

	Home Currency Depreciation (or Foreign currency appreciation)	Home Currency Appreciation (or Foreign Currency Depreciation)
Meaning	<ul style="list-style-type: none"> a. Currency depreciates when its <u>value falls with respect to the value of another currency</u> or a basket of other currencies. b. Home-currency depreciation takes place when there is an increase in the home currency price of the foreign currency (or, alternatively, a decrease in the foreign currency price of the home currency). 	<ul style="list-style-type: none"> a. Currency appreciates when its <u>value increases with respect to the value of another currency</u> or a basket of other currencies. b. Home-currency appreciation takes place when there is a decrease in the home currency price of foreign currency (or alternatively, an increase in the foreign currency price of home currency).
Cause	<ul style="list-style-type: none"> 1. This arises when the Demand Curve for Foreign Currency shifts to the right representing increased demand for Foreign Currency, and Supply Curve remains unchanged. 2. Where the DD curve remains same but the supply decreases 	<ul style="list-style-type: none"> 1. This arises when the Supply Curve for Foreign Currency shifts to the right representing increased supply for Foreign Currency, and Demand Curve remains unchanged. 2. Where the DD curve remains same but the supply increases

Impact on Exporters and importers by Appreciation/ depreciation of currency

Situation	Type	Impact	Good or Bad
When Foreign currency appreciates	Exporter		
When Home currency appreciates	Exporter		
When Home currency depreciates	Importer		
When Foreign currency Depreciates	Importer		

Devaluation Vs Depreciation

	Devaluation	Depreciation
Meaning	Deliberate downward adjustment in the value of a country's currency relative to another currency, group of currencies or standard.	Currency depreciates when its <u>value falls with respect to the value of another currency</u> or a basket of other currencies.
causes	Devaluation is caused by action of the Government/ central Bank/ Monetary authority/	Depreciation is caused when Demand increases with supply remaining constant or Where Demand is constant and Supply decreases
Regime	Applicable if Fixed exchange rate Regime	Applicable if Floating exchange rate Regime
Determinant	It is a monetary policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime	Determined by Market forces. Demand and supply forces determines the value of currency

Revaluation is the opposite of devaluation and the term refers to a discrete raising of the otherwise fixed par value of a nation's currency.

Impacts of exchange rate fluctuations on domestic economy

1. Export:

- (a) Home Currency Depreciates- Export Demand Increases.
- (b) Home Currency Appreciates- Export Demand decreases

2. Imports:

- (a) Home Currency Depreciates- Imports decreases.
- (b) Home Currency Appreciates- demand for Imports increases.

3. Domestic Inflation: (relate with Import)

- (a) Home Currency Depreciates- leads to Cost push Inflation.
- (b) Home Currency Appreciates- brings down Inflation.

4. Domestic Demand:

- (a) Home Currency Depreciates- increases the demand for Domestic goods.
- (b) Home Currency Appreciates- reduces the demand for Domestic goods.

5. Foreign currency Debt

- (a) Home Currency Depreciates- will lead to more HC outflow towards repayment of loan and

Principle.

(b) **Home Currency Appreciates-** will lead to lesser HC outflow towards repayment of loan and Principle.

6. Inward remittance

(a) **Home Currency Depreciates-** Depreciation increases such inflows.

(b) **Home Currency Appreciates-** Appreciation decreases such inflows

7. Current account

(a) **Home Currency Depreciates-** If Export earnings rise faster than the Import Spending, then Current Account will improve.

(b) **Home Currency Appreciates-** Increasing imports and declining Exports cause larger deficits and worsen the Current Account balance.

Exchange rate Regime

1. An exchange rate regime is the system by which a **country manages its currency in respect to foreign currencies**.
2. There are **three** broad categories of exchange rate systems.
 - (a) **Floating Exchange rate Regime:** In one system, exchange rates are set purely by private market forces with no government involvement. Values change constantly due to demand & supply of currencies.
 - (b) **Fixed Exchange rate Regime:** governments may seek to fix the values of their currencies, either through participation in the market or through regulatory policy
 - (c) **Managed Floating:** currency values are allowed to change, but governments participate in currency markets in an effort to influence those values.

Floating rate Regime

Meaning:

1. Determined by **demand for and supply of currency** relative to other currencies.
2. **Self-regulating**.
3. There is **no predetermined target rate**.
4. There is **no interference on the part of the government or the central bank**, except to moderate the rate of change and preventing undue fluctuations.

Merits

1. Allows Central bank and /or government to pursue its **own independent monetary policy**
2. Floating exchange rate regime allows exchange rate to be used as a **policy tool**:
3. **Not required to maintain a huge foreign exchange reserve**.

Demerits

1. Generate a **lot of uncertainties** in relation to international transactions.
2. Make international transactions riskier.
3. Contracts between buyers and sellers in different countries get affected by exchange rate changes in addition to business risk.

Fixed rate Regime

Concept

- a) A fixed exchange rate is also referred as *pegged exchange rate*.
- b) The Country's *Central bank and / or Government announces or decrees the Rate*, i.e. what its currency will be worth in terms of -
 - i) either other country's currency,
 - ii) a basket of currencies,
 - iii) Another measure of value, e.g. Gold.
- c) When a Government intervenes in the *forex Market* so that the Exchange Rate of its currency is different from what would have been determined by the free flow of market forces, it is said to have established a "*peg*" for its currency.
- d) To maintain the Rate at that announced level (called "Parity Value"), the *Central Bank and/or Government also regularly operates in the market* by buying (or selling) Foreign Reserves.

Merits

- (a) *Avoids currency fluctuations and eliminates exchange rate risks*
- (b) *Greatly enhance international trade and investment.*
- (c) *A reduction in speculation on exchange rate.*
- (d) *Imposes discipline on a country's monetary authority.*
- (e) *The government can encourage greater trade and investment.*
- (f) *Exchange rate peg can also enhance the credibility of the country's monetary-policy.*

Demerits

- a) The Central Bank and/or Government have to *maintain large reserves*.
- b) Market Forces of *Demand and Supply have no role* in determination of Equilibrium FX Rate.

Managed Float Systems

- a) Exchange rates are still free to float, but governments try to influence their values. Government or central bank participation in a floating exchange rate system and intervene from time to time in the currency market to stabilize the fluctuations.

Hard Peg	The Central Bank sets a fixed and unchanging value for the Exchange Rate.
Soft Peg	The Exchange Rate is generally market determined, but if the Rates tend to be move speedily in one direction, the Central Bank will intervene in the market.
Floating Regime	Market determines the Exchange rate. Supply and Demand of Currency determines the rate of exchange

Real rate and Nominal rate of Exchange

- (a) The 'real exchange rate' describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country. It is denoted by R.
- (b) Trade flows are affected not by nominal exchange rates, but instead, by real exchange rates.
- (c) A country's real exchange rate is a key determinant of its net exports of goods and services.

(d) The real exchange rate for single commodity is represented by the following equation:

$$\text{Real exchange rate (R)} = \text{nominal exchange rate} \times \frac{\text{domestic price}}{\text{Foreign Price.}}$$

(e) In contrast to the nominal exchange rate, the real exchange rate is always "floating", since even in the regime of a fixed nominal exchange rate E, the real exchange rate R can move via price-level changes.

(f) Rather than focusing on the nominal exchange rate, it is more sensible to monitor the real exchange rate when assessing the effect of exchange rates on international trade or export competitiveness of a country.

Nominal Effective Exchange rate (NEER) & Real effective exchange rate (REER):

(a) **Nominal Effective Exchange rate (NEER):** Unlike nominal and real exchange rates, NEER and REER are not determined for each foreign currency separately but against a whole basket of currencies.

(b) **Real effective exchange rate (REER):** A real effective exchange rate (REER) adjusts NEER by the appropriate foreign price level and deflates by the home country price level. The REER is NEER with price or labor cost inflation removed from it.

CHAPTER 10: INDIAN ECONOMY

STATUS OF INDIAN ECONOMY: PRE INDEPENDENCE PERIOD (1850 -1947)

India's Economic Position between 1st and 17th Century

1. India is the largest economy of the ancient and the medieval world.
2. It controlled between **one third and one fourth** of the world's wealth.
3. The Economy is a hub for commerce, pilgrimage and administration.

A. Handbook of Political Philosophy: Arthashastra - Period: 321-296 BCE

I. Features of the Book:

- a) 'Arthashastra' is the work **Kautilya (Chanakya)**.
- b) It is believed to be a kind of **handbook for King Chandragupta Maurya**, the founder of Mauryan empire.
- c) Arthashastra means **primarily, 'wealth' and, secondarily, 'the land'**.
- d) The major focus of the work is on the means of fruitfully maintaining and using land.
- e) Kautilya's writings relate to statecraft, political science, economic policy and military strategy.
- f) It contains the directives as to how to reign over the kingdom and encouraging direct action in addressing political concerns without regard for ethical considerations.
- g) Artha is **not** wealth alone; rather it encompasses all aspects of the **material well-being of individuals**.
- h) Taxes, which were charged equal for private and state-owned businesses.
- i) **True kingship**: The preservation and advancement of this good was comprised of seven vital elements, namely the **King, Ministers, Farmlands, Fortresses, Treasury, Military & the Allies**.

The period of British rule can be divided into two sub periods:

The rule of East India Company from 1757 to 1858

- a) **Reversal of Indian Market** - From Exporter of Goods to exporter of RM
- b) **Tariffs Discriminatory**: This made the exports of finished goods relatively costlier and the imports cheaper.
- c) Hostile policy and Competition from Machine made goods:
- d) Drop in Demand for Indian goods, Shift towards Western goods and Culture.
 - Imbalance arose in Indian economy: this causes imbalance in the traditional village Economy.
- e) **List of situations where waves of colonialism have impacted as follows**
 - a) Large scale unemployment >> absence of alternate sources of employment >> dependency agriculture for livelihood >> sub division and fragmentation of land holdings >> subsistence farming >> reduced agricultural productivity and poverty >> imported goods made the survival of domestic industries more difficult >> Excessive pressure on land under tenancy >> zamindars got the opportunity to extract excessive rents >> low attention to productivity enhancing measures led to a virtual collapse of Indian agriculture.

British government in India from 1858 to 1947

- a) The 'Modern' industrial enterprises in colonial India started to grow in the mid-19th century.
- b) **Cotton Mills:** With **9 million spindles** in the 1930s, India got **fifth position** globally.
- c) **Jute Mills:** **Largest** in the world, expanding rapidly in and around **Calcutta**
- d) **Iron Industry:** Ranking **eighth** in the world.
- e) Just before the Great Depression, India was ranked as the 12th Largest Industrialized country measured by the value of manufactured products.
- f) **Downturn in Producer goods Industries:**
 - i. Policy formulation in favor of britishers
 - ii. The share in the net domestic product (NDP) of the manufacturing sector had barely reached 7% even in 1946.

INDIAN ECONOMY: POST-INDEPENDENCE (1947- 1991)

1. Feature of Indian Economy immediately after Independence:

- a) Majorly had rural inhabited >> mostly illiterate >> poor population >> literacy just 18 % >> barely 32 years of life expectancy.

2. Development Strategy - Nehruvian Model:

- a. The **Nehruvian model** supporting social and economic redistribution and industrialization.
- b. **Rapid industrialization** of the economy was the cornerstone of Nehru's development strategy. The concept of 'planned modernization'.
- c. **Centralized economic planning** and direction was at the core of India's development strategy supporting **equity and distributive justice.**
- d. **The Planning Commission of India** was established to particularly plan for the economic development of the nation in line with the **socialistic strategy.**
- e. This was carried through the **five-year plans.**

1948	<ol style="list-style-type: none"> a. Expanded role for the public sector b. Licensing to the private sector. c. Granted state monopoly for strategic areas such as atomic energy, arms & ammunition & railways. d. The rights to new investments in basic industries were exclusively given to the state.
1950	<ol style="list-style-type: none"> a. Two Economic philosophies: <ol style="list-style-type: none"> 1. PM Nehru's visualization - emphasis on heavy industry, and 2. The Gandhian philosophy - small scale and cottage industry and village republics.
1950-1980	<ol style="list-style-type: none"> a. India's average annual rate of growth of GDP- often referred to as the 'Hindu growth rate'- was a modest 3.5 percent. b. Green Revolution Initiative: <ol style="list-style-type: none"> i. The strategy for agricultural development till then was reliance on institutional model. ii. India then faced two severe and consecutive droughts struck in 1966 and 1967.. iii. The evolution of Green Revolution was successfully materialised. Green Revolution is called as Wheat Revolution, made us to overcome food problem.

- c. The economic performance during the period of 1965-81 is the worst because of-
- i. The license-raj, the autarchic policies in 1960s and 1970s,
 - ii. the external shocks such as three wars (in 1962, 1965, and 1971),
 - iii. major droughts (especially 1966 and 1967), and the oil shocks of 1973 and 1979
 - iv. India being practically a closed economy missed out on the opportunities created by a rapidly growing world economy.
- d. Consequence of Framing Interventionist policy**
- i. The government nationalized 14 banks in 1969 and 6 in 1980.
 - ii. The Monopolies and Restrictive Trade Practices (MRTP) Act, 1969 restricted the possibility of expansion of big business houses.

Evolution of Economic Reforms

1. **Around 1980** - The seeds of early Liberalization and Reforms were sown.
2. Between 1981-1989- This Period named as **early liberalization** were specifically aimed at changing the prevailing thrust on 'in-ward oriented' trade and investment practices.
3. The early reforms of 1980's broadly covered three areas, namely **industry, trade** and **taxation**.

a. List of Some Economic Reforms initiated before 1991:

- (a) **Delicensing of 25 broad categories** of industries.
- (b) **Broad-banding** - firms may switch production between different production lines.
- (c) The ceiling limit of MRTP Regulations have been increased from **20 crore to 100 crore**.
- (d) Establishment of SEBI.
- (e) The open general licence (OGL) list was steadily expande.
- (f) Based on the real effective exchange rate (REER), the rupee was depreciated by about 30.0 per cent from 1985-86 to 1989-90.

b. Challenges faced from Reforms:

- The private investments were affected due to **complicated licensing policies, public sector reservations** and **excessive government controls**.
- **Reservation of goods to small scale sector** discouraged private investments.
- Inefficiency in government controls and bureaucratic procedures.
- Foreign investments and foreign competition were not allowed for protection to domestic industries.

THE ECONOMIC REFORMS OF 1991

- ▲ India embarked on a bold set of economic reforms in **1991 under the Narsimha Rao government**.
- ▲ The causes attributed to the immediate need for such a drastic change are:
 - a. The fiscal initiatives of 1980s led fiscal deficit, making adverse balance of payments.
 - b. Persistent huge deficits led large government's expenditure towards interest payments.

- c. The surge in oil prices triggered by the gulf war in 1990.
 - d. The foreign exchange reserves touched the lowest point with a reserve of only \$1.2 billion which was barely sufficient for two weeks of imports.
 - e. India had to depend on external borrowing from the IMF.
 - f. The fragile political situation ballooned into what may be called a 'crisis of confidence'.
 - g. Collapse of the **Soviet Union and the spectacular success of China**, based on outward oriented policies were lessons for the Indian policy makers.
- ▲ The reforms, popularly known as liberalization, privatization & globalization had two major objectives:
1. **Reorientation of the economy** from a centrally directed and highly controlled one to a 'market friendly' or market oriented economy.
 2. **Macroeconomic stabilization** by substantial reduction in fiscal deficit.

The policies can be broadly classified as :

1. **Stabilization measures** >>>> short term measures >>>to address the problems of inflation & adverse balance of payment
2. **Structural reform** >>>> long term and of continuing nature>>>> aimed at bringing in productivity and competitiveness by removing the structural rigidities in different sectors of the economy.
4. The prominent industrial policy initiatives were:
 - a. **Liberalisation:** Liberalisation refers to relaxation of previous Government restrictions usually in areas of social and economic policies.
 - b. **Areas of Liberalisation: Liberalization** i.e. economic reforms were introduced in four major sectors viz. -
 - ✓ Industrial Sector,
 - ✓ Financial Sector,
 - ✓ Foreign Trade / External Sector, and
 - ✓ Fiscal Policy.

The Fiscal Reforms

Measures to this effect included:

1. Introduction of a **stable and transparent tax structure**,
2. Ensuring **better tax compliance**,
3. Thrust on **curbing government expenditure**
4. **Reduction** in subsidies and **abolition** of unnecessary subsidies
5. **Disinvestment of part of government's equity holdings** in select public sector undertakings and
6. Encouraging **private sector participation**.

Monetary and Financial Sector Reforms

- ▲ The focus was mostly on **reducing the burden of nonperforming assets**. These included many measures, important among them are:
1. **Interest rate liberalization and reduction in controls on banks** by the RBI

2. **Opening of new private sector banks.**
3. Reduction in reserve requirements namely CRR and SLR.
4. **Liberalisation of bank branch licensing policy** and granting of freedom to banks in respect of opening, relocating or closure of branches

Reforms in Capital Markets

- ▲ The **Securities and Exchange Board of India (SEBI)** which was set up in 1988 was given statutory recognition in 1992.

The 'New Industrial Policy'

- ▲ The '**New Industrial Policy**' was announced by the government on **24 July 1991**.
 1. The New Economic Policy put an end to the '**License Raj**' by removing licensing restrictions for all industries except for 18. Consequently, 80 percent of the industry was taken out of the licensing framework.
 2. This is subsequently reduced to 5, namely, arms and ammunition, atomic substances, narcotic drugs and hazardous chemicals, distillation and brewing of alcoholic drinks and cigarettes and cigar.
 3. The MRTP Act was restructured.
 4. Many goods produced by small-scale industries have been de reserved enabling entry of large firms.
 5. Foreign investment was also liberalised. The concept of automatic approval was introduced for foreign direct investments up to 51 %.
 6. FDI is prohibited only in four sectors viz. retail trade, atomic energy, lottery business and betting and gambling.
 7. External trade was further liberalised by substituting 'the positive list approach' of listing license-free items on the OGL list with **the negative list approach.**
 8. In 1990-91, the highest tariff rate was 355% which came down to 10% with some exceptions such as automobile at 100%
 9. Rupee was devalued by 18% against the dollar.

Trade Policy Reforms

- ▲ The trade policy reforms aimed at:
 - Dismantling of **quantitative restrictions** on imports and exports
- ▲ **Export duties were removed** to increase the competitive position of Indian goods.
- ▲ In 1991, India still had a fixed exchange rate system. In March 1992 the government decided to establish a dual exchange rate regime. From 1993 onwards, India has followed a managed floating exchange rate system.
- ▲ India enjoys a solid cushion of foreign exchange reserves close to eight months of import cover. India has one of the largest holdings of international reserves in the world.
 - * Poverty has reduced substantially

- * Value-added share of agriculture and allied activities has declined steadily over the past four decades.

NITI AAYOG: A BOLD STEP FOR TRANSFORMING INDIA

A. Background for NITI AAYOG:

- a. On 1st January 2015, the apex policy-making body namely Planning Commission, was replaced by the National Institution for Transforming India (NITI) Aayog.
- b. The major objective of such a move was to '**spur innovative thinking by objective 'experts' and promote 'co-operative federalism'** by enhancing the voice and influence of the states'.
- c. NITI Aayog is expected to serve as a 'Think Tank' of the government. [and] a 'directional and policy dynamo'.

B. NITI Ayog will work towards the following objectives :

- a. **To evolve a shared vision** of national development with the active involvement of states.
- b. To foster **cooperative federalism**, recognizing that strong states make a strong nation.
- c. **Formulate credible plans** at the village level & aggregate these progressively at higher levels.
- d. To pay special **attention to the sections of our society**.
- e. To **design strategic and long-term policy and programme** frameworks.
- f. To provide **advice and encourage partnerships between key stakeholders** and national and international like-minded think tanks, as well as educational and policy research institutions.
- g. To create a **knowledge, innovation and entrepreneurial** support system.
- h. To offer a **platform for the resolution of inter-sectoral and inter departmental issues**.
- i. To maintain a **state-of-the-art resource centre**.
- j. To **actively monitor and evaluate the implementation of programmes** and initiatives.
- k. To focus on **technology up gradation and capacity building** for implementation of programmes.

C. The key initiatives of NITI Aayog are:

- a. '**Life**' which envisions replacing the prevalent 'use-and-dispose' economy
- b. The **National Data and Analytics Platform (NDAP)** facilitates and improves access to Indian government data
- c. **Shoonya campaign** aims to improve air quality in India by accelerating the deployment of electric vehicles
- d. **E-Amrit** is a one-stop destination for all information on electric vehicles
- e. **India Policy Insights (IPI)**
- f. '**Methanol Economy**' programme is aimed at reducing India's oil import bill, greenhouse gas (GHG) emissions, and converting coal reserves and municipal solid waste into methanol, and
- g. '**Transforming India's Gold Market**' constituted by NITI Aayog to recommend measures for tapping into the potential of the sector and provide a stimulus to exports and economic growth

D. Weaknesses of NITI AAYOG:

- a. NITI has a **limited role**
- b. It **does not produce National Plans, Control Expenditures, or Review state plans**.
- c. The major shortcoming of NITI is its **exclusion from the Budgeting Process**.

- d. It also lacks **Autonomy and Balance of Power** within the policy making apparatus of the central government.

THE CURRENT STATE OF THE INDIAN ECONOMY: A BRIEF OVERVIEW

The Primary Sector

1. Agriculture, with its allied sectors, is largest source of livelihood in India.
2. According to the latest estimates, **47 per cent of India's population is directly dependent** on agriculture for living.
3. India is world's largest producer of **milk, pulses, jute and spices**. India has the **largest area planted** under **wheat, rice and cotton**.
4. India has the **world's largest cattle herd (buffaloes)**..
5. It is the **second-largest producer of fruits, vegetables, tea, farmed fish, cotton, sugarcane, wheat, rice, cotton, and sugar**.
6. **Indian food and grocery market is the world's sixth largest**.
7. India is among the **top ten exporters of agricultural** products in the world.
8. Although the share of agriculture has been declining in overall gross value added (GVA) of India, it continues to grow in absolute terms.
9. Gross Value Added by the agriculture and allied sector **was 18.8% in 2021 -22** (until 31 January, 2022).
10. Ensure certainty of returns to the farmers through price support (The Minimum Support Price (MSP) of **all 23 mandated crops is fixed at 1.5 times** of all India weighted average cost of production)
11. Agricultural and Processed Food Export Development Authority (APEDA) is entrusted with the responsibility of export promotion of agri products.
12. The Government of India has allowed 100% FDI in marketing of food products and in food product E-commerce under the automatic route.
13. Large number of interventions is undertaken by different governments. A few such recent measures are:
 - ⤴ Income support to farmers through **PM KISAN**
 - ⤴ Launch of the **National Mission for Edible Oils**
 - ⤴ **Pradhan Mantri Fasal Bima Yojana (PMFBY)**
 - ⤴ **Mission for Integrated Development of Horticulture (MIDH)**
 - ⤴ Provision of **Soil Health Cards**
 - ⤴ **Parampara at Krishi Vikas Yojana (PKVY)** supporting and promoting organic farming, and improvement of soil health.
 - ⤴ **Promotion of Farmer Producer Organisations (FPOs)** to ensure better income for the producers through an organization of their own.
 - ⤴ **Per Drop More Crop (PDMC)** scheme to increase water use efficiency at the farm level
 - ⤴ Setting up of **E-NAM -a pan-India electronic trading portal** which networks the existing APMC mandis to create a unified national market for agricultural commodities.
 - ⤴ Introduction of **Kisan Rail** for improvement in farm produce logistics, and

14. Indian agriculture faces many issues such as:

1. Indian agriculture is dominated by **small and medium farmers with low farm productivity**. These also reduce their ability to participate in the **domestic as well as export market**.
2. Indian agriculture is **resource intensive, cereal centric and regionally biased**..
3. **Unscientific and wasteful agricultural practices**.
4. **Inadequate agro-processing infrastructure**
5. **Slow agricultural diversification**
6. Inadequate adoption of **environmentally sustainable and climate resistant** new farm technology
7. **Poor adoption of new agricultural technologies**
8. **Ineffective marketing, warehousing and credit delivery** of agricultural products.
9. High food **price volatility**
10. **Heavy dependence on monsoons** and loss of crops and livelihood due to vagaries of nature
11. **Inability to tap the full export potential** of primary as well as value added products
12. Inadequate **post-harvest infrastructure and management practices**
13. Incidence of **poverty and malnutrition**

10.7.1 The Secondary Sector

1. The Indian industry contributes about 30 % of total *GVA* by employing over 12.1 crores.
2. The industrial sector in India broadly comprises of manufacturing, heavy industries, fertilizers, pharmaceuticals, chemicals and petrochemicals, oil and natural gas, food processing, mining, defence products, textiles, retail, micro, small & medium enterprises, cottage industries and tourism. The share of informal sector in the economy is more than 50% of *GVA*.
3. The Department for Promotion of Industry and Internal Trade (DPIIT) has a role in the formulation and implementation of industrial policy and strategies for industrial development in conformity with the development needs and national objectives.
 - Introduction of *GST* on 1 July 2017 replaced many indirect taxes in India such as the excise duty, *VAT*, services tax, etc.
 - Reduction of corporate tax to domestic companies giving an option to pay income-tax at the rate of 22%.
 - 'Make in India' is a 'Vocal for Local' initiative launched in 2014.
 - Ease of Doing Business' - India ranks 63rd in the World Bank's annual Doing Business Report (*DBR*), 2020 as against 77th rank in 2019 registering a jump of 14 ranks.
 - The National Single Window System is a one-stop-shop for investment related support.
 - *PM Gati Shakti* - reducing logistics cost.
 - National Logistics Policy (*NLP*) launched in September 2022, aims to lower the cost of logistics.
 - The Production Linked Incentive (*PLI*) Scheme was initiated in March 2020 for 14 key sector.
 - *FAME-India* Scheme (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles)
 - 'Udyami Bharat' aims at the empowerment of Micro Small and Medium Enterprises (*MSMEs*).
 - *PM Mega Integrated Textile Region and Apparel (PM MITRA)*:

- 100 per cent FDI under automatic route is permitted for the sale of coal, and coal mining activities, including associated processing infrastructure and for insurance intermediaries.
- Foreign Investment Promotion Board (FIPB) was abolished in May 2017, and a new regime namely Foreign Investment Facilitation Portal (FIF) has been put in place.
- Remission of Duties and Taxes on Export Products (RoDTEP) 2021 formed to replace the existing MEIS (Merchandise Exports from India Scheme) to boost exports.
- Start-up India Programme acts as the facilitator for ideas and innovation in the country. India's rank in the Global Innovation Index (GII) has improved from 81st in 2015 to 40th in 2022.
- The Emergency Credit Line Guarantee Scheme (ECLGS) is a fully guaranteed emergency credit line to monitor lending institutions.

There are many challenges to the industrial sector; a few of these are enumerated below:

- ⤴ **Shortage of efficient infrastructure and manpower.**
- ⤴ **Reliance on imports, exchange rate volatility** and associated time and cost overruns
- ⤴ **The MSME sector is relatively less favorably placed** in terms of credit availability.
- ⤴ **Industrial locations established** without reference to cost-effective points tend to experience unsustainable cost structure.
- ⤴ **Heavy losses, inefficiencies, lower productivity** and unsustainable returns plaguing PSU.
- ⤴ **Lower export competitiveness**, slowing external demand and imposition of non tariff barriers by other countries.
- ⤴ **Inflation and associated macro economic developments** leading to input cost escalations and lower demand.
- ⤴ **Global slowdown** and related negative sentiments affecting investment.
- ⤴ **Aggressive tightening of monetary policy** and increases in cost of credit.
- ⤴ **High and increasing fuel prices**, and Mounting presence of informal sector .

10.7.3 The Tertiary Sector

India has the unique experience of bypassing the secondary sector in the growth trajectory by a shift from agriculture to the services sector.

India's services sector covers a wide variety of activities.

BOX 2. The broad classification of services as per the National Industrial Classification, 2008	
1.	Wholesale and retail trade and repair of vehicles
2.	Transportation and storage
3.	Accommodation and food service activities
4.	Information and communication
5.	Financial and insurance activities
6.	Real estate activities
7.	Professional, scientific and technical activities
8.	Administrative and support services
9.	Public administration, defence and compulsory social security

10.	Education
11.	Human health and social work activities
12.	Arts, entertainments and recreation
13.	Other service activities
14.	Activities of households as employers, undifferentiated goods and servicesproducing activities of households for own use
15.	Activities of extra territorial organizations and bodies

1. The service sector refers to the industry producing intangible goods viz. services as output. The services sector is the largest sector of India and accounts for 53.89% of total India's GVA.
2. The production and consumption of information-intensive service activities such as computing, accounting, inventory management, quality control, personnel administration, marketing, advertising and legal services has increased manifold.
3. India is among the top 10 World Trade Organization (WTO) members in service exports and imports.
4. India's services exports have remained resilient during the Covid-19 pandemic. The reasons are the higher demand for digital support and need for digital infrastructure modernization.
5. The Indian services sector is the largest recipient of FDI inflows. FDI equity inflows into the services sector accounted for more than 60 per cent of the total FDI equity inflows into India.
6. India as the seventh largest recipient of FDI in the top 20 host countries in 2021. In 2021-22.
7. To ensure the liberalisation of investment in various industries, the government has permitted 100 per cent foreign participation in telecommunication services through the Automatic Route including all services and infrastructure providers.

CHAPTER 1: NATURE AND SCOPE OF BUSINESS ECONOMICS		
S.NO	ECONOMIST NAME	DEFINITION
1	<i>Adam Smith</i>	<ol style="list-style-type: none"> 1. Economics is an inquiry into the nature and causes of wealth of nations. 2. Economics is a science which deals with wealth.
3	<i>Alfred Marshall</i>	<ol style="list-style-type: none"> 1. Economics is a study of mankind in the ordinary business of life.{Welfare Definition.} 2. Law of Demand 3. Law of diminishing Utility 4. Time Element
4	<i>AC Pigou</i>	<ol style="list-style-type: none"> 1. Money Measurement concept (Measuring Rod) 2. Price Discrimination 3. Modern business activities are based on the anticipations of business community and are affected by waves of optimism or pessimism.(CH-5)
5	<i>Lionel Robbins</i>	Scarcity Definition.
6	<i>Paul.A.Samuelson</i>	Growth Definition.
7	<i>Joel Dean</i>	Use of economic analysis to make business decisions involving the best use of an organization's scarce resources
8	<i>Prof. Boulding</i>	"Study of particular firm, particular household, individual price, wages, income, individual industries, particular commodities"-
9	<i>Prof.Mc.Connel</i>	"Macro Economics examines the Forest and not the Trees. Large aggregates "-
10	<i>Karl Marx And Frederic Engles</i>	<ol style="list-style-type: none"> 1. Concept of socialist economy. 2. The Communist Manifesto in year 1848
Chapter 2: Theory Of Demand And Supply		
11	<i>Hicks And Allen</i>	<ol style="list-style-type: none"> 1. Substitution Effect 2. Indifference Curve Analysis
12	<i>James Dusesenberry</i>	Demonstration Effect
13	<i>Thorstein Veblen</i>	<ol style="list-style-type: none"> 1. Veblen Effect 2. Conspicuous Consumption
14	<i>Robert Giffen</i>	Giffen Goods
15	<i>Olaf Helmer</i>	Delphi Technique
Chapter 3: Theory Of Production And Cost		
16	<i>James Bates And J.R.Parkinson</i>	"Production Is The Organized Activity Of Transformation Of Raw Material Into Finished G&S to Satisfy The Demand
17	<i>Ricardo</i>	Definition of land - indestructible and permanent
18	<i>R.L.Marris</i>	Maximize the firm balanced growth rate
19	<i>Schumpeter</i>	Function of an entrepreneur is to do innovation
20	<i>H.A.Simon</i>	Satisficing behaviour
21	<i>Baumol</i>	Sales revenue maximization.
22	<i>A.A.Berle & G.C.Means</i>	Manager enjoy discretionary powers to set goals
23	<i>Williamson</i>	Maximisation of managerial utility function

24	<i>Cyert & March</i>	5 Goals -Profit goals, production goal, inventory goal, sales goal, market share goal
25	<i>Paul.H.Douglas & C.W.Cobb</i>	Applies not to only individual firm but to the whole of manufacturing industry .
26	<i>Chamberlin</i>	Distinction between selling cost and production cost
27	<i>Frank Knight -</i>	Profit is the reward for bearing uncertainties
Chapter 4: Meaning And Types Of Market		
28	<i>Porf.Stigler</i>	Defined oligopoly
29	<i>Paul.A.Sweezy</i>	Kinked demand curve
30	<i>Cournot Model</i>	The firms control variable is output in contrast to price.
31	<i>Stackelberg Model</i>	The leader commits to an output before all other firms.
32	<i>Bertrand Model</i>	Price is control variable for firms and each firm is independently sets its price in order to maximize profits.
Chapter 5: Business Cycle		
33	<i>Keynes</i>	Aggregate effective demand
34	<i>Schumpeter</i>	Innovation theory
35	<i>Jm Keynes</i>	Fluctuation in effective demand
36	<i>Nicholas Kaldor</i>	Cobweb theory - holds that business cycles result from the fact that present prices substantially influence the production at some future date .
37	<i>Hawtrey</i>	Trade cycle is purely monetary phenomenon

BCK SUMMARY		
1	<i>Charles Darwin</i>	It is not the strongest of the species that survive , nor the most intelligent, but the one most responsive to change .
2	<i>Gluek & Jauch</i>	Business environment includes factors outside the firm which can lead to opportunities for threats to the firm.
3	<i>Barry.M.Richman And Melvyn Copen</i>	Environment factors or constraint are <u>largely if not totally</u> ,external and beyond the control of individual industrial enterprises.
4	<i>Peter Drucker</i>	The aim of business is to create and retain customer .
5	<i>Dadabhai Naoroji</i>	Book " Poverty and Un-British Rule in India " drew attention to drain of wealth from India to Britain.
6	<i>J.P.Devadhar</i>	SEBI order can be appealed to securities appellate tribunal which is three member tribunal and headed

CHAPTER 1: NATURE AND SCOPE OF BUSINESS ECONOMICS		
Sno.	Concept	Formula
1	Total Utility	$TU = MU_1 + MU_2 + MU_3 + \dots + MU_{n^{th}} \text{ Units}$
3	Marginal Utility	1. Marginal Utility = $\frac{\text{Change in Total Utility } (\Delta TU)}{\text{Change in No. of Units Consumed } (\Delta Q)}$. 2. $MU_n = TU_n - TU_{n-1}$
4	Consumer Equilibrium - Cardinal	$\frac{MU_x}{\text{Price}_x} = \frac{MU_y}{\text{price}_y}$
5	Consumer Surplus	1. What a consumer is ready to pay - what he actually pays. 2. Marginal Utility (MU) - Price
6	Consumer Equilibrium - Ordinal	$MRS_{xy} = MU_x / MU_y$
7	PRICE ELASTICITY {PERCENTAGE METHOD} =	$\frac{\% \text{ Change in quantity demanded}}{\% \text{ change in price}}$
8	Method of derivative	$\frac{-dq \times p}{dp \times q}$
9	Method of Graph	Lower segment/Upper segment
10	Arc Elasticity	$\frac{(q_1 - q_2) \times (p_1 + p_2)}{(q_1 + q_2) (p_1 - p_2)}$
11	Total Outlay Method	1. If Total expenditure & Price moving in same direction - Inelastic 2. If Total expenditure & Price moving in Opposite direction - Elastic 3. If total revenue remains unchanged - Unit elastic
12	Income Elasticity	$\frac{\% \text{ change in Demand}}{\% \text{ change in income}}$
13	Cross Elasticity	$\frac{\% \text{ change in Demand of good } x}{\% \text{ change in price of good } y}$
14	Advertisement Elasticity	$\frac{\% \text{ change in demand of commodity}}{\% \text{ change in advertisement expenditure}}$
15	Elasticity of supply - % Change method	$\frac{\% \text{ change in Quantity supplied}}{\% \text{ change in price}}$
16	Arc Elasticity	$\frac{(S_1 - S_2) \times (P_1 + P_2)}{(S_1 + S_2) (P_1 - P_2)}$
17	Method of derivative	$\frac{dq \times p}{dp \times q}$
18	Cobb-Douglas	$Q = K^a L^b C^{(1-a)}$

19	<i>Average Product</i>	$\frac{\text{Total product}}{\text{Quantity of input}}$
20	<i>Marginal Product</i>	<ol style="list-style-type: none"> $\frac{\text{Change in Total Product } (\Delta TP)}{\text{Change in No. of Quantity } (\Delta Q)}$ $MP_n = TP_n - TP_{n-1}$
21	<i>Economic Costs</i>	Explicit Costs + Implicit Costs
22	<i>Marginal cost per unit</i>	<ol style="list-style-type: none"> $\frac{\text{Difference in Total Cost (TC) between two output levels}}{\text{Difference in Output Quantity at those levels}}$ $\frac{\text{Difference in Total variable (TVC) of two units}}{\text{Difference in Output Quantity of two units}}$ $TC_n - TC_{n-1}$ $TVC_n - TVC_{n-1}$
23	<i>Total Cost</i>	<u>Total Fixed cost + Total variable cost</u>
24	<i>Average Total Cost</i>	<ol style="list-style-type: none"> $\frac{\text{Total Cost}}{\text{Total output}}$ Average Fixed cost + Average Variable cost
25	<i>Average Fixed cost- AFC</i>	$\frac{TFC}{Q}$
26	<i>Average Variable cost - AVC</i>	$\frac{TVC}{Q}$
27	<i>Total Revenue</i>	Price x Quantity (P x Q)
28	<i>Average Revenue</i>	<ol style="list-style-type: none"> $\frac{\text{Total Revenue}}{\text{Quantity}}$ (TR/Q) Also Known as Price
29	<i>Marginal Revenue</i>	<ol style="list-style-type: none"> $\frac{\text{Change in TR}}{\text{Change in Qty. sold}}$ $TR_n - TR_{n-1}$ Marginal Revenue = Average Revenue (E - 1/E)
30	<i>Accounting profit</i>	Total revenue - Explicit cost
31	<i>ECONOMIC PROFIT</i>	Total Revenue-(Explicit Cost + Implicit Cost)
32	<i>Profit maximisation condition</i>	<ol style="list-style-type: none"> <u>MC = MR</u> <u>MC Curve cuts MR from Below</u>