

GOKUL GLOBAL UNIVERSITY
Faculty of Commerce & Management
E-Content



Course:	BACHLORS OF BUSINESS ADMINISTRATION
Semester:	SECOND
Subject:	MACRO ECONOMICS
Subject Code:	FMB220101

Address: - Gokul Global University, Sujanpur Patia, Opp. I.O.C. Depot. State Highway- 41, Siddhpur-384151, Gujarat

Module 1

Module 1

Macroeconomics is a branch of economics that deals with the performance, structure, behavior, and decision-making of an economy as a whole. This includes national, regional, and global economies. Macroeconomics examines aggregate indicators such as GDP, unemployment rates, and price indices to understand how the whole economy functions.

Definition

Macroeconomics is the field of economics that studies the behavior and performance of an economy in its entirety. It focuses on aggregate changes in the economy such as growth rates, unemployment, inflation, and national income. The goal of macroeconomics is to understand the large-scale economic factors and how they interact to influence the overall economy.

Scope of Macroeconomics

1. National Income Accounting:

- **Gross Domestic Product (GDP):** The total market value of all final goods and services produced within a country in a given period.
- **Gross National Product (GNP):** GDP plus net income from abroad.
- **Net National Product (NNP):** GNP minus depreciation.

2. Economic Growth:

- **Long-term Growth:** Study of how economies grow over time and the factors that drive this growth.
- **Factors Influencing Growth:** Investment in capital, technology, human resources, and innovation.

3. Business Cycles:

- **Phases of Business Cycles:** Expansion, peak, contraction, and trough.
- **Causes of Business Cycles:** Fluctuations in demand and supply, financial crises, policy changes, etc.

4. Unemployment:

- **Types of Unemployment:** Frictional, structural, cyclical, and seasonal.
- **Natural Rate of Unemployment:** The level of unemployment expected in a healthy economy.

5. Inflation:

- **Measures of Inflation:** Consumer Price Index (CPI) and Producer Price Index (PPI).
- **Causes of Inflation:** Demand-pull inflation, cost-push inflation, and built-in inflation.

6. Monetary Policy:

- **Central Banking:** Role of central banks in controlling the money supply and interest rates.
- **Tools of Monetary Policy:** Open market operations, reserve requirements, and discount rate.

7. Fiscal Policy:

- **Government Spending and Taxation:** How government budgets

affect the economy.

- **Budget Deficit/Surplus:** The impact of government borrowing and debt.

8. **International Economics:**

- **Trade Balance:** Exports and imports of goods and services.
- **Exchange Rates:** The value of one currency in terms of another.
- **Balance of Payments:** A country's transactions with the rest of the world.

Importance of Macroeconomics

1. **Policy Formulation:**

- Helps governments and central banks in designing and implementing policies to stabilize and grow the economy.
- Essential for developing fiscal and monetary policies.

2. **Economic Stability:**

- Aims to reduce the severity of business cycles, minimizing periods of economic boom and bust.
- Provides tools for managing inflation and unemployment.

3. **Growth and Development:**

- Identifies factors that promote economic growth and development.
- Helps in formulating strategies for long-term sustainable development.

4. **Understanding Economic Performance:**

- Provides a comprehensive view of the economy's overall health and performance.
- Uses aggregate indicators to measure economic activity and performance.

5. **Global Economic Relations:**

- Analyzes international trade and finance, aiding in understanding global economic dynamics.
- Helps in making informed decisions in the context of a globalized economy.

6. **Resource Allocation:**

- Guides efficient allocation of resources at the macro level.
- Assists in managing national resources for optimal use and distribution.

Limitations of Macroeconomics

1. **Aggregation Issues:**

- Aggregating individual behaviors to reflect the whole economy can be misleading.
- Macro models may oversimplify complex economic interactions.

2. **Measurement Problems:**

- Difficulty in accurately measuring economic variables like GDP, inflation, and unemployment.
- Discrepancies in data collection and reporting.

3. **Assumptions and Models:**

- Relies on assumptions that may not hold true in the real world.
- Models may fail to predict economic outcomes accurately due to changing dynamics.

4. **Policy Implementation:**

- Time lags in implementing and realizing the effects of policies.
 - Unintended consequences and potential for policy failure.
5. **Economic Predictions:**
- Uncertainty in predicting future economic conditions.
 - Susceptibility to unexpected events such as financial crises, natural disasters, and geopolitical tensions.
6. **Global Interdependence:**
- Increasing interconnectedness of economies can make it difficult to isolate the effects of domestic policies.
 - Global events can have significant impacts on national economies.

National Income (NI) Accounting

National Income (NI) refers to the total value of all goods and services produced by a country over a specific period, usually a year. It is a key indicator of the economic performance of a country. National income accounting provides a systematic way to measure the economic activity and performance of an economy.

Meaning of National Income (NI)

National Income is the total amount of money earned within a country. It includes wages, rents, interest, and profits, and represents the aggregate income earned by the country's factors of production. It serves as an important indicator of economic health, showing the level of economic activity and standard of living in a country.

Circular Flow of National Income in a Four-Sector Economy

The circular flow of national income describes the movement of money, goods, and services in an economy. In a four-sector economy, the sectors are households, businesses (firms), government, and the foreign sector.

1. **Households:**
 - Supply factors of production (labor, capital, land, and entrepreneurship) to firms.
 - Receive income (wages, rent, interest, and profit) in return.
 - Spend income on goods and services (consumption).
2. **Businesses (Firms):**
 - Produce goods and services using the factors of production.
 - Sell goods and services to households, government, and the foreign sector.
 - Pay wages, rent, interest, and profits to households.
3. **Government:**
 - Collects taxes from households and businesses.
 - Provides public goods and services.
 - Transfers payments (social security, subsidies) and spends on goods and services (government expenditure).
4. **Foreign Sector:**
 - Involves trade with other countries (exports and imports).
 - Exports bring money into the economy, while imports send money out.

The circular flow in a four-sector economy can be summarized as:

- **Households** provide factors of production to **firms** and receive income.
- **Households** spend income on goods and services produced by **firms**.
- **Firms** produce goods and services and pay for factors of production.
- The **government** collects taxes and provides public goods and services.

- The **foreign sector** engages in trade (exports and imports) with the domestic economy.

Stock and Flow Concept

- **Stock:**
 - Represents a quantity measured at a specific point in time.
 - Examples: Wealth, capital, money supply.
- **Flow:**
 - Represents a quantity measured over a period of time.
 - Examples: Income, expenditure, investment.

National Income at Current Price and Constant Price

- **Current Price (Nominal NI):**
 - Measures national income using the prices prevailing in the year the output is produced.
 - Affected by inflation and changes in price levels.
- **Constant Price (Real NI):**
 - Measures national income using the prices of a base year.
 - Adjusted for inflation to reflect the real value of goods and services.

Various Concepts of National Income

1. **Gross Domestic Product (GDP):**
 - Total market value of all final goods and services produced within a country in a given period.
 - Can be measured at current or constant prices.
2. **Gross National Product (GNP):**
 - GDP plus net income from abroad (income earned by residents from overseas investments minus income earned by foreign residents from domestic investments).
3. **Net Domestic Product (NDP):**
 - GDP minus depreciation (wear and tear of capital assets).
4. **Net National Product (NNP):**
 - GNP minus depreciation.
5. **Personal Income (PI):**
 - Total income received by individuals and households, including wages, salaries, transfer payments, etc.
 - $PI = \text{National Income} - \text{Corporate Taxes} - \text{Retained Earnings} + \text{Transfer Payments}$
6. **Disposable Income (DI):**
 - Income available to individuals after taxes.
 - $DI = \text{Personal Income} - \text{Personal Taxes}$

Methods for Measurement of National Income

1. **Income Method:**
 - Sum of all incomes earned by individuals and businesses in the economy.
 - Components: Wages and salaries, rent, interest, profits.
2. **Expenditure Method:**
 - Sum of all expenditures made in the economy.
 - Components: Consumption expenditure, investment expenditure, government expenditure, net exports (exports minus imports).

3. Output (Production) Method:

- Sum of the value of all goods and services produced in the economy.
- Value-added approach: Adds up the value added at each stage of production.

Difficulties in Measurement of National Income

1. Non-Market Activities:

- Difficult to measure activities that do not involve market transactions (e.g., household work, volunteer work).

2. Informal Economy:

- Activities in the informal sector or black market are hard to track and measure.

3. Data Collection:

- Inaccuracies and inconsistencies in data collection methods and sources.

4. Double Counting:

- Ensuring that only final goods and services are counted to avoid double counting intermediate goods.

5. Valuation:

- Valuing non-monetary transactions and public goods can be challenging.

6. Price Changes:

- Adjusting for inflation and changes in price levels to get accurate measures of real national income.

7. Exchange Rates:

- For international comparisons, variations in exchange rates can distort measurements.

8. Quality of Goods and Services:

- Changes in the quality and variety of goods and services over time are difficult to account for accurately.

Module 2

Module 2

Theory of Income and Employment

The theory of income and employment, as developed by John Maynard Keynes, is a cornerstone of macroeconomic theory. It addresses how aggregate output and income levels are determined in an economy and the factors that influence employment levels.

Keynes' Consumption Function

Definition and Concept

The consumption function describes the relationship between total consumption and gross national income. Proposed by Keynes, it asserts that consumption is primarily a function of current income.

Key Elements of the Consumption Function

1. **Autonomous Consumption (C_0):**
 - This is the level of consumption that occurs even when income is zero. It represents basic needs and obligations that must be met regardless of income levels.
2. **Marginal Propensity to Consume (MPC):**
 - The MPC is the fraction of additional income that is spent on consumption. It is the slope of the consumption function and typically lies between 0 and 1.

Mathematical Representation

$$C = C_0 + cY$$

$$C = C_0 + cY$$

where:

- C is total consumption,
- C_0 is autonomous consumption,
- c is the marginal propensity to consume,
- Y is disposable income.

Psychological Law

Keynes posited a psychological law stating that as income increases, consumption also increases, but by a smaller amount. This implies that the MPC is less than 1.

Investment Function

Definition and Importance

The investment function describes the relationship between investment and the interest rate. Investment, in this context, refers to the purchase of capital goods which can be used to produce other goods and services in the future.

Determinants of Investment

1. **Interest Rates:**
 - Lower interest rates reduce the cost of borrowing, encouraging more investment.
2. **Expected Returns:**
 - Firms invest based on expected future profits.
3. **Business Confidence:**
 - Overall optimism or pessimism about future economic conditions.

Mathematical Representation

$I = I(r)$ where:

- I is the level of investment,
- r is the interest rate.

Autonomous and Induced Investment

- **Autonomous Investment:** Investment that does not depend on the level of income.
- **Induced Investment:** Investment that varies with the level of income or output.

Keynesian Theory of Income and Employment

Core Concepts

Keynesian economics focuses on total spending in the economy (aggregate demand) and its effects on output and inflation. It argues that total demand for goods and services determines the overall level of economic activity, and inadequate aggregate demand can lead to prolonged periods of high unemployment.

Aggregate Demand (AD)

The total demand for goods and services within an economy at a given overall price level and in a given period.

$$AD = C + I + G + (X - M)$$

$$AD = C + I + G + (X - M)$$

$$AD = C + I + G + (X - M)$$

where:

- C is consumption,
- I is investment,
- G is government spending,
- (X - M) is net exports (exports minus imports).

Aggregate Supply (AS)

The total supply of goods and services that firms in a national economy plan to sell during a specific time period. Keynes focused more on the demand side as he believed that supply would respond to demand.

Equilibrium in the Keynesian Framework

Equilibrium is achieved when aggregate demand equals aggregate supply. Disequilibrium can lead to unemployment or inflation.

Investment Multiplier

Definition

The investment multiplier measures the impact of a change in investment on total economic output. It is based on the idea that an initial increase in investment leads to increased income and consumption, which in turn leads to further increases in income and consumption, creating a multiplied effect on the overall economy.

Formula

$$k = \frac{1}{1 - MPC}$$

$$k = \frac{1}{1 - MPC}$$

where k is the multiplier and MPC is the marginal propensity to consume.

Process

1. **Initial Increase in Investment:**
 - Leads to increased production and income.
2. **Increased Income:**
 - Leads to increased consumption.
3. **Increased Consumption:**
 - Leads to further increases in production and income.

4. **Continued Process:**

- Until the full multiplier effect is realized.

Interest Rate Theory - Liquidity Preference Theory

Definition

Keynes' liquidity preference theory posits that the interest rate is determined by the supply and demand for money. People demand money for three primary motives: transactions, precaution, and speculation.

Components of Liquidity Preference

1. **Transaction Motive:**

- Money needed for everyday transactions.

2. **Precautionary Motive:**

- Money held for unexpected expenses.

3. **Speculative Motive:**

- Money held to take advantage of future changes in the interest rate or bond prices.

Demand for Money

The total demand for money is the sum of the transaction, precautionary, and speculative demands.

Supply of Money

The supply of money is determined by the central bank and is considered fixed in the short run.

Equilibrium Interest Rate

The equilibrium interest rate is determined where the demand for money equals the supply of money.

Mathematical Representation

$L = L_1(Y) + L_2(r)$ where:

- L is the total demand for money,
- $L_1(Y)$ is the transaction and precautionary demand, which depends on income (Y),
- $L_2(r)$ is the speculative demand, which depends on the interest rate (r).

Detailed Analysis

1. Keynes' Consumption Function

Autonomous Consumption (C_0)

Autonomous consumption reflects the consumption expenditure that occurs when income levels are zero. It includes basic needs like food, housing, and healthcare. This concept is critical in understanding that some consumption does not rely on current income levels.

Marginal Propensity to Consume (MPC)

The MPC is a critical concept in Keynesian economics. It measures the change in consumption resulting from a change in income. For example, if the MPC is 0.8, it implies that for every additional dollar of income, consumption increases by 80 cents. This relationship highlights how consumer spending drives economic activity.

Mathematical Formulation

The consumption function can be mathematically expressed as: $C = C_0 + cY$ where C is total consumption, C_0 is autonomous consumption, c is the marginal propensity to consume, and Y is disposable income.

The Psychological Law

Keynes introduced the psychological law stating that as income increases, consumption also increases but by a smaller proportion. This implies that the MPC is less than 1. This concept is fundamental to understanding saving behavior and the dynamics of aggregate demand.

2. Investment Function

Determinants of Investment

Investment decisions in an economy are influenced by several factors, including interest rates, expected returns, and business confidence.

Interest Rates

Interest rates play a pivotal role in investment decisions. Lower interest rates reduce the cost of borrowing, making it cheaper for businesses to invest in capital goods. Conversely, higher interest rates increase borrowing costs, potentially deterring investment.

Expected Returns

Firms base their investment decisions on expected future profits. If businesses anticipate higher returns from their investments, they are more likely to invest.

Business Confidence

Overall business confidence significantly affects investment. In times of economic optimism, firms are more willing to invest, whereas economic pessimism can lead to reduced investment.

Autonomous and Induced Investment

- **Autonomous Investment:** Investment that does not depend on the level of income or output. It includes expenditures that are necessary for maintaining the existing production capacity.
- **Induced Investment:** Investment that varies with the level of income or output. Higher income levels lead to increased investment as businesses expand to meet higher demand.

Mathematical Representation

The investment function can be represented as: $I = I(r)$ where I is the level of investment and r is the interest rate. This relationship indicates that investment is inversely related to the interest rate.

3. Keynesian Theory of Income and Employment

Aggregate Demand (AD)

Aggregate demand represents the total demand for goods and services in an economy at a given overall price level and in a specific time period. It is the sum of consumption, investment, government spending, and net exports.

$$AD = C + I + G + (X - M)$$

Components of Aggregate Demand

- **Consumption (C):** Spending by households on goods and services.
- **Investment (I):** Spending by firms on capital goods.
- **Government Spending (G):** Expenditures by the government on goods and services.
- **Net Exports (X - M):** The value of exports minus the value of imports.

Aggregate Supply (AS)

Aggregate supply represents the total supply of goods and services that firms in an economy plan to sell during a specific time period. Keynes focused more on the demand side of the economy, believing that supply would respond to changes in demand.

Equilibrium in the Keynesian Framework

Equilibrium in the Keynesian framework is achieved when aggregate demand equals aggregate supply. Disequilibrium can lead to unemployment or inflation.

$$AD = AS$$

Disequilibrium and Economic Adjustments

When aggregate demand is less than aggregate supply, it leads to excess supply, resulting in unemployment and underutilized resources. Conversely, when aggregate demand exceeds aggregate supply, it leads to excess demand, resulting in inflation.

4. Investment Multiplier

Definition and Process

The investment multiplier measures the impact of a change in investment on total economic output. The multiplier effect occurs because an initial increase in investment leads to increased production, income, and consumption, which in turn leads to further increases in production and income.

Formula

The investment multiplier can be calculated using the following formula:
 $k = \frac{1}{1 - MPC}$ where k is the multiplier and MPC is the marginal propensity to consume.

Example

If the MPC is 0.8, the multiplier would be: $k = \frac{1}{1 - 0.8} = 5$

This implies that an initial increase in investment by \$1 will ultimately increase total output by \$5.

Steps of the Multiplier Process

1. **Initial Increase in Investment:** Leads to increased production and income.
2. **Increased Income:** Leads to increased consumption.
3. **Increased Consumption:** Leads to further increases in production and income.
4. **Continued Process:** Until the full multiplier effect is realized.

5. Interest Rate Theory - Liquidity Preference Theory

Definition

Keynes' liquidity preference theory posits that the interest rate is determined by the supply and demand for money. People demand money for three primary motives: transactions, precaution, and speculation.

Components of Liquidity Preference

1. **Transaction Motive:**

- Money needed for everyday transactions. As income increases, the demand for transaction balances increases.
- 2. **Precautionary Motive:**
 - Money held for unexpected expenses. This is also positively related to income.
- 3. **Speculative Motive:**
 - Money held to take advantage of future changes in interest rates or bond prices. This demand is inversely related to the interest rate.

Demand for Money

The total demand for money is the sum of the transaction, precautionary, and speculative demands. It is influenced by income and interest rates.

$$L = L_1(Y) + L_2(r)$$

where L is the total demand for money, $L_1(Y)$ is the transaction and precautionary demand, which depends on income (Y), and $L_2(r)$ is the speculative demand, which depends on the interest rate (r).

Supply of Money

The supply of money is determined by the central bank and is considered fixed in the short run.

Equilibrium Interest Rate

The equilibrium interest rate is determined where the demand for money equals the supply of money.

$$M_s = L(Y, r)$$

$$M_s = L(Y, r)$$

$$M_s = L(Y, r)$$

where M_s is the supply of money, and $L(Y, r)$ is the demand for money.

Changes in Interest Rates

Changes in the money supply or shifts in the demand for money can lead to changes in the equilibrium interest rate. For example, an increase in the money supply, with the demand for money remaining constant, will lower the interest rate. Conversely, an increase in the demand for money, with the money supply remaining constant, will raise the interest rate.

Detailed Analysis

Transaction and Precautionary Motives

The transaction and precautionary motives are relatively stable and primarily dependent on income. As income increases, people demand more money for day-to-day transactions and to hold as a precaution against unforeseen expenses.

Speculative Motive

The speculative motive is more sensitive to changes in the interest rate. When interest rates are high, people prefer to hold less money and invest in interest-bearing assets. Conversely, when interest rates are low, people prefer to hold more money, expecting future interest rates to rise.

Mathematical Representation

The total demand for money can be expressed as: $L = kY - hrL = kY - hrL$

where:

- k is a positive constant reflecting the transaction and precautionary motives,
- Y is income,
- h is a positive constant reflecting the speculative motive,
- r is the interest rate.

Equilibrium and Policy Implications

The equilibrium interest rate in the liquidity preference theory is crucial for monetary policy. By influencing the money supply, central banks can affect interest rates and, consequently, investment and consumption.

Conclusion

The theory of income and employment, as developed by Keynes, provides a comprehensive framework for understanding how aggregate output and income levels are determined in an economy and the factors influencing employment. Key components include the consumption function, investment function, Keynesian theory of income and employment, investment multiplier, and liquidity preference theory.

1. Keynes' Consumption Function:

- Emphasizes the relationship between income and consumption, highlighting the role of autonomous consumption and the marginal propensity to consume.

2. Investment Function:

- Explores the determinants of investment, including interest rates, expected returns, and business confidence.

3. Keynesian Theory of Income and Employment:

- Focuses on aggregate demand as the primary driver of economic activity, stressing the importance of maintaining adequate demand to achieve full employment.

4. Investment Multiplier:

- Illustrates the multiplied impact of investment on economic output, emphasizing the significance of investment in driving economic growth.

5. Interest Rate Theory - Liquidity Preference Theory:

- Analyzes the determinants of interest rates based on the supply and demand for money, highlighting the role of monetary policy in influencing economic activity.

Module 3

Module 3

Money: Definition and Functions: -

Definition of Money

Money is a fundamental concept in economics, representing any item or verifiable record that is universally accepted as payment for goods and services and repayment of debts within a particular country or economic context. Its primary role is to facilitate transactions, providing a common medium for exchange.

Functions of Money

Money performs several essential functions in an economy:

1. Medium of Exchange:

- **Purpose:** Eliminates the inefficiencies of a barter system by serving as an intermediary in trade.
- **Function:** Facilitates the buying and selling of goods and services by being universally accepted in transactions.
- **Example:** Using cash to buy groceries.

2. Unit of Account:

- **Purpose:** Provides a standard measurement of value, making it easier to compare the value of goods and services.
- **Function:** Allows individuals and businesses to measure and record economic transactions consistently.
- **Example:** Pricing items in a store.

3. Store of Value:

- **Purpose:** Maintains value over time, allowing individuals to save and transfer purchasing power into the future.
- **Function:** Enables saving and investing, as money can be kept for future use without losing its value (assuming low inflation).
- **Example:** Depositing money in a savings account.

4. **Standard of Deferred Payment:**

- **Purpose:** Facilitates credit transactions by providing a standard method for future payments.
- **Function:** Used in borrowing and lending activities, allowing for the deferral of payment.
- **Example:** Taking out a loan and repaying it over time with money.

Stocks of Money (M1, M2, M3, and M4)

The money supply in an economy is categorized into different measures based on liquidity and the types of financial assets included. These measures, known as monetary aggregates, are defined as M1, M2, M3, and M4.

M1 (Narrow Money)

- **Components:**
 - **Currency in Circulation:** Physical money like coins and banknotes held by the public.
 - **Demand Deposits:** Balances in checking accounts that can be withdrawn on demand.
 - **Other Checkable Deposits:** Similar to demand deposits, these are readily accessible for transactions.
 - **Traveler's Checks:** Prepaid checks used primarily for travel purposes.
- **Liquidity:**
 - **Highest Liquidity:** All components of M1 can be quickly and easily used for transactions.

M2 (Broad Money)

- **Components:**
 - **All Components of M1:** Currency, demand deposits, and other checkable deposits.
 - **Savings Deposits:** Accounts that earn interest and can be withdrawn without major restrictions.
 - **Time Deposits (under a certain amount):** Fixed-term deposits that earn interest but are less liquid than savings deposits.
 - **Money Market Deposit Accounts:** Interest-bearing accounts that offer limited check-writing capabilities.
- **Liquidity:**
 - **Less Liquid than M1:** Components can be converted to cash or checking deposits relatively easily but are less liquid than those in M1.

M3

- **Components:**
 - **All Components of M2:** Currency, demand deposits, savings deposits, time deposits under a certain amount, and money market deposit accounts.

- **Large Time Deposits:** High-value fixed-term deposits.
- **Institutional Money Market Funds:** Investments by large institutions in money market instruments.
- **Short-term Repurchase Agreements:** Short-term borrowing arrangements secured by collateral.
- **Other Larger Liquid Assets:** Financial assets that can be quickly converted into cash.
- **Liquidity:**
 - **Less Liquid than M2:** Includes more types of assets that are less liquid but still relatively easy to convert into cash.

M4

- **Components:**
 - **All Components of M3:** Currency, demand deposits, savings deposits, time deposits, institutional money market funds, and other larger liquid assets.
 - **Other Less Liquid Financial Assets:** Assets that are more difficult to convert into cash quickly, such as long-term securities.
- **Liquidity:**
 - **Least Liquid:** Includes the broadest range of financial assets, many of which are not immediately convertible to cash.

Credit Creation by Commercial Banks

Process of Credit Creation

Commercial banks play a crucial role in the money supply through the process of credit creation. This process involves banks' lending out a portion of their deposits while retaining a fraction as reserves. Here is a detailed explanation of how credit creation works:

1. **Initial Deposit:**
 - **Action:** A customer deposits money into a bank.
 - **Example:** A \$1,000 deposit is made into Bank A.
 - **Reserves:** The bank is required to keep a fraction of this deposit as reserves, known as the reserve ratio. Suppose the reserve ratio is 10%, the bank must keep \$100 as reserves.
2. **Loan Disbursement:**
 - **Action:** The bank lends out the remaining portion of the deposit.
 - **Example:** Bank A can lend out \$900.
 - **New Deposits:** The loaned amount is deposited into the borrower's account or another bank, creating a new deposit in the banking system.
3. **Multiplier Effect:**
 - **Process:** The process of depositing, holding reserves, and lending out continues, with each round of deposits leading to more loans.
 - **Money Multiplier:** The total money created in the economy can be represented by the money multiplier effect.

- **Formula:** $\text{Money Multiplier} = \frac{1}{\text{Reserve Ratio}}$
- **Example:** With a reserve ratio of 10%, the money multiplier is 10. Therefore, an initial deposit of \$1,000 can lead to a total increase in the money supply of \$10,000.

Detailed Example of Credit Creation

1. Initial Deposit:

- **Deposit:** \$1,000 is deposited in Bank A.
- **Reserves:** Bank A keeps \$100 as reserves (10% of \$1,000).
- **Loan:** Bank A lends out \$900.

2. Second Round:

- **Deposit:** The \$900 loan is deposited in Bank B.
- **Reserves:** Bank B keeps \$90 as reserves (10% of \$900).
- **Loan:** Bank B lends out \$810.

3. Third Round:

- **Deposit:** The \$810 loan is deposited in Bank C.
- **Reserves:** Bank C keeps \$81 as reserves (10% of \$810).
- **Loan:** Bank C lends out \$729.

4. Continued Process:

- **Repetition:** This process continues, with each subsequent deposit and loan leading to a decrease in the amount that can be loaned out due to the reserve requirement.
- **Total Increase:** Eventually, the initial \$1,000 deposit can create a total money supply increase of \$10,000 in the economy.

Inflation: -

Meaning of Inflation

Inflation is the rate at which the general level of prices for goods and services rises, leading to a decrease in the purchasing power of money. It is measured as an annual percentage increase. When the price level rises, each unit of currency buys fewer goods and services.

Types of Inflation

1. Demand-Pull Inflation:

- **Description:** Occurs when aggregate demand in an economy outpaces aggregate supply.
- **Causes:** High consumer spending, increased investment, government spending, and strong demand for exports.
- **Example:** During an economic boom, consumers and businesses spend more, pushing prices up.

2. Cost-Push Inflation:

- **Description:** Happens when the costs of production increase, leading producers to raise prices to maintain profit margins.

- **Causes:** Increased wages, rising costs of raw materials, and supply chain disruptions.
 - **Example:** A sudden increase in oil prices raises transportation costs, leading to higher prices for goods.
3. **Built-In Inflation:**
- **Description:** Also known as wage-price inflation, it occurs when workers demand higher wages to keep up with rising living costs, leading businesses to raise prices to cover higher wage costs.
 - **Example:** A continuous cycle where higher wages lead to higher prices, which in turn lead to demands for even higher wages.

Deflation, Stagflation, and Hyperinflation

- **Deflation:**
 - **Description:** A decrease in the general price level of goods and services.
 - **Implications:** Can lead to reduced consumer spending as people anticipate lower prices in the future, potentially causing economic stagnation or recession.
 - **Example:** Japan has experienced periods of deflation, leading to economic challenges.
- **Stagflation:**
 - **Description:** A combination of stagnant economic growth, high unemployment, and high inflation.
 - **Implications:** Difficult to manage because policies to reduce inflation may exacerbate unemployment, and policies to reduce unemployment may worsen inflation.
 - **Example:** The 1970s in the United States experienced stagflation, partly due to oil price shocks.
- **Hyperinflation:**
 - **Description:** An extremely high and typically accelerating inflation rate, often exceeding 50% per month.
 - **Implications:** Leads to a rapid erosion of the real value of local currency, causing people to lose confidence in the currency.
 - **Example:** Zimbabwe experienced hyperinflation in the late 2000s, with prices doubling every day.

Causes of Inflation

1. **Demand Factors:**
 - **Increased Consumer Spending:** High consumer confidence and increased disposable income led to higher demand for goods and services.
 - **Government Spending:** Increased public expenditure can boost demand in the economy.
 - **Monetary Policy:** Lower interest rates can increase borrowing and spending.
 - **Export Demand:** High demand for a country's exports can lead to increased production and prices domestically.
2. **Supply Factors:**

- **Cost of Production:** Higher costs for wages, raw materials, and energy can lead to increased prices.
 - **Supply Chain Disruptions:** Natural disasters, geopolitical events, and pandemics can disrupt supply chains, reducing the availability of goods and pushing prices up.
 - **Currency Devaluation:** A weaker currency makes imports more expensive, leading to higher prices for imported goods.
3. **Expectations:**
- **Inflation Expectations:** If people expect prices to rise, they may act in ways that contribute to inflation, such as demanding higher wages or increasing prices.

Measures to Control Inflation

1. **Monetary Policy:**
 - **Interest Rates:** Central banks can raise interest rates to reduce borrowing and spending, thus lowering demand.
 - **Open Market Operations:** Selling government securities to absorb excess liquidity in the economy.
 - **Reserve Requirements:** Increasing the amount of reserves banks must hold, reducing their ability to create credit.
2. **Fiscal Policy:**
 - **Reducing Government Spending:** Lowering public expenditure to reduce demand.
 - **Increasing Taxes:** Raising taxes to reduce disposable income and spending.
3. **Supply-Side Policies:**
 - **Improving Productivity:** Investing in technology and infrastructure to increase productivity and reduce production costs.
 - **Reducing Regulatory Burdens:** Simplifying regulations to lower the cost of doing business.
4. **Wage and Price Controls:**
 - **Temporary Controls:** Implementing temporary controls to curb excessive wage and price increases. This approach is generally not favored due to potential distortions and inefficiencies it introduces into the market.

Meaning of Business Cycle: -

The business cycle refers to the recurring pattern of economic growth and contraction in an economy. It represents the fluctuations in economic activity over time, typically measured by changes in Gross Domestic Product (GDP), employment levels, industrial production, and other economic indicators. Understanding the business cycle is crucial for economists, policymakers, businesses, and individuals as it influences economic decisions, investment

strategies, and policy formulations.

Characteristics of the Business Cycle

1. Recurring Pattern:

- The business cycle follows a repetitive sequence of expansion and contraction phases.
- Economic expansions are periods of increasing economic activity, while contractions (or recessions) are periods of declining economic activity.

2. Duration:

- Business cycles vary in duration, ranging from a few months to several years.
- The length of each phase (expansion, peak, contraction, trough) can vary significantly across cycles.

3. Amplitude:

- The magnitude or amplitude of business cycles varies, with some cycles exhibiting mild fluctuations and others experiencing more pronounced swings in economic activity.
- Factors influencing amplitude include the severity of external shocks (e.g., financial crises, oil price shocks) and the effectiveness of economic policies.

4. Impact Across Sectors:

- Business cycles affect different sectors of the economy unevenly.
- Some sectors, such as durable goods manufacturing and construction, are more sensitive to economic fluctuations than others, like healthcare and utilities.

Phases of the Business Cycle

The business cycle typically consists of four phases:

1. Expansion:

- **Description:** An expansionary phase characterized by increasing economic growth, rising GDP, and declining unemployment rates.
- **Key Indicators:** Increased consumer spending, business investments, and industrial production.
- **Causes:** Stimulus from fiscal and monetary policies, improved consumer and business confidence, and growing international trade.

2. Peak:

- **Description:** The highest point of economic activity in an expansion phase.
- **Key Indicators:** GDP growth rates reach their maximum, and economic indicators may show signs of overheating.
- **Causes:** Full capacity utilization, labor shortages, and potential inflationary pressures.

3. Contraction (Recession):

- **Description:** A period of declining economic activity, characterized by falling GDP, rising unemployment, and reduced consumer spending.
- **Key Indicators:** Decreased industrial production, declining business investments, and rising bankruptcies.

- **Causes:** Tightened monetary policies, reduced consumer confidence, global economic downturns, and external shocks.
4. **Trough:**
- **Description:** The lowest point of economic activity in a recessionary phase.
 - **Key Indicators:** Economic indicators stabilize or begin to show signs of improvement.
 - **Causes:** Adjustment period for businesses, stabilization of financial markets, and potential for policy interventions to stimulate recovery.

Dynamics of the Business Cycle

- **Interconnected Phases:** The phases of the business cycle are interconnected, with each phase influencing the subsequent phase.
- **Impact on Policy:** Governments and central banks often use monetary and fiscal policies to manage economic fluctuations, aiming to stabilize growth and minimize the severity of recessions.
- **Long-Term Trends:** While business cycles reflect short-term economic fluctuations, long-term trends in technological advancements, demographic changes, and global economic integration also shape economic performance over time.

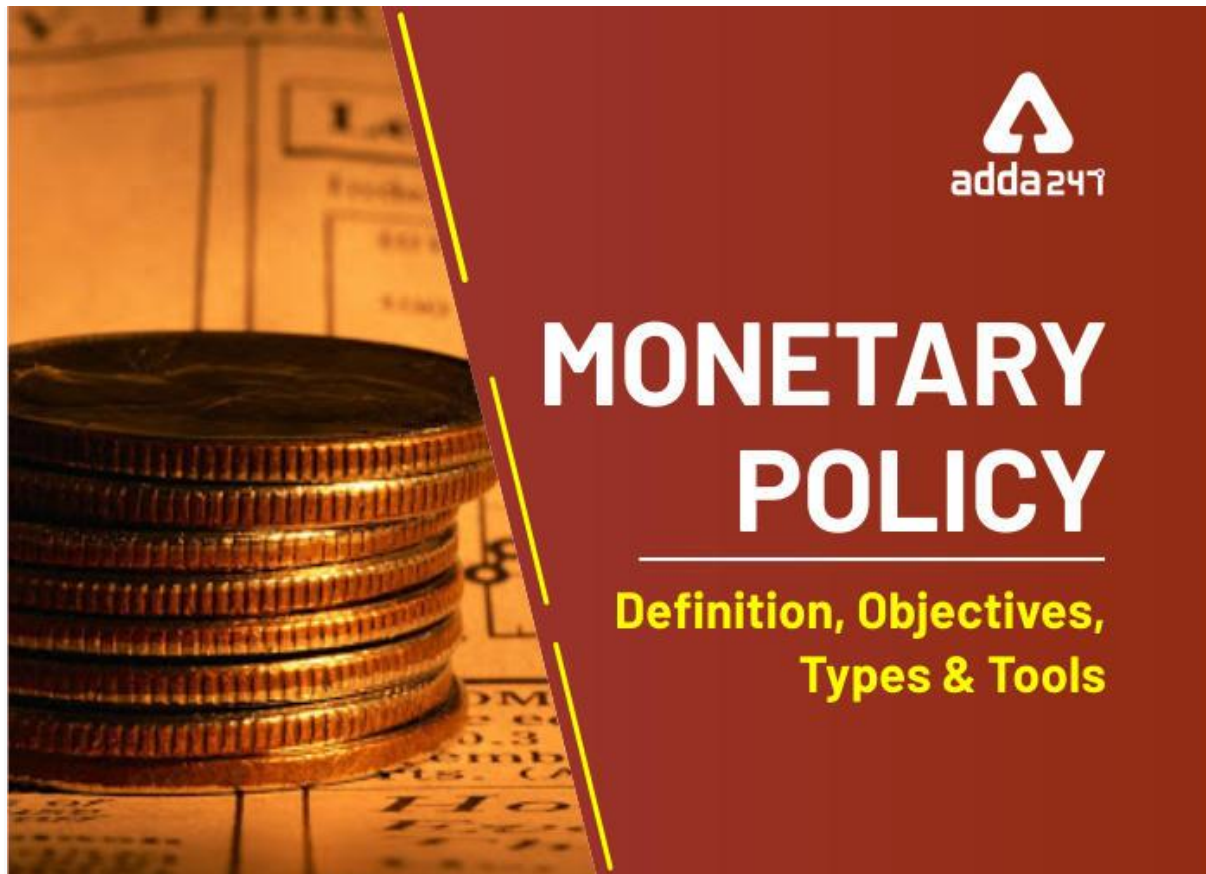
Examples of Business Cycles

1. **Post-War Boom (1945-1970s):** A period of sustained economic growth and prosperity in Western economies following World War II, characterized by rapid industrialization, technological advancements, and rising standards of living.
2. **Oil Crisis Recession (1970s):** Global economic downturns triggered by oil price shocks in 1973 and 1979, leading to stagflation (high inflation and unemployment) in many developed economies.
3. **Dot-Com Bubble (late 1990s - early 2000s):** A period of rapid expansion in the technology sector, followed by a sharp contraction and market correction in 2000-2001, impacting global stock markets and economic growth.

Module 4

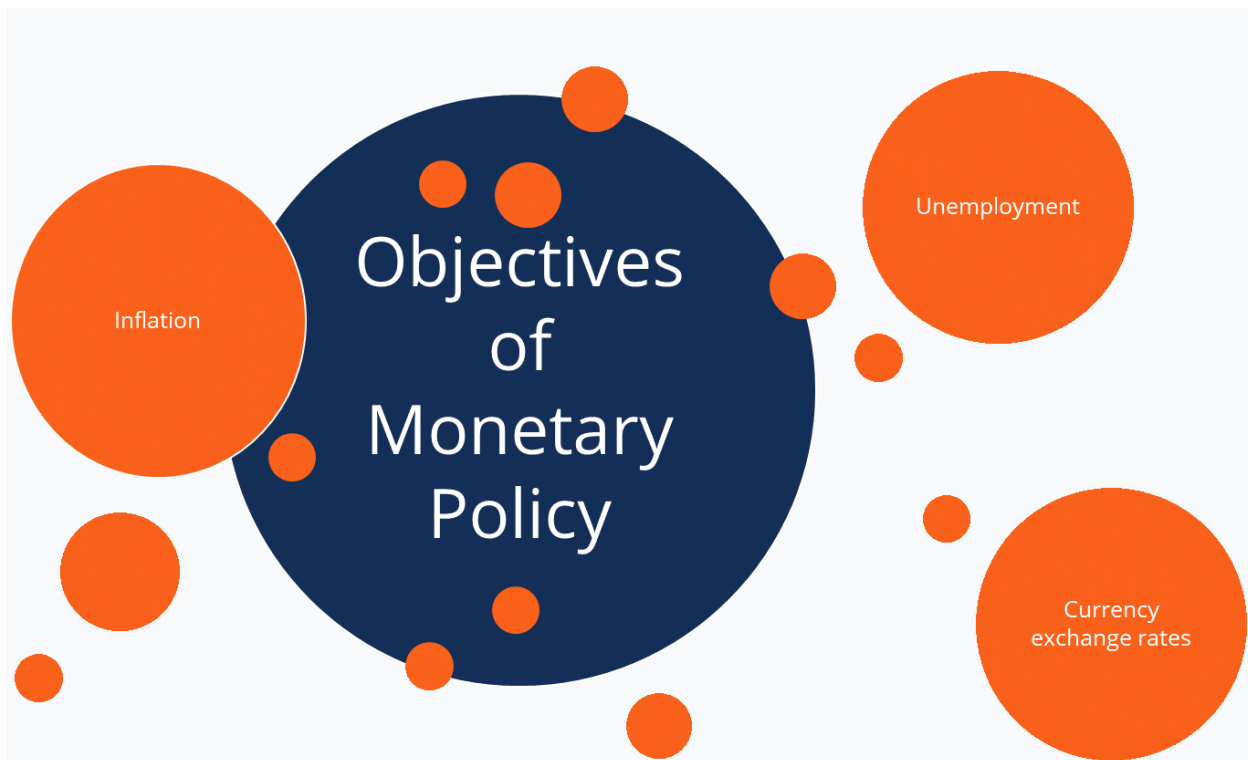
Module 4

What is Monetary Policy?-



Monetary policy is an economic policy that manages the size and growth rate of the money supply in an economy. It is a powerful tool to regulate macroeconomic variables such as inflation and unemployment.

These policies are implemented through different tools, including the adjustment of the interest rates, purchase or sale of government securities, and changing the amount of cash circulating in the economy. The central bank or a similar regulatory organization is responsible for formulating these policies.



Objectives of Monetary Policy

The primary objectives of monetary policies are the management of inflation or unemployment, and maintenance of currency exchange rates.

1. Inflation

Monetary policies can target inflation levels. A low level of inflation is considered to be healthy for the economy. If inflation is high, a contractionary policy can address this issue.

2. Unemployment

Monetary policies can influence the level of unemployment in the economy. For example, an expansionary monetary policy generally decreases unemployment because the higher money supply stimulates business activities that lead to the expansion of the job market.

3. Currency exchange rates

Using its fiscal authority, a central bank can regulate the exchange rates between domestic and foreign currencies. For example, the central bank may increase the money supply by issuing more currency. In such a case, the domestic currency becomes cheaper relative to its foreign counterparts.

Tools of Monetary Policy

Central banks use various tools to implement monetary policies. The widely utilized policy tools include:

1. Interest rate adjustment

A central bank can influence interest rates by changing the discount rate. The discount rate (base rate) is an interest rate charged by a central bank to banks for short-term loans. For example, if a central bank increases the discount rate, the cost of borrowing for the banks increases. Subsequently, the banks will increase the interest rate they charge their customers. Thus, the cost of borrowing in the economy will increase, and the money supply will decrease.

2. Change reserve requirements

Central banks usually set up the minimum number of reserves that must be held by a commercial bank. By changing the required amount, the central bank can influence the money supply in the economy. If monetary authorities increase the required reserve amount, commercial banks find less money available to lend to their clients and thus, money supply decreases.

Commercial banks can't use the reserves to make loans or fund investments into new businesses. Since it constitutes a lost opportunity for the commercial banks, central banks pay them interest on the reserves. The interest is known as IOR or IORR (interest on reserves or interest on required reserves).

3. Open market operations

The central bank can either purchase or sell securities issued by the government to affect the money supply. For example, central banks can purchase government bonds. As a result, banks will obtain more money to increase the lending and money supply in the economy.

Expansionary vs. Contractionary Monetary Policy

Depending on its objectives, monetary policies can be expansionary or contractionary.

Expansionary Monetary Policy

This is a monetary policy that aims to increase the money supply in the economy by decreasing interest rates, purchasing government securities by central banks, and lowering the reserve requirements for banks. An expansionary policy lowers unemployment and stimulates business activities and consumer spending. The overall goal of the expansionary monetary policy is to fuel economic growth. However, it can also possibly lead to higher inflation.

Contractionary Monetary Policy

The goal of a contractionary monetary policy is to decrease the money supply in the economy. It can be achieved by raising interest rates, selling government bonds, and increasing the reserve requirements for banks. The contractionary policy is utilized when the government wants to control inflation levels.

What is Fiscal Policy, Its Objectives, Tools?

Fiscal policy is an essential tool at the disposal of the government to influence a nation's economic growth. The fiscal policy is used in coordination with the monetary policy, which a central bank uses to manage the money supply in a country. The meaning, types, objectives, and tools are discussed in detail below.

So, the fiscal policy helps in controlling inflation, addressing unemployment along with ensuring the health of the currency in the international market. Now that we know what is fiscal policy, let's understand its objectives and types.



Fiscal policy must be designed to be performed in two ways-by expanding investment in public and private enterprises and by diverting resources from socially less desirable to more desirable investment channels.

The objective of fiscal policy is to maintain the condition of full employment, economic stability and to stabilize the rate of growth.

For an under-developed economy, the main purpose of fiscal policy is to accelerate the rate of capital formation and investment.

“Arthur Smithies, fiscal policy aims primarily at controlling aggregate demand and leaves private enterprise its traditional field- the allocation of resources among alternative uses.”

Generally following are the objectives of a fiscal policy in a developing economy:

1. Full employment
2. Price stability
3. Accelerating the rate of economic development
4. Optimum allocation of resources
5. Equitable distribution of income and wealth

6. Economic stability

7. Capital formation and growth

8. Encouraging investment

1. Full Employment:

The first and foremost objective of fiscal policy in a developing economy is to achieve and maintain full employment in an economy. In such countries, even if full employment is not achieved, the main motto is to avoid unemployment and to achieve a state of near full employment. Therefore, to reduce unemployment and under-employment, the state should spend sufficiently on social and economic overheads. These expenditures would help to create more employment opportunities and increase the productive efficiency of the economy.

In this way, public expenditure and public sector investment have a special role to play in a modern state. A properly planned investment will not only expand income, output and employment but will also step-up effective demand through multiplier process and the economy will march automatically towards full employment. Besides public investment, private investment can also be encouraged through tax holidays, concessions, cheap loans, subsidies etc.

In the rural areas attempts can be made to encourage domestic industries by providing them training, cheap finance, equipment and marketing facilities. Expenditure on all these measures will help in eradicating unemployment and under-employment.

In this context, Prof. Keynes made the following recommendations to achieve full employment in an economy:

(a) To capture the excessive purchasing power and to curb private spending:

(b) Compensate the deficiency in private investment through public investment;

(c) Cheap money policy or lower interest rates to attract more and more private entrepreneurs.

2. Price Stability:

There is a general agreement that economic growth and stability are joint objectives for underdeveloped countries. In a developing country, economic instability is manifested in the form of inflation. Prof. Nurkse believed that “inflationary pressures are inherent in the process of investment but the way to stop them is not to stop investment. They can be controlled by various other ways of which the chief is the powerful method of fiscal policy.”

Therefore, in developing economies, inflation is a permanent phenomenon where there is a tendency to the rise in prices due to expanding trend of public expenditure. As a result of rise in income, aggregate demand exceeds aggregate supply. Capital goods and consumer goods fail to keep pace with rising income.

Thus, these result in inflationary gap. The price rise generated by demand pull reinforced by cost push inflation leads to further widening the gap. The rise in prices raises demand for more wages. This further gives rise to repeated wage-price spirals. If this situation is not effectively controlled, it may turn into hyperinflation.

In short, fiscal policy should try to remove the bottlenecks and structural rigidities which cause imbalance in various sectors of the economy. Moreover, it should strengthen physical controls of essential commodities, granting of concessions, subsidies and protection in the economy. In short, fiscal measures as well as monetary measures go side by side to achieve the objectives of economic growth and stability.

3. To Accelerate the Rate of Economic Growth:

Primarily, fiscal policy in a developing economy, should aim at achieving an accelerated rate of economic growth. But a high rate of economic growth cannot be achieved and maintained without stability in the economy. Therefore, fiscal measures such as taxation, public borrowing and deficit financing etc. should be used properly so that production, consumption and distribution may not adversely affect. It should promote the economy as a whole which in turn helps to raise national income and per capita income.

In this connection it is significant to quote the views of Mrs. Hicks, who observed, “now that fiscal policy has been developed as an established economic function of a government, every country is anxious to gear its public finance in pursuit of the twin aims of stability and growth, but their relative importance is very differently regarded from one country to another... A steady rate of expansion will tend to reduce the violence of such fluctuations as may occur; a successful full employment policy will provide an atmosphere which is congenial for growth.”

4. Optimum Allocation of Resources:

Fiscal measures like taxation and public expenditure programmes, can greatly affect the allocation of resources in various occupations and sectors. As it is true, the national income and per capita income of underdeveloped countries is very low. In order to gear the economy, the government can push the growth of social infrastructure through fiscal measures. Public expenditure, subsidies and incentives can favourably influence the allocation of resources in the desired channels.

Tax exemptions and tax concessions may help a lot in attracting resources towards the favoured industries. On the contrary, high taxation may draw away resources in a specific sector. Above all, direct curtailment of consumption and socially unproductive investment may be helpful in mobilization of resources and the further check of the inflationary trends in the economy. Sometimes, the policy of protection is a useful tool for the growth of some socially desired industries in an under-developed country.

Prof. R.N. Tripathi suggests the following steps to raise the saving ratio which provides the required finance for developmental schemes:

(i) Direct physical control.

- (ii) Increasing the rate of existing taxes.
- (iii) Introduction of new taxes,
- (iv) Public borrowing of non-inflationary nature,
- (v) Deficit financing.

5. Equitable Distribution of Income and Wealth:

It is needless to emphasize the significance of equitable distribution of income and wealth in a growing economy. Generally, inequality in wealth persists in such countries as in the early stages of growth, it concentrates in few hands. It is also because private ownership dominates the entire structure of the economy. Besides, extreme inequalities create political and social discontentment which further generate economic instability. For this, suitable fiscal policy of the government can be devised to bridge the gap between the incomes of the different sections of the society.

To reduce inequalities and to do distributive justice, the government should invest in those productive channels which incur benefit to low-income groups and are helpful in raising their productivity and technology. Therefore, redistributive expenditure should help economic development and economic development should help redistribution.

Thus, well-planned fiscal programme, public expenditure can help development of human capital which in turn possesses positive effects on income distribution. Regional disparities can also be removed by providing incentives to backward regions. A redistributive tax policy should be highly progressive and aim at imposing heavy taxation on the richer and exempting poorer sections of the community. Similarly, luxurious items, which are consumed by the higher section, may be subject to heavy taxation.

6. Economic Stability:

Fiscal measures, to a larger extent, promote economic stability in the face of short-run international cyclical fluctuations. These fluctuations cause variations in terms of trade, making the most favourable to the developed and unfavourable to the developing economies. So, for the purpose of bringing economic stability, fiscal methods should incorporate built-in-flexibility in the budgetary system so that income and expenditure of the government may automatically provide compensatory effect on the rise or fall of the nation's income.

Therefore, fiscal policy plays a leading role in maintaining economic stability in the face of internal and external forces. The instability caused by external forces is corrected by a policy, popularly known as 'tariff policy' rather than aggregative fiscal policy. In the period of boom, export and import duties should be imposed to minimize the impact of international cyclical fluctuations.

To curb the use of additional purchasing power, heavy import duty on consumer goods and luxury import restrictions are essential. During the period of recession, government should undertake public works programmes through deficit financing.

In nut shell, fiscal policy should be viewed from a larger perspective keeping in view the balanced growth of various sectors of the economy.

7. Capital Formation and Growth:

Capital assumes a central place in any development activity in a country and fiscal policy can be adopted as a crucial tool for the promotion of the highest possible rate of capital formation. A newly developing economy is encompassed by a 'vicious circle of poverty'. Therefore, a balanced growth is needed to breakdown the vicious circle which is only feasible with higher rate of capital formation. Once a country comes out of the clutches of backwardness, it stimulates investment and encourage capital formation.

Prof. Raja J. Chelliah recommends that fiscal policy must aim at the following for attaining rapid economic growth:

(i) Raising the ratio of saving (s) to Income (y) by controlling consumption (c);

(ii) Raising the rate of investment:

(iii) Encouraging the flow of spending into productive way;

8. To Encourage Investment:

Fiscal policy aims at the acceleration of the rate of investment in the public as well as in private sectors of the economy. Fiscal policy, in the first instance, should encourage investment in public sector which in turn effect to increase the volume of investment in private sector. In other words, fiscal policy should aim at rapid economic development and must encourage investment in those channels which are considered most desirable from the point of view of society.

It should aim at curtailing conspicuous consumption and investment in unproductive channels. In the early stages of economic development, the government must try to build up economic and social overheads such like transport and communication, irrigation, flood control, power, ports, technical training, education, hospital and school facilities, so that they may provide external economies to induce investment in industrial and agricultural sectors of the economy.

These economies will be helpful for widening the size of the market, reducing the cost of production and increasing the social marginal productivity of investment. Here it must be remembered that projects of social marginal productivity should wisely be selected keeping in view its practical implication.

Fiscal Policy Tools

A government has two tools at its disposal under the fiscal policy – taxation and public spending.

FISCAL POLICY

FISCAL POLICY is an essential tool at the disposal of govt. to influence a nation's economic growth based on Keynesian economics. It is used in coordination with monetary policy.

OBJECTIVES

Boosting employment levels & economic development

Maintain economy's growth rate

Raising the standard of living

Maintaining equality in price levels & Balance of Payment

TOOLS

1. TAXATION

It includes taxes on income, property, sales, & investments.

2. PUBLIC SPENDING

It includes subsidies, transfer payments, welfare, and public works projects.

FISCAL DEFICIT

If a govt. spends more than what it earns, it leads to the deficit.

FISCAL SURPLUS

If the govt. spends less than what it earns, it creates a fiscal surplus.

TYPES

1. EXPANSIONARY

To stimulate economic growth by increasing spending /lowering taxes/both.

2. CONTRACTIONARY

To slow the economic growth.

MONETARY POLICY

- Controls money supply.
- Raises/lowers the fed funds rate.
- Works faster than fiscal policy
- Helps in maintaining efficiency..

Taxation includes taxes on income, property, sales, and investments. On the one hand, more taxes mean more income for the government, but it also results in less income in the hand of the people.

Public spending includes subsidies, transfer payments, like salaries to a govt. employee, welfare programs, and public works projects. Those who get the funds have more money to spend.

Structure of Balance of Payment

The monetary transactions that happen between a resident of the country and the rest of the world are recorded. These are recorded in a statement called the balance of payment. Structure of balance of payments includes current account, capital account, etc.

Structure of BOP

<i>Receipts (Credits)</i>	<i>Payments (Debits)</i>
1) Exports of goods	1) Imports of goods
Trade Account Balance	
2) Exports of services	2) Imports of services
3) Interests, profits and dividends received	3) Interests, profits and dividends paid
4) Unilateral receipts	4) Unilateral Payments
Current Account Balance (1 to 4)	
5) Foreign Investments	5) Investments abroad
6) Short term borrowing	6) Short term lending
7) Medium and long term borrowing	7) Medium and long term lending
8)	Statistical discrepancy (Errors and omission)
Capital Account Balance (5 to 8)	
9) Change in reserves (+)	9) Change in reserves
Total Receipts = Total payments	

Balance of Payment

Balance of payment includes all the transactions that are made by corporates, individuals, and the government. Thus, it helps in monitoring the funds for the development of the country.

Thus, the inflows and outflows of a country should balance out. But in reality, this does not happen. This statement is useful to identify whether the country has a surplus or deficit. Thus, to identify it the country has more exports or more imports.

Structure of Balance of Payments

There are three main components that form the basis of the structure of balance of payments. The financial account, capital account, and current account

current account

The current account is useful for monitoring inflow and outflow of goods and services. Thus, this account covers all the payments and receipts that are made with respect to manufactured goods and raw materials. Furthermore, it also

includes receipts from tourism, engineering, business services, transportation, etc.

There are many categories of trades that occur between the countries. These trades could be visible or invisible. When trades happen in goods between the countries than it is called as visible items. While the trade happening in import or exports of services, is referred to as invisible items.

Capital Account

The capital transactions that occur between the countries are monitored under the capital account. Thus, capital transactions include the sale and purchase of assets like properties. Furthermore, the capital account also includes the flow of taxes, sales and purchases of fixed assets for a migrant moving in or out of the country. The three major elements of the capital account are investments, foreign exchange reserves, and loans and borrowings.

Financial Account

The flow of funds to and from foreign countries via various investments in real estate, FDI, business ventures, etc. Also, this account measures the variation in foreign ownership. When you analyse this, you can understand whether a country is acquiring more or selling more.

Example

Suppose the value of exported goods via India is 110 crores. While the value of imported goods to India is 90 crores. Thus, it can be said that India has a trade surplus of 20 crores.

BOP helps as an economic indicator in order to identify a trade surplus or deficit of a country. There are many components in BOP that provides a clear indication of which sector is doing economically well.

GOKUL GLOBAL UNIVERSITY

Faculty of Commerce & Management

E-Content



Course:	BBA
Semester:	2 nd
Subject:	Business Environment
Subject Code:	FMB220102

Address: - Gokul Global University, Sujapur Patia, Opp. I.O.C. Depot. State Highway- 41, Siddhpur-384151, Gujarat

Module 1

Introduction to Business Environment

Concept of Business Environment

The concept of the business environment encompasses a broad array of factors that collectively influence the operations, strategies, and decisions of a business organization. It refers to the complex and dynamic interplay of external and internal elements that shape the context within which businesses operate. Externally, the business environment includes economic conditions such as inflation rates, GDP growth, and market demand; political factors like government policies, stability, and regulations; socio-cultural trends, including demographic shifts, consumer preferences, and cultural values; technological advancements and innovations that impact industries and markets; and competitive dynamics involving rival firms, market share, and industry trends. Internally, it encompasses factors within the organization's control, such as its organizational culture, management structure, human resources, operational capabilities, and financial health.

Understanding the business environment is crucial for businesses because it provides insights into opportunities and threats, allowing organizations to formulate effective strategies and make informed decisions. By analyzing the external environment, businesses can identify emerging trends, anticipate market changes, and capitalize on new opportunities. Simultaneously, awareness of internal factors helps in leveraging strengths, addressing weaknesses, and optimizing resource allocation. The business environment is dynamic, constantly evolving with global, economic, technological, and social shifts, requiring businesses to remain agile and adaptable. Ultimately, a comprehensive understanding of the business environment enables businesses to navigate challenges, manage risks, and sustain long-term growth and competitiveness in their respective markets.

Definition of Business Environment

The business environment can be defined as the aggregate of all conditions, events, and influences that surround and affect a business organization. It is a comprehensive term that includes both macroeconomic and microeconomic factors, internal and external elements, and both controllable and uncontrollable variables.

Some common definitions include:

- 1. General Definition:** The business environment is the combination of internal and external factors that influence a company's operating conditions.
- 2. Economic Definition:** The business environment refers to the economic, legal, and social conditions that affect the operation of a business.
- 3. Management Definition:** The business environment encompasses the external forces, factors, and institutions that are beyond the control of the business and affect its performance and strategies.

Importance of Business Environment

Understanding the business environment is crucial for businesses across all sectors and sizes due to several key reasons:

1. **Strategic Planning:** Knowledge of the business environment enables organizations to formulate strategic plans effectively. By analyzing external factors such as market trends, economic conditions, and regulatory changes, businesses can identify opportunities for growth and development. Strategic planning based on a thorough understanding of the environment helps in aligning organizational goals with market demands and competitive dynamics.
2. **Risk Management:** The business environment analysis helps businesses identify potential risks and uncertainties. By anticipating changes in economic conditions, consumer behavior, or regulatory frameworks, organizations can develop risk mitigation strategies. This proactive approach reduces vulnerabilities, enhances resilience, and minimizes the impact of external threats on operations and profitability.
3. **Decision Making:** Informed decision-making relies on accurate and current information about the business environment. Managers and executives use environmental analysis to evaluate alternatives, assess potential outcomes, and make decisions that align with organizational objectives. Understanding market trends, technological advancements, and competitive pressures enables businesses to make timely and effective decisions.
4. **Competitive Advantage:** Adaptation to the business environment can provide a competitive edge. Businesses that monitor and respond to changes faster than their competitors can capitalize on emerging opportunities and address market demands proactively. By leveraging strengths and addressing weaknesses identified through environmental analysis, organizations can differentiate themselves in the marketplace and maintain a sustainable competitive advantage.
5. **Regulatory Compliance:** Legal and regulatory factors significantly impact business operations. Understanding the regulatory environment helps businesses ensure compliance with laws, regulations, and industry standards. Compliance not only mitigates legal risks and penalties but also enhances corporate reputation and credibility among stakeholders.
6. **Opportunity Identification:** The business environment analysis facilitates the identification of new market opportunities and emerging trends. By monitoring consumer preferences, technological innovations, and socio-cultural shifts, businesses can innovate products, services, and business models to meet evolving customer needs. This proactive approach allows organizations to stay ahead of competitors and capture untapped market segments.
7. **Resource Allocation:** Effective resource allocation is critical for organizational efficiency and performance. By understanding economic conditions, financial trends, and resource availability, businesses can optimize resource allocation strategies. This includes investments in technology, infrastructure, human capital, and operational processes aligned with organizational objectives and market demands.
8. **Adaptability and Innovation:** Businesses operating in a dynamic environment must continuously adapt and innovate to stay relevant. Environmental analysis provides insights into changing market dynamics, customer preferences, and technological advancements. This knowledge fosters a culture of innovation within organizations, encouraging creativity, experimentation, and the development of new products, services, or processes that meet evolving market demands.

In conclusion, the business environment serves as a crucial framework that shapes organizational strategies, operational decisions, and competitive positioning. By understanding and responding effectively to external and internal factors, businesses can navigate uncertainties, capitalize on opportunities, and achieve sustainable growth in a rapidly evolving global marketplace.

Internal & External of Environment

Businesses operate within a complex ecosystem shaped by both internal and external factors. Understanding these environments is essential for effective management and strategic decision-making.

Internal Environment

The internal environment of a business comprises factors that are within its control or influence. These factors include:

1. **Organizational Culture:** The shared values, beliefs, norms, and behaviors that define the company's identity and influence employee behavior, decision-making processes, and organizational performance.
2. **Management Structure:** The hierarchy, leadership styles, and decision-making processes within the organization that determine the efficiency, coordination, and strategic direction of the business.
3. **Human Resources:** The workforce, skills, capabilities, and talent management strategies that impact productivity, innovation, employee satisfaction, and organizational development.
4. **Operational Capabilities:** The efficiency and effectiveness of the organization's operational processes, including production, supply chain management, logistics, and service delivery.
5. **Financial Health:** The financial resources, capital structure, liquidity, profitability, and financial management practices that influence investment decisions, growth opportunities, and financial sustainability.
6. **Internal Policies and Procedures:** The rules, guidelines, and operational procedures established by the organization to govern its activities, ensure compliance, and maintain consistency in operations.

External Environment

The external environment of a business consists of factors that are beyond its direct control but have a significant impact on its operations. These factors include:

1. **Economic Factors:** Market conditions, economic growth rates, inflation, interest rates, exchange rates, and overall economic stability that influence consumer spending, business investment, and market demand.
2. **Political and Legal Factors:** Government policies, regulations, political stability, trade tariffs, taxation policies, and legal frameworks that affect business operations, market entry strategies, and international trade relations.
3. **Social and Cultural Factors:** Demographic trends, cultural norms, societal values, consumer preferences, lifestyle changes, and corporate social responsibility considerations that influence market segmentation, customer behavior, and brand reputation.
4. **Technological Factors:** Advancements in technology, research and development (R&D) activities, innovation trends, digital transformation, and technological disruptions that impact product development, production processes, and market competitiveness.
5. **Environmental Factors:** Environmental sustainability concerns, climate change policies, regulatory requirements, and corporate sustainability practices that influence operational strategies, product design, and corporate reputation.

6. **Competitive Factors:** The strategies, strengths, and weaknesses of competitors, market share dynamics, industry rivalry, and competitive positioning that impact market competitiveness and strategic decision-making.

Importance of Understanding Internal and External Environments

- **Strategic Alignment:** Understanding both internal capabilities and external opportunities and threats helps businesses align their strategies with market demands and competitive dynamics.
- **Risk Management:** Awareness of internal strengths and weaknesses, as well as external risks and uncertainties, enables businesses to develop effective risk mitigation strategies and contingency plans.
- **Decision Making:** Insights from internal and external environmental analysis support informed decision-making processes, allowing businesses to capitalize on opportunities and address challenges effectively.
- **Competitive Advantage:** Leveraging internal strengths and responding strategically to external opportunities and threats helps businesses maintain a competitive edge and achieve sustainable growth.
- **Adaptability and Innovation:** Monitoring external trends and technological advancements, coupled with fostering a supportive internal culture, promotes innovation and enables businesses to adapt to changing market conditions.

Economic Environment Reforms in Indian Money Market

The economic environment and reforms in the Indian money market have undergone significant changes over the years, aimed at enhancing efficiency, transparency, and stability. Here's a detailed overview of the reforms and their impact:

Overview of Indian Money Market

The Indian money market comprises various instruments and institutions that facilitate short-term borrowing and lending of funds. It includes the Reserve Bank of India (RBI) as the central bank, commercial banks, cooperative banks, non-banking financial companies (NBFCs), financial institutions, and other entities involved in money market operations.

Economic Environment Reforms in Indian Money Market

1. Liberalization and Deregulation:

In the early 1990s, India embarked on economic liberalization and financial sector reforms to integrate with the global economy and improve the efficiency of financial markets. Key reforms include:

- **Interest Rate Deregulation:** The phased deregulation of interest rates allowed market forces to determine lending and deposit rates, reducing the RBI's direct control over interest rates.
- **Entry of Private Players:** Liberalization led to the entry of private banks and NBFCs, increasing competition and efficiency in the money market.
- **Foreign Institutional Investors (FIIs):** FIIs were allowed to participate in the Indian money market, enhancing liquidity and bringing in foreign capital.

2. Development of Money Market Instruments:

To meet the diverse funding needs of market participants and enhance liquidity, several money market instruments were introduced or developed further:

- **Treasury Bills (T-Bills):** Short-term government securities issued to manage liquidity in the market and finance short-term borrowing needs of the government.
- **Commercial Paper (CP) and Certificates of Deposit (CD):** CPs are unsecured money market instruments issued by corporates to raise short-term funds, while CDs are issued by banks to raise funds from the money market.
- **Repo (Repurchase Agreement) Market:** The development of the repo market allowed banks and financial institutions to borrow funds against collateral of securities, providing liquidity and supporting monetary policy operations.

3. Regulatory and Institutional Reforms:

Regulatory reforms aimed at strengthening the regulatory framework and enhancing market infrastructure:

- **Securities and Exchange Board of India (SEBI):** SEBI was entrusted with regulating the securities market, including money market instruments, to promote transparency and investor protection.
- **Financial Sector Legislative Reforms Commission (FSLRC):** Recommendations from the FSLRC aimed at modernizing financial sector laws and enhancing regulatory coordination and governance.

4. Financial Inclusion and Technology Integration:

Efforts were made to promote financial inclusion and leverage technology to improve access to financial services:

- **Payment Banks and Small Finance Banks:** Introduced to provide banking services to underserved segments and promote financial inclusion.
- **Digital Payments and Platforms:** The promotion of digital payment systems and platforms like Unified Payments Interface (UPI) enhanced efficiency, transparency, and access to financial services.

5. Monetary Policy Framework:

The adoption of a flexible inflation targeting framework by the RBI aimed at maintaining price stability while supporting economic growth:

- **Monetary Policy Committee (MPC):** Formed to decide on key policy rates, such as the repo rate, based on inflation targets and economic conditions.

Impact of Reforms

- **Enhanced Efficiency:** Reforms led to a more efficient money market with improved price discovery mechanisms and reduced transaction costs.
- **Increased Transparency:** Greater transparency in transactions and pricing improved investor confidence and market integrity.
- **Risk Management:** Introduction of risk management tools and practices helped in better management of liquidity and credit risks.
- **Financial Inclusion:** Initiatives like payment banks and digital platforms expanded financial access and inclusion, particularly in rural and underserved areas.
- **Market Development:** Development of new instruments and market segments contributed to the overall development and deepening of the Indian financial markets.

Challenges

- **Regulatory Compliance:** Ensuring compliance with evolving regulatory requirements and maintaining financial stability.
- **Financial Literacy:** Addressing gaps in financial literacy to empower consumers and investors to make informed decisions.
- **Cybersecurity Risks:** Mitigating cybersecurity risks associated with digital transactions and online financial services.

Primary Capital Market & Secondary Capital Market

Primary Capital Market

The primary capital market refers to the financial market where new securities, such as stocks and bonds, are issued and sold to investors for the first time. It is the initial point of issuance where companies or governments raise funds directly from investors to finance their operations, expansion projects, or government expenditures. Here are key features and aspects of the primary capital market:

1. **Issuance of Securities:** Companies issue new shares (equity) or bonds (debt securities) to raise capital for various purposes, such as funding new projects, expansion plans, or refinancing existing debt.
2. **Methods of Issuance:**
 - **Initial Public Offering (IPO):** Companies offer their shares to the public for the first time, allowing investors to become shareholders.
 - **Rights Issue:** Existing shareholders are given the right to buy additional shares at a discounted price proportionate to their existing holdings.
 - **Private Placement:** Securities are sold directly to institutional investors or a select group of investors without a public offering.
3. **Role of Intermediaries:** Intermediaries such as investment banks, underwriters, and financial advisors play a crucial role in facilitating the issuance process. They assist in pricing the securities, marketing the offering to potential investors, and ensuring compliance with regulatory requirements.
4. **Regulatory Oversight:** The primary market is regulated by securities laws and regulatory bodies like the Securities and Exchange Board of India (SEBI) in India. These regulations aim

to protect investors' interests, promote transparency, and ensure fair practices in the issuance and trading of securities.

Secondary Capital Market

The secondary capital market refers to the financial market where existing securities that have already been issued in the primary market are bought and sold among investors. It provides a platform for investors to trade previously issued securities, thereby facilitating liquidity and price discovery. Key features and aspects of the secondary capital market include:

1. **Trading of Securities:** Investors buy and sell securities, such as stocks, bonds, and derivatives, through stock exchanges or over-the-counter (OTC) markets. Prices of securities in the secondary market are determined by supply and demand dynamics and reflect investors' perceptions of the company's financial health and future prospects.
2. **Role of Stock Exchanges:** Stock exchanges, like the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) in India, provide the infrastructure and platform for trading securities. They facilitate transparent and orderly transactions, ensure liquidity, and enforce trading rules and regulations.
3. **Participants:** Participants in the secondary market include individual investors, institutional investors (such as mutual funds, insurance companies, and pension funds), and market makers who facilitate trading by providing liquidity.
4. **Functions:**
 - **Price Discovery:** Secondary markets enable continuous price discovery based on market demand and supply dynamics, reflecting the current value of securities.
 - **Enhanced Liquidity:** Investors can easily buy and sell securities in the secondary market, providing liquidity and flexibility to adjust their investment portfolios.
 - **Efficient Allocation of Capital:** Efficient secondary markets allocate capital to companies and governments based on their performance and investor confidence, promoting economic growth and development.
5. **Market Efficiency:** The secondary market contributes to market efficiency by reflecting all available information and investor expectations in security prices, facilitating efficient resource allocation and capital formation.

Relationship Between Primary and Secondary Markets

- **Continuum of Capital Formation:** The primary market provides a channel for raising new capital, while the secondary market provides liquidity to investors who wish to buy or sell existing securities.
- **Investor Participation:** Investors often participate in both markets, initially buying securities in the primary market through IPOs or secondary offerings and subsequently trading these securities in the secondary market based on market conditions and investment objectives.

Module 2

Union Budget

Concept of Union Budget

The Union Budget of India is the annual financial statement of the Government of India, outlining its revenue and expenditure for the upcoming fiscal year, which runs from April 1 to March 31. It is presented in Parliament by the Union Finance Minister and provides a comprehensive overview of the government's finances, policies, and priorities. The Union Budget plays a crucial role in shaping India's economic policies, fiscal management, and allocation of resources across various sectors.

Main Constituents of Union Budget

1. Revenue Budget:

- **Revenue Receipts:** Income generated by the government through taxes (like income tax, corporate tax, GST), non-tax revenues (like dividends, interest receipts), and grants-in-aid from states and foreign countries.
- **Revenue Expenditure:** Daily operational expenses of the government, such as salaries, pensions, subsidies, interest payments on loans, maintenance costs, and grants to states and union territories.

2. Capital Budget:

- **Capital Receipts:** Proceeds from disinvestment, loans raised by the government from domestic and international sources, and recovery of loans granted by the central government.
- **Capital Expenditure:** Investments made by the government in long-term assets, infrastructure development projects, acquisition of land, construction of buildings, and loans to state governments and union territories.

3. Fiscal Deficit: The difference between the government's total revenue and total expenditure. It indicates the borrowing requirements of the government to meet its expenditure obligations and is an essential indicator of fiscal health.

4. Budgetary Allocation to Sectors:

- **Allocation to Key Sectors:** The budget allocates funds to various sectors such as agriculture, education, health, defense, infrastructure, rural development, and social welfare schemes based on government priorities and developmental objectives.
- **Scheme-wise Allocations:** Specific allocations are made for flagship schemes, poverty alleviation programs, employment generation initiatives, and infrastructure projects aimed at boosting economic growth and development.

5. Budget Estimates and Actuals:

- **Budget Estimates (BE):** The financial projections made at the beginning of the fiscal year regarding revenue receipts, revenue expenditure, capital receipts, and capital expenditure.
- **Revised Estimates (RE):** Adjustments made to the budget estimates during the fiscal year based on actual revenue collections and expenditure requirements.
- **Actuals:** The final audited figures of revenue receipts, expenditure, fiscal deficit, and other financial parameters at the end of the fiscal year.

6. Tax Proposals:

- **Direct and Indirect Taxes:** The Union Budget announces tax policies, rates, and reforms affecting direct taxes (income tax) and indirect taxes (GST, customs duties) to enhance revenue mobilization, promote economic growth, and achieve socio-economic objectives.

7. Economic Survey: Often presented a day before the Union Budget, the Economic Survey provides an overview of India's economic performance, challenges, and policy recommendations. It serves as a precursor to the Budget and informs decision-making.

Role and Significance of Union Budget

- **Policy Document:** The Union Budget serves as a policy document outlining the government's economic and fiscal policies, priorities, and reform agenda for the upcoming year.
- **Resource Allocation:** It allocates resources to various sectors and programs based on developmental priorities, promoting inclusive growth, infrastructure development, and social welfare.
- **Fiscal Discipline:** The Budget aims to maintain fiscal discipline, manage government finances prudently, and ensure sustainable economic growth by balancing revenue generation with expenditure commitments.
- **Transparency and Accountability:** The Budget enhances transparency in financial management, accountability in resource utilization, and public scrutiny of government spending and taxation policies.
- **Economic Stability and Growth:** It plays a crucial role in achieving macroeconomic stability, controlling inflation, attracting investments, and fostering economic growth and development.

Types of various budgetary deficit:

Budgetary deficits occur when a government's expenditures exceed its revenues over a specific period, typically a fiscal year. Understanding the different types of budgetary deficits is crucial for students studying economics, public finance, or related fields. Here are the main types of budgetary deficits:

1. Fiscal Deficit

- **Definition:** The difference between the total revenue and total expenditure of the government (excluding borrowing).
- **Formula:** Fiscal Deficit = Total Expenditure - Total Revenue (excluding borrowings)
- **Significance:** Indicates the borrowing needs of the government. A high fiscal deficit implies more borrowing, leading to higher debt levels.

2. Revenue Deficit

- **Definition:** The shortfall between the revenue receipts and the revenue expenditures.
- **Formula:** Revenue Deficit = Revenue Expenditure - Revenue Receipts
- **Significance:** Highlights that the government's day-to-day expenses are not being met by its regular income, necessitating borrowing or cutting down on capital expenditures.

3. Primary Deficit

- **Definition:** The fiscal deficit excluding interest payments on previous borrowings.
- **Formula:** Primary Deficit = Fiscal Deficit - Interest Payments
- **Significance:** Helps understand the extent of deficit caused by current expenditures and revenues, excluding past debt obligations.

4. Effective Revenue Deficit

- **Definition:** The revenue deficit minus grants for the creation of capital assets.
- **Formula:** Effective Revenue Deficit = Revenue Deficit - Grants for Creation of Capital Assets

- **Significance:** Focuses on the revenue deficit adjusted for expenditures that lead to asset creation, providing a clearer picture of the government's operational efficiency.

5. Monetary Deficit

- **Definition:** Occurs when the central bank finances the deficit by printing new money.
- **Significance:** Can lead to inflation if not managed properly, as it increases the money supply without corresponding economic growth.

6. Trade Deficit

- **Definition:** The amount by which a country's import expenses exceed its export revenues.
- **Formula:** Trade Deficit = Imports - Exports
- **Significance:** Indicates the country's international economic position and can affect the exchange rate and foreign reserves.

7. Structural Deficit

- **Definition:** A budget deficit that persists across the business cycle due to fundamental imbalances in government revenues and expenditures.
- **Significance:** Reflects long-term financial health and sustainability issues, often necessitating policy changes to address the underlying causes.

8. Cyclical Deficit

- **Definition:** The part of the budget deficit that results from economic downturns and reduced tax revenues, expected to diminish when the economy recovers.
- **Significance:** Temporary and tied to economic cycles, contrasting with structural deficits which are more permanent.

Price and Distribution Controls: Objectives and Overview

Price and distribution controls are regulatory mechanisms employed by governments to influence the pricing of goods and their distribution in the market. These controls are typically used to stabilize the economy, ensure fair access to essential goods, and prevent exploitative practices. Understanding the objectives and types of these controls is essential for students studying economics, public policy, and related fields.

Objectives of Price and Distribution Controls

1. Price Stability

- **Objective:** To prevent excessive fluctuations in prices, ensuring stability in the market.
- **Reason:** Price volatility can lead to economic uncertainty, affecting both consumers and producers. Stabilizing prices helps maintain economic stability and predictability.

2. Protection of Consumers

- **Objective:** To protect consumers from exorbitant prices, especially for essential goods and services.
- **Reason:** In times of scarcity or monopoly, prices can be artificially inflated. Controls help ensure affordability and prevent exploitation.

3. Ensuring Fair Distribution

- **Objective:** To ensure that essential goods are distributed equitably among the population.
- **Reason:** In times of crisis (e.g., natural disasters, wars), it is crucial to ensure that all segments of the population have access to basic necessities.

4. Encouraging Production and Supply

- **Objective:** To incentivize the production and supply of essential goods.
- **Reason:** Setting minimum prices or guaranteeing prices can encourage producers to maintain or increase the supply of critical goods.

5. Controlling Inflation

- **Objective:** To keep inflation in check by preventing runaway price increases.
- **Reason:** High inflation erodes purchasing power and can lead to economic instability. Controls help manage inflationary pressures.

6. Market Regulation

- **Objective:** To regulate markets where competition is limited or non-existent.
- **Reason:** In monopolistic or oligopolistic markets, price controls prevent the abuse of market power and ensure competitive pricing.

Direct vs. Indirect Price Controls, Administered Prices, and Dual Pricing:

Direct Price Controls

- **Definition:** Government directly intervenes to set the price of goods or services.
- **Examples:**
 - **Price Ceilings:** Maximum price set by the government (e.g., rent control).
 - **Price Floors:** Minimum price set by the government (e.g., minimum wage).
- **Implications:**
 - **Positive:**
 - Prevents excessive price increases, making essential goods affordable.
 - Ensures fair wages for workers through minimum wage laws.
 - **Negative:**
 - **Price Ceilings:** Can lead to shortages if the ceiling is below the market equilibrium price, as demand exceeds supply.
 - **Price Floors:** Can lead to surpluses if the floor is above the market equilibrium price, as supply exceeds demand.

Indirect Price Controls

- **Definition:** Government influences prices through market mechanisms rather than setting them directly.
- **Examples:**
 - **Subsidies:** Financial assistance to reduce production or consumption costs (e.g., subsidies for renewable energy).

- **Taxes:** Levies on goods to increase their prices and reduce consumption (e.g., sin taxes on tobacco and alcohol).
- **Regulations:** Rules affecting supply and demand (e.g., import restrictions, production quotas).
- **Implications:**
 - **Positive:**
 - Can achieve policy goals without direct market intervention.
 - More flexible and less intrusive compared to direct controls.
 - **Negative:**
 - Can still lead to market distortions and inefficiencies.
 - May require complex administrative systems and enforcement mechanisms.

Administered Prices

Administered Prices

- **Definition:** Prices set by the government for certain essential goods and services, often below market rates.
- **Examples:**
 - **Utilities:** Electricity, water, and gas prices set by the government.
 - **Essential Food Items:** Staple foods like rice, wheat, and sugar.
 - **Public Services:** Public transport fares.
- **Implications:**
 - **Positive:**
 - Ensures affordability of essential goods and services for the population.
 - Protects consumers from price gouging in critical sectors.
 - **Negative:**
 - Can lead to inefficiencies and financial losses if prices are set below production costs.
 - May result in reduced quality and investment in the affected sectors.
 - Can create black markets if the supply does not meet the demand.

Dual Pricing

- **Definition:** A system where the same commodity is sold at two different prices in the market: one controlled price and one market price.
- **Examples:**
 - **Subsidized Food Grains:** Staple foods sold at lower prices to low-income groups through public distribution systems, while the same items are sold at higher market prices to others.
 - **Fuel:** Subsidized fuel for public transport or low-income consumers, with the rest sold at market prices.
- **Implications:**
 - **Positive:**
 - Ensures that low-income groups have access to essential goods at affordable prices.
 - Allows market forces to operate for other consumers, maintaining overall market efficiency.
 - **Negative:**
 - Can lead to leakage and corruption if not properly monitored, as goods may be diverted to the market price segment.
 - Administrative complexity in maintaining and enforcing dual pricing structures.
 - Potential for social discontent if there is a significant disparity between the controlled and market prices.

Subsidisation

Definition:

- Subsidisation involves financial assistance provided by the government to reduce the cost of production or consumption of goods and services, aimed at promoting economic stability and social welfare.

Types of Subsidies:

1. Production Subsidies:

- **Purpose:** To lower the cost of production and encourage higher output.
- **Examples:**
 - **Agricultural Subsidies:** Financial support to farmers to reduce costs and stabilize food production.
 - **Energy Subsidies:** Support for renewable energy projects to promote sustainable development.
- **Business Implications:**
 - **Positive:** Lower production costs, increased profitability, enhanced competitiveness.
 - **Negative:** Risk of overproduction, reduced incentives for efficiency, potential market distortions.

2. Consumption Subsidies:

- **Purpose:** To make essential goods and services more affordable for consumers.
- **Examples:**
 - **Food Subsidies:** Providing staple foods at lower prices to ensure food security.
 - **Healthcare Subsidies:** Reducing costs for medical services to improve public health.
- **Business Implications:**
 - **Positive:** Increased consumer demand, higher sales volumes, improved public welfare.
 - **Negative:** Potential strain on government finances, risk of overconsumption, possible dependency.

Objectives of Subsidisation:

1. **Economic Stability:**
 - Stabilizes prices and ensures a steady supply of essential goods.
2. **Social Welfare:**
 - Improves the living standards of low-income groups by making basic necessities more affordable.
3. **Economic Development:**
 - Encourages growth in strategic sectors, such as agriculture, energy, and technology.
4. **Market Support:**
 - Helps emerging industries compete and innovate, fostering economic diversity.

Challenges of Subsidisation:

1. **Fiscal Burden:**
 - High government expenditure on subsidies can lead to budget deficits and increased public debt.
2. **Market Distortion:**
 - Interference with natural market dynamics can lead to inefficiencies and reduced competition.
3. **Dependency:**

- Beneficiaries may become reliant on subsidies, reducing their motivation to improve efficiency and productivity.
- 4. **Misallocation:**
 - Risks of corruption and misuse of funds, diverting resources from intended beneficiaries.

Public Distribution System (PDS)

Definition:

- The Public Distribution System (PDS) is a government-run program aimed at distributing essential commodities, such as food grains, to the needy at subsidized prices to ensure food security and price stability.

Objectives of PDS:

1. **Food Security:**
 - Ensure the availability of basic food items to all sections of society, particularly vulnerable and economically disadvantaged groups.
2. **Price Stability:**
 - Control prices of essential commodities by distributing them at fixed, subsidized rates.
3. **Poverty Alleviation:**
 - Support low-income families by providing essential goods at affordable prices.
4. **Equitable Distribution:**
 - Ensure that basic necessities are distributed evenly across different regions and communities.

Components of PDS:

1. **Targeted Public Distribution System (TPDS):**
 - Focuses on providing subsidized food grains to below-poverty-line (BPL) families.
2. **Antyodaya Anna Yojana (AAY):**
 - Provides highly subsidized food grains to the poorest of the poor.
3. **Mid-Day Meal Scheme:**
 - Offers free lunches to school children, improving nutrition and encouraging school attendance.

Operation of PDS:

1. **Procurement:**
 - Government purchases food grains from farmers at minimum support prices (MSP), ensuring a fair income for producers.
2. **Storage:**
 - Commodities are stored in government warehouses to ensure steady supply and prevent shortages.
3. **Distribution:**
 - Essential goods are distributed through a network of fair price shops (FPS) to eligible beneficiaries at subsidized rates.

Business Implications of PDS:

1. **Market Stability:**
 - Helps stabilize markets by ensuring a steady supply of essential commodities, preventing price spikes.

2. Consumer Spending:

- Increases disposable income for low-income households, boosting demand for other goods and services.

3. Agricultural Support:

- Provides a stable market for farmers, encouraging agricultural production and investment.

4. Retail Impact:

- Fair price shops compete with private retailers, potentially affecting their pricing and sales strategies.

Challenges of PDS:

1. Efficiency Issues:

- Operational inefficiencies, including poor storage and transportation, can lead to wastage and spoilage.

2. Leakages and Diversion:

- Risks of corruption and diversion of subsidized goods to the open market, reducing the benefits to intended recipients.

3. Targeting Accuracy:

- Difficulties in accurately identifying and targeting beneficiaries, leading to exclusion errors and inclusion errors.

4. Financial Sustainability:

- High cost of subsidies and administrative expenses can strain government budgets and impact other development priorities.

Privatisation: Concept, Ways of Privatisation, Disinvestment Process in India, and Exit Policy

Concept of Privatisation

Definition:

- Privatisation refers to the transfer of ownership, management, and control of public sector enterprises to the private sector. This shift can involve the sale of government-owned assets or shares to private investors.

Objectives:

1. Efficiency Improvement:

- Enhance the efficiency and productivity of enterprises through private sector management practices.

2. Fiscal Health:

- Reduce the fiscal burden on the government by lowering the need for subsidies and financial support to public enterprises.

3. Market Expansion:

- Encourage competition and innovation by involving private players.

4. Resource Mobilisation:

- Generate revenue for the government through the sale of public assets.

5. Wider Ownership:

- Broaden the base of asset ownership among the public by allowing them to invest in previously government-held enterprises.

Ways of Privatisation

1. **Strategic Sale:**

- **Description:** Selling a significant portion of a public sector enterprise to a private entity, along with transfer of management control.
- **Example:** The sale of Air India to Tata Sons.

2. **Public Offering:**

- **Description:** Offering shares of a public sector enterprise to the general public through the stock market.
- **Example:** Initial Public Offerings (IPOs) of companies like ONGC and Coal India.

3. **Disinvestment:**

- **Description:** The government's sale of its shares in public sector enterprises without transferring management control.
- **Example:** Partial sale of the government's stake in Bharat Petroleum Corporation Limited (BPCL).

4. **Lease or Management Contracts:**

- **Description:** Leasing out public sector assets or entering into management contracts with private entities while retaining ownership.
- **Example:** Private management of airport operations in India.

5. **Joint Ventures:**

- **Description:** Forming partnerships between public sector enterprises and private companies.
- **Example:** Joint ventures in the defense sector between public and private entities.

6. **Franchising:**

- **Description:** Granting private entities the right to operate certain services or businesses under specified conditions.
- **Example:** Franchising of retail outlets by Indian Railways.

Disinvestment Process in India

1. **Policy Framework:**

- The government sets annual disinvestment targets and policies through the Union Budget.
- The Department of Investment and Public Asset Management (DIPAM) oversees the disinvestment process.

2. **Identification:**

- Identification of public sector enterprises for disinvestment based on strategic, economic, and social considerations.

3. **Valuation:**

- Independent valuation of assets or shares to determine their market value.

4. **Approval:**

- Obtaining approvals from the relevant authorities, including the Cabinet Committee on Economic Affairs (CCEA).

5. **Method of Sale:**

- Deciding the method of sale, such as strategic sale, public offering, or auction.

6. **Implementation:**

- Execution of the disinvestment process, including marketing, bidding, and finalizing the sale.

7. **Monitoring and Post-Sale:**

- Ensuring compliance with contractual obligations and monitoring the performance of the privatised entity.

Exit Policy

Definition:

- An exit policy provides a framework for businesses to downsize, restructure, or close operations smoothly. It ensures that the interests of employees, creditors, and other stakeholders are protected.

Objectives:

1. **Ease of Doing Business:**
 - Simplify procedures for business exit, making it easier for companies to restructure or shut down unviable operations.
2. **Protection of Stakeholders:**
 - Safeguard the interests of employees, creditors, and other stakeholders affected by business closure.
3. **Economic Efficiency:**
 - Facilitate the efficient reallocation of resources from unviable enterprises to more productive uses.

Components of Exit Policy:

1. **Legal Framework:**
 - Laws and regulations governing business closures, such as the Insolvency and Bankruptcy Code (IBC) in India.
2. **Employee Protection:**
 - Provisions for severance pay, retraining, and redeployment of employees.
3. **Creditor Settlement:**
 - Mechanisms for the timely settlement of dues to creditors and other liabilities.
4. **Asset Liquidation:**
 - Procedures for the sale and distribution of assets of the closing business.
5. **Government Support:**
 - Government initiatives to support affected workers and industries, such as retraining programs and financial assistance.

Module 3

Global Environment

Globalisation: Definition, Meaning & Indicators

Definition:

- Globalisation refers to the process of increasing interdependence and interconnectedness of the world's markets and businesses. It is characterized by the free flow of goods, services, information, and capital across international borders.

Meaning:

- Globalisation encompasses economic, cultural, political, and technological dimensions, leading to a more integrated and cohesive global economy.

Indicators of Globalisation:

1. **Trade Liberalisation:**
 - Reduction of trade barriers such as tariffs, quotas, and import restrictions.
2. **Capital Flows:**
 - Increased cross-border investments, including foreign direct investment (FDI) and foreign portfolio investment (FPI).
3. **Technological Advancement:**
 - Rapid spread and adoption of technology and communication networks worldwide.
4. **Labour Mobility:**
 - Movement of people across borders for employment, education, and other opportunities.
5. **Cultural Exchange:**
 - Global dissemination and assimilation of cultural products, values, and ideas.

Foreign Investment Flows

Concepts of FDI and FPI:

Foreign Direct Investment (FDI):

- **Definition:** Investment made by a firm or individual in one country into business interests located in another country. It typically involves acquiring ownership or controlling interest in a foreign business.
- **Forms:**
 - Equity capital: Buying shares of a foreign company.
 - Reinvested earnings: Profits earned from foreign operations reinvested in the same.
 - Intra-company loans: Loans provided by the parent company to its foreign subsidiaries.
- **Role of FDI:**
 - Promotes economic growth by creating jobs and enhancing productivity.
 - Facilitates the transfer of technology, management skills, and best practices.
 - Increases foreign exchange reserves and improves the balance of payments.

Foreign Portfolio Investment (FPI):

- **Definition:** Investment in financial assets such as stocks, bonds, and mutual funds in a foreign country. Unlike FDI, FPI does not involve control over the business entity.
- **Characteristics:**
 - More liquid and easily tradable than FDI.

- More sensitive to market conditions and economic stability.
- **Role of FPI:**
 - Provides capital for development and diversification of financial markets.
 - Enhances market efficiency and liquidity.
 - Can be a source of economic volatility due to its speculative nature.

Introduction of GATT and Origin & Objectives of WTO

GATT (General Agreement on Tariffs and Trade):

- **Introduction:** Established in 1948 as a legal agreement between many countries to promote international trade by reducing or eliminating trade barriers such as tariffs and quotas.
- **Objectives:**
 - Promote free trade through negotiations and multilateral agreements.
 - Provide a forum for resolving trade disputes.
 - Improve economic cooperation among member countries.

WTO (World Trade Organization):

- **Origin:** Established in 1995 as a successor to GATT to provide a more permanent institutional framework for international trade.
- **Objectives:**
 - Facilitate smooth and fair trade flows between nations.
 - Administer trade agreements and monitor trade policies.
 - Provide a platform for trade negotiations and dispute resolution.
 - Promote economic growth, development, and employment globally.
- **Impact of WTO on Indian Economy:**
 - Increased market access for Indian products and services.
 - Enhanced export opportunities and foreign investments.
 - Greater competition leading to improved efficiency and innovation.
 - Challenges for domestic industries due to exposure to global competition.

MNCs: Meaning of MNC & TNC, Benefits from MNCs, Problems brought by MNCs

MNC (Multinational Corporation):

- **Definition:** A corporation that operates in multiple countries, managing production or delivering services in more than one country.

TNC (Transnational Corporation):

- **Definition:** Similar to MNCs, TNCs have a more decentralized structure with significant operations and decision-making processes in various countries.

Benefits from MNCs:

1. **Economic Growth:**
 - Creation of jobs and income generation.
2. **Technology Transfer:**
 - Introduction of advanced technology and management practices.
3. **Market Expansion:**
 - Opening of new markets for domestic products and services.

4. **Infrastructure Development:**

- Investment in infrastructure and development projects.

5. **Skills Development:**

- Training and skill development for local workforce.

Problems brought by MNCs:

1. **Economic Dependency:**

- Local economies may become overly reliant on MNCs.

2. **Cultural Erosion:**

- Spread of foreign cultures can undermine local traditions and values.

3. **Market Dominance:**

- MNCs may outcompete and marginalize local businesses.

4. **Profit Repatriation:**

- Profits may be transferred out of the host country, limiting local economic benefits.

5. **Exploitation of Resources:**

- Potential overuse and depletion of local natural resources.

EXIM Policy (Latest)

EXIM Policy (Export-Import Policy):

- **Definition:** The set of guidelines and instructions related to the import and export of goods and services, issued by the government.

Latest EXIM Policy (2023-2028):

1. **Objectives:**

- Boost exports and make India a significant player in global trade.
- Enhance ease of doing business and improve trade facilitation.
- Diversify export markets and reduce dependency on a few regions.
- Promote sustainable and inclusive trade practices.

2. **Key Features:**

- Simplification of procedures and reduction of compliance burden.
- Promotion of e-commerce and digital trade.
- Support for MSMEs to enhance their export capabilities.
- Emphasis on quality and standards to meet international benchmarks.
- Measures to counter non-tariff barriers and trade remedies.

3. **Schemes and Initiatives:**

- **Export Promotion Capital Goods (EPCG) Scheme:** Facilitates import of capital goods for production.
- **Merchandise Exports from India Scheme (MEIS):** Incentivizes exporters of specified goods.
- **Services Exports from India Scheme (SEIS):** Provides rewards to service exporters.
- **Transport and Marketing Assistance (TMA):** Supports agricultural exports.

Module 4

Social Environment

Meaning of Social Responsibility of Business

Definition:

- Social responsibility of business refers to the ethical obligation of a company to act in the best interest of society at large. It involves going beyond the pursuit of profits to consider the impact of business activities on employees, customers, communities, and the environment.

Various Social Responsibilities of Business:

1. **Economic Responsibility:**
 - Produce goods and services that society needs and generate profits for shareholders.
2. **Legal Responsibility:**
 - Comply with laws and regulations governing business operations.
3. **Ethical Responsibility:**
 - Conduct business in a manner that is fair, just, and respects stakeholders' rights.
4. **Philanthropic Responsibility:**
 - Contribute to the welfare of the community through charitable donations, volunteering, and supporting social causes.
5. **Environmental Responsibility:**
 - Implement sustainable practices to minimize the ecological footprint and promote environmental conservation.

Business Ethics

Definition:

- Business ethics refers to the principles and standards that guide behavior in the world of business. It involves applying general ethical principles to business activities, ensuring fairness, transparency, and accountability.

Importance of Business Ethics:

1. **Trust Building:**
 - Ethical practices build trust and credibility among stakeholders, including customers, employees, and investors.
2. **Reputation Management:**
 - Maintaining high ethical standards enhances the company's reputation and brand image.
3. **Legal Compliance:**
 - Ethical behavior ensures compliance with laws and regulations, reducing the risk of legal penalties.
4. **Employee Satisfaction:**
 - A strong ethical culture fosters a positive work environment, enhancing employee morale and retention.
5. **Sustainable Success:**
 - Ethical businesses are more likely to achieve long-term success by maintaining good relationships with stakeholders.

Consumerism

Concept:

- Consumerism is a social movement aimed at protecting and promoting the rights and interests of consumers. It advocates for fair trade practices, accurate information, and protection against exploitation.

Consumer Rights:

1. **Right to Safety:**
 - Protection from hazardous goods and services.
2. **Right to be Informed:**
 - Access to accurate information about products and services.
3. **Right to Choose:**
 - Access to a variety of products and services at competitive prices.
4. **Right to be Heard:**
 - Representation in the formulation of consumer policies and protection measures.
5. **Right to Redress:**
 - Compensation for substandard goods or services.
6. **Right to Consumer Education:**
 - Knowledge and skills to make informed choices.

Consumerism in India:

- In India, consumer protection is governed by the Consumer Protection Act, 2019. The act establishes Consumer Dispute Redressal Commissions at the national, state, and district levels to address consumer grievances. The government also promotes consumer awareness through various programs and campaigns.

Technological & Natural Environment Concept of Technology & Innovation

Technology:

- Technology refers to the application of scientific knowledge for practical purposes, especially in industry. It involves the development and use of tools, machines, and techniques to solve problems and improve efficiency.

Innovation:

- Innovation is the process of translating an idea or invention into a good or service that creates value or for which customers will pay. It involves improving existing products, services, or processes, or developing new ones.

Sources of Technology Dynamics:

1. **Research and Development (R&D):**
 - Investments in R&D lead to technological advancements and innovations.
2. **Collaboration:**
 - Partnerships between businesses, universities, and research institutions foster innovation.
3. **Market Demand:**
 - Consumer needs and preferences drive technological improvements.
4. **Government Policies:**

- Supportive policies and incentives promote technological development.
- 5. **Globalization:**
 - Exposure to global markets and competition accelerates technological progress.

Concept of Natural Environment & Its Impact on Business

Natural Environment:

- The natural environment encompasses all living and non-living things occurring naturally, including the air, water, land, flora, and fauna. It provides resources essential for human survival and economic activity.

Impact on Business:

1. **Resource Availability:**
 - Businesses depend on natural resources like water, minerals, and energy for production. Scarcity or depletion of these resources can affect operations.
2. **Regulatory Compliance:**
 - Environmental regulations impose constraints on business activities to protect the environment. Non-compliance can result in penalties and legal issues.
3. **Operational Costs:**
 - Implementing sustainable practices may increase short-term costs but can lead to long-term savings and efficiency.
4. **Reputation and Brand Image:**
 - Eco-friendly practices enhance a company's reputation and appeal to environmentally conscious consumers.
5. **Risk Management:**
 - Businesses need to manage environmental risks, such as natural disasters and climate change, which can disrupt operations and supply chains.

GOKUL GLOBAL UNIVERSITY
Faculty of Commerce & Management
E-Content



Course:	BACHELOR OF BUSINESS ADMINISTRATION (B.B.A.)
Semester:	II (Second)
Subject:	GROWTH & STRUCTURE OF INDUSTRIES
Subject Code:	FMB 220103

Address: - Gokul Global University, Sujanpur Patia, Opp.

I.O.C. Depot. State Highway- 41, Siddhpur-384151, Gujarat

INDEX

SR.NO.	DETAIL	PAGE NO.
1	Syllabus	3
2	Module-1	5
3	Module-2	15
4	Module-3	40
5	Module-4	49
6	Case Studies	59

Syllabus

Sr No.	Subject content	Hours	Weightage (%)
1	Introduction: Meaning of industry and industrialization, Significance of industrialization in India, Factors hampering India Location of Industries: Meaning and importance of location, Weber's theory of location and factors affecting location, Agglomeration and Deglomeration, Dynamics of industrial location	17	25
2	Public Sector in Indian Economy: Role of PSUs in India, Performance of PSUs and Problems of PSUs, Private Sector in Indian Economy: Role of Private Sector in India, Performance of Private Sector in the Post Liberalisation phase in India, Problems of Private Sector , Growth and Contribution Of Service Sector in India	18	25
3	Small Scale and Cottage Industries Meaning, characteristics and classification (cottage, modern SSI and tiny units), Importance of SSI in Indian economy, Problems faced by SSIs, Policy measures for SSIs (Government Assistance to SSIs, Industrial Estates, DICs, Policy of reservation for SSIs), the industrial policy 1991 and SSIs, Financial Institutions for SSI (NSIC, SIDBI, SFCs, SIDC)	17	25
4	Industrial Policy a). An outline of the industrial policies in the pre-reform (1991) period. b). Provisions of the industrial policy after 1991 Policies for Industrial Sickness Meaning of industrial sickness, causes of industrial sickness in India, Government's measures for sick industrial units Indian Industries and the Energy problem Sources of Energy, Energy Crisis and Measures to solve Energy Crisis	10	25

Reference Books:-

1. Indian Economy (28th Revised Edition) by Mishra & Puri (Himalaya Publication)
2. Industrial Economy of India by S.S.M Desai & N. Bhalerao
3. Indian Economy by Datt & Sundharam (S.Chand Publication)

Course Objectives

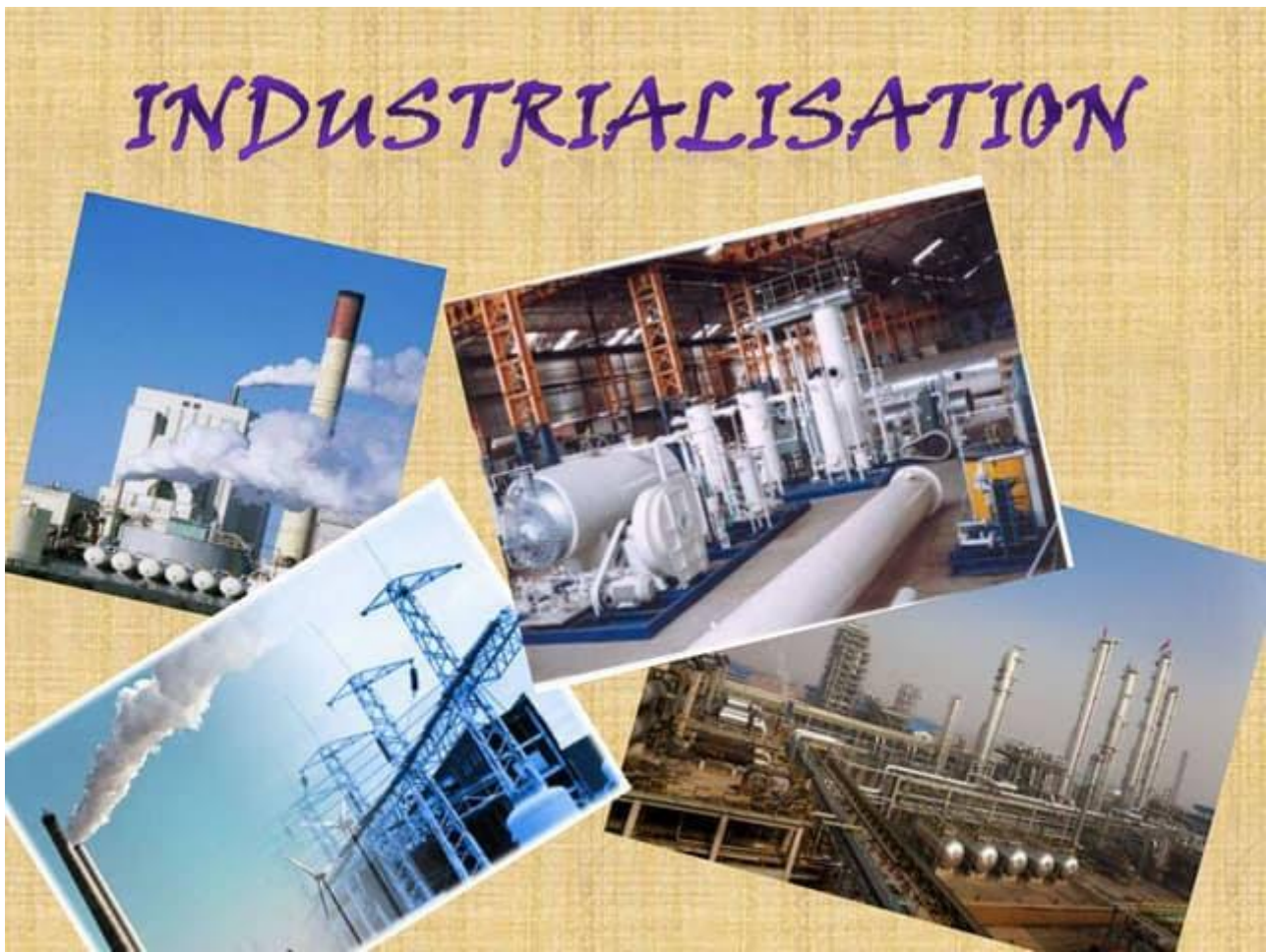
1. Equip students with an understanding of industrialization, significance, challenges of industries in India.
2. Analyze the roles, performance, and challenges of the public and private sectors in India, including the post-liberalization phase and the service sector's growth.
3. Explore policies and support mechanisms for small-scale industries, industrial policies before and after 1991, industrial sickness, and energy issues in India.

Course Outcomes

1. Students will explain industrialization's significance, identify industry location factors, and apply Weber's location theory.
2. Students will critically assess the public and private sectors' roles and performances, identify challenges, and evaluate the service sector's contribution.
3. Students will describe small-scale industries' importance and challenges, understand key industrial policies, and assess industrial sickness and energy crisis solutions.

Module-1

Meaning of Industry and Industrialization



Industry refers to economic activities focused on processing raw materials and manufacturing goods in factories. It encompasses sectors such as manufacturing, construction, mining, and services.

Industrialization is the transformation of an economy from being primarily agricultural to one based on manufacturing. This shift involves the adoption of mechanized mass production methods.

Key Characteristics of Industrialization:

- **Economic Growth:** Drives economic development and increases productivity, contributing significantly to the GDP.
- **Employment Generation:** Creates job opportunities, reducing unemployment and underemployment.
- **Infrastructure Development:** Leads to the development of infrastructure like transportation, communication, and energy.
- **Technological Advancement:** Fosters innovation, improving efficiency and competitiveness.
- **Improved Living Standards:** Raises income levels and provides better goods and services.
- **Urbanization:** Promotes urbanization, improving access to services and amenities.

Key Takeaways:

- **Transformation:** Industrialization shifts an economy from agriculture to mechanized manufacturing.
- **Income and Living Standards:** Typically leads to higher average income and better living standards.
- **Historical Context:** Began in Europe and North America in the 18th and 19th centuries and later spread worldwide.
- **Diverse Strategies:** Various approaches to industrialization have been implemented with different levels of success.

Importance of Industrialization in India

1. **Economic Growth:** Industrialization has been pivotal in driving economic growth in India, boosting productivity and GDP.
2. **Employment Generation:** Creates substantial employment opportunities, addressing issues of unemployment and underemployment.
3. **Infrastructure Development:** Industrialization leads to the development of essential infrastructure like roads, transportation, and communication systems.
4. **Technological Advancement:** Encourages technological innovation and dissemination, enhancing efficiency and global competitiveness.
5. **Standard of Living:** Raises income levels and offers better goods and services, thereby improving living standards.
6. **Urbanization:** Promotes urbanization, leading to better access to various services and amenities.

Factors Hampering Industrialization in India

1. **Infrastructure Deficiencies:** Inadequate power supply, transportation, and communication networks hinder industrial growth.
2. **Regulatory Challenges:** Complex regulatory frameworks can deter investment and innovation.
3. **Skilled Labor Shortage:** A lack of adequately trained and skilled labor impedes productivity and growth.
4. **Financial Constraints:** Limited access to capital and financing options restricts expansion and modernization.
5. **Political Instability:** Political uncertainty and inconsistent policies create an unfavorable environment for investment.
6. **Environmental Concerns:** Balancing industrial growth with environmental sustainability is a significant challenge.

Location of Industries

Meaning and Importance of Location: The location of industries refers to the geographic placement of industrial facilities. Choosing an appropriate location is crucial as it affects production

costs, distribution efficiency, and overall profitability.

Importance of Location:

1. **Cost Efficiency:** Proximity to raw materials, labor, and markets reduces transportation and production costs.
2. **Access to Markets:** Being closer to markets ensures timely delivery of products and reduces distribution costs.
3. **Availability of Resources:** Access to essential resources like water, power, and raw materials is vital for smooth operations.
4. **Government Policies:** Tax incentives, subsidies, and favorable regulations can influence location decisions.
5. **Infrastructure:** Good transportation networks, communication systems, and utilities are critical for efficient operations.

Weber's Theory of Location

Alfred Weber's Theory, also known as the Least Cost Theory, posits that the optimal location of an industry is determined by minimizing three types of costs:

1. **Transportation Costs:** Costs of moving raw materials to the factory and finished products to the market.
2. **Labor Costs:** Vary by location and can significantly impact overall costs.
3. **Agglomeration Costs:** Cost advantages arising from firms and industries clustering together, sharing services, infrastructure, and labor pools.

Factors Affecting Location

1. **Raw Material Availability:** Industries often locate near raw material sources to minimize transportation costs.
2. **Labor Supply:** Access to both skilled and unskilled labor influences location decisions.
3. **Market Proximity:** Being close to consumer markets reduces distribution costs and improves responsiveness.
4. **Infrastructure:** Adequate infrastructure like roads, ports, and utilities is essential for efficient operations.
5. **Government Policies:** Incentives, tax breaks, and supportive regulations can attract industries to specific locations.
6. **Climate and Environment:** Favorable climatic conditions and environmental regulations can impact location choices.

Agglomeration and Deglomeration

Agglomeration refers to the clustering of industries in a particular area, leading to cost savings and efficiencies due to shared services, infrastructure, and labor pools.

Deglomeration occurs when industries move away from highly concentrated areas to avoid

congestion, high costs, and other disadvantages of agglomeration.

Dynamics of Industrial Location

The dynamics of industrial location involve changes over time due to factors like technological advancements, shifts in consumer demand, changes in transportation and communication networks, and evolving government policies. Industries may relocate to adapt to these changes, seeking cost efficiencies, market access, and improved operational conditions.

Summery

Meaning of Industry and Industrialization

- **Industry:** Refers to economic activities that transform raw materials into goods through manufacturing and processing, including sectors like manufacturing, construction, mining, and services.
- **Industrialization:** The transition of an economy from predominantly agricultural to one based on large-scale manufacturing. This shift involves adopting mechanized production methods.

Key Characteristics of Industrialization

- **Economic Growth:** Drives GDP growth by enhancing productivity.
- **Employment Generation:** Creates jobs, reducing unemployment and underemployment.
- **Infrastructure Development:** Develops essential infrastructure such as roads, communication, and energy systems.
- **Technological Advancement:** Promotes innovation, boosting efficiency and competitiveness.
- **Improved Living Standards:** Increases income levels, providing better goods and services.
- **Urbanization:** Encourages the growth of urban areas, enhancing access to services and amenities.

Significance of Industrialization in India

- **Economic Growth:** Vital for boosting productivity and GDP.
- **Employment Generation:** Creates numerous job opportunities, addressing unemployment.
- **Infrastructure Development:** Enhances essential infrastructure like roads and communication networks.
- **Technological Advancement:** Fosters innovation, enhancing efficiency and global competitiveness.
- **Standard of Living:** Raises income levels and improves the quality of goods and services.
- **Urbanization:** Facilitates urban growth, improving access to services and amenities.

Factors Hampering Industrialization in India

- **Infrastructure Deficiencies:** Issues like power shortages and inadequate transport networks.
- **Regulatory Challenges:** Complex regulations that discourage investment.
- **Skilled Labor Shortage:** Lack of trained workforce impacting productivity.
- **Financial Constraints:** Limited access to capital hampers expansion.
- **Political Instability:** Political uncertainty and inconsistent policies deter investment.
- **Environmental Concerns:** Challenges in balancing growth with environmental sustainability.

Location of Industries

- **Meaning and Importance:** Industry location is crucial for cost efficiency, distribution, and profitability.
- **Factors Affecting Location:**
 1. **Cost Efficiency:** Proximity to raw materials and markets reduces costs.
 2. **Access to Markets:** Nearness to markets minimizes distribution costs.
 3. **Resource Availability:** Access to water, power, and raw materials is vital.
 4. **Government Policies:** Tax incentives and subsidies influence location choices.
 5. **Infrastructure:** Good transport, communication, and utility networks are essential.

Weber's Theory of Location

- **Least Cost Theory:** Optimal location minimizes transportation, labor, and agglomeration costs.
 1. **Transportation Costs:** Moving raw materials and finished products.
 2. **Labor Costs:** Impacted by local wage levels.
 3. **Agglomeration Costs:** Benefits from clustering with other firms, sharing services and labor.

Factors Affecting Location

- **Raw Material Availability:** Proximity to raw materials reduces transportation costs.
- **Labor Supply:** Access to skilled and unskilled labor is crucial.
- **Market Proximity:** Closeness to markets lowers distribution costs.
- **Infrastructure:** Essential utilities and transport networks are critical.
- **Government Policies:** Incentives and supportive regulations attract industries.
- **Climate and Environment:** Favorable conditions and regulations impact choices.

Agglomeration and Deglomeration

- **Agglomeration:** Clustering of industries for shared services and efficiencies.
- **Deglomeration:** Movement of industries away from crowded areas to avoid congestion and high costs.

Dynamics of Industrial Location

- **Changes Over Time:** Influenced by technology, consumer demand, transport, communication, and policies. Industries relocate to optimize costs, access markets, and improve conditions.

Multiple Choice Questions (MCQs)

1. What does industry refer to?

- A) Agricultural activities
- B) Economic activities focused on processing raw materials and manufacturing goods
- C) Services provided in urban areas
- D) Retail activities

2. What is industrialization?

- A) The shift from manufacturing to agriculture
- B) The transformation of an economy from agriculture to manufacturing
- C) The development of service industries
- D) The increase in agricultural productivity

3. Which of the following is a key characteristic of industrialization?

- A) Decrease in productivity
- B) Increase in agricultural activities
- C) Employment generation
- D) Reduction in urbanization

4. What does industrialization typically lead to in terms of living standards?

- A) Lower average income
- B) Better living standards
- C) Higher unemployment
- D) Decreased technological advancement

5. When did industrialization begin in Europe and North America?

- A) 17th and 18th centuries
- B) 18th and 19th centuries
- C) 19th and 20th centuries
- D) 20th and 21st centuries

6. Which of the following is NOT a factor hampering industrialization in India?

- A) Infrastructure deficiencies
- B) Regulatory challenges
- C) Skilled labour shortage
- D) Excessive natural resources

7. What is Alfred Weber's Theory of Location also known as?

- A) Agglomeration Theory
- B) Least Cost Theory
- C) High Cost Theory
- D) Market Proximity Theory

8. What does agglomeration refer to?

- A) The dispersion of industries
- B) The clustering of industries
- C) The relocation of industries
- D) The decline of industries

9. What is the primary aim of industrialization in terms of economic impact?

- A) Reduce GDP
- B) Boost economic growth and productivity
- C) Increase agricultural dependency
- D) Minimize technological advancements

10. Which factor is NOT considered in Alfred Weber's Theory of Location?

- A) Transportation costs
- B) Labor costs
- C) Agglomeration costs
- D) Agricultural yields

11. Which of the following is a key takeaway of industrialization?

- A) Decrease in technological innovation
- B) Shift from agriculture to mechanized manufacturing
- C) Increase in rural population
- D) Decline in infrastructure development

12. What is a significant challenge for industrial growth in India?

- A) Excessive infrastructure development
- B) Skilled labour shortage
- C) Over-regulation
- D) Abundant financial resources

13. Why is the location of industries important?

- A) It has no impact on production costs
- B) It affects production costs, distribution efficiency, and profitability
- C) It only affects market access
- D) It is irrelevant for service industries

14. What does deglomeration refer to?

- A) Clustering of industries
- B) Moving industries away from concentrated areas
- C) Industrial growth in rural areas
- D) Reduction in employment opportunities

15. Which factor is crucial for the dynamics of industrial location?

- A) Stability of technological advancements
- B) Static consumer demand
- C) Changes in transportation and communication networks
- D) Lack of government policies

Long Answer Type Question (250 Words)

1. How does industrialization help a country's economy grow? Explain its effects on GDP and overall economic development.
2. What are the main challenges stopping industrialization in India? Describe how these issues affect the growth of industries.
3. Why is the location of industries important? Discuss how factors like raw materials, labor, markets, and government policies influence where industries are placed.
4. What is Alfred Weber's Least Cost Theory about industrial location? Explain the main cost factors in this theory and how they help decide the best location for industries.
5. How does technological advancement drive industrialization? Explain how innovation improves efficiency and competitiveness in industries and its broader impact on society.

Multiple Choice Question (MCQs) Answers

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	B	B	C	B	B	D	B	B	B	D	B	B	B	B	C

Module-2

PUBLIC SECTOR IN INDIA

Public Sector Undertaking (PSUs)

In simple words, a Public Sector Undertaking is a business unit that is not owned or managed by any individual or a private entity but by the government – central, state, or local.



These PSUs have been formed with the *sole purpose of benefiting the public and providing essential services without any hassles*. In contrast, previously any kind of business activity was mainly performed by an individual or private organizations & government only had to look into the essential services. The private enterprises were more profit-based and therefore the addition of the public sector undertaking was made.

These public sector undertakings have been defined under Section 2 (45) of the Companies Act, 2013. They can either be commercial or industrial undertakings with the intention of public welfare. Some examples of public sector enterprises are banks, the Life Insurance Corporation of India (LIC), the Gas Authority of India (GAIL), the State Trading Corporation (STC), etc.

Types of PSU in India

Public Sector Undertakings can be classified into two main categories based on the

controlling authority-

1. **Central Public Sector Enterprises**
2. **State Level Public Sector Enterprises.**

The Government of India introduced another classification system for Public Sector Enterprises based on the amount of revenue that these businesses bring annually & how much they contribute to the economy of the country. Based on this classification, PSUs can further be divided into three categories:

- Maharatnas (Net Worth – 10,000 Cr)
- Navratnas (Best performing PSUs)
- Mini-Ratnas (Should be profitable for at least three consecutive years)

Objectives of Indian Public Sector:

The objectives of the public sector in India can be divided into three categories:

1. **Social Objectives:** The public sector aims at providing basic goods and services to the citizens. It also provides employment opportunities and promotes economic development.
2. **Economic Objectives:** The public sector plays a key role in the development of infrastructure and encourages private investment.
3. **Political Objectives:** The public sector protects the interests of weaker sections of society and promotes exports.

The public sector has always been aimed at achieving certain socio-economic objectives. However, its performance over the years has not been up to the mark.

Importance of the Public Sector in the Economy

The public sector is important for the following reasons:

- It plays a key role in the economic development of a country
- It helps in providing essential services to the citizens
- It provides employment opportunities
- It helps in the development of infrastructure
- It encourages private investment
- It promotes exports

- The public sector is the backbone of the Indian economy and it plays a pivotal role in its development.
- In case of a dire need for production, the Government can initiate it on a large scale, unlike the private sector.
- The Government can get heavy funds and also can take heavy loans easily.
- Profit is the core motive of the private sector. The profits in the private sector are related to personal gains and also lead to the exploitation of the workers. While the profit gained in the public sector leads to the upliftment of the services.
- The public sector undertakings do not run primarily in pursuit of profits. The PSUs do not seek quicker profits.
- The resources are easily accessible. The regulation of the sources is dependent on the states so it becomes easier for them to avail the raw materials easily.

Public Sector Development since Independence:

The public sector undertakings (PSUs) have also made significant progress since their inception. The PSUs have contributed immensely to the development of infrastructure and the promotion of industrialization in the country. The eight core industries, which include coal, steel, cement, electricity, crude oil, refinery products, natural gas, and fertilizers, account for about 38% of the total industrial production in India. These eight sectors are dominated by the public sector. The PSUs have also made significant contributions to the exports of the country.

Role of the Public Sector in the Indian Economy

The public sector in India is one of the key contributors to the Indian economy. It helps generate income and opportunities for the public and makes essential services available for the general public at affordable rates. Some of the major points that prove the importance of the public sector in the Indian economy are as follows:

- **Capital Generation** – 14% of the country's GDP can be attributed to the public sector in India. It encourages investment and generates capital by supporting the country's economy through the creation and expansion of infrastructure and creating other opportunities.
- **Building opportunities for employment** – Another significant contribution of the Public Sector has been in generating enough employment for the youth. Dealing with

various public enterprises and industries, the PSUs contribute to creating new avenues in various government sectors.

- **Advocating of R & D** – A major chunk of the investments made by the public sector lately has been into research and development for finding new and innovative technologies & industrial pieces of equipment.
- **Regional Development** – The public sector has also been contributing to the development of various regions of the country by promoting the formation of industrial plants and factories. The development of the industrial sector in these regions leads to increased basic facilities such as water supply, electricity, township, etc.

Public Sector Reforms in India

The major public sector reforms in India have taken place spanning a few years. All the public sector reforms have been mentioned below:

- The Statement on Industrial Policy, of 1991, reviewed the public sector in India and recognized many problems associated with public enterprises. It also suggested ways to rectify these problems.
- The policy stated that many public enterprises have become a burden to the Government rather than an asset and proposed the Government adopt a new approach to public enterprises.
- Accordingly, the public sector was reduced in many areas from the initial 17 to 6 areas. In manufacturing, the areas which continue to be reserved for the public sector are those related to strategic concerns, defense, and petroleum.
- Apart from that, the *Government made no bar or restriction on the participation of the private sector*.
- All effort was made through the change of management and financial help for reviving the public sector and making it competitive.
- The decision of disinvestment of equity of the public sector enterprises was also proposed.
- Mini Ratnas and Maharatnas Policy were also introduced around the 2000s.
- The Navratnas Policy was also introduced under which the PSUs that displayed the best performances were given the status of Navratnas along with an autonomous authority.

Problems of the Public Sector in India

The Public Sector Undertakings or PSUs come across certain difficulties with respect to carrying out their regular functions that hamper the growth and obstruct their workflow. In these PSUs, the level of profit is low as compared to the private sector. In many cases, the real expense of the planned project surges beyond the original cost due to mismanagement and Bureaucratic hurdles.

- Excessive political interference has been one of the major reasons behind the non-performance of Public Sector Enterprises.
- Public Sector Enterprises normally take more time than expected.
- The investment decisions are at times very ill-suited.
- Lack of skilled manpower in Public Sector Undertakings in India is also one the important issues leading to *decreased production and efficiency*.
- The Public Sector Enterprises in most cases are not able to utilize their full potential.

Lack of management and planning in Public Sector Enterprises has been creating many issues and challenges.

Role of Public Sector in Economic Growth of India:

The public sector plays a key role in the economic development of India. It accounts for about 14% of the country's GDP and employs over 20 million people. The public sector undertakes a variety of activities that include infrastructure development, employment generation, and the promotion of exports.

The public sector has always been an important part of the Indian economy. However, its performance over the years has not been up to the mark.

The steps which need to be taken by the Public Sector to be Effective and Efficient are:

- The public sector needs to be more efficient and effective.
- There is a need for better planning and coordination between the various agencies of the government.
- The public sector needs to focus on its core competencies and outsource non-core activities.
- There is a need for more transparency and accountability in the functioning of the public sector.
- The public sector needs to adopt new technologies and processes to improve its efficiency.
- The public sector needs to be more customer-oriented in its approach.

- The public sector needs to reduce its dependence on the government for financial assistance.
- The public sector needs to focus on its strengths and improve upon its weaknesses.

Performance of the Public Sector In India

The central and state government are responsible for managing the performance of the public sector in India. The performance of public sector undertakings in India can be judged by the amount of profit or loss they make on a yearly basis.

- It started with 5 PSUs in India in 1951 and has now reached more than 360 enterprises in the public sector in India.
- These enterprises including 7 new defense enterprises as well accounted for a total investment of around Rs. 16.41 lakh crore in the year 2021.

Private Sector

Understanding the Private Sector

The private sector is the segment of a national economy that is owned, controlled, and managed by private individuals or enterprises. The private sector has a goal of making money and employs more workers than the public sector.

A private sector organization is created by forming a new enterprise or privatizing a public sector organization. A large private sector corporation may be privately or publicly traded. Businesses in the private sector drive down prices for goods and services while competing for consumers' money; in theory, customers do not want to pay more for something when they can buy the same item elsewhere at a lower cost.

In most free economies, the private sector makes up a big portion of the economy, as opposed to nations that have more state control over their economies, which have a larger public sector. For example, the United States has a strong private sector because it has a free economy, while China, where the state controls many of its corporations, has a larger public sector.

Characteristics / Features of Private Sector

The private sector has several distinctive features that set it apart from other parts of the economy:

- 1. Ownership Structure:** In the private sector, private individuals, families, or groups own businesses.
- 2. Profit Motive:** Making a profit is a primary objective in the private sector. Businesses operate to generate revenue that exceeds their costs. This profit motive incentivizes efficiency, innovation, and strategic decision-making to ensure financial success.
- 3. Decision-Making Autonomy:** Private enterprises have the autonomy to make decisions independently. Owners or appointed executives, rather than government officials, have the authority to set business strategies, make operational decisions, and determine the direction of the company.
- 4. Competition:** Competition is a fundamental aspect of the private sector. Companies vie with each other to attract customers, gain market share, and increase profitability. This competitive environment encourages efficiency, quality improvement, and innovation as businesses strive to outperform their rivals.
- 5. Innovation and Entrepreneurship:** The private sector is known for its emphasis on innovation and entrepreneurship. Businesses constantly seek ways to differentiate themselves, introduce new products or services, and adapt to changing market demands. This commitment to innovation drives economic growth and technological advancement.

Objectives of the Private Sector

The private sector has some clear reasons for being around. Here are important purposes it serves:

- 1. Making Money and Profits:** The main goal is to make money and turn a profit. Businesses in the private sector want to earn more money than they spend. This keeps them on their toes, encouraging them to be creative, efficient, and competitive.
- 2. Providing Goods and Services:** Businesses in the private sector make and sell things that people want or need. Whether it's a local store, a tech company, or a factory, they produce goods and services to keep the economy going.
- 3. Creating Jobs and Employment:** One big role of the private sector is providing jobs. As businesses grow, they need more hands on deck. This isn't just about making money; it's about giving people the chance to work and support themselves.

4. Driving Innovation and Progress: Private businesses are often the ones coming up with new ideas. The desire for profit pushes them to be creative and think outside the box. This isn't just good for them – it benefits everyone by bringing in new things and making life better.

5. Contributing to Economic Development: The private sector plays a big part in helping a country's economy grow. Through investments, creating jobs, and working in different industries, it helps the nation develop. This leads to a better standard of living for everyone.

Importance of Private Sector

The private sector is crucial for several reasons that make a big difference for a country:

1. Boosting the Economy: Private businesses are like the engine of a country's economy. They contribute a lot to the overall wealth of the nation, helping it grow financially.

2. Creating Jobs: Private companies play a big part in giving people work. When businesses do well, they hire more people. This isn't just about making money; it's about giving individuals the chance to earn a living.

3. Being Creative and Moving Forward: The private sector is a place where new ideas come to life. The need for profit pushes businesses to be creative and think of new things. This isn't just good for the businesses; it benefits everyone by bringing in new stuff and making life better.

4. Working efficiently and Staying Competitive: In a tough market, private businesses need to be smart about how they work. They aim to be efficient, cutting down on unnecessary costs and improving productivity. This not only keeps prices fair but also makes sure things run smoothly.

5. Using Resources Wisely: Private businesses are good at putting resources where they're needed most. They invest in areas that are in demand making sure resources are used where they can do the most good.

6. Creating Wealth: Successful private businesses make money, and that money gets shared. Owners, shareholders, and employees all get a piece of the pie. This helps spread wealth and benefits throughout society.

Types of Private Sector

1. Big Companies (Corporate Sector): These are large businesses that often sell shares to the public. Ownership is spread among many shareholders, and decisions are usually made by a board of directors and top executives. Think of companies like Apple or Toyota.

2. Small and Medium-sized Businesses (SMEs): These are smaller, independent businesses that operate on a local or regional level. They can be owned by individuals, families, or a small group of people. Examples include local shops, restaurants, or small manufacturing units.

3. Single Owner Businesses (Sole Proprietorships): In this type, one person owns and runs the whole show. It's common for small businesses, like a local bakery or a freelance service. The owner has full control and is personally responsible for the business.

4. Partnerships: Partnerships involve two or more people owning and managing a business together. There are different types, like general partnerships where everyone is equally involved and limited partnerships where some partners are more hands-on than others.

5. Joint Ventures: This happens when two or more private groups team up for a specific project. Each group brings something to the table and shares the risks and rewards. Joint ventures are often formed to combine different skills and resources.

Examples of the Private Sector

1. Local Family-Owned Restaurant: A local family-owned restaurant is a classic example of a private sector business. In this scenario, a family or small group of individuals own and operate the restaurant. The decisions, from the menu to the daily operations, are made by the owners. They are responsible for the restaurant's success and profits. The private ownership allows for a personal touch, unique offerings, and the flexibility to adapt to local preferences.

2. Independent Tech Startup: Consider a small, independent tech startup founded by a group of entrepreneurs. In this case, a few individuals come together to develop and launch a new technology-based product or service. The ownership is typically shared among the

founders, and they drive the decision-making process. The private nature of the business enables agility, quick decision-making, and a focus on innovation to gain a competitive edge in the market.

3. Local Manufacturing Company: Imagine a small manufacturing company that produces goods for the local market. This could be a family-owned factory creating anything from furniture to electronic components. The ownership is often within the family or a small group of individuals who oversee the production process, quality control, and business operations. This type of private sector enterprise contributes to local employment, economic development, and the availability of diverse products in the community.

Multinational Retail Corporation: On a larger scale, you have multinational retail corporations like Walmart or IKEA. These companies are privately owned and operated, usually by a group of shareholders and executives. The decision-making processes are more complex due to the scale of operations. These corporations demonstrate how private sector entities can grow into massive global players, impacting economies on an international level.

In these examples, the private sector manifests in various sizes and industries, showcasing the versatility of privately owned businesses. Whether it's a small family venture or a multinational corporation, private sector entities play a crucial role in shaping local economies and meeting the diverse needs of consumers.

Regulation the Private Sector

The private sector is kept in check through a mix of rules and oversight to make sure businesses play fair and act responsibly. Here's how they're regulated:

1. Laws and Rules: Governments make laws that lay down the rules for how businesses should operate. These laws cover things, like how they treat their workers, the impact they have on the environment, and how they deal with consumers. Businesses have to follow these laws, and breaking them can lead to fines or legal action.

2. Government Agencies: Special agencies are set up by the government to keep an eye on specific industries or parts of business. These agencies make and enforce rules to ensure businesses compete fairly protect consumers, and manage risks. For example, an agency like the Environmental Protection Agency (EPA) might regulate businesses to limit their impact on the environment.

3. Following Standards: Businesses often have to meet certain standards to show they're following regulations. These standards could involve quality control, safety measures, or ethical business practices. Regular checks and audits make sure businesses are sticking to these standards.

4. Licenses and Permissions: Many businesses need licenses or permissions to operate legally. These are given by the government only if the business meets certain criteria and follows the rules. For example, a restaurant might need a health permit to prove it's following food safety rules.

5. Money Matters: Financial rules are set to keep financial businesses and other companies stable. These rules might include reporting requirements, measures to stop money laundering, and checks by financial regulators.

6. Workplace Laws: Laws are in place to protect the rights of employees. They cover things like working hours, pay, workplace safety, and the right of workers to organize. Making sure businesses follow these laws ensures fair and ethical employment practices.

7. Tax Rules: Businesses have to follow tax rules, which means filing accurate tax returns and paying taxes on time. Tax authorities keep an eye on businesses to make sure they're not trying to avoid taxes and that they contribute fairly to public funds.

Regulating the private sector is about finding a balance – letting businesses grow while making sure they're doing it in a way that's fair and responsible.

Differences between Private Sector and Public Sector

Basis	Private Sector	Public Sector
Ownership	In the private sector, businesses are owned by private individuals or groups.	In the public sector, ownership and control rest with the government.
Decision-Making	Decision-making in the private sector is typically carried out by owners or appointed executives.	In the public sector, decisions often involve government officials and are shaped by policies.
Profit Motive	The private sector is primarily focused on making a profit.	The public sector, while mindful of efficiency, extends its focus beyond profit to public service delivery.
Funding	Private sector entities rely on private investment and loans for funding.	The public sector is funded through taxes and government appropriations.
Competition	The private sector operates in a competitive market environment.	May have less direct competition, depending on the sector.

Role of Private Sector in India

The private sector plays a crucial role in the overall functioning and growth of Indian economy.

1. Economic Growth: Private sector activities are a major driving force behind the overall economic growth of a nation. When businesses flourish, they contribute significantly to the country's Gross Domestic Product (GDP), creating a robust economic foundation. The

production of goods and services by private enterprises injects vitality into the economy, fostering a cycle of growth.

2. Employment Generation: Private businesses play a crucial role in job creation, addressing unemployment concerns. As these enterprises expand and thrive, they hire more people to meet operational demands. This not only reduces unemployment rates but also enhances the standard of living for individuals and families by providing them with opportunities for sustainable livelihoods.

3. Innovation and Research: The private sector is a hotbed for innovation and research. Driven by the pursuit of profit and a competitive edge, businesses invest in research and development to stay ahead in the market. This commitment to innovation leads to the creation of new products, services, and technologies, contributing to the advancement and modernization of society.

4. Efficiency: The private sector operates in a competitive environment where efficiency is key to survival. Businesses strive to optimize their operations, cut unnecessary costs, and enhance productivity to remain competitive. This drive for efficiency benefits consumers by ensuring that goods and services are provided at competitive prices, promoting overall economic efficiency.

5. Infrastructure Development: Private investment plays a crucial role in the development of essential infrastructure. Whether it's building roads, bridges, or communication networks, private sector involvement is often instrumental in funding and executing these projects. This not only contributes to the physical development of a nation but also facilitates economic activities and connectivity.

After the introduction of New Industrial Policy, 1991, the Government has opened some areas like power generation, air transport etc. for the participation of the private sector. Accordingly, in the post- 1991 period, the private sector has been actively participating in those new areas like power generation, air transport, building highways and bridges on Build, Operate and Transfer (BOT) basis etc.

6. Agriculture

In India agriculture and other allied activities like animal husbandry, dairying, poultry etc. are playing a dominant role as it contributes nearly 30 per cent of GDP and it provided employment to nearly 67 per cent of the total working population of the country. Such a big sector is completely owned and managed by the private sector.

Thus, private sector is quite dominant in respect of agriculture and other allied activities. In India, agriculture is not conducted on commercial basis rather it is managed by the

households as much of these activities are in the hands of small and marginal farmers. In India, the new agricultural strategy adopted by the Government has been implemented by the private sector under the active support of the Government.

Performance of Private Sector in the Post liberalisation phase in India:

The economic liberalisation in India, initiated in 1991, marked a significant shift from a highly controlled and regulated economy to a more market-oriented one. This transformation was aimed at integrating the Indian economy with the global economy, enhancing efficiency, and promoting economic growth. The private sector has been a crucial beneficiary and driver of this liberalisation process.

Key Reforms and Their Impact

1. Deregulation and Reduction of Bureaucratic Hurdles:

- **Pre-1991:** The Indian economy was characterised by extensive regulation, often referred to as the "Licence Raj," where businesses required government permission for almost every significant business decision.
- **Post-1991:** Liberalisation reduced the need for such permissions, allowing for quicker decision-making and implementation. This resulted in an increase in private investment and entrepreneurship.

2. Foreign Direct Investment (FDI):

- **Pre-1991:** FDI was heavily restricted.
- **Post-1991:** The government opened up several sectors to FDI, providing easier entry and operational norms for foreign companies. This influx of foreign capital brought advanced technology, managerial practices, and competitive pressures, which significantly benefitted the private sector.

3. Privatization:

- **Pre-1991:** Public sector undertakings (PSUs) dominated many industries.
- **Post-1991:** The government initiated disinvestment and privatisation of PSUs, encouraging private sector participation in areas previously reserved for the public sector.

4. Financial Sector Reforms:

- **Pre-1991:** The financial sector was predominantly state-controlled.
- **Post-1991:** Reforms included deregulation of interest rates, reduction in statutory pre-emption, and allowing private and foreign banks to operate, thereby improving efficiency and competitiveness.

Performance Metrics

1. GDP Growth:

- **1991-2021:** The Indian economy grew at an average rate of about 6-7% per annum, a significant improvement from the pre-liberalisation era. The private sector's contribution to GDP has increased markedly.
- The private sector's contribution to GDP has increased from about 45% in 1991 to around 75% in recent years.

2. Sectoral Growth:

- **IT and Services:** The Information Technology (IT) and services sector witnessed exponential growth, with companies like Infosys, TCS, and Wipro becoming global players.
- **Manufacturing:** There has been substantial growth in sectors such as automobiles, pharmaceuticals, and consumer goods, driven by private sector dynamism.

3. Employment:

- The private sector has emerged as a major employer, especially in urban areas. The growth of new industries and services has created millions of jobs.
- Employment in the private sector increased from 16.02 million in 1991 to approximately 32.5 million in 2020.

4. Exports:

The share of the private sector in India's exports has increased significantly. Sectors such as IT, pharmaceuticals, and textiles have become key export earners.

5. FDI Inflows:

- FDI inflows have increased from \$2.1 billion in 1991 to \$81.72 billion in 2020-21. The share of private sector exports in India's total exports increased from around 60% in 1991 to over 85% in 2020.

The share of private sector exports in India's total exports increased from around 60% in 1991 to over 85% in 2020.

Challenges faced by Private Sectors:

Despite the impressive performance, the private sector has faced several challenges in the post-liberalisation era:

- **Infrastructure Bottlenecks:** Inadequate infrastructure has often constrained growth.
- **Regulatory Uncertainty:** Frequent changes in regulations and policies have created an unpredictable business environment.
- **Access to Finance:** Small and medium enterprises (SMEs) still face challenges in accessing affordable finance.

Problems of Private Sector in India

Despite the significant progress and contributions of the private sector to India's economy, several challenges continue to hinder its growth and efficiency. Here are some of the major problems faced by the private sector in India:

1. Regulatory and Bureaucratic Hurdles

- **Complex Regulations:** The regulatory environment in India is often complex and cumbersome, with numerous laws and compliance requirements. This complexity can lead to delays and increased costs for businesses.
- **Corruption:** Bureaucratic red tape and corruption can further complicate business operations, making it difficult for companies to obtain necessary permits and clearances without undue delay or additional costs.

2. Infrastructure Deficiencies

- **Transportation and Logistics:** Inadequate infrastructure, particularly in transportation and logistics, hampers the efficient movement of goods and services. Poor road conditions, congested ports, and an underdeveloped railway network contribute to higher operational costs and delays.
- **Power Supply:** Although there have been improvements, inconsistent and unreliable power supply remains a challenge, particularly for manufacturing industries.

3. Access to Finance

- **Credit Availability:** Small and medium enterprises (SMEs) often face difficulties in accessing affordable finance. High collateral requirements and stringent lending norms make it challenging for these businesses to secure necessary funding.

- **High Interest Rates:** Even when finance is available, high interest rates can be a deterrent, affecting profitability and limiting expansion opportunities

4. Skilled Labor Shortage

- **Skill Gap:** There is a significant gap between the skills required by industries and those possessed by the workforce. This skill mismatch leads to lower productivity and higher training costs for companies.
- **Attrition:** High attrition rates, particularly in sectors like IT and services, can disrupt business operations and increase recruitment and training costs.

5. Technological Constraints

- **Innovation and R&D:** Investment in research and development (R&D) and innovation is relatively low in India. Many private sector companies lack the resources or incentive to invest significantly in R&D, leading to lower competitiveness in the global market.
- **Digital Divide:** While larger corporations may have access to advanced technologies, smaller firms often struggle with digital adoption and integration, limiting their efficiency and growth potential.

6. Market Competition

- **Informal Sector:** The large informal sector in India poses a significant challenge to formal private sector companies. Informal businesses often operate with lower costs due to tax evasion and non-compliance with labor laws, creating an uneven playing field.
- **Global Competition:** Indian companies face stiff competition from global players, particularly in sectors like manufacturing, where cost advantages of other countries can be significant.

7. Policy Uncertainty

- **Frequent Changes:** Policy changes and regulatory shifts can create an uncertain business environment. Frequent changes in tax laws, import-export policies, and other regulations can disrupt long-term planning and investment.
- **Implementation Issues:** Even when policies are favorable, implementation can be inconsistent and plagued by delays, reducing their effectiveness and benefits to the private sector.

8. Environmental and Social Issues

- **Sustainability:** Increasing awareness and regulatory pressure regarding

environmental sustainability require companies to invest in cleaner technologies and practices, which can be costly.

Corporate Social Responsibility (CSR): While CSR is essential, compliance with CSR norms adds to the operational costs of businesses, particularly for smaller firms.

Growth and Contribution of the Service Sector in India

Introduction

The service sector, also known as the tertiary sector, encompasses a wide range of activities such as trade, hospitality, transport, communication, finance, real estate, business services, and social services. Over the past few decades, the service sector has emerged as a major driver of economic growth in India, contributing significantly to GDP, employment, and exports.

Growth of the Service Sector

- **Pre-Liberalisation (Before 1991):** The service sector in India was relatively underdeveloped and contributed modestly to the economy, with primary focus on agriculture and manufacturing.
- **Post-Liberalisation (1991 Onwards):** The economic reforms of 1991, which aimed at liberalising the economy, significantly boosted the service sector. Deregulation, increased foreign investment, and technological advancements played pivotal roles in this transformation.

Contribution to the Economy

1. Gross Domestic Product (GDP)

- I. The service sector is the largest contributor to India's GDP. As of 2021-22, it contributed around 54% to the total GDP, up from around 30% in 1950-51.
- II. The sector has shown resilience, maintaining growth even during global economic slowdowns, due to its diverse range of services and adaptability.

2. Employment

- I. The service sector is a major employer in India, providing jobs across various skill levels. It employs about 32% of the workforce, translating to millions of jobs in IT, retail, healthcare, education, and other areas.

- II. The sector has also been instrumental in creating employment opportunities for women, particularly in urban areas.

3. Exports

- I. The service sector's contribution to exports has been significant, particularly through IT and ITES. In 2020-21, services exports accounted for about 40% of India's total exports.
- II. India's IT services exports alone were valued at approximately \$147 billion in 2020-21, making it a key player in the global market.

4. Foreign Direct Investment (FDI)

- I. The service sector attracts substantial FDI. As of 2021, services (including financial, banking, insurance, outsourcing, R&D, courier, technology testing, and analysis) accounted for about 18% of total FDI inflows.

The influx of FDI has facilitated technological advancements, enhanced service delivery, and created more job opportunities.

Key Drivers of Growth

- I. Information Technology (IT) and IT-Enabled Services (ITES):** India has become a global hub for IT and ITES. Companies like TCS, Infosys, and Wipro have played a significant role in driving growth, contributing to exports and employment.
- II. Financial Services:** The expansion of banking, insurance, and financial services has been substantial, with increased penetration and innovation.
- III. Telecommunications:** Rapid growth in mobile and internet connectivity has facilitated the expansion of various service industries.
- II. Tourism and Hospitality:** India's rich cultural heritage and natural diversity have promoted growth in tourism and hospitality, contributing to employment and foreign exchange earnings.

Summary

Public Sector Undertakings (PSUs) in India Definition: PSUs are government-owned businesses aimed at public welfare, providing essential services, and contributing to economic and social development.

Types:

- **By Authority:** Central and State Level PSUs
- **By Performance:** Maharatnas, Navratnas, Mini-Ratnas

Importance:

- Contributes 14% of GDP
- Provides jobs and infrastructure
- Supports economic and regional development

Challenges:

- Political interference, inefficiency, and management issues

Private Sector in India

Definition: The private sector includes businesses owned by private individuals or entities, focusing on profit and innovation.

Characteristics:

- **Ownership:** Private entities
- **Profit Motive:** Main goal is profitability
- **Decision-Making:** Independent and competitive

Importance:

- Drives economic growth, creates jobs, and fosters innovation

Types:

- Large corporations, SMEs, sole proprietorships, partnerships, and joint ventures.

Performance of the Private Sector in Post-Liberalisation India

Economic Liberalisation (1991 Onwards):

- **Shift:** From a regulated economy to a market-oriented one.
- **Impact:** Enhanced private sector growth and efficiency.

Key Reforms:

1. **Deregulation:**
 - **Pre-1991:** Extensive "Licence Raj."

- **Post-1991:** Reduced permissions, boosting investment and entrepreneurship.
- 2. **Foreign Direct Investment (FDI):**
 - **Pre-1991:** Restricted FDI.
 - **Post-1991:** Opened sectors to FDI, bringing technology and competitive pressure.
- 3. **Privatization:**
 - **Pre-1991:** Dominance of public sector undertakings (PSUs).
 - **Post-1991:** Encouraged private participation through disinvestment.
- 4. **Financial Sector Reforms:**
 - **Pre-1991:** State-controlled.
 - **Post-1991:** Deregulated interest rates and allowed private and foreign banks.

Performance Metrics:

1. **GDP Growth:**
 - Increased from 45% contribution in 1991 to 75% in recent years.
 - Average annual growth of 6-7%.
2. **Sectoral Growth:**
 - **IT and Services:** Major global players emerged (e.g., Infosys, TCS).
 - **Manufacturing:** Growth in automobiles, pharmaceuticals, consumer goods.
3. **Employment:**
 - Private sector employment grew from 16.02 million in 1991 to 32.5 million in 2020.
4. **Exports:**
 - Private sector share in exports increased from 60% in 1991 to over 85% in 2020.
5. **FDI Inflows:**
 - Increased from \$2.1 billion in 1991 to \$81.72 billion in 2020-21.

Challenges:

- **Infrastructure Bottlenecks:** Inadequate transportation, power issues.
- **Regulatory Uncertainty:** Frequent policy changes.
- **Access to Finance:** Difficulties for SMEs.
- **Skilled Labor Shortage:** Skill mismatch and high attrition.
- **Technological Constraints:** Low R&D investment, digital divide.
- **Market Competition:** Informal sector and global competition.
- **Policy Uncertainty:** Frequent regulatory shifts.
- **Environmental and Social Issues:** Compliance with sustainability and CSR norms.

Growth and Contribution of the Service Sector

Post-Liberalisation Impact:

- **GDP Contribution:** Increased to ~54% by 2021-22 from ~30% in 1950-51.
- **Employment:** Major employer, about 32% of the workforce.
- **Exports:** 40% of total exports, with IT services at \$147 billion in 2020-21.
- **FDI:** 18% of total FDI inflows.

Key Drivers:

- **IT and ITES:** Major global hub.
- **Financial Services:** Significant expansion and innovation.
- **Telecommunications:** Growth in connectivity.
- **Tourism and Hospitality:** Growth due to cultural and natural diversity.

Multiple Choice Questions (MCQs):

1. What is a key role of Public Sector Undertakings (PSUs) in India?

- A) Focus on international trade
- B) Provide essential public services
- C) Specialize in luxury goods
- D) Minimize government intervention

2. What is a common problem faced by PSUs in India?

- A) High efficiency and productivity
- B) Excessive profitability
- C) Poor financial performance
- D) Strong market competition

3. Which sector's performance improved notably after the liberalization phase in India?

- A) Public Sector
- B) Private Sector
- C) Agricultural Sector
- D) Cooperative Sector

4. What is one of the key roles of the private sector in India?

- A) Promote government-owned industries
- B) Increase market competition
- C) Focus solely on public welfare
- D) Limit entrepreneurial activities

5. What challenge does the private sector face in India?

- A) Excessive government regulation
- B) Overabundance of financial resources
- C) Lack of market demand
- D) High competition and market volatility

6. What is a major contribution of the service sector to the Indian economy?

- A) Decrease in GDP
- B) Increase in employment opportunities
- C) Reduction in consumer spending
- D) Lower foreign investment

7. What is a performance issue often encountered by PSUs?

- A) High levels of innovation
- B) Efficient resource management
- C) Poor financial health

D) Rapid expansion

8. Which factor negatively affects the performance of PSUs?

- A) High market demand
- B) Efficient management practices
- C) Bureaucratic inefficiencies
- D) Technological advancements

9. How did the private sector perform post-liberalization in India?

- A) It experienced significant growth and increased efficiency
- B) It faced severe decline and reduced activity
- C) It remained stagnant with minimal changes
- D) It experienced substantial losses and closures

10. Which of the following is a problem faced by the private sector?

- A) Excessive public sector interference
- B) Lack of innovative practices
- C) Insufficient market opportunities
- D) Over-regulation and compliance costs

11. What role does the private sector play in India's economic development?

- A) Restricting economic activities
- B) Enhancing innovation and growth
- C) Minimizing foreign investment
- D) Centralizing economic control

12. Which sector has seen substantial growth in India due to increased demand for services?

- A) Agricultural Sector
- B) Manufacturing Sector
- C) Service Sector
- D) Public Sector

13. What is a notable characteristic of the service sector's growth in India?

- A) Decline in global competitiveness
- B) Decrease in employment opportunities
- C) Significant contribution to GDP
- D) Reduction in technological advancements

14. Which problem is common in the private sector in India?

- A) Overemphasis on public welfare
- B) High level of government subsidies
- C) Market saturation and competition

D) Insufficient investment in infrastructure

15. What major shift occurred in the private sector following economic liberalization?

- A) Decrease in foreign investments
- B) Increased innovation and efficiency
- C) Growth of government control
- D) Reduced market expansion

Long Answer Type Questions

1. What role do Public Sector Undertakings (PSUs) play in the Indian economy?
2. What is a common problem faced by Public Sector Undertakings (PSUs) in India?
3. How did the performance of the private sector change after the liberalization phase in India?
4. What is a key contribution of the service sector to the Indian economy?
5. Explain the challenge that the private sector faces in India?

Multiple Choice Questions (MCQs) Answer

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	B	C	B	B	D	B	C	C	A	D	B	C	C	C	B

Module-3

Small Scale and Cottage Industries in India

Meaning of Small Scale Industries (SSI)

Small Scale Industries are those industries in which the investment in fixed assets, such as plant and machinery, does not exceed a certain limit. These industries typically produce goods and services on a smaller scale with a smaller workforce.

Cottage Industries: Cottage industries are small, decentralized manufacturing businesses often operated from home or small premises. They typically involve traditional skills and techniques, using local raw materials.

Characteristics:

1. **Small Capital Investment:** SSIs and cottage industries usually require lower capital investment compared to large-scale industries.
2. **Labour Intensive:** These industries are more labor-intensive, providing employment to a large number of people.
3. **Local Raw Materials:** They often use locally available raw materials.
4. **Flexible Operations:** SSIs and cottage industries have flexible operations and can adapt to changing market conditions quickly.
5. **Decentralized and Dispersed:** They are spread across rural and urban areas, contributing to balanced regional development.

Classification:

1. **Cottage Industries:** These are traditional industries operated on a small scale, often from homes or small workshops. Examples include handloom weaving, pottery, and handicrafts.
2. **Modern Small Scale Industries (SSI):** These include industries with more advanced technologies and larger production capacities compared to cottage industries. Examples are small-scale manufacturing units, engineering units, and pharmaceuticals.
3. **Tiny Units:** These are very small enterprises with minimal investment in plant and machinery, typically up to a few lakh rupees. They often involve one or two workers and include units like small repair shops and tiny manufacturing units.

Importance of SSIs in Indian Economy

1. **Employment Generation:** SSIs are a significant source of employment, particularly in rural and semi-urban areas.
2. **Balanced Regional Development:** By promoting industrialization in rural and backward areas, SSIs help in reducing regional imbalances.
3. **Export Contribution:** SSIs contribute substantially to India's exports, promoting foreign exchange earnings.
4. **Entrepreneurship Development:** They foster a culture of entrepreneurship by encouraging local talent and skills.
5. **Utilization of Local Resources:** SSIs utilize local raw materials and resources, contributing to the local economy

Problems Faced by SSIs

1. **Financial Constraints:** SSIs often face difficulties in accessing adequate finance due to high-interest rates and stringent lending norms.
2. **Technological Obsolescence:** Many SSIs use outdated technology, leading to lower productivity and competitiveness.
3. **Marketing Challenges:** Limited marketing capabilities and access to broader markets can hinder the growth of SSIs.
4. **Regulatory Hurdles:** Complex regulatory frameworks and compliance requirements can be burdensome for small enterprises.
5. **Infrastructure Deficiencies:** Inadequate infrastructure, including poor transportation and unreliable power supply, poses significant challenges.

Policy Measures for SSIs

1. **Government Assistance to SSIs:** Various government schemes and incentives, such as subsidies, grants, and tax exemptions, are provided to support SSIs.
2. **Industrial Estates:** Special industrial estates with developed infrastructure are established to provide a conducive environment for SSIs.
3. **District Industries Centres (DICs):** DICs provide a single-window service for various needs of SSIs, including registration, finance, and marketing assistance.
4. **Policy of Reservation for SSIs:** Certain products are reserved exclusively for

production in the SSI sector to protect and promote their interests.

The Industrial Policy of 1991 and SSIs

The Industrial Policy of 1991 introduced significant reforms to liberalize the Indian economy, including:

1. **Deregulation:** Reduced regulatory constraints, making it easier to start and operate SSIs.
2. **Liberalization:** Opened up the economy to foreign investments, providing SSIs with opportunities for collaboration and access to new technologies.
3. **Modernization:** Encouraged the modernization and technological upgradation of SSIs to enhance their competitiveness.

Financial Institutions for SSI

1. **National Small Industries Corporation (NSIC):** NSIC provides financial assistance, marketing support, and technical services to SSIs.
2. **Small Industries Development Bank of India (SIDBI):** SIDBI offers financial and non-financial support for the growth and development of SSIs.
3. **State Financial Corporations (SFCs):** SFCs provide financial assistance to small and medium enterprises within their respective states.
4. **State Industrial Development Corporations (SIDCs):** SIDCs promote industrial development in states by providing financial, technical, and managerial assistance to SSI.

Summary

Small Scale Industries (SSI) and Cottage Industries- Meaning:

- **SSI:** Industries with investment in fixed assets below a certain limit, producing goods/services on a smaller scale.
- **Cottage Industries:** Small, home-based businesses using traditional skills and local materials.

Characteristics of SSI:

1. Low capital investment.
2. Labor-intensive.
3. Use of local raw materials.
4. Flexible operations.
5. Decentralized and dispersed.

Classification:

1. **Cottage Industries:** Traditional, home-based (e.g., handloom weaving).
2. **Modern SSI:** Advanced technologies, larger production (e.g., small manufacturing units).
3. **Tiny Units:** Minimal investment, very small operations (e.g., small repair shops).

Importance:

1. Employment generation.
2. Balanced regional development.
3. Significant export contribution.
4. Entrepreneurship development.
5. Utilization of local resources.

Problems:

1. Financial constraints.
2. Technological obsolescence.
3. Marketing challenges.
4. Regulatory hurdles.
5. Infrastructure deficiencies.

Policy Measures:

1. Government assistance and incentives.
2. Development of industrial estates.
3. District Industries Centres (DICs).
4. Reservation policies for SSIs.

Industrial Policy of 1991:

- Deregulation, liberalization, and modernization.

Financial Institutions:

1. National Small Industries Corporation (NSIC).
2. Small Industries Development Bank of India (SIDBI).
3. State Financial Corporations (SFCs).
4. State Industrial Development Corporations (SIDCs).

Multiple-Choice Questions (MCQs)

1. What is a characteristic of cottage industries?

- A) Large-scale production
- B) Use of advanced technology
- C) Operated from home or small workshops
- D) Heavy machinery

2. Which of the following is a type of Small Scale Industry (SSI)?

- A) Tiny units
- B) Large manufacturing plants
- C) Multinational corporations
- D) Government agencies

3. What is one key importance of SSIs in the Indian economy?

- A) They monopolize markets
- B) They provide significant employment opportunities
- C) They exclusively serve international markets
- D) They focus on large-scale production only

4. Which problem is commonly faced by Small Scale Industries (SSIs)?

- A) Excessive financial stability
- B) Overstaffing
- C) Limited access to finance
- D) Over-regulation

5. What is one policy measure to support SSIs in India?

- A) Restricting their market access
- B) Industrial Estates
- C) Limiting government assistance
- D) Reducing market competition

6. What does DIC stand for in the context of SSIs?

- A) District Industry Committee
- B) Development and Investment Corporation
- C) Department of Industrial Cooperation
- D) Direct Investment Corporation

7. Which institution provides financial assistance specifically to SSIs?

- A) National Bank for Agriculture and Rural Development (NABARD)
- B) Small Industries Development Bank of India (SIDBI)
- C) Reserve Bank of India (RBI)

D) State Bank of India (SBI)

8. The policy of reservation for SSIs means:

- A) Exclusive production rights for multinational companies
- B) Certain products are reserved for SSIs to produce
- C) Limiting the number of SSIs in the market
- D) Complete elimination of SSIs

9. What was a major change introduced by the Industrial Policy of 1991?

- A) Complete nationalization of industries
- B) Relaxation of restrictions on SSIs
- C) Elimination of SSIs
- D) Restriction on foreign investments

10. What is the role of the National Small Industries Corporation (NSIC)?

- A) To regulate large industries
- B) To assist SSIs with raw materials and marketing
- C) To manage multinational corporations
- D) To oversee government industries

11. What type of unit is characterized by very small scale production and minimal machinery?

- A) Cottage units
- B) Modern SSIs
- C) Large-scale units
- D) Heavy industries

12. Which of the following is NOT a characteristic of SSIs?

- A) Small-scale production
- B) High capital investment
- C) Flexibility in operations
- D) Use of simple technology

13. Which institution helps in the development of industrial estates for SSIs?

- A) State Industrial Development Corporations (SIDCs)
- B) National Bank for Agriculture and Rural Development (NABARD)
- C) Small Industries Development Bank of India (SIDBI)
- D) Reserve Bank of India (RBI)

14. What is the purpose of Industrial Estates for SSIs?

- A) To centralize large corporations
- B) To provide infrastructure and facilities for SSIs
- C) To eliminate competition among SSIs
- D) To promote foreign investments only

15. What role does SIDBI play in supporting SSIs?

- A) Regulates large industries
- B) Provides financial support and development services
- C) Manages multinational corporations
- D) Controls government industries

Long Answer Type Questions (250 Words)

1. Explain the meaning and characteristics of cottage industries, modern SSIs, and tiny units.
How do these classifications differ?
2. Discuss the importance of Small Scale Industries (SSIs) in the Indian economy. How do they contribute to employment and economic development?
3. Identify and describe the main problems faced by Small Scale Industries (SSIs) in India. How do these problems impact their performance and growth?
4. Describe the policy measures taken by the Indian government to support Small Scale Industries (SSIs). Include details on government assistance, industrial estates, and policy reservations.
5. Explain the impact of the Industrial Policy of 1991 on Small Scale Industries (SSIs) in India. How did the policy changes affect the growth and development of SSIs?

Multiple Choice Questions (MCQs) Answer

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	C	A	B	C	B	A	B	B	B	B	A	B	A	B	B

Module-4

An Outline of the Industrial Policies in the Pre-Reform (1991) Period

The pre-reform industrial policies in India, primarily established post-independence, were characterized by a strong state intervention aimed at achieving self-reliance and rapid industrialization. This period is often referred to as the "License Raj," which had significant implications for the structure and growth of Indian industries.

1. License Raj:

The essence of the License Raj was the necessity for businesses to obtain licenses from the government to set up and operate industries. This regulatory framework was aimed at controlling industrial growth, ensuring that only approved projects received the necessary permissions. However, it led to bureaucratic bottlenecks, corruption, and inefficiencies, as obtaining licenses became a lengthy and cumbersome process.

2. Public Sector Dominance:

In the early years after independence, the government aimed to build a robust industrial base and foster national self-sufficiency. As a result, several key sectors were nationalized, and public sector enterprises (PSEs) were established to dominate critical industries such as steel, coal, and power generation. This was intended to lead the economy towards industrialization, but it often resulted in inefficiencies, overstaffing, and lack of competition.

3. Import Substitution:

The industrial policy focused heavily on import substitution, with the goal of reducing dependency on foreign goods. High tariffs and import quotas were instituted to protect domestic industries, leading to a lack of competition and innovation. While the intention was to promote local production, this often resulted in outdated technologies and inferior quality products.

4. Sectoral Reservation:

The government implemented a policy of sectoral reservation where certain industries and products were reserved for the public sector or small-scale industries (SSIs). This limited the entry of larger private enterprises into various sectors, stifling competition and reducing overall efficiency.

5. Regulatory Framework:

The Industries Development and Regulation Act (IDRA) of 1951 was a critical piece of legislation that regulated industrial development. It sought to promote industrial growth while controlling the entry of new players. This often led to inefficiencies as the government tightly controlled various aspects of the industry, from production to pricing.

6. Impact on Growth:

While the industrial policies aimed at achieving rapid industrialization, they often resulted in slow growth rates, lack of technological advancement, and poor global competitiveness. The high level of state intervention stifled innovation and entrepreneurship, leading to a fragmented industrial landscape characterized by inefficiencies.

In summary, the pre-reform industrial policies were marked by heavy state control, limited private sector involvement, and an overarching focus on self-sufficiency through import substitution. While these policies laid the groundwork for industrialization, they ultimately necessitated a paradigm shift towards liberalization in the 1990s to address the economic challenges faced by the country.

Provisions of the Industrial Policy after 1991

The economic reforms initiated in 1991 marked a watershed moment in India's industrial policy framework, transitioning from a heavily regulated and controlled system to a more liberalized and market-oriented approach. These reforms were aimed at enhancing the competitiveness of Indian industries and attracting foreign investment.

1. Liberalization:

The liberalization policies abolished the License Raj for most industries, drastically reducing the regulatory burden on entrepreneurs. Businesses no longer needed licenses to establish or expand operations, allowing for greater ease of doing business and encouraging new investments. This deregulation fostered a more entrepreneurial environment and stimulated economic growth.

2. Privatization:

As part of the reform agenda, the government initiated the privatization of state-owned enterprises, especially those that were underperforming. Disinvestment in public sector enterprises was encouraged to improve efficiency, reduce the fiscal burden, and attract private investment. This shift aimed to bring in market discipline and improve management practices.

3. Foreign Direct Investment (FDI):

The 1991 reforms significantly liberalized FDI norms, allowing foreign companies to invest in various sectors with fewer restrictions. This opened the floodgates for foreign capital and technology, enhancing competitiveness in the Indian market. The government introduced

policies that provided incentives for FDI, such as tax benefits and simplified approval processes.

4. Support for Small Scale and Medium Enterprises (SMEs):

Recognizing the importance of SMEs for job creation and innovation, the post-reform policy continued to support small- scale industries through various measures. The government introduced schemes for financial assistance, technology support, and marketing initiatives, including credit guarantees and subsidies.

5. Sectoral Focus:

The reformed industrial policy identified priority sectors such as information technology, biotechnology, and telecommunications. Government initiatives aimed at promoting research and development in these sectors encouraged innovation and technological advancement, enabling India to become a global player in certain industries.

6. Infrastructure Development:

To facilitate industrial growth, the government prioritized infrastructure development. Investments in transportation, power, and telecommunications were increased to support industrial activities. Special economic zones (SEZs) were established to provide better facilities and incentives for industries, promoting export- oriented growth.

In conclusion, the post-1991 industrial policy provisions marked a significant shift towards liberalization, privatization, and globalization. These reforms aimed to enhance the competitiveness of Indian industries, attract foreign investment, and create a more conducive environment for business growth. The focus on infrastructure development and support for SMEs further contributed to transforming India into a vibrant and dynamic economy.

Policies for Industrial Sickness

1. Meaning of Industrial Sickness: Industrial sickness refers to a situation where an industrial unit incurs continuous losses, leading to a negative net worth and an inability to meet its financial obligations. Such units often face insolvency and may require restructuring or rehabilitation to revive their operations.

2. Causes of Industrial Sickness in India:

- **Financial Mismanagement:** Poor financial practices, inadequate capital management, and lack of strategic planning can lead to financial instability in industrial units.
- **Outdated Technology:** Many industries fail to upgrade their technology, resulting in reduced productivity and competitiveness in the market.
- **Market Competition:** Increased competition from domestic and international markets can put pressure on weaker firms, particularly those unable to innovate or adapt.
- **Lack of Demand:** Changes in consumer preferences and economic conditions can lead to reduced demand for products, impacting sales and revenue.
- **Regulatory Burdens:** Compliance with various regulations and bureaucratic hurdles can drain resources and hamper operational efficiency.

3. Government's Measures for Sick Industrial Units:

- **Restructuring:** The government promotes revival plans for sick units, which may involve financial restructuring, operational improvements, and technology upgrades to restore viability.
- **Institutional Support:** The Board for Industrial and Financial Reconstruction (BIFR) was established to oversee the rehabilitation of sick units. It assesses their viability and recommends restructuring plans.
- **Financial Assistance:** Sick units may receive special funding from government institutions, banks, and financial organizations to support their revival efforts. This can include soft loans, grants, and credit guarantees.

Overall, addressing industrial sickness is crucial for maintaining employment, supporting economic stability, and fostering a robust industrial ecosystem in India.

Indian Industries and the Energy Problem

1. Sources of Energy: India's energy landscape is characterized by a mix of energy sources. The primary sources include:

- **Fossil Fuels:** Coal, oil, and natural gas remain the backbone of India's energy supply, contributing significantly to electricity generation and transportation. Coal accounts for nearly 70% of the country's electricity generation.
- **Renewable Energy:** India has been rapidly expanding its renewable energy capacity,

particularly solar and wind power, as part of its commitment to sustainable development. The National Solar Mission aims to install 100 GW of solar capacity by 2022.

- **Nuclear Energy:** Although a smaller portion of the energy mix, nuclear power plays a role in reducing greenhouse gas emissions and diversifying energy sources.

2. Energy Crisis: India faces a significant energy crisis due to several factors:

- **Supply-Demand Gap:** Rapid economic growth and urbanization have led to surging energy demand, often outstripping supply, resulting in power shortages and blackouts in various regions.
- **Dependence on Imports:** India's heavy reliance on imported crude oil makes it vulnerable to global price fluctuations and geopolitical uncertainties. Approximately 85% of crude oil is imported, exposing the economy to external shocks.
- **Environmental Concerns:** The reliance on fossil fuels has contributed to air pollution and climate change. India is under pressure to transition towards cleaner energy sources to meet global climate commitments.

3. Measures to Solve the Energy Crisis:

- **Renewable Energy Initiatives:** The government has set ambitious targets for renewable energy capacity expansion, investing in solar parks, wind farms, and biomass projects to diversify the energy mix and reduce dependency on fossil fuels.
- **Energy Efficiency Programs:** Initiatives like the Perform, Achieve and Trade (PAT) scheme encourage industries to adopt energy-efficient technologies and practices, aiming to reduce energy consumption and greenhouse gas emissions.
- **Investment in Infrastructure:** Strengthening the energy infrastructure, including power generation, transmission, and distribution networks, is essential for minimizing losses and improving access to reliable energy.

In summary, India's energy sector faces significant challenges that require strategic interventions, including diversification of energy sources, investment in renewable technologies, and improving energy efficiency. Addressing the energy problem is vital for sustaining economic growth and achieving environmental sustainability.

Summary

Pre-Reform Industrial Policies (Before 1991)

1. **License Raj:** Required businesses to obtain government licenses, leading to bureaucratic delays and corruption.
2. **Public Sector Dominance:** Nationalized key industries to foster self-sufficiency, resulting in inefficiencies.
3. **Import Substitution:** High tariffs and quotas to protect domestic industries, leading to outdated technologies.
4. **Sectoral Reservation:** Reserved certain industries for the public sector and small-scale industries, stifling competition.
5. **Regulatory Framework:** Controlled industrial growth through the Industries Development and Regulation Act (IDRA) of 1951.
6. **Impact on Growth:** Resulted in slow growth rates, lack of innovation, and poor global competitiveness.

Post-1991 Industrial Policies

1. **Liberalization:** Abolished License Raj, reducing regulatory burdens and fostering business growth.
2. **Privatization:** Encouraged disinvestment in underperforming public sector enterprises to improve efficiency.
3. **Foreign Direct Investment (FDI):** Liberalized norms, attracting foreign capital and technology.
4. **Support for SMEs:** Provided financial assistance, technology support, and marketing initiatives for small and medium enterprises.
5. **Sectoral Focus:** Promoted priority sectors like IT, biotechnology, and telecommunications.
6. **Infrastructure Development:** Increased investments in transportation, power, and telecom; established Special Economic Zones (SEZs).

Policies for Industrial Sickness

1. **Meaning:** Continuous losses leading to negative net worth and insolvency.
2. **Causes:** Financial mismanagement, outdated technology, market competition, lack of demand, regulatory burdens.
3. **Government Measures:** Restructuring plans, institutional support from the Board for Industrial and Financial Reconstruction (BIFR), financial assistance.

Indian Industries and the Energy Problem

1. **Sources of Energy:** Fossil fuels (coal, oil, natural gas), renewable energy (solar, wind), and nuclear energy.
2. **Energy Crisis:** Supply-demand gap, dependence on imports, environmental concerns.
3. **Measures to Solve:** Renewable energy initiatives, energy efficiency programs, investment in infrastructure.

Multiple Choice Questions (MCQs)

1. What was a key feature of the industrial policies in India before 1991?

- A) Liberalization of trade
- B) Strict government control and regulation
- C) Focus on privatization
- D) Increased foreign investments

2. What major change occurred in industrial policy after 1991?

- A) Introduction of strict licensing requirements
- B) Relaxation of industrial regulations and liberalization
- C) Nationalization of industries
- D) Elimination of foreign investments

3. What is meant by industrial sickness?

- A) A health issue affecting industrial workers
- B) A decline in the profitability and performance of an industrial unit
- C) The spread of diseases in industrial areas
- D) Increased productivity in industries

4. Which of the following is a cause of industrial sickness in India?

- A) High levels of government support
- B) Inefficient management practices
- C) Over-regulation
- D) Technological advancements

5. What is one of the government's measures for sick industrial units in India?

- A) Complete shutdown of the units
- B) Financial assistance and rehabilitation programs
- C) Increasing taxes
- D) Removing government support

6. Which of the following is a source of energy in India?

- A) Solar energy
- B) Digital energy
- C) Artificial energy
- D) Geothermal energy

7. What is a significant issue related to the energy crisis in India?

- A) Excessive energy availability
- B) Efficient energy management
- C) Shortage of energy supply
- D) High energy costs for consumers

8. **Which measure is taken to solve the energy crisis in India?**
- A) Reducing energy production
 - B) Increasing dependence on fossil fuels
 - C) Promoting renewable energy sources
 - D) Eliminating energy efficiency programs
9. **What was a characteristic of industrial policies in India before the 1991 reforms?**
- A) Encouragement of private sector investments
 - B) Heavy restrictions and licensing requirements
 - C) Relaxation of industrial regulations
 - D) Promotion of foreign direct investments
10. **What did the industrial policy reforms of 1991 primarily focus on?**
- A) Expanding government control over industries
 - B) Liberalizing and deregulating the industrial sector
 - C) Nationalizing private industries
 - D) Restricting foreign investments
11. **Which of the following is NOT a cause of industrial sickness?**
- A) Poor financial management
 - B) Out-dated technology
 - C) Government incentives
 - D) Poor market conditions
12. **What role does the government play in addressing industrial sickness?**
- A) Providing subsidies and financial support
 - B) Increasing regulatory burdens
 - C) Reducing support for sick units
 - D) Closing down sick units immediately
13. **Which of these is a major source of energy in India?**
- A) Wind energy
 - B) Nuclear energy
 - C) Non-renewable energy
 - D) All of the above
14. **What is a common feature of industrial policies post-1991?**
- A) Increased government control
 - B) Deregulation and privatization
 - C) Strict licensing and quotas
 - D) Reduced foreign trade

15. Which of the following measures helps in solving the energy crisis?

- A) Investing in renewable energy technologies
- B) Reducing energy production
- C) Restricting energy consumption
- D) Increasing coal usage exclusively

Answer Type Questions (250 Words)

1. Outline the key features of the industrial policies in India before the 1991 reforms. How did these policies impact industrial growth and development?
2. Describe the major provisions of the industrial policy introduced after 1991. What were the objectives and outcomes of these reforms?
3. Explain the concept of industrial sickness. What are the primary causes of industrial sickness in India, and what measures has the government taken to address these issues?
4. Discuss the sources of energy available in India and the challenges associated with the energy crisis. What measures have been taken to mitigate the energy crisis?
5. Analyze the role of government policies in addressing industrial sickness. How effective have these measures been in rehabilitating sick industrial units and promoting industrial health?

Multiple Choice Questions (MCQs) Answer

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	B	B	B	B	B	A	C	C	B	B	C	A	D	B	A

RECENT TRENDS: GROWTH AND DEVELOPMENT

Source: India Brand Equity Foundation (IBEF)

1. THE EMERGENCE OF INDIA AS A GLOBAL STARTUP HUB

October, 2023

In recent years, India has rapidly emerged as a global powerhouse in the startup ecosystem. With a vibrant entrepreneurial spirit, a massive pool of skilled professionals and a growing appetite for innovation, India has transformed into a hub for startups across various sectors.

The country's startup ecosystem has witnessed an unprecedented surge, supporting a culture of innovation, risk-taking, and technological advancements. India's remarkable journey to becoming a global startup hub can be attributed to a combination of key factors, which have propelled its growth trajectory to new heights. India is fast emerging as a start-up nation. The Indian technology landscape has seen tremendous growth towards the creation of innovative startups and has emerged as the 3rd fastest-growing hub for technology startups with more than 4,200 start-ups creating over 80 thousand jobs.

At the heart of India's emergence as a global startup hub lies the unwavering support and encouragement from the government. Realizing the potential of startups as a powerful engine of economic growth and employment generation, the Indian government has implemented a series of policy reforms to nurture and boost the startup ecosystem. Initiatives like "Startup India," launched in 2016, have provided startups with a conducive environment to thrive. These policy reforms have laid a solid foundation for startup growth through tax exemptions, fast-track patent registrations, and access to government-aided funding.

Furthermore, the surge in investor confidence has been a game-changer for India's startup ecosystem. Domestic and international investors have displayed a keen interest in funding innovative and promising startups across diverse sectors. This influx of capital has fuelled growth and empowered entrepreneurs to think big and scale their ventures.

Indian Startup Ecosystem witnessed exponential growth in the past few years (2015-2022):

Indian Unicorns are flourishing in the fast-paced and dynamic economy of today. These startups are not only developing innovative solutions and technologies but are generating large-scale employment. Till FY17, approximately one unicorn was being added every year. Over the past four years (since 2017-18), this number has been increasing exponentially, with a whopping 66% year-on-year (y-o-y) growth in the number of additional unicorns being added every year. As of May 31, 2023, India is home to 108 unicorns with a total valuation of US\$ 340.80 billion. Out of the total

number of unicorns, 44 unicorns with a total valuation of US\$ 93 billion were born in 2021 and 21 unicorns with a total valuation of US\$ 27 billion were born in 2022.

The years 2021, 2020, and 2019 saw the birth of the maximum number of Indian unicorns with 44, 11, and 7 unicorns coming each year, respectively. COVID-19 has caused a great amount of socio-economic suffering globally, but it is during this time that resilient Indian Entrepreneurs have worked effortlessly to not only contribute to the economy but also contribute toward COVID-19 relief efforts. In 2020, there was the birth of more than 10 unicorns. It's raining unicorns has been the motto of the year 2021 with 44 unicorns pumped in the ecosystem and many unicorns waiting in line.

Ccumulative Unicorn Count in India (As of May 2022)

Source: India Briefing

India's startup ecosystem has come a long way, from obtaining its first unicorn in 2011 with "Inmobi" to reaching 100 in just over ten years. Moreover, 50% of Indian firms achieved unicorn status within five years of their founding, thanks in large part to widespread digitalization during the period immediately following 2016. This marked a significant uptick in the startup sector.

Mensa, GlobalBees, and Cred Avenue became the fastest startups to enter the coveted unicorn club in record time – at six months, seven months, and 1.5 years, respectively. Other startups that achieved a billion-dollar valuation in record time include Paytm Mall, Glance, Ola Electric, Spinny, PharmEasy, etc.

India added 44 unicorns in 2021 alone, significantly more than the 37 companies that passed the US\$ 1 billion value threshold in the ten years prior put together. In addition, India produced 14 more unicorns in the first four months of 2022, including LEAD School, Fractal, DarwinBox, XpressBees Logistics, Cred Avenue, etc. In the first quarter of 2022, Indian entrepreneurs raised over US\$ 10 billion in funding, up from US\$ 5.7 billion in the corresponding period of 2021, according to statistics from Venture Intelligence. Despite the doubts of private market investors who favour a "wait and watch" strategy because of global challenges, this is significant growth.

India's rich talent pool has played a pivotal role in its rapid startup growth. The country's education system churns out a vast number of skilled engineers, developers, and business professionals annually, providing startups with a steady stream of talent. The technological process of India's workforce, particularly in information technology and software development, has enabled startups to harness cutting-edge technologies and develop groundbreaking products and services.

The digital revolution in India has opened boundless opportunities for startups. With the widespread adoption of smartphones, affordable internet access, and digital payment platforms, startups have been able to reach a vast and diverse consumer base. The "Digital India" initiative has further bolstered digital infrastructure across the country, creating a favourable environment for startups to thrive in the digital era.

India's startup culture is vibrant, dynamic, and inclusive. An array of startup events, networking forums, and incubators/accelerators have fostered a spirit of collaboration, learning, and mentorship. Major cities like Bengaluru, Mumbai, and Delhi-NCR have emerged as bustling startup hubs, attracting talent from every corner of the nation. The presence of co-working spaces and startup campuses has created a sense of community and camaraderie, driving collective progress in the ecosystem.

In terms of startup hubs, Bengaluru took its spot back as the top startup hub from Mumbai, with Bengaluru-based startups raising US\$ 285 million, slightly higher than US\$ 241 million raised in August 2022.

Mumbai slid to the third spot with US\$ 92 million, having secured pole position in August 2022 with US\$ 585 million. Delhi NCR rose to the second spot, with the startups based in the region raising US\$ 251 million in September 2022.

As of February 28, 2023, the government has 92,683 startups recognised under the Department for Promotion of Industry and Internal Trade (DPIIT).

The start-up India project was launched by the central government on January 16, 2016, to foster a strong ecosystem for the promotion of the country's expansion of innovation and entrepreneurship. There are formal policies in 31 out of 36 states and union territories in India. There is no specific policy in the two states of Ladakh and Arunachal Pradesh. Post the launch of the Startup India Project 2016, there was a huge development in the startup policies in India. Such regulations are important to ease the process of following rules and providing incentives which eventually creates a favorable atmosphere for entrepreneurs. Many of these regulations talk about the entire development of the startup ecosystem in the country by offering incentives to various startup actors like incubators, colleges like the IITs, and other higher education institutions.

India lays the foundation for government support to create a vibrant startup ecosystem in the country. Such as "Simplification and handholding," "Funding support and incentives," and "Industry-

academia partnership and incubation" are covered. As part of the Start-up India Initiative, the government implemented the Fund of Funds for Startups (FFS) and the Start-up India Seed Fund Scheme (SISFS) to provide financial help at various stages of a start-up business's lifecycle. Both programmes are in place across India and are reportedly assisting startup founders in getting a foothold in their respective industries.

2. THE SUCCESS OF DIGITAL INDIA

February, 2024

India's digital ecosystem has undergone an enormous change in recent years. The progressive integration of government services into digital platforms has made grassroots delivery of those services swift and effective. With just one click, citizens can now access these programs and get the help they require in a matter of seconds. The Government of India has consistently increased the number of digital payment transactions as part of its aim to digitise the economy and financial sector. Furthermore, a great deal of work has been done to make financial inclusion a top priority as a vital national objective, guaranteeing that every person has access to financial services. Digital India has set a significant goal of attaining a status characterised by presence-less, paperless, cashless, backed with consent transactions. The Government of India has placed utmost importance on promoting digital payments, aiming to include every segment of the country's population within the formal framework of digital payment services. The ultimate vision is to ensure that all Indian citizens can access seamless digital payment facilities conveniently, affordably, quickly, and securely.

There has been a technological revolution in recent years in India. As part of the Government of India's plan to digitise the financial industry and economy, the number of digital payment transactions has been steadily rising over the past several years. More concentrated efforts have been made to advance financial inclusion as one of the nation's key national goals. One of the key enablers at the centre of India's transformed digital payment landscape is JAN Trinity- Jan Dhan, Aadhaar and Mobile. Launched in August 2014, Pradhan Mantri Jan-Dhan Yojana (PMJDY) is one of the biggest financial inclusion initiatives in the world. It contributes to providing universal banking services for every unbanked household. The main product of the Unique Identification Authority of India, Aadhaar, is a straightforward but efficient way to validate people and beneficiaries using their biometric data. Together, Jan Dhan accounts, Aadhaar, and mobile connections have contributed to building the groundwork for a Digital India, where citizens may access a wide range of government services directly and with greater convenience without the need for middlemen.

The idea of digital India revolves around achieving faceless, paperless, and cashless status. To promote digital payments to strengthen the Indian economy, the government has been using various initiatives to bring each segment of the country under one-fold digitisation.

The Digital India program is a program of the Government of India (GoI) that was launched in July 2015 with the vision of transforming India into a digitally empowered nation and a progressive

economy.

Digital payment is one of its aspects that offers a faster and even more convenient alternative to the conventional payment system. This offers the convenience of avoiding long queues at banks or Automatic Tailor Machines (ATMs) for money requirements. With the arrival of digital currency, there's less risk involved in handling currency. Moreover, digital transactions help in controlling the circulation of black money by allowing the government to track and monitor all financial activities that are going on. This enables the elimination of counterfeit notes and facilitates better regulation of income taxes. During the pandemic, digital payments emerged as a boon and enabled contactless and safe transactions.

During the last 5 years, various easy & convenient modes of digital payments, including Bharat Interface for Money-Unified Payments Interface (BHIM-UPI), Immediate Payment Service (IMPS), & National Electronic Toll Collection (NETC), have registered substantial growth and have transformed the digital payment ecosystem by increasing person-to-person (P2P) as well as person-to-merchant (P2M) payments. BHIM UPI has emerged as the preferred payment mode of the citizens & has recorded Rs. 803.6 crore (US\$ 96.6 million) digital payment transactions with a value of Rs. 12.98 lakh crore (US\$ 155.98 billion) in January 2023.

The expansion of digital payments in India and the availability of various simple and practical digital payment options have made life easier for the populace and promoted financial inclusion, business, and economic growth. Contactless digital payment options like BHIM-UPI made it easier for people to distance themselves from one another and for businesses, especially small ones, to continue operating throughout the pandemic.

Some of the benefits of using digital payments are as follows:

It offers an instant and convenient mode of payment. Digital mechanisms like IMPS and BHIM-UPI allow money to be instantly sent to the beneficiary account, unlike cash. Additionally, by utilising the BHIM-UPI mode, a user can conduct a digital transaction through their phone by providing a virtual payment address (email-like address) or their cell phone number, which is easy to recall. Payments are now easier owing to BHIM-UPI, which has made it possible to access various bank accounts with a single mobile app. Citizens can easily receive and make payments using their phones owing to digital payments, which provide anytime, anywhere access to accounts. Individuals who might have been put off by the time and expense of physically visiting a bank branch to conduct transactions can now easily access their bank account online and enjoy all the advantages of joining

the official banking system and gaining financial inclusion. With the recent implementation of UPI 123PAY, feature phone users can now conduct digital transactions in assisted voice mode using UPI, promoting financial inclusion and digital transactions in rural regions.

Unlike cash payments, digital payments automatically establish a user's financial footprint, thereby increasing access to formal financial services, including credit. Banks and other lending institutions can utilise digital transaction histories to make cashflow-based lending decisions for both retail lending and lending to businesses, including small businesses that may face difficulty in getting credit in the absence of verifiable cashflows. The Bharat Bill Payment System (BBPS) offers users a simple, accessible, and interoperable way to pay their bills using a variety of channels, including BHIM-UPI, mobile apps, Internet banking, and mobile banking. With BBPS, citizens can conveniently pay their bills at any time, from any location.

Earlier cash payments were vulnerable to "ghost" (false) beneficiaries and "leakage" (payments that do not reach the recipient in full), especially when it came to government transfers of social security funds. Benefits are now sent via digital payment methods straight to the target beneficiary's account (direct benefit transfer).

One product that has been dubbed revolutionary in the payment environment is UPI. Since its launch in 2016, it has grown to become one of the most widely used digital transaction platforms in the nation. The National Payments Corporation of India (NPCI) created the immediate payment system known as UPI. It combines a number of banking functions, smooth fund routing, and merchant payments under one roof, enabling numerous bank accounts into a single mobile application.

Currently, considerably over 40% of all digital transactions in India are made using UPI. Small companies and street vendors have benefited as it makes bank-to-bank transfers, even for relatively small amounts, quick and secure. For migrant workers, it also makes swift money transfers possible. The technology is simple to use because it involves no physical effort and enables money transfers with just the scan of a QR code. Because UPI makes it simple and contactless to do transactions, it has also proven to be a lifesaver during the COVID-19 outbreak. As a result, its use is growing quickly. BHIM-UPI has emerged as the preferred payment method among users. UPI has set a new record of processing over 9 billion transactions (worth US\$ 179 billion) in May 2023. UPI accounts for 75% of the total retail digital payments in India.

India has witnessed an unprecedented surge in the digital economy and specifically digital payments over the years. Digital payment methods that are easy to use and convenient, like Person-to-Person

(P2P) and Person-to-Merchant (P2M) payments, Examples: Bharat Interface for Money-Unified Payments Interface (BHIM-UPI), Immediate Payment Service (IMPS), Pre-paid Payment Instruments (PPIs), NACH, AePS, and National Electronic Toll Collection (NETC).

3. FUTURE OF DATA SCIENCE AND AI IN INDIA

Last updated: May, 2023

Artificial Intelligence (AI) is the potential of machines to impersonate the capabilities of the human mind. These machines are enabling high-level cognitive processes like thinking, perceiving, learning, problem-solving and decision-making with advancements in data collection, aggregation, analytics, and computer processing power. The goal of AI systems is to tackle complex problems in similar ways to human logic and reasoning. The market for AI is expected to reach US\$ 7.8 billion by 2025 in India. According to the State of the Education report (SOER) 2022, AI will grow at a rate of 20.2% compound annual growth rate (CAGR). In recent years, all nations place the highest priority on strengthening educational standards and student learning results. By 2030, AI in education systems will contribute considerable efforts to achieve sustainable development goals in India along with help in addressing issues related to equality, equity, and inclusion in education. AI will complement and supplement human intelligence and enrich the way people live and work.

AI has been the most revolutionary creation and is expected to have a prominent impact on the evolution of mankind. The global AI market in 2021 was nearly US\$ 59.67 billion and it is projected to grow at a CAGR of 39.4% to reach US\$ 422.37 billion by 2028. While the AI market in India is projected to grow at a CAGR of 20.2% to reach US\$ 7.8 billion by 2025 from US\$ 3.1 billion in 2020. The number of AI start-ups increased 14 times from 2000 till September 2022. Artificial intelligence has been gaining massive traction due to the enormous change in business operations and fast-paced technological advancement. The trend will only grow further in the coming years.

Experts have predicted that, by 2030, there will be a 31.4% increase in jobs related to data science and mathematical science, mostly AI-based.

Data science has been one of the most extensive applications of artificial intelligence as AI can provide massive analytical power. It facilitates extracting insights and patterns from a large data set and using it to make predictions on possible outcomes. Some common systems used for data analysis involve Google Analytics, automation platforms, business intelligence systems, content management systems, and CRMs. Data science users often use AI to get more refined value from already existing data and make valuable predictions.

Data science and AI are currently reigning technologies which have conquered industries around the

world owing to the massive explosion in data and the increasing need for businesses to rely on data for major decision-making. Data scientists help businesses analyse large amounts of data from numerous sources, assess their performance, and recommend necessary adjustments to improve it. Additionally, they support the product development team in customising goods and services by examining consumer behaviour. The extensive analysis of data through AI helps to save a lot of money and time for businesses.

The emerging technology has made it all-pervasive. It is not only for big businesses and industries instead it impacts our daily lives as well. We come across the influence of these technologies throughout the day, from weather forecasts, filtering spam emails, enabling search predictions in Google, personalizing social media feeds, and voice recognition such as Apple's Siri, Google Now, Microsoft's Cortana or Amazon's Alexa. The data science technologies also help OTT and other video streaming platforms like Netflix and Spotify to extract customer preferences and their viewing patterns to develop and curate highly targeted shows. Various e-commerce giants such as amazon, Flipkart, Meesho, etc., use customer data such as buying patterns, tastes, and preferences to present customised shopping recommendations.

Future of Artificial Intelligence (AI) in India

AI is one of the emerging industries that is turning out to be a proxy for human brains. It performs various business functions without a human intervention like customer interaction, creating brand awareness on social media, etc. AI is widely transforming various sectors such as healthcare, insurance, finance, marketing, etc., by automating their processes. It helps these sectors to analyse records, conduct market research, interact with potential customers, etc. AI has huge potential across the globe. India is the fastest-growing economy with the second-largest population in the world and has a significant stake in the AI revolution.

Considering the potential of AI to transform the economy, the finance minister of India in budget 2018-19 mandated NITI Aayog to establish a national program on AI. It was organised with a view to guiding the research and development segment about new and emerging technologies.

In 2022-23, the public funding for the digital India mission increased by 67% to reach US\$ 1.29 billion (Rs. 10,676 crore). This mission involves a plan for the effective utilization of AI to promote financial inclusion, supplement the education sector, and transform the urban infrastructure. States such as Tamil Nadu, Punjab, Uttar Pradesh, and Telangana are already utilising AI-based tools to support law and order, increase agricultural productivity, and improve healthcare delivery.

AI helps to contribute to various sectors such as agriculture and healthcare. India had an estimated

1,000 agriculture start-ups working with the government as of March 2022 in the aggrotech segment. The National Agriculture Market and eNAM, an electronic trading platform across India, are two of the top government assistance programmes that have helped to improve the agricultural system. Using sustainable technologies, the National Sustainable Agriculture Mission seeks to increase agricultural output. A national e-Governance Plan for agriculture gives funding for cutting-edge technology like blockchain, machine learning, drones, and AI top priority. Farmers in this area get the benefits of using GPS, GIS, and satellite imagery. GPS-enabled devices can be used to guide drones and help in monitoring and implementing better irrigation practices.

Farmers who deal with periodic yield monitoring and inconsistency can benefit from start-ups that focus on GPS, GIS, and satellite images. Data about crop health such as the type and extent of disease manifestation can also be recorded to improvise crop quality. These data are helpful in supporting decisions about irrigation and fertilizer requirements. As a result, farmers can take considerable action to mitigate damage and associated costs. The Indian agriculture sector accounts for around 19% of the country's greenhouse gas emissions. Emerging technologies have helped in the control of various imprudent and polluting practices. Start-ups such as CropIN, AgroStar, DeHaat, Fasal, and SatSure are addressing the issues.

The Central Board of Secondary Education (CBSE) in accordance with National Education Policy (NEP) has introduced artificial intelligence as a subject in class IX and class XI in their affiliated schools implementing from the academic year 2020-21. During a discussion in the Lok Sabha in August 2022, Minister of State for Education Annpurna Devi highlighted AI initiatives like the Diksha portal. This portal uses artificial intelligence methods to offer self-paced learning, and it is designed using open-source software to offer content for school education in states as well as UTs. It also provides QR-coded energised texts for all grades (one nation, one digital platform). As of March 28 2023, DIKSHA has 16.82 million students enrolled in various courses. A total of 9.32 million learning sessions have been attended in Karnataka followed by Rajasthan with 6.10 million and Odisha accounts for 4.45 million total learning sessions. The idea of cloud-based education in India is expanding widely as it helps to improve physical and digital access to resources. Companies like Miko, an artificial intelligence (AI) driven companion robot for kids, offer services including chatting, reacting, instructing, amusing, and comprehending the child's needs, emotions, and likes and dislikes. These businesses, along with other start-ups, gained traction in the Covid, creating an online ecosystem enabling kids to learn more quickly. There are many AI start-ups developed in 2022 which contribute to the nation's education segment such as HackerRank, iNurture Square Panda etc.

Healthcare is also one of the sectors which have included AI to improve performance across the

sector. One of the recent examples is the collaboration of Google with Apollo Hospitals in India to improve the deep learning models in x-rays and other diagnostic purposes. The issue of poor availability of better healthcare facilities in rural areas is being analysed by AI. The early and rapid detection of these issues can be a powerful tool for targeted public health interventions, particularly in rural areas. The adoption of enhanced technologies and automated intervention provides opportunities to bridge existing gaps in the healthcare sector. Companies like Google, Microsoft, Meta, and Apple have spent around US\$ 3 billion in 2021 in the healthcare sector to amplify the growth with start-ups such as Pharmeasy, HealthifyMe, Healthplix, DocTalk, etc. The algorithms of AI have augmented the healthcare space ranging from early disease diagnosis, drug recovery trials, and precision in patient monitoring to self-care.

During complete lockdown in India, AI-powered start-up MyHealthcare which is recognised by NASSCOM built AI-based solutions by adopting speciality care EMR solutions, voice-based CPOE and AI-enabled CDSS that helps to deliver personalised healthcare services to their patients. There has been the integration of AI with diagnostic algorithms for screening diseases ranging from cancer, and diabetic retinopathy to cardiovascular disease.

The Indian defence industry is working towards transforming the armed forces into one of the most advanced in the world. The adoption of various technologies based on AI will revolutionise the Indian Military and help India to become one of the biggest defence product markets. This collaborative effort among the public and private sectors of industry, research organisations, academic institutions, start-ups, and innovators has contributed to the development of numerous innovative technological products based on AI in the fields of data, logistics, surveillance, weapons, and many others. The introduction of autonomy in weapon systems, in Intelligence, Surveillance and Reconnaissance (ISR) data management, can be a huge asset in stopping terrorism, installing counter-terrorism measures, and protecting soldiers. In fact, AI in defence can change combat and conflict at the deepest levels.

4. SUSTAINABLE CIRCULAR ECONOMY IN INDIA

Last updated: May, 2023

A circular economy involves a comprehensive strategy for economic growth that is intended to benefit industry, society, and the environment. It seeks to separate growth from the consumption of finite resources by being restorative and regenerative by design, in contrast to the 'take-make-dispose' linear economy. It works on principles of reuse, reduce, recycle, refurbish/repair, and remanufacture.

A circular economy is a significant tool in reversing the environmental crisis by promoting the reuse of materials. It also supports the efficient utilization of expired products to reduce the negative impact on the environment. It also encourages people to responsibly use natural resources and extends the service life of those products which are hazardous to the environment such as plastics and other electronic appliances. In addition to it, regulatory bodies like Central Pollution Control Board (CPCB) in India have implemented regulations such as the EPR authorization, which requires companies to develop a plan for managing the waste generated by their products to reduce environmental damage.

With a population of 1.3 billion people, accounting for 18% of the global population, living on only 2.4 % of the world's surface, India faces resource constraints. To attain the desired economic growth along with this growing population, India needs to tackle the issue of resource scarcity and embark on a positive, inclusive, and environmentally sustainable model of development. To achieve this transformation towards building a low-carbon resource-efficient economy, India needs to unlock and implement the opportunities in the circular economy. Considering the rapid expansion of population, swift urbanization, and escalating environmental and climate change, India needs to implement the concept of the circular economy to reverse and minimize the environmental crisis. This approach focuses on the need for an integrated view of processes and products and is essential for minimising the dependency on resources. It also helps with annual substantial yield benefits and promotes a significant reduction in congestion and pollution, which would have a multiplier effect on the economy. The sustainable circular economy approach helps improve resource efficiency, reduce the consumption of existing resources and the emergence of new business models will also help incentivize India's transition towards self-reliance.

Indian start-up inventions provide evidence of technological progress and the positive impact that comes from continuing to conduct business in an ecologically conscious manner. A favourable

ecosystem has been created for start-ups to test and develop solutions appropriate for India due to the global environment, government support, and private investments. The demands of the country are rapidly becoming more environmentally friendly. Being environmentally conscious means making the necessary sacrifices and purposeful efforts to change habits and conserve resources. Numerous industries have taken into consideration the effort to go green as companies begin to recognise how their operations have an impact on the environment. Indian businesses and start-ups appear to be making a concerted effort to protect the environment and slow down climate change by using recycled or renewable resources to reduce energy use and trash. Aspiring eco-entrepreneurs and CEOs have become interested in the recent major climate change calamities. By recognising emerging trends and implementing significant changes in their respective industries, they support India's assertion of sustainability. India has amazing potential to be a key player in sustainable industrial development (SID) given the size of its industries. Over time, India's SMEs have emerged as a key driver of the country's economic growth. The 42.5 million SMEs in India employ roughly 40% of the labour force and produce about 30% of the GDP, according to the Confederation of Indian Industry (CII). As a result, the government invests in MSMEs to help India meet its SDG obligations. A strong ecosystem of sustainability drivers is being built by several government efforts like Zero Defect Zero Effect (ZED). Innovating their business prototypes and presenting a sustainability-first mentality, the current generation of young eco-entrepreneurs is moving the sustainability narrative forward and bringing in a new era of environmentally conscious goods and services. The active, diverse ecosystems which are driven by sustainability provide support for them, boosting their stimulation.

Government Policies Supporting India's Sustainable Circular Economy

To drive the nation towards a sustainable circular economy, the government of India has been actively formulating policies and various incentivizing projects.

- The government has implemented different rules to control plastic waste such as Plastic Waste Management Rules, e-Waste Management Rules, Construction and Demolition Waste Management Rules, and Metals Recycling Policy. These rules have been formed to achieve sustainable economic growth.
- 11 committees have been formed by the government which comprise representatives from NITI Aayog and the Ministry of Environment, Forest, and Climate Change (MoEFCC), SMEs and industry representatives. These different committees have been formed for eleven focus areas to accelerate the transition from a linear to a circular economy. The committees will develop an

extensive action plan for transitioning the economy from a linear to a sustainable circular economy in their respective focus areas. The committee will also take regulatory measures to ensure the efficient implementation of their recommendations and findings. The 11 focus areas wherein the government is focussing to accelerate the transition involve municipal solid waste and liquid waste, scrap metal, electronic waste, lithium-ion batteries, solar panels, gypsum, toxic and hazardous industrial waste, used oil waste, agriculture waste, tyre and rubber recycling and end-of-life vehicles (ELVs).

- To reduce the dependency on fossil fuels, the National Solar Mission has been formulated which aims to increase the use of solar energy in India. It is a major government initiative with active participation from states to promote ecologically sustainable growth while addressing India's energy security challenges. This mission's objective is to establish India as a global leader in solar energy by creating the policy conditions for solar technology diffusion across the country.
- The National Electric Mobility Mission Plan has been formed which aims to have at least 30% of all vehicles in India be electric by 2030. This plan has been designed to enhance national fuel security, provide affordable and environmentally friendly transportation, and enable the Indian automotive industry to achieve global manufacturing leadership.
- The National Action Plan on climate change working on formulating a comprehensive strategy for addressing climate change in India. It also focuses on measures to reduce emissions and adapt to the impacts of climate change.
- The Pradhan Mantri Fasal Bima Yojana, which is a crop insurance scheme, has been set up to help farmers mitigate the risks associated with climate change such as droughts and floods. On the other hand, The National Clean Energy Fund is established to support the development and deployment of clean energy technologies in India.

To reduce greenwashing, the Securities and Exchange Board of India (SEBI) has introduced new guidelines for companies to disclose their environmental, social, and governance (ESG) performance. Under these guidelines, companies are required to disclose information on their environmental and social policies, performance, and risks, as well as their governance structure and practices. These principles are intended to give investors additional knowledge about a company's ESG performance so they can determine more informed investment choices. These rules also give businesses a structure for disclosure and reporting, which will aid them in improving their ESG performance. These new regulations will take effect in the 2023-24 fiscal year. The government of India will issue Sovereign Green Bonds (SGrBs) as part of its broader market borrowings to raise money for green projects. The earnings will be used to fund public sector initiatives to lower the economy's carbon intensity.

The implementation of a circular economy has numerous advantages including direct and positive implications for the competitiveness of companies, individual stakeholders, and the overall industrial sectors. To achieve an impactful circular economy transition, macro-economic level planning is important along with considering stakeholders. The government advocates about 7Rs of circular economy which includes Reduce, Reuse, Recycle, Redesign, Remanufacture, Refurbish, and Repair. These should be considered as guiding principles while designing new ventures, business parks, and industrial clusters. With a system-level approach and favourable economic conditions, India can become a sustainable manufacturing hub in the coming years.

5. IMPACT OF THE ENERGY SECTOR ON INDIA'S ECONOMIC GROWTH

Last updated: Apr, 2023

In the fast-increasing world, energy consumption has already raised concerns over their excessive use of resources and subsequent environmental impacts. Being a developing nation, power consumption in India has been increasing at a greater pace. India's energy sector is diversified compared to the rest of the world. Energy production in India is still dominated by conventional sources such as coal and water-based thermal power plants. It is being used up at an alarming rate all around the world, and India is no exception. India's most urgent problems are its expanding population and the resulting increased energy demand. It is the third-largest energy consumer in the world, behind the US and China. The energy segment of India aims to boost investment to achieve an efficient, sustainable, and clean energy system. There has been a focus on reducing the import of energy in India, relying on alternative sources of energy, and enhancement of domestic supply. In 2021, at global climate negotiations, the Indian government established a new commitment to reach net-zero greenhouse gas emissions by the year 2070. India also reaffirmed its aim to install 500 GW of non-fossil power capacity by 2030.

The growth of the energy sector was being challenged by the global COVID-19 pandemic which resulted in constrained economic activity. While the government initiatives like Jawaharlal Nehru National Solar Mission, rooftop scheme, solar park scheme, etc., have continuously supported the growth of the energy sector in India in terms of improved installed quantity of energy along with their equal distribution to maximize the reach. The total power consumption in India was 121.19 billion units in December 2022. Energy has become the most crucial factor in the survival of humans as well as the efficient running of machinery. The need has led to the consumption of energy at an alarming rate. To meet the excessive use of resources and safeguard those from extinction, the government of India is coming up with alternatives to the primary sources of energy. This will improve efficiency and sustainability in the use of energy resources.

In any economy, one of the most crucial factors is the energy sector as it has the ability and capability to ensure sustained economic growth and development. The progress in the well-being and prosperity of a nation is often linked to the growth of this sector. With all the benefits of this sector, India also focuses on addressing the challenges which emerge from time to time, e.g., ensuring safe, affordable, and continuous energy sources not only for the population but for industries as well, and assuring that the available sources sustainably meet the energy requirements to have a minimum long

term negative impact.

Key Facts on India's Energy Sector

- **India is among the top three nations in the world which are leading the global renewable energy growth**
- **India ranks 3rd globally for total renewable power capacity additions**
- **India is 3rd largest market in the world for new solar photovoltaic (PV) capacity**
- **The primary energy consumption (mainly coal, oil, natural gas, and biomass) of India is the third largest in the world**
- **India's industrial segment has 42% of the share in total energy consumption (2022)**
- **MSME sector can contribute approximately 20-25% of industrial energy consumption (2022)**
- **As per the Bureau of Energy Efficiency (BEE), national strategy plan - the industrial sector has the highest (60%) energy-saving potential by 2030**

Performance of the Energy Sector in India

India ranks 4th globally in renewable energy installed capacity including large hydro, wind power capacity, and solar power capacity. India has set an ambition to expand the capacity of renewable energy to 500 GW by 2030.

Although the COVID outbreak in 2020 led to a decline in the consumption of bioenergy and other renewable energy sources as compared to the previous year. However, as per the forecast, the Indian market for renewable energy is anticipated to exhibit a CAGR of 10.10% between 2022 and 2027. The growth is supported by various government policies, rising environmental concerns, incentives, and tax benefits for solar panel installations. There will be significant growth in the solar energy segment specifically during the forecast period, owing to the increasing number of investments in this sector. The Ministry of New and Renewable Energy (MNRE) has set a target to achieve 500 GW of renewable energy installed capacity by 2030. It is expected that this move will create growth and expansion opportunities for the market in the future. The growth will be boosted and supported by the initiatives of the government specifically the plans formulated by the Ministry of New & Renewable Energy (MNRE).

6. THE POTENTIAL OF COTTAGE INDUSTRY TRADE

Last updated: Jun, 2022

A cottage industry is a small business engaged in manufacturing and operated from the owner's homes. Cottage industries form an important part of the Indian economy. Being a developing economy, cottage industries create employment opportunities and drive incomes, preserve local customs and traditions and popularise them by producing unique local products, allow flexibility to owners and workers, and so on. This industry caters to multiple sectors such as handloom, handicrafts and textiles. Starting and operating a cottage industry business requires low capital and other resources, which allows many families to start such businesses. However, given the lower capital Investment, these industries operate using cheap and outdated technology. This may lead to higher costs as well as more time to produce a single unit. Due to this cottage industries face competition from larger firms using modern technology and efficient means of production.

Nonetheless, many cottage industries still stand strong. Products made by popular cottage industry businesses are recognised as a brand and known for their quality. Additionally, products made by machines and similar modern technology may lack the exquisiteness of some cottage industry products such as Banarasi saree, a popular cottage industry product in Varanasi. This leads to sustainability of demand, enabling growth in the industry.

As of 2020, around 65% of Indians were living in rural areas; of these, majority have low incomes and resources. Cottage industries are an important source of earning for them. These industries support many Indians, lifting them from poverty. Cottage industries also increase India's export potential. Due to mainly these factors, the cottage industry is called the backbone of India's economy.

7. IMPORTANCE OF INDIA'S AGRICULTURE ECONOMY

Last updated: Dec, 2022

Agriculture is the foundation of India's livelihood, civilisation, culture and heritage. With a population of 1.39 billion, India is the second-most populous country in the world and is expected to overtake China as the most populated by 2027-30. With 328 million hectares (Mha) of land, India is the world's seventh largest country. India has ~160 Mha of arable land, the second largest after the US. The country experiences all 15 prominent climates. Moreover, India's landmass constitutes 46 of the 60 soil types found on the planet. It cultivates ~50% of its total geographical area, placing it among the top land users for agriculture. The proportion of cultivated land to the total geographical area often exceeds 90% in the more geographically suitable Indo-Gangetic Plain (IGP) and the deltas of the eastern coast. Indian agriculture, one of the world's oldest systems, is diverse, heterogeneous, unorganised and frequently subject to vagaries at various stages “from seed to market”. It is a critical sector of the economy for the country's long-term and inclusive economic growth. The sector employs 49.6% of the workforce, which is often seasonal, under-employed and underpaid, and accounts for ~17% of India's GDP. India's large and diverse agricultural sector makes it a major producer of cereals, sugar, milk, fruits and vegetables, eggs and spices. The agriculture sector in India remains the backbone of its society, employing ~58% of the population. With only 4% of the world's water resources and 2.4% of the world's land, India supports 17.8% of the world's population and 15% of the livestock population. There is no other country with a more varied food and non-food agriculture base than India, which raises the prospect of India becoming a world agricultural trade leader.

The agricultural sector in India has performed admirably in recent years, expanding at a compounded annual growth rate (CAGR) of 3.7% between 2017-18 and 2021-22. In 2021-22, the estimated real agriculture gross value added (GVA) was Rs. 21.1 lakh crore (US\$ 256.4 billion), accounting for 15.5% of total GVA and 6.4% higher than the pre-pandemic level. Even during the pandemic, the agriculture GVA increased for all products, including foodgrains, cereals, pulses and oilseeds, providing the country with the much-needed food security.

The country's total foodgrain production was estimated to be a record-high 314.6 million tonnes in 2021-22, an increase of 3.8 million tonnes over 2010-21. The production of cereals and pulses has increased at a CAGR of 2.0% and 1.8%, respectively, from 2017-18 to 2021-22.

The development of agriculture industry in India would not be possible if not for the various initiatives taken by the government to boost the sector.

GOKUL GLOBAL UNIVERSITY

Faculty of Commerce & Management

E-Content



Course:	BBA/BCOM
Semester:	2
Subject:	Business communication-2
Subject Code:	FMB 220104 / FCB220104

Address: - Gokul Global University, Sujanpur Patia, Opp. I.O.C. Depot.
State Highway- 41, Siddhpur-384151, Gujarat

Module 1

Wings of Fire Abridged

Introduction

"Wings of Fire" is the autobiography of Dr. APJ Abdul Kalam, co-written by Arun Tiwari. Dr. Kalam, born in 1931 in Rameswaram, Tamil Nadu, rose from humble beginnings to become a renowned scientist and the 11th President of India. His journey reflects a blend of spiritual conviction and scientific inquiry. Known as the 'Missile Man' of India, Dr. Kalam's work at the Defence Research and Development Organization (DRDO) and the Indian Space Research Organization (ISRO) significantly contributed to India's advancements in space and missile technology.

The autobiography is divided into four parts, detailing different phases of his life and career:

1. **Orientation (1931-1963):** Covers his early life, education, and formative years.
2. **Creation (1963-1980):** Focuses on his scientific contributions and work at DRDO and ISRO.
3. **Propitiation (1981-1991):** Highlights his innovations in missile technology and participative management style.
4. **Contemplation (Beyond 1991):** Describes his role as Scientific Advisor, his contributions to India's nuclear capabilities, and his vision for India's future.

Book Summary

Orientation (1931-1963)

This part narrates Dr. Kalam's early life in Rameswaram, his education, and the support he received from his family and community. Despite financial hardships, he graduated with a degree in aeronautical engineering from the Madras Institute of Technology. The harmonious coexistence of different religions in his community influenced his inclusive worldview.

Creation (1963-1980)

Dr. Kalam's professional journey began at DRDO, followed by a significant stint at ISRO, where he worked under prominent scientists like Vikram Sarabhai and Satish Dhawan. His leadership in the SLV-III project, which launched India's first satellite, Rohini, marked a milestone in Indian space history.

Propitiation (1981-1991)

Returning to DRDO as its Director, Dr. Kalam led several missile projects, earning the title 'Missile Man of India.' His inclusive management style and dedication to innovation brought numerous scientific advancements, including the Polar Satellite Launch Vehicle (PSLV) and the Integrated Guided Missile Program.

Contemplation (Beyond 1991)

As Scientific Advisor to the Defense Minister, Dr. Kalam played a pivotal role in India's nuclear tests in 1998. He received prestigious awards like the Bharat Ratna, Padma Vibhushan, and Padma Bhushan. His vision for India 2020 emphasized self-sufficiency in innovation and technology.

Conclusion

"Wings of Fire" is an inspiring account of Dr. Kalam's life, showcasing his extraordinary achievements and unwavering dedication to his country. It serves as a testament to his belief in the power of dreams and hard work, offering valuable lessons for young readers.

Biography

- **Full Name:** Avul Pakir Jainulabdeen Abdul Kalam
- **Born:** 15 October 1931, Rameswaram, Tamil Nadu
- **Died:** 27 July 2015, Shillong, Meghalaya (Age 83)
- **Nationality:** Indian
- **Nickname:** Missile Man, People's President
- **Education:** B.Sc in Physics from Saint Joseph's College, Tiruchirappalli; Aerospace Engineering from Madras Institute of Technology
- **Profession:** Aerospace Scientist, Author, Politician
- **Parents:** Jainulabiddin Marakayar (Father), Ashiamma Jainulabiddin (Mother)
- **Siblings:** Mohammed Muthu Meera Lebbai Maraikayar, Mustafa Kamal, Kasim Mohammed, Asim Zohra

Awards and Honours

- **Bharat Ratna (1997)**
- **Padma Vibhushan (1990)**
- **Padma Bhushan (1981)**
- **Honorary Degrees:** Over 30 universities worldwide
- **Other Notable Awards:** Von Braun Award, IEEE Honorary Membership, Hoover Medal, and many more.

Notable Works

1. Ignited Minds
2. India 2020
3. Indomitable Spirit
4. A Wing of Fire - Abridge
5. My Spiritual Experience with Pramukh Swami Ji (BAPS)
6. Turning Point
7. Inspiring Thoughts
8. Mission of India
9. Scientific India
10. Luminous Spark

Dr. APJ Abdul Kalam's life and work continue to inspire millions, emphasizing the importance of perseverance, knowledge, and service to the nation. His legacy as a visionary leader and a dedicated scientist remains a guiding light for future generations.

Dr. A.P.J. Abdul Kalam: A Brief Overview

Full Name: Avul Pakir Jainulabudeen Abdul Kalam

Birth Date: October 15, 1931

Birthplace: Rameshwaram, Tamil Nadu, India

Parents: Jainulabudeen (Father), Ashiamma (Mother)

Occupation: Engineer, Scientist, Author, Professor, Politician

Famous As: 11th President of India (2002-2007)

Personal Possessions

1. **Books:** 2500
2. **Veena:** 1
3. **Wrist Watch:** 1
4. **C.D. Player:** 1
5. **Laptop:** 1
6. **Shirts:** 6
7. **Trousers:** 4
8. **Suits:** 3
9. **Shoes:** 1 pair
10. **Property:** An ancestral house and a small site near the house in Rameshwaram

Education

- **Schooling:** Schwartz Matriculation School, Ramanathapuram
- **College:** Saint Joseph's College, Tiruchirappalli (Graduated in Physics, 1954)
- **Advanced Education:** Madras Institute of Technology (MIT-Chennai) in Aerospace Engineering (Graduated in 1960)

Career Milestones

- **Aeronautical Development Establishment (DRDO):** Joined as a scientist in 1960
 - **Indian Space Research Organisation (ISRO):** Project Director of India's first indigenous Satellite Launch Vehicle (SLV-III) which deployed the Rohini satellite in 1980
 - **Missile Development:** Chief Scientific Adviser to the Prime Minister and Secretary of DRDO from 1992 to 1999; played a key role in developing the Agni missile
 - **President of India:** Served from July 25, 2002, to July 25, 2007
-

Awards and Honors

National Awards:

- **Bharat Ratna:** 1997
- **Padma Vibhushan:** 1990
- **Padma Bhushan:** 1981

Other Awards and Honors:

Year	Award/Honor	Awarding Organization
2014	Honorary Professor	Beijing University, China
2014	Doctor of Science	Edinburgh University, UK
2013	Von Braun Award	National Space Society
2012	Doctor of Laws (Honoris Causa)	Simon Fraser University
2011	IEEE Honorary Membership	IEEE
2010	Doctor of Engineering	University of Waterloo
2009	Honorary Doctorate	Oakland University
2009	Hoover Medal	ASME Foundation, USA
2009	International von Kármán Wings Award	California Institute of Technology, USA
2008	Doctor of Engineering (Honoris Causa)	Nanyang Technological University, Singapore
2008	Doctor of Science (Honoris Causa)	Aligarh Muslim University, Aligarh
2007	Honorary Doctorate of Science and Technology	Carnegie Mellon University
2007	King Charles II Medal	Royal Society, UK
2007	Honorary Doctorate of Science	University of Wolverhampton, UK
2000	Ramanujan Award	Alvars Research Centre, Chennai
1998	Veer Savarkar Award	Government of India
1997	Indira Gandhi Award for National Integration	Indian National Congress
1995	Honorary Fellow	National Academy of Medical Sciences
1994	Distinguished Fellow	Institute of Directors (India)

Legacy

Dr. A.P.J. Abdul Kalam, often referred to as the "People's President," is remembered for his humility, dedication, and contributions to India's scientific and technological advancements. He passed away on July 27, 2015, but his legacy continues to inspire millions.

I
ORIENTATION
[1931 – 1963]

Chapter - 1 "A Wings of Fire Abride"

The chapter from "Wings of Fire" narrates the early life of Dr. A.P.J. Abdul Kalam, providing a vivid picture of his humble beginnings in Rameswaram. Born into a middle-class Tamil family, Kalam's childhood was marked by the simplicity and spiritual richness of his surroundings. Despite his father's lack of formal education and wealth, Kalam's upbringing was secure and filled with valuable life lessons. His father, Jainulabdeen, and mother, Ashiamma, were revered in their community, known for their wisdom, generosity, and spiritual depth.

Kalam's father's disciplined routine, starting with the pre-dawn namaz, his simple yet profound spiritual teachings, and his resilience in adversity, deeply influenced Kalam. The anecdote about his father building a sailboat, only to have it destroyed by a cyclone, illustrates the unpredictable yet formative experiences of Kalam's early life. His bond with his cousin, Ahmed Jallaluddin, who later became his brother-in-law, played a significant role in his spiritual and intellectual development. Jallaluddin's encouragement and discussions about the broader world beyond Rameswaram ignited Kalam's curiosity and ambition.

The chapter also highlights the communal harmony in Rameswaram, where people of different religions lived peacefully and respected each other's traditions. Kalam's friendships with Ramanadha Sastry, Aravindan, and Sivaprakasan, all from orthodox Hindu families, reflect the inclusive nature of his upbringing. The incident with the new teacher, who attempted to segregate Kalam and Sastry based on religion, was met with strong opposition from Sastry's father, emphasizing the community's commitment to equality and justice.

Kalam's educational journey took him to Ramanathapuram, where he experienced the challenges of adapting to a new environment. His father's advice, quoting Khalil Gibran, underscored the importance of independence and personal growth. Despite his homesickness, Kalam was determined to succeed and fulfill his father's dreams for him. His interactions with his science teacher, Sivasubramania Iyer, further inspired him to break social barriers and strive for excellence.

Throughout the chapter, Kalam's reflections on his childhood reveal a deep sense of gratitude for the influences that shaped him. The wisdom of his unschooled mentors, Jallaluddin and Samsuddin, the communal harmony of Rameswaram, and the spiritual teachings of his father collectively contributed to his development. These early experiences instilled in him values of honesty, self-discipline, kindness, and the power of positive thinking, which guided him throughout his life.

In conclusion, this chapter of "Wings of Fire" provides a comprehensive insight into Dr. A.P.J. Abdul Kalam's formative years. It encapsulates the essence of his humble beginnings, the profound impact of his family and community, and the experiences that laid the foundation for his illustrious career. Kalam's journey from the small island town of Rameswaram to becoming one of India's most revered scientists and leaders is a testament to the enduring power of resilience, education, and spirituality.

Chapter - 2 "A Wings of Fire Abridge"

Wings of Fire: Orientation

At Schwartz High School in Ramanathapuram, my teacher, Iyadurai Solomon, became more than a mentor; he shaped my beliefs about life's possibilities. His wisdom on desire, belief, and expectation resonated deeply, guiding me to become the first child from Rameswaram to fly.

Despite a brief incident with my mathematics teacher, Ramakrishna Iyer, who later praised my achievements, my confidence soared by the time I completed my education at Schwartz. I pursued higher education at St. Joseph's College, Trichi, where Rev. Father TN Sequeira's nurturing influence and the camaraderie with diverse roommates enriched my experience.

Transitioning to St. Joseph's was pivotal. Professors like Prof. Sponder, Prof. KAV Pandalai, and Prof. Narasingha Rao at the Madras Institute of Technology (MIT) honed my passion for aeronautical engineering. Their teachings illuminated the complexities of flight, reinforcing my determination to succeed.

MIT was a turning point, testing my beliefs against scientific inquiry while I grappled with spiritual interests. A pivotal project under Prof. Srinivasan's guidance taught me resilience and earned me recognition, bolstering my commitment to aeronautical excellence.

Joining Hindustan Aeronautics Limited (HAL) in Bangalore provided practical insights into aircraft engineering. From engine overhauling to understanding gas dynamics, every experience deepened my technical acumen and passion for aviation.

In retrospect, these formative years at educational institutions and under the mentorship of exceptional teachers laid the groundwork for my illustrious career in aeronautics and space exploration. Their guidance and wisdom continue to inspire my journey to this day.

This summary captures the essence of your experiences at various educational institutions and with influential teachers, focusing on your evolution towards aeronautical engineering and beyond.

Chapter - 3 "A Wings of Fire Abridge"

Wings of Fire: Orientation

Through the window of the compartment, I watched the countryside slip past, men in their white dhotis and turbans, and women in bright colors against green paddy fields, seeming like figures in a painting. The rhythmic tranquility of their activities—men driving cattle, women fetching water—stirred a sense of timeless beauty. As my train journeyed northward, the landscape changed, rich plains of the Ganga giving way to a history of invasions and religious transformations.

In 1958, I halted briefly in Delhi, a city steeped in the legacy of Sufi saints, before facing an interview at DTD&P(Air). Though my aspirations to join the Air Force faltered, Swami Sivananda's words in Rishikesh offered solace: "Desire, when pure and intense, possesses electromagnetic energy, manifested with cosmic currents."

Page 2

Returning to Delhi, I accepted a role at DTD&P(Air), embracing a new path. Posted at the Technical Centre (Civil Aviation), I immersed myself in designing supersonic aircraft and exploring aircraft maintenance in Kanpur's industrial bustle. The contrast from my rural upbringing in Rameswaram was stark, yet the challenge fueled my determination.

Transferred to Bangalore's Aeronautical Development Establishment (ADE), I encountered a city teeming with contrasts—traditional roots juxtaposed against modern aspirations. Leading a team to develop India's first indigenous hovercraft prototype, I faced skepticism but found inspiration in Defence Minister Krishna Menon's unwavering support.

Page 3

Despite early successes, political changes thwarted the project's full realization. Disappointed yet undeterred, I found solace in childhood teachings and spiritual encounters, leading me to Thumba's Equatorial Rocket Launching Station. Guided by Dr. Vikram Sarabhai's vision, I embarked on a journey into space research, culminating in a pivotal training at NASA.

As I departed for America, my father's prayers and the unwavering faith of friends echoed in my heart. Their belief in my potential and the power of prayer reinforced my resolve. Standing at the threshold of new possibilities, I carried with me the essence of my upbringing—a fusion of faith, resilience, and a relentless pursuit of dreams.

This structured format encapsulates the journey outlined in the text while maintaining a professional tone and clear narrative progression. Each page represents a distinct phase of the protagonist's life, transitioning smoothly from personal reflections to professional achievements, and finally, to future aspirations

II CREATION [1963 – 1980]

Chapter4: Journey of Inspiration and Innovation

Introduction

The journey begins at NASA's Langley Research Centre (LRC) in Hampton, Virginia, where the author embarked on a transformative experience in aerospace technology. The vivid memory of a sculpture symbolizing the synergy between scientific research and technological development sets the stage for a narrative that spans across continents and ideologies.

NASA and the Goddard Space Flight Centre (GSFC)

Transitioning to the Goddard Space Flight Centre (GSFC) in Greenbelt, Maryland, the author witnesses the operational hub of NASA's earth-orbiting satellites and global tracking networks. Here, amidst the cutting-edge science and technological marvels, the author reflects on the pivotal role of American resolve and ingenuity in space exploration.

Wallops Flight Facility and Unexpected Inspiration

A visit to the Wallops Flight Facility in Virginia reveals an unexpected tribute to history— a painting depicting Tipu Sultan's army, celebrated for its early advancements in rocketry. This encounter with a piece of Indian history immortalized at a NASA facility underscores the global impact of scientific achievement and cultural resonance.

Reflections on American Spirit and Leadership

The author's reflections on American culture reveal a deep admiration for resilience and problem-solving ethos, reminiscent of Benjamin Franklin's philosophy: "Those things that hurt instruct." This ethos contrasts with challenges faced in Indian organizations, where issues of pride and hierarchy hinder effective communication and innovation.

Return to India and New Beginnings

Returning to India just as the nation celebrates its first rocket launch, the narrative shifts to the author's pivotal role in the Nike-Apache project. Amidst challenges and a last-minute crisis during the launch, the team's perseverance and collective effort yield success, coinciding with a momentous global event—the assassination of President John F. Kennedy.

Prof. Sarabhai's Vision and the Birth of Indian Space Program

Under the visionary leadership of Prof. Vikram Sarabhai, the narrative turns to the birth of India's space program. From the humble beginnings at INCOSPAR (later ISRO), where faith in young scientists and engineers propelled ambitions for indigenous space exploration, to the establishment of Thumba Equatorial Rocket Launch Station (TERLS), every milestone reflects Prof. Sarabhai's unwavering belief in innovation and self-reliance.

Legacy and Revival of Indian Rocketry

The chapter concludes with reflections on the revival of Indian rocketry, drawing historical parallels to Tipu Sultan's legacy and the transformative impact of India's space program on global technological advancements. From the Rohini Sounding Rocket Program to the

development of indigenous propellants and strategic capabilities, India emerges as a leader in space research, echoing Nehru's vision of harnessing technology for national development.

Conclusion

In retrospect, the journey from NASA to India's space program encapsulates a narrative of inspiration, innovation, and the enduring quest for knowledge. It underscores the transformative power of visionary leadership and collective endeavor in shaping the future of science and technology on a global scale.

Chapter5: Dreamers

During his frequent visits to Thumba, Prof. Sarabhai would openly review the progress of work with the entire team. He never gave directions. Rather, through a free exchange of views, he led us forward into new terrain which often revealed an unforeseen solution. Perhaps he was aware that though a particular goal might be clear to himself, and he could give adequate directions for its accomplishment, his team members might have resisted working towards a goal that made no sense to them. He considered the collective understanding of the problem the main attribute of effective leadership. He once told me, “Look, my job is to make decisions; but it is equally important to see to it that these decisions are accepted by my team members.”

In fact, Prof. Sarabhai took a series of decisions that were to become the life-mission of many. We would make our own rockets, our own Satellite Launch Vehicles (SLVs) and our own satellites. And this would not be done one-by-one but concurrently, in a multi-dimensional fashion. In the development of payloads for the sounding rockets, instead of getting a certain payload and then engineering it to fit into the rocket, we discussed the matter threadbare with the payload scientists working in different organizations and at different locations. I may even say that the most significant achievement of the sounding rocket programme was to establish and maintain nationwide mutual trust.

Perhaps realising that I preferred to persuade people to do as they were told rather than use my legitimate authority, Prof. Sarabhai assigned me the task of providing interface support to payload scientists. Almost all physical laboratories in India were involved in the sounding rocket programme, each having its own mission, its own objective and its own payload. These payloads were required to be integrated to the rocket structure so as to ensure their proper functioning and endurance under flight conditions. We had X-ray payloads to look at stars; payloads fitted with radio frequency mass spectrometers to analyse the gas composition of the upper atmosphere; sodium payloads to find out wind conditions, its direction and velocity. We also had ionospheric payloads to explore different layers of the atmosphere. I not only had to interact with scientists from TIFR, National Physical Laboratory (NPL), and Physical Research Laboratory (PRL), but also with payload scientists from USA, USSR, France, Germany and Japan.

I often read Khalil Gibran, and always find his words full of wisdom. “Bread baked without love is a bitter bread that feeds but half a man’s hunger,”—those who cannot work with their hearts achieve but a hollow, half-hearted success that breeds bitterness all around. If you are a writer who would secretly prefer to be a lawyer or a doctor, your written words will feed but half the hunger of your readers; if you are a teacher who would rather be a businessman, your instructions will

meet but half the need for knowledge of your students; if you are a scientist who hates science, your performance will satisfy but half the needs of your mission. The personal unhappiness and failure to achieve results that comes from being a round peg in a square hole is not, by any means, new. But there are exceptions to this like Prof. Oda and Sudhakar, who bring to their work a personal touch of magic based upon their individual character, personality, inner motives, and perhaps the dreams crystallized within their hearts. They become so emotionally involved with their work that any dilution of the success of their effort fills them with grief.

Prof. Oda was an X-ray payload scientist from the Institute of Space and Aeronautical Sciences (ISAS), Japan. I remember him as a diminutive man with a towering personality and eyes that radiated intelligence. His dedication to his work was exemplary. He would bring X-ray payloads from ISAS, which along with the X-ray payloads made by Prof. UR Rao, would be engineered by my team to fit into the nose cone of the Rohini Rocket. At an altitude of 150 km, the nose cone would be separated by explosion of pyros triggered by an electronic timer. With this, the X-ray sensors would be exposed to space for collecting the required information about the emissions from stars. Together, Prof. Oda and Prof. Rao were a unique blend of intellect and dedication, which one rarely sees. One day, when I was working on the integration for Prof. Oda's payload with my timer devices, he insisted on using the timers he had brought from Japan. To me they looked flimsy, but Prof. Oda stuck to his stand that the Indian timers be replaced by the Japanese ones. I yielded to his suggestion and replaced the timers. The rocket took off elegantly and attained the intended altitude. But the telemetry signal reported mission failure on account of timer malfunction. Prof. Oda was so upset that tears welled up in his eyes. I was stunned by the emotional intensity of Prof. Oda's response. He had clearly put his heart and soul into his work.

Sudhakar was my colleague in the Payload Preparation Laboratory. As part of the pre-launch schedule, we were filling and remotely pressing the hazardous sodium and thermite mix. As usual, it was a hot and humid day at Thumba. After the sixth such operation, Sudhakar and I went into the payload room to confirm the proper filling of the mix. Suddenly, a drop of sweat from his forehead fell onto the sodium, and before we knew what was happening, there was a violent explosion which shook the room. For a few paralysed seconds, I did not know what to do. The fire was spreading, and water would not extinguish the sodium fire. Trapped in this inferno, Sudhakar, however, did not lose his presence of mind. He broke the glass window with his bare hands and literally threw me out to safety before jumping out himself. I touched Sudhakar's bleeding hands in gratitude, he was smiling through his pain. Sudhakar spent many weeks in the hospital recuperating from the severe burns he had received.

At TERLS, I was involved with rocket preparation activities, payload assembly, testing and evaluation besides building subsystems like payload housing and jettisonable nose cones. Working with the nose cones led me, as a natural consequence, into the field of composite materials.

It is interesting to know that the bows found, during archaeological excavations at different sites in the country, reveal that Indians used composite bows made of wood, sinew, and horn as early as the eleventh century, at least 500 years before such bows were made in medieval Europe. The versatility of composites, in the sense that they possess very desirable structural, thermal, electrical, chemical and mechanical properties, fascinated me. I was so enthused with these man-made materials that I was in a hurry to know everything about them almost overnight. I used to read up everything available on related topics. I was particularly interested in the glass and carbon Fibre Reinforced Plastic (FRP) composites.

An FRP composite is composed of an inorganic fibre woven into a matrix that encloses it and gives the component its bulk form. In February 1969, Prime Minister Indira Gandhi visited

Thumba to dedicate TERLS to the International Space Science Community. On this occasion, she commissioned the country's first filament winding machine in our laboratory. This event brought my team, which included CR Satya, PN Subramanian and MN Satyanarayana, great satisfaction. We made high strength glass cloth laminates to build non-magnetic payload housings and flew them in two-stage sounding rockets. We also wound and test flew rocket motor casings of up to 360 mm diameter.

Slowly, but surely, two Indian rockets were born at Thumba. They were christened Rohini and Menaka, after the two mythological dancers in the court of Indra, the king of the sky. The Indian payloads no longer needed to be launched by French rockets. Could this have been done but for the atmosphere of trust and commitment which Prof. Sarabhai had created at INCOSPAR? He brought into use each person's knowledge and skills. He made every man feel directly involved in problem solving. By the very fact of the team members' participation, the solutions became genuine and earned the trust of the entire team resulting in total commitment towards implementation.

Prof. Sarabhai was matter-of-fact and never tried to hide his disappointment. He used to talk with us in an honest and objective manner. Sometimes I found him making things look more positive than they actually were, and then charming us by his almost magical powers of persuasion. When we were at the drawing board, he would bring someone from the developed world for a technical collaboration. That was his subtle way of challenging each one of us to stretch our capabilities.

At the same time, even if we failed to meet certain objectives, he would praise whatever we had accomplished. Whenever he found any one of us going over his head and attempting a task for which he did not have the capability or skill, Prof. Sarabhai would reassign activity in such a way so as to lower pressure and permit better quality work to be performed. By the time the first Rohini-75 rocket was launched from TERLS on 20 November 1967, almost each one of us was in his own groove.

Early next year, Prof. Sarabhai wanted to see me urgently in Delhi. By now I was accustomed to Prof. Sarabhai's working methods. He was always full of enthusiasm and optimism. In such a state of mind, sudden flashes of inspiration were almost natural. On reaching Delhi, I contacted Prof. Sarabhai's secretary for an appointment and was asked to meet him at 3.30 a.m. at Hotel Ashoka. Delhi being a slightly unfamiliar place, with an unfriendly climate for someone like me, conditioned to the warm and humid climate of South India, I decided to wait in the hotel lounge after finishing my dinner.

I have always been a religious person in the sense that I maintain a working partnership with God. I was aware that the best work required more ability than I possessed and therefore I needed help that only God could give me. I made a true estimate of my own ability, then raised it by 50 per cent and put myself in God's hands. In this partnership, I have always received all the power I needed, and in fact have actually felt it flowing through me. Today, I can affirm that the kingdom of God is within you in the form of this power, to help achieve your goals and realise your dreams.

There are many different types and levels of experience that turn this internal power reaction critical. Sometimes, when we are ready, the gentlest of contacts with Him fills us with insight and wisdom. This could come from an encounter with another person, from a word, a question, a gesture or even a look. Many a time, it could come even through a book, a conversation, some phrase, even a line from a poem or the mere sight of a picture. Without the slightest warning, something new breaks into your life and a secret decision is taken, a decision that you may be completely unconscious of, to start with.

I looked around the elegant lounge. Somebody had left a book on a nearby sofa. As if to fill the small hours of that cold night with some warm thoughts, I picked up the book and started browsing. I must have turned only a few pages of the book, about which I do not remember a thing today.

It was some popular book related to business management. I was not really reading it, only skimming over paragraphs and turning pages. Suddenly, my eyes fell on a passage in the book, it was a quotation from George Bernard Shaw. The gist of the quote was that all reasonable men adapt themselves to the world. Only a few unreasonable ones persist in trying to adapt the world to themselves. All progress in the world depends on these unreasonable men and their innovative and often nonconformist actions.

I started reading the book from the Bernard Shaw passage onwards. The author was describing certain myths woven around the concept and the process of innovation in industry and business. I read about the myth of strategic planning. It is generally believed that substantial strategic and technological planning greatly increases the odds of a 'no surprises' outcome. The author was of the opinion that it is essential for a project manager to learn to live with uncertainty and ambiguity. He felt that it was a myth to hold that the key to economic success is computability. A quotation from General George Patton was given as a counterpoint to this myth—that a good plan violently executed right now is far better than a perfect plan executed next week. It is a myth that to win big one must strive to optimize, the author felt. Optimization wins only on paper, but would invariably lose later in the real world, the book said.

Waiting in the hotel lobby at 1 a.m. for an appointment two hours later was certainly not a reasonable proposition, neither for me nor for Prof. Sarabhai. But then, Prof. Sarabhai had always exhibited a strong component of unorthodoxy in his character. He was running the show of space research in the country—under-staffed, overworked—nevertheless in a successful manner.

Suddenly, I became aware of another man who came and sat down on the sofa opposite mine. He was a well-built person with an intelligent look and refined posture. Unlike me—always disorderly in my dress—this man was wearing elegant clothes. Notwithstanding the odd hours, he was alert and vivacious.

There was a strange magnetism about him which derailed the train of my thoughts on innovation. And before I could get back to the book, I was informed that Prof. Sarabhai was ready to receive me. I left the book on the nearby sofa from where I had picked it up. I was surprised when the man sitting on the opposite sofa was also asked to come inside. Who was he? It was not long before my question was answered. Even before we sat down, Prof. Sarabhai introduced us to each other. He was Group Captain VS Narayanan from Air Headquarters.

Prof. Sarabhai ordered coffee for both of us and unfolded his plan of developing a rocket-assisted take-off system (RATO) for military aircraft. This would help our warplanes to take off from short runways in the Himalayas. Hot coffee was served over small talk. It was totally uncharacteristic of Prof. Sarabhai. But as soon as we finished the coffee, Prof. Sarabhai rose and asked us to accompany him to Tilpat Range on the outskirts of Delhi. As we were passing through the lobby, I threw a cursory glance at the sofa where I had left the book. It was not there.

It was about an hour's drive to the Range. Prof. Sarabhai showed us a Russian RATO. "If I get you the motors of this system from Russia, could you do it in eighteen months' time?" Prof. Sarabhai asked us. "Yes, we can!" Both Gp Capt VS Narayanan and I spoke almost simultaneously. Prof. Sarabhai's face beamed, reflecting our fascination. I recalled what I had read, "He will bestow on you a light to walk in."

After dropping us back at the Hotel Ashoka, Prof. Sarabhai went to the Prime Minister's house for a breakfast meeting. By that evening, the news of India taking up the indigenous development of a device to help short run take-offs by high performance military aircraft, with myself heading the project, was made public. I was filled with many emotions— happiness, gratitude, a sense of fulfilment and these lines from a little-known poet of the nineteenth-century crossed my mind:

*all your days prepare
And meet them ever alike
When you are the anvil, bear –
When you are the hammer, strike.*

RATO motors were mounted on aircraft to provide the additional thrust required during the take-off run under certain adverse operating conditions like partially bombed-out runways, high altitude airfields, more than the prescribed load, or very high ambient temperatures. The Air Force was in dire need of a large number of RATO motors for their S22 and HF-24 aircraft. The Russian RATO motor shown to us at the Tilpat Range was capable of generating a 3000 kg thrust with a total impulse of 24500 kg seconds. It weighed 220 kg and had a double base propellant encased in steel. The development work was to be carried out at the Space Science and Technology Centre with the assistance of the Defence Research and Development Organization (DRDO), HAL, DTD&P(Air) and Air Headquarters.

After a detailed analysis of the available options, I chose a fibreglass motor casing. We decided in favour of a composite propellant which gives a higher specific impulse and aimed at a longer burning time to utilize it completely. I also decided to take additional safety measures by incorporating a diaphragm which would rupture if the chamber pressure for some reason exceeded twice the operating pressure. Two significant developments occurred during the work on RATO. The first was the release of a ten-year profile for space research in the country, prepared by Prof. Sarabhai. This profile was not merely an activity plan laid down by the top man for his team to comply with, it was a theme paper meant for open discussions, to be later transformed into a programme. In fact, I found it was the romantic manifesto of a person deeply in love with the space research programme in his country. The plan mainly centred around the early ideas which had been born at INCOSPAR; it included utilization of satellites for television and developmental education, meteorological observations and remote sensing for management of natural resources. To this had been added the development and launch of satellite launch vehicles.

The active international cooperation dominant in the early years was virtually eased out in this plan and the emphasis was on self-reliance and indigenous technologies. The plan talked about the realisation of a SLV for injecting lightweight satellites into a low earth orbit, upgrading of Indian satellites from laboratory models to space entities and development of a wide range of spacecraft subsystems like the apogee and booster motors, momentum wheel, and solar panel deployment mechanism. It also promised a wide range of technological spin-offs like the gyros, various types of transducers, telemetry, adhesives, and polymers for non-space applications. Over and above, there was the dream of an adequate infrastructure that would be capable of supporting R&D in a variety of engineering and scientific disciplines.

The second development was the formation of a Missile Panel in the Ministry of Defence. Both Narayanan and I were inducted as members. The idea of making missiles in our own country was exciting, and we spent hours on end studying the missiles of various advanced countries.

The distinction between a tactical missile and a strategic missile is often a fine one. Generally, by 'strategic', it is understood that the missile will fly thousands of kilometres. However, in warfare,

this term is used to denote the kind of target rather than its distance from missile launch. Strategic missiles are those that strike at the enemy's heartland, either in counter-force attacks on their strategic forces or in counter-value attacks on the society, which in essence means his cities. Tactical weapons are those that influence a battle, and the battle may be by land, sea or air, or on all three together. This categorization now appears nonsensical, as the US Air Force's ground-launched Tomahawk is used in a tactical role, notwithstanding its range of some 3000 km. In those days, however, strategic missiles were synonymous with intermediate range ballistic missiles (IRBMs) with ranges in the order of 1500 nautical miles or 2780 km and inter-continental ballistic missiles (ICBMs) with a capability of going even further.

Gp Capt Narayanan had an ineffable enthusiasm for indigenous guided missiles. He was a great admirer of the strong arm approach of the Russian Missile Development Programme. "When it could be done there, why not here, where space research has already prepared the soil for a bonanza of missile technology?" Narayanan used to needle me.

The bitter lessons of the two wars in 1962 and 1965 had left the Indian leadership with little choice in the matter of achieving self-reliance in military hardware and weapon systems. A large number of Surface-to-Air Missiles (SAMs) were obtained from the USSR to guard strategic locations. Gp Capt Narayanan passionately advocated the development of these missiles in the country.

While working together on RATO motors and on the Missile Panel, Narayanan and I played the roles of student and teacher interchangeably wherever required. He was very eager to learn about rocketry and I was very curious to know about airborne weapon systems. The depth of Narayanan's conviction and his force of application were inspiring. Right from the day of our pre-dawn visit to the Tilpat Range with Prof. Sarabhai, Narayanan was always busy with his RATO motor. He had arranged everything that was required before being asked. He obtained funding of Rs 75 lakhs with a further commitment towards any unforeseen costs. "You name the thing and I will get it for you, but do not ask for time," he said. At times, I often laughed at his impatience, and read for him these lines from T.S. Eliot's Hollow Men:

Between the conception
And the creation
Between the emotion
And the response
Falls the Shadow.

Defence R&D at that time was heavily dependent on imported equipment. Virtually nothing indigenous was available.

Together, we made a long shopping list and drew up an import plan. But this made me unhappy—was there no remedy or alternative? Was this nation doomed to live with screwdriver technology? Could a poor country like India afford this kind of development?

One day, while working late in the office, which was quite routine after I took up the RATO projects, I saw a young colleague, Jaya Chandra Babu going home. Babu had joined us a few months ago and the only thing I knew about him was that he had a very positive attitude and was articulate. I called him into my office and did a bit of loud thinking. "Do you have any suggestions?" I then asked him. Babu remained silent for a while, and then asked for time until the next evening to do some homework before answering my question.

The next evening, Babu came to me before the appointed time. His face was beaming with promise. "We can do it, sir! The RATO system can be made without imports. The only hurdle is the inherent

inelasticity in the approach of the organization towards procurement and subcontracting, which would be the two major thrust areas to avoid imports.” He gave me seven points, or, rather, asked for seven liberties—financial approval by a single person instead of an entire hierarchy, air travel for all people on work irrespective of their entitlement, accountability to only one person, lifting of goods by air-cargo, sub-contracting to the private sector, placement of orders on the basis of technical competence, and expeditious accounting procedures.

These demands were unheard of in government establishments, which tend to be conservative, yet I could see the soundness of his proposition. The RATO project was a new game and there was nothing wrong if it was to be played with a new set of rules. I weighed all the pros and cons of Babu’s suggestions for a whole night and finally decided to present them to Prof. Sarabhai. Hearing my plea for administrative liberalization and seeing the merits behind it, Prof. Sarabhai approved the proposals without a second thought.

Through his suggestions, Babu had highlighted the importance of business acumen in developmental work with high stakes. To make things move faster within existing work parameters, you have to pump in more people, more material and more money. If you can’t do that, change your parameters! Instinctive businessman that he was, Babu did not remain long with us and left ISRO for greener pastures in Nigeria. I could never forget Babu’s common sense in financial matters.

We had opted for a composite structure for the RATO motor casing using filament fibre glass/epoxy. We had also gone in for a high energy composite propellant and an event-based ignition and jettisoning system in real-time. A canted nozzle was designed to deflect the jet away from the aircraft. We conducted the first static test of RATO in the twelfth month of the project initiation. Within the next four months, we conducted 64 static tests. And we were just about 20 engineers working on the project! * * *

Chapter 6: Movers

In 1969, recognizing the transformative potential of space technology, Prof. Sarabhai committed to establishing India's capability in satellite launch with the creation of the Sriharikota Rocket Launch Station. Positioned strategically on the east coast to leverage Earth's rotation, Sriharikota became the birthplace of the SHAR Rocket Launch Station, driving India's indigenous satellite launch ambitions forward.

Under Prof. Sarabhai's guidance, the Indian Space Research Organization (ISRO) was formed to spearhead space research, and key personnel were handpicked for pivotal roles. Notably, the author was entrusted with leading the development of the fourth stage of the Satellite Launch Vehicle (SLV). This stage required cutting-edge innovations, aligning with the author's expertise in composite structures.

Despite setbacks, including the cancellation of a collaborative project with France, Prof. Sarabhai's leadership remained pivotal. His emphasis on learning from mistakes and fostering teamwork was evident in every aspect of the project. The establishment of the Rocket Engineering Section underscored his commitment to integration and innovation.

Following Prof. Sarabhai's untimely passing, the mantle passed to Prof. Satish Dhawan, who consolidated various facilities into the Vikram Sarabhai Space Centre (VSSC). The author, selected as Project Manager for SLV, faced the challenge of orchestrating a complex project involving multiple work centers and specialized teams. His approach, influenced by Islamic wisdom and mentorship from Dr. Brahm Prakash, emphasized patience, tolerance, and the integration of diverse talents.

The SLV-3 project, aimed at launching a 40 kg satellite into orbit, demanded meticulous planning and execution across propulsion, control systems, and launch facilities. Despite initial resource constraints, synergistic efforts among a dedicated team of engineers and scientists enabled significant progress. The team's success lay in celebrating achievements together, fostering morale, and overcoming setbacks through mutual support.

Today, the legacy of Prof. Sarabhai lives on through his visionary leadership, which not only advanced India's space capabilities but also nurtured a generation of scientists and engineers who continue to lead in pioneering missions like the Polar Satellite Launch Vehicle (PSLV) and Augmented Satellite Launch Vehicle (ASLV) projects.

* * *

Chapter 7 Thrusters

Assuming leadership of the SLV-3 project thrust me into a whirlwind of responsibilities. My days were a juggle of committee obligations, material procurement, correspondence, reviews, and briefings, all against the backdrop of diverse technical demands. Each morning, I commenced with a contemplative 2-kilometer walk around my lodge. This routine allowed me to chart a daily course, prioritizing key objectives, including long-term goals. Upon arriving at my office, I immediately cleared my desk. Within ten minutes, I sorted through papers—categorizing them by urgency, priority, pending status, or as reading material. High-priority documents were kept in view, while the rest were set aside.

Turning to the SLV-3 project, its design entailed approximately 250 sub-assemblies and 44 major subsystems. Material lists extended to over a million components, necessitating a meticulous project implementation strategy spanning seven to ten years. Professor Dhawan underscored the need for VSSC and SHAR to direct all manpower and funds towards our initiative. In response, we devised a matrix management approach to effectively engage with over 300 industries, aiming to empower them technologically.

Three principles guided our team: the significance of design capability, the efficacy of goal setting and realization, and resilience in the face of setbacks. Concurrently, we embarked on pioneering efforts in material science, incorporating a wide array of metallic and non-metallic materials. Stainless steel, aluminum alloys, composites, and ceramics featured prominently in the construction of the launch vehicle. We pursued advancements in welding techniques, electroforming, and precision tooling, crafting essential machinery in-house.

Avionics—encompassing electrical circuitry, instrumentation, and guidance systems—formed the nerve center of the SLV. Our research focused on digital electronics, microwave radars, and inertial systems to monitor the vehicle's performance in flight. The integration of transducers and telemetry systems facilitated real-time data collection and analysis, ensuring operational safety through advanced control and communication protocols.

Propulsion was pivotal. Solid propellants, classified as composite or double base, provided the necessary thrust. Our pursuit of self-sufficiency drove indigenous manufacturing capabilities forward, though not without challenges. Our team, largely self-trained, tackled issues with unwavering dedication and problem-solving acumen.

Concurrently, DRDO was advancing in missile technology, adapting the one-to-one substitution approach to indigenous surface-to-air missiles. Led by Air Commodore Narayanan, DRDL spearheaded the transformation, leveraging foreign collaborations and local talent to establish critical infrastructure.

At ISRO, a culture of participative management took root under Prof. Dhawan's stewardship. His systematic review meetings galvanized the team, fostering cohesion and clarity of purpose. Communication emerged as the cornerstone of our management strategy, bridging vertical and horizontal divides within the organization. Open dialogue and factual communication were pivotal in addressing challenges and driving progress.

Reflecting on my leadership journey, I emphasized the importance of independence, influence, and continuous learning. Knowledge and skills were indispensable assets, empowering effective decision-making and strategic planning. I advocated for proactive engagement and

personal responsibility, believing these qualities to be fundamental to individual and organizational success.

As ISRO transitioned into a government entity in 1975, the formation of the ISRO Council facilitated collaborative governance between operational centers and administrative bodies. This participative model, a departure from traditional bureaucratic structures, promoted synergy and accountability in scientific research and technological development.

In conclusion, my tenure at ISRO underscored the transformative power of vision, collaboration, and resilience in achieving ambitious scientific and technological goals. The journey was marked by challenges and milestones, guided by a shared commitment to innovation and national progress.

* * *

Chapter- 8 Expedients

The passage you've shared provides a rich, reflective narrative about the author's experiences with the SLV-3 (Satellite Launch Vehicle) project, interwoven with personal and professional challenges. The text highlights several key themes:

Key Themes and Lessons:

1. Performance Dimensions:

- The concept of performance dimensions extends beyond mere competencies to include attitudes, values, and traits.
- Identifying these dimensions can create a blueprint for exceptional performance.

2. Challenges and Personal Losses:

- The author experienced significant personal losses, including the deaths of close family members, which profoundly affected their emotional state and work.
- Despite these challenges, the author found solace and motivation through their work on the SLV-3 project.

3. Role of Total Commitment:

- Total commitment to one's work is depicted as essential for achieving success and overcoming challenges.
- The author emphasizes that hard work alone is not sufficient; total involvement and passion are crucial.

4. Flow State:

- Flow is described as a state of complete immersion and involvement in an activity, where actions follow an internal logic without conscious effort.
- Achieving flow involves working on challenging tasks that align with one's passion and having uninterrupted time.

5. Learning from Others:

- Interaction with figures like Wernher von Braun provided valuable insights and encouragement.

- von Braun's advice about commitment and dealing with failures helped reinforce the author's dedication to the SLV-3 project.
- 6. Impact of Teamwork and Coordination:**
- Effective teamwork and coordination were essential in overcoming obstacles and achieving project goals.
 - The author acknowledges the significant contributions of team members and the importance of harmonious collaboration.
- 7. Resilience and Inner Strength:**
- The narrative demonstrates the author's resilience in the face of both personal and professional adversities.
 - Inner strength and the ability to find purpose in one's work helped the author navigate through difficult times.

Conclusion:

The passage provides an insightful reflection on the interplay between personal challenges and professional dedication. It underscores the importance of performance dimensions, total commitment, and the flow state in achieving success. The author's experiences illustrate how personal loss can be reconciled with professional aspirations and how meaningful work can serve as a source of strength and purpose.

* *

Chapter- 9 Builders

This passage offers a rich tapestry of insights into the journey of a space scientist, reflecting on both personal and professional aspects. Here's a summary and analysis of the key themes and elements:

Summary:

- 1. Support and Emotional Resilience:**
 - **Dr. Brahm Prakash's Role:** Dr. Brahm Prakash's support was crucial during a period of difficulty following the failure of the SLV-3 mission. His approach, emphasizing team solidarity and emotional support, helped the author navigate through this challenging time.
- 2. Technical Failure and Responsibility:**
 - **SLV-3 Failure Analysis:** The failure of the SLV-3 was traced to issues with the second stage control system. Detailed analysis revealed that the failure was due to the draining of Red Fuming Nitric Acid (RFNA), which was caused by a malfunctioning solenoid valve. The author took personal responsibility for the mishap, acknowledging a lapse in judgment.
- 3. Learning from Failure:**
 - **Historical Context:** The author reflects on historical figures such as Johannes Kepler, Konstantin Tsiolkovsky, and Prof. Chandrasekhar to draw parallels with their own experiences. This reflection underscores the idea that scientific progress often involves overcoming setbacks and enduring long periods of failure.
- 4. Team Spirit and Inspiration:**
 - **Key Figures:** Dr. Brahm Prakash is highlighted as an inspiring figure who emphasized patience and thoughtful progress. The author acknowledges the contributions of team members like Sivakami and reflects on how their dedication and courage were vital to the success of the SLV-3 project.

5. **Success and Recognition:**

- **SLV-3 Success:** On 18 July 1980, the SLV-3 successfully launched, marking a significant achievement for India's space program. The author describes the widespread national excitement and recognition that followed, including personal reflections on missing mentors and colleagues who had passed away.

6. **Personal Reflections and Future Directions:**

- **Transition to DRDO:** After the success of the SLV-3, the author considered a transition to the Defence Research and Development Organisation (DRDO) to lead missile development programs. The decision was influenced by Prof. Ramanna's proposal and the author's ongoing commitment to advancing India's scientific capabilities.

7. **Recognition and Awards:**

- **Padma Bhushan:** The author was honored with the Padma Bhushan award, which was a source of personal and familial joy. Despite mixed reactions from peers, the award was a symbol of recognition for their contributions to the space program.

Analysis:

1. **Resilience in the Face of Failure:**

- The narrative emphasizes the importance of resilience and learning from setbacks. It shows how personal responsibility and acceptance of failure can be instrumental in achieving future success.

2. **Role of Supportive Mentorship:**

- Dr. Brahm Prakash's mentorship illustrates the value of supportive leadership and the impact it can have on an individual's professional and emotional well-being.

3. **Scientific and Emotional Journey:**

- The passage intertwines the scientific challenges with personal emotions, demonstrating how scientific endeavors are deeply connected with individual experiences and societal impacts.

4. **Recognition and Its Implications:**

- The author's reflections on recognition reveal both the personal satisfaction and professional challenges associated with public acknowledgment. It also highlights the complexities of working within collaborative environments where individual achievements can sometimes lead to envy or misunderstanding.

This account provides an inspiring look into the life of a scientist who navigated both triumphs and tribulations, underscoring the interconnectedness of scientific progress, personal growth, and emotional resilience.

You may charge me with murder –
Or want of sense (We are all of us weak at times):
But the slightest approach to a false pretence
Was never among my crimes!

III
PROPITIATION
[1981 – 1991]

Let craft, ambition, spite,
Be quenched in Reason's night,
Till weakness turn to might,
Till what is dark be light,
Till what is wrong be right!
Lewis Carroll

Chapter- 10 Seekers

Summary of the Appointment and the Launch of IGMDP

In early 1982, a complex negotiation unfolded between the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO) concerning my transfer from ISRO to DRDO. This transition was further complicated by administrative delays and internal hesitations. The decision was finalized in February 1982 when I was appointed Director of the Defence Research and Development Laboratory (DRDL), succeeding Prof. Ramanna. My appointment was crucial at a time when DRDL was grappling with the aftermath of the Devil missile project's termination.

Dr. V.S. Arunachalam, who succeeded Prof. Ramanna, was a dynamic leader whose energy and commitment significantly impacted the DRDL's morale and operations. His leadership, coupled with my collaboration, aimed to revive DRDL's efforts and refocus on missile development. My initial visits to DRDL highlighted both the potential and the challenges faced by the laboratory, including the underutilized twin 30-ton Liquid Propellant Rocket Engine project.

Recognizing the need for a revitalized vision, I emphasized the importance of practical, market-oriented missile systems and encouraged collaboration with external institutions. By fostering a culture of openness and inclusivity, I sought to reinvigorate the DRDL workforce, drawing upon external expertise to enhance our projects. This approach was inspired by my past experiences and the need for a fresh perspective within DRDL.

In 1983, I proposed an Integrated Guided Missile Development Programme (IGMDP), aiming to create a comprehensive missile development strategy encompassing several types of missile systems. The proposal was met with skepticism but received strong support from Dr. Arunachalam and the Defence Minister, R. Venkataraman. Our revised plan, presented to the Defence Minister, included a detailed financial and strategic framework for missile development.

During the presentation, I faced a personal dilemma as my niece's wedding coincided with critical discussions in Delhi. However, Dr. Arunachalam's intervention facilitated an urgent arrangement, allowing me to attend the wedding and subsequently continue with the crucial meetings. This support underscored the collaborative spirit and commitment shared among the team.

The Defence Minister's approval of our revised proposal marked a turning point, leading to the sanction of Rs 388 crores for the IGMDP. This program aimed to develop indigenous missile systems, including the Prithvi (Surface-to-Surface), Trishul (Tactical Core Vehicle), Akash (Surface-to-Air), and Nag (anti-tank missile). My long-cherished project, the Re-entry Experiment Launch Vehicle (REX), was named Agni.

The formal launch of the IGMDP on July 27, 1983, represented a milestone in India's missile development efforts. The event, attended by a diverse audience from scientific, academic, and military circles, marked the beginning of a new era in India's defense capabilities.

* * *

chapter 11 Stewards

The IGMDP Initiative

The launch of the Integrated Guided Missile Development Programme (IGMDP) was a landmark event in Indian scientific advancement. At that time, missile technology was predominantly controlled by a select group of nations, and there was widespread curiosity about how India, with its existing resources, would achieve its ambitious goals. The scale of the IGMDP was unprecedented, and the projected timelines seemed unrealistic by the standards of Indian research and development (R&D). Securing approval for the programme was merely the initial step; the real challenge lay in effective execution.

With the allocation of funds and autonomy, the primary focus shifted to translating the IGMDP promises into reality. While we had skilled manpower, financial resources, and some infrastructure, the key requirement was mastering missile technology. This task required exceptional leadership to drive the project and coordinate the efforts of hundreds of engineers and scientists. Our experience with the Satellite Launch Vehicle (SLV-3) had taught us that success depended on addressing the inherent contradictions and procedural inefficiencies within the participating laboratories.

Among the challenges was overcoming entrenched attitudes in public sector units that were not accustomed to performance-based assessments. The entire system needed to adapt and evolve. We aimed to achieve goals far beyond our collective capability, requiring a meticulous approach based on proportional reasoning. DRDL's pool of talent was considerable, but it was often hindered by egotism and lack of confidence. Many scientists preferred deferring to external specialists rather than relying on their own judgments.

A notable figure at DRDL was AV Ranga Rao, whose distinctive appearance and personality made a strong impression. Despite his arrogance, his expertise in management and organizational restructuring proved invaluable. Ranga Rao's efforts, along with our decision to reorganize DRDL into a matrix-based structure, were instrumental in addressing the technological demands of the IGMDP.

Selecting Project Directors for the missile projects was crucial. The choice needed to balance various attributes: from cautious planning to flexible control. Leaders needed to be capable of inspiring and managing teams while navigating complex technological and organizational landscapes. For the Prithvi project, I chose Col VJ Sundaram, whose innovative approach and problem-solving skills aligned well with the project's needs. Cmde SR Mohan was selected for Trishul due to his deep knowledge and persuasive abilities. RN Agarwal, with his academic and managerial excellence, was chosen for the Agni project, while Prahlada and NR Iyer were appointed for Akash and Nag, respectively. Deputies VK Saraswat and AK Kapoor were assigned to support Sundaram and Mohan.

To foster an environment conducive to productivity, I established a Science Council to ensure open discussion and collective problem-solving among scientists. This was critical for maintaining morale and addressing challenges collaboratively. The selection of Project Directors and the creation of the Science Council aimed to build a robust team capable of leading the IGMDP to success.

As the IGMDP progressed, we faced logistical and infrastructural challenges. The existing facilities at DRDL were inadequate for the expanded needs of the programme. Consequently, we initiated the development of the Research Centre Imarat (RCI) to house advanced technical facilities. The establishment of the RCI involved substantial planning, coordination with various agencies, and overcoming bureaucratic hurdles.

Simultaneously, the search for a missile flight test site led us to Balasore, Orissa, where we set up the Interim Test Range (ITR). The design and construction of the ITR, while respecting local environmental concerns, were crucial for the successful testing of missile systems.

The creation of RCI was one of the most fulfilling aspects of my career. The center represented a significant step forward in missile technology, akin to the satisfaction of a craftsman creating enduring artifacts. Defense Minister R Venkataraman's advice to harness imagination and belief was a guiding principle throughout the IGMDP. Our enthusiasm and the visible success of the programme attracted top professionals, reinforcing the IGMDP's reputation as a promising and innovative endeavor.

In summary, the IGMDP was a transformative initiative that demonstrated India's capability to achieve technological milestones through meticulous planning, effective leadership, and collective effort.

chapter 12 Workers

We were at a meeting laying down the targets for 1984, when news came of Dr Brahm Prakash's death on the evening of 3 January at Bombay. It was a great emotional loss for me, for I had had the privilege of working under him during the most challenging period of my career. His compassion and humility were exemplary. His healing touch on the day of the failed SLV-E1 flight surfaced in my memory serving to deepen my sorrow.

If Prof. Sarabhai was the creator of VSSC, Dr Brahm Prakash was the executor. He had nurtured the institution when it most needed nourishment. Dr Brahm Prakash played a very important role in shaping my leadership skills.

In fact my association with him was a turning point in my life. His humility mellowed me and helped me discard my aggressive approach. His humility did not consist merely in being modest about his talents or virtues, but in respecting the dignity of all those who worked under him and in recognizing the fact that no one is infallible, not even the leader. He was an intellectual giant with a frail constitution; he had a childlike innocence and I always considered him a saint among scientists.

During this period of renaissance at DRDL, an altitude control system and an on-board computer developed by P Banerjee, KV Ramana Sai and their team was almost ready. The success of this effort was very vital for any indigenous missile development programme. All the same, we had to have a missile to test this important system.

After many brainstorming sessions, we decided to improvise a Devil missile to test the system. A Devil missile was dis-assembled, many modifications made, extensive subsystem testing was done and the missile checkout system was reconfigured. After installing a make-shift launcher, the modified and extended range Devil missile was fired on 26 June 1984 to flight test the first

indigenous Strap-down Inertial Guidance system. The system met all the requirements. This was the first and very significant step in the history of Indian missile development, which had so far been restricted to reverse engineering, towards designing our own systems. A long-denied opportunity was at last utilized by missile scientists at DRDL. The message was loud and clear. We could do it!

It did not take long for the message to reach Delhi. Prime Minister Indira Gandhi expressed her desire to personally apprise herself of the progress of the IGMDP. The entire organization was filled with an aura of excitement. On 19 July 1984, Shrimati Gandhi visited DRDL.

Prime Minister Indira Gandhi was a person with a tremendous sense of pride—in herself, in her work and in her country. I deemed it an honour to receive her at DRDL as she had instilled some of her own pride into my otherwise modest frame of mind. She was immensely conscious that she was the leader of eight hundred million people. Every step, every gesture, every movement of her hands was optimised. The esteem in which she held our work in the field of guided missiles boosted our morale immensely.

During the one hour that she spent at DRDL, she covered wideranging aspects of the IGMDP, from flight system plans to multiple development laboratories. In the end, she addressed the 2000-strong DRDL community. She asked for the schedules of the flight system that we were working on. “When are you going to flight test Prithvi?” Shrimati Gandhi asked. I said, “June 1987.” She immediately responded, “Let me know what is needed to accelerate the flight schedule.” She wanted scientific and technological results fast. “Your fast pace of work is the hope of the entire nation,” she said. She also told me that the emphasis of the IGMDP should be not only on schedule but also on the pursuance of excellence. “No matter what you achieve, you should never be completely satisfied and should always be searching for ways to prove yourself,” she added. Within a month, she demonstrated her interest and support by sending the newly appointed Defence Minister, SB Chavan, to review our projects. Shrimati Gandhi’s follow-up approach was not only impressive, it was effective too. Today, everyone associated with aerospace research in our country knows that excellence is synonymous with the IGMDP. We had our home-grown, but effective, management techniques.

One such technique was concerned with follow-up of project activities. It basically consisted of analysing the technical as well as procedural applicability of a possible solution, testing it with the work centres, discussing it with the general body of associates and implementing it after enlisting everybody’s support. A large number of original ideas sprung up from the grass root level of participating work centres. If you were to ask me to indicate the single most important managerial tactic in this successful programme, I would point to the pro-active follow-up. Through follow-up on the work done at different laboratories on design, planning, supporting services, and by the inspection agencies and academic institutions, rapid progress has been achieved in the most harmonious manner. In fact, the work code in the Guided Missile Programme Office was: if you need to write a letter to a work centre, send a fax; if you need to send a telex or fax, telephone; and if the need arises for telephonic discussions, visit the place personally.

The power of this approach came to light when Dr Arunachalam conducted a comprehensive status review of IGMDP on 27 September 1984. Experts from DRDO Laboratories, ISRO, academic institutions, and production agencies gathered to critically review the progress made and problems faced in the first year of implementation. Major decisions like the creation of facilities at Imarat Kancha and the establishment of a test facility were crystallized during the review. The future infrastructure at the Imarat Kancha was given the name of Research Centre Imarat (RCI), retaining the original identity of the place.

It was a pleasure to find an old acquaintance, TN Seshan, on the review board. Between SLV-3 and now, we had developed a mutual affection. However, this time as the Defence Secretary, Seshan's queries about the schedules and viability of financial propositions presented were much more pointed. Seshan is a person who enjoys verbally bringing adversaries to their knees. Using his sharp-edged humour, Seshan would make his opponents look ridiculous. Although he is prone to be loud and can turn argumentative on occasions, in the end he would always ensure maximization of all available resources towards a solution that was within implementation. At a personal level, Seshan is a very kind-hearted and considerate person.

My team was particularly pleased to answer his questions about the advanced technology employed in the IGMDP. I still remember his uncanny curiosity about the indigenous development of carbon-carbon composites. And to let you into a small secret—Seshan is perhaps the only person in the world who enjoys calling me by my full name which contains 31 letters and five words—Avul Pakir Jainulabdeen Abdul Kalam. The missile programme had been pursued concurrently and had partners in design, development and production from 12 academic institutions and 30 laboratories from DRDO, the Council of Scientific and Industrial Research (CSIR), ISRO and industry. In fact, more than 50 professors and 100 research scholars worked on missile-related problems in the laboratories of their respective institutes. The quality of work achieved through this partnership in that one year had given me tremendous confidence that any development task could be undertaken within the country so long as we have our focussed schedules. Four months before this review, I think it was during April–June 1984, six of us in the missile programme visited academic campuses and enlisted promising young graduates. We presented an outline of the missile programme before the professors and the aspiring students, about 350 of them, and requested them to participate. I informed the reviewers that we were expecting around 300 young engineers to join our laboratories.

Roddam Narasimha, then Director of the National Aeronautical Laboratory, used the occasion of this review to put up a strong case for technology initiative. He cited the experiences of the green revolution, which had demonstrated beyond doubt that if the goals were clear, there was enough talent available in the country to tackle major technological challenges.

When India carried out its first nuclear explosion for peaceful purposes, we declared ourselves the sixth country in the world to explode a nuclear device. When we launched SLV-3 we were the fifth country to achieve satellite launch capability. When were we going to be the first or second country in the world to achieve a technological feat?

I listened carefully to the review members as they aired their opinions and doubts, and I learned from their collective wisdom. It was indeed a great education for me. Ironically, all through school, we were taught to read, write and speak, but never to listen, and the situation remains much the same today. Traditionally, Indian scientists have been very good speakers, but have inadequately developed listening skills. We made a resolution to be attentive listeners. Are engineering structures not built on the foundation of functional utility? Does technical know-how not form its bricks? And, are these bricks not put together with the mortar of constructive criticism? The foundation had been laid, the bricks baked, and now the mortar to cement our act together was being mixed.

We were working on the action plan that had emerged from the earlier month's review, when the news of Shrimati Gandhi's assassination broke. This was followed by the news of widespread violence and riots. A curfew had been imposed in Hyderabad city. We rolled up the PERT charts and a city map was spread out over the table to organize transport and safe passage for all

employees. In less than an hour, the laboratory wore a deserted look. I was left sitting alone in my office.

The circumstances of Shrimati Gandhi's death were very ominous. The memories of her visit barely three months ago further deepened my pain. Why should great people meet with such horrific ends? I recollected my father telling someone in a similar context: "Good and bad people live together under the sun as the black thread and the white are woven together in a cloth. When either one of the black or white thread breaks, the weaver shall look into the whole cloth, and he shall examine the loom also." When I drove out of the laboratory there was not a single soul on the road. I kept thinking about the loom of the broken thread.

Shrimati Gandhi's death was a tremendous loss to the scientific community. She had given impetus to scientific research in the country. But India is a very resilient nation. It gradually absorbed the shock of Shrimati Gandhi's assassination, although at the cost of thousands of lives and a colossal loss of property. Her son, Rajiv Gandhi, took over as the new Prime Minister of India. He went to the polls and obtained a mandate from the people to carry forward the policies of Mrs. Gandhi, the Integrated Guided Missile Development Programme being a part of them.

By the summer of 1985, all the groundwork had been completed for building the Missile Technology Research Centre at Imarat Kancha. Prime Minister Rajiv Gandhi laid the foundation stone of the Research Centre Imarat (RCI) on 3 August 1985. He appeared very pleased with the progress made. There was a child-like curiosity in him which was very engaging. The grit and determination displayed by his mother when she visited us a year ago was also present in him, although with a small difference. Madam Gandhi was a taskmaster, whereas Prime Minister Rajiv Gandhi used his charisma to achieve his ends. He told the DRDL family that he realised the hardships faced by Indian scientists and expressed his gratitude towards those who preferred to stay back and work in their motherland rather than go abroad for comfortable careers. He said that nobody could concentrate on work of this type unless he was free from the trivialities of daily life, and assured us that whatever necessary would be done to make scientists' lives more comfortable.

Within a week of his visit, I left for the USA with Dr Arunachalam on an invitation from the United States Air Force. Roddam Narasimha of National Aeronautical Laboratory and KK Ganapathy of HAL accompanied us. After finishing our work at the Pentagon in Washington, we landed in San Francisco on our way to Los Angeles to visit Northrop Corporation. I utilized this opportunity to visit the Crystal Cathedral built by my favourite author, Robert Schuller. I was amazed by the sheer beauty of this all-glass, four-pointed, star-shaped structure that is more than 400 feet from one point to another. The glass roof which is 100 feet longer than a football field seemed to float in space. This Cathedral has been built at the cost of several million dollars through donations organized by Schuller. "God can do tremendous things through the person who doesn't care about who gets the credit. The ego involvement must go," writes Schuller. "Before God trusts you with success, you have to prove yourself humble enough to handle the big prize." I prayed to God in Schuller's church to help me build a Research Centre at the Imarat Kancha—that would be my Crystal Cathedral. * * *

The young engineers at DRDL, 280 in total, transformed the organization by developing advanced technologies like re-entry structures, millimetric wave radars, phased array radars, and rocket systems. Initially, they felt overwhelmed by their responsibilities, but with encouragement and positive reinforcement, their attitudes shifted from negative to positive. This new mindset, combined with the energy of the young team, revitalized older scientists and created a productive work culture.

We emphasized goal-setting, positive thinking, visualizing, and believing. Young scientists were encouraged to present their work at review meetings, boosting their confidence and enabling them to tackle technical challenges without fear. This collaborative environment, mixing the experience of older scientists with the skills of younger colleagues, led to a successful work culture at DRDL.

The first missile launch on 16 September 1985 with Trishul was a success, followed by the successful test flight of the Pilotless Target Aircraft (PTA). These milestones demonstrated DRDL's capabilities and highlighted the cooperation between DRDL and private sector firms. Our partnerships expanded to multi-laboratory programmes and collaborations with the industry, emphasizing national self-reliance in missile technology.

Even if they consented to cooperate, the cost for their wind tunnel would exceed our entire project budget. To circumvent this, Prof. SM Deshpande of IISc gathered four young scientists and, within six months, they developed unique software for Computational Fluid Dynamics for Hypersonic Regimes. Similarly, Prof. IG Sharma of IISc created the missile trajectory simulation software ANUKALPANA for Akash-type systems, which no other country would provide.

Prof. Bharati Bhatt of IIT Delhi, in collaboration with SPL and CEL, developed ferrite phase shifters for the Akash radar, breaking the Western monopoly. Prof. Saraf of IIT Kharagpur and BK Mukhopadhyay from RCI created a millimetric wave antenna for the Nag Seeker Head, a notable international achievement. CEERI Pilani, SPL, and RCI developed an Impatt Diode, reducing foreign dependence for crucial MMW device components.

As the project expanded, performance appraisal became challenging. Leading nearly 500 scientists, I managed their Annual Confidential Reports (ACRs), forwarding them to an assessment board. Some saw missed promotions as personal dislikes or favors from me. Evaluating performance fairly was a delicate balance, as individuals often judged their actions by intentions, not results.

Reflecting on my career, I constantly aimed to grow and improve, driven by an inner urge rather than external influences. I believe life's challenges offer opportunities for growth. Effective leadership involves motivating people to enhance performance and handle setbacks. By balancing supportive and resisting forces, one can foster a productive work environment. In 1983, during the IGMDP launch, I sought to create such an environment, even during the design phase.

The re-organization significantly increased activity levels, necessitating a second re-organization as multiple projects advanced into development and flight-testing stages. By integrating a young team of scientists, the average age dropped from 42 to 33 years. The motivational inventory of a leader was crucial, focusing on understanding employee needs, the motivational impact of job design, and the power of positive reinforcement. The 1983 re-organization, managed adeptly by AV Ranga Rao and Col R Swaminathan, led to the self-reliance in advanced technology and showcased the intellectual rejuvenation brought by enthusiastic young minds.

As work on Prithvi progressed, a matrix organization was retained, and a task-design exercise was implemented, with scientists becoming system managers and an external fabrication wing handling missile hardware development. By 1988, Prithvi featured advanced clustered Liquid Propellant (LP) rocket engines, and the project's success hinged on converting creative ideas into practical solutions, led by Saraswat, Y Gyaneshwar, and P Venugopalan. The Prithvi launch on 25 February 1988 marked India's entry into advanced missile technology, leading to a seven-nation technology embargo. The Agni mission further exemplified India's competence in rocketry, involving over 500 scientists and emphasizing collaborative effort and resilience despite technical challenges, underscoring India's capability in achieving high technology through combined scientific and industrial efforts.

In May 1989, amidst critical challenges, I addressed the DRDL-RCI community, urging resilience and dedication towards the Agni project. Despite earlier setbacks and media satire, we focused on refurbishing the control system with immense determination. The team's incredible effort, completing the system readiness in just ten days, was a testament to their willpower. The launch, scheduled for 22 May, faced additional obstacles due to impending cyclonic weather, but our resolve remained steadfast.

On the launch day, 22 May 1989, Agni successfully lifted off, following a perfect trajectory and meeting all flight parameters. This success, following five years of relentless work and overcoming significant hurdles, was a moment of immense pride. Prime Minister Rajiv Gandhi and President Venkataraman lauded the achievement, recognizing it as a milestone in India's quest for technological self-reliance. Agni symbolized not just a missile but the indomitable spirit and pride of the nation.

The Agni launch underscored India's capability in advanced missile technology, marking a shift towards technological independence. The success fostered further development in areas like re-entry technology and tactical missiles, with Prithvi and Trishul already showcasing impressive results. As we continued to innovate, the focus shifted to future projects like the Astra missile and advancements in materials science, ensuring that India remained at the forefront of defence technology.

IV CONTEMPLATION [1991 –]

We create
and destroy
And again recreate
In forms of which no one knows.
AL-WAQUIAH Qur'an

Chapter - 15

Emancipators

On Republic Day 1990, our nation celebrated a landmark achievement in its missile program. I was honored with the Padma Vibhushan alongside Dr. Arunachalam, while my esteemed colleagues JC Bhattacharya and RN Agarwal were awarded the Padma Shree. This recognition of so many scientists from a single organization was unprecedented. Despite these accolades, my lifestyle remained modest, reflecting the profound respect and love I received from my countrymen—an invaluable reward that transcends monetary gain.

Reflecting on my journey, memories of mentorship and overcoming formidable challenges surfaced. From the sands of Rameswaram to the triumphs of the SLV-3, each milestone was a testament to collective effort. A notable achievement was the successful testing of the Nag missile, showcasing India's indigenous technological prowess. This success underscored the efficacy of the consortium approach, which mobilized multiple laboratories across the country in a cohesive effort.

A particularly memorable event was my visit to Madurai to deliver a convocation address, where I reunited with my high school teacher, Rev. Iyadurai Solomon. His words, "Great dreams of great dreamers are always transcended," profoundly moved me. Later, in Trichi, I visited St. Joseph's College, paying tribute to the educators who significantly shaped my path.

India celebrated its 44th Independence Day with the test firing of the Akash missile, marking a critical advancement in ground-based air defense. That same year, I was honored with an honorary Doctor of Science degree from Jadavpur University, an accolade I shared with the legendary Nelson Mandela. This recognition underscored our shared dedication and persistence in our respective missions.

In 1991, discussions at DRDL and RCI centered on achieving technological parity with other nations, culminating in significant enhancements in missile accuracy and guidance systems. The successful test firings of Prithvi and Trishul during the Gulf War amplified national pride and awareness of India's missile capabilities. The Gulf War emphasized the necessity of technological superiority, echoing the ancient Chinese philosopher Sun Tzu's principle of breaking the enemy's will through strategic dominance.

The deliberations at DRDL highlighted the imperative of attaining military capability parity in specific areas with potential adversaries. This commitment led to significant advancements: improving Prithvi's accuracy, developing the Ka band guidance system for Trishul, and perfecting carbon-carbon re-entry control surfaces for Agni. These milestones represented substantial progress in India's missile program.

On a broader scale, I observed that technology perpetuates its own advancement, creating a cycle of innovation encompassing creative ideas, practical applications, and societal integration. For India, closing this innovation loop is crucial to keeping pace with global technological advancements. The year also witnessed breakthroughs in ship-launched anti-sea-skimmer missiles and other advanced systems.

In summary, my experiences and reflections underscore the importance of overcoming psychological inertia and self-limiting attitudes prevalent in India. By embracing technology and innovation, and transcending perceived limitations, India can achieve remarkable progress. My journey and the collective efforts of many demonstrate that with determination and faith, no challenge is insurmountable.

Chapter 16 Leaders

Technology, unlike science, is a group activity. It is not based on individual intelligence, but on the interaction of many people. I think the biggest success of IGMDP is not the fact that in record time the country acquired the capability of making five state-of-the-art missile systems but that through it, some superb teams of scientists and engineers have been created. If someone asks me about my personal achievements in Indian rocketry, I would put it down to having created a challenging environment for teams of young people to work in.

In their formative stages, teams are much like children in spirit. They are as excitable, as full of vitality, enthusiasm, curiosity and the desire to please and excel. As with children, however, these positive attributes can be destroyed by the behaviour of misguided parents. For teams to be successful, the environment must offer scope for innovation. I confronted many such challenges during the course of my work at DTD&P (Air), ISRO, DRDO and elsewhere, but always ensured for my teams an environment which allowed innovation and risk-taking.

When we first began creating project teams during the SLV-3 project and later in IGMDP, people working in these teams found themselves in the frontline of their organizations' ambitions. Since a great deal of psychological investment had been made in these teams, they became both highly visible and highly vulnerable. They were personally expected to make a disproportionate contribution to win collective glory.

I was aware that any failure in the organizational support system would negate the investment in team strategies. The teams would be relegated to the league of average working groups and might fail even there, unable to meet the high expectations set for them. On several occasions, the organization was on the verge of losing its nerve and imposing restraints. The high level of uncertainty and complexity associated with team activity very often proves to be a trap for the unwary.

In the early years of the SLV-3 project, I often had to counter nervousness of the top people because progress was not tangibly or immediately visible. Many felt that the organization had lost control over SLV-3, that the team would run on unchecked, and cause chaos and confusion. But on all occasions, these fears were proved imaginary. There were many people in powerful positions in organizations, for example at VSSC, who underestimated our responsibility and commitment to organizational objectives. Dealing with such people was a crucial part of the whole operation, and this was performed dexterously by Dr Brahm Prakash.

When you work as a project team, you need to develop a complex view of the success criteria. There are always multiple and often conflicting sets of expectations that exist about a team's performance. Then, quite often, the project teams are virtually torn apart in their attempt to accommodate the needs and constraints of sub-contractors outside the organization and specialist departments within the organization. Good project teams are able to quickly identify the key person or people with whom negotiations must take place. A crucial aspect of the team leader's role is to negotiate with these key people for their requirements, and to ensure that the dialogue continues on a regular basis as the situation develops or changes. If there is one thing outsiders dislike, it is unpleasant surprises. Good teams ensure that there are none.

The SLV-3 team developed their own internal success criteria. We articulated our standards, expectations and objectives. We summarised what was needed to happen for us to be successful and how we would measure success. For instance, how we were going to accomplish our tasks, who would do what and according to what standards, what were the time limits and how would the team conduct itself with reference to others in the organization. The process of arriving at the success criteria within a team is an intricate and skilled one because there are a lot of things going on below the surface. On the surface, the team is simply working to achieve the project's goals. But I have repeatedly seen how

people are poor at articulating what they want—until they see a work centre doing something they don't want them to do. A project team member must in fact act like a detective. He should probe for clues as to how the project is proceeding, and then piece together different bits of evidence to build up a clear, comprehensive and deep understanding of the project's requirements.

At another level, the relationship between the project teams and the work centres should be encouraged and developed by the project leader. Both parties must be very clear in their minds about their mutual interdependence and the fact that both of them have a stake in the project. At yet another level, each side should assess the other's capabilities and identify areas of strength and weakness in order to plan what needs doing and how it should be done. In fact, the whole game can be seen as a process of contracting. It is about exploring and arriving at an agreement on what each party expects of the other; about realistically understanding the constraints of the other party; and about communicating the success criteria while defining some simple rules about how the relationship is to work; but above all, it's the best means of developing clarity in the relationship, both at the technical and personal levels, in order to avoid any nasty surprises in the future. In IGMDP, Sivathanu Pillai and his team did some remarkable work in this area through their home-grown technique, PACE, which stands for Programme Analysis, Control and Evaluation. Each day between 12 noon and 1 p.m., they would sit with a project team and a particular work centre that was on the critical path and assess the level of success among themselves. The excitement of planning ways to succeed and the vision of future success provide an irresistible form of motivation which, I have found, always makes things happen.

The concept of Technology Management has its roots in the Developmental Management models which originated in the early Sixties out of a conflict between harmony-seeking and output-oriented management structures. There are basically two types of management orientations: primal, which values an economic employee, and rational, which values an organizational employee. My concept of management is woven around an employee who is a technology person. While the primal management school recognizes people for their independence, and rational management acknowledges them for their dependability, I value them for their interdependence. Whereas the primal manager champions independent enterprise and the rational manager serves cooperation, I moot interdependent joint ventures, getting the forces together, networking people, resources, time schedules, costs, and so on.

Abraham Maslow was the first person to suggest the new psychology of self-actualization at a conceptual level. In Europe, Rudolf Steiner and Reg Revans developed this concept into the system of individual learning and organizational renewal. The Anglo-German management philosopher, Fritz Schumacher introduced Buddhist economics and authored the concept of "Small is Beautiful". In the Indian subcontinent, Mahatma Gandhi emphasized grass root level technology and put the customer at the centre of the entire business activity. JRD Tata brought in progress driven infrastructure. Dr Homi Jehangir Bhabha and Prof. Vikram Sarabhai launched the high, technology-based atomic energy and space programmes with a clear-cut emphasis on the natural laws of totality and flow. Advancing the developmental philosophy of Dr Bhabha and Prof. Sarabhai, Dr MS Swaminathan ushered the Green Revolution into India working on another natural principle of integrity. Dr Verghese Kurien brought in a powerful cooperative movement through a revolution in the dairy industry. Prof. Satish Dhawan developed mission management concepts in space research. These are but a few examples of individuals who have not only articulated but also implemented their ideas, thus changing forever the face of research and business organizations all over the world.

In the IGMDP, I attempted to integrate the vision of Prof. Sarabhai and the mission of Prof. Dhawan by adapting the high technology setting of Dr Brahm Prakash's space research. I attempted to add the natural law of Latency in founding the Indian Guided Missile Programme in order to create a completely indigenous variety of technology management. Let me use a metaphor to illuminate this.

The tree of technology management takes root only if there is the self-actualization of needs, renewal, interdependence, and natural flow. The growth patterns are characteristic of the evolution process, which means that things move in a combination of slow change and sudden transformation; each transformation causes either a leap into a new, more complex level or a devastating crash to some earlier

level; dominant models reach a certain peak of success when they turn troublesome; and the rate of change always accelerates.

The stem of the tree is the molecular structure in which all actions are formative, all policies are normative, and all decisions are integrative. The branches of this tree are resources, assets, operations, and products which are nourished by the stem through a continuous performance evaluation and corrective update.

This tree of technology management, if carefully tended, bears the fruits of an adaptive infrastructure: technological empowerment of the institutions, the generation of technical skills among people, and finally self-reliance of the nation and improvement in the quality of life of its citizenry.

When IGMDP was sanctioned in 1983, we did not have an adequate technology base. A few pockets of expertise were available, but we lacked the authority to utilize that expert technology. The multi-project environment of the programme provided a challenge, for five advanced missile systems had to be simultaneously developed. This demanded judicious sharing of resources, establishing priorities, and ongoing induction of manpower. Eventually, the IGMDP had 78 partners, including 36 technology centres and 41 production centres spread over public sector undertakings, ordnance factories, private industries, and professional societies, hand-in hand with a well-knit bureaucratic structure in the Government. In the management of the Programme, as much as in the technological inputs, we attempted to develop a model that was appropriate, even tailor-made, for our very specific needs and capabilities. We borrowed ideas that had been developed elsewhere, but adapted them in the light of what we knew were our strengths and what we recognized as the constraints we would be compelled to work under. All in all, the combination of appropriate management and our cooperative endeavours helped to unearth the talent and potential that lay unused in research laboratories, government institutions and private industries.

The Technology Management philosophy of IGMDP is not exclusive to missile development. It represents the national urge to succeed and an awareness that the world will never again be directed by muscle or money power. In fact, both these powers will depend on technological excellence. Technology respects only technology. And, as I said in the beginning, technology, unlike science, is a group activity. It does not grow only through individual intelligence, but by intelligences interacting and ceaselessly influencing one another. And that is what I tried to make IGMDP: a 78- strong Indian family which also makes missile systems.

There has been much speculation and philosophizing about the life and times of our scientists, but not enough exploration in determining where they wanted to go and how they reached there. In sharing with you the story of my struggle to become a person, I have perhaps given you some insight into this journey. I hope it will help at least a few young people to stand up to the authoritarianism in our society.

A characteristic feature of this social authoritarianism is its insidious ability to addict people to the endless pursuit of external rewards, wealth, prestige, position, promotion, approval of one's lifestyle by others, ceremonial honours, and status symbols of all kinds.

To successfully pursue these goals, they have to learn elaborate rules of etiquette and familiarize themselves with customs, traditions, protocols and so on. The youth of today must unlearn this self-defeating way of life. The culture of working only for material possessions and rewards must be discarded. When I see wealthy, powerful and learned people struggling to be at peace with themselves, I remember people like Ahmed Jallaluddin and Iyadurai Solomon. How happy they were with virtually no possessions!

On the coast of Coromandel
Where the earthy shells blow,
In the middle of the sands
Lived some really rich souls.
One cotton lungi and half a candle –

One old jug without a handle
These were all the worldly possessions
Of these kings in the middle of the sands.

How did they feel so secure without anything to fall back upon? I believe they drew sustenance from within. They relied more on the inner signals and less on the external cues that I have mentioned above. Are you aware of your inner signals? Do you trust them? Have you taken control over your life into your own hands? Take this from me, the more decisions you can make avoiding external pressures, which will constantly try to manipulate you, the better your life will be, the better your society will become. Infact the entire nation will benefit by having strong, inwardlooking people as their leaders. A citizenry that thinks for itself, a country of people who trust themselves as individuals, would be virtually immune to manipulation by any unscrupulous authority or vested interest.

Your willingness to use your own inner resources to invest in your life, especially your imagination, will bring you success. When you address a task from your own uniquely individual standpoint, you become a whole person.

Everyone on this planet is sent forth by Him to cultivate all the creative potential within us and live at peace with our own choices. We differ in the way we make our choices and evolve our destiny. Life is a difficult game. You can win only by retaining your birthright to be a person. And to retain this right, you will have to be willing to take the social or external risks involved in ignoring pressures to do things the way others say they should be done. What will you call Sivasubramania Iyer inviting me to have lunch in his kitchen? Zohara, my sister, mortgaging her gold bangles and chains to get me into engineering college? Prof. Sponder insisting that I should sit with him in the front row for the group photograph? Making a hovercraft in a motor-garage setup? Sudhakar's courage? Dr Brahm Prakash's support? Narayanan's management? Venkataraman's vision? Arunachalam's drive? Each is an example of a strong inner strength and initiative. As Pythagoras had said twenty-five centuries ago, "Above all things, reverence yourself."

I am not a philosopher. I am only a man of technology. I spent all my life learning rocketry. But as I have worked with a very large crosssection of people in different organizations, I had an opportunity to understand the phenomenon of professional life in its bewildering complexity. When I look back upon what I have narrated so far, my own observations and conclusions appear as dogmatic utterances. My colleagues, associates, leaders; the complex science of rocketry; the important issues of technology management; all seem to have been dealt with in a perfunctory manner. The despair and happiness, the achievements and the failures—differing markedly in context, time, and space—all appear grouped together.

When you look down from an aircraft, people, houses, rocks, fields, trees, all appear as one homogeneous landscape, it is very difficult to distinguish one from another. What you have just read is a similar bird'seye view of my life seen, as it were, from afar.

My worthiness is all my doubt
His merit – all my fear—
Contrasting which my quality
Does however – appear.

This is the story of the period ending with the first Agni launch—life will go on. This great country will make enormous strides in all fields if we think like a united nation of 900 million people. My story—the story of the son of Jainulabdeen, who lived for over a hundred years on Mosque Street in Rameswaram island and died there; the story of a lad who sold newspapers to help his brother; the story of a pupil reared by Sivasubramania Iyer and Iyadurai Solomon; the story of a student taught by teachers like Pandalai; the story of an engineer spotted by MGK Menon and groomed by the legendary Prof. Sarabhai; the story of a scientist tested by failures and setbacks; the story of a leader supported by a large team of brilliant and dedicated professionals. This story will end

with me, for I have no belongings in the worldly sense. I have acquired nothing, built nothing, possess nothing—no family, sons, daughters.

I am a well in this great land
Looking at its millions of boys and girls
To draw from me
The inexhaustible divinity
And spread His grace everywhere
As does the water drawn from a well.

I do not wish to set myself up as an example to others, but I believe that a few readers may draw inspiration and come to experience that ultimate satisfaction which can only be found in the life of the spirit. God's providence is your inheritance. The bloodline of my greatgrandfather Avul, my grandfather Pakir, and my father Jainulabdeen may end with Abdul Kalam, but His grace will never cease, for it is Eternal. * * *

Epilogue This book is interwoven with my deep involvement with India's first Satellite Launch Vehicle SLV-3 and Agni Programmes, an involvement which eventually led to my participation in the recent important national event related to the nuclear tests in May, 1998. I have had the great opportunity and honour of working with three scientific establishments— Space, Defence Research and Atomic Energy. I found, while working in these establishments, that the best of human beings and the best of innovative minds were available in plenty. One feature common to all three establishments, is that the scientists and technologists were never afraid of failures during their missions. Failures contain within themselves the seeds of further learning which can lead to better technology, and eventually, to a high level of success. These people were also great dreamers and their dreams finally culminated in spectacular achievements. I feel that if we consider the combined technological strength of all these scientific institutions, it would certainly be comparable to the best found anywhere in the world. Above all, I have had the opportunity of working with the great visionaries of the nation, namely Prof. Vikram Sarabhai, Prof. Satish Dhawan and Dr Brahm Prakash, each of whom have greatly enriched my life. A nation needs both economic prosperity and strong security for growth and development. Our Self Reliance Mission in Defence System 1995– 2005 will provide the Armed Forces with a state-of-the-art competitive weapons system. The Technology Vision – 2020 plan will put into place certain schemes and plans for the economic growth and prosperity of the nation. These two plans have evolved out of the nation's dreams. I earnestly hope and pray that the development resulting from these two plans— Self Reliance Mission and Technology Vision – 2020—will eventually make our country strong and prosperous and take our rightful place among the ranks of the “developed” nations.

Brief Journey

Journey Towards Dream and Nation Building

In *Wings of Fire*, A.P.J. Abdul Kalam narrates his journey from his childhood in Rameswaram to becoming the president of India, painted against the backdrop of India's

journey of becoming a major player in space and defence technology. The book is divided into three parts: 'Orientation', 'Creation', and 'Contemplation'.

The first part, 'Orientation', focuses on Kalam's early life in Rameswaram, a coastal town in Tamil Nadu, his pursuit of education, and the moments that shaped his thoughts about serving the nation. We are guided through instances of his bonding with nature, the influence of teachers and spiritual leaders, and the hardships of living in British-occupied India.

Journey to Rocketry and Space Missions

The second part, 'Creation', delves into the making of India's first satellite-launch vehicle (SLV). Reciting his experiences while working at the Indian Space Research Organization (ISRO), Kalam elaborates on his role in the mission despite numerous challenges. A major part of this section is dedicated to his sophisticated thinking and commitment to design and launch India's first-ever satellite.

There are insightful accounts about his visits to NASA, his team's dedication to the space mission, and the affirming moment of India's entrance into the 'space club.' Ultimately, we get to witness Kalam's rise to the position of the project director for India's first indigenous Satellite Launch Vehicle.

Achievements in Missile Development

In the third section, 'Contemplation', we are introduced to the years Kalam spent at the Defence Research and Development Organisation (DRDO). Here, Kalam led the Integrated Guided Missile Development Program, which later resulted in the successful launch of missiles like Agni and Prithvi. Kalam's passion and commitment towards nation-building are evident as he reiterates the importance of self-reliance in defence technology.

He further explains the challenges, failures, successes, and the lessons he learned in the process. With passages dedicated to his pursuit of spirituality, his bond with his father, and the profound effect his mother and siblings had on him, this section concludes the life he lived and the values he embraced.

Through the Lens of a Leader

In the final section of *Wings of Fire*, Kalam provides reflections on the events described and the life lessons drawn. Known for his humility, he gives credit to his teachers and mentors who stood by him and guided him during difficult times. He emphasizes the essence of hard work, resilience, perseverance, and a never-give-up attitude behind every success story.

In conclusion, *Wings of Fire* is an inspiring account of a simple man's journey to extraordinary achievements. The book paints a vivid picture of Kalam's principles, his dedication to the nation, the virtues he stood by, and the sheer determination to make a

difference. It persuasively articulates that dreams have no limits, and achievement is a result of dedication and tenacity.

Module 2

Barriers to Business Communication

Communication is the activity of conveying meaningful information. It requires a sender, a message, and an intended recipient. However, various obstacles can impede this process, preventing the effective exchange of ideas or thoughts. These obstacles, known as communication barriers, can arise in different forms. Understanding and addressing these barriers is crucial for ensuring clear and efficient communication within a business context. Below is a detailed exploration of these barriers:

1. Physical Barriers

Physical barriers refer to any tangible obstacles in the environment that hinder the effective exchange of information. These barriers can significantly impact how messages are sent, received, and interpreted within a business context. Below are the key types of physical barriers and their implications in business communication: Physical barriers arise from the environment and include:

- **Noise:** Disruptive sounds such as machinery, traffic, or background chatter that interfere with the communication process. Noise is a significant physical barrier to effective communication. It can originate from external sources or exist within the communication environment. Effective communication is almost impossible in noisy environments such as factory floors or busy public places. Noise distorts messages and acts as a barrier to effective communication.
 - **Definition:** Disruptive sounds that interfere with the communication process.
 - **Examples:** Machinery, traffic, background chatter.
 - **Impact:** Distorts messages and reduces the clarity of communication.
 - **Solutions:** Create quiet zones, use noise-cancelling devices, implement soundproofing.
- **Time:** The timing of the communication can affect its effectiveness. For instance, messages sent too late might miss their relevance. Time plays a crucial role in communication. Phrases like "timely advice" underscore the importance of timing in communication. An organization expecting quick results cannot afford delays in communication channels. Modern and fast communication channels are necessary to overcome time lags, especially in international contexts.
 - **Definition:** The timing of communication affecting its effectiveness.
 - **Examples:** Messages sent too late, poorly timed announcements.

- **Impact:** Messages may lose relevance or urgency, leading to misunderstandings.
- **Solutions:** Schedule regular communication intervals, use asynchronous communication tools (e.g., emails, messages).
- **Distance:** Geographic separation and differing time zones that complicate the coordination and exchange of information. Distance affects communication when staff are situated in different buildings or on different floors, necessitating the use of phones or emails instead of face-to-face communication. This can prevent effective communication and lead to misunderstandings.
- **Definition:** Geographic separation and differing time zones complicating communication.
- **Examples:** Teams in different locations, international offices.
- **Impact:** Delays in message delivery, lack of face-to-face interaction.
- **Solutions:** Use video conferencing, schedule meetings accommodating different time zones, employ collaborative online tools.

2. Semantic Barriers

S Semantic barriers in business communication are pervasive challenges that stem from misunderstandings and misinterpretations of language. These barriers arise when words or phrases carry multiple meanings, such as homonyms and polysemous words like "bank" or "bark," which can confuse recipients without clear contextual cues. Additionally, technical jargon and complex terminology specific to certain fields may alienate those unfamiliar with the specialized language, leading to errors and miscommunication. Idioms, colloquialisms, and ambiguous statements further complicate communication, especially across diverse cultural and linguistic backgrounds.

The implications of semantic barriers are profound for both employees and employers. Employees may experience frustration and reduced efficiency due to misunderstandings, leading to errors in work output and wasted resources in correcting mistakes. For employers, ineffective communication can hinder decision-making processes and operational efficiency, affecting overall productivity and organizational success. To mitigate these challenges, businesses can adopt strategies such as using clear and precise language, providing contextual information, avoiding unnecessary jargon, and encouraging feedback to ensure messages are accurately understood.

By implementing these strategies and fostering a culture of effective communication, organizations can enhance information exchange, improve collaboration among teams, and ultimately achieve greater efficiency and success in their business endeavours. Clear communication practices not only clarify intentions but also foster a more productive and harmonious workplace environment where everyone can contribute effectively to organizational goals.

Semantic barriers arise from differences in understanding and interpretation of language, including:

- **Interpretation of Words:** Words with multiple meanings can lead to misunderstandings if not clearly defined. Misinterpretation occurs when the sender translates the message based on their understanding, without considering the recipient's comprehension level. Messages must be tailored to the audience's understanding to avoid miscommunication.
 - **Definition:** Misunderstandings due to words having multiple meanings.
 - **Examples:** Words like "lead" (to guide or a type of metal), "sale" (transaction or discounted items).
 - **Impact:** Miscommunication and confusion.
 - **Solutions:** Use simple and clear language, provide definitions for ambiguous terms, encourage feedback to ensure understanding.
- **Technical Jargon:** Specialized terminology used within certain fields may be confusing to those outside the profession. Technical language used by specialized groups can create barriers when communicating with those outside the group. For instance, terms like "cell" in biology and "sale" in business have different meanings.
 - **Definition:** Specialized terminology used within certain fields.
 - **Examples:** "Bandwidth" in IT, "ROI" in finance.
 - **Impact:** Can confuse individuals not familiar with the jargon.
 - **Solutions:** Avoid or explain technical terms, tailor communication to the audience's level of understanding.
- **Idioms and Phrases:** Cultural expressions or idiomatic language that may not be universally understood, leading to confusion. Idiomatic expressions should not be taken literally, as they can confuse the receiver and lead to miscommunication.
 - **Definition:** Cultural expressions that may not be universally understood.
 - **Examples:** "Break the ice," "piece of cake."
 - **Impact:** Misunderstandings and misinterpretation.
 - **Solutions:** Use clear and direct language, avoid idiomatic expressions in multicultural settings.

3. Psycho-Sociological Barriers

Psycho-sociological barriers in communication are rooted in the psychological and social dynamics that influence how individuals interact and exchange information within organizational settings. These barriers often manifest through factors such as status differences, where

hierarchical structures can inhibit open communication channels. For instance, lower-status employees may hesitate to voice their opinions or concerns to higher-status individuals, fearing repercussions or perceived lack of authority. Moreover, closed mindsets and emotional interference, such as anxiety or frustration, can distort message reception and hinder effective communication. Additionally, strong group affiliations and identification can create biases and misunderstandings between different teams or departments, impacting collaboration and decision-making processes within the organization.

These barriers pose significant challenges for both employees and employers. Employees may feel demotivated or marginalized when their voices are not heard due to status blocks or emotional barriers, leading to decreased morale and productivity. For employers, these barriers can result in fragmented communication channels, impeding the flow of critical information and hindering organizational agility. To overcome psychosociological barriers, fostering a culture of inclusivity, encouraging open dialogue regardless of status, and promoting emotional intelligence and empathy are crucial. By addressing these barriers proactively, organizations can cultivate a more cohesive and communicative workplace environment where all individuals feel valued and contribute effectively to collective goals.

Psychological barriers relate to the mental and emotional state of individuals, including:

- **Status Block:** Differences in status and hierarchy within an organization can inhibit open communication, particularly from lower-status individuals to higher-status ones. Status differences in an organization can lead to selective communication, where subordinates may only share what they think superiors want to hear, thus creating a barrier.
 - **Definition:** Hierarchical differences within an organization inhibiting open communication.
 - **Examples:** Junior employees reluctant to speak up to senior managers.
 - **Impact:** Reduced feedback, important information may not reach decision-makers.
 - **Solutions:** Foster a culture of open communication, implement anonymous feedback systems, flatten organizational hierarchies where possible.
- **Closed Mind:** A rigid mindset that resists new ideas or perspectives can obstruct effective communication. Individuals with a closed mindset are not open to new ideas or suggestions, often reacting negatively to feedback and advice.
 - **Definition:** Resistance to new ideas or perspectives.
 - **Examples:** A manager dismissing suggestions from team members.

- **Impact:** Stagnation, missed opportunities for innovation.
- **Solutions:** Encourage open-mindedness, provide training on active listening and empathy, promote a culture of continuous improvement.
- **Emotional Interference:** Strong emotions such as anger, fear, or excitement can distort the message and its reception. Emotional states such as anger, nervousness, or confusion can affect how messages are sent and received, leading to misunderstandings.
 - **Definition:** Strong emotions affecting message transmission and reception.
 - **Examples:** Anger, fear, excitement.
 - **Impact:** Distorted messages, miscommunication.
 - **Solutions:** Address emotional issues before important discussions, practice emotional intelligence, create a supportive environment.
- **Group Identification:** Strong affiliation with a particular group can create biases and misunderstandings between groups. Identity barriers related to gender, race, ethnicity, and other personal attributes can lead to miscommunication and misunderstanding.
 - **Definition:** Biases arising from strong affiliations with particular groups.
 - **Examples:** Gender, race, ethnicity, departmental silos.
 - **Impact:** Misunderstandings and conflict.
 - **Solutions:** Promote diversity and inclusion, encourage cross-functional teams, provide diversity training.
- **Poor Communication Skills:** Inadequate skills in expressing oneself clearly and listening effectively can result in miscommunication. Active listening and clear expression are crucial for effective communication. Miscommunication often arises from inadequate skills in these areas.
 - **Definition:** Inadequate skills in expressing oneself clearly and listening effectively.
 - **Examples:** Poor articulation, lack of active listening.
 - **Impact:** Miscommunication, misunderstandings.
 - **Solutions:** Provide communication skills training, encourage active listening, use clear and concise language.
- **State of Health:** Physical or mental health conditions that affect an individual's ability to communicate effectively. Mental and physical health issues can affect an individual's communication ability, leading to less effective interactions.
 - **Definition:** Physical or mental health conditions affecting communication ability.

- **Examples:** Stress, fatigue, illness.
- **Impact:** Reduced clarity, miscommunication.
- **Solutions:** Promote employee well-being, provide health support, accommodate health needs in communication plans.

4. Cultural Barriers

Cultural barriers in business communication arise from differences in cultural backgrounds, including language variations, norms, values, and communication styles. These differences can lead to misunderstandings and misinterpretations, impacting the effectiveness of communication within multinational or diverse teams. For example, varying interpretations of gestures, expressions, or even silence can affect how messages are perceived. Moreover, language barriers, whether due to differences in language proficiency or dialects, can complicate communication and require careful translation or clarification to ensure mutual understanding.

Addressing cultural barriers requires cultural sensitivity and awareness. Organizations can promote effective cross-cultural communication by providing cultural training to employees, encouraging open dialogue to clarify cultural norms and expectations, and fostering a respectful and inclusive work environment where diverse perspectives are valued. By bridging these cultural gaps, businesses can enhance collaboration, improve decision-making processes, and strengthen relationships with international clients and partners.

Cultural barriers arise from differences in cultural backgrounds, including:

- **Language Differences:** Variations in language and dialects that make understanding difficult. Different languages and dialects can pose significant barriers in multinational organizations, necessitating the need for translation or the use of a common language.
 - **Definition:** Variations in language and dialects making understanding difficult.
 - **Examples:** Multilingual teams, regional dialects.
 - **Impact:** Miscommunication, misunderstandings.
 - **Solutions:** Use a common language, employ translators, encourage language training.
- **Cultural Norms and Values:** Differences in cultural backgrounds that lead to varying interpretations and expectations regarding communication styles and behaviors. Cultural differences influence communication styles, behaviors, and interpretations. Being culturally aware and appropriate is essential for effective communication in diverse environments.
 - **Definition:** Different cultural backgrounds leading to varying interpretations and expectations.

- **Examples:** Different communication styles, body language.
- **Impact:** Misunderstandings, conflict.
- **Solutions:** Promote cultural awareness, provide cross-cultural training, respect and adapt to different cultural practices.

5. Organizational Barriers

Organizational barriers in business communication stem from internal structures, processes, and practices that hinder effective information flow and understanding within an organization. These barriers include hierarchical structures that can slow down communication as messages pass through multiple levels of management, risking distortion or delays. Additionally, a lack of clear communication policies and guidelines can lead to inconsistent messaging and misunderstandings among employees. Moreover, organizational size and complexity can amplify these challenges, making it difficult to maintain cohesive communication across different departments or locations.

To overcome organizational barriers, companies can adopt strategies such as flattening hierarchies to facilitate more direct communication channels, implementing clear communication protocols to standardize messaging, and utilizing technology to streamline information dissemination. By promoting transparency, reducing bureaucratic hurdles, and fostering a culture that values open communication, organizations can enhance their operational efficiency and ensure that messages are communicated clearly and effectively throughout the entire workforce.

Organizational barriers stem from the structure and processes within an organization, including:

- **Misinterpretation:** Messages can be misinterpreted due to poor communication efforts or language differences. Poorly communicated messages can be misunderstood, especially in diverse workplaces. Noise and distractions can further complicate message reception.
 - **Definition:** Messages misunderstood due to poor communication efforts or language differences.
 - **Examples:** Misleading emails, unclear instructions.
 - **Impact:** Miscommunication, errors.
 - **Solutions:** Provide clear and detailed communication, encourage feedback to confirm understanding, use visual aids.
- **Bad Work Relationships:** Emotional states and negative behaviors can create hostile working relationships, affecting communication. Negative emotions and behaviors can create conflicts and hinder teamwork, affecting overall communication.

- **Definition:** Negative behaviors creating hostile work relationships.
- **Examples:** Office politics, interpersonal conflicts.
- **Impact:** Reduced collaboration, communication breakdowns.
- **Solutions:** Foster a positive work environment, address conflicts promptly, promote team-building activities.

- **Lack of Knowledge:** Inadequate knowledge about the company, its products, and job roles can hinder effective communication. Employees lacking essential knowledge about their roles and the organization struggle to communicate effectively, leading to poor performance and customer interactions.
- **Definition:** Inadequate knowledge about the company, products, or job roles.
- **Examples:** New employees, unclear job expectations.
- **Impact:** Miscommunication, poor performance.
- **Solutions:** Provide comprehensive training, offer continuous learning opportunities, ensure clear job descriptions.

- **Negative Organizational Climate:** A toxic work environment can demotivate employees and impede open communication. A supportive and open work environment fosters better communication. Conversely, a negative climate can lead to disengagement and communication breakdowns.
- **Definition:** A toxic work environment demotivating employees.
- **Examples:** Lack of trust, poor leadership.
- **Impact:** Communication breakdowns, low morale.
- **Solutions:** Promote a positive organizational culture, recognize and reward positive behavior, ensure transparent communication.

- **Absence of Communication Policy:** Without clear communication policies, messages may not be delivered effectively. Clear guidelines and policies are necessary for consistent and effective communication across the organization.
- **Definition:** Lack of clear communication policies.
- **Examples:** Inconsistent messaging, unclear guidelines.
- **Impact:** Miscommunication, confusion.
- **Solutions:** Develop and implement clear communication policies, regularly review and update communication guidelines.

- **Excessive Authority Layers:** Multiple layers of hierarchy can lead to message distortion as information passes through different levels.

Flattening the hierarchy and encouraging open communication channels can mitigate the distortion of messages.

- **Definition:** Multiple layers of hierarchy distorting messages.
 - **Examples:** Information passing through several levels.
 - **Impact:** Delayed and altered messages.
 - **Solutions:** Flatten organizational hierarchy, encourage direct communication, streamline communication channels.
-
- **Filtering:** Information is often filtered as it travels through organizational layers, leading to incomplete or biased communication. Ensuring transparency and direct communication can reduce the negative effects of filtering.
 - **Definition:** Information being filtered as it travels through organizational layers.
 - **Examples:** Selective information sharing, biased reporting.
 - **Impact:** Incomplete or biased communication.
 - **Solutions:** Encourage transparency, promote open communication channels, use direct communication methods.
 - **Organizational Size:** Larger organizations may face more significant communication challenges due to the sheer number of employees and complexity. Implementing effective communication strategies and tools can help manage the challenges posed by larger organizational sizes.
 - **Definition:** Communication challenges due to the size of the organization.
 - **Examples:** Large number of employees, complex structures.
 - **Impact:** Communication inefficiencies, delays.
 - **Solutions:** Implement effective communication tools, promote decentralized communication, ensure regular updates.

6. Individual Barriers

Individual barriers in business communication arise from personal factors that affect how individuals send, receive, and interpret messages within organizational contexts. These barriers can include fear of speaking up or fear of repercussions, which inhibits employees from expressing their ideas or concerns openly. Additionally, perceptual differences among individuals can lead to misunderstandings due to varying interpretations of the same information. Moreover, personality differences such as communication styles or preferences can impact how effectively individuals convey and receive messages, influencing overall communication effectiveness.

To mitigate these individual barriers, organizations can promote a culture of openness and psychological safety where employees feel comfortable expressing themselves without fear of judgment. Providing training and development opportunities in communication skills can also help individuals enhance their ability to articulate ideas clearly and understand others better. Furthermore, fostering an environment that respects diverse communication styles and preferences can improve collaboration and reduce the likelihood of communication breakdowns due to individual differences.

Individual barriers arise from personal factors, including:

- **Fear:** Fear of speaking up or fear of repercussions can prevent effective communication. Encouraging a culture of openness and safety can help alleviate fear and promote more effective communication.
 - **Definition:** Fear of speaking up or repercussions.
 - **Examples:** Fear of criticism, fear of authority.
 - **Impact:** Suppressed communication, lack of feedback.
 - **Solutions:** Create a safe communication environment, encourage open dialogue, provide anonymous feedback options.
- **Perceptual Differences:** Different perceptions and viewpoints can lead to misunderstandings. Acknowledging and addressing perceptual differences can lead to better understanding and cooperation.
 - **Definition:** Different perceptions and viewpoints.
 - **Examples:** Different interpretations of the same message.
 - **Impact:** Misunderstandings, conflict.
 - **Solutions:** Promote empathy and understanding, address perceptual differences, encourage feedback to ensure clarity.
- **Inattention:** Lack of attention or interest can result in missed or misunderstood messages. Training and awareness programs can improve focus and attention during communication.
 - **Definition:** Lack of attention or interest.
 - **Examples:** Distractions, multitasking.
 - **Impact:** Missed or misunderstood messages.
 - **Solutions:** Promote active listening, minimize distractions, emphasize the importance of attention in communication.
- **Personality Differences:** Variations in personality traits can affect how individuals communicate and interpret messages. Recognizing and adapting to different personality types can enhance communication effectiveness.

- **Definition:** Variations in personality traits affecting communication.
- **Examples:** Introverts vs. extroverts, assertiveness levels.
- **Impact:** Communication mismatches, misunderstandings.
- **Solutions:** Recognize and adapt to different personality types, provide communication skills training, encourage a variety of communication styles.

By identifying and addressing these common barriers to communication, businesses can enhance their communication strategies, ensuring a more efficient and effective exchange of information.

Module 3

- Sales letter -PPT Present
Link: - <https://youtu.be/mYLqvJou5Uo>
- Job Application & Resume:- PPT Present
Link: - <https://youtu.be/6FjNL8Or8sU>
- Collection Letter:- PPT Present
Link:- <https://www.youtube.com/watch?v=5uKRWLASuVY&t=22s>

Job Application

Prepared by: Dr. Preeti Mishra

A) Resume

B) Job Application

A) Resume

Definition and Meaning

A resume is a French word meaning “summary,” signifying a summary of a person’s work life. It is a vital document required from job applicants, including students facing interviews.

Definitions of Resume

According to Wikipedia, a resume is a document used and created by a person to present their background, skills, and accomplishments. It can be used for various reasons, but most often, they are used to secure new employment.

Curriculum Vitae (CV)

A Curriculum Vitae (CV) is a comprehensive document that may span 5 or 6 pages, covering in-depth information including:

- Academic Background
- Research Experience
- Awards
- Honors
- Publications
- Teaching
- Volunteering Experience
- Other Specific Accomplishments

Curriculum Vitae (CV)

A Curriculum Vitae, commonly referred to as a CV, is a detailed and comprehensive document that provides an in-depth overview of an individual's professional and academic achievements. Unlike a resume, which is typically concise and focused on summarizing work experience, a CV can span multiple pages, often 5 or 6, and includes a wide range of information that reflects the breadth and depth of the individual's career.

Academic Background

The academic background section of a CV is foundational, providing detailed information about the individual's educational journey. This includes not only the names of the institutions attended but also the degrees earned, majors or specializations, and the dates of attendance. For individuals with advanced degrees, this section might also include the titles of theses or dissertations, the names of advisors, and a summary of key research projects. The academic background serves to establish the individual's qualifications and expertise in their chosen field.

Research Experience

Research experience is a critical component of a CV, particularly for those in academic, scientific, or technical fields. This section details the individual's involvement in various research projects, including the scope, objectives, and outcomes of each project. It is essential to highlight the methodologies used, the roles played (e.g., lead researcher, co-investigator), and any significant findings or contributions to the field. This section demonstrates the individual's ability to conduct rigorous research, contribute to the body of knowledge in their field, and work collaboratively with other researchers.

Awards and Honors

Awards and honors are important indicators of an individual's achievements and recognition within their field. This section of the CV should list any scholarships, grants, fellowships, or professional awards received. It is beneficial to include the awarding bodies, the criteria for selection, and the significance of each award. This not only showcases the individual's accomplishments but also provides evidence of their standing and reputation in their professional community.

Publications

The publications section is crucial for those in academia and research-intensive roles. It includes a comprehensive list of all the individual's published works, such as journal articles, book chapters, conference papers, and monographs. Each entry should follow a standard citation format and provide sufficient details to allow readers to locate the work. This

section highlights the individual's contributions to their field of study and their ability to disseminate research findings to a broader audience.

Teaching Experience

For individuals pursuing academic careers, teaching experience is a significant aspect of their CV. This section should detail the courses taught, including course titles, institutions, and the duration of teaching assignments. It is also useful to mention any curriculum development, teaching methodologies employed, and student engagement strategies. This demonstrates the individual's capability to educate and mentor students, as well as their commitment to fostering a positive learning environment.

Volunteering Experience

Volunteering experience reflects the individual's commitment to service and community engagement. This section should describe any volunteer work, including the organizations involved, the roles undertaken, and the duration of service. Highlighting specific projects or initiatives and the impact of these activities can provide a broader view of the individual's interests and values beyond their professional and academic pursuits.

Other Specific Accomplishments

This section is reserved for any additional achievements that do not neatly fit into the other categories but are nonetheless significant. This might include patents, invited talks or lectures, professional memberships, leadership roles in professional organizations, and notable projects. Including these accomplishments helps to paint a fuller picture of the individual's professional journey and diverse skill set.

Conclusion

A Curriculum Vitae is a vital document that offers a thorough and detailed account of an individual's professional and academic life. It serves not only as a record of achievements but also as a tool to communicate one's qualifications and expertise to potential employers, collaborators, and academic institutions. By carefully detailing academic background, research experience, awards, publications, teaching roles, volunteering activities, and other accomplishments, a CV provides a comprehensive view of an individual's career trajectory and contributions to their field. This depth and breadth of information make the CV an indispensable tool for professionals aiming to highlight their qualifications and experiences comprehensively.

Resume Format & Style

Brief

1. **Easy and Understandable:** The format should be simple and easy to read.
2. **Short, Crisp, Effective Titles & Phrases:** Use clear and concise titles and phrases.
3. **Bullet Points:** Utilize bullet points for clarity.
4. **Avoid Negativity:** Focus on positive aspects and avoid negative language.
5. **Quality Paper:** Use good quality paper for printing.
6. **Length:** Keep it to one or two pages.
7. **No Hobbies:** Avoid including hobbies unless they are directly relevant.
8. **Font & Size:** Select an appropriate font and size.
9. **Grammar, Spelling, and Punctuation:** Check thoroughly for errors.
10. **Honesty:** Provide truthful information.

Detailed

Resume Format & Style

1. **Easy and Understandable:** Ensure that the resume format is simple and easy to read. Avoid complex layouts and excessive use of graphics. Clear headings and well-organized sections help the reader navigate the document easily. Consistent formatting throughout the resume enhances readability.
2. **Short, Crisp, Effective Titles & Phrases:** Use clear and concise titles and phrases to convey information effectively. Avoid long, descriptive sentences that can clutter the document. Use impactful words that highlight your key achievements and responsibilities. Keep the language professional and to the point.
3. **Bullet Points:** Utilize bullet points to present information in a clear and organized manner. This helps break up text and makes it easier for the reader to scan for important details. Each bullet point should focus on a single accomplishment or responsibility. Use action verbs to start each bullet point for added impact.
4. **Avoid Negativity:** Focus on positive aspects of your experience and skills. Avoid mentioning failures or negative experiences. Highlight your achievements and what you can bring to the prospective employer. Use positive language to convey confidence and competence.
5. **Quality Paper:** If printing your resume, use good quality paper to make a professional impression. Avoid colored or decorative paper which can seem unprofessional. White or off-white, heavyweight paper is preferred. The quality of the paper can reflect your attention to detail and professionalism.
6. **Length:** Keep your resume concise, ideally one to two pages. Employers typically spend only a few seconds reviewing each resume, so brevity is crucial. Include only the most relevant information that directly supports your candidacy for the job. Edit ruthlessly to eliminate unnecessary details.
7. **No Hobbies:** Unless directly relevant to the job, avoid including hobbies. Focus instead on professional skills and achievements. If hobbies demonstrate relevant skills or attributes, such as teamwork

or leadership, they can be included. Ensure that everything on your resume supports your professional profile.

8. **Font & Size:** Select an appropriate font and size that is easy to read. Common professional fonts include Arial, Calibri, and Times New Roman. Font size should generally be between 10 and 12 points for body text. Use larger sizes for headings and subheadings to create a visual hierarchy.
9. **Grammar, Spelling, and Punctuation:** Thoroughly check your resume for grammar, spelling, and punctuation errors. Mistakes can create a negative impression and suggest a lack of attention to detail. Use tools like spell check, but also review manually or have someone else proofread it. Accuracy is key to professionalism.
10. **Honesty:** Always provide truthful information on your resume. Exaggerating or lying about your qualifications can backfire and harm your credibility. Ensure all dates, job titles, and responsibilities are accurate. Honesty builds trust with potential employers and sets the foundation for a positive working relationship.

Contents of a Resume

- **Heading:** Name, Address, Mobile No, Email Address, etc.
- **Career Objective:** A brief statement of your career goals.
- **Education and Training:** Academic qualifications and relevant training.
- **Work Experience:** Detailed work history.
- **Relevant Skills:** Skills pertinent to the job.
- **Activities & Achievements:** Significant activities and accomplishments.
- **Personal Data:** Basic personal information.
- **References:** Contact details of professional references.

Detailed

Contents of a Resume

1. **Heading:** Include your name, address, mobile number, and email address. Ensure this section is prominently placed at the top of your resume. Make sure your contact details are current and accurate. This allows potential employers to reach you easily.
2. **Career Objective:** A brief statement outlining your career goals and aspirations. Tailor it to align with the job you are applying for. This section should convey your professional direction and the value you aim to bring to the role. Keep it concise and focused.
3. **Education and Training:** List your academic qualifications and any relevant training courses completed. Include the names of institutions, degrees earned, and dates of attendance. Highlight any specialized training that enhances your suitability for the job. Ensure all information is accurate and up-to-date.

4. **Work Experience:** Provide a detailed history of your work experience, starting with the most recent job. Include job titles, company names, locations, and employment dates. Briefly describe your responsibilities and notable achievements in each role. Use bullet points for clarity and brevity.
 5. **Relevant Skills:** Highlight skills that are directly pertinent to the job you are applying for. Focus on both technical skills and soft skills that demonstrate your suitability for the role. Ensure each skill listed is backed by your experience or training. This section helps employers quickly assess your qualifications.
 6. **Activities & Achievements:** Mention significant activities and accomplishments that are relevant to your career. Include awards, certifications, volunteer work, and notable projects. Highlight achievements that showcase your skills and contributions. This section provides a fuller picture of your capabilities.
 7. **Personal Data:** Include basic personal information, such as date of birth, nationality, and language proficiency if relevant. Avoid including unnecessary details that do not contribute to your professional profile. This section should be brief and relevant to the job application.
 8. **References:** Provide contact details of professional references who can vouch for your qualifications and work ethic. Include their names, job titles, companies, and contact information. Ensure you have their permission before listing them. References should be relevant and recent.
-

Sample of Resume

FILL IN THE BLANK RESUME

Current Address:

Permanent Address:

Education

University of Wisconsin Oshkosh Oshkosh, WI

Bachelor _____

Major: _____

Minor: _____

Cumulative GPA: _____

Major GPA: _____

Computer/
Language Skills

- _____
- _____
- _____
- _____
- _____

Relevant
Experience

- _____, ____
____ - ____
- _____
 - _____
 - _____
 - _____

Work
Experience

- _____, ____
____ - ____
- _____
 - _____
 - _____
 - _____
- _____, ____
____ - ____
- _____
 - _____
 - _____
 - _____

Honors and
Activities

- _____
- _____
- _____
- _____
- _____

Example

Your Resume

Chris Q. Surname

Contact Information

Objective

Current Address

1234 Willow Avenue
West Lafayette, IN 47905
0173-123-4567
chrisc@email.address.com

Permanent Address

1234 Oakleaf Trail
Long Beach, CA 90802
0195-123-4567
sup.thech.address@chrisq

Objective

A sales and marketing internship offering me to utilize my leadership and communication skills and apply my knowledge of the health care industry.

Education

Purdue University, West Lafayette, IN
Boiler School of Management
B.S. in Management
• Marketing Minor
• Human Resources Minor

May 2009
Major GPA: 3.84/4.0
Minor GPA: 3.94/4.0

Popular Computer Applications

Microsoft Office
Microsoft Access

Microsoft Communications
Internet Explorer

Special Course Project

- Acted as class liaison for Memorial Hospital as part of Business Writing class project
- Conducted research and prepared report on more efficient communication systems

Volunteer Service

Volunteer, Memorial Hospital Pharmacy, Muncie, IN, IN • December 2003 to May 2004

- Prepared prescriptions to meet diverse needs of patients and customers
- Provided various pharmaceutical products from different suppliers, handling billing
- Offered over 100 hours of volunteer service to health care facility

Work Experience

Cashier, A-1 Cash Supermarket, Muncie, IN • May 2005-June 2007

- Trained new employees in customer service and efficient money handling
- Balanced cash register drawers and maintained high level of accuracy
- Assisted manager with inventory and ordering procedures

Edin Associates, Harrisburg, Muncie, IN

July 1995-November 1996

- Balanced registers and operated cashiers in a responsible manner

Leadership Activities

Oni Muncie
• Clinical Committee Co-Chair
• Classmate
• Publicity
Beta Gamma Society

Beta Sigma Pi Professional Fraternity
Kappa Kappa Gamma Fraternity
Management Association
Purple Heart 5th Club
North of Indiana Wild-Bees

Experience

Honors & Activities

Resumes come in various formats, each designed to highlight different aspects of a candidate's qualifications. Choosing the right type of resume depends on the individual's experience, the job they are applying for, and their career goals. Here are the four main types of resumes:

Types of Resumes

1. Basic Resume

1. **Basic Resume:** Ideal for those with no work experience. It includes basic information such as contact details, education, activities, skills, interests, and any part-time or summer jobs.

Description: A basic resume is ideal for individuals with little to no work experience. It focuses on educational background, skills, and any extracurricular activities or part-time jobs. This type of resume is often used by recent graduates or those entering the workforce for the first time.

Key Features:

- **Contact Information:** Includes name, address, phone number, and email.
- **Objective:** A brief statement about career goals.
- **Education:** Details of educational qualifications.
- **Skills:** List of relevant skills.
- **Activities:** Involvement in clubs, organizations, or volunteer work.
- **Part-Time Jobs/Summer Jobs:** Any temporary work experience.

When to Use:

- Applying for entry-level positions.
- When you have limited work experience.

2. Chronological Resume

Chronological Resume: This format details your objective, skill sets, educational background, and work experience in reverse chronological order, starting from the most recent position. It is the most commonly used resume format among job seekers.

Description: A chronological resume lists work experience in reverse chronological order, starting with the most recent position. This format is widely used and preferred by many employers as it provides a clear timeline of the candidate's career history.

Key Features:

- **Contact Information:** Name, address, phone number, and email.
- **Objective:** Career goal statement.
- **Work Experience:** Detailed job history, listed in reverse chronological order (most recent job first).
- **Education:** Academic qualifications.
- **Skills:** Relevant skills and competencies.
- **Achievements:** Notable accomplishments and awards.

When to Use:

- When you have a solid work history with no significant gaps.
- Applying for a job in a field where you have extensive experience.

2. Functional Resume

Functional Resume: This format emphasizes skills and achievements rather than work history.

Description: A functional resume emphasizes skills and achievements rather than work history. This format is suitable for individuals with gaps in employment, career changers, or those with diverse experiences that are not directly related to the job they are applying for.

Key Features:

- **Contact Information:** Name, address, phone number, and email.
- **Objective:** Brief statement about career goals.
- **Skills and Competencies:** Highlighted skills and abilities.
- **Achievements:** Significant accomplishments related to the job.
- **Work Experience:** Brief summary of employment history.
- **Education:** Academic background.

When to Use:

- When you have employment gaps or are changing careers.
- When your skills are more relevant to the job than your work history.

4. Combination Resume

Combination Resume: This format combines elements of both functional and chronological resumes, focusing on the applicant's skills and abilities.

Description: A combination resume merges elements of both the chronological and functional formats. It highlights relevant skills and achievements at the top, followed by a detailed work history. This format is useful for showcasing skills while also providing a clear career progression.

Key Features:

- **Contact Information:** Name, address, phone number, and email.
- **Objective:** Career goals statement.
- **Skills and Achievements:** Highlighted skills and notable accomplishments.
- **Work Experience:** Detailed job history in reverse chronological order.
- **Education:** Academic qualifications.

When to Use:

- When you have a strong set of skills and a solid work history.
- Applying for roles that require both relevant skills and experience.

Choosing the Right Resume Format

The type of resume you choose should align with your career objectives and the requirements of the job you are applying for. Here are some guidelines to help you decide:

- **Basic Resume:** Ideal for entry-level positions and candidates with minimal work experience.
- **Chronological Resume:** Best for those with a consistent work history and experience relevant to the job.
- **Functional Resume:** Suitable for career changers, those with gaps in employment, or individuals with diverse work experiences.
- **Combination Resume:** Great for candidates who want to highlight both their skills and their job history.

By selecting the appropriate resume format, you can effectively present your qualifications and increase your chances of securing the desired job.

Job Application

What is a Job Application Letter?

According to Quible and Others, “A letter of application is a message designed to inform the reader of your desire for a position in their organization and to request an interview for that position.”

Types of Employment Application Letters

1. **Solicited Application:** Sent when the applicant knows that an opening exists in a company. When one sends a letter knowing that an opening exists in a company, this is called a solicited letter of application.”
 2. **Unsolicited Application:** When one sends a letter not knowing whether an opening exists in a company, the letter is called an unsolicited application
-

Essentials of a Good Covering Letter

1. **Job Requirements:** Align with the job requirements.
 2. **Formal Tone:** Maintain a professional and formal tone.
 3. **Personal Information:** Include relevant personal details.
 4. **Error-Free:** Ensure the letter is free from errors.
 5. **Single Page:** Keep it concise, ideally within a single page.
-

Format and Contents of an Application Letter

1. **Heading:** Includes the sender's address and the date.
 2. **Inside Address:** Recipient's name, title, organization, and address.
 3. **Subject & Reference:** Purpose of the letter.
 4. **Salutation:** Formal greeting.
 5. **Body of the Letter:** Main content explaining the applicant's qualifications and interest.
 6. **Complimentary Close:** Formal closing phrase.
-

Sample Job Application Letter/Email

Subject: Job Application for the Role of English Teacher

Dear [Recipient's Name],

I am writing in response to your advertisement published in [Portal Name] regarding a vacancy for an English Teacher. I am eager to apply for this role.

Teaching is my passion, and I have consistently excelled in engaging with students. I have been a supervisor at [School Name] for 5 years and have previously taught classes VI and VII for 2 years. My qualifications and experience align with your requirements.

Please find my resume attached for your consideration. I would appreciate the opportunity to discuss my application further. You can reach me at the contact details provided below.

Thank you for your time and consideration.

Yours sincerely,

[Your Name]

Mobile - [Your Contact Number]

Email - [Your Email Address]

Sample- Job Application Letter

27 University Avenue, Bada Bazar, Kandiwali, Mumbai 11288

April 11, 2003

Mr. Mohit Kumar

Director of Campus Relations

ABC Corporation

27 East Third Market, Dadar, Mumbai 10056

Dear Mr. Kumar,

I am interested in applying for the sales representative position recently advertised in The Current Times. My work experience and academic background make me a strong candidate for this position.

As indicated in my resume, my internship with ABC Corporation provided me with practical experience in account maintenance. Additionally, my four-year tenure in a call center has equipped me with valuable customer service skills, earning me "Employee of the Month" several times.

I would welcome the opportunity to discuss how my skills and experiences align with your needs.

You can contact me at +919999999990. Thank you for considering my application.

Sincerely,

[Your Signature]
ABC

Enclosure

Collection letter

Contents

- Introduction
- Definition
- Essential Features for Drafting Collection Letters or Dunning Letters
- Stages of Collection Letters
- Thanking a Customer for Timely Payment
- Reply to a Complaint Regarding Faulty Billing

Collection Letter

Introduction

A collection letter is a formal written notification sent to inform a consumer of their due payments. It is a professional way to remind a borrower of their outstanding debts. Collection letters can include reminders, inquiries, warnings, or notifications of possible legal actions. Despite being firm notices, these letters must be written in a polite and respectful manner, avoiding slang, offensive, or abusive language.

Definition

According to L. Gart, "A request to settle the outstanding account is known as a collection letter." Kitty O. Locker adds, "Collection letters ask customers to pay for the goods and services they have already received."

Essential Features for Drafting Collection Letters or Dunning Letters

1. **Parties Involved:** Clearly identify the creditor and the debtor in the letter.
 2. **Series of Letters:** Draft a sequence of letters, escalating in urgency as needed.
 3. **Objective:** Clearly state the purpose of the letter – to remind the debtor of their obligation to pay.
 4. **Positive Tone:** Maintain a positive and respectful tone throughout the correspondence.
 5. **Governing Principle:** Base your approach on fairness and professionalism.
 6. **Referring the Previous Letter:** Reference prior correspondence to maintain a clear communication trail.
 7. **Threat of Legal Action:** As a last resort, mention the potential for legal action if payment is not made.
 8. **Sent Through Registered Post:** Ensure letters are sent via registered mail for documentation purposes.
 9. **Language:** Use clear, concise, and professional language.
 10. **Exchange of Letters:** Keep a record of all letters sent and received.
 11. **Patience:** Exercise patience and give the debtor reasonable time to respond.
-

Stages of Collection Letters

A. Reminder Stage, Notification Stage

At this stage, it is assumed that the customer has failed to pay the bill by mistake. A gentle reminder is sent to inform them of the outstanding payment, without insisting on immediate payment, and maintaining a mild tone.

Hints for Drafting Reminder Stage:

1. Refer to the statements of account already sent and the amount due.
2. Suggest that the customer may have overlooked the statement.
3. Request prompt payment.
4. Enclose the statement of account for reference.

Example: Dear Sir,

Your account today shows an unpaid balance of Rs. 5000/-. It is not a large sum, so we thought you had probably overlooked it.

Will you remit the amount today?

B. Enquiry, Appeal, and Discussion Stage

This second stage includes the third, fourth, and fifth reminders. The letters emphasize the importance of credit as the foundation of business, referencing contractual obligations and the necessity of meeting them in time.

Hints for Drafting Enquiry and Appeal Stage:

1. Refer to the amount due and the time since it has been due.
2. Reference past reminders.
3. State the problem faced due to non-payment and inquire if there is any issue.
4. Offer to accept payment in easy installments.
5. Suggest returning unsold goods.
6. Demand prompt payment.

Example: Dear Sir,

We reminded you earlier that your account is past due, as shown in the enclosed statement. We have not received the payment yet. May we remind you again to send your cheque as soon as possible?

If you have already sent your cheque, please accept our thanks and ignore this reminder.

C. Warning and Threat Stage

This stage is typically avoided but becomes necessary when other efforts fail. It includes the sixth and seventh reminders, presenting a final warning before legal action.

Hints for Drafting Warning/Threat Stage:

1. Refer to the steps taken previously.
2. State that all humble efforts have failed.
3. Give a definite time limit for payment.
4. Explain the course of action if payment is not received within the time limit.

Example: Dear Sir,

We are really uncomfortable about your indifference to our letters about our outstanding bill of Rs. 2000/- for goods supplied in January. This delay is not doing any good to your credit reputation, and you know how difficult it is to build up a good one. Will you now allow your credit to be tarnished by just ignoring our requests for payments?

We hope that you will not create an awkward situation by remaining silent even after receiving this letter. We are expecting your cheque by return of post.

Thanking a Customer for Timely Payment

Dear [Name of Recipient],

Wow, I noticed that you've been our customer for 5 years! Thank you so much for sticking with us—it's people like you that keep our wheels turning!

Thank you for your prompt payment. Working with customers like you is always a pleasure. I am writing to confirm your recent payment of [Payment Amount], which was processed on [Date]. Your current outstanding balance is now [Insert Current Amount Due or Zero]. If you have any questions or concerns regarding your account, please do not hesitate to contact us.

In the meantime, thank you again for your recent payment. We look forward to serving you again in the future.

Sincerely,
[Your Name]

Reply to a Complaint Regarding Faulty Billing

Rajeev Choudhary
27, Gariyawas,
Jaipur 313007

May 5, 2019

Pooja Choudhary
Mahindra World City,
Jaipur (Rajasthan)

Subject: Related to Faulty Bill

Dear Miss Pooja,

I am awaiting your response because I found a significant mistake in my invoice record, resulting in a faulty bill issued to you. This error primarily arose from my incorrect documentation process. I want to rectify this mistake and provide you with an error-free bill for your satisfaction. I admit my mistake and sincerely apologize for any inconvenience caused.

Yours sincerely,
Rajeev Choudhary

Sales Letter

Contents

1. Introduction
 2. Formula for Organizing Sales Letters
 3. Features of Sales Letters
 4. Objectives of Sales Letters
 5. Advantages & Disadvantages of Sales Letters
 6. Writing Tips for Drafting Sales Letters
 7. Sample Sales Letters
 8. Sample Sales Letter in E-Mail Format
 9. Types of Sales Letters
-

Sales Letter

Introduction

A sales letter is a type of direct mail designed to persuade the reader to purchase a particular product or service in the absence of a salesperson. These letters are typically longer than other business correspondence because they aim to educate, persuade, and convince the customer. Sales letters often include additional literature such as brochures or pamphlets to enhance their persuasive appeal.

Sales letters serve as a form of advertisement, aimed at catching the attention of a specific target audience. Writing an effective business sales letter requires skill and precision to ensure it fulfills its purpose of generating interest and prompting action.

Formula for Organizing Sales Letters

The most effective formula for organizing sales letters is known as AIDA:

- **A - Attention:** Grab the reader's attention immediately.
 - **I - Interest:** Generate interest in the product or service.
 - **D - Desire:** Create a desire for the product or service.
 - **A - Action:** Prompt the reader to take action, such as making a purchase or contacting the company.
-

Features of Sales Letters

1. **Product Introduction:** Used to introduce products or services to consumers.
 2. **Formal Structure:** Follows a formal letter structure.
 3. **Impersonal Nature:** Often sent to multiple recipients.
 4. **Advertising Tool:** Acts as a form of advertising to promote goods or services.
-

Objectives of Sales Letters

1. **Grab Attention:** The primary goal is to capture the reader's attention.
 2. **Generate Interest:** Spark interest in the product or service.
 3. **Market Introduction:** Effectively and quickly introduce new products to the market at a lower cost and over a wider area.
-

Advantages & Disadvantages of Sales Letters

Advantages

1. **Cost-Effective:** Cheaper compared to other forms of publicity.
2. **Unavoidable:** Easier to overlook a salesman than a sales letter.
3. **Direct Reach:** Goes straight to the reader, capturing more attention.
4. **Personal Touch:** Offers a personal touch that can be more compelling.
5. **Less Competition:** Does not face the same level of competition as advertisements.

Disadvantages

1. **Uninvited:** Often uninvited and may not receive a warm welcome.
 2. **Limited Space:** Must perform various functions within limited space.
 3. **Arouse Interest:** Needs to arouse interest and desire quickly.
-

Writing Tips for Drafting Sales Letters

1. **Convincing Pattern:** Follow a format that persuades the reader.
2. **Curiosity:** Begin the letter in a way that arouses curiosity.
3. **Formal Tone:** Maintain a formal tone throughout the letter.
4. **Flow:** Ensure the letter is written in a smooth flow.
5. **No Errors:** Avoid grammatical mistakes and spelling errors.
6. **Typed Format:** The letter should be typed, not handwritten.
7. **Concise and Crisp:** Keep the content concise and to the point.
8. **Impressive:** Make sure the letter is impressive and engaging.
9. **Short Paragraphs:** Avoid long paragraphs to maintain reader interest.
10. **Professional:** The letter should be highly professional.
11. **Active Voice:** Use a strong, bold active voice.

12. **Product Description:** Provide a vivid description of the product or service and its benefits.
 13. **Evidence:** Convince the reader by providing evidence.
 14. **Attractive Schemes:** Offer attractive schemes to entice the reader.
-

Sample of a Sales Letter

From,
_____(name, designation and company of the sender)

To,
_____(name, designation &
_____(Address of the recipient)

Date _____(date of issuing letter)

Dear _____, (name of the recipient)

We at _____(introduce your company and products). We want to ____
_____(state the purpose of the letter).

Our products have _____(state the features and
benefits of your product and also give the details of the offer provided by your company). You
can try _____(restate your purpose).

For further information you can visit
_____(Provide you website address or contact info).

Yours sincerely,
_____(Name, signature and address of sender)

A sample of sales letter is shown above:

2nd Sample of sales letter

From,
Mamta Printers Agra ,UP
India.

Date: 2nd Sample of sales letter e Nov 01,

2019 To,

Mr. Mike George General Manager
Dustuche Ltd.

Jaipur,
Rajasthan

Subject: Sales Letter Dear Mr. George ,

We are glad to introduce to you our new copiers and printers. Our products are user friendly and they have great capabilities and benefits.

Our product will surely lessen your work loads. These printers are in the market for last five months and have received positive responses from most of our customers. We are proud to introduce them to you and assure that they will help you in making your chore a lot easier.

We will proud to introduce you the characteristics of the printer and give a display to you. For more details of our product you can also visit our website www.ohmsprinters.com.

We hope for a good business prospect.

Mamta Printers Agra, U.P
India.

Sample of sales letter in E-Mail format

To: email of receiver from: email of sender Subject: Sales Letter

Dear (client's name)

We are glad to introduce to you our new copiers and printers. Our products are user friendly and they have great capabilities and benefits.

Our product will surely lessen your work loads. These printers are in the market for last five months and have received positive responses from most of our customers. We are proud to introduce them to you and assure that they will help you in making your chore a lot easier.

We will proud to introduce you the characteristics of the printer and give a display to you. For more details of our product you can also visit our website www.ohmsprinters.com.

We hope for a good business prospect.

Mamta Printers Agra, U.P India.

[Company's Letterhead]

[Date]

[Recipient's Name

Recipient's Address

City, State, ZIP Code

Dear [Recipient's Name],

We are thrilled to introduce our latest range of eco-friendly cleaning products. These products are designed to provide excellent cleaning results while being gentle on the environment. Our eco-friendly cleaning range includes all-purpose cleaners, laundry detergents, and dishwashing liquids that are free from harsh chemicals and toxins.

Switching to our eco-friendly products will not only benefit your household but also contribute to a healthier planet. To celebrate the launch, we are offering a 10% discount on your first purchase. Visit our website or nearest store to explore the range and take advantage of this special offer.

We look forward to your positive response and are always here to answer any questions you may have.

Sincerely,
[Your Name]
[Your Position]
[Company Name]

Sample of Sales Letter in E-Mail Format

To: [Email of Receiver]
From: [Email of Sender]
Subject: Introducing Our New Range of Eco-Friendly Cleaning Products

Dear [Recipient's Name],

We are delighted to introduce you to our new line of eco-friendly cleaning products, which are both highly effective and environmentally safe. These products, which include all-purpose cleaners, laundry detergents, and dishwashing liquids, have received excellent reviews for their performance and eco-friendliness.

Switching to our eco-friendly cleaning products will help you maintain a clean home while also supporting a healthier planet. As a token of appreciation, we are offering a special 10% discount on your first purchase.

Please visit our website at www.ecoclean.com to learn more about our products and place your order. We look forward to serving you and helping you make a positive impact on the environment.

Best regards,

[Your Name]
[Your Position]
[Company Name]

Types of Sales Letters

1. Introductory Sales Letter

This letter introduces a consumer or business customer to your company and products. It highlights the benefits of purchasing your products over competitors and may offer a trial period. The letter should be concise, grabbing attention, building interest, and prompting desire to visit the store.

2. Product Update Sales Letter

Sent to existing customers to introduce new products. It describes the advantages of the new products over older ones and may include offers for customers to buy the new product.

3. Thank You Sales Letter

This letter expresses gratitude to customers for their business. It emphasizes how much you value their patronage and briefly mentions that your products are always available.

4. Holiday Celebration Sales Letter

Offers your product as a potential gift for holidays. It highlights new arrivals and special offers, encouraging customers to visit the store while supplies last.

5. Lost Customer Sales Letter

Designed for customers who have not purchased recently or have canceled their service. It expresses that you miss their business and informs them of any new products or specials.

Module 4

Unit -04

Vocabulary (Foreign words)

Sr.no	Foreign words	English meaning
1	lingua franca	A common language
2	ad hoc	For the purpose
3	Viz	See above, below, namely
4	Ad valorem	According to the value
5	Vice versa	opposite
6	Apropos	To the point
7	Via media	A middle course
8	Bona fide	Genuine, In good faith
9	versus	Against
10	De facto	In reality, in Point of fact
11	Ultra vires	Beyond one's Power
12	elite	The choice part
13	Sub judice	Under consideration of judiciary
14	En bloc	As a whole
15	Status quo	As it is unchanged
16	En route	On way to
17	Sine die	Without any definite day

18	En masse	In a body
19	Pro-rata	In proportion
20	Exit	The way to go out
21	Prima fade	On the face of it
22	Ex-officio	By virtue of one's office
23	Percent	Per hundred
24	Ex- parte	One sided
25	Per diem	Per day
26	Fait accompli	An established fact
27	Per capita	perhead
28	Impasse	Dead lock
29	Par excellence	By way of special Eminence
30	In camera	In secret
31	In mala fide	In bad faith

GOKUL GLOBAL UNIVERSITY

Faculty of Commerce & Management
E-Content



Course:	B.COM/BBA
Semester:	2ND
Subject:	Financial Accounting-II
Subject Code:	FCB220105/FMB220105

UNIT 1: PURCHASE OF BUSINESS BY COMPANY

Purchase of business is the process of acquisition of old business by a company. The person who sells the business to another company is called the vendor. The money paid by the purchaser is called purchase price. The purchase of a business must involve agreement between the parties.

Promoters can acquire a business and sell it to another company at a profit. A viable business is likely to sell more than its present value, whereas a business with a not too impressive performance may sell at a lower price

Here, assets, name and connection of the business will be taken over hence, goodwill must be paid for. For this reason, assets and liabilities will be revalued. The purchaser can assume trade liabilities as part of the consideration. The excess of the purchase consideration over the net value of asset is called Goodwill. If on the other hand, the purchase consideration is lower than the net assets, the purchaser has gained the advantage of "Capital reserve". In some cases he may acquire all the assets without cash and leave the vendor to discharge the liabilities of the business.

What is Amalgamation?

Amalgamation is defined as the combination of one or more companies into a new entity. It includes:

- i. Two or more companies join to form a new company
- ii. Absorption or blending of one by the other

Thereby, amalgamation includes absorption. However, one should remember that Amalgamation as its name suggests, is nothing but two companies becoming one. On the other hand, Absorption is the process in which the one powerful company takes control over the weaker company. Transferor Company means the company which is amalgamated into another company; while Transferee Company means the company into which the transferor company is amalgamated.

Procedure for Amalgamation

1. The terms of amalgamation are finalized by the board of directors of the amalgamating companies.
2. A scheme of amalgamation is prepared and submitted for approval to the respective High Court.
3. Approval of the shareholders of the constituent companies is obtained followed by approval of SEBI.
4. A new company is formed and shares are issued to the shareholders of the transferor company.
5. The transferor company is then liquidated and all the assets and liabilities are taken over by the transferee company at their book value.

Amalgamation	Existing companies A and B are wound up and a new company AB Ltd. is formed to take over the businesses of A and B
Absorption	Existing company B takes over the business of another existing company A which is wound up
External Reconstruction	External reconstruction takes place when an existing company goes into liquidation for the express purpose of selling its assets and liabilities to a newly formed company which is generally

	owned and named alike.
--	------------------------

Types of Amalgamation

According to AS-14, Amalgamation is of two types:

1. Amalgamation in the nature of merger
2. Amalgamation in the nature of purchase

1. Amalgamation in the nature of Merger

According to AS-14 on Accounting for Amalgamation, the following conditions must be satisfied for an amalgamation in the nature of merger:

- A. After amalgamation, all the assets and liabilities of the transferor company becomes the assets and liabilities of the transferee company.
- B. Shareholders holding not less than 90% of the face value of the equity shares of the transferor company become the equity shareholders of the transferee company by virtue of amalgamation.
- C. The business of the transferor company is intended to be carried on after the amalgamation by the transferee company.
- D. Purchase consideration should be discharged only by issue of equity shares in the transferee company except that cash may be paid in respect of any fractional shares.
- E. No adjustments are required to be made in the book values of the assets and liabilities of the transferor company, when they are incorporated in the financial statements of the transferee company.

If any one of the conditions is not satisfied in a process of amalgamation, it will not be considered as amalgamation in the nature of merger.

2. Amalgamation in the nature of Purchase

An amalgamation will be treated as “Amalgamation in the nature of purchase” if any of the above-mentioned conditions is not satisfied.

UNIT 2: UNDER WRITING OF SHARES & DEBENTURE

Meaning of Underwriting

Underwriting is an agreement between the underwriters and the company where the underwriters ensure the company that in case the shares and debentures offered to the public are not subscribed by the public then such shares and debentures will be taken up by the underwriters.

Meaning of Underwriters.

The person or institutions underwriting a public issue of shares and debentures are called underwriters.

The underwriters may be individuals, partnership firms, joint stock companies, banks and financial institutions.

Ex : ICICI, SFC's, LIC etc.,

Meaning of underwriting Commission.

The underwriters are entitled to some consideration for the risk they undertake in underwriting the shares or debentures of a public company.

In the words the consideration payable to the underwriters for underwriting the shares and debentures is called underwriting commission.

Maximum Limit for underwriting commission.

For the services rendered by the underwriters : they are entitled to a maximum commission of 5% of the issue price of the shares and debentures at 2.5% on the issue price according to company's act of 1956.

According to SEBI the maximum commission payable to underwriters for underwriting the shares and debentures is 2.5% of the issued price.

Advantages of Underwriting.

1. As underwriters guarantee the sale of shares and debentures, subscription of capital of the company becomes certain.
2. When there is an underwriting arrangement, a company is relieved from the trouble of raising the required capital.
3. When there is an underwriting arrangement, a company can be sure of getting the required capital within a specified period of time.
4. With an underwriting arrangement, a company need not bother about money market conditions.

Types of Underwriting

1. On the basis of number of shares or debentures underwritten:
According to this basis underwriting contracts are classified in 2 types they are,
 - a) **Complete underwriting** : It is one under which the whole of the issue of shares or debentures of a company is underwritten by one or more underwriters.
 - b) **Partial Underwriting** : It is one under which a part of the issue of shares or debentures of a company is underwritten by one or more underwriters.

2. On the basis of liability of underwriters:
According to this basis underwriting contracts are classified into 2 types they are,
 - a) **Pure / Open Underwriting** : it is an arrangement under which and underwriters or underwriters agree to take up the shares or debentures of a company only when the shares or debentures underwritten by him or them is not fully subscribed by the public.
 - b) **Firm Underwriting** : It is an arrangement where underwriters agrees to buy a definite number of shares and debentures irrespective of the number of shares or debentures subscribed by the public.
In case of firm underwriting, the underwriters gets priority over general public if shares / debentures are over subscribed.

Calculation of underwriters liability

Liability of underwriters refer to the number of shares, the underwriters must subscribed on account of underwriting agreement.

Statement showing underwriter's liability

Particulars	No.of Shares
Gross liability	XXX
(-) Unmarked application	XXX
	XXX
(-) marked application	XXX
Net liability	XXX
(+) Firm Underwriting	XXX
Total Liability	XXX

Marked and unmarked applications.

The applications received by the company bearing the officials stamp of the individual underwriter or the respective underwriters are called Marked application.

PROBLEMS:

1. A Ltd issued 100000 equity shares the whole of the issue was underwritten as follows.

X – 40%, Y-30%, Z-30%

Applications for 80,000 shares were received in all out of which application for 20,000 shares had the stamp of X those for 10,000 shares that of Y and 20,000 shares that of Z.

Your required to determine the net liability of each underwriter.

i. Calculation of unmarked applications

Total applications received	80,000
(-)Marked applications	50,000
(X-20,000, Y-10,000, Z-20,000)	_____
Unmarked application	<u>30,000</u>

ii. Statement showing Net Liability of underwriter

Particulars	X	Y	Z	Total
Gross Liability	40,00	30,00	30,00	1,00,000
(-)unmarked application	0	0	0	30,000
(30,000*4:3:3)	12,00	9,000	9,000	
(-) marked application	28,00	21,00	21,00	70,00
	0	0	0	0
Net Liability	20,00	10,00	20,00	50,00
	0	0	0	0
	8,000	11,00	1,000	20,00
		0		0

2. Super India Ltd., issued 75,000 equity shares the whole of the issue was underwritten as follows.

A-50%, B-25%, C-25%

Applications for 60,000 shares were received in all out of which applications for 15,000 shares had stamp of A, those for 7500 shares had stamp of B and 15,000 of C

Determine the net liability of the underwriters.

i. Calculation of unmarked applications

Total application received	60,000
(-) marked application	37,500
(A-15,000, B-7,500, C-15,000)	_____
Unmarked application	22,500

ii. Statement showing net liability of underwriters

Particulars	A	B	C	Total
Gross Liability	37,500	18,750	18,750	75,000
(-)unmarked application	11,250	5,625	5,625	22,500
(-) marked application	26,250	13,125	13,125	52,500
Liability	15,000	7,500	15,000	37,500
(-) Excess of 'C'	11,250	5,625	1,875	15,000
(1875*2:1)	1,250	625	-	--
Net Liability	10,000	5,000		15,000

3. Adithya Co. Ltd was incorporated on 1.01.2014, issued a prospectus inviting applications for 5 lakhs equity shares of Rs.10 each. The whole issue was fully underwritten by A, B, C & D as follows A-2,00,000. B – 1,50,000 C-1,00,000 & D- 50,000 shares.

Applications were received for 4,50,000 shares of which marked applications were as follows: A-2,20,000 , B – 1,10,000 , C – 90,000 , D-10,000 you are required to find out the Net liability of each underwriter and also calculate the commission received by each underwriters as per company's Act of 1956.

i. Calculation of unmarked applications

Total application received	4,50,000
(-) marked application	4,30,000
(2,20,000+1,10,000+90,000+10,000)	_____
Unmarked application	<u>20,000</u>

ii. Statement showing net liability of underwriters

Particulars	A	B	C	D	Total
Gross Liability	2,00,000	1,50,000	1,00,000	50,000	5,00,000
(-)unmarked application	8,000	6,000	4,000	2,000	20,000
(-) marked application	1,92,000	1,44,000	96,000	48,000	4,80,000
Liability	2,20,000	1,10,000	90,000	10,000	4,30,000
(-) Excess of 'A'	-	34,000	6,000	38,000	50,000
(3:2:1*28,000)	28,000	0	9,333	0	0
(-) Excess of 'C' shared among 'B'&'D'	--	14,000		4,667	--
(3,333*3:1)	--	20,000	-	33,333	--
Net Liability	--	0	3,333	833	--
		2,500	--		

	-	17,50 0	-	32,50 0	50,00 0
--	---	------------	---	------------	------------

iii. Calculation of underwriters Commission

A- $2,00,000 \times 10 \times 5\% = \text{Rs.} 1,00,000$

B- $1,50,000 \times 10 \times 5\% = \text{Rs.} 75,000$

C- $1,00,000 \times 10 \times 5\% = \text{Rs.} 50,000$

D- $50,000 \times 10 \times 5\% = \text{Rs.} 25,000$

4. A Company issued 1, 00,000 shares of Rs.10 each. The whole issue was fully underwritten by A, B, C & D as follows: A-40,000, B-30,000 C – 10,000 & D – 20,000 the company received applications for 90,000 shares of which marked applications were as follows. A-44,000, B-22,000, C-2,000 and D-18,000 shares. Determine the liability of each underwriter.

i. Calculation of unmarked applications

Total application received	90,000
(-) marked application	86,000
(44,000+22,000+2,000+18,000)	<u> </u>
Unmarked application	4,000

ii. Statement showing net liability of underwriters

Particulars	A	B	C	D	Total
Gross Liability	40,00	30,00	10,000	20,000	1,00,000
(-)unmarked application	0	0	400	800	4,000
(4,000*4:3:1:2)	1,600	1,200			
(-) marked application	38,40	28,80	9,600	19,20	96,00
Liability	0	0	2,000	0	0
(-) Excess of 'A'	44,00	22,00		18,00	86,00
(5,600*3:1:2)	0	0		0	0
(-)Excess of 'C'	-	6,800	7,600	1,200	
(667*3:1)	5,600	2,800	933	1,867	
Net Liability	-	4,000	6,667	-667	
	-	500	167		
	-	3,500	6,500	-	10,000

5. A company issued prospectus inviting applications for 3,50,000 equity shares of Rs.10 each the whole issue was fully underwritten by A, B, C & D as follows A- 1,40,000 , B-1,05,000, C-70,000 & D-35,000 applications were received for 3,15,000 shares of which marked applications were as follows: A-1,54,000 B – 77,000 C – 63,000 & D-7,000 Determine the Net liability of each underwriter.

i. Calculation of unmarked applications

Total application received	3,15,000
(-) marked application	3,01,000
(1,54,000+77)	<u> </u>
Unmarked application	14,000

ii. Statement showing net liability of underwriters

Particulars	A	B	C	D	Total
Gross Liability	1,14,00	1,05,000	70,00	35,00	3,50,000
(-)unmarked application	0	4,2000	0	0	14,000
(14,000*4:3:2:1)	5,600		2,800	1,400	
(-) marked application	1,34,40	1,00,800	67,20	33,60	3,36,00
	0	77,000	0	0	0
	1,54,00		63,00	7,000	3,01,00
	0		0		0
(-) Excess of 'A'	-	23,80	4,200	26,60	
(19,600*3:2:1)			6,533		

(-) Excess of 'C' (2333*3:1) Liability Net	19,600	0 9,800		0 3,267	
		14,00 0 1,750	-2333	23,333 583	
		12,25 0		22,75 0	35,00 0

6. ABC company issued 1,00,000 equity shares of Rs.10 each. The whole issue was fully underwritten by the following underwriters. A -35,000 B-30,000 C-20,000 D-10,000 E-3,000 F-2,000. The application forms marked by the underwriters were A-10,000 B-22,500 C-20,000 D-7,500 E-5,000 F-Nil.

Application for 20,000 shares were received as unmarked. You are required to find out Net liability of underwriters.

□ **Statement showing net liability of underwriters**

Particular	A	B	C	D	E	F	Total
Gross Liability	35,000	30,000	20,000	10,000	3,000	2,000	1,00,000
(-)unmarked application (20,000*35:30:20:10:3:2)	0 7,000	0 6,000	0 4,000	0 2,000	600	400	20,000
(-) marked application	28,000 0	24,000 0	16,000 0	8,000 7,500	2,400 5,000	1,600 0	80,000
(-) application	10,000 0	22,500 0	20,000 0				65,000
(-) Excess of (C+E) (6,600*35:30:10:2)	18,000 0	1,500 2,571	-4,000	500 857	-2,600	1,600 172	15,000
(-)Excess of (B+D) (1428-35:2)	3,000 15,000 0	-1,071	-	-357	-	1,428	-
Net Liability	1,351 13,649	-	-	-	-	77 1,351	- 15,000

7. A Public limited company with a capital of Rs.10,00,000 divided into equity share of Rs.10 each, places its entire issue in the market. The whole issue has been underwritten as follows: A-30,000 B-35,000 C-10,000, D-15,000 E-2,000 F-8,000. The application received on the forms marked by the underwriters are: A-25,000 B-23,500 C-6,500, D-1,000 E-2,000 F-7,000.

20,000 equity shares were received as unmarked applications calculate the liability of each underwriters.

□ **Statement showing net liability of underwriters**

Particular	A	B	C	D	E	F	Total
Gross Liability	30,000	35,000	10,000	15,000	2,000	8,000	1,00,000
(-)unmarked application (20,000*30:35:10:15:2:8)	0 6,000	0 7,000	0 2,000	0 3,000	400	1,600	20,000
(-) application	24,000 0	28,000 0	8,000 6,500	12,000 0	1,600 2,000	6,400 7,000	80,000
	25,000 0	23,500 0		1,000			65,000

(-) marked application (-)Excess of (A+E+F) (2000*35:10:15) Net Liability	- 1,000	4,500	1,500	11,00 0	-400	-600	15,00 0
	-	1,167	333	500	-	-	
	-	3,333	1,167	10,50 0	-	-	15,00 0

8. A public issue of 10,000 shares of Rs.10 each were offered by a company. These shares were underwritten as follows: A-7,000 B-3,000 the public applied for 8,000 Shares which include marked applications of A-5,000 B-2,000 determine the liability of A & B if unmarked shares were apportioned to underwriters on the basis of (a) Gross Liability (b) Remaining Liability.

i. Calculation of unmarked applications

Total applications received	8,000
(-)Marked applications (5,000+2,000)	7,000
Unmarked application	<u>1,000</u>

a. Statement showing Net Liability of underwriter

Particulars	A	B	Total
Gross Liability	7,000	3,000	10,000
(-)unmarked application (1,000*7:3)	700	300	1,000
(-) marked application	6,300	2,700	9,000
Net Liability	5,000	2,000	7,000
	1,300	700	2,000

b. Statement showing Net Liability of underwriter (remaining liability)

Particulars	A	B	Total
Gross Liability	7,000	3,000	10,000
(-)marked application	5,000	2,000	7,000
(-) unmarked application (1,000*2:1)	2,000	1,000	3,000
Net Liability	667	333	1,000
	1,333	667	2,000

9. X company Ltd. Was incorporate with a capital of Rs.10,00,000 divided into shares of Rs.10 each. The whole issue was underwritten by the underwriters as follows : M-35,000 N-30,000 O-20,000 P-10,000 Q-3,000 R-2000.

All the marked application forms were to go in relief of the underwriters whose names choose. The following application forms were marked by the underwriters : M-10,000 N-22,500 O-20,000 P-7,500 Q-5,000 R- Nil.

Application for 20,000 shares were received as unmarked applications. prepare a statement showing the number of shares each underwriter

had to take up.

□ **Statement showing underwriters liability**

Particular	M	N	O	P	Q	R	Total
Gross Liability	35,00	30,00	20,00	10,00	3,000	2,000	1,00,000
(-)marked application	0	0	0	0	5,000	-	65,000
	10,00	22,50	20,00	7,500			
Excess of Q is	0	0	0				
distr. Among	25,00	7,500	-	2,500	-2000	2,000	35,00
(M,N,P,R)	0						0
(2,000*35:30:10:2)	909	779	-	260	-	52	
(-) unmarked							
application	24,09	6,721	-	2,240	-	1,948	35,00
(20,000*35:30:10:2)	1	7,792	-	2,597	-	520	0
	9,091						25,00
							0
(-)Excess of (N+P)	15,00	-	-	-357	-	1,428	15,00
(1,428*35:2)	0	1,071					0
Net Liability			-	-		77	
	1,351	-					
	13,64					1,35	15,00
	9					1	0

10. A company issued 80,000 shares of Rs.10each at a premium of 20% 'A' underwriter underwriters 80% of the issue. The company receives applications for 75% of the issue of which 40,000 application had the rubber stamp of Mr.A Underwriters commission in 4% of the issue price. Determine the liability of Mr.A and calculate the Underwriting commission.

i. Calculation of Co's share

$$\begin{aligned}
 \text{Co's share} &= \text{Total issue} - \text{underwriters share} \\
 &= 80,000 - (80,000 * 80\%) \\
 &= 80,000 - 64,000 \\
 &= 16,000
 \end{aligned}$$

ii. Calculation of unmarked applications

Total applications received (75% of 80,000) 60,000

(-)Marked applications of 'A'	40,000
Unmarked application	20,000

iii. Statement showing Net Liability of underwriter

Particulars	A	Company	Total
Gross Liability	64,000	16,00	80,00
(-)unmarked application	-	0	0
		20,00	20,00
		0	0

(-) surplus of company distributed to underwriter	64,00 0	- 4,000	60,00 0
'A'(-) marked application	4,000-	-	
Net Liability	60,00 0 40,00 0	- - -	60,00 0 60,00 0 40,00 0
	20,00 0		20,00 0

iv. Calculation of underwriters commission.

Gross liability of 'A' * issue price * Roc issue price = Rs.10 + 20% of premium
= 10 + 2 = 12

64,000 * 12 - 4% = 30,720

11. 'H' Ltd issued 20,000 equity shares of Rs.100 each 80% of the issue was underwritten star brother's. Applications for 15,000 shares were received in all out of which 10,000 shares were marked. Determine the liability of Tsar Brother's and also the commission as per law (Act of 1956)

i. Calculation of Co's share

Co's share = Total issue - underwriters share
= 20,000 - (20,000 * 80%)
= 20,000 - 16,000
= 4,000

ii. Calculation of unmarked application

Total application received
15,000 (-) Marked application
10,000
Unmarked shares 5,000

iii. Calculation of star brothers commission

Issue price = 100 share
Gross liability * issue price * Roc (as per Co's act 1950)
= 16,000 * 100 * 5%
= Rs. 80,000

iv. Statement showing Net liability

Particulars	Star brother	Company	Total
Gross Liability	16,000	4,000	20,000
(-) unmarked application	-	5,000	5,000
(-) surplus of company distributed to star brothers	16,000	-	15,000
	0	1,000	0
	1,000	-	-
(-) marked application	15,000	-	15,000
	0	-	0
Net	10,000	-	10,000
	0	-	0
Liability	5,000	-	5,000

12. X company Ltd. Issued 1,00,000 shares of Rs.10 each. 60% of the issue was underwritten by A & B in the ratio of 3:2 application for 80,000 shares were received in all out of which marked applications were A-25,000 B-12,000 determine the liability of underwriters and also commission payable as per SEBI (25%)

□ **i. Calculation of Co's share**

Co's share = Total- underwriters share

= 1,00,000-(60%*1,00,000)

= 1,00,000-60,000

= 40,000/-

ii. Calculation of unmarked application

Total application received	80,000
(-) Marked application (25,000+12,000)	37,000
Unmarked shares	<u>43,000</u>

iii. Statement showing Net liability

Particulars	A	B	Company	Total
Gross Liability	36,000	24,000	40,000	1,00,000
(-) unmarked application	-	-	0	43,000
(-) surplus of company distributed to underwriters (3,000*3:2)	36,000	24,000	-3,000	57,000
(-) marked application	0	0	-	
	1,800	1,200		
Net Liability	34,200	22,800	-	57,000
	0	0	-	0
	25,000	12,000		37,000
	0	0		0
	9,200	10,800		20,000

iv. Calculation of underwriters commission as per SEBI

A- $36,000 \times 10 \times 2.5\% = 9,000$

B- $24,000 \times 10 \times 2.5\% = 6,000$

13. A company issued 40,000 shares of Rs.10 each for public subscription.

Underwriters	% of Shares underwritten	Marked application
P	25% of issue	5,000
Q	30% of issue	6,000
R	40% of Issue	4,000

The company received application for 30,000 shares ascertain the net liability of each underwriters.

- P- $40,000 \times 25\% = 10,000$ Q- $40,000 \times 30\% = 12,000$

R- $40,000 \times 40\% = 16,000$
38,000

i. Calculation of Co's share

Co's share = Total share - underwriters share
 $= 40,000 - 38,000$
 $= 2,000$

ii. Calculation of unmarked applications:

Total application received	30,000
(-) Marked application (5,000+6,000+4,000)	<u>15,000</u>
Unmarked shares	15,000

iii. Statement showing Net liability

Particulars	P	Q	R	Company	Total
Gross Liability	10,000	12,000	16,000	2,000	40,000
(-)unmarked application	-	-	-	15,000	0
(-) surplus is distributed among P,Q & R (13,000*5:6:8)	10,000	12,000	16,000	-	25,000
(-) marked application Net Liability	3,421	4,105	5,474	-	0
	6,579	7,895	10,526	-	25,000
	5,000	6,000	4,000	-	15,000
	1,579	1,895	6,526	-	10,000

14. A company issued 1,00,000 shares of Rs.10 each. These shares were underwriters as follows X-30,000 Y-50,000 the public applied for 70,000 shares Determine the liability of X & Y .

☐ **i. Calculation of Co's share**

$$\begin{aligned}
 \text{Co's share} &= \text{Total issue} - \text{underwriters share} \\
 &= 1,00,000 - (30,000 + 50,000) \\
 &= 1,00,000 - 80,000 \\
 &= 20,000
 \end{aligned}$$

ii. Calculation of marked & unmarked applications.

$$\begin{aligned}
 \text{Marked application of X} &= 70,000 \times 3/10 \\
 &= 21,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Marked application of Y} &= 70,000 \times 5/10 \\
 &= 35,000
 \end{aligned}$$

$$\begin{aligned}
 \text{(-) unmarked application Co} &= 70,000 \times 2/10 \\
 &= 14,000
 \end{aligned}$$

Note: in the absence of marked application the total subscription is divided among the underwriters & the Co's in their gross liability ration. The co's share is treated as unmarked applications.

iii. Statement showing underwriters liability

Particulars	X	Y	Company	Total
Gross Liability	30,000	50,000	20,000	1,00,000
(-)unmarked application	-	-	14,000	14,000

(-) application marked Liability Net	30,00 0	50,00 0	6,000 -	86,00 0
	21,00 0	35,00 0		56,00 0
	7,000	15,00 0	6,000	30,00 0

15. Popular Ltd issued 40,000 shares of Rs.10each for Public Subscription. The issue was underwritten as follows: Sriram – 25%, Raghu-30%, Tilak-25% the company received a total of 28,000 application of which marked application are follows : Sriram -8,000, Raghu-6,000 and Tilak-8,000. Determine the net liability of each underwriter.

i. Calculation of Co's share

$$\begin{aligned}
\text{Co's share} &= \text{Total issue} - \text{underwriters share} \\
&= 40,000 - (10,000 + 12,000 + 10,000) \\
&= 40,000 - 32,000 \\
&= 8,000
\end{aligned}$$

ii. Calculation of unmarked application

Total application received	28,000
(-) marked application (8,000 + 6,000 + 8,000)	<div style="border-bottom: 1px solid black; display: inline-block; width: 100%;">22,000</div>
	6,000

iii. Statement showing Net liability

Particulars	S	R	T	Company	Total
Gross Liability	10,000	12,000	10,000	8,000	40,000
(-) unmarked application	-	-	-	6,000	6,000
(-) marked application	10,000	12,000	10,000	2,000	34,000
Net Liability	8,000	6,000	8,000	-	22,000
	2,000	6,000	2,000	2,000	12,000

16. Neeraj Ltd issued 10,000 shares of rs.10 each at a premium of 10% these shares were underwritten by the underwriters as follows: J-5000 K-3000. The applications received by the company were 8000 shares of which the marked applications were J-3600 K-900 shares calculate underwriters commission as per law and also prepare statement of underwriters Net liability.

i. Calculation of Co's share

$$\begin{aligned}
\text{Co's share} &= \text{Total issue} - \text{underwriters share} \\
&= 10,000 - (5,000 + 3,000) \\
&= 10,000 - 8,000 \\
&= 2,000
\end{aligned}$$

ii. Calculation of unmarked applications:

Total application received	8,000
(-) marked application (3,600 + 900)	<div style="border-bottom: 1px solid black; display: inline-block; width: 100%;">4,500</div>
	3,500

iii. Statement showing Net liability

Particulars	J	K	Company	Total
-------------	---	---	---------	-------

Gross Liability	5,000	3,000	2,000	10,00
(-)unmarked application	-	-	3,500	0
				3,500
(-) surplus is distributed to J&K (1,500*5:3)	5,000	3,000	-	6,500
	937	563	1,500	
(-) marked application Net Liability			-	
	4,063	2,437	-	6,500
	3,600	900	-	4,500
	463	1,537		2,000

iv. Calculation of commission of underwriters as per law:-

$$J = 5,000 \times 5\% \times 11$$

$$= 2,750$$

$$K = 3,000 \times 5\% \times 11$$

$$= 1,650$$

FIRM UNDERWRITING.

- a) When a firm underwriting (included in total subscription) is treated on part with unmarked applications. The format for calculating total liability for each underwriter will be as follows.

Particulars	A	B	Total
Gross Liability	XXX	XXX	XXX
(-) unmarked applications (Total application received –marked application)	XXX	XXX	XXX
Balance	XXX	XXX	XXX
(-) Marked applications	XXX	XXX	XXX
Net Liability	XXX	XXX	XXX
(+) Firm Underwriting	XXX	XXX	XXX
Total Liability	XXX	XXX	XXX

- b) When Firm underwriting (included in total subscription) is treated on part with marked application the format for calculating total liability will be as follows.

Particulars	A	B	Total
Gross Liability	XXX	XXX	XXX
(-) unmarked applications (Total application received –marked application + Firm Underwriting)	XXX	XXX	XXX
Balance	XXX	XXX	XXX
(-) Marked applications (Marked application + Firm Underwriting)	XXX	XXX	XXX
Net Liability	XXX	XXX	XXX
(+) Firm Underwriting	XXX	XXX	XXX
Total Liability	XXX	XXX	XXX

17. A company issued 1,00,000 shares these shares were underwritten as follows: X-60,000 , Y-25,000 , Z-15,000. In addition there is firm underwriting X-8,000, Y-3,000, Z-10,000 shares. The total subscription including the firm underwriting was 71,000 shares and the firms included the following marked application: X- 10,000 , Y-20,000 , Z- 5,000. Determine the liability of underwriters.

□ **i. Calculation of unmarked application:**

Total application received 71,000

(-) marked application (10,000+20,000+5,000) 35,000

36,000

ii. Calculation showing underwriters liability

Particulars	X	Y	Z	Total
Gross Liability	60,00	25,00	15,00	1,00,000
(-)unmarked application	0	0	0	36,000
(-) marked application	21,60	9,000	5,400	
(-) surplus of Y's distributer to X& Z (4,000*12:3)	38,40	16,00	9,600	64,00
Net Liability	0	0	5,000	0
(+) Firm underwriting liability	10,00	20,00		35,00
	0	0		0
	28,40	-	4,600	29,00
	0	4,000	800	0
	3,200	-		-
	25,20	-	3,800	29,00
	0	3,00	10,00	0
	8,000	0	0	21,00
				0
	33,20	3,000	13,80	50,00
	0		0	0

18. Meena Ltd has authorised company of Rs.50,00,000 divided into 1,00,000 equity shares of Rs.50 each. The Company issued for subscription 50,000 shares at a premium of Rs.10 each. The entire issue was underwritten as follows : A-30,000 (firm underwriting 5,000), B-15,000 (firm Underwriting 2,000), C-5,000(Firm Underwriting 500). Out of the total issue 45,000 shares including firm underwriting were subscribed. The following were the marked applications: A-16,000 , B-10,000 , C-4,000. Calculate the liability of each underwriters.

i. Calculation of unmarked application:

Total subscription received	45,000
(-) marked application (16,000+10,000+4,000)	<u>30,000</u>
	<u>15,000</u>

ii. Calculation showing underwriters liability

Particulars	A	B	C	Total
Gross Liability	30,00	15,00	5,000	50,00
(-)unmarked application	0	0	1,500	0
(-) marked application (15,000*6:3:1)	9,000	4,500		15,00
(-) surplus of 'C' distributer to A&B (500*6:3)	21,00	10,50	3,500	35,00
Net Liability	0	0	4,000	0
(+) Firm underwriting liability	16,00	10,00		30,00
	0	0		0
	5,000	500	-500	5,000
	333	167	-	-

underwriting Total liability	4,667	333	-	5,000
	5,000	2,000	500	7,500
	9,667	2,333	500	12,500

19. ABC company issued 20,000 shares which were underwritten by X,Y & Z as follows : X-10,000 , Y-6,000 , Z-4,000. In addition there was firm underwriting by X-1,000 , Y-500 , Z-1,500. A company received applications for 15,200 shares including firm underwriting and the Number of marked applications were as follows: X-3,000 , Y-4,500 , Z-1,700. Calculate the liability of each underwriters.

□ **i. Calculation of unmarked application:**

Total share received	15,200
(-) marked application (3,000+4,500+1,700)	<u>9,200</u>
	<u>6,000</u>

ii. Calculation showing underwriters liability

Particulars	X	Y	Z	Total
Gross Liability	10,000	6,000	4,000	20,000
(-)unmarked application	0	1,800	1,200	0
(6,000*5:3:2)	3,000			6,000
(-) marked application	7,000	4,200	2,800	14,000
	3,000	4,500	1,700	0
				9,200
(-) surplus of Y's distributer to X& Z (300*5:2)	4,000	-300	1,100	4,800
Net Liability	214	-	86	-
(+) Firm underwriting	3,786	-	1,014	4,800
Total liability	1,000	500	1,500	3,000
	4,786	500	2,514	7,800

20. X ltd issued 4,00,000 shares of Rs.10 each the entire issue was underwritten as follows. A-2,00,000(firm underwriting 40,000), B – 1,20,000 (Firm Underwriting 20,000), C-80,000 (firm underwriting 20,000).Shares applied for were 3,60,000. The following being the marked forms including Firm underwriting A-1,40,000 , B-56,000 , C-64,000. Calculate the liability of each Underwriter.

i. Calculation of unmarked application:

Total share received	3,60,000
(-) marked application (1,40,000+56,000+64,000)	(1, <u>2,60,000</u>)
	<u>1,00,000</u>

ii. Calculation showing underwriters liability

Particulars	A	B	C	Total
Gross Liability	2,00,000	1,20,000	80,000	4,00,000
(-)unmarked application	50,000	0	0	0
(1,00,000*5:3:2)		30,000	20,000	1,00,000
(-) marked application	1,50,000	90,000	60,000	3,00,000
	0	0	0	0
	1,40,000	56,000	69,000	2,60,000

(-) surplus of 'C' distributer to A&B (4,000*5:3) Net Liability (+) Firm underwriting Total liability	0	0	0	0
	10,00 0	34,00 0	- 4,000	40,000
	2,500	1,500	-	
	7,500 40,00 0	32,500 20,00 0	- 20,00 0	40,00 0 80,00 0
	47,50 0	52,50 0	20,00 0	1,20,000

21. Embassy Ltd issued 10,000 Shares of Rs.100 each a premium of Rs.20 per share. The entire issue was underwritten by A, B & C as follows. A-5,000 (firm Underwriting-1000),B-3,000(firmUnderwriting-500),C-2,000(firmUnderwriting-500). Public have applied for 9,000 shares. The following are the marked forms including Firm Underwriting A-3,500, B-1,400 , C-1,600.

i. Calculation of unmarked application:

Total subscription received	9,000
(-) marked application including u/w (3,500+1,400+1,600)	<u>6,500</u> <u>2,500</u>

ii. Calculation showing underwriters liability

Particulars	X	Y	Z	Total
Gross Liability	5,000	3,000	2,000	10,000
(-)unmarked application (2,500*5:3:2)	1,250	750	500	2,500
(-) marked application	3,750	2,250	1,500	7,500
(-) surplus of 'C' distributer to A & B (100*5:3)	3,500	1,400	1,600	6,500
Net Liability	250	850	-100	1,000
(+) Firm underwriting Total liability	63	37	-	-
	187	813	-	1,000
	1,000	500	500	2,000
	1,187	1,313	500	3,000

22. Bangalore House building Association Ltd. Issued 1,00,000 equity shares of Rs.100 each. P, Q, R & S underwriters the entire issue in the proportion of 40% , 30%, 20% & 10% respectively . In consideration of commission in cash at 4% they also applied for Firm Underwriting : P-3,000 , Q-2,000 , R-2,000 , S-3,000 exclusive of Firm Underwriting Besides the firm applications from the underwrite the public apply for 60,000 shares of which marked applications were as follows: P-10,000 , Q-6,000 , R-8,000 & S-16,000 show the number of shares to be taken up by each of the underwriting and also the commission receivable in cash.

i. Calculation of Total Subscription

$$\begin{aligned}
 \text{Total Subscription} &= \text{No. of application received} + \text{Firm underwriting} \\
 &= 60,000 + (3,000 + 2,000 + 2,000 + 3,000) \\
 &= 60,000 + 10,000 \\
 &= 70,000
 \end{aligned}$$

ii. Calculation of unmarked application:

Total subscription received	70,000
(-) marked application Ex	<u>40,000</u>

(10,000+6,000+8,000+16,000)

30,000

Note: Firm underwriting treated as unmarked applications

iii. Calculation showing underwriters total liability

Particulars	P	Q	R	S	Total
Gross Liability	40,000	30,000	20,000	10,000	1,00,000
(-)unmarked application (30,000*4:3:2:1)	0	0	0	0	30,000
	12,000	9,000	6,000	3,000	
(-) marked application	28,000	21,000	14,000	7,000	70,000
	0	0	0	16,000	0
(-) surplus of 'S' distributer to P,Q & R (9,000*4:3:2)	10,000	6,000	8,000	0	30,000
	0				0
Net Liability	18,000	15,000	6,000	-9,000	40,000
	0	0	2,000		0
(+) Firm underwriting Total liability	4,000	3,000			9,000
	14,000	12,000	4,000	-	30,000
	0	0	2,000	3,000	0
	3,000	2,000		0	10,000
					0
	17,000	14,000	6,000	3,000	40,000
	0	0			0

iv. Calculation of underwriters commission P=

$$\begin{aligned} 40,000 \times 100 \times 4\% &= \text{Rs. } 1,60,000 \\ Q &= 30,000 \times 100 \times 4\% = \text{Rs. } 1,20,000 \\ R &= 20,000 \times 100 \times 4\% = \text{Rs. } 80,000 \\ S &= 10,000 \times 100 \times 4\% = \text{Rs. } 40,000 \end{aligned}$$

23. A company issued 30,000 shares of Rs.10 each. These shares were underwritten as follows. X-18,000 , Y-7,500 , Z-4,500 I addition there was Firm Underwriting:X-2,400 , Y- 900 , Z-3,000 . Total applications received by the company (excluding firm underwriting & marked applications) were 4,500 shares.

Marked applications were X-3,000 Y-6,000 , Z-1,500. Determine the liability of the underwriter.

☐ **i. Calculation of Total Subscription**

$$\begin{aligned} \text{Total Subscription} &= \text{No. of application received} + \text{Firm underwriting} \\ &+ \text{marked application} = 4,500 + 6,300 + 10,500 \\ &= 21,300 \end{aligned}$$

ii. Calculation of unmarked application:

Total subscription received	21,300
(-) marked application Ex	10,500
(3,000+6,000+1,500)	<u>10.800</u>

Firm underwriting = 2,400 + 900 + 3,000
= 6,300

iii. Statement showing total liability

Particulars	X	Y	Z	Total
Gross Liability	18,000	7,500	4,500	30,000
(-) unmarked application (10,800*12:5:3)	6,480	2,700	1,620	10,800
(-) marked application	11,520	4,800	2,880	19,200
(-) surplus of 'Y' distributer to X & Z (1,200*12:3)	3,000	6,000	1,500	10,500
Net Liability	8,520	-1,200	1,380	8,700
(+) Firm underwriting Total liability	900	-	240	
	7,560	-	1,140	8,700
	2,400	900	3,000	6,300
	9,960	-900	4,140	15,000

24. A company a public issue of 1,25,000 equity shares of Rs.100 each the entire issue was underwritten by A, B, C & D in a proportion of 30% , 25% , 25% & 20% respectively. Under the terms agreed upon a commission of 2% was payable to the underwriters.

A, B, C & D also agreed upon firm Underwriting of 4,000 ; 6,000; Nil ; 15,000 shares respectively. The total subscription excluding firm underwriting but including marked applications 90,000 shares marked applications received were ; A-24,000 ; B-20,000; C-12,000 & D-24,0001 shares . determine the liability of the underwriters.

i. Calculation of Total Subscription

$$\begin{aligned}
 \text{Total Subscription} &= \text{No. of application received} + \text{Firm underwriting} \\
 &= 90,000 + (4,000 + 6,000 + 0 + 15,000) \\
 &= 90,000 + 25,000 \\
 &= 1,15,000
 \end{aligned}$$

ii. Calculation of unmarked application:

Total subscription received	1,15,000
(-) marked application	80,000
(24,000+20,000+12,000+24,000)	<u>35,000</u>

iii. Calculation showing underwriters total liability

Particulars	A	B	C	D	Total
Gross Liability	37,500	31,250	31,250	25,000	1,25,000
(-) unmarked application (35,000*6:5:5:4)	10,500	8,750	8,750	7,000	35,000
(-) marked application	27,000	22,500	22,500	18,000	90,000
(-) surplus of 'D' distributor to A,B & C (6,000*6:5:5)	24,000	20,000	12,000	24,000	80,000
Net Liability	3,000	12,500	10,500	-6,000	10,000
(+) Firm underwriting Total liability	2,250	0	0	-	0
	750	1,875	1,875		
	4,000	125	8,625	15,000	10,000
		6,000	-	0	0
					25,000
	4,750	6,125	8,625	15,000	35,000
				0	0

iv. Calculation of underwriters commission

P=

37,500*100*2%=Rs.75,000

Q=31,250*100*2%=Rs.62,500

R=31,250*100*2%=Rs.62,500

S=25,000*100*2%=Rs.50,000

25. A company issued 24,000 shares of Rs.10 each. These shares were underwritten as follows : X-14,400 ; Y-6,000 ; Z-3,600 shares. Firm underwriting X-1,920 ; Y- 720 ; Z-2,400. The total subscriptions received except of firm underwriting and marked application were 3,600 shares. Marked applications were X-2,400; Y- 4,800; X-1,200. Determine the liability of Underwriters.

i. Calculation of Total Subscription

Total Subscription = No. of application received + Firm underwriting + marked application
= 3,600 + 8,400 + 5,040
= 17,040

ii. Calculation of unmarked application:

Total subscription received

17,040

(-)	marked	8,400
application(2,400+4,800+1,200		
		<u>8,640</u>

Marked application =2,400+4,800+1,200
= 8,400

Firm underwriting = 1,920+720+2400
= 5040

iii. Statement showing total liability

Particulars	X	Y	Z	Total
Gross Liability	14,400	6,000	3,600	24,000
(-) unmarked application (8,640*12:5:3)	5,184	2,160	1,296	8,640
(-) marked application	9,216	3,840	2,304	15,360
	2,400	4,800	1,200	8,400
(-) surplus of 'Y' distributer to X & Z (960*12:3)	6,816	-960	1,104	6,960
	768	-	912	-
Net Liability	6,048	-	912	6,960
(+) Firm underwriting	1,920	720	2,400	5,040
Total liability	7,968	720	3,312	5,040

26. Nischal Ltd 2,50,000 shares of Rs.10 each which was underwritten as follows: Mr. A 75,000 (firm underwriting -8,000) Mr.B – 62,500 (firm underwriting - 12,000) Mr.C – 62,500 (firm underwriting -Nil), Mr.D- 50,000 (firm underwriting -30,000).

The total applications excluding firm underwriting but including marked applications were for 1,80,000 shares. The marked applications were as follows ; Mr.A-40,000 ; Mr.B – 36,000 ; Mr.C-24,000 & Mr.D+48,000. Calculate the Net liability of each underwriter treating (a) Firm underwriter as marked applications (b) Firm underwriter as unmarked applications.

□ **i. Calculation of Total Subscription**

Total Subscription = No. of application received + Firm underwriting
 = 1,80,000 + (8,000 + 12,000 + 30,000)
 = 1,80,000 + 50,000
 = 2,30,000

a) Firm underwriting as marked application

ii. Calculation of unmarked application:

Total subscription received 2,30,000

(-) marked application (including Firm U/w 1,98,000

U/w

(48,000 + 48,000 + 24,000 + 78,000)

32,000

iii. Calculation showing underwriters total liability

Particulars	Mr. A	Mr. B	Mr. C	Mr. D	Total
Gross Liability	75,00	62,50	62,50	50,00	2,50,000
(-) unmarked application (32,000*6:5:5:4)	0 9,600	0 8,000	0 8,000	0 6,400	32,000
(-) marked application	65,40 0	54,50 0	54,50 0	43,60 0	2,18,00 0
(-) surplus of 'D' distributor to A,B & C (34,000*6:5:5)	48,00 0	48,00 0	24,00 0	78,00 0	1,98,00 0
(-) surplus of 'D' distributor to A,B & C (4,250*6:5)	17,40 0	6,500 10,75	30,50 0	-34,400	20,000
Net Liability	12,90 0	0	10,75 0	-	
(+) Firm underwriting Total liability	4,500 2318	-4,250	19,75 0	-	
	1,932 8,000	12,000	17,818 -	30,000	20,00 0 50,00 0
	10,18 2	12,000	17,81 8	30,000	70,000

b) Firm underwriting as unmarked application

ii. Calculation of unmarked application:

Total subscription received
2,30,00

0 (-) marked application(excluding Firm U/w)

1,48,000

(40,000+36,000+24,000+48,000) 82,000

iii. Calculation showing underwriters total liability

Particulars	Mr. A	Mr. B	Mr. C	Mr. D	Total
Gross Liability	75,00	62,50	62,50	50,00	2,50,000
(-) unmarked application (82,000*6:5:5:4)	0 24,60 0	0 20,50 0	0 20,50 0	0 16,40 0	82,000
(-) marked application	50,40 0	42,00 0	42,00 0	33,60 0	1,68,00 0
(-) surplus of 'D' distributor to A,B & C (14,400*6:5:5)	40,00 0	36,00 0	24,00 0	48,00 0	1,48,00 0
Net Liability	10,40 0	6,000 4,500	18,00 0	- 14,400	20,000

(+) Firm underwriting Total liability	5,400		4,500-		
	5,000 8,000	1,500 12,00 0	13,500 -	- 30,000	20,00 0 50,00 0
	13,00 0	13,50 0	13,50 0	30,00 0	70,000

27. X Ltd invited applications from public for 2,50,000 shares of Rs.10 each at a premium of Rs.5 per share. The entire issue was underwritten by underwriters P, Q , R & S to the extent of 30% , 20% , 30% & 20% respectively with the provision of firm underwriting of 7,500 ; 2,500 ; 5,000 & 2,500 shares respectively. The underwriters were entitled to the maximum commission as per law in force and practise lay down by SEBI.

The co-received applications for 1,75,000 shares excluding firm underwriting. The marked applications were 47,000 ; 52,500 ; 25,000 & 20,000 respectively calculate the liability of each of the underwriters treating.

- a) Firm underwriting as marked applications
b) Firm Underwriting as unmarked applications .

Also calculate the underwriters commission payable to different underwriters.

□ **i. Calculation of Total Subscriptions**

Total subscriptions received	1,75,000
(-) firm underwriting (7,500+2,500+5000+2,500)	<u>17,500</u>
	<u>1,92,500</u>

- a) Firm underwriting as marked application

i. Calculation of unmarked application

Total subscriptions	1,92,500
(-) marked application (including firm U/w)	<u>1,62,000</u>
(54,500+55,000+30,000+22,500)	<u>30,500</u>

ii. Statement of underwriters liability

Particulars	P	Q	R	S	Total
Gross Liability	75,00	50,00	75,00	50,00	2,50,000
(-)unmarked application	0	0	0	0	30,500
(30,500*3:2:3:2)	9,150	6,100	9,150	6,100	
(-) marked application	65,85	43,90	65,85	43,90	2,19,50
	0	0	0	0	0
	54,50	55,00	30,00	22,50	1,62,00
	0	0	0	0	0
(-) surplus of 'Q' distributor to P,R & S	11,35	-11,100	35,85	21,40	57,500
(11,100*3:3:2)	0		0	0	
Net Liability	4,162		4,162	2,776	
(+) Firm underwriting	7,188		31,68	18,62	57,50
	7,500	2,500	8	4	0
Total liability			5,000	2,500	17,50
					0
	14,68	2,500	36,68	21,12	75,000
	8		8	4	

- b) Firm underwriting as unmarked applications

i. calculation of unmarked application

Total subscription	1,92,500
(-) marked application (excluding F	<u>1,44,500</u>

U/w)

(47,000+52,500+25,000+20,000)

48,000

i. Statement of underwriters liability

Particulars	P	Q	R	S	Total
Gross Liability	75,00	50,00	75,00	50,00	2,50,000
(-)unmarked application (48,000*3:2:3:2)	0 14,40 0	0 90,60 0	0 14,40 0	0 9,600 0	48,000
(-) marked application	60,60 0	40,40 0	60,60 0	40,40 0	1,98,00 0
(-) surplus of 'Q' distributer to P,R & S (12,100*3:3:2)	47,00 0	52,50 0	25,00 0	20,00 0	1,44,50 0
Net Liability	13,60 0	- 12,100	35,60 0	20,40 0	53,500 -
(+) Firm underwriting	4,537	-	4,537	3,026	
Total liability	9,063 7,500	2,500	31,06 3 5,000	17,37 4 2,500	53,50 0 17,50 0
	14,68 8	2,500	36,06 3	19,87 4	71,00 0

iv. Calculation of commission underwriters

P=

$$75,000 \times 100 \times 2.5\% = \text{Rs.} 28,125$$

$$Q = 50,000 \times 100 \times 2.5\% = \text{Rs.} 18,750$$

$$R = 75,000 \times 100 \times 2.5\% = \text{Rs.} 28,125$$

$$S = 50,000 \times 100 \times 2.5\% = \text{Rs.} 18,750$$

28. Apporva Ltd issued 5,00,000 equity shares of Rs.10 each at a premium of 20% the issue was underwritten by 3 persons A, B & C as follows:
A-2,50,000 (firm Underwriting -25,000), B- 1,50,000 (firm Underwriting -15,000) & C-1,00,000 (firm Underwriting -10,000).

The underwriting commission % on the issue price and A Company agreed to create firm under writing applications as marked forms. The company received applications for 4,00,000 equity shares (excluding firm underwriting) of which marked forms were as follows : A-1,15,00 ; B-1,25,000 ; & C-1,30,000 you are required to show

- Net liability of underwriters in terms of Number of shares
- Commission due to each underwriter
- Net amount due from each underwriter to the company.

i. Calculation of Total Subscription

$$\begin{aligned}
 \text{Total Subscription} &= \text{No. of application received} + \text{Firm underwriting} \\
 &= 4,00,000 + (25,000 + 15,000 + 10,000) \\
 &= 4,00,000 + 50,000 \\
 &= 4,50,000
 \end{aligned}$$

ii. Calculation of unmarked application:

Total subscription received	4,50,000
(-) marked application	4,20,000
(1,40,000+1,40,000+1,40,000)	<u>30,000</u>

iii. Calculation showing underwriters Net liability

Particulars	A	B	C	Total
Gross Liability	2,50,000	1,50,000	1,00,000	5,00,000
(-) unmarked application (30,000*5:3:2)	15,000	9,000	6,000	30,000
	2,35,000	1,41,000	94,000	4,70,000
(-) marked application	1,40,000	1,40,000	1,40,000	4,20,000
	95,000	1,000	-46,000	50,000
(-) surplus of 'C' distributer to A,B (46,000*5:3)	0	17,250	-	0
(-) surplus of 'B' distributer to A & C (16,250*5)	28,750	0	-	50,000
Net Liability	66,250	-16,250	-	
(+) Firm underwriting Total liability	16,250	-	-	50,000
	50,000	15,000	10,000	50,000
	25,000	0	0	
	75,000	15,000	10,000	1,00,000
	0	0	0	

b) iii. Underwriters commission:

A-
 $2,50,000 \times 12 \times 5\% = \text{Rs. } 1,50,000$
 B-
 $1,50,000 \times 12 \times 5\% = \text{Rs. } 90,000$
 C- $1,00,000 \times 12 \times 5\% = \text{Rs. } 60,000$

c) Calculation of Net amount due from each underwriter to the company

A = $75,000 \times 12 = \text{Rs. } 9,00,000$
 B = $15,000 \times 12 = \text{Rs. } 1,80,000$
 C = $10,000 \times 12 = \text{Rs. } 1,20,000$

Net amount due - Net amount - commission

A = $9,00,000 - 1,50,000 = 7,50,000$
 B = $1,80,000 - 90,000 = 90,000$
 C = $1,20,000 - 60,000 = 60,000$

29. Ram Ltd invited applications from public for 1,00,000 shares of Rs.10 each at a premium of Rs.5 per share. The entire issue was underwritten by underwriters P, Q, R & S to the extent of 30%, 30%, 20% & 20% respectively with the provision of firm underwriters of 3,000 ; 2,000 ; 1,000 ; 1,000 respectively. The underwriters are entitled to the maximum commission as per the provisions of the company's act of 1956. The company received applications for 70,000 shares (excluding firm Underwriters) out of which applications for 19,000 ; 10,000 ; 21,000 ; 8,000 were marked in favour of P, Q, R & S calculate the liability of each underwriter by providing relief for firm applications also ascertain the underwriting commission payable to different underwriters.

□ i. **Calculation of Total Subscription**

$$\begin{aligned}
 \text{Total Subscription} &= \text{No. of application received} + \text{Firm underwriting} \\
 &= 70,000 + (3,000 + 2,000 + 1,000 + 1,000) \\
 &= 70,000 + 7,000 \\
 &= 77,000
 \end{aligned}$$

ii. **Calculation of unmarked application:**

Total subscription received	77,000
(-) marked application	65,000
(22,000+12,000+22,000+9,000)	<u>12,000</u>

iii. **Statement of underwriters liability**

Particulars	P	Q	R	S	Total
Gross Liability	30,00	30,00	20,00	20,00	1,00,000
(-) unmarked application	0	0	0	0	12,000
(12,000*3:3:2:2)	3,600	3,600	2,400	2,400	
(-) marked application	26,40	26,40	17,60	17,60	88,00
	0	0	0	0	0
	22,00	12,00	22,00	9,000	65,00
	0	0	0		0
(-) surplus of 'R' distributor (4,400*3:3:2)	4,400	14,40	-	8,600	23,000
		0	4,400		
Net Liability	1,650			1,100	
(+) Firm underwriting		1,650	-		
	2,750	12,75	-	7,500	23,00
Total liability	3,000	0	1,00	1,000	0
		2,000	0		7,000
	5,750	14,75	1,000	8,500	30,000
		0			

iv. **Calculation of underwriters commission**

P=

$$30,000 * 15 * 5\% = \text{Rs. } 22,500$$

$$Q = 30,000 * 15 * 5\% = \text{Rs. } 22,500$$

$$R = 20,000 * 15 * 5\% = \text{Rs. } 15,000$$

$$S = 20,000 * 15 * 5\% = \text{Rs. } 15,000$$

UNIT 3: Capital Reduction

What is Reconstruction?

Reconstruction is a process of the company's reorganization, concerning legal, operational, ownership and other structures, by revaluing assets and reassessing the liabilities. It refers to the transfer of company or several companies' business to a new company. This, therefore, means that the old company will get put into liquidation, and shareholders will therefore agree to take shares of equivalent value in the new company. Reconstruction is required when the company is incurring losses for many years, and the statement of account does not reflect the true and fair position of the business, as a higher net worth is depicted, than that of the real one. In other words, "Reconstruction" involves the winding up of an existing company and the transfer of its assets and liabilities to a new company formed for the purpose of taking over the business and undertaking of the existing company. Shareholders in the existing company become shareholders in the new company. The business undertaking and shareholders of the new company are substantially the same as those of the old company.

Objectives of Reconstruction

The major objectives of reconstruction are as follows

1. To resolve the problem of over-capitalization/huge accumulated losses/over valuation of assets.
2. When the capital structure of a company is complex and is required to make it simple
3. When change is required in the face value of shares of the company
4. To generate surplus for writing off accumulated losses & writing down overstated assets.
5. Raising the fresh capital by issuing new shares.
6. Changing altogether the memorandum of association of the company.
7. To generate cash for working capital needs, replacement of assets, to add balancing equipment's, modernise plant & machinery etc.

Types of Reconstruction

A company can be reconstructed in any of the two ways. These are:

1. External Reconstruction and
2. Internal Reconstruction.

External Reconstruction: When a company is suffering losses for the past several years and facing financial crisis, the company can sell its business to another newly formed company. Actually, the new company is formed to take over the assets and liabilities of the old company. This process is called external reconstruction. In other words, external reconstruction refers to the sale of the business of existing company to another company formed for the purposed. In external reconstruction, one company is liquidated and another new company is formed. The liquidated company is called "Vendor Company" and the new company is called "Purchasing Company".

Shareholders of vendor company become the shareholders of purchasing company. Internal Reconstruction: Internal reconstruction refers to the internal re-organization of the financial structure of a company. It is also termed as re-organization which permits the existing company to be continued. Generally, share capital is reduced to write off the past accumulated losses of the company.

Significance of Internal Reconstruction

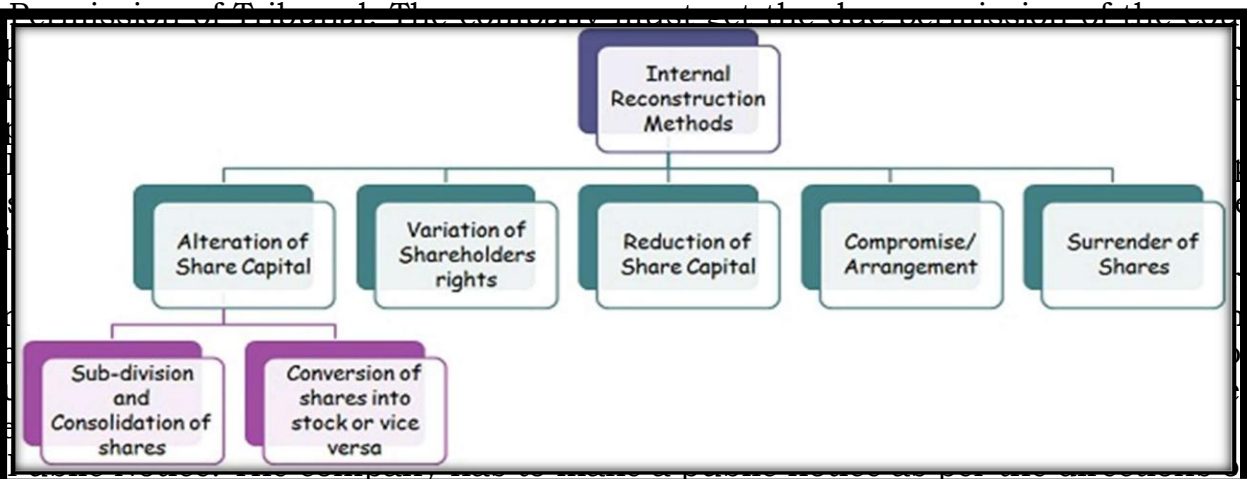
Internal reconstruction is done by the company when:

1. There is an overvaluation of assets and undervaluation of liabilities.
2. There is a difficulty to meet the financial crisis and there are continuous losses.

Conditions/Provisions regarding Internal Reconstruction

1. Authorization by Articles of Association: The company must be authorized by its articles of association to resort for capital reduction. Articles of association contains all the details regarding the internal affairs of the company and mention the clause containing manner of reduction of capital.
2. Passing of Special Resolution: The company must pass the special resolution before resorting to capital reduction. The special resolution can be passed only if the majority of the stakeholders are assenting to the internal reconstruction. This special resolution must be get signed by the tribunal and deposited to the registrar appointed under the Companies Act, 2013.

3. Permission of Tribunal: The company must get the due permission of the court or tribunal stating that the company is resorting to capital reduction. Also, the company has to state the valid reasons for the same.



Methods of Internal Reconstruction

There are various methods of Internal reconstruction which is depicted in the form of following chart-

Accounting Entries

1.	For increase in share capital Bank account To equity share capital a/c (Being the amount received on shares of ₹ each)	Dr.
2.	For consolidation of shares Equity share capital A/c To equity share capital A/c (Being conversion of shares of ₹ each intoshares of ₹ each)	Dr.
3.	For sub-division of shares Equity share capital A/c To equity share capital (Being conversion of shares of ₹ each into shares of ₹ each)	Dr.
4.	For conversion of share into stock or vice versa Equity share capital A/c To equity stock a/c (Being conversion of fully paid equity shares of ₹ each into equity stock) Equity stock A/c To equity share capital A/c (Being conversion of equity stock into equity shares of ₹ each)	Dr. Dr.
5.	For cancellation of unissued capital No entry is passed for cancellation of capital	

with

ital

2. **Variation of Shareholders right:** Section 48 of the Companies Act 2013 states that where a share capital of the company is divided into different classes of shares, the rights attached to the shares of any class may be varied with the consent in writing of the holders of not less than three-fourths of the issued shares of that class or by means of a special resolution passed at a separate meeting of the holders of the issued shares of that class.

3. **Reduction of Share Capital:**

Section 66 of the Companies Act 2013 provides that subject to confirmation by the Tribunal on an application by the company, a company limited by shares or limited by guarantee and having a share capital may, by a special resolution, reduce the share capital in any manner and in particular, may—

- (a) Extinguish or reduce the liability on any of its shares in respect of the share capital not paid-up; or
- (b) Either with or without extinguishing or reducing liability on any of its shares, —
 - (i) Cancel any paid-up share capital which is lost or is unrepresented by available assets; or
 - (ii) Pay off any paid-up share capital which is in excess of the wants of the company

4. **Compromise/Arrangement:**

A scheme of compromise and arrangement is an agreement between a company and its members and outside liabilities when the company faces financial problems. Such an arrangement, therefore, also involves sacrifices by shareholders, or creditors and debenture holders or by all.

5. **Surrender of Shares:**

In this method, shares are divided into shares of smaller denominations and then the shareholders are made to surrender their shares to the company. These shares are then allotted to debenture holders and creditors so that their liabilities are reduced. The unutilized surrendered shares are then cancelled by transferred to Reconstruction Account.

Differentiate between Internal and External reconstruction

Basis of Distinction	Internal Reconstruction	External Reconstruction
Meaning	Internal reconstruction refers to the method of corporate restructuring wherein existing company is not liquidated to form a new one.	External reconstruction is one in which the company undergoing reconstruction is liquidated to take over the business of existing company.
New company	No new company is formed.	New company is formed.
Capital reduction	Capital is reduced and the external liability holders waive their claims.	No reduction in the capital
Liquidation	Liquidation of company is not done.	Liquidation of company is must

Losses against profits	It can set off past losses against future profits.	Since a new company is established, losses of the old company can't be set off against the profits of the new company.
------------------------	--	--

UNIT 4: INDIAN ACCOUNTING STANDARDS

Accounting Standards – 2 Valuation of Inventories

OBJECTIVE

- Formulate the method of computation of cost of inventories/stock.
- Determining the value of closing stock at which it is to be shown in balance sheet till it is not sold and recognized as revenue.

Applications

- This Standard should be applied in accounting for inventories other than:
 - (a) work in progress arising under construction contracts, including directly related service contracts (see Accounting Standard (AS) 7, Construction Contracts);
 - (b) work in progress arising in the ordinary course of business of service providers;
 - (c) shares, debentures and other financial instruments held as sk in trade; and
 - (d) producers' inventories of livestock, agricultural and forest products, and mineral oils, ores and gases to the extent that they are measured at net realisable value in accordance with well established practices in those industries.

DEFINITION

Inventories are assets:

- Held for the sale in the ordinary course of business (Finished Goods).
- In the process of production of such sale (Raw material and working progress).
- In the form of materials and supplies to be consumed in the production process or in the rendering of services (Stores, Spares, Raw material).
- Inventories do not include machinery.

Measure of Inventories

Inventories should be valued at the lower of cost and net resale value

MAJOR POINTS FOR VALUATION OF INVENTORIES

- Determination of cost of Inventories
- Determination of net realizable value of inventories
- Comparison between the cost and net realizable value

Determination of Cost of Inventories

Cost of Inventories Includes:

- Cost of Purchase
- Cost of Conversion
- Other Costs (incurred in bringing the inventories to their present location and condition)

Cost of Purchase

Cost of Purchase Price includes :

- Duty and Purchase Price
- Taxes
- Freight Inward
- Other Expenditure directly attributable to the acquisition.

Less :

- Duties and taxes recoverable by enterprises from taxing authorities
- Trade discount
- Duty Drawback
- Rebate

Cost of Conversion

- It Consists of the cost directly related to the units (Direct Labor, Direct Material, Direct Expenses)

Add:

- Systematic allocation of fixed and variable production overheads that are incurred in converting material into finished goods.

Other Costs

Cost incurred in bringing the inventories to their present location and condition

- Excise duty contributes directly to bringing the inventories to its present location and condition
- Excise duties is direct costs, which should be included in the valuation of inventories

Determination of net realizable value of Inventories.

- Net realizable value means estimated selling price in ordinary course of business less estimated costs of completion and estimated costs necessary to make the sale
- If the finished product is sold at cost or above cost, then the estimated realizable value of raw material and supplies is considered more than its cost
- If the finished product is sold below cost, then the estimated realizable value of raw material or supplies is equal to replacement price of raw material or supplies

Methods of computing Inventories

- First-in, First-out (FIFO)
- Last-in, First-out (LIFO)
- Weighted-average cost (WAC)

Accounting Standards – 6 Depreciation Accounting

- This statement deals with depreciation accounting and applies to all depreciable assets, except the following items to which special considerations apply –
 - a. Forests, plantations and similar regenerative natural resources;
 - b. Wasting assets including expenditure on the exploration for and extraction of minerals, oils, natural gas and similar non-regenerative resources;
 - c. Expenditure on research and development
 - d. Goodwill;
 - e. Live stock.

This statement also does not apply to land unless it has a limited useful life for the

enterprise.

- Different accounting policies for depreciation are adopted by different enterprises. Disclosure of accounting policies for depreciation followed by an enterprise is necessary to appreciate the view presented in the financial statements of the enterprise.

Explanation –

1) Importance of depreciation – Depreciation has a significant effect in determining and presenting the financial position and results of operations of an enterprise. Depreciation is charged in each accounting period by reference to the extent of the depreciable amount, irrespective of an increase in the market value of the assets.

2) Determination of depreciation – Assessment of depreciation and the amount to be charged in respect thereof in an accounting period are usually based on the following three factors

- a. Historical cost or other amount substituted for the historical cost of the depreciable asset when the asset had been revalued;
- b. Expected useful life of the depreciable asset; and
- c. Estimated residual value of the depreciable asset.

- Historical cost- historical cost of a depreciable asset represents its money outlay or its equivalent in connection with acquisition, installation and commissioning as well as for additions to or improvement thereof. The historical cost of a depreciable asset may undergo subsequent changes arising as a result of increase or decrease in long-term liability on account of exchange fluctuations, price adjustments, changes in duties or similar factors.

- Useful life of a depreciable asset- The useful life of a depreciable asset is shorter than its physical life and is :

- (i) pre-determined by legal or contractual limits, such as the expiry dates of a related leases;
- (ii) directly governed by extraction or consumption;
- (iii) dependent on the extent of use and physical deterioration on account of wear and tear which again depends on operational factors, such as, the number of shifts for which the asset is to be used, repair and maintenance policy of the enterprise etc; and
- (iv) Reduced by obsolescence arising from such factors as :

- (a) Technological changes;
- (b) Improvement in production method;
- (c) Change in market demand for the product or service output of the asset; or
- (d) Legal or other restrictions.

- Determination of the useful life- Determination of the useful life of a depreciable asset is a matter of estimation and is normally based on various factors including experience with similar types of assets. Such estimations is more difficult for an asset using new technology or used in the production of a new product or in the provision for a new service but is nevertheless required on some reasonable basis.

- Addition or extension to an existing asset- Any addition or extension to an existing asset which is of a capital nature and which becomes an integral part of the existing asset is depreciated over the remaining useful life of that asset. As a practical measure, however, depreciation is sometimes provided on such addition or extension at the rate which is applied to an existing asset. Any addition or extension which retains a separate identity and is capable of being

used after the existing asset I disposed of, is depreciated independently on the basis of an estimate of its own useful life.

- Determination of residual value- Determination of residual value of an asset is normally a difficult matter. If such value is considered as insignificant, it is normally regarded as nil. On the contrary, if the residual value is likely to be significant, it is estimated at the time of acquisition/installation, or at the time of subsequent revaluation of the asset. One of the bases for determining the residual value would be the realizable value of similar assets which have reached the end of their useful lives and have operated under conditions similar to those in which the asset will be used.
- The amount of depreciation- The amount of depreciation to be provided in an accounting period involves the exercise of judgment by management in the light of technical, commercial accounting and legal requirements and accordingly may need periodical review. If it is considered that the original estimate of useful life of an asset requires any revision, the unamortized depreciable amount of the asset is charged to revenue over the revised remaining useful.
- Methods of depreciation- there are several methods of allocating depreciation over the useful life of the assets. Those most commonly employed in industrial and commercial enterprises are the straight line method and the reducing balance method. The management of a business selects the most appropriate method (s) based on various important factors, e.g. (i) type of asset, (ii) the nature of the use of such asset, and (iii) circumstances prevailing in the business. A combination of more than one method is sometimes used. In respect of depreciable assets which do not have material value depreciation is often allocated fully in the accounting period in which they are acquired.
- Statutory restrictions- The statute governing an enterprise may provide the basis for computation of the depreciation. For example, the Companies Act, 1956 lays down the rates of depreciation in respect of various assets. Where the managements' estimated of the useful life of an asset of the enterprise is shorter than that envisaged under the provisions of the relevant statute, the depreciation provision is appropriately computed by applying a higher rate. If the management's estimate of the useful life of the asset is longer than that envisaged under the statute, depreciation rate lower than that envisaged by the statute can be applied only in accordance with requirements of the statute.
- Disposal of asset- Where depreciable assets are disposed of, discarded, demolished or destroyed, the net surplus or deficiency, if material, is disclosed separately.
- Change in the method of depreciation- The method of depreciation is applied consistently to provide comparability of the results of the operations of the enterprise from period to period. A change from one method of providing depreciation to another is made only if the adoption of the new method is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate preparation or presentation of the financial statements of the enterprise. When such a change in the method of depreciation is made, depreciation is recalculated in accordance with the new method from the date of the asset coming into use. The deficiency or surplus arising from retrospective recompilation of depreciation in accordance with the new method is adjusted in the accounts in the year in which the method of depreciation is changed. In case the change in the method results in deficiency in depreciation in respect of past years, the deficiency is charged in the statement

of profit and loss. In case the change in the method result in surplus, the surplus is credited to the statement of profit and loss. Such a change is treated as a change in accounting policy and its effect is quantified and disclosed.

Accounting Standards – 10 Accounting for fixed assets

The following is the text of the Accounting Standard 10 (AS 10) issued by the institute of Chartered Accountants of India on “Accounting for fixed assets”. In the initial years, this accounting standard will be recommendatory in character. During this period, this standard is recommended for use by companies listed on a recognized stock exchange and other large commercial, industrial and business enterprises in the public and private sectors.

Introduction

Financial statements disclose certain information relating to fixed assets. In many enterprises, these assets are grouped into various categories, such as land and buildings, plant and machinery, vehicles, furniture and fittings, goodwill, patents, trademark and designs. This statements deals with accounting for such fixed assets with the following exceptions-

- (a) This statement does not deal with the specialized aspects of accounting for fixed assets reflecting the effects of changing prices but supplies to financial statements prepared on historical cost basis.
- (b) This statement does not deal with accounting for the following items to which special consideration apply ;
 - (i) forests, plantations and similar regenerative natural resource;
 - (ii) wasting assets including material rights, expenditure on the exploration for and extraction of minerals, oil, natural gas and similar non-regenerative resources;
 - (iii) expenditure on real estate development; and
 - (v) livestock.

Definitions: The following terms are used in this statement with their meanings specified :

1. Fixed assets- Fixed assets is an asset held with the intention of being used for the purpose of producing or providing goods or services and is not held for sale in the normal course of business.
2. Fair market- Fair market value is the price that would be agreed to in an open and unrestricted market-between knowledgeable and willing parties dealing at arm's length who are fully informed and are not under any compulsion to transact.
3. Gross book- gross book value of a fixed asset is its historical cost or other amount substituted for historical cost in the books of account or financial statements. When this amount is shown net of accumulated depreciation, it is termed as net book value.

Explanation

1. Fixed assets often comprise a significant portion of the total assets of an enterprise and therefore, are important in the presentation of financial position. Furthermore, the determination of whether an expenditure presents an asset or an expense can have a material effect on an enterprise's reported results of operations.

2. Identification of fixed assets

- (a) Aggregation- The above mentioned definition of fixed asset gives criteria for determining

whether items are to be classified as fixed assets. It may be appropriate to aggregate individually insignificant items, and to apply the criteria to the aggregate value. An enterprise may decide to expense an item which could otherwise have been included

as fixed assets, because the amount of the expenditure is not material. (b) Stand-by equipment- Stand-by equipment and servicing equipment are normally capitalized. Machinery spares are usually charged to the profit and loss statement as and when consumed. However, if such spares can be used only in connection with an item of fixed assets and their use is expected to be irregular, it may be appropriate to allocate the total cost on a systematic basis over a period not exceeding the useful life of the principal item. (c) Segregation- in certain circumstances, the accounting for an item of fixed asset may be improved if the total expenditure thereon is allocated to its component parts, provided they are in practice separable, and estimates are made of the useful lives of these components. For example, rather than treat an aircraft and its engines as one unit, it may be better to treat the engines as a separate unit if it is likely that their useful life is shorter than that of the aircraft as a whole.

3. Components of cost

(i) The cost of an item of fixed assets comprises its purchase price, including import duties and other non-refundable taxes or levies and any directly attributable cost of bringing the asset to its working condition for its intended use; any trade discounts and rebates are deducted in arriving at the purchase price. Example of directly attributable cost are : (a) site preparation; (b) initial delivery and handling costs; (c) installation cost, such as special foundations for plant; and (d) Professional fees, for example fees of architects and engineers. (ii) Financing costs relating to deferred credits or to borrowed funds attributable to construction or acquisition of fixed assets for the period up to the completion of construction or acquisition of fixed assets are also sometimes included in the gross book value of the asset to which they relate. However, post construction or acquisition financing costs (including interest) are not capitalized. (iii) Administration and other general overhead expenses are usually excluded from the cost of fixed assets because they do not relate to a specific fixed asset except the cases where they are directly attributable to fixed asset. (iv) The expenditure incurred on start-up and commissioning of the project, including the expenditure incurred on test runs and experimental production, is usually capitalized as an indirect element of the construction cost. (v) If the interval between the date a project is ready to commence commercial production and the date at which commercial production actually begins is prolonged, all expenses incurred during this period are charged to the profit and loss statement.

4. Self-constructed fixed assets In arriving at the gross book value of self-constructed fixed assets, the same principles apply as those described earlier. Included in the gross book value are costs of construction that relate directly to the specific asset and cost that are attributable to the construction activity in general and can be allocated to the specific asset. Any internal profits are eliminated in arriving at such costs. 5. Non-monetary consideration (i.e. Exchange of fixed asset)

(a) When a fixed asset is acquired in exchange for another asset, its cost is usually determined by reference to the fair market value of the consideration given. It may be appropriate to consider also the market value of the asset acquired if this is more clearly evident. An alternative accounting treatment that is sometimes used for an exchange of assets, particularly when the assets exchanged are similar, is to record the asset acquired at the net book value of asset given up. In each case one an adjustment is made for any balancing receipt or payment of cash or other consideration. (b) When a fixed asset is acquired in exchange for shares or other securities in the, enterprise, it is usually recorded at its fair market value, or the

fair market value of the securities issued whichever is more clearly evident.

GOKUL GLOBAL UNIVERSITY

Faculty of Commerce & Management

E-Content



Course:	Bachelor's of Business Administration / Bachelor's of Commerce
Semester:	2 ND
Subject:	Computer Application – 2
Subject Code:	FMB220106 / FCB220106

Address: - Gokul Global University, Surjapuri Patia, Opp. I.O.C. Depot. State
Highway- 41, Siddhpur-384151, Gujarat

MODULE 1

ADVANCED WORD-I

A. Checking Spelling & Grammar

- Spelling & Grammar Tools: Microsoft Word includes a built-in spelling and grammar checker that identifies and suggests corrections for misspelled words and grammatical errors.
- Accessing the Tools: You can access these tools from the Review tab by clicking on 'Spelling & Grammar'.
- Real-time Checking: Errors are underlined (red for spelling, blue for grammar) as you type.
- Suggestions and Corrections: Right-clicking on an underlined word or phrase provides a list of suggestions or options to ignore the error or add the word to the dictionary.

B. AutoCorrect & AutoText

- AutoCorrect: Automatically corrects common typing errors (e.g., “teh” to “the”).
- Customization: You can add your own entries via File > Options > Proofing > AutoCorrect Options.
- AutoText: Allows you to insert pre-defined text snippets quickly.
- Creating AutoText: Select text, go to Insert > Quick Parts > AutoText > Save Selection to AutoText Gallery.

C. Opening & Closing Toolbars

- Toolbars: Toolbars provide quick access to frequently used commands.
- Opening Toolbars: Click on the View tab and select Toolbars, then choose the toolbar you want to open.
- Closing Toolbars: Right-click on the toolbar and select 'Close', or go to View > Toolbars and uncheck the desired toolbar.

D. Using Tabs

1. Defining Tabs Using Ruler Bar and Mouse

- Ruler Bar: Visible at the top of the document window, used to set tabs.

- Setting Tabs: Click on the desired position on the ruler to set a tab stop.
 - Types of Tabs: Left, center, right, decimal, and bar tabs, selectable by clicking on the tab selector at the far left of the ruler.
2. Defining Tabs Using Dialog Box
- Accessing the Tab Dialog Box: Go to Home > Paragraph group > Dialog Box Launcher > Tabs.
 - Setting Tab Stops: Enter the position, choose alignment, and select a leader if needed.
 - Modifying Tabs: You can add, clear, and modify tab stops using this dialog box.

E. Enhancing a Document

1. Page Setup: Configuring document layout options.
2. Margins, Orientation, Size: Adjust these settings via Layout > Page Setup group.
3. Page Breaks: Insert a page break via Insert > Pages > Page Break.
4. Looking at a Document in Different Views: Switch views using the View tab.
5. Print Layout, Web Layout, Read Mode, Outline, Draft: Different views for various editing needs.
6. Header & Footer: Insert via Insert > Header & Footer.
7. Customization: Add text, images, page numbers, and other elements.
8. Zoom: Adjust zoom level via the View tab or the zoom slider at the bottom-right of the window.
9. Changing Case: Change text case via Home > Font group > Change Case.
10. Print Options: Access print settings via File > Print.

F. Tables

1. Creating a Table: Insert a table via Insert > Table.
2. Formatting a Table: Use the Table Tools Design and Layout tabs for formatting options.

3. AutoFormat: Apply pre-designed styles via the Table Tools Design tab.
4. Calculation in Table: Perform calculations using formulas in table cells (Table Tools Layout > Formula).
5. Sorting: Sort table data via Table Tools Layout > Sort.

MODULE 2

ADVANCED WORD-II

A. Using Multiple Columns, Format Painter, AutoFormat

- Multiple Columns: Format text into columns via Layout > Columns.
- Format Painter: Copy and apply formatting using the Format Painter tool (Home > Clipboard group).
- AutoFormat: Automatically apply styles and formats via File > Options > Proofing > AutoFormat As You Type.
- Graphics, Drawing Toolbar, WordArt, Inserting Graphics
- Graphics: Insert images via Insert > Pictures.
- Drawing Toolbar: Access drawing tools via Insert > Shapes.
- WordArt: Add stylized text via Insert > WordArt.
- Inserting Graphics: Insert images, shapes, icons, SmartArt, and charts via the Insert tab.

B. Mail Merge: What is Mail Merge?

- Mail Merge: Combines a document with a data source to personalize letters, labels, emails, etc.
- Steps: Start Mail Merge via Mailings > Start Mail Merge and follow the steps to select the document type, data source, and fields.

C. Creating & Printing Merged Letters

- Creating Merged Letters: Use Mail Merge to create personalized letters.
- Insert Merge Fields: Place fields from the data source into the document.
- Preview and Finish: Preview results and complete the merge via Mailings > Finish & Merge.

D. Using Mail Merge to Print Envelopes and Mailing Labels

- Printing Envelopes: Set up envelopes via Mailings > Envelopes.
- Mailing Labels: Set up and print labels via Mailings > Labels.

- Merge Fields: Insert and align fields for each envelope or label.

MODULE 3

WEB DESIGN USING FLASH

A. Multimedia Authoring Software

- Multimedia Authoring: Software used to create multimedia applications, combining text, images, audio, and video.
- Examples: Adobe Flash, Adobe Animate, Director.

B. Advantages of Flash

- Interactivity: Create highly interactive content.
- Animations: Powerful tools for creating animations.
- Multimedia Integration: Integrate various media types seamlessly.

C. What is Animation?

- Animation: The process of creating the illusion of motion by displaying a series of individual frames.

D. Parts of Screen of Flash 8.0

1. Stage: The visible area where content is placed and viewed.
2. Timeline: Manages frames and animation sequences.
3. Panel: Contains tools and properties for objects.
4. Toolbox: Provides drawing and selection tools.
5. Library Window: Stores symbols, images, and other assets used in the project.

E. Web Animation

- Web Animation: Creating animations specifically for web pages, often using Flash or HTML5.

F. Publish Animation

- Publishing: Exporting the final animation for web use.
- Formats: SWF, HTML5, GIF, etc.
- Settings: Configure export settings via File > Publish Settings.

MODULE 4

IMPORTANT TERMS RELATED TO COMPUTERS

1. Algorithm: A step-by-step procedure for solving a problem or accomplishing a task.
2. Artificial Intelligence: The simulation of human intelligence by machines.
3. ASCII: American Standard Code for Information Interchange, a character encoding standard.
4. ATM: Automated Teller Machine, a device that allows bank transactions.
5. Automated Office: Integration of office functions via technology.
6. Backup: Copying data to protect against loss.
7. BIOS: Basic Input/Output System, firmware used to initialize hardware during booting.
8. Bit: The smallest unit of data in computing (binary digit).
9. Byte: A group of 8 bits, representing a single character.
10. Boot: The process of starting a computer.
11. Bug: An error or flaw in software.
12. Client/Server: A network architecture where clients request services from a central server.
13. Encryption: Converting data into a secure format to prevent unauthorized access.
14. Flow Chart: A diagram representing a process or algorithm.
15. GIGO: Garbage In, Garbage Out, emphasizing the importance of correct input for accurate output.
16. POST: Power-On Self-Test, a diagnostic testing sequence run by a computer's BIOS.
17. Password: A secret word or phrase used for authentication.
18. Program: A set of instructions that a computer follows to perform a task.
19. Modem: A device that modulates and demodulates signals for communication.

20. Web: The World Wide Web, a system of interlinked hypertext documents accessed via the internet.
21. Virus: Malicious software that replicates and spreads to other computers.
22. Configuration of a PC: The arrangement of hardware and software settings in a computer.