JMBA41 –BUSINESS ENVIRONMENT

CENTRE FOR DISTANCE AND ONLINE EDUCATION

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SYLLABUS

JMBA41 – BUSINESS ENVIRONMENT

UNIT	Details
I	The concept of Business Environment: its nature and significance A brief overview of political, cultural, legal, economic, and social environments and their impact on business and strategic decisions
II	Political Environment: Functions of state, economic roles of government, government and legal environment.
III	Economic Environment: Business Cycles (Inflation, Deflation), Macroeconomic Parameters Like GDP, Growth Rate, Population, Urbanization, National Income, and Per Capita Income, and Their Impact on Business Decisions
IV	Social environment; cultural heritage; social attitudes; castes and communities Joint family systems; linguistic and religious groups
V	Technology environment – Industry 4.0-Meaning Features- basic Applications and Uses- Blockchain, AI, AR, Cloud, IOT, IIOT, Big Data and Analytics

	References Books
1	Business Environment : A Test/Reference Book With Case Studies Ebook : Prakash , N R Mohan
2	Business Environment Ruchi Goyal Publisher: Neelkanth Publishers Pvt. Ltd.2019
3	Business Environment,Fourth Edition,By Pearson
4	Business Environment Indian And Global Perspective 3Rd Edition by AHMED, FAISAL ALAM, M. ABSAR, PHI Learning

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UNIT – I

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1.1 Introduction to Business Environment:

The formula for business success requires two elements – the individual and the environment. Remove either value and success becomes impossible. Business environment consist of all those factors that have a bearing on the business. The term' business environment implies those external forces, factors and institutions that are beyond the control of individual business organizations and their management and affect the business enterprises. It implies all external forces within which a business enterprise operates. Business environment influence the functioning of the business system. Thus, business environment may be defined as all those conditions and forces which are external to the business and are beyond the individual business unit, but it operates within it. These force are customer, creditors, competitions, government socio-cultural organizations, political parties national and international organizations etc. some of those forces affect the business directly which some others have indirect effect on the business.

1.2 Meaning of Business Environment:

The business environment encompasses all external and internal factors that influence a company's operations and performance. These factors include economic conditions, social trends, technological advancements, political and legal regulations, and even internal elements like company culture and resources. Understanding and adapting to this environment is crucial for a company's success.

1.3 Definitions:

The word ‘Business Environment’ is defined by many authors in different ways. Few of the definitions are as follows:

According to William F. Glucck and Lawrance R. Jauch, “The Business Environment includes factors outside the firm, which can lead to opportunities for or threats to the firms. Although there are many factors, the most important of the factors are socio-economic, technological, suppliers, competitors and government.”

According to Barry M. Richman and Melvyn Copen, “Environmental factors or constraints are largely, if not totally, external and beyond the control of individual industrial enterprise and their managements. These are essentially the “givens” within which the firms and their managements must operate in a specific country and they vary, often greatly from country – to – country.”

According to Barry M. Richman and Melvgn Copen “Environment consists of factors that are largely if not totally, external and beyond the control of individual industrial enterprise and their managements. These are essentially the ‘givers’ within which firms and their management must operate in a specific country and they vary, often greatly, from country to country”.

According to Keith Davis “Business environment is the aggregate of all conditions, events and influences that surround and affect business”.

According to Bayord O. Wheeler “Business environment refers to “the total of all things external to firms and industries which affect their organization and operation”.

According to Glueck and Jauch “The environment includes factors outside the firm which can lead to opportunities for or threats to the firm. Although there are many factors, the most important of the sectors are socio-economic, technological, supplier, competitors, and government”.

1.4 What is the business environment?

The business environment comprises all internal and external factors that impact a company's functioning. Internally, it includes employees, management, and operations. Externally, factors such as customer needs, market demand, government policies, technological advancements, economic fluctuations, and social trends play significant roles. This environment is dynamic, constantly evolving, and directly influences a company's strategic decisions, operational efficiencies, and overall performance. By understanding the business environment meaning, organizations can anticipate changes, identify opportunities for growth, mitigate risks, and align their strategies to achieve sustainable success in a competitive marketplace. Adaptability to these diverse influences is key to thriving amidst evolving business landscapes. Recognizing and capitalizing on a business opportunity within this environment can lead to significant growth.

1.5 Nature and Scope of Business Environment:

Every organisation operates in a certain kind of environment. Each organisation has some opportunities and threats associated with various forces which may be external or internal in nature.

Nature of Business Environment:

i) Dynamic: Business environments such as internal and external business environments are highly flexible and keep on changing. For example, changing customer preferences, new competitors entering into the market, novel technology, new marketing channels, new government policies and changing demography.

ii) Uncertain: It is very difficult to pre assume with any degree of certainty about the factors influencing the business environment because they continue to fluctuate very quickly.

iii) Complex: The business environment is complex as it is continuously exposed to uncertain challenges such as technological disruptions, global competition, leadership change, shifting economic, social, and regulatory conditions etc. It may be easy to scan the environment but its impact on business decisions will be difficult to estimate. It is very difficult for a firm to survive and prosper in such an uncertain environment.

iv) Relativity: The business environment is associated with societal norms and local conditions and this is the reason, why the business environment varies from country to country, region to region which makes it more complex.

v) Interrelation: All the factors and forces of the business environment are related to each other. For instance, with the proclivity of youth towards western culture, the demand for fastfood is also rising. Take another example, change in political parties will result in changing monetary policy, fiscal policies, government rules, market conditions, technology, etc. Thus, all these factors are required to be scanned properly as these factors are interrelated to each other.

Scope of Business Environment:

i) Internal and external environment: Internal environment means those factors that are within an organisation and influence the strength or weakness of the business. For example, superior raw material, inefficient human resources, etc. External environment means those factors which are beyond the control of the business and are outside the organisation. They provide opportunities and pose threats to business. For example, changing political and economic conditions, technological changes, etc.

ii) Micro-environment and macro-environment: Sometimes internal and external environment are interchangeably reffered as micro and macro environment respectively. Micro-environment affects the working of a particular business. It directly impacts business activities and incorporates customers, suppliers, market intermediaries, competitors, etc. These factors are controllable to some extent. Macro environment is the general environment that impacts the working of all businesses. It is uncontrollable and influences indirectly. Political conditions, economy, technology, etc., are part of the macro environment. For example, Technological advancement such as blockchain, Artificial Intelligence (AI) have changed the face of business operations.

iii) Controllable and uncontrollable environment: All those factors which are governed by business come under a controllable environment. Internal factors are also treated as controllable factors, such as money, men, materials, machines, etc. Uncontrollable factors are external and are beyond the control of business namely global, technological, legal and natural changes. For example, recent Corona pandemic is a major example of uncontrollable factor. The pandemic has hugely impacted the businesses and led to changes in strategies of operations.

iv) Specific and general environment: Specific environment refers to external forces that directly influence business enterprises' decisions and actions and are directly pertinent for the achievement of organisational goals. The main forces that include the specific environment are customers, suppliers, competitors and pressure groups. General environment refers to the economic, politico-legal, socio-cultural, technological, demographic, and global conditions that influence organisations. These external forces or factors impact organisations indirectly and organisations must plan, organise, lead and control their activities by incorporating these factors.

1.6 Significance of Business Environment:

The significance of business environment lies in its impact on decision-making and overall performance. A favorable environment can drive growth, while a challenging one demands strategic resilience.

i) Strategic Decision-Making: Analyzing the environment helps organizations make informed decisions. For instance, a tech company must understand emerging trends in AI to stay competitive. It allows businesses to align their strategies with market needs and achieve better outcomes.

ii) Identifying Opportunities: Companies can capitalize on opportunities like favorable policies, growing markets, or technological advancements. Spotting these opportunities early gives businesses a competitive edge and helps them grow faster.

iii) Risk Management: Understanding risks such as legal restrictions or market downturns prepares businesses to mitigate their impact. This proactive approach helps reduce losses and ensures stability during uncertain times.

iv) Adaptability: Awareness of changing market dynamics fosters adaptability, ensuring long-term success. Businesses that adapt quickly to trends can maintain relevance and stay ahead of competitors.

v) Resource Allocation: By understanding market demand, businesses can allocate resources efficiently to maximize profits. Proper allocation improves productivity and reduces waste, leading to sustainable growth.

vi) Competitive Advantage: Analyzing the environment helps businesses stay ahead of competitors by identifying unique strengths and market gaps. This insight enables them to create innovative strategies and deliver better value to customers.

Examples of Significance

Apple Inc.: Apple's focus on technological advancements allows it to lead the global tech market.

Amazon: Its adaptability to e-commerce trends ensures consistent growth worldwide.

Tesla: Understanding the growing demand for sustainable energy drives Tesla's innovations.

1.7 Types of Business Environment:

There are certain factors or forces internal and external to the organisation influencing the it in both positive and negative ways. The various types of business environment are listed below:

1. Internal Environment: This includes those factors or forces that exist within an organisation influencing the performance of an organisation. These factors are controllable in nature and organisations can attempt to change or modify these factors. Organisation's resources like men, materials, money, and machines are part of the internal environment. The different internal factors are listed below:

i) Values: The values are defined as ethical beliefs that guide the organisation in attaining its mission and objectives. These are formulated by top-level managers such as the board of directors. The extent to which these value systems are shared by all in the organisation is a significant factor leading to its success.

ii) Mission and objectives: Mission reflects the overall purpose or reason for organisation's existence. A mission guides and affects the decisions and economic activities of the organisation. Accordingly, an organisation can change or modify its mission and objectives.

iii) Organisation structure: The organisational structure is the hierarchical relationship explaining roles, responsibilities and supervision. The structure of the board of directors, the professionalism of management, etc., are the part of the organisation structure and are significant forces affecting business decisions. For effective management and working of a business organisation and for prompt decision making, the structure of the organisation should be conducive.

iv) Culture: Shared values and belief in an organisation determine its internal environment also known as corporate culture. Organisation having strict supervision and control reflects the lack of flexibility and unsatisfied employees. These sets of values assist the employees to understand what organisation stands for, what it considers, how it works. Cultural values of business, thus determine the direction of activities.

v) Human resources: Human quality of a firm is an important factor of internal environment. Skills, qualities, capabilities, attitude, competencies and commitment of its employees, etc., contribute to the strengths and weaknesses of an organisation. Organisations may find it difficult to carry out modernisation and redesigning because of resistance by its employees.

vi) Physical resources and financial capabilities: Physical resources, like machinery, plant and equipment facilities and financial capabilities of a firm decides its competitive strength which is the significant factor for examining its efficiency and unit cost of production. Moreover, research and development capabilities of a company decides its ability to innovate and thus increase the productivity of workers.

2. External Environment: This includes those factors or forces that exist outside an organisation influencing the performance of an organisation. These external factors can be further classified into micro-environment and macro environment which are defined below.

A. Micro-Environment: Those factors which have a direct impact on business. The different components under micro-environment are as follows:

i) Suppliers of inputs: The suppliers of inputs are a significant constituent of the external micro environment of an organisation. Suppliers give raw materials and resources to the firm. A firm should have more than one supplier for efficient input inflows.

ii) Customers: Customers are the buyers of the firm's products and services. Customers are an important part of the external micro-environment as a firm’s survival and growth are dependent on sales of a product or service. Thus, it is essential to keep the customers satisfied.

iii) Marketing intermediaries: Intermediaries play an essential role in selling and distributing products to the final customers. Marketing intermediaries are an important link between a business firm and its ultimate customers. Retailers and wholesalers buy in bulk and sell business products and services to the ultimate consumer.

iv) Competitors: Competitors are the rivalry in business influencing the business strategies of the organisation. For example, Zomato and Swiggy are major competitors in food delivery business and their strategies impact each other.

v) Public: Public or groups, such as media groups, women's associations, environmentalists, consumer protection groups, are significant factors in the external micro-environment. The public can be defined as any group affecting a company's ability to achieve its objectives. Recently People for the Ethical Treatment of Animals (PETA) India protested against Amul (dairy company) suggested them to produce vegan milk.

B. Macro Environment: These are the factors or conditions which are general to all businesses and are uncontrollable. Because of the uncontrollable nature of macro forces, a firm need to adjust or adapt itself to these external forces. These factors are as follows:

i) Economic environment: Economic environment refers to all those forces and factors which have an economic impact on businesses. It consists of the role of the private and public sector, monetary and fiscal policy, role of saving and investment, economic reforms, agriculture, industrial production, infrastructure, planning, basic economic philosophy, stages of economic development, trade cycles, national income, per capita income, money supply, international debt, etc. For example, an increase in Gross Domestic Product (GDP) will increase disposable income and thus further rise in demand for products.

ii) Politico-legal environment: Politico-legal environment constitutes all the factors related to the activities of legislature, executive and judiciary which play a leading role in shaping, directing, developing and controlling business activities. For example, rules and regulations, framed by the government, like licensing policy, Skill India movement, Digital India, Swachha Bharat Abhiyan, polythene ban, etc., affect the business. Higher business growth can be achieved in a stable and dynamic politico-legal environment.

iii) Technological environment: Technology is defined as the "Systematic application of scientific or other organized knowledge to particular tasks". The technology incorporates both machines (hard technology) and ways of thinking (soft technology). These organized knowledge and innovation provide new methods of producing goods and services and latest ways of operating business. Recent technological changes such as the online sale of grocery items, online booking of air tickets, online payments, etc. have changed the business strategies. As technology is changing fast, organisations should keep a close look at these technological fluctuations for their adaptation in their business activities.

iv) Global or international environment: The global environment includes all environmental factors having a global impact which is also important for shaping business activity. In the era of globalization, the whole world is a market. Business analyses the international environment to cope up with the changes. Principles and agreements of the World Trade Organisation (WTO), other international treaties and protocols such as crude oil prices are examples of the global environment.

v) Socio-cultural environment: The socio-cultural environment reflects customs and values which influence business practices. People’s attitude towards work and wealth, lifestyle, ethical issues, religion, the role of family, marriage, education and also social responsiveness of business impact the business. For example, foreign brands like McDonalds were sensitive to Indian culture and avoided selling beef burgers in India.

vi) Demographic environment: Demographic environment includes the composition and characteristics of the population. For example, Population size and growth, the life expectancy of the people, rural-urban distribution of population, the technological skills and educational levels of the labour force are part of the demographic environment. These forces also impact the organizations’ functioning. For example, many MNCs are targeting Indian youth because of the country’s demographic dividend.

vii) Natural environment: Natural environment includes geographical and ecological resources like minerals and oil reserves, weather and climatic conditions, water and forest resources, and port facilities. These are very important for many business activities. For example, in places where climate conditions such as temperatures are high, demand for coolers and air conditioners will also be high. Similarly, demand for clothes and building materials is also conditioned upon weather and climatic conditions. Natural calamities such as floods, droughts, earthquakes, etc. greatly affect business activities.

1.8 Features of Business Environment:

The business environment includes all the factors that influence how companies operate and grow. A comprehensive understanding of its features enables businesses to effectively adapt, formulate strategic plans, and achieve sustained success in a competitive market environment.

i) Dynamic Nature: The environment continuously changes due to innovations, policies, and social shifts. Businesses must adapt quickly to stay relevant and seize new opportunities. Those who fail to adapt risk falling behind their competitors.

ii) Complexity: It involves numerous interconnected factors that make analysis challenging. Understanding these factors requires thorough research and strategic planning to make informed decisions.

iii) Interdependency: Elements like economy, politics, and technology influence each other. A change in one factor can create a ripple effect, impacting businesses in unexpected ways.

iv) Global Impact: Modern businesses face global challenges and opportunities, including international competition. Companies must understand global trends to expand their market reach and stay competitive.

v) Uncertainty: The future of the environment is unpredictable, which requires proactive planning. Businesses that prepare for uncertainties are more likely to thrive during unexpected changes.

1.9 A Brief Overview of Political, Cultural, Legal, Economic, and Social Environments and their Impact on Business and Strategic Decisions:

i) Political Environment:

This includes the political system, the government policies and attitude towards the business community and the unionism. All these aspects have a bearing on the strategies adopted by the business firms. The stability of the government also influences business and related activities to a great extent. It sends a signal of strength, confidence to various interest groups and investors. Further, ideology of the political party also influences the business organization and its operations. You may be aware that Coca-Cola, a cold drink widely used even now, had to wind up operations in India in late seventies. Again the trade union activities also influence the operation of business enterprises. Most of the labor unions in India are affiliated to various political parties. Strikes, lockouts and labour disputes etc. Also adversely affect the business operations. However, with the competitive business environment, trade unions are now showing great maturity and started contributing positively to the success of the business organization and its operations through workers' participation in management.

ii) Cultural Environment:

The cultural environment in business refers to the societal norms, values, and beliefs that influence consumer behavior and business practices. Understanding this environment is crucial for businesses, especially those operating internationally, as it can impact various aspects of the business, including marketing strategies, product design, and communication.

Key aspects of the cultural environment in business:

i) Consumer Behavior:

Culture shapes consumer preferences, attitudes, and behaviors, influencing what products and services they demand and how they perceive them.

ii) Marketing Strategies:

Cultural differences can impact advertising, packaging, pricing, and distribution strategies.

iii) Product Design:

Cultural values and aesthetics can influence the design and features of products.

iv) Communication:

Cultural nuances in language, communication styles, and non-verbal cues can affect how messages are conveyed and received.

v) Business Practices:

Cultural norms can impact business ethics, negotiation styles, and management practices.

Factors influencing the cultural environment:

i) Language:

Different languages can lead to misunderstandings and require careful translation and adaptation of marketing materials.

ii) Religion:

Religious beliefs and practices can influence consumer behavior, product preferences, and business ethics.

iii) Family Structure:

Family values and traditions can impact consumer purchasing decisions and product choices.

iv) Education:

Educational levels and systems can influence attitudes towards learning, technology, and social issues.

v) Social Class:

Social class can impact purchasing power, consumer preferences, and access to goods and services.

vi) Geographic Location:

Geographic factors, such as climate and resources, can influence cultural practices and business opportunities.

Examples of cultural differences impacting business:

i) Language:

Using "cans" instead of "tins" in the US and UK, respectively, when referring to grocery products.

ii) Time:

Differing perceptions of punctuality and time management in different cultures.

iii) Business Norms:

Acceptable levels of formality, personal relationships, and negotiation styles vary across cultures.

iv) Values:

Individualism vs. collectivism, uncertainty avoidance, and power distance can impact business practices and employee management.

Why is cultural understanding important for businesses?

i) Avoiding Marketing Failures:

Ignoring cultural differences can lead to misinterpretation of marketing messages and ultimately fail to resonate with the target audience.

ii) Building Trust:

Demonstrating cultural sensitivity and understanding can build trust and foster positive relationships with customers and stakeholders.

iii) Improving Efficiency:

Adapting business practices to local cultural norms can lead to more efficient operations and better results.

iv) Promoting Global Success:

Understanding and respecting cultural diversity is essential for achieving sustainable success in the global marketplace.

iii) Legal Environment:

The legal environment in business refers to the body of laws, regulations, and judicial precedents that influence how businesses operate. It provides a framework for businesses to comply with legal standards, ensure ethical practices, and meet their obligations to various stakeholders. Understanding the legal environment is crucial for businesses to align their operations with legal requirements, enhance credibility, and minimize legal risks.

Key aspects of the legal environment:

i) Laws and Regulations: Governments enact laws and regulations to govern business activities, which can vary across countries and regions.

ii) Judicial Precedents: Court decisions establish legal precedents that influence future business decisions.

iii) Contract Law: Governs agreements between businesses and other parties, ensuring they are legally binding and enforceable.

iv) Intellectual Property Rights: Protects businesses' creations, such as patents, trademarks, and copyrights, ensuring they can benefit from their innovation.

v) Consumer Protection Laws: Safeguard consumers from unfair or deceptive business practices, ensuring fair trade practices.

vi) Employment Laws: Govern the relationship between businesses and their employees, ensuring fair labor practices and protecting employee rights.

vii) Environmental Regulations: Address environmental concerns and require businesses to operate in a sustainable manner, minimizing pollution and resource depletion.

viii) Antitrust Laws: Prevent monopolies and promote fair competition in the marketplace.

ix) Accounting and Auditing Standards: Ensure financial transparency and accountability in businesses.

x) Tax Laws: Govern the taxation of businesses and their activities.

Importance of understanding the legal environment:

i) Compliance:

Businesses must comply with the law to avoid penalties, legal disputes, and reputational damage.

ii) Fair Trade:

Legal frameworks promote fair trade practices and protect consumers and employees.

iii) Risk Management:

Understanding the legal environment helps businesses identify and manage legal risks.

iv) Business Strategy:

Legal factors can influence business decisions, such as where to locate a business, how to structure it, and what products or services to offer.

v) Social Responsibility:

Businesses have a social responsibility to operate ethically and legally, which is often reflected in the legal environment.

Example in India:

In India, the legal environment includes laws such as the Companies Act 2013, Consumer Protection Act 2019, and the Foreign Trade Policy, among others. Businesses need to be aware of these laws and regulations to operate legally and successfully in the Indian market.

iv) Economic Environment:

The economic environment of a business refers to the external factors that affect its operations and profitability. These factors include overall economic conditions, government policies, and market dynamics. Understanding the economic environment is crucial for businesses to make informed decisions and adapt to changing circumstances.

Fundamental Elements of the Economic Environment:

i) Economic Conditions:

This includes factors like GDP growth, inflation rate, unemployment rate, and interest rates.

ii) Government Policies:

This includes fiscal policies (government spending and taxation) and monetary policies (control of the money supply and interest rates).

iii) Market Conditions:

This includes factors like supply and demand, pricing trends, and competition levels.

iv) Economic System:

This refers to the structure of the economy, whether it's a market economy, command economy, or mixed economy.

International Trade and Investment:

This includes factors like exchange rates, trade agreements, and foreign investment.

Impact on Business:

i) Decision-Making:

Businesses use economic data to make informed decisions about investments, pricing, and expansion strategies.

ii) Adaptation:

Businesses need to adapt their strategies to changing economic conditions, such as recessions or inflation.

iii) Profitability:

The economic environment can significantly impact a company's profitability, as factors like inflation, interest rates, and consumer spending can affect sales and costs.

iv) Growth:

Economic growth and stability can create opportunities for businesses to expand and increase their market share.

v) Social Environment:

The social environment of a business encompasses the societal forces, including customs, traditions, values, beliefs, and demographic factors, that influence how businesses operate and interact with consumers. This environment plays a crucial role in shaping consumer behavior, preferences, and purchasing power, which in turn affects a business's marketing strategies, product development, and overall success.

Core Dimensions of the Social Environment:

i) Culture and Traditions:

Deeply ingrained societal practices and beliefs, such as festivals, holidays, and social rituals, can drive demand for specific products or services. For example, the demand for sweets, gifts, and festive attire increases during Diwali and other major festivals in India.

ii) Values and Beliefs:

Moral principles, social justice, and equality of opportunity are among the values that influence consumer behavior and business ethics. Businesses that prioritize these values tend to build stronger reputations and foster positive relationships with consumers.

iii) Social Trends and Demographics:

Changes in population demographics, such as age, income, and education levels, impact consumption patterns and market segmentation strategies. For instance, the increasing number of nuclear families can influence demand for household goods and services.

iv) Education and Literacy:

Higher literacy rates lead to more informed and discerning consumers, who are more likely to be concerned about product quality and consumer rights.

v) Consumption Patterns and Lifestyle:

Changes in consumer behavior, such as the shift towards health-conscious living, can create new market opportunities for businesses. For example, the rise of online shopping and streaming services has impacted traditional retail and entertainment industries.

vi) Social Movements and Awareness:

Environmental concerns, social justice issues, and consumer activism can influence business operations and marketing strategies, particularly in regards to ethical sourcing, sustainable practices, and social responsibility.

Check Your Progress:

Choose the Correct Answer:

1. Which of the following is NOT a key component of the business environment?

   a) Economic environment

   b) Political environment

   c) Technological environment

   d) Psychological environment

   Answer: d) Psychological environment

2. Which of the following best defines the business environment?

   a) The global financial market

   b) The forces that affect an organization's operations and decisions

   c) The organization's financial conditions

   d) The government's legal framework

   Answer: b) The forces that affect an organization's operations and decisions

3. Which of the following statements about business environment is true?

a) It is dynamic and ever-changing

b) It is stable and does not change

c) It remains unaffected by global factors

d) It only involves political and legal factors

Answer: a) It is dynamic and ever-changing

4. Which component of the business environment affects the purchasing power of consumers?

a) Economic environment

b) Political environment

c) Social environment

d) Technological environment

Answer: a) Economic environment

5. The government's regulation of business practices falls under which environment?

a) Economic environment

b) Political environment

c) Technological environment

d) Social environment

Answer: b) Political environment

6. Which of the following is an example of a social factor in the business environment?

a) Government tax policies

b) Population growth and demographics

c) Technological advancements

d) Economic inflation

Answer: b) Population growth and demographics

7. The legal environment in business focuses on which of the following?

a) Laws related to business operations, contracts, and disputes

b) Social welfare programs

c) Environmental protection measures

d) Taxation laws

Answer: a) Laws related to business operations, contracts, and disputes

8. Which of the following is a key characteristic of the cultural environment in business?

a) Influence of global economic trends

b) Influence of cultural values and norms on consumer behavior

c) Technological advancements in production

d) Legal regulations governing marketing strategies

Answer: b) Influence of cultural values and norms on consumer behavior

9. What impact does the business environment have on strategic decisions?

a) It does not influence strategic decisions

b) It determines the external factors that affect an organization's ability to achieve its goals

c) It only influences short-term decisions

d) It has no effect on a business's goals or objectives

Answer: b) It determines the external factors that affect an organization's ability to achieve its goals

10. The natural environment, including climate change, impacts which aspect of business?

a) Political environment

b) Legal environment

c) Economic environment

d) Technological environment

Answer: c) Economic environment

1.10 Self-Assessment Questions

1. Explain the concept and nature of business environment.
2. Explain the significance of Business Environment at National and International level.
3. What do you understand by 'Environment of Business'? Explain the various components of business environment.
4. Give a brief account of the economic, political and cultural environment of business between nations and their implications for business.
5. Explain the types of Business Environment
6. Explain with suitable examples, the impact of business environment on business and strategic decisions.

UNIT – II

Structure:

2.1 Introduction to Political Environment

2.2 Functions of State

2.3 Role of Government in Business

2.4 Legal Environment

2.5 Self-Assessment Questions

2.1 Introduction to Political Environment:

Political environment refers to three political institutions viz. legislature, executive and the judiciary in shaping, directing, developing and controlling business activities. The political environment of a country is influenced by the political organisations such as philosophy of political parties, ideology of government or party in power, nature and extent of bureaucracy influence of primary groups. The political environment of the country influences the business to a great extent. The political environment includes the political system, the government policies and their attitude towards the business community. All these aspects have a bearing on the strategies adopted by the business firms. The stability of the government also influences business and related activities to a great extent. It sends a signal of strength, confidence to various interest groups and investors. Further, ideology of the political party also influences the business organisation and its operations.

2.2 Functions of State:

The state plays a multifaceted role in the business environment, encompassing both regulatory and promotional functions. It establishes the legal framework for business operations, ensures fair competition, and protects consumers. Additionally, it provides infrastructure, financial assistance, and incentives to foster economic growth. The following provides a detailed examination of the functions of the state.

1. Regulatory Functions:

- ✓ **Establishing a legal framework:**

  The state creates laws and regulations governing business activities, including company formation, contracts, property rights, and labor laws.

- ✓ **Promoting fair competition:**

  The state implements policies to prevent monopolies, anticompetitive practices, and ensure a level playing field for businesses.

- ✓ **Protecting consumers:**

  The state sets standards for product safety, quality, and consumer rights to protect consumers from unfair or deceptive practices.

- ✓ **Ensuring social responsibility:**

  The state encourages businesses to take responsibility for their impact on society, including environmental protection, ethical labor practices, and community development.

2. Promotional Functions:

- ✓ **Providing infrastructure:**

  The state invests in infrastructure like roads, railways, ports, power, and telecommunications to facilitate business operations.

- ✓ **Offering financial assistance and incentives:**

  The state may provide financial assistance through subsidies, tax breaks, and grants to encourage specific industries or investments.

- ✓ **Creating a conducive business environment:**

  The state aims to create a stable, predictable, and transparent legal and regulatory environment to attract investments and promote economic growth.

- ✓ **Supporting research and development:**

  The state may fund research and development activities to foster innovation and technological advancement.

- ✓ **Facilitating international trade:**

  The state negotiates trade agreements, sets export/import policies, and supports businesses engaging in international trade.

3. Other Important Functions:

- ✓ **Managing public finances:**

  The state collects taxes, manages public debt, and allocates resources to support public services and economic development.

- ✓ **Providing social security:**

  The state provides social security benefits, including unemployment insurance, healthcare, and retirement pensions.

- ✓ **Ensuring public safety and security:**

  The state provides law enforcement, maintains order, and protects citizens from threats to their safety and security.

2.3 Role of Government in Business:

Every government plays a significant role in regulating, shaping and re modelling of business environment. Post-independence, the Indian Government played a noteworthy role by promoting public and private sector companies, also encouraging foreign companies through foreign direct investments and other reforms.

One such major change came in 1991 with the introduction of New Industrial Policy, 1991. Its salient features were:

i) Liberalization: Government loosening restrictions on business

ii) Privatization: Allowing entry of private enterprises into certain business areas earlier owned by the government

iii) Globalization: Expansion of business activities on a world-wide scale, integrating a nations economy with global economy thereby opening international business opportunities.

The governments' role in business is as follows:

1. Regulatory Role:

With the basic objectives to – (a) prevent the market structure from becoming monopolistic, (b) developing the small and new entrepreneurs, and (c) promoting the welfare of weaker sections of any society.

It also means regulating the business and economic activities of the nation by government.

To elaborate further Indian regulatory control is exercised as follows:

i) Industries (Development and Regulation) Act, 1951: Its main objective is to promote development and regulate industries. Through this Act a) available resources are properly utilised; b) concentration of economic power is controlled; C) resources are properly allocated; and d) new industries are given incentives.

ii) Industrial Licensing System: It aims at at controlling the setting up of new industries and increasing the capacity of existing industries.

iii) Price Control: The central government and various state governments regulate the prices with a view to protect the interest of the consumers

iv) Distribution Mechanism: Distribution of items of daily necessities are controlled and regulated through Essential Commodities Act and Public Distribution System (PDS)

v) Monopolies and Restrictive Trade Practices Act, 1969: Its principal objectives were (a) Prevention of concentration of economic power to the common detriment, and (b) control of monopolistic. restrictive and unfair trade practices which are prejudicial to public interest

vi) Foreign Exchange Regulation Act (FERA), 1973: To regulate the foreign exchange

vii) Regulation of Companies: Under Companies Act, 2013 the management of capital issue, dividend distribution, loans and advances, share capital and other affairs are controlled and regulated to safeguard the interests of share-holders and creditors

viii) Labour Affairs: to safeguard and prevent the exploitation of labour. Some of the important laws are: Factories Act, 1948, Workmen's "Compensation Act, 1923, Employees' Provident Fund Act, 1952. Payment of Minimum Wages Act, 1948, Maternity Benefit Act, 1961, Payment of Bonus Act, 1975, and Industrial Disputes Act. 1947.

2. Entrepreneurial Role: It refers to government investment, capitalization and ownership of business. It involves (a) Making investments in new units, (b) Acquiring existing (sick) units to set off the depreciation and accumulated losses against their tax liabilities, and (c)

Nationalization, where certain industries have been reserved exclusively for the public sector, eg. defense, public transportation like – railways, etc.

3. Promotional Role: Under this role the government builds up development oriented basic structure which includes construction of roads, bridges, supply of water and power, efficient transport facilities, building industrial regions and estates, existence of district industrial centers, counselling centers, development centers, communication system provision of industrial training and financial banking and marketing network. The following section outlines comparable functions.

i) To maintain public utilities

ii) To encourage the developmental attitude among various sectors

iii) To make economic resources productive and progressive

iv) To ensure equitable distribution of wealth and income

v) To promote investment climate in the country

2.4 Legal Environment:

The code of conduct which decides the legal boundaries of business is called legal environment. Business is regulated in a country by government as per well defined priorities. Legal environment of business keep on changing as per need and demands of the business, government and consumers. Legal environment constitutes the various laws which are passed by the government in a country to regulate the business operations. All the decisions in a business are dominated by regulatory environment. A business should have a thorough knowledge of laws and legislations of the government as non implementation of policies may lead to heavy fine and penalties. There are a numbers of laws which are regulating the system in India. Some of the laws which affect the businesses in India are mentioned as below:

i) Labour and Industrial Laws:

- ✓ Workmen Compensation Act, 1923
- ✓ Trade Union’s Act, 1926
- ✓ Employee’s State Insurance Act, 1948
- ✓ Minimum Wages Act, 1948
- ✓ Apprentice Act, 1961
- ✓ Factories Act,1948
- ✓ Industrial Disputes Act,1947

ii) Taxation Laws:

- ✓ Income Tax Act, 1961
- ✓ Central Sales Tax Act, 1956
- ✓ Customs Act, 1962
- ✓ Central Excise Act, 1944
- ✓ Value Added Tax (VAT), 2005
- ✓ Central Goods and Services Tax Act, 2017

iii) Intellectual Property Laws:

- ✓ Patents Act, 1970
- ✓ Trade Marks Act, 1999
- ✓ Copyrights Act, 1957

iv) Banking and Insurance Laws:

- ✓ Banking Regulation Act, 1949
- ✓ Insurance Act, 1938

v) Business and Corporate Laws:

- ✓ Indian Contract Act,1872
- ✓ Sales of Goods Act,1930
- ✓ Partnership Act,1932
- ✓ Companies Act, 2013

vi) Some other Laws which may affect business in India:

- ✓ Competition Act, 2002
- ✓ Arbitration and Conciliation Act,1996
- ✓ Foreign Exchange Management Act (FEMA), 1999
- ✓ Information technology Act, 2000
- ✓ Environmental Protection Act,1986

i) Labour and Industrial Laws:

Industrial legislation affects a large number of industries, workmen and their families. Hence a large population of country is affected by industrial legislations. Traditionally the employer used the policy of hire and fire to his workmen. But now the concept of master and servant has changed. The employer may hire the employee but cannot fire at own will. The legislation protects the rights of employees. Industrialization in India or in any other country means factory system growth with employers and wage earners. Wage population migrated to industrial towns due to introduction of factory system and the society faces labour problems which need solution. Earlier the workers were illiterate and unaware of their rights and employer's socio economic status was above the employees. Hence workers could not dictate their terms and conditions related to work hours, wages and leaves etc. To promote social justice there is need of equitable distribution of profits. Another objective is to provide protection to their health against harmful effects. Some of the Labour Laws are as follows:

Workmen Compensation Act, 1923 ensures that compensation be paid to the workers in case of an injury caused by an accident during course of employment. Act provide adequate protection to the workers from losses by accidents and improve employee's working conditions. In case of an injury to workmen due to accident the Act provides for payment of compensation to certain class of employees.

Trade Union's Act, 1926 ensure better conditions of employment to the workers and trade union concept has grown up. In any industry labour and capital contribution is very essential. To secure better amenities, privileges and working conditions to the labour through collective bargaining, strikes and mutual insurance are used as tools.

Employee's State Insurance Act, 1948 is another important step by government through legislation is to ensure social security to workmen. Which aims to provide economic and social justice to poor labour class and extended to the workers of every factory and industry etc.

Minimum Wages Act, 1948 prevents exploitation of labour and aims to fix minimum wages which an employer must pay. It protects the ignorant, less privileged and less organized workers to be protected from capitalist. Minimum wages ensure the physical need of workers to keep them above starvation level and provide certain level for educational, medical requirements etc.

Apprentice Act, 1961 regulates the training of apprentice in an industry. Act passed to ensure to carry on a systematic training programme of skilled labour and provide facilities to ensure training as per programmes.

Factories Act, 1948 deals with the provisions of health, welfare and safety of workers. As per Act there must be cleanliness in the factory and precautions be taken for accumulation of dirt and it should be removed daily. Every workroom, floor be cleaned once in a week. The promotion of human conditions at work place, securing full employment to the workers and welfare of people are covered under Act.

Industrial Disputes Act, 1947 have the objective to maintain industrial relations through industrial peace and economic justice. If there are good relations between management and labour due to absence of disputes, then it will have the positive influence on production. This will promote smooth growth of the industry. Hence industrial peace can be maintained through legislations for industrial relations.

ii) Taxation Laws:

There are two types of taxes: Direct taxes and indirect taxes. Direct taxes are those taxes which are directly charged from the person who avails benefits and indirect taxes are those taxes which are passed ultimately to the consumer of goods but collected from seller, importer and producer etc. Income tax and wealth tax are direct taxes whereas central excise duty, customs duty, central sales tax, state VAT and service tax are indirect taxes.

a) Direct Taxes

Income Tax Act, 1961 provides for the administration, levy, collection and recovery of income tax in India. To replace Income Tax Act, 1961 and Wealth Tax act, 1956 Government of India has drafted a statute named "Direct Tax Code'. Income of a person who is resident in India during previous year is chargeable under income tax Act. There are five heads of income called Income under head 'Salary', Income under head 'House Property', Income under head 'Capital Gains', Income under head 'Business or Profession' and Income from other sources.

b) Indirect Taxes

Central Sales Tax Act, 1956 is an indirect tax and chargeable by central Government from a registered dealer on taxable turnover of interstate sale of goods i.e .when goods move from one state to another. Import and export of goods are not covered under CST.

Customs Act, 1962 is the law related to customs duty to be charged on import or export in the country and levied by the Central Government. It contains the provisions for duty chargeable on cargo exports, postal articles and baggage etc.It also imposes restrictions on imports and exports. Smuggling activities are prevented by Central Government through this Act.

Central Excise Act, 1944 is the law related to duty chargeable on goods produced or manufactured in India. On essential goods like alcohol, cigarettes consumption is discouraged and duty is charged at high rate on commodities like oil and gas to reduce their consumption. It is chargeable from manufacturer for goods produced in India.

Value Added Tax (VAT), 2005 is a tax on sale and another form of sales tax. During sales of goods it is charged in different stages of transaction and paid on purchases. The registered dealer is issued an 11-digit number called Taxpayer's Identification Number (TIN) under the law to charge VAT.

Goods and Service Tax the Goods and Service Tax Act was passed in the Indian Parliament on March 29th, 2017, which subsequently came into effect on July 1st, 2017. It was hailed as a significant tax reform for the country, replacing the pre-existing array of indirect taxes, such as excise duty, VAT, service tax, etc. Goods and Services Tax (GST) is a value-added tax levied on the supply of goods and services for domestic consumption. GST is, therefore, an all-encompassing, single indirect tax law for the entire country. This tax is included in the final price of a product. A customer who buys said product pays its price inclusive of the GST. The business or seller then forwards its GST portion to the government. The Central Government of India levies this tax. In the case of intrastate transactions, this tax is distributed between the central and state government under CGST and SGST.

iii) Intellectual Property Laws:

Human intellect and human mind creation is called intellectual property. It is a hidden property means to accumulate wealth. Intellectual property has fear of piracy and covers two branches: industrial property i.e. patents, trademarks, industrial designs etc. whereas copyrights covers writing rights, musical works, dramatic works and photographic works etc.

Patents Act, 1970 grants privilege or authority to one or more individuals in property which is approved by Government. The Government provides an exclusive monopoly for a limited period of time for an invention which is called Patent. For the invention exclusive rights can be enjoyed by the inventor. The Government encourages research by innovation encouragement to promote technological, industrial and economic development in the country. Patentee is the owner of the patent who can deal with the property in same manner as owner of any other movable property.

Trade Marks Act, 1999 is related to the fact that a consumer may be cheated when purchases a commodity presuming to be the original which is of substandard. The reputation of trader may also suffer. To protect the interests of consumer and trader a symbol is marked on the origin of the goods. Such symbol is called trade mark. The trade mark may be a brand, symbol, letter etc. which can be represented graphically and may include combination of colours and packaging. Trade mark ensures quality of the product and it identifies the product at origin.

Copyrights Act, 1957 says that copyright is a special kind of intellectual property. This right is acquired by a person as a result of intellectual labour which is called copyright. It protects the work, labour, skill of a person which is in the nature of musical, dramatic or literature work or may be artistic, sound recording work etc.

iv) Banking and Insurance Laws:

Indian banking and insurance sector had undergone a bigger change in last few years. A bigger amount has been in invested in India in banking and insurance sector in the form of Foreign Direct Investment (FDI). Although banking and insurance sector is entrusted with the safety of funds of the general public as well as government institutions. Many reforms have been introduced in both the sectors. In the era of globalization these sectors need a proper regulation. The related laws are mentioned below.

Banking Regulation Act, 1949 is related to the banks and public service institutions which deal in funds of public. Banking Regulation Act contains various provisions related to capital of banks, businesses which are prohibited to banking companies, liquid assets, banking licenses, new branch opening, loans and advances etc. Successful banking venture depends upon position of liquidity. Before the commencement of business, a banking company requires a license from Reserve Bank of India and RBI inspects that whether position of bank is good to pay depositors at present or in future.RBI grants prior permission to the banking companies for opening new places of businesses in India and abroad. A banking company can wind up business like any other company if unable to pay debts or otherwise.

Insurance Act, 1938 is the law related to insurance and Insurance Regulatory Authority of India (IRDA) is the regulatory body which makes supervision and development of insurance sector in India. Insurance is an agreement between two parties. The person who takes protection, pay premium is called insured and person who agrees to compensate for loss is called Insured. Policy is the document in which terms and conditions of contract are mentioned. There are various types of insurances like life insurance, fire insurance, marine insurance and general insurance.

v) Businesses and Corporate Law:

There are various types of business and corporate laws which may affect a business in India. Many laws are prevalent in the country before independence. Business Laws in India includes some of the following laws. Although this is not complete list of Business Laws in India. Some of the laws are covered in earlier sections or in the forthcoming sections

a) Business Laws

In India business is regulated by different laws. But some basic business laws are in the form of Indian Contract Act,1872, Sales of Goods Act,1930, Partnership Act,1932 and other additional laws related to Bailment and Pledge, Principle of Agency, Negotiable Instruments Act,1881 are also operational, Brief outline is as follows:

Indian Contract Act, 1872 is the law which is most important part of mercantile law. Trade or business is not possible without this law. Every person is affected by law of contracts in one way or another way. Every one of us enters into a large number of contracts right from morning till evening. As per Indian Contract Act one person makes an offer and when this offer accepted by other person, it becomes a valid contract. There must be free consent of the parties which are entering into a valid contract. The objective of the contract must be lawful and a consideration is a valid one. For a valid contract the parties must be competent to enter into contract. There are remedies which are available to an aggrieved party if other party makes a default in the contract.

Sales of goods Act, 1930 is the law of contract under which property in goods is transferred by the seller to the buyer. Two parties are covered under the Act, one is called ‘seller’ and other is known as ‘buyer’. Consideration for the contract of sale is money paid or promised. Subject matter of contract of sale is ‘goods’ which may be existing, future or contingent goods. Performance of contract of sale is complete when both the parties i.e. seller and buyer complete their promises. Seller delivers the goods and buyer makes payment of the goods.

Partnership Act, 1932 mentions that partnership is an association of two or more persons who have agreed to share the profits for the business concern carried on by all or one of them acting for all. Partnership business is based on the principle of mutual agency which means that if decisions which are taken by one partner in good faith then such decisions are carried on by all of the partners i.e every partner will be liable for such decisions. The liability of the partners is unlimited i.e. if debts are not paid then they can be recovered even from private property of partners. To remove the shortcomings of Partnership Act, 1932 a new Act called **Limited Liability Partnership Act, 2008** has come into existence.

b) Corporate Laws

There are various laws which are affect corporate houses in India. One of the most important law which regulates the companies is called Companies Act, 2013.before this law Companies Act,1956 was operational. Some details are below:

Companies Act, 2013 came into existence when corporate sector has undergone a bigger change over the years and Companies Act, 1956 revamped due to these changes. A company is an association of a number of persons, having perpetual succession and common seal. A company is an artificial legal person having separate entity from persons who constitute it. The property of the company belongs to it and not to the members. One of the biggest advantages of company is that the members have a limited liability which means in case of winding up of a company liability of members will be limited to the extent of shares subscribed by them i.e. if the face value of share is Rs. 10 and a shareholder has already paid Rs. 7 then he will be liable to pay only Rs. 3 in case of winding up (if shares are issued at par).Another privilege of company form is that it has perpetual succession which means that company is not affected by death, lunacy, insolvency of any member. Members may come and go but company remains in existence. A company being a legal entity is separate from members, directors, employees etc. and has certain rights which are not enjoyed by members. Company can sue and can be sued in its own name. A company is not a citizen like a natural person. To bring a company into existence certain important steps are taken by some persons who are called promoters. In the formation of a company Memorandum of Association is most important document. It is the foundation of the company structure and considered as constitution of the company. The internal management of the company is managed by Articles of Association but in no case they can exceed Memorandum of Association. A company can invite public for subscription in shares or debentures by issue of Prospectus. The shares of a company are freely transferable being a movable property in a manner mentioned in Articles of Association. A company can also raise funds through borrowings and being an artificial person cannot act by itself hence certain persons carry on business of company are called Directors. Meetings are conducted in a company to transact a lawful business. A company being an artificial person comes into existence by a legal process and comes to an end by a legal process called winding up.

vi) Some other Laws which may affect business in India:

Although businesses are affected by a large number of laws. Some of them are as follows:

Arbitration and Conciliation Act,1996 mentions that Arbitration agreement is an agreement under which in case of a dispute between the parties the dispute can be referred to an Arbitrator. Such dispute may arise due to a legal relationship in between the parties which may be contractual or not. The agreement of arbitration must be in writing, parties should sign it and record of agreement may be through different means of communication like telegrams, telex or exchange of letters. The number of arbitrators to be appointed by the parties is as per their will, but such number cannot be an even number. If the parties fail to determine the number of arbitrators, then arbitral tribunal will be the sole arbitrator. On the death of a party, arbitration agreement will not be discharged. In such a case it will be enforceable by or against the legal representatives of the deceased. To present the case each party shall be given full opportunity and treated with equality. The place of arbitration is as agreed between the parties. In case of failure to decide the place it shall be determined by the arbitral tribunal as per the convenience of the parties and circumstances of the case.

As per the Act the conciliation proceedings may be commenced when one party initiates conciliation and an invitation in writing is send to the other party with the identification of the subject of the dispute. On the acceptance in writing by the other party there shall be commencement of the conciliation proceedings. No conciliation proceedings will be there, if the invitation is rejected by the other party. If the reply is not received by the party who initiates conciliation within thirty days from the date when invitation is sent or other period mentioned in the invitation conciliation invitation may be treated as rejected. One conciliator should be there unless agreed between the parties two or three conciliators may be there. There may be an agreement between the parties on sole conciliator name in case of one conciliator. One conciliator appointed by each party in case of two conciliators. When there are three conciliators one conciliator is appointed by each party and third conciliator is the person who is agreed in between the parties and act as presiding conciliator. Principles of justice, fairness shall be in the mind of conciliator and shall act in an impartial and independent manner for speedy settlement of the dispute.

Competition Act, 2002 is an act which protects the interests of consumers and ensures in Indian market a free trade. The purpose of the act is to prohibit those activities due to which business entities are restricted from competition and free trading. The entrepreneurs are provided an opportunity to compete in the market and ban the monopoly situations. As per the act there is a restriction on agreements related to supply, distribution and production etc.in between persons or associations due to which the competition in India is adversely affected. There will be an adverse impact on the agreements which determine prices for sale or purchase directly or indirectly and due to which a limit of investment, supply, markets, and control of production etc.is set. There are two types of agreements as per the competition law. When the enterprises are competing within same business then these are called horizontal agreements and presumed to be illegal. When the agreements are among independent enterprises then these are called vertical agreements. When an enterprise restricts production, directly or indirectly imposes conditions of discriminatory nature for purchase and sale of goods or for the entry of new operators create hindrances against the benefits of consumers. Then there is an abuse of dominant position which is controlled by the law. The activities of combination like mergers, amalgamations and acquisition are regulated by the Act and it also keeps a watch on the combinations which cause an adverse effect on the competition in the market. Competition Commission of India is an independent entity and body corporate which can sue in own name, possess a common seal and have the power to enter into a contract. Commission consists of a chairperson, who works with the assistance of minimum two and maximum ten members. At present there are six members in the commission. The practices which have an adverse effect on competition can be eliminated by Commission to ensure trade freedom in the markets in India and protects the interests of the consumers.

Foreign Exchange Management Act (FEMA), 1999 has replaced Foreign Exchange Regulation Act, 1974(FERA). To tune with the foreign policy of India FEMA regulation enables Reserve Bank of India and Central Government to pass the regulations. In the foreign exchange market currency is purchased or sold by individuals, governments and businesses. There may be an exposure of risk or benefit to country due to frequent changes in the foreign exchange market. Restrictions are imposed by the central government through FEMA when payments are made to any person outside India or receipts are from them. There are restrictions on the transactions in foreign exchange and payments from outside country when not made through an authorized person. Necessary requirements are required to be complied with by the exporters and need to furnish export details to Reserve Bank of India (RBI).

Information Technology Act, 2000 deals with the commitment of crimes where computer is used as a tool. Computer may be used to commit a crime or there may be computer related crimes. Crimes may be committed without computer but computer may facilitate commitment of crime in a better way. For the electronic governance legal framework is provided by the Act. Digital signatures and electronic records are recognized by the Act. Cyber crimes and penalties are also prescribed. Cyber Appellate Tribunal is established to resolve the disputes. The cyber crimes may cover harassment by mails, hacking, defamation, virus transmission, network trespassing, cyber terrorism against Government organization, pirated software distribution etc. To cover cyber law security in India and expansion of companies in e-commerce has prompted government to regulate the area.

Environmental Protection Act, 1986 is related to protection of the environment in India. Environment may relate to surroundings and for progress of society industry is must and pollution is obvious. Environmental protection is a global issue. There is a close link between healthy environment and economic conditions of community. Due to industrialization water pollution is created. Industrial waste is discharged by large number of industries into rivers and pollute them. Air pollution is also felt in the form of smoke, heat, dust etc. Noise is an atmospheric pollution and increases due to urbanization and industrislation.

Check Your Progress:

Choose the Correct Answer:

1. What is the primary function of the government in the political environment?

   a) To control business competition

   b) To regulate international trade only

   c) To set the legal and regulatory framework for business operations

   d) To influence consumer behavior

   Answer: c) To set the legal and regulatory framework for business operations

2. Which of the following is a key role of the government in the business environment?

   a) To guarantee business profits

   b) To provide subsidies for all businesses

   c) To regulate business practices and ensure fair competition

   d) To conduct business operations

   Answer: c) To regulate business practices and ensure fair competition

3. Which political factor significantly influences international trade?

   a) Trade restrictions and tariffs

   b) Consumer preferences

   c) Technological advancements

d) Environmental concerns

Answer: a) Trade restrictions and tariffs

4. The government's role in ensuring social welfare and healthcare affects which environment?

a) Technological environment

b) Political environment

c) Legal environment

d) Economic environment

Answer: b) Political environment

5. Which of the following is NOT typically controlled by the government in the political environment?

a) Market competition

b) Business taxation

c) Environmental regulations

d) Consumer preferences

Answer: d) Consumer preferences

6. The government's fiscal policy, including taxation and spending, directly affects which part of the business environment?

a) Economic environment

b) Social environment

c) Technological environment

d) Legal environment

Answer: a) Economic environment

7. Which of the following is an example of the government influencing the business environment through law?

a) Setting interest rates

b) Implementing consumer protection laws

c) Encouraging consumer spending

d) Increasing labor costs

Answer: b) Implementing consumer protection laws

8. Government intervention in protecting intellectual property rights affects which environment?

a) Political environment

b) Legal environment

c) Economic environment

d) Technological environment

Answer: b) Legal environment

9. Which of the following is a political factor that could lead to changes in business operations?

a) Technological advancements

b) New government regulations on trade and imports

c) Changes in consumer preferences

d) Changes in social behavior

Answer: b) New government regulations on trade and imports

10. What is the impact of political stability on business operations?

a) It increases the predictability of business conditions

b) It leads to fewer regulations for businesses

c) It makes economic conditions unpredictable

d) It has no impact on business operations

Answer: a) It increases the predictability of business conditions

2.5 Self-Assessment Questions

1. Explain briefly Functions of State.
2. What is the relationship of government with the business?
3. Explain the roles of government in business.
4. Briefly discuss how politico-legal environment impacts business.

UNIT – III

Structure:

3.1 Introduction to Economic Environment:

The economic environment refers to the external economic conditions that influence the decisions and behaviors of consumers, businesses, and governments. It encompasses factors like inflation, interest rates, employment levels, and income distribution. Understanding the economic environment is crucial for making informed financial decisions.

3.2 What is Economic Environment?

The economic environment refers to the aggregate economic factors and conditions that either directly or indirectly influence the activities of an economy. This can include interest rates, inflation, fiscal policies, and other forms of relations in external trade. All these directly influence business and consumer decisions in making choices on individual and group economic growth.

3.3 Key Features of Economic Environment:

- ✓ **Dynamic and Evolving:** Economic environments change rapidly due to global events, policy shifts, and technological advancements.
- ✓ **Macro and Micro-Level Impacts:** At the macro level, it affects the GDP, inflation, and employment rates. At the micro-level, it influences individual businesses and consumer purchasing power.
- ✓ **Decision-Making Foundation:** Economic conditions serve as the basis for planning and strategy in sectors like investment, production, and international trade.

3.4 Elements of Economic Environment:

India’s economic environment is shaped by several key elements that work together to drive the nation’s economic trajectory. These elements provide a clear picture of the opportunities and challenges that India faces.

i) Economic Policies:

India's economic policies form the backbone of its economic environment. Fiscal, monetary, and industrial policies are among them.

- ✓ **Fiscal Policy:** Formulated by the government, fiscal policy pertains to taxation, public expenditure, and borrowing. For example, through the union budget, the government expresses intentions over public expenditure and revenue collection policies.
- ✓ **Monetary Policy:** RBI governs monetary policy, which keeps a check on the money supply and restricts inflation through alterations in rates of interest and credit control.
- ✓ **Industrial policy:** This is an encouragement of the development of industries in manufacturing, technology, and exports.

ii) Economic Conditions:

Economic conditions provide a snapshot of India's economic health and performance.

- ✓ **GDP Growth:** India, being one of the fastest-growing economies, consistently posts GDP growth rates between 6-7%. This growth is driven by strong domestic consumption and industrial output.
- ✓ **Inflation Rates:** Inflation, particularly food and fuel inflation, plays a critical role in shaping the cost of living and business costs.
- ✓ **Unemployment Rates:** India faces the dual challenge of creating jobs for its young population and addressing underemployment, particularly in rural areas.

iii) Trade & Global Integration:

India's trade policies and international agreements are very important in its economic environment.

- ✓ **Exports and Imports:** The country's exports and imports relate mainly to IT services, textiles, and pharmaceuticals, but crude oil and electronic goods are notable imports.
- ✓ **International Trade Relationships:** FTAs with ASEAN, UAE, and others are strengthening the base of India in global markets.
- ✓ **Foreign Exchange Reserves:** Robust forex reserves provide a buffer against economic shocks and currency fluctuations.

iv) Infrastructure Development:

Infrastructure is the backbone of India's economic growth.

- ✓ **Transportation and Connectivity:** Projects like PM Gati Shakti and the National Infrastructure Pipeline (NIP) are revolutionizing transportation and logistics.
- ✓ **Digital Infrastructure:** Initiatives such as Digital India have expanded internet connectivity and digital inclusion, fostering economic participation.
- ✓ **Energy and Sustainability:** India's focus on renewable energy sources, such as solar and wind, underscores its commitment to sustainable development.

v) Foreign Direct Investment (FDI):

FDI is an integral part of India's economic environment, allowing entry to capital, technology, and employment.

- ✓ **Sectors Attracting FDI:** The top sectors in which investment is attracted are: IT, Telecommunications, and e-commerce.
- ✓ **Reforms under the government:** The more relaxed norms of FDI and the introduction of GST, have made foreign investors feel more attracted to India.

vi) Social & Demographic Factors:

The demographic trend in India is an essential feature of its economic climate.

- ✓ **Young Workforce:** India ranks one of the youngest workforce globally with over 65% of its population under 35.
- ✓ **Gender and Education:** Enabling higher female labor force participation by supporting productivity growth while improving education quality.
- ✓ **Health and Well-Being:** Investments in health infrastructure are improvements in general economic productivity that result from a healthy workforce.

3.5 Importance of Economic Environment in India:

The economic environment in India serves as the foundation for planning, decision-making, and policy formulation for businesses, investors, and the government.

i) **It Facilitates Policy Making:** A deep understanding of the economic environment helps in making policies. For instance, calculating inflation makes RBI fix appropriate interest rates to govern the flow of transactions in the economy.

ii) **It improves business choices:** Businessmen analyze the economic surroundings to try to predict demand in the markets, set up pricing procedures, and make expansionary plans. For instance, low interest rates will boost companies to invest more in growth-oriented projects.

iii) **Attracts Foreign Investments:** A predictable and stable economic environment attracts international investors. Indian liberalized FDI norms and improvement of ease of doing business rankings have made it an attractive place for foreign investments.

iv) **Drives Sustainable Development:** Economics supports sustainability by balancing growth objectives with environmental preservation. Promotions of renewable energy and electric vehicles, for instance, align economic growth with sustainability goals.

v) **Boosts Global Competitiveness:** It is also making India more competitive in the world. The economic environment is becoming increasingly competitive in the area of manufacturing and people under “Skill India” and “Make in India.” programs are being up-skilled.

3.6 Factors that Influence the Economic Environment:

i) Global Economic Trends:

International trade, exchange rates, and global competition can affect businesses operating both domestically and internationally.

ii) Domestic Economic Policies:

Government spending, taxation, and monetary policies can create booms and busts in the economy.

iii) Technological Advancements:

Technological innovations can disrupt industries and create new opportunities, requiring businesses to adapt their strategies.

iv) Demographic Changes:

Shifts in population size, age distribution, and education levels can affect labor supply, consumer demand, and investment decisions.

v) Social and Cultural Factors:

Changes in consumer preferences, attitudes towards work, and ethical considerations can impact business practices.

3.7 Business Cycle:

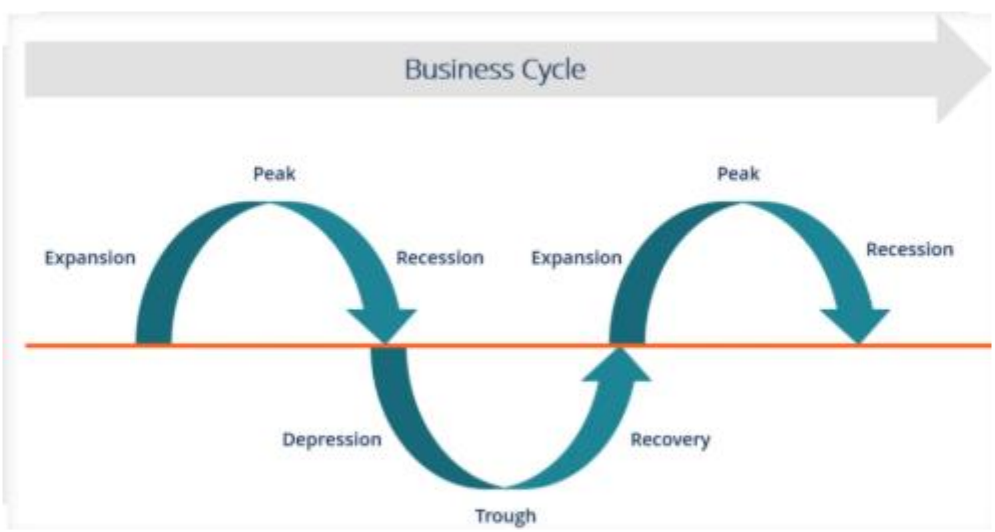
A business cycle is a cycle of fluctuations in the Gross Domestic Product (GDP) around its long-term natural growth rate. It explains the expansion and contraction in economic activity that an economy experiences over time.

A business cycle is completed when it goes through a single boom and a single contraction in sequence. The time period to complete this sequence is called the length of the business cycle.

A boom is characterized by a period of rapid economic growth, whereas a period of relatively stagnated economic growth is a recession. These are measured in terms of the growth of the real GDP, which is inflation-adjusted.

Figure 3.1

Stages of the Business Cycle



In the diagram above, the straight line in the middle is the steady growth line. The business cycle moves about the line. Below is a more detailed description of each stage in the business cycle:

i) Expansion:

The first stage in the business cycle is expansion. In this stage, there is an increase in positive economic indicators such as employment, income, output, wages, profits, demand, and supply of goods and services. Debtors are generally paying their debts on time, the velocity of the money supply is high, and investment is high. This process continues as long as economic conditions are favorable for expansion.

ii) Peak:

The economy then reaches a saturation point, or peak, which is the second stage of the business cycle. The maximum limit of growth is attained. The economic indicators do not grow further and are at their highest. Prices are at their peak. This stage marks the reversal point in the trend of economic growth. Consumers tend to restructure their budgets at this point.

iii) Recession:

The recession is the stage that follows the peak phase. The demand for goods and services starts declining rapidly and steadily in this phase. Producers do not notice the decrease in demand instantly and go on producing, which creates a situation of excess supply in the market. Prices tend to fall. All positive economic indicators such as income, output, wages, etc., consequently start to fall.

iv) Depression:

There is a commensurate rise in unemployment. The growth in the economy continues to decline, and as this falls below the steady growth line, the stage is called a depression.

v) Trough:

In the depression stage, the economy's growth rate becomes negative. There is further decline until the prices of factors, as well as the demand and supply of goods and services, contract to reach their lowest point. The economy eventually reaches the trough. It is the negative saturation point for an economy. There is extensive depletion of national income and expenditure.

vi) Recovery:

After the trough, the economy moves to the stage of recovery. In this phase, there is a turnaround in the economy, and it begins to recover from the negative growth rate. Demand starts to pick up due to low prices and, consequently, supply begins to increase. The population develops a positive attitude towards investment and employment and production starts increasing.

Employment begins to rise and, due to accumulated cash balances with the bankers, lending also shows positive signals. In this phase, depreciated capital is replaced, leading to new investments in the production process. Recovery continues until the economy returns to steady growth levels.

This completes one full business cycle of boom and contraction. The extreme points are the peak and the trough.

3.8 What are the Features of a Business Cycle?

There are several features of a Business Cycle. Let us take a look at five features of a Business Cycle.

i) Occurs Periodically:

The different phases of a Business Cycle occur from time to time. Although, at certain times, these periods will vary according to the Economic conditions of the industry. This duration may last as long as 10-12 years. The intensity of the phases will also change depending on the Economy. For example, at times, the firm will see massive growth followed by a short span of depression.

ii) Synchronous:

Another advantageous and prominent feature of the Business Cycle is that it is synchronic. The features of a Business Cycle are not restricted to a single firm or industry. They originate in a free Economy and are prevalent. If there is any kind of disturbance or Business boom in one industry, it will affect the other firms too. Since different kinds of industries are interrelated, the Business in one firm disturbs that in another firm.

iii) Major Sectors Are Affected:

It’s been noticed that fluctuations occur not only at the level of production but also in other variables such as employment, consumption, investment, rate of interest, and price level. The investment and consumption of durable consumer goods like houses and cars are continually affected by the periodical fluctuations. As the process of consumption is deferred the courses of the Business Cycle are also affected widely.

iv) Profit Variation:

Another significant feature of the Business Cycle is that the profits fluctuate more than any other income source. This makes any kind of Business a tricky and uncertain profession for many. It is difficult to predict Economic conditions. In situations of depression, profits may even become harmful. That is why many Businesses go bankrupt.

v) Worldwide Impact:

Business Cycles are international in nature. If depression occurs in one country, then it is bound to spread to other nations too. This happens mainly because the countries depend on each other for import and export trades. The 1930 depression in the USA and Great Britain shook the entire world and resulted in a recession.

3.9 What are the characteristics of Business Cycle?

A business cycle is characterized by recurring fluctuations in economic activity, including periods of expansion (boom) and contraction (recession). These cycles are marked by changes in key economic indicators like output, employment, and investment. The following provides a comprehensive analysis of the key characteristics.

1. Periodic Fluctuations:

- ✓ Business cycles are not regular, but they do occur periodically, with variations in their length and intensity.
- ✓ The phases of the cycle include expansion, peak, contraction (or recession), and trough.
- ✓ These phases are not fixed and can last for varying durations, typically ranging from two to twelve years.

2. All-Embracing Nature (Synchronic):

- ✓ Business cycles impact the entire economy, not just specific sectors or industries.
- ✓ Changes in one sector tend to ripple through the entire economic system.

3. Impact on Multiple Economic Variables:

- ✓ Business cycles affect more than just production; they also influence employment, investment, consumption, interest rates, and price levels.
- ✓ Investment and consumption of durable goods are particularly sensitive to cyclical fluctuations.

4. Complex and Dynamic:

- ✓ Business cycles are not predictable and have no single cause or pattern.

- ✓ Factors like government policies, consumer confidence, technological advancements, and global events can all influence the cycle.

5. International in Nature:

- ✓ Business cycles can spread across borders through trade, investment, and other global linkages.
- ✓ One country's economic downturn can impact other nations' economies.

3.10 Causes of Business Cycle

Business cycles, characterized by periods of expansion and contraction in economic activity, are driven by a complex interplay of demand-side and supply-side factors. Demand-side factors, like consumer confidence and investment decisions, significantly influence the cycle, while supply-side factors, including technological advancements and changes in production costs, also play a role. Additionally, factors like interest rates, government policies, and geopolitical events can impact the business cycle. A detailed examination of the causes is given below.

i) Demand-Side Factors:

- ✓ **Consumer Confidence:**

  Changes in consumer confidence directly impact spending and demand for goods and services. Increased confidence leads to higher spending, while decreased confidence can trigger a recession.

- ✓ **Investment Decisions:**

  Businesses' investment decisions, influenced by factors like interest rates and profit expectations, play a crucial role in driving the business cycle. High investment during expansions can create demand and jobs, while lower investment can contribute to contractions.

- ✓ **Aggregate Demand:**

  Fluctuations in aggregate demand, driven by changes in consumer spending, business investment, government spending, and net exports, are a primary driver of the business cycle.

- ✓ **Monetary and Fiscal Policies:**

  Government policies, such as changes in interest rates and fiscal spending, can influence the cycle by affecting aggregate demand and economic growth.

ii) Supply-Side Factors:

- ✓ **Technological Advancements:**

  Innovations can lead to increased productivity and lower production costs, potentially driving economic growth and expansion.

- ✓ **Changes in Production Costs:**

  Increases in production costs, like raw materials or labor, can lead to higher prices and potentially slow down economic activity.

- ✓ **Natural Disasters and Other Shocks:**

  Unexpected events, like natural disasters or global crises, can disrupt supply chains and negatively impact economic activity.

iii) Other Factors:

- ✓ **Interest Rates:**

  Fluctuations in interest rates, influenced by monetary policy, affect borrowing costs and investment decisions, impacting the business cycle.

- ✓ **Government Policies:**

Fiscal and monetary policies can be used to manage the business cycle, with policies aimed at stimulating demand during recessions and cooling down the economy during expansions.

- ✓ **Geopolitical Events:**

Major geopolitical events, like wars or trade disputes, can disrupt global markets and impact economic activity.

In summary, the business cycle is a complex phenomenon influenced by a combination of factors that affect both demand and supply in the economy.

3.11 Macro Economic Parameters:

Macroeconomic parameters like GDP, growth rate, population, urbanization, national income, and per capita income significantly influence business decisions. GDP, growth rate, and national income reflect overall economic health, while population and urbanization impact market size and distribution. Per capita income indicates consumer spending power, impacting demand and pricing strategies.

i) GDP (Gross Domestic Product):

Represents the total monetary value of all goods and services produced within a country's borders during a specific period, typically a year. A higher GDP generally indicates a stronger and more productive economy.

ii) Growth Rate:

Measures the percentage change in GDP over a period, reflecting the pace of economic expansion or contraction. A positive growth rate suggests the economy is expanding, while a negative rate indicates a recession.

iii) National Income:

Represents the total income earned by a nation's residents, including wages, profits, and rents. It provides a different perspective on economic performance compared to GDP, focusing on the income earned rather than the value of production.

iv) Population:

The total number of people residing in a country or region. Larger populations generally imply a larger market for businesses.

v) Urbanization:

Refers to the increasing proportion of people living in urban areas rather than rural areas. Urbanization can create more concentrated consumer markets and influence infrastructure requirements for businesses.

vi) Per Capita Income:

Calculated by dividing the total national income by the total population, indicating the average income per person. Higher per capita income suggests a greater capacity for consumer spending and demand for goods and services.

Impact on Business Decisions:

Businesses analyze these macroeconomic indicators to make strategic decisions, such as:

- ✓ **Market Entry and Expansion:** GDP and population growth can indicate the potential size and profitability of a market.
- ✓ **Pricing Strategies:** Per capita income can influence the pricing of goods and services, with higher income levels potentially supporting higher price points.
- ✓ **Investment Decisions:** Economic growth prospects, as reflected in GDP growth, can influence investment decisions.

- ✓ **Supply Chain Management:** Urbanization patterns can affect the location and logistics of supply chains.
- ✓ **Production and Capacity Planning:** GDP, growth rate, and population trends can help businesses forecast demand and plan production capacity.

3.12 What is a Macroeconomic Factor?

A macroeconomic factor is a pattern, characteristic, or condition that emanates from, or relates to, a larger aspect of an economy rather than to a particular population. The characteristic may be a significant economic, environmental, or geopolitical event that widely influences a regional or national economy.

A macroeconomic factor can include something that affects the course or direction of a given large-scale economy. Monetary policies and other regulations, for example, can affect national and state economies, while also coming with potentially great global consequences.

Inflation, gross domestic product (GDP), national income, and unemployment levels are examples of macroeconomic factors. Such economic performance metrics are closely tracked by states, companies, and consumers alike. The correlation between various macroeconomic factors is extensively researched in the field of macroeconomics.

3.13 Nature of Macroeconomics:

Macroeconomics is the study of aggregates: aggregate volume of the output of an economy, aggregate demand and supply, aggregate level of factors of production employed, and overall price level in an economy. The properties that these aggregates possess cannot be deduced from simply adding the smaller individual components that they comprise. These aggregates call for study of economic behavior exhibited at large scales, their interactions with each-other, and the overall direction in which they lead the economy.

3.14 Scope of Macroeconomics:

The scope of macroeconomics is broad and diverse. It encompasses a wide range of topics, including the role of government in the economy, international trade and finance, economic growth and development, and the effects of monetary and fiscal policies. Macroeconomists use different models and analytical tools to study these topics, and they are constantly refining and developing their theories to better understand the behavior of the economy.

Macroeconomic analysis begins with the observation and measurement of the various macroeconomic variables. The most important macroeconomic variable is gross domestic product (GDP), which measures the total value of goods and services produced within an economy over a given period. Macroeconomists also analyze other macroeconomic variables such as inflation, unemployment, balance of payments, and exchange rates.

One of the most important goals of macroeconomics is to understand the determinants of long-term economic growth. Economic growth is essential for increasing living standards and reducing poverty. Macroeconomic theories explain how technological progress, investment, human capital, and institutions are the key drivers of long-term growth.

Another important aspect of macroeconomics is the study of business cycles. Business cycles refer to the fluctuations in economic activity that occur over time. They are characterized by periods of expansion and contraction in the economy. Macroeconomists study business cycles to understand the causes of economic fluctuations and to formulate policies that can help stabilize the economy.

3.15 Types of Macro Environment Factors:

Macro-environment factors are broad, external influences that impact businesses and markets. Examples include economic factors like GDP growth, inflation, and consumer spending; political factors like government regulations and trade policies; social and cultural factors like demographics, values, and lifestyle trends; technological factors like innovation and automation; and environmental factors like climate change and sustainability. The following are the types of macro environment factors:

1. Economic Factors:

- ✓ **GDP Growth:** Overall economic performance and potential for consumer spending.
- ✓ **Inflation:** The rate at which prices increase, impacting purchasing power and business costs.
- ✓ **Interest Rates:** Influence borrowing costs for businesses and consumers.
- ✓ **Consumer Spending:** Overall level of consumer demand and its potential impact on business revenue.
- ✓ **Unemployment Rate:** Impacts the availability of labor and consumer spending power.
- ✓ **Exchange Rates:** Impact international trade and competitiveness.

2. Political and Legal Factors:

- ✓ **Government Regulations:** Rules and laws that affect businesses, such as environmental regulations, labor laws, and trade restrictions.
- ✓ **Political Stability:** The degree of political risk and its impact on investment and business operations.
- ✓ **Trade Agreements:** Impact international trade flows and the competitiveness of businesses.

- ✓ **Taxes:** The level of taxation and its impact on business profitability.
- ✓ **Labor Laws:** Regulations that affect the workforce, such as minimum wages, working hours, and benefits.

3. Social and Cultural Factors:

- ✓ **Demographics:** Population trends, including age, gender, ethnicity, income, and education levels.
- ✓ **Lifestyle Trends:** Changes in consumer preferences, attitudes, and behaviors.
- ✓ **Values and Beliefs:** Cultural norms and values that influence consumer choices and business practices.
- ✓ **Social Issues:** Current events and social movements that can impact consumer behavior and business operations.

4. Technological Factors:

- ✓ **Innovation:** The development and adoption of new technologies that can disrupt industries and create new opportunities.
- ✓ **Automation:** The use of technology to automate processes, potentially impacting labor costs and productivity.
- ✓ **Cybersecurity:** The need to protect information and systems from cyber threats.
- ✓ **Internet and E-commerce:** The rise of online platforms and their impact on businesses and consumers.

5. Environmental Factors:

- ✓ **Climate Change:** Global warming and its impact on businesses and consumer behavior.
- ✓ **Sustainability:** Growing concerns about environmental impact and the need for sustainable practices.

- ✓ **Resource Scarcity:** The depletion of natural resources and its impact on businesses and consumers.
- ✓ **Waste Management:** The need to manage waste effectively and reduce pollution.

3.16 Significance of urbanization to business:

Urbanization significantly impacts businesses by creating larger markets, boosting economic activity, and fostering innovation. It also leads to increased competition, higher costs, and the need for businesses to adapt to changing consumer preferences.

Positive Impacts:

i) Market Expansion:

Urban areas attract a larger and more diverse population, leading to increased demand for goods and services and wider consumer base.

ii) Economic Growth:

Urbanization drives industrialization and modernization, creating more job opportunities and fueling economic growth.

iii) Innovation and Creativity:

The concentration of people and businesses in urban environments fosters collaboration, knowledge sharing, and the development of new ideas and technologies.

iv) Infrastructure Development:

Urban areas often have better infrastructure, including transportation, communication, and utilities, which can improve business operations and reduce costs.

v) Increased Efficiency:

Urbanization leads to specialization and economies of scale, enabling businesses to operate more efficiently and reduce production costs.

vi) Labor Availability:

Cities offer a readily available pool of skilled labor, making it easier for businesses to find employees and attract talent.

Challenges and Considerations:

i) Increased Competition: The concentration of businesses in urban areas leads to increased competition, requiring companies to differentiate themselves and offer competitive pricing.

ii) Higher Costs: Urban living and business operations can be more expensive, including rent, labor costs, and utilities.

iii) Environmental Impact: Rapid urbanization can strain resources and lead to environmental problems, including pollution and traffic congestion.

iv) Social Issues: Urbanization can also exacerbate social issues, such as poverty, inequality, and crime, which businesses need to address to ensure a stable and sustainable environment.

v) Adapting to Changing Consumer Preferences: Businesses must adapt to the changing tastes and preferences of urban consumers, who often demand higher quality products, services, and experiences.

vi) Balancing Growth with Sustainability: Businesses must strive to balance economic growth with environmental sustainability, ensuring that their operations do not negatively impact the urban environment. In conclusion, urbanization presents both opportunities and challenges for businesses. Businesses that can effectively leverage the advantages of urbanization and address its challenges are likely to succeed in the long term.

Check Your Progress:

Choose the Correct Answer:

1. Which of the following is a key feature of an economic environment?

   a) Government taxation

   b) Demand for goods and services

   c) Economic policies, inflation, and interest rates

   d) None of the above

   Answer: c) Economic policies, inflation, and interest rates

2. What does GDP stand for in the economic environment?

   a) Gross Domestic Product

   b) Global Domestic Product

   c) Generalized Demand Patterns

   d) Growth Distribution Potential

   Answer: a) Gross Domestic Product

3. Which economic factor influences the cost of borrowing for businesses?

   a) Inflation rate

   b) Exchange rates

   c) Interest rates

   d) Population growth

   Answer: c) Interest rates

4. Which of the following is true about inflation in the business environment?

   a) Inflation makes goods and services cheaper for consumers

   b) Inflation increases the purchasing power of money

c) Inflation leads to a rise in costs for businesses

d) Inflation has no effect on business operations

Answer: c) Inflation leads to a rise in costs for businesses

5. How does population growth impact business?

a) It has no effect on market demand

b) It creates new market opportunities by expanding the consumer base

c) It decreases demand for products and services

d) It increases competition in the market

Answer: b) It creates new market opportunities by expanding the consumer base

6. Which of the following economic indicators reflects the overall health of an economy?

a) Consumer satisfaction index

b) Gross Domestic Product (GDP)

c) Exchange rate

d) Unemployment rate

Answer: b) Gross Domestic Product (GDP)

7. A business cycle that experiences rising prices and economic expansion is referred to as:

a) Recession

b) Depression

c) Inflationary boom

d) Stagnation

Answer: c) Inflationary boom

8. How do changes in national income affect business decisions?

a) High national income leads to lower consumer spending

b) Low national income reduces business profitability

c) Higher national income leads to higher consumer spending and demand

d) National income does not affect business decisions

Answer: c) Higher national income leads to higher consumer spending and demand

9. Which of the following economic factors is closely related to the employment rate?

a) Inflation

b) Unemployment rate

c) Exchange rate

d) Population growth

Answer: b) Unemployment rate

10. Per capita income measures:

a) The total income of the economy

b) The average income per person in a country

c) The total production output of an economy

d) The business growth rate in a country

Answer: b) The average income per person in a country

3.17 Self Assessment Questions

1. What is economic environment? and explain its key features.
2. What is meant by business cycle?
3. Point out the important features of business cycle.
4. What are the different phases of business cycle?
5. Explain the impact of macroeconomic parameters on business decisions?
6. Explain the significance of urbanisation to business.

7. Explain the types of macro environment factors.
8. Give a brief account of the importance of economic environment to business.

UNIT – IV

Structure:

4.1 Introduction to Social Environment

4.2 Social Environment - Meaning

4.3 What is a social environment?

4.4 Internal and External Social Environment

4.5 Elements of the Social Environment:

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4.20 Joint Family System in India

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4.24 Linguistic systems in India

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4.28 Indian Religion Groups

4.29 Self Assessment Questions

4.1 Introduction to Social Environment:

The social environment in business refers to the societal forces, including values, beliefs, customs, traditions, and attitudes, that influence how a business operates and interacts with its customers, employees, and the community. These factors create the context in which businesses operate, impacting their strategies, products, and marketing efforts.

4.2 Social Environment – Meaning:

The social environment consists of the sum total of a society's beliefs, customs, practices and behaviours. It is, to a large extent, an artificial construct that can be contrasted with the natural environment in which we live.

Every society constructs its own social environment. Some of the customs, beliefs, practices and behaviours are similar across cultures, and some are not. For example, an American traveling to Britain will find many familiar practices but not so much if traveling to China.

This social environment created by a society-at-large in which a business functions can be referred to as its external social environment. If a business operates in a multicultural society, then the social external social environment is even more complicated because the environment will consist of diverse sub-populations with their own unique values, beliefs and customs.

A business also has its own social environment. We can refer to this as its internal social environment, which is simply the customs, beliefs, practices, and behaviours within the confines of the business. A business has much more control over its internal social environment than it does with its external social environment.

4.3 What is a social environment?

A person's social environment is their society and all surroundings influenced in some way by humans. It includes all relationships, institutions, culture, and physical structures.

The social environment comprises the beliefs, desires, values, and attitudes of consumers and public members. Other social environment examples are the consumption patterns, desires, and behaviours of the market. This social environment definition includes demographic factors of the market, such as Occupation, Age, Income, Consumption patterns, Gender and Ethnicity.

4.4 Internal and External Social Environment:

A business must be keenly aware of the society's social preferences regarding its needs and wants. These preferences and needs and wants will be influenced by

i) Internal social environments

ii) External social environments

i) Internal Social Environment:

A business also creates a social environment consisting of its own organizational values, norms, customs and practices. Many of these values, norms and beliefs will mirror the internal social environment, but some will be unique to the organization.

Businesses need to operate as a cohesive unit, so it is important that they build a strong and productive organizational culture. It is also important to ensure that the culture is stable and positive. Thus, a business should carefully monitor the relations between its members to detect any hostility or other dysfunction that needs to be corrected.

ii) External Social Environment:

A business must utilize and adapt to its external social environment, or it will not survive. Let us look at some examples. A change in beliefs and values towards energy conservation and global climate change may create a change in consumer preference away from gas guzzling SUVs to hybrid sedans. Some cultures treat the meal as a long social event, and fast food just won't cut it. Social preferences relating to fashion are constantly changing. Skirt lengths go up and down depending upon the years, as do the preference for single-breasted and double-breasted suits.

If a business refuses to adapt to changing social preferences, its sales will drop, and it will fail. Of course, sometimes the change in social preferences may be so large that a business simply can't adapt. For example, a social movement led to the outlawing of alcohol in the early 20th century, which was known as Prohibition. During Prohibition, it was illegal to sell alcohol. Distilleries were put out of business until Prohibition was repealed.

While there are risks with social change, there are also opportunities. Businesses often try to influence social values through the use of marketing, advertising and targeted public relations strategies. Marketing campaigns are used in an attempt to create trends. The fashion industry is a prime example. Public relation campaigns are often used to build up or repair a business' image.

For example, BP launched a massive public relations campaign to improve its image after a massive oil leak in the Gulf of Mexico caused by offshore drilling. Fast food restaurants may include healthier choices on their menus and sponsor health-related activities.

Broader social values will also affect the success of a business. A society that values higher education will provide a better workforce that will lead to more productivity and innovation. Likewise, a society that supports investment in public infrastructure will have access to good transportation and communication systems. And if the social values of a community include a hard work ethic, a business will have access to productive workers and a population that has money to spend on goods and services.

4.5 Elements of the Social Environment:

i) Traditions and Customs:

Cultural practices and rituals, like festivals and holidays, can drive demand for specific products and services. For example, during Diwali in India, businesses see increased demand for goods like sweets, clothes, and decorations.

ii) Values and Beliefs:

Societal values regarding equality, fairness, and environmental responsibility influence how businesses are perceived and how they conduct their operations.

iii) Social Trends:

Emerging trends like health and fitness, sustainable living, and online shopping can impact consumer preferences and business models.

iv) Education and Literacy:

Higher levels of education lead to more informed consumers who are likely to demand higher quality products and services.

v) Family Structure and Composition:

Changes in family sizes and roles, such as the rise of nuclear families, can influence consumer behavior and product preferences.

vi) Demographics:

Factors like age, income, and gender can impact consumer spending patterns and market segments.

vii) Social Issues and Concerns:

Issues like poverty, environmental degradation, and social justice can influence business practices and consumer expectations.

4.6 Types of Social Organizations:

Social organizations or institutions arise out of social needs and situations of members. These organizations are the means through which individuals adjust their behaviour to environmental conditions.

Lapiere says that "social organization consists of all the ways by which men live and work together, more especially of all the programmed, ordered and coordinated relations of the members of the society." Social organisations at different levels organize and give expression to collective behaviour. They coordinate and crystallize numerous interests of individuals and groups.

Social organisations are of two broad types, namely, those which grow out of kinship and those that result from the free and voluntary associations of members. A brief analysis of a few such organizations is given below:

i) Family:

It is the earliest and the most universal of all social institutions. It is also the most natural, simplest, and permanent form of social organization. In society, individuals are primarily organized into separate families and households.

Family is generally composed of husband, wife and their children. It may be defined as a group of persons, united either by the ties of marriage or blood relationship, having a common household, a common tradition or culture.

The form and features of family may be different from place to place and country to country but family as a social group exists everywhere. It may rightly be described as the keystone of the social arch. It performs a variety of functions like biological, emotional, economic, educational and cultural.

ii) Clan:

The members of a clan are supposed to be the descendants of common ancestors. They usually bear common surname. They are usually found among primitive people and members act through the guidance of a chieftain. They are associated through common social, religious and cultural ceremonies. Members practice exogamy; they do not marry a person belonging to the same clan. All members worship a totem or a symbolic object like cow, bull, bird etc.

iii) Tribe:

A tribe is a wider social organization than clan and has been defined as "a social group of a simple kind, and members of which speak a common dialect, have a common government and act together for such common purpose as welfare." Tribe is usually formed after a stronger clan subordinates a weaker one. Tribe has a government with a tribal chief as its head. It is organized for military purposes and has a common dialect and language. Though devoid of blood relationship, a tribe maintains solidarity among its members.

iv) Community:

One way of organizing individuals on secular lines is through formation of communities and associations. A community is defined as "the total organisation of social life within a limited area." A community is a self sufficient group based on common life. The area of a community may range from narrow to very broad (even global) limits.

v) Association:

MacIver defines, "An association as a group organized for the pursuit of an interest or group of interests in common." Associations may be of various types including kinship, religious, cultural, recreational, philanthropic, vocational, political groups.

4.7 Cultural Heritage:

Heritage means that which is inherited, condition of one’s birth or anything that is transmitted from ancestors.

Cultural heritage includes customers and traditions including festival, ways of celebrating different auspicious events, art and literature, ancient places of worship, temple, monuments & buildings and so on.

A very import character of culture is transmission. Cultural transmission takes place by means of symbolic communication. The great importance of language in cultural transmission is very clear. Literature, films, television, social institution, advertisement, marketing techniques and other electronic gadgets play a very important role in cultural transmission.

Nature and process of cultural transmission and diffusion is very important to business decision making. Businesses including foreign firms contribute significantly to the preservation and promotion of cultural heritage.

Eg: Converting traditional building into heritage hotels, promoting are you pay the tourism, ethnic food festival etc…

Cultural heritage within a business environment refers to how a company's values, beliefs, and traditions influence its operations and interactions with stakeholders, including customers, employees, and the broader community. Businesses can leverage cultural heritage to create a unique identity, foster a strong sense of belonging, and build relationships with diverse groups.

4.8 Cultural Heritage – Meaning:

Cultural heritage comprises the sources and evidence of human history and culture regardless of origin, development and level of preservation (tangible/material heritage), and the cultural assets associated with this (intangible/non-material heritage). Because of their cultural, scientific and general human values, it is in the state's interest to protect and preserve cultural heritage.

The basic cultural function of cultural heritage is its direct incorporation into space and active life within it, chiefly in the area of education, the transfer of knowledge and experience from past periods of history, and the strengthening of national originality and cultural authenticity.

4.9 Types of Cultural Heritage:

i) Tangible (material) heritage: Tangible (material) heritage is made up of individual buildings, groups of buildings, areas, objects and collections of objects.

ii) Built heritage: It comprises buildings (including their associated facilities), decorative elements, equipment and attached land, other built elements, settlements and parts thereof, and spatial arrangements (even if they are formed from natural elements). We can classify built heritage as follows:

- ✓ Buildings (units): all buildings or built components that have an expressly historical, archaeological, artistic, scientific, social or technical importance;
- ✓ In-groups of buildings: uniform groups of urban or rural buildings that that have an expressly historical, archaeological, artistic, scientific, social or technical importance and are sufficiently interlinked that they comprise spatially definable units;
- ✓ Areas: joint creations of man and nature, i.e., areas that are partly built and sufficiently recognisable and uniform that they are spatially definable, and have a special historical, archaeological, artistic, scientific, social or technical importance.

iii) Archaeological heritage: It comprises all relics, objects and human traces from past periods of history on the surface, in the earth and in water whose preservation and study contributes to the uncovering of the historical development of mankind and his links to the natural environment and for which archaeological research is the main source of information.

iv) Cultural heritage landscapes: They are special distinct areas of land as recognised by people and whose characteristics and spatial layout are the result of the operation and mutual influence of natural and human factors. The terms ‘integral heritage’ and ‘area of national identity’ are two terms with a wider meaning.

v) Integral heritage: It is formed by units of the human environment or nature in which elements of natural and cultural heritage are intertwined and whose value is increased by the fact that both forms of heritage are genetically, functionally or substantively linked and dependent on each other.

4.10 Benefits of Cultural Heritage:

Not everyone feels a connection with their cultural heritage, but many people do. What is it about cultural heritage that draws these people to it? Some may think traditions are archaic and no longer relevant, and that they are unnecessary during these modern times. Perhaps for some, they aren't; but for others, exploring cultural heritage offers a robust variety of benefits.

- ✓ **Connection to social values, beliefs, religions and customs:** Culture can give people a connection to certain social values, beliefs, religions and customs. It allows them to identify with others of similar mindsets and backgrounds.
- ✓ **Sense of unity and belonging within a group:** Cultural heritage can provide an automatic sense of unity and belonging within a group and allows us to better understand previous generations and the history of where we come from.
- ✓ **Preserving cultural heritage as communal support:** Another benefit that comes from preserving cultural heritage as a whole is the communal support. Those that identify strongly with a certain heritage are often more likely to help out others in that same community.

4.11 Social Attitudes:

The emotional component is the feeling experienced on the evaluation of a particular entity. The cognitive aspect implies thoughts and beliefs adopted towards the subject, while the behavioural component is the conduct that results from a social attitude. An individual with an explicit attitude is aware of it and how it dictates his behaviour and beliefs. On the other hand, a person may not be conscious of his implicit attitude, although it still may influence his beliefs and behaviour.

People pick social attitudes from personal experiences or observations. Likewise, social roles and norms can dictate formation of attitudes. Social roles determine the behaviour an individual occupying a particular position or context in the society is expected to demonstrate, while social norms define the conduct that's acceptable to the society.

However, social attitude does not always lead to specific behaviour. For example, someone may favour policies of a specific politician but fail to turn out to vote. Attitudes can be dropped the same way they're learned.

Social attitude within a business environment refers to the collective beliefs, opinions, and behaviors of individuals in a society, which can influence how they perceive and interact with businesses. These attitudes encompass values, expectations, and behaviors that impact business decisions and operations.

Key Aspects of Social Attitude in Business:

i) Social Values:

Values are the fundamental beliefs about what is right and wrong, which influence how individuals perceive and interact with businesses. For example, a strong value of environmental protection may lead to consumer preference for eco-friendly products and businesses.

ii) Social Norms:

Social norms are the unwritten rules and standards of behavior within a society. Businesses need to be aware of these norms to ensure their actions align with community expectations and avoid causing offense or harm.

iii) Consumer Attitudes:

Consumer attitudes towards a product or service significantly impact sales and profitability. Understanding these attitudes requires market research and careful consideration of consumer preferences and values.

iv) Employee Attitudes:

Employee attitudes towards the organization and their work can influence productivity, morale, and retention rates. A positive employee attitude can contribute to better customer service and overall business success.

v) Ethical Considerations:

Businesses must consider the ethical implications of their actions and strive to operate in a manner that is socially responsible. This includes respecting human rights, protecting the environment, and ensuring fair labor practices.

Impact on Business:

vi) Market Demand:

Social attitudes influence consumer preferences and purchasing decisions. Understanding these attitudes is crucial for businesses to develop products and services that meet market demands.

vii) Brand Reputation:

Businesses with a strong social responsibility reputation can attract and retain customers. Negative social attitudes towards a company can damage its reputation and negatively impact sales.

viii) Social Impact:

Businesses have an impact on society, and their actions can have positive or negative social consequences. Taking social responsibility seriously can lead to a more sustainable and equitable business environment.

Examples:

i) Environmental Concerns:

Increased awareness of climate change and pollution has led to greater demand for sustainable products and businesses that prioritize environmental responsibility.

ii) Social Justice Issues:

Growing awareness of social inequalities and discrimination can influence consumer purchasing decisions and employee expectations regarding diversity and inclusion.

iii) Community Involvement:

Businesses that actively participate in community initiatives and support local organizations can build goodwill and enhance their reputation.

4.12 The Caste System in India:

The origins of the caste system in India and Nepal are shrouded, but it seems to have originated more than two thousand years ago. Under this system, which is associated with Hinduism, people were categorized by their occupations.

Although the early Vedic sources name four primary castes, in fact there were thousands of castes, sub-castes and communities within Indian society. These Jati were the basis of both social status and occupation.

Castes or sub-castes besides the four mentioned in the Bhagavad Gita include such groups as the Bhumihar or landowners, Kayastha or scribes, and the Rajput, who are a northern sector of the Kshatriya or warrior caste. Some castes arose from very specific occupations, such as the Garudi - snake charmers- or the Sonjhari, who collected gold from river beds. Some people were born outside of (and below) the caste system. They were called "untouchables."

4.13 Origins of the Caste System:

Early written evidence about the caste system appears in the Vedas, Sanskrit-language texts from as early as 1500 BC, which form the basis of Hindu scripture. The Rigveda, from 1700-1100 BCE, rarely mentions caste distinctions, and indicates that social mobility was common. The Bhagavad Gita, however, from c. 200 BCE-200 CE, emphasizes the importance of caste. In addition, the "Laws of Manu" or Manusmriti from the same era defines the rights and duties of the four different castes or varnas. Thus, it seems that the Hindu caste system began to solidify sometime between 1000 and 200 BC.

4.14 The Caste System during Classical Indian History:

The caste system was not absolute during much of Indian history. For example, the renowned Gupta Dynasty, which ruled from 320 to 550 CE, were from the Vaishya caste rather than the Kshatriya. Many later rulers also were from different castes, such as the Madurai Nayaks (r. 1559 1739) who were Balijas (traders).

From the 12th century onwards, much of India was ruled by Muslims. These rulers reduced the power of the Hindu priestly caste, the Brahmins. The traditional Hindu rulers and warriors, or Kshatriyas, nearly ceased to exist in north and central India. The Vaishya and Shudra castes also virtually melded together.

Although the Muslim rulers' faith had a strong impact on the Hindu upper castes in the centres of power, anti-Muslim feeling in rural areas actually strengthened the caste system. Hindu villagers reconfirmed their identity through caste affiliation.

Nonetheless, during the six centuries of Islamic domination (c. 1150 1750), the caste system evolved considerably. For example, Brahmins began to rely on farming for their income, since the Muslim kings did not give rich gifts to Hindu temples. This practice was considered justified so long as Shudras did the actual physical labour.

4.15 The British Raj and Caste:

When the British Raj began to take power in India in 1757, they exploited the caste system as a means of social control. The British allied themselves with the Brahmin caste, restoring some of its privileges that had been repealed by the Muslim rulers. However, many Indian customs concerning the lower castes seemed discriminatory to the British, and were outlawed. During the 1930s and 40s, the British government made laws to protect the "Scheduled castes" - untouchables and low-caste people. Within Indian society in the 19th and early 20th centuries there was a move towards the abolition of untouchability, as well. In 1928, the first temple welcomed untouchables or Dalits ("the crushed ones") to worship with its upper-caste members. Mohandas Gandhi advocated emancipation for the Dalits, too, coining describe them.

4.16 Caste Relations in Independent India:

The Republic of India became independent on August 15, 1947. India's new government instituted laws to protect the "Scheduled castes and tribes" - including both the untouchables and groups who live traditional life-styles. These laws include quota systems to ensure access to education and to government posts. Over the past sixty years, therefore, in some ways a person's caste has become more of a political category than a social or religious one.

- ✓ **Caste among Non-Hindus:** Curiously, non-Hindu populations in India sometimes organized themselves into castes as well. After the introduction of Islam on the subcontinent, for example, Muslims were divided into classes such as the Sayed, Sheikh, Mughal, Pathan, and Qureshi. These castes are drawn from several sources - the Mughal and Pathan are ethnic groups, roughly speaking, while the Qureshi name comes from the Prophet Muhammad's clan in Mecca. Small numbers of Indians were Christian from c. 50 onward, but Christianity expanded after the Portuguese arrived in the 16th century. However, many Christian Indians still observed caste distinctions.

- ✓ **Indian Communities:** Indian communities refer to that structured and integrated group of people, belonging to a certain religion and believing in one single united cause, who establish amongst themselves a clustered bunch to discuss various issues on a general panel. The term, rather the coinage Indian communities perhaps cannot be credited to any single individual. In fact, ancient history in India does lend considerable and credible information regarding primeval communities, or organisations that had cropped up since the times of pre- Christian era. Indeed, since the eras of Indus Valley Civilization and Harappa, the concept of organising communities had been well assimilated within both uneducated and educated classes. Indus Valley is known to contain both uneducated and educated society, with Indian history also informing that it was this very civilisation itself that perhaps had first traced lines of illustrious lineage and something now referred to as sophistication. Religious, economic, administrational, even, societal classed communities had existed during ancient Indian evolvement.
- ✓ **Indian Communities under Hinduism:** Caste system and class consciousness was one such idealistic concept that had driven these ancient Indian communities to behave the way they did. The gigantic awareness of belonging to a higher caste or higher religious

order paved way for first ever establishment of Hindu religious community, divided into Brahmins, Kshatriyas, Vaishyas and Shudras.

These four cardinal Hindu caste systems were further sub divided into their own specific community, a concept that is very much retained in present-day Indian society. It is also known that an omnipresent and unseen demarcation line had existed amongst these ancient Indian communities, with none daring to cross that thin red line. Hinduism had hugely dominated in ancient religious Indian systems, with the Mauryans, Guptas, Palas, Cholas, Kushanas, Vijayanagaras, Satavahanas, Pratiharas, Chaluky as, even Marathas (in much later times) assorting to significant establishment of communities, information from which are still being deduced by historians and researchers.

- ✓ **Indian Communities under Islam:** Islamic invasion and subsequent extensive Muslim rule in India, wholly changed and metamorphosed the concept of communities in India. The Khiljis, Tughlaqs, Lodis and finally the Mughals had entirely altered the graph of Islamic communities in India, with an overwhelming mass of the erstwhile populace joining in the various causes to form organisational communities. Discussions and forums within these groups ranged from an assorted bunch of views, like religion, governance, conditions of society, economy, monetary involvements, literature and foreign trading. It is also an acknowledged fact that legendary luminaries had indeed been shot to recognition and admiration from the masses, never for once denoting the class consciousness, a breakaway and distinct facet different from erstwhile Hindu communities. Emperors, army generals and high-profile men had contributed whole heartedly and honestly to each meticulous cause to make these Indian communities as well grounded as mountainous rocks.

- ✓ **Indian Communities under Christianity:** With passage of time and advancement in Indian ruling and sovereign administration, arrived the concept of Christian communities in India, ushered in by the Dutch, Portuguese, French and British, uniquely accompanied by the former Jewish and Armenian settlers in the country. Till this period of time Christianity and Christians were not a thing much heard of in India, with Hindus and Muslims dominating the entire topography.

  However, with the very overpowering European encroachments, Indian population took on a dramatic turn, with communities within India looking towards rather modernistic domains in daily life, leaving aside religious dogmatism. The historic and long drawn British Empire and its western outlook stood in vast difference with eastern phenomena, paving way for establishing innovative communities based upon creed and caste that were divided upon religious basics. For instance, Hindu communities went regional into Punjab, Madras, Andhra Pradesh or Kashmir.
- ✓ **Contemporary Indian communities:** Contemporary and present times stay witness to and believe in much more an amalgamation of various communities in India put together, with globalisation aiding in several occasions. The concept of Indian communities has become much more panoptic and international in conscience, almost lapping up everything coming to its way. Matrimonial alliance amongst the aboriginal Indian communities is another striking factor that is assisting in betterment of Indian citizens. Yet, some specific and historic communities that have gained prominence over these years comprise: Armenian Community, Jewish Community, Khatri Community, Maratha Community, Jat Sikh Community etc.

4.17 Difference Between Indian Culture and Western Culture:

This topic is always debatable and frankly there is never a winner as to which culture is better. Both are different types of culture and customs that are followed in different parts of the world. Indian Culture refers to the customs, traditions, religions and set of rules that are followed in India, while the Western Culture most commonly refers to culture that is followed in America and Europe.

Both the cultures differ from each other in the traditional mindset, however, in today's world both the cultures are coming to a mix. The Indian Culture has been dealing with westernization for a few decades now and the Western Culture has started developing a taste for the exotic Indian food and yoga.

Each culture has a set of negative and positive points. They are similar to the two sides of the same coin. No one culture ever surpasses the other culture, as it all depends on perception; to each person either culture could be better than the other one. Many people these days opt to take positive points from both the cultures and live as it suits them.

4.18 Indian Culture Western Culture:

Definition Indian culture is the traditional mindset of people that reside in India. It is the customs, traditions, ceremonies, festivals, religions of India Western culture started from the Ancient Greece and Rome, which then spread all over the world under Roman rule. It was then encouraged by the European civilization and now refers to modern way of thinking.

Origin Indian culture is one of the oldest cultures in the world. The traditions are several millennia old Though according to historical records, western culture began with Ancient Greece and Ancient Rome, it is considered as a modern culture to many people.

Cuisine Indian food is heavily spiced and is rich in flavour. Major emphasis is put on having lunch Basis of food is meat; it is an essential part of every meal. More emphasis is placed on having dinner.

Family Traditional people usually prefer joint-families, while modern people are now living in nuclear-like families Most people believe in nuclear families.

Festivals Holi, Diwali, Navratri, etc. There a whole lot of festivals that are based on different events in the history; modern festivals are being accepted such as Christmas Christmas, Labour Day, Easter, Halloween etc. Also due to it being a melting pot a whole of other festivals are also celebrated.

Marriages Arranged Marriages are more common, compared to love marriages Love marriages are more common.

Society plays an active part in a person's life. Every decision that a person takes, reflects what the society thinks about its Society does not take an active part. People take decisions depending on what they want, not what the society thinks.

Gender Equality Women are still considered unequal to men though acceptance of westernization is changing this idea Women are equal to men in society Castes Still have various castes, where one caste is lesser than the other caste No such thing as castes, all people are equal.

Clothing. Clothing should not be revealing or tight A person can wear clothing according to what they desire.

Religious, classical, folk, popular is a melting pot and mix of all kinds. Music Bollywood and pop music of music from all over the world; includes rap, hip hop, pop, metal, rock, soft rock, etc. The social hierarchy cannot be challenged. (Ex: Boss has final decision) Hierarchy can be challenged at any point by anyone.

4.19 Impact of Foreign Culture on India:

Civilizations do meet and even merge but never has such an impact been witnessed as the impact of the west on India. A Birdseye view of the Indian scenario would depict a miniature or a distorted West in India.

- ✓ **Notice only western modes:**

  The impact has been so great and so deep that, wherever we go, and, as far as the eye can see, we notice only western modes and we are for a moment set to wonder if we are in India or in some western country.

- ✓ **Culture of the west has penetrated so deep:**

  Impact of cultures is felt elsewhere also and this is bound to be, when two people or two societies or two countries meet but, neither leaves its own system wholesale as in India. This is a unique feature in India only, where the culture of the west has penetrated so deep and far and wide that, the original Indian culture has got lost somewhere.

- ✓ **Completely influenced by the west:**

  To find western impact on India we do not have to go far to seek. Each and every home, each and every sphere of life has been completely influenced by the west that it is difficult to recognize what is Indian in India. Our food, and food habits, our dresses, our dances, our songs, our music, our life style are the entire western pattern.

- ✓ **English language most prominent**

  One often wonders whether where we live is India, or a colony of the west? The influence is also changing our education system. In schools, the language most prominent is English and not Hindi. The medium of instruction is also English, so far so good. However, the sad part of this system is that, the schools that lay more stress on Hindi, or use the Hindi Medium of instruction, are known to be second rate schools. Thus, we have not only adopted the British ways but we also appreciate them only. The height of it all is seen when see that, a person who can communicate in English is known to be smarter than a person who cannot. This volume of change is not understandable.

- ✓ **Follow the western styles:**

  It implies that, not only have we taken to western styles, we also admire only them who follow the western styles, in comparison to those who follow the Indian styles.

- ✓ **Loss of the identity:**

  This much influence is not only unwarranted but also shameful. It has often been seen that countries do adopt methods of other countries but in doing so, they maintain their own identity. The loss of the identity is only found in India.

- ✓ **Indigenous is difficult to introduce:**

  To a great extent the influence of the British can be well understood as, we have remained slaves to them for two centuries. This much may be excused, but to revolt if anything Indian or anything indigenous is being introduced cannot be forgiven at all.

- ✓ **Remain culturally and mentally bonded to the west**

  This only points to the ugly fact that, we have got independence from the British only physically and politically but, mentally and culturally the onslaught on India has been complete. We, even to-day, remain culturally and mentally bonded to the west. Whenever anything Indian is talked about there is an attitude of derision for it, even in the highest echelons of society. This indicates a full and complete degeneration of Indian culture and its total merger with the culture of the west.

- ✓ **To learn a thing just because it is of the west**

  It is good to learn whatever is good anywhere, but to learn a thing just because it is of the west only depicts a crumbled and shattered state of the Indian mind. We must learn to sort out and learn what is good elsewhere and maintain what is good in us.

4.20 Joint Family System in India:

A joint family or undivided family is an extended family arrangement prevalent throughout the Indian subcontinent, particularly in India, consisting of many generations living in the same home. All the daughters, or widowed relatives, all bound by the common relationship. The joint family status being the result of birth, possession of joint cord that knits the members of the family together is not property but the relationship. The family is headed by a patriarch, usually the oldest male called Kartha, who makes decisions on economic and social matters on behalf of the entire family. The patriarch's wife generally exerts control over the kitchen, child rearing and minor religious practices. All money goes to the common pool and all property is held jointly.

4.21 Characteristics of joint family system in India:

On the basis of the conceptual framework, we can mention some characteristics of the joint family system in India.

i) Common Residence: One of the most important features of the joint family system is common residence. Members of the joint family normally reside together in the same house or at one particular place. Some scholars like Iravati Karve regard co-residentiality as an essential ingredient of jointness.

ii) Common Kitchen: Living together is not the only ingredient of joint family. A group of persons living at one place or under one roof may not form a joint family. Therefore, the essential feature of a joint family is the common kitchen. The members eat food prepared jointly at the common kitchen. The undivided kitchen has been traditionally associated with the joint family system.

iii) Common property: The members hold common property. As Milley writes, the joint family "is a cooperative institution similar to a joint stock company in which there is joint property." The head of the family manages the family property like a trustee. The total earnings of the members are pooled into family treasury and family expenses are met out of that. According to old Hindu law givers, the nature of joint family consisted in the ownership of ancestral property. Daya Bhag and Mitakshara rules enjoin that during the life time of the father, the property of the family cannot be divided between the members of the family.

iv) Depth of Generations: The joint family is large in size in comparison to nuclear family. It consists of members of three or more generations including grandparents, parents and children. Sometimes, other kith and kin such as uncles, aunts, cousins and great grandsons also live in the joint family.

v) Common Worship: The Hindu joint family derives its strength from religion. Hence, it is associated with various religious rituals and practices. It is a feature of joint family system that there is a common mode of worship and common Gods and Goddesses. The reason for this might have been the practice of ancestor worship and the custom of Pinda Dana. In ancient times, every family had its own deity or 'Kula Devata' who was worshipped throughout the ages. Thus, common worship of Gods and Goddesses has been associated with joint family system.

vi) Co-operation and Sentiment: Scholars like I.P. Desai and K.M. Kapadia point out that jointness should be looked in functional terms. A patrilineal joint family may consist of a number of households headed by males related through the father. It may be located even at distant places and may not even have property in common. But what is common is that it identifies itself as members of a particular 'family', cooperates in rituals and ceremonies, renders financial and other kinds of help, and cherishes common family sentiment and abides by the norms of joint living.

vii) Ritual Bonds: The ritual bonds of the joint family are considered to be important component of jointness. A joint family, thus, is bound together by periodic propitiation of the dead ancestors. The members perform a 'Shradha' ceremony in which the senior male member of the joint family propitiates his dead father's or mother's spirit offering it through the 'Pinda' on behalf of all the members.

viii) Authority of Karta: The Hindu family is usually patriarchal. In the patriarchal joint family, the eldest male member exercises authority. The authority of the head of the family is considered to be supreme. The Hindu family, in theory and practice, enjoins the figure of the head of the family who is responsible for the management of the house, management of finances, bread winner and wage earner. The head of the family or the Karta enjoys the highest position in the family. Majumdar has written, the Karta of the joint or extended family has the right to make decisions for his family, he is the working head, he is the judge and the jury, he decides family quarrels, he is the political head as every family has a place and is represented by the head of the family in the social, ceremonial and in community activities. “The power is traditionally given to the eldest male of the family and the head allows little individual freedom to the family members. As opposed to it, in the matriarchal joint family the eldest female member in theory exercises the supreme authority.

ix) Mutual Obligations: The joint family consists of a number of relations who have a common residence and a common kitchen. Because of living together and enjoying property in common, the members of the joint family are also bound together by the ties of mutuality of obligations. It means that since they live together, they share sorrows and joys together. On all important occasions like birth, death and marriage, they commonly share the burden of sentiments and emotions.

x) Familistic Organisation: Joint family is based on a family which means the subordination of individual interests to the interests of the family as a whole. This also means that goals or interests of the family must be the goals or interests of the individuals.

xi) Filial Relationship: In contrast to conjugal ties (i.e., between husband and wife), emphasis is laid on filial relationship (the father-son relationship) and fraternal relationship (the relationship between brothers) in the joint family system. In other words, the conjugal relationship is subordinated to filial and fraternal relationships.

xii) Arranged Marriage: In the joint family, the head considers it as his privilege to arrange the marriages of the members. The individual’s right to select his / her life partner is not allowed. The younger members rarely challenge his decisions and arrangements.

xiii) Self-Sufficiency: There was a time when the joint family was mostly self- sufficient. It used to meet the economic, recreational, educational and other needs of members. The rural agricultural joint families were mostly self-reliant.

xiii) Kin Relationship between the Members: We can say that a joint family may consist of members related lineally or collaterally or both. There is more or less a unanimous agreement that a family is essentially defined as “joint” only if it includes two or more related married couples. Also, it has been observed that these couples may be related (i) lineally (usually in a father -son relationship or occasionally in a father- daughter relationship) or (ii) collaterally (usually in a brother-brother relationship or / occasionally in a brother-sister relationship). Both these types refer to the compositional aspect of the patrilineal joint family. South-west and North-East India, the family is usually composed of a woman, her mother and her married and unmarried daughters. The mother’s brother is also an important member of the family; he is the manager of the matrilineal joint family affairs the husbands of the female members live with them. In Kerala, husbands used to be frequent visitors in their wife’s household and lived with their mother’s household.

4.22 Benefits of Joint Family Businesses:

i) Strong Family Bonds:

The shared business can strengthen family bonds and create a sense of unity and purpose.

ii) Financial Stability:

Family businesses can offer financial security and stability to family members, especially during times of economic hardship.

iii) Knowledge Transfer:

Family businesses can facilitate the transfer of knowledge, skills, and experience across generations, ensuring the continuity of the business.

iv) Personalized Service:

Family businesses often prioritize customer satisfaction and loyalty, offering a personalized approach to business interactions.

4.23 Challenges of Joint Family Businesses:

i) Conflict and Power Struggles:

Disputes between family members over decision-making, inheritance, and management style can arise, potentially impacting the business.

ii) Difficulty in Adapting to Change:

Traditional values and practices can sometimes hinder the business's ability to adapt to changing market conditions and technological advancements.

iii) Lack of Professional Management:

Family members may not possess the necessary skills or experience to effectively manage the business in a competitive environment.

In conclusion, the joint family system in business is a complex and multifaceted phenomenon that can offer significant benefits and challenges. Understanding the dynamics of this system is crucial for businesses, particularly those in developing countries, where family-owned businesses often play a vital role in the economy.

4.24 Linguistic systems in India:

India has become a land of many tongues and has been called "as a tower of veritable languages" or a "Museum of languages". In 1950, the States in India were reorganized on linguistic basis. As a result, the domiciles of a particular state speak a particular language. The Constitution of India has approved of 22 languages. In India we find a number of languages. India has also been called a "Tower of Babel". This multilingual nature of the country affects every aspect of her national life. But linguistic diversity was not a great problem in the past since Sanskrit in the beginning, later Persian and during last hundred years English served as link languages. At present the language problem has become so acute that it has posed a major threat to national integration. Most often linguistic tensions are being manifested in the borders which are bilingual. For example, in Belgaum there is a tug of war between Marathi and Kannada speaking people. Assam confronted with Bengali and Assamese. Although Hindi has been recognized as the national language, this has promoted bitter hostilities, particularly in the South. Language problem has never been as intensely felt as it is today. Even Bihar and Utter Pradesh are not free from the linguistic problems. Further, conflict tends to persist among the Urdu, Hindi and Oriya linguistic groups and Urdu and Hindi speaking people respectively.

4.25 Origin of Linguistic Systems in India:

The basis for the Origin of Linguistic Systems in India is discussed below:

i) Love of Literature:

Love of literature creates and strengthens a sense of loyalty towards it among the linguistic groups. These linguistic loyalties hamper the evolution of a common language.

ii) Geographical Causes:

People living in a particular locality tend to speak the same language. This promotes local identity and distinctiveness among people. Living together geographically reinforces a linguistic group’s love for its own language.

iii) Historical Causes:

The linguistic system in India is a by-product of India’s struggle for national freedom. Our leaders of the freedom movement criticized the British system of dividing the country by cutting across linguistic boundaries. Rather, they pleaded for the division of India into different provinces along linguistic lines. After independence, in 1956, the States were reorganized on the basis of homogeneity of languages. The reorganization of the States on linguistic lines has provided geographical foundations for sub-nationalism in India.

iv) Political Causes:

Political parties create linguistic feeling among the people of a locality and exploit their sentiments at the time of election.

v) Psychological Causes:

Language has certain psychological and emotional characteristics which invoke the feeling of ethnocentrism to a homogeneous group. In India, the linguistic groups are tied together by ties of common interest. This creates the spirit of regionalism, sectarianism and separatist feeling in the mind of the inhabitant.

4.26 Evils of Linguistic systems in India:

The evils of linguistic systems in India are as follows:

i) Increasing Regionalism and Parochialism:

The people of different linguistic groups who are concentrated in a state seem to think only in terms of interests of their own States. This undermines consideration of national issues and causes parochial feelings.

ii) Formation of Regional Political Parties:

The linguistic system has resulted in regionalism which has ultimately led to the formation of regional political parties in some states. Some of these regional political parties have also formed the government. Such political parties in power often complicate Centre-State relationship.

iii) Persecution of the Linguistic Minorities:

The State Reorganization Commission had provided for safeguarding linguistic minorities in States. But in reality, linguistic minorities have been harassed in different States. As a result, certain complications and disturbing trends have developed which seem to have threatened the unity of the country.

iv) Demand for Separate States:

Linguistic conflicts take place due to selfish motive of politicians. These politicians instigate the linguistic minority to demand partition of the States along linguistic lines. The demand for a separate state creates problems for the concerned state as well as the centre.

v) Erosion of National Feeling:

The national feeling is eroded due to linguistic and regional loyalties. The erosion of national feeling threatens the sovereignty of the country.

vi) Inter-State Border Dispute:

Language problems have created tensions on the border which are bilingual. For example, the Gonas are divided on the basis of Konkani and Marathi languages.

4.27 Remedial Measures for Eradication of the Evils of Linguistic Systems in India:

The following measures may be taken for the eradication of tensions between different linguistic groups:

i) Development of a National Language:

Although Hindi has been recognized as the national language, it has caused bitter hostilities, particularly in the South. It will be unwise to impose Hindi on non-Hindi speaking people. Therefore, the propagation of Hindi as the national language requires lot most care and tact.

ii) Development of Common Script:

At present there are a number of scripts in India. But if a common script is evolved, it would break through the script barrier which separates one language area from another. M. N. Srinivas's suggestion for the use of Roman Script may also be considered.

iii) Ban on Political Parties and other Organisations:

The regional political or any other organization which tries to exploit the sentiments of people along linguistic lines should be banned. The Sarkari Commission was appointed in 1983 to examine the language problem in India. The Commission made a couple of recommendations for the solution to the problem. It suggested that the styles, forms and expression of English along with other regional languages are to be retained in the process of development of the official language. The three-language formula such as regional language, Hindi and English should be properly implemented.

4.28 Indian Religion Groups:

India is a land of diversities. This diversity is also visible in the spheres of religion. The major religions of India are Hinduism (majority religion), Islam (largest minority religion), Sikhism, Christianity, Buddhism, Jainism, Zoroastrianism, Judaism and the Baha'i Faith. India is a land where people of different religions and cultures live in harmony. This harmony is seen in the celebration of festivals.

Whether it's the gathering of the faithful, bowing in prayer in the courtyard of a mosque, or the gathering of lamps that light up houses at Diwali, the good cheer of Christmas or the brotherhood of Baisakhi, the religions of India are celebrations of shared emotion that bring people together. People from the different religions and cultures of India, unite in a common chord of fascinating brotherhood and diverse land.

i) Buddhism: At present Buddhism is one of the major world religions. The philosophy of Buddhism is based on the teachings of Lord Buddha, Siddhartha Gautama (563 and 483 BC), a royal prince of Kapilvastu, India. After originating in India, Buddhism spread throughout the Central Asia, Sri Lanka, Tibet, Southeast Asia, as well as the East Asian countries of China, Mongolia, Korea, Japan and Vietnam.

ii) Christians: Christianity is one of the prominent religions in India. At present there are about 25 million Christians in India. It is interesting to note that the Christian population in India is more than the entire population of Australia and New Zealand or total population of a number of countries in Europe.

iii) Hinduism: Hinduism is the oldest religion in the world. Hinduism is world's third largest religion after Christianity and Islam. Hinduism is the dominant religion in India, where Hindus form about 84 per cent of the total population. Hinduism is also known as "Sanatan Dharma" or the everlasting religion.

iv) Islam: One of the prominent religions of India, Islam forms about 12 per cent of India's population. Though India's contact with Islam had begun much earlier, the real push came in the 8th century when the province of Sindh was conquered. Though the Muslims form only 12 per cent of the total population of India but the influence of Islam on Indian society is much stronger.

v) Jainism: Jains form less than one percent of the Indian population. For centuries, Jains are famous as community of traders and merchants. The states of Gujarat and Rajasthan have the highest concentration of Jain population in India. The Jain religion is traced to Vardhamana Mahavira (The Great Hero 599-527 B.C.).

vi) Sikhism: Sikhs form about 2 per cent of Indian population. In comparison to other religions, Sikhism is a younger religion. The word 'Sikh' means a disciple and thus Sikhism is essentially the path of discipleship. The true Sikh remains unattached to worldly things.

vii) Zoroastrian: Though the total number of Zoroastrians in Indian population is very less yet they continue to be one of the important religious communities of India. According to the 2001 census, there were around 70,000 members of the Zoroastrian faith in India. Most of the Parsis (Zoroastrians) live in Maharashtra and the rest in Gujarat.

viii) Guru Nanak Dev: Sri Guru Nanak Dev Ji is credited with starting the Sikh religion. He was the first Guru of the Sikhs and is worshipped next to God. His sole aim in life was to unify the Hindus and Muslims and form a universal religion of brotherhood and compassion. He believed that true salvation could be achieved only by devotion of thought an excellence of conduct.

ix) Lord Mahavira: Lord Mahavira is often credited with the advent of Jainism in India. However, Jainism existed even before Lord Mahavira was born. He is supposed to be the twenty-fourth (last) Tirthankara according to the Jain philosophy. A Tirthankara is an enlightened soul who is born as a human being and attains perfection through intense meditation.

x) Adi Shankaracharya: One of the greatest philosophers of India, Adi Shankaracharya founded the Advaita Vedanta, which is one of the sub-schools of Vedanta. Adi Shankaracharya whole heartedly believed in the concept of the Vedas but at the same time advocated against the rituals and religious practices that were over exaggerated.

Check Your Progress:

Choose the Correct Answer:

1. Which of the following is NOT a component of the social environment?

a) Demographics

b) Technology

c) Values

d) Traditions

Answer: b) Technology

2. What is the primary impact of understanding the social environment on a business?

a) To reduce legal risks

b) To improve marketing strategies

c) To streamline supply chains

d) To lower production costs

Answer: b) To improve marketing strategies

3. Social values, traditions, and cultural attitudes form an essential part of the:

a) Technological framework

b) Social environment

c) Economic infrastructure

d) Political ideology

Answer: b) Social environment

4. How does the joint family system influence business practices in India?

a) By promoting individualistic decision-making

b) By encouraging decentralized marketing systems

c) Through collective decision-making and resource sharing

d) By restricting product innovation

Answer: c) Through collective decision-making and resource sharing

5. Linguistic and religious diversity in a country impacts:

a) Market segmentation and communication strategies

b) Government taxation policies

c) Foreign currency reserves

d) Legal structuring of business contracts

Answer: a) Market segmentation and communication strategies

6. Which of the following is most likely influenced by a society's cultural heritage?

a) Foreign direct investment

b) Advertising content and consumer behavior

c) National tax structure

d) Stock market regulation

Answer: b) Advertising content and consumer behavior

4.29 Self Assessment Questions

1. Explain the essential elements of social environment.
2. Explain the types of cultural heritage.
3. Enumerate on the emerging global culture and its implications for business.
4. Explain the role of religion in shaping society. How it affects business?
5. What are the characteristics of joint family business? Explain.
6. Explain the Indian religion groups.

UNIT – V

Structure:

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5.33 Self-Assessment Questions

5.1 Introduction to Technology Environment:

The technological environment in business refers to the ongoing advancements and changes in technology that directly impact how a business operates, produces goods, and services, and interacts with its customers and market. Businesses must adapt to these changes to remain competitive and successful.

5.2 Technological Environment – Meaning:

Technological Environment means the development in the field of technology which affects business by new inventions of productions and other improvements in techniques to perform the business work. We see that in 21st century, technology is changing very fast. Now, all work is done online and business shops are using machinery at high level. Following technological environment factors affect business are:

- ✓ New inventions to produce the products.
- ✓ New inventions relating to marketing like BPO for selling online in the international market.

Technology has a major impact on business. It affects the business prospects, cuts down the profits and forces the management to change the course of the business operations. Any change in technology changes the work cultures, the methods and the systems. It affects the speed of operations and gives a boost to productivity. Examples of technological changes are seen in aviation, electronics, energy, communication, the consumer goods industry, optics, medicines and manufacturing.

5.3 Factors Affecting Technology in Businesses Environment:

Technological factors affecting businesses all over the world demands a changing behaviour with regard to traditional marketing. The rapid development of technology requires quick reaction by businesses in order to survive in an emerging competitive environment and keep up with new trends and innovative services which other competitors might be offering. The technological factors affecting the business environment are as follows:

i) Organisational change:

It is usually quite difficult especially when a high number of people are involved as routines will be modified. It is recommended to inform employees in advance and keep them up to date by encouraging feedback while making such change.

ii) Business processes:

Integrating modern technology solicits identifying the business requirements and evaluating the business processes according to its objectives and goals. These changes should benefit the company and the consumers.

iii) SCA (Sustainable Competitive Advantage):

Technology is looked at from a positive perspective instead of a 'necessary evil'. Traditional models are changing and advantages can be achieved by investing in modern technology but just purchasing technology for the sake of having it is not enough. Implementing a strategic plan is the key to succeed.

iv) Costs involved:

A necessary expense in today's emerging environment is unavoidable. However, it is understandable that some organisations are hesitant to invest due to systems being outdated quite often, but the one who views this investment as an opportunity to gain competitive advantage and have a well-developed strategy attached, could benefit immensely.

v) Efficiency:

Productivity, reducing manual labour costs, cost-effective overall factor as it can simplify, speed up and enhance accuracy (or e.g., departments can interact or check a particular issue or status of an order/delivery/service from different locations in the Value Chain).

vi) Information Security/Contingency Planning:

Technology provides a lot of advantages but we should also take into consideration the responsibilities that come with it. Businesses should take into account the rise in data breaching and various cyber-crime elements and must invest in effective ways of preventing or combating these factors. Imagine if an important process becomes unavailable suddenly or a system is hacked, businesses must have these contingency plans in order to protect their valuable assets.

The following points are considered as immense value to the business for the rapid development of technology

- ✓ Understanding Web Terminology

- ✓ Technology legislation
- ✓ Internet/broadband– consumer & business markets
- ✓ Technology infrastructure in a country (Web/Broadband/Mobile)
- ✓ Technologies offer consumers and businesses more innovative products and services such as Internet banking, new generation mobile telephones…
- ✓ Secured Systems are encryptions, digital certificates, SSL (secure sockets layer protocol mechanisms)
- ✓ Distribution of products and services are changed by new technologies e.g., books via the Internet, flight tickets, auctions etc.
- ✓ Technology offers companies a new way to communicate with consumers e.g., social media, Customer Relationship Management (CRM), etc?
- ✓ Machinery
- ✓ Equipment

5.4 Importance of Technology in Business:

Technology has been important in business operations. No matter the size of your enterprise, technology has both tangible and intangible benefits that will help you make money and produce the results. Technological infrastructure affects the culture, efficiency and relationships of a business. It also affects the security of confidential information and trade advantages.

i) Communication with Customers:

First and foremost, technology affects a firm's ability to communicate with customers. In today's busy business environment, it is necessary for employees to interact with clients quickly and clearly. Websites allow customers to find answers to their questions after hours. Fast shipment options allow businesses to move products over a large geographic area. When customers use technology to interact with a business, it creates better communication and builds stronger public image.

ii) Efficiency of Operations:

Technology also helps a business understand its cash flow needs and preserve precious resources such as time and physical space. Warehouse inventory technologies let business owners understand how best to manage the storage costs of holding a product. With proper technology in place, executives can save time and money by holding meetings over the Internet instead of at corporate headquarters.

iii) Business Culture and Class Relations:

Technology creates a team dynamic within a business because employees at different locations have better interactions. If factory managers can communicate with shipment coordinators at a different location, tensions and distrust are less likely to evolve. Cliques and social tensions can become a nightmare for a business; technology often helps workers put their different backgrounds aside.

iv) Security:

Most businesses of the modern era are subject to security threats and vandalism. Technology can be used to protect financial data, confidential executive decisions and other proprietary information that leads to competitive advantages. Simply put, technology helps businesses keep their ideas away from their competition. By having computers with passwords, a business can ensure none of its forthcoming projects will be copied by the competition.

v) Research Capacity:

A business that has the technological capacity to research new opportunities will stay a step ahead of its competition. For a business to survive, it must grow and acquire new opportunities. The Internet allows a business to virtually travel into new markets without the cost of an executive jet or the risks of creating a factory abroad.

5.5 Industry 4.0:

Industry 4.0, characterized by digital technologies like the Internet of Things (IoT) and artificial intelligence (AI), is transforming businesses by enabling new business models, enhancing productivity, and driving innovation. This digital transformation, while offering significant opportunities, also presents challenges such as cybersecurity risks and potential job displacement.

Here's a more detailed look at Industry 4.0 in the business environment:

Key Concepts:

i) Digital Transformation:

Industry 4.0 represents a significant shift in how businesses operate, moving towards greater connectivity, automation, and data-driven decision-making.

ii) Technological Advancements:

Core technologies include IoT, AI, cloud computing, big data analytics, and cyber-physical systems.

iii) Business Model Innovation:

Industry 4.0 enables new business models like servitization (offering services alongside products) and subscription-based models.

iv) Workforce Transformation:

While creating new job roles, Industry 4.0 also requires reskilling and upskilling of the workforce to adapt to the changing landscape.

v) Economic Impact:

Industry 4.0 has the potential to drive economic growth and enhance competitiveness globally.

Benefits:

i) Increased Productivity:

Automation and data analytics can lead to significant improvements in efficiency and productivity.

ii) Enhanced Flexibility:

Industry 4.0 allows for more agile and responsive manufacturing processes, enabling companies to adapt to changing market demands.

iii) New Business Opportunities:

Emerging business models and data-driven insights can unlock new revenue streams and markets.

iv) Improved Decision Making:

Real-time data and analytics provide businesses with better insights for making informed decisions.

Challenges:

i) High Implementation Costs:

Adopting Industry 4.0 technologies can require significant upfront investments.

ii) Cybersecurity Risks:

The increased reliance on digital systems introduces new cybersecurity threats that businesses need to address.

iii) Workforce Reskilling:

The transition to Industry 4.0 requires workers to adapt to new technologies and roles, necessitating reskilling and upskilling efforts.

iv) Data Privacy Concerns:

The collection and use of large amounts of data raise concerns about privacy and data security.

Examples:

i) Smart Factories:

Using IoT and AI to monitor and optimize production processes in manufacturing plants.

ii) Predictive Maintenance:

Using sensors and data analytics to predict machine failures and schedule maintenance proactively.

iii) Personalized Products and Services:

Using data to tailor products and services to individual customer needs.

iv) Supply Chain Optimization:

Using digital platforms to improve transparency and efficiency in supply chains.

Conclusion:

Industry 4.0 is a transformative force in the business environment, offering significant opportunities for innovation, growth, and competitiveness. However, businesses need to be prepared for the challenges associated with its implementation, including high costs, cybersecurity risks, and workforce adaptation.

5.6 Features of Industry 4.0:

Industry 4.0 in a business environment is characterized by increased automation, data analysis, and the integration of technologies like AI, robotics, and the Internet of Things (IoT) to create smart factories and supply chains. This leads to enhanced productivity, efficiency, flexibility, and informed decision-making.

Here's a more detailed look at the key features:

1. Automation and Robotics:

i) Increased Automation:

Industry 4.0 heavily relies on automating tasks and processes, freeing up human labor for more strategic and creative work.

ii) Robotics Integration:

Robots are used for a variety of tasks, including manufacturing, assembly, and logistics, improving efficiency and accuracy.

2. Data Analysis and Analytics:

i) Big Data and AI:

Industry 4.0 leverages big data and AI to analyze vast amounts of information, enabling better decision-making and predictive maintenance.

ii) Real-time Data:

Real-time data collection and analysis allow for immediate adjustments to production processes, improving efficiency and responsiveness.

3. Internet of Things (IoT) and Connectivity:

i) Smart Factories and Supply Chains:

IoT devices and sensors connect machines, equipment, and systems, creating a network of interconnected devices that can share data and collaborate.

ii) Enhanced Visibility:

This connectivity provides end-to-end visibility across the entire supply chain, allowing for better monitoring and control.

4. Flexibility and Customization:

i) Agile Manufacturing:

Industry 4.0 enables agile manufacturing, allowing businesses to quickly adapt to changing customer demands and market conditions.

ii) Mass Customization:

Companies can offer customized products and services, meeting individual customer needs efficiently.

5. Collaboration and Partnership:

i) Collaborative Design Platforms:

Industry 4.0 supports the creation of collaborative design platforms where different teams and stakeholders can work together on projects.

ii) Integration of Systems:

Industry 4.0 focuses on integrating different systems and processes, creating a seamless flow of information and collaboration.

6. Improved Productivity and Efficiency:

i) Reduced Downtime:

Predictive maintenance and real-time monitoring help minimize downtime and maximize machine uptime, leading to increased productivity.

ii) Cost Reduction:

Automation and optimization of processes can lead to significant cost savings.

5.7 Technology Transfer:

It is a process that permits the flow of technology from a source to a receiver. Both the source and the recipient of such technological transfers can be an individual, company or a country. The source, in this case, is the owner or holder of the technological knowledge, while the receiver is the beneficiary of such knowledge. With the advancements in the technological environment, the transfer of such technological innovations is spreading rapidly across world markets, especially benefitting the less developed and the emerging economies. The source of such technological knowledge usually happens to be the advanced economies.

5.8 Block Chain:

Block Chain is a system of recording information that completely prohibits to change, hack or cheat the system. It is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems in the Block Chain.

Block Chain and Block Chain-based distributed ledger technologies are creating a tremendous impact both in the global trade supply chain as well as in the global trade financially. It not only makes the shipment of goods more convenient, but also simplifies the long and tedious process of obtaining a Letter of Credit (LoC), a payment mechanism that is used in global trade.

Several trade organizations such as the Dubai Chamber of Commerce and Industry have launched an initiative to implement Block Chain technology for addressing world trade issues like high costs and lack of transparency and security. Deloitte, have assisted an Indian private sector bank in redesigning its LoC issuance service, using a Block Chain based solution that reduced the issuance time from 20-30 days to hours. Companies such as Skuchain are by-passing the LoC altogether and is providing real-time tracking of goods and inventory financing that reduces the risks associated with transactions, and allows the trade financers to provide working capital relief to all the supply chain partners at the lowest cost of capital in that supply chain.

5.9 Artificial Intelligence (AI) and Machine Learning (ML):

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines or computer systems that are programmed to think and act like humans. This term is also applied to any machine that functions like a human – mind such as learning and problem – solving.

Machine Learning (ML), on the other hand, is a part of Artificial Intelligence (AI). It is a study of computer algorithms that can be improved automatically through everyday experience and with the use of data.

Both AI and ML can be used to optimise trade shipping routes, manage vessel and truck traffic at ports and translate e-commerce search queries from one language to another and respond with the translated inventory. It also works more towards making global trade sustainable, rather than focusing only on efficiency gains and better customer services. An example of this is the launching of Global Fishing Watch by Google in 2016, a real-time tool based on Machine Learning which is used to curb the illegal means of fishing through provision of a global view of commercial fishing activities based on satellite data and ship movements.

Governments and other organizations can also use this to track suspicious behaviours and work on developing sustainable policies accordingly.

5.10 Trading Services through Digital Platforms:

Trading services have now become much more convenient online. With the help of several online digital platforms such as ‘Upwork’, users can now look for service providers worldwide for a vast range of services, and can be able to find anything from an accountant in US, to a web developer in Japan, or a virtual assistant in India. Certain start-ups have come up with an online learning digital platform, that enables pairing up educators with children across the globe to provide online education on a wide range of courses. An example of such an online digital learning platform is VIPKID which connects American educational instructors with Chinese children for teaching English online. Many online digital platforms have also come up to connect customers with various professional service providers in just few clicks.

5.11 3D-Printing Services:

3D-Printing (also known as Additive manufacturing) is a process of creating a three dimensional solid object from a digital file. This is done using an additive process in which an object is created with successive layers of material until the object is created.

3D-Printing has the potential to make the production of goods, from food to medical supplies and to great coral reefs, accessible to everyone. In future, it may also lead its way into the businesses, disaster sites, outer space etc. The significance of 3D- printing on a global business environment is still a debatable topic. Some studies predict that with the mass-adoption of high-speed 3D-printing and lower associated costs, global trade might see a decline by approx. 25 per cent, as 3D- printing involves lesser manpower and reduces the need for importing goods. Others argue on the account of complexities and reality associated with mass-manufacturing using 3D-printing. Regardless of being positive or negative, the impact of 3D-printing seems to have a real impact on global trade, with the efficient and low-priced availability of 3D-printing methods.

5.12 Mobile Payment Services:

With the advent of M-Pesa, Mobikwik, Google Pay, Phone Pe and other UPI (Unified Payments Interface) methods, mobile payments seem to transform the lives of people and help in linking more people to global market opportunities. As per the World Bank Global Inclusion Database, mobile money payments were a major drive for financial inclusion during 2011-14, especially in the emerging economies, as the number of people who gained access to bank accounts increased by 20 per cent during the same period. This has made people to participate in global trade in a much easier and faster method, either as consumers or businessmen.

5.13 Customer Relationship Management (CRM) Software Services:

With the expansion of a business across national borders, one needs to essentially look into the customer services and therefore maintaining healthy customer relationships. However, global expansion of business can really make it difficult to keep a proper track on all client records. This is where the CRM software services come into play.

The CRM software helps in creation of a database for all your customer contacts that can easily be accessed by any member of one's team, related to business. This software is very much essential while running businesses on a global scale. It helps to create a database for maintaining the product order histories, concerns raised by consumers, and personal as well as business related information of each individual consumer along with their contact details (phone calls, emails and chats). This information enables a company or a business to track their customer's location, along with the languages that they speak and the local customs that the company may require to be aware of, alongside any applicable trade rules or restrictions.

5.14 Cloud Computing Services:

Cloud computing refers to an on-demand availability of all computer system resources, especially data storage and computing power, even without direct active management by the user. It is generally used to describe the data centres over the internet.

This technology is especially beneficial for companies working on a global front and where employees need to travel quite frequently or work remotely. With the help of Cloud computing, an employee can get access to files and essential information regarding their organization from anywhere and can remain connected to its customers as well as office, on filing of reports, sharing of data or communicating uninterruptedly around the globe.

5.15 Logistics Tracking Technology:

Logistics is an essential part of doing business, especially during buying and selling goods internationally. Execution, receipt and tracking of shipment require a lot of planning, consideration and careful handling as a wrong shipment can have an adverse impact on time, money and customers.

In order to help the companies deal with this task efficiently, an innovative technology in the form of Logistics Management Systems have come up. This system helps in planning of trade routes, monitoring of any trade restrictions or problem areas, if any, and track movements of goods and services. It also helps in modifying disrupted trade routes to get the deliveries back on track. Electronic Shipment Tracking is nowadays evolving to help in meeting business needs. Cost effective Radio Frequency Identification (RFID) devices have evolved to be more affordable and attainable for companies, followed by Bluetooth Beacons which emerged as another alternative option for electronically tracking shipments.

The emergence of RFID and Bluetooth Beacons has therefore, helped the businesses in taking advantage of Automatic Identification and Data Capture (AIDC) in their supply chains, making it more reliable to manage and track their shipments.

5.16 Translation and Language Learning Software and Services:

Language barriers can appear to be a real challenge for a global company, especially when it comes to communicating effectively with its customers or business clients. Web-based translation companies have evolved themselves and are still in the process of upgrading their functions every day. Though they sophistically translate and check the communications, it is still suggested to have a professional translator or a fluent speaker to check the communications and avoid inaccuracies, if any.

In order to continue a business with its partner or customer in the long-run, learning of the foreign languages can help reducing expenses or translation costs and can help provide better customer services. In such a case, a plenty of online reputable programmes and software courses can help one learn and improve their foreign language skills.

5.17 Internet of Things (IoT):

The Internet of Things (IoT) refers to a network of physical devices, vehicles, appliances, and other physical objects that are embedded with sensors, software, and network connectivity, allowing them to collect and share data.

IoT devices—also known as “smart objects”—can range from simple “smart home” devices like smart thermostats, to wearables like smartwatches and RFID-enabled clothing, to complex industrial machinery and transportation systems. Technologists are even envisioning entire “smart cities” predicated on IoT technologies.

IoT enables these smart devices to communicate with each other and with other internet-enabled devices. Like smartphones and gateways, creating a vast network of interconnected devices that can exchange data and perform various tasks autonomously. This can include:

- ✓ monitoring environmental conditions in farms
- ✓ managing traffic patterns with smart cars and other smart automotive devices
- ✓ controlling machines and processes in factories
- ✓ tracking inventory and shipments in warehouses

The potential applications of IoT are vast and varied, and its impact is already being felt across a wide range of industries, including manufacturing, transportation, healthcare, and agriculture. As the number of internet-connected devices continues to grow, IoT is likely to play an increasingly important role in shaping our world. Transforming the way that we live, work, and interact with each other.

In an enterprise context, IoT devices are used to monitor a wide range of parameters such as temperature, humidity, air quality, energy consumption, and machine performance. This data can be analyzed in real time to identify patterns, trends, and anomalies that can help businesses optimize their operations and improve their bottom line.

5.18 Why is IoT important?

IoT is important for business for several reasons. Here are the core benefits of IoT:

i) Improved efficiency

By using IoT devices to automate and optimize processes, businesses can improve efficiency and productivity. For example, IoT sensors can be used to monitor equipment performance and detect or even resolve potential issues before they cause downtime, reducing maintenance costs and improving uptime.

ii) Data-driven decision-making

IoT devices generate vast amounts of data that can be used to make better-informed business decisions and new business models. By analyzing this data, businesses can gain insights into customer behavior, market trends, and operational performance, allowing them to make more informed decisions about strategy, product development, and resource allocation.

iii) Cost-savings

By reducing manual processes and automating repetitive tasks, IoT can help businesses reduce costs and improve profitability. For example, IoT devices can be used to monitor energy usage and optimize consumption, reducing energy costs and improving sustainability.

iv) Enhanced customer experience

By using IoT technology to gather data about customer behavior, businesses can create more personalized and engaging experiences for their customers. For example, retailers can use IoT sensors to track customer movements in stores and deliver personalized offers based on their behavior.

Examples of IoT Applications

i) Healthcare

In the healthcare industry, IoT devices can be used to monitor patients remotely and collect real-time data on their vital signs, such as heart rate, blood pressure and oxygen saturation. This sensor data can be analyzed to detect patterns and identify potential health issues before they become more serious. IoT devices can also be used to track medical equipment, manage inventory and monitor medication compliance.

ii) Manufacturing

Industrial IoT devices can be used in manufacturing to monitor machine performance, detect equipment failures and optimize production processes. For example, sensors can be used to monitor the temperature and humidity in a manufacturing facility, ensuring that conditions are optimal for the production of sensitive products. IoT devices can also be used to track inventory, manage supply chains and monitor the quality of finished products. Industrial IoT is such an expansive new technology space, that it is sometimes referred to by its own abbreviation: IIoT (Industrial IoT).

iii) Retail

In the retail industry, IoT devices can be used to track customer behavior, monitor inventory levels and optimize store layouts. For example, sensors can be used to track foot traffic in a store and analyze customer behavior, allowing retailers to optimize product placement and improve the customer experience. IoT devices can also be used to monitor supply chains, track shipments and manage inventory levels.

iv) Agriculture

IoT devices can be used in agriculture to monitor soil conditions, weather patterns and crop growth. For example, sensors can be used to measure the moisture content of soil, ensuring that crops are irrigated at the optimal time. IoT devices can also be used to monitor livestock health, track equipment and manage supply chains. Low-power or solar-powered devices can often be used with minimal oversight in remote locations.

v) Transportation

In the transportation industry, IoT devices can be used to monitor vehicle performance, optimize routes, and track shipments. For example, sensors can be used to monitor the fuel efficiency of connected cars, reducing fuel costs and improving sustainability. IoT devices can also be used to monitor the condition of cargo, ensuring that it arrives at its destination in optimal condition.

5.19 The Future of IoT:

The future of IoT is promising, with many exciting developments for businesses on the horizon. Here are some of the trends and predictions for the future of IoT:

- ✓ **Growth:** The number of IoT devices is expected to continue to grow rapidly, with estimates suggesting that there will be tens of billion IoT devices in use over the next few years. This growth will be driven by increased adoption across industries, as well as the development of new use cases and applications.
- ✓ **Edge computing:** Edge computing is becoming increasingly important for IoT, as it allows data to be processed and analyzed closer to the source of the data, rather than in a centralized data center. This can improve response times, reduce latency and reduce the amount of data that needs to be transferred over IoT networks.
- ✓ **Artificial intelligence and machine learning:** AI and machine learning are becoming increasingly important for IoT, as they can be used to analyze vast amounts of data that is generated by IoT devices and extract meaningful insights. This can help businesses make more informed decisions and optimize their operations.
- ✓ **Blockchain:** Blockchain technology is being explored as a way to improve security and privacy in the IoT. Blockchain can be used to create secure, decentralized networks for IoT devices, which can minimize data security vulnerabilities.
- ✓ **Sustainability:** Sustainability is becoming an increasingly important consideration for IoT, as businesses look for ways to reduce their environmental impact. IoT can be used to

optimize energy usage, reduce waste and improve sustainability across a range of industries.

The future of IoT is exciting, with many new developments and innovations on the horizon, with providers of devices offering attractive pricing, as the cost of IoT device production declines. As the number of IoT devices continues to grow, businesses need to be prepared to adapt to new technologies and embrace new use cases and applications. Those that are able to do so will be positioned to reap the benefits of this transformative technology.

5.20 Benefits of IoT in Business:

IoT, or the Internet of Things, is transforming the business environment by connecting devices, processes, and people to enhance efficiency, productivity, and customer experience. By leveraging sensors and connected devices, businesses can gather real-time data, automate tasks, and make data-driven decisions, leading to cost savings, improved operations, and new business models.

i) Enhanced Operational Efficiency:

IoT enables businesses to monitor and manage assets, optimize processes, and automate tasks, leading to significant cost savings and improved productivity.

ii) Improved Decision-Making:

Real-time data collected by IoT devices allows for better data analysis and informed decision-making, leading to more strategic and efficient business operations.

iii) New Business Models:

IoT facilitates the development of new products, services, and business models based on the data generated by connected devices, opening up new revenue streams and market opportunities.

iv) Improved Customer Experience:

IoT enables personalized customer experiences, proactive customer support, and improved product offerings, leading to increased customer loyalty and satisfaction.

v) Enhanced Asset Utilization:

IoT allows for better tracking and utilization of assets, leading to optimized maintenance schedules, reduced downtime, and improved asset performance.

vi) Increased Competitiveness:

By embracing IoT, businesses can gain a competitive edge through innovation, efficiency, and personalized customer experiences.

5.21 Introduction to IIoT:

IIoT is the advanced form of IoT and it is used in industrial applications such as agriculture and manufacturing. The Industrial Internet of Things (IIoT) is the application of the Internet of Things (IoT) in an industrial setting which applies smart technology (smart sensors), data collection/storage, and cloud based analytics connected together using the internet's infrastructure to achieve value-added performance within an industry's enterprise. In the simplest of words, IIoT can tell an Oil and Gas company how to minimise impending damage and disruption before leakage occurs in a gas pipeline, whereas in IoT, home users are informed when to feed their pets on time.

IoT is the interconnection of smart devices that monitor, inform, and enhance personal aspects of everyday life via the internet. IIoT, in a similar way, builds on the same technology and concepts as IoT to provide the ability to connect businesses, people, machines, data, and devices within an industrial setting specifically targeted to enhance the performance across the manufacturing value chain. For example, the robotic arm on an assembly line, a thermostat in a freezer delivery truck, or a pump that provides fresh water are all connected providing and sharing data to make informed real-time data driven decisions that better control the process they are part of.

IIoT technology can be applied to solve difficult logistic, manufacturing, and supply chain issues that benefit both the manufacturer and consumer. Leveraging IIoT in an existing enterprise is a mutually beneficial aspect of IIoT implementation and can reduce operational costs while ensuring the highest quality possible in a wide variety of an industry's processes.

5.22 Why Industrial IOT?–Specialty of IIOT:

The Internet of Things (IoT) is all over the media with particular attention to the process and manufacturing industries for which the name Industrial Internet of Things (IIoT) is used. There are also IoT solutions for other application areas like transportation and healthcare etc. but we don't hear about "TIoT" or "HIoT". What makes industry so special that it has to be singled out as IIoT?

IoT is about digitally networking "things" such as sensors and actuators from the very first meter and then securely all the way across the Internet so all their data can be accessed from anywhere including the other side of the world. For the industry this means 4-20 mA and on-off signals are no longer sufficient, you need digital networking all the way from the sensors and actuators; bus or wireless. It is when it comes to this sensor & actuator level digital networking where the industry is very different from the other application areas. The home and office environment are not demanding and the applications are not critical; so Ethernet, Wi-Fi, USB, and Bluetooth work fine. However, applications in plants boiling petrol (refinery), mixing volatile chemicals, and power generation (ensuring no blackout) are mission critical requiring real-time digital closed loop control. The outdoor applications on the process itself have challenges such as hazardous areas (explosive atmosphere), rain and sea spray, dust, hot deserts and bitter cold winters, direct sunlight, electrically noisy (switching and frequency control of heavy electrical loads), long distances with huge ground potential differences. There are other circumstances that make industrial applications challenging. For instance, the industrial sensors and actuators are handled by people with only big tools in their toolbox, and they must be able to replace these "things" without having to touch system software because their responsibility is instrumentation, so they are not allowed to work on the control system. The number of sensors in a plant outnumbers those in a home by several orders of magnitude.

Clearly, more sensors and actuators are an industry trend as plants are becoming ever larger to get economy of scale, and the processes are more complex to handle lower grade feed and meet increasingly stringent requirements for a finished product. Plants are deploying more sensors for equipment condition monitoring to improve reliability and reduce maintenance cost, for performance monitoring and loss detection to improve energy efficiency, automate balance manual data collection for productivity, and to meet ever more demanding safety, health, and environmental (HS&E) regulations- a good thing.

By automating data collection like vibration, temperature, pressure, and fluid levels etc. the plant also enables remote access: from a plant control room and maintenance office, from the on-shore integrated operations (iOps) centre, from a global engineering solutions centre, by equipment manufacturer, or third-party service provider. For instance, a very fast pressure transmitter with embedded statistical process monitoring (SPM) can detect pump cavitation to notify operators to check for closed valves, and maintenance to check for plugged strainers. If securely connected across the Internet, the corporate global solutions experts are able to compare the problem to other similar plants, the pump manufacturer for product issues, and a service provider to schedule an overhaul.

For any business that deals with the production and/or transportation of physical goods, IIoT can create game-changing operational efficiencies and present entirely new business models. The following are examples of ways in which IIoT technology could be applied in diverse industries.

i) Production: This is the industry in which most IIoT technology is currently being implemented. IIoT-enabled machines can self-monitor and predict potential problems, meaning less downtime and greater overall efficiency.

ii) Supply chain: With sensor-managed inventory, IIoT technology could take care of ordering supplies just before they go out of stock. This decreases the amount of waste produced while keeping necessary goods in stock and frees up employees to focus on other tasks.

iii) Building management: IIoT technology could make building management simpler and more secure. With sensor-driven climate control, the guesswork and frustration involved in manually changing a building's climate will be eliminated. Additionally, devices that monitor entry points in the building and respond to potential threats quickly will increase the building's security.

iv) Healthcare: With devices that monitor patients remotely and notify healthcare providers as soon as patients' statuses change, IIoT could cause healthcare to become more precise and responsive. Eventually, AI may even be able to take over patients' diagnoses, meaning doctors are able to treat them sooner and more effectively.

v) Retail: IIoT technology has the potential to make quick, intelligent marketing decisions for individual stores. With storefronts that automatically update based on consumer interest and the ability to put together smart promotions, retail outlets that implement IIoT technology could gain a significant advantage over their competitors.

5.23 Difference between IoT and IIoT:

The Industrial Internet of Things (IIoT) is a subcategory of the Internet of Things (IoT), which also includes consumer-facing applications such as wearable devices, smart home technology and self-driving cars. Sensor embedded devices, machines and infrastructure that transmit data via the Internet and are managed by software are the hallmark of both concepts.

IoT is the interconnection of smart devices that monitor, inform, and enhance personal aspects of everyday life via the internet. IIoT, in a similar way, builds on the same technology and concepts as IoT to provide the ability to connect businesses, people, machines, data, and devices within an industrial setting specifically targeted to enhance the performance across the manufacturing value chain.

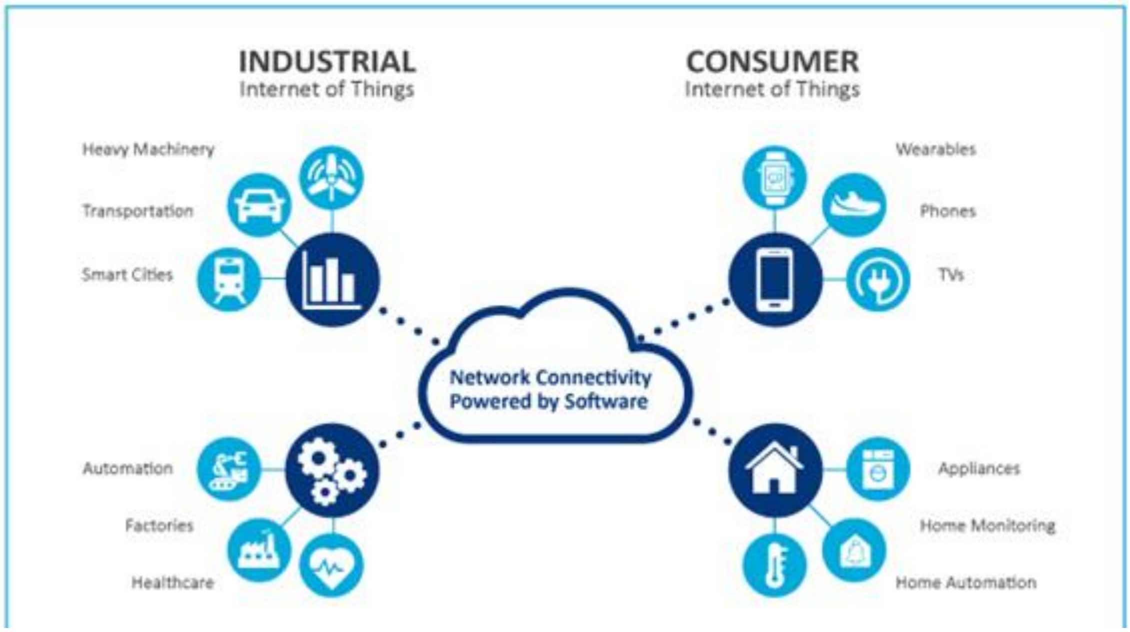
While the Industrial Internet of Things falls under the general IoT umbrella, there are a few differences between the two. The key difference is that IIoT focuses on connecting machines and devices in industries like manufacturing, healthcare, and logistics, while IoT is generally used to describe consumer level devices like Fitbits and the whole range of smart home devices from ring video doorbells to thermostats and refrigerators.

Besides the business versus consumer distinction, IIoT comes with much higher stakes than IoT due to its massive scale. When a system fails, downtime can result in life-threatening situations or major financial losses. While personal IoT devices do come with privacy concerns and bring up issues about data collection and consent, it’s unlikely that failure could result in a true emergency situation.

The main differences between the IoT and IIoT application domains are highlighted and also shown in the Figure 5.1.

Figure 5.1

IIOT and IoT connected through Cloud Network



(Source: IIoT World, https://www.iiot-world.com/industrial-iot/connected-industry/iot-vs-iiot)

The term IoT, Internet of Things, is often used to refer to ubiquitous, consumer-oriented IoT products. The IIoT, on the other hand, stands for Industrial Internet of Things, and is a subset of the larger IoT, focusing on the specialised requirements of industrial applications such as manufacturing, oil and gas, and utilities. IIoT is a collective term that describes the connection of machines and production plants. The parameters that differentiate the IoT from the industrial IoT include:

- ✓ Security
- ✓ Interoperability
- ✓ Scalability

- ✓ Precision
- ✓ Programmability
- ✓ Low Latency
- ✓ Reliability
- ✓ Resilience
- ✓ Automation
- ✓ Serviceability

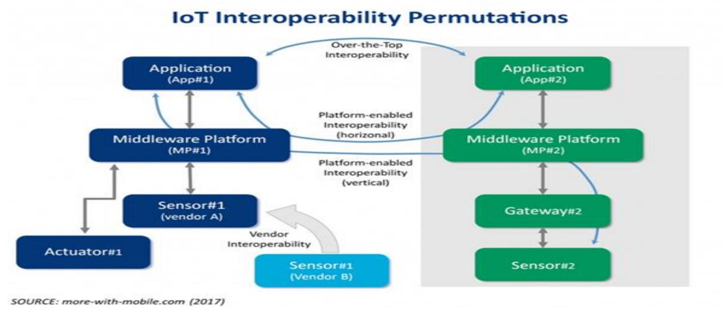
i) Security:

Any kind of IoT solution requires security, but industrial IoT solutions require more robust measures. Resolving security on a merely superficial level can have a disastrous outcome for a high-volume manufacturing process, resulting in lost production costing huge amounts of money. Another outcome of incorrect action in the control process can put the system into an unstable and unsafe condition. Therefore, IIoT solutions incorporate sophisticated security measures, from secure and resilient system architectures, specialised chipsets, encryption and authentication threat detection to management processes. On the other side, operation safety is not necessarily an issue in an IoT ecosystem as these systems do not handle industrial processes. Therefore, no serious safety incident can happen if a wrong decision is made.

ii) Interoperability: The IoT Interoperability Permutations is as shown in Figure 5.2

Figure 5.2

IoT Interoperability Permutations



(Source: IIoT World, https://www.iiot-world.com/industrial-iot/connected-industry/iot-vs-iiot)

Usually, industrial IoT applications must co-exist in environments with significant amounts of legacy operations technologies (OT). These legacy OT don't go away so fast; therefore, industrial IoT solutions must integrate, support various protocols and data sets, and work reliably with these systems.

iii) Scalability:

The term industrial suggests large-scale networks supporting a high amount of devices in the order of tens of thousands (or more). These devices can be controllers, robots or large machinery and IoT solutions deployed into these networks must scale seamlessly and support hundreds of thousands of sensors and devices as well as existing non-IoT devices.

iv) Precision:

Industrial operations require higher levels of accuracy. Automated, high speed machinery is synchronized to a matter of milliseconds. Therefore, the quality must be assured for such systems. Any small variation in the operation of such high-volume manufacturing processes must be corrected right away. Otherwise, this can result in lost efficiency and downtimes which can affect the revenue considerably.

v) Programmability:

The programming and reconfiguration of industrial machines is frequently performed. This can be done remotely, on site or in the field and the industrial IoT solutions supporting industrial and manufacturing processes must provide reliable flexibility and adaptability.

vi) Low Latency:

Complementary to precision and accuracy is the requirement for low latency in industrial applications. Anomalies must be quickly detected and corrective actions must be applied in near-real time.

vii) Reliability:

Industrial products are usually designed to operate for twenty to thirty years before a scale replacement is performed. With these strict requirements, like operating in harsh environments, sometimes subject to extreme cold, heat, high vibration, pressure and hazardous conditions, the IIoT applications must assure reliable operability and high availability. A wrong action can put people's lives at risk.

The "Reliability" aspect is part of the SRP triad: Safety, Reliability and Productivity.

viii) Resilience:

The Resilience Model in Four Acts is shown in the Figure 5.3:

Figure 5.3

Resilience Model

(Source: IIoT World, https://www.iiot-world.com/industrial-iot/connected-industry/iot-vs-iiot)

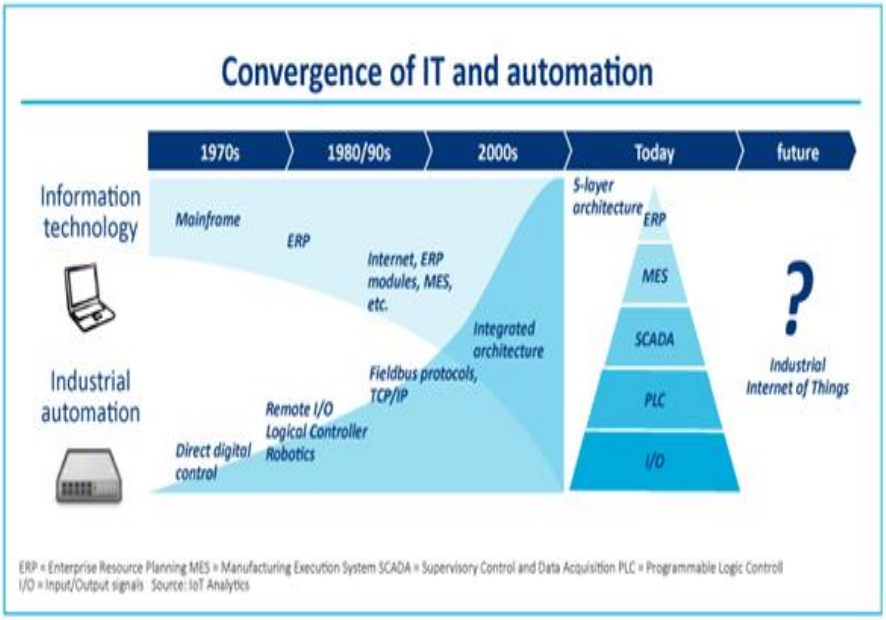
Breakdowns in one part of the system are not unusual in such highly scaled industrial applications; therefore, the applications must be designed with resilience in mind. To compensate for such faults in the system, the IoT system architectures must be designed to always satisfactorily complete their processes and operations.

ix) Automation

The evolution of convergence process of IT and automation is shown in the Figure 5.4:

Figure 5.4

Convergence of IT and Automation



(Source: IIoT World, https://www.iiot-world.com/industrial-iot/connected-industry/iot-vs-iiot)

Most of the industrial applications are highly automated from the bottom to the top, with limited or absolutely no human intervention. Such IoT solutions are required to support a range of autonomous actions. In order to ensure this, applications do incorporate intelligence into the edge devices, or deep learning capabilities in the system design.

x) Serviceability:

IoT solutions operating in industrial environments must be serviceable in order to sustain the levels of performance required. This can extend from swapping out sensors and updating firmware to configuring gateways and servers — the ability to maintain industrial IoT solutions over their entire lifecycle is an essential requirement. While building industrial IoT products, one has to focus on the real needs and values of a properly designed cloud data-based architecture with a special focus on the safety, reliability and productivity aspects. The difference between IIoT and IoT is shown in Table 5.1:

Table 5.1

The Difference between IIoT and IoT

IIoT	IoT
It focuses on industrial applications such as manufacturing, power plants, oil & gas, etc.	It focuses on general applications ranging from wearables to robots & machines.
It uses critical equipment & devices connected over a network which will cause a life-threatening or other emergency situations on failure therefore uses more sensitive and precise sensors.	Its implementation starts with small scale level so there is no need to worry about life threatening situations.
It deals with large scale networks.	It deals with small scale networks.
It can be programmed remotely i.e., offers remote on-site programming	It offers easy off-site programming.
It handles data ranging from medium to high.	It handles very high volume of data.
It requires robust security to protect the data.	It requires identity and privacy.
It needs stringent requirements.	It needs moderate requirements.
It having very long life cycle.	It having short product life cycle.
It has high- reliability	It is less reliable.

5.24 Big Data Analytics:

Big data analytics refers to the systematic processing and analysis of large amounts of data and complex data sets, known as big data, to extract valuable insights.

Big data analytics allows for the uncovering of trends, patterns and correlations in large amounts of raw data to help analysts make data-informed decisions. This process allows organizations to leverage the exponentially growing data generated from diverse sources, including internet-of-things (IoT) sensors, social media, financial transactions and smart devices to derive actionable intelligence through advanced analytic techniques.

In the early 2000s, advances in software and hardware capabilities made it possible for organizations to collect and handle large amounts of unstructured data. With this explosion of useful data, open-source communities developed big data frameworks to store and process this data. These frameworks are used for distributed storage and processing of large data sets across a network of computers. Along with additional tools and libraries, big data frameworks can be used for:

- ✓ Predictive modeling by incorporating artificial intelligence (AI) and statistical algorithms
- ✓ Statistical analysis for in-depth data exploration and to uncover hidden patterns
- ✓ What-if analysis to simulate different scenarios and explore potential outcomes
- ✓ Processing diverse data sets, including structured, semi-structured and unstructured data from various sources.

Four main data analysis methods: descriptive, diagnostic, predictive and prescriptive are used to uncover insights and patterns within an organization's data. These methods facilitate a deeper understanding of market trends, customer preferences and other important business metrics.

5.25 Differences between Big Data and Traditional Data:

The main difference between big data analytics and traditional data analytics is the type of data handled and the tools used to analyze it. Traditional analytics deals with structured data, typically stored in relational databases. This type of database helps ensure that data is well-organized and easy for a computer to understand. Traditional data analytics relies on statistical methods and tools like structured query language (SQL) for querying databases.

Big data analytics involves massive amounts of data in various formats, including structured, semi-structured and unstructured data. The complexity of this data requires more sophisticated analysis techniques. Big data analytics employs advanced techniques like machine learning and data mining to extract information from complex data sets. It often requires distributed processing systems like Hadoop to manage the sheer volume of data.

5.26 How does Big Data Analytics Work?

Big Data Analytics is a powerful tool which helps to find the potential of large and complex datasets. To get better understanding, let's break it down into key steps:

i) Data Collection: Data is the core of Big Data Analytics. It is the gathering of data from different sources such as the customers' comments, surveys, sensors, social media, and so on. The primary aim of data collection is to compile as much accurate data as possible. The more data, the more insights.

ii) Data Cleaning (Data Preprocessing): The next step is to process this information. It often requires some cleaning. This entails the replacement of missing data, the correction of inaccuracies, and the removal of duplicates. It is like sifting through a treasure trove, separating the rocks and debris and leaving only the valuable gems behind.

iii) Data Processing: After that we will be working on the data processing. This process contains such important stages as writing, structuring, and formatting of data in a way it will be usable for the analysis. It is like a chef who is gathering the ingredients before cooking. Data processing turns the data into a format suited for analytics tools to process.

iv) Data Analysis: Data analysis is being done by means of statistical, mathematical, and machine learning methods to get out the most important findings from the processed data**. For example,** it can uncover customer preferences, market trends, or patterns in healthcare data.

v) Data Visualization: Data analysis usually is presented in visual form, for illustration – charts, graphs and interactive dashboards. The visualizations provided a way to simplify the large amounts of data and allowed for decision makers to quickly detect patterns and trends.

vi) Data Storage and Management: The stored and managed analyzed data is of utmost importance. It is like digital scrapbooking. May be you would want to go back to those lessons in the long run, therefore, how you store them has great importance. Moreover, data protection and adherence to regulations are the key issues to be addressed during this crucial stage.

vii) Continuous Learning and Improvement: Big data analytics is a continuous process of collecting, cleaning, and analyzing data to uncover hidden insights. It helps businesses make better decisions and gain a competitive edge.

5.27 Types of Big Data Analytics:

Big Data Analytics comes in many different types, each serving a different purpose:

i) Descriptive Analytics: This type helps us understand past events. In social media, it shows performance metrics, like the number of likes on a post.

ii) Diagnostic Analytics: In Diagnostic analytics delves deeper to uncover the reasons behind past events. In healthcare, it identifies the causes of high patient re-admissions.

iii) Predictive Analytics: Predictive analytics forecasts future events based on past data. Weather forecasting, for example, predicts tomorrow's weather by analyzing historical patterns.

iv) Prescriptive Analytics: However, this category not only predicts results but also offers recommendations for action to achieve the best results. In e-commerce, it may suggest the best price for a product to achieve the highest possible profit.

v) Real-time Analytics: The key function of real-time analytics is data processing in real time. It swiftly allows traders to make decisions based on real-time market events.

vi) Spatial Analytics: Spatial analytics is about the location data. In urban management, it optimizes traffic flow from the data unde the sensors and cameras to minimize the traffic jam.

vii) Text Analytics: Text analytics delves into the unstructured data of text. In the hotel business, it can use the guest reviews to enhance services and guest satisfaction.

5.28 Big Data Analytics Technologies and Tools:

Big Data Analytics relies on various technologies and tools that might sound complex, let's simplify them:

i) Hadoop: Imagine Hadoop as an enormous digital warehouse. It's used by companies like Amazon to store tons of data efficiently. For instance, when Amazon suggests products you might like, it's because Hadoop helps manage your shopping history.

ii) Spark: Think of Spark as the super-fast data chef. Netflix uses it to quickly analyze what you watch and recommend your next binge-worthy show.

iii) NoSQL Databases: NoSQL databases, like MongoDB, are like digital filing cabinets that Airbnb uses to store your booking details and user data. These databases are famous because of their quick and flexible, so the platform can provide you with the right information when you need it.

iv) Tableau: Tableau is like an artist that turns data into beautiful pictures. The World Bank uses it to create interactive charts and graphs that help people understand complex economic data.

v) Python and R: Python and R are like magic tools for data scientists. They use these languages to solve tricky problems. For example, Kaggle uses them to predict things like house prices based on past data.

vi) Machine Learning Frameworks (e.g., TensorFlow): In Machine learning frameworks are the tools who make predictions. Airbnb uses TensorFlow to predict which properties are most likely to be booked in certain areas. It helps hosts make smart decisions about pricing and availability.

These tools and technologies are the building blocks of Big Data Analytics and helps organizations gather, process, understand, and visualize data, making it easier for them to make decisions based on information.

5.29 Benefits of Big Data Analytics:

Big Data Analytics offers a host of real-world advantages, and let's understand with examples:

i) Informed Decisions: Imagine a store like Walmart. Big Data Analytics helps them make smart choices about what products to stock. This not only reduces waste but also keeps customers happy and profits high.

ii) Enhanced Customer Experiences: Think about Amazon. Big Data Analytics is what makes those product suggestions so accurate. It's like having a personal shopper who knows your taste and helps you find what you want.

iii) Fraud Detection: Credit card companies, like MasterCard, use Big Data Analytics to catch and stop fraudulent transactions. It's like having a guardian that watches over your money and keeps it safe.

iv) Optimized Logistics: FedEx, for example, uses Big Data Analytics to deliver your packages faster and with less impact on the environment. It's like taking the fastest route to your destination while also being kind to the planet.

5.30 Challenges of Big Data Analytics:

While Big Data Analytics offers incredible benefits, it also comes with its set of challenges:

i) Data Overload: Consider Twitter, where approximately 6,000 tweets are posted every second. The challenge is sifting through this avalanche of data to find valuable insights.

ii) Data Quality: If the input data is inaccurate or incomplete, the insights generated by Big Data Analytics can be flawed. For example, incorrect sensor readings could lead to wrong conclusions in weather forecasting.

iii) Privacy Concerns: With the vast amount of personal data used, like in Facebook's ad targeting, there's a fine line between providing personalized experiences and infringing on privacy.

iv) Security Risks: With cyber threats increasing, safeguarding sensitive data becomes crucial. For instance, banks use Big Data Analytics to detect fraudulent activities, but they must also protect this information from breaches.

v) Costs: Implementing and maintaining Big Data Analytics systems can be expensive. Airlines like Delta use analytics to optimize flight schedules, but they need to ensure that the benefits outweigh the costs.

5.31 Usage of Big Data Analytics:

Big Data Analytics has a significant impact in various sectors:

i) Healthcare: It aids in precise diagnoses and disease prediction, elevating patient care.

ii) Retail: Amazon's use of Big Data Analytics offers personalized product recommendations based on your shopping history, creating a more tailored and enjoyable shopping experience.

iii) Finance: Credit card companies such as Visa rely on Big Data Analytics to swiftly identify and prevent fraudulent transactions, ensuring the safety of your financial assets.

iv) Transportation: Companies like Uber use Big Data Analytics to optimize drivers' routes and predict demand, reducing wait times and improving overall transportation experiences.

v) Agriculture: Farmers make informed decisions, boosting crop yields while conserving resources.

vi) Manufacturing: Companies like General Electric (GE) use Big Data Analytics to predict machinery maintenance needs, reducing downtime and enhancing operational efficiency.

5.32 How Big Data Analytics Impacts Businesses:

i) Enhanced Decision-Making:

By leveraging data, businesses can make informed decisions based on insights rather than guesswork, leading to more effective strategies and improved efficiency.

ii) Improved Customer Understanding:

Big data analytics helps businesses understand customer preferences, behaviors, and trends, enabling them to personalize marketing campaigns, improve customer service, and foster stronger customer relationships.

iii) Increased Operational Efficiency:

Analyzing operational data can reveal areas for improvement, such as streamlining processes, reducing costs, and optimizing resource allocation.

iv) New Product and Service Innovation:

Big data can identify market gaps and opportunities, allowing businesses to develop new products and services that meet evolving customer needs.

v) Competitive Advantage:

By leveraging data insights, businesses can gain a competitive edge by being more agile, responsive to market changes, and innovative.

Examples of Big Data Analytics in Action:

i) Retail:

Analyzing sales data to predict trends, optimize inventory, and personalize shopping experiences.

ii) Marketing:

Tracking customer engagement, analyzing campaign performance, and tailoring marketing messages for better results.

iii) Healthcare:

Predicting patient health risks, improving treatment effectiveness, and optimizing resource allocation.

iv) Manufacturing:

Monitoring machine performance, predicting equipment failures, and optimizing production processes.

v) Finance:

Detecting fraudulent transactions, assessing credit risk, and identifying investment opportunities.

Conclusion

Big Data Analytics is a game-changer that's shaping a smarter future. From improving healthcare and personalizing shopping to securing finances and predicting demand, it's transforming various aspects of our lives. However, Challenges like managing overwhelming data and safeguarding privacy are real concerns. In our world flooded with data, Big Data Analytics acts as a guiding light. It helps us make smarter choices, offers personalized experiences, and uncovers valuable insights. It's a powerful and stable tool that promises a better and more efficient future for everyone.

Check Your Progress:

Choose the Correct Answer:

1. Industry 4.0 is characterized by the integration of which of the following technologies into business operations?

a) Manual labor and basic IT

b) Paper-based systems

c) AI, IoT, Big Data, and Cloud Computing

d) Traditional ERP models only

Answer: c) AI, IoT, Big Data, and Cloud Computing

2. Which emerging technology enables decentralized digital transactions and is transforming supply chain transparency?

a) Augmented Reality

b) Blockchain

c) Cloud Storage

d) Data Mining

Answer: b) Blockchain

3. Which of the following is NOT a typical application of AI in business?

a) Customer service chatbots

b) Traditional accounting practices

c) Predictive analytics for sales forecasting

d) Supply chain optimization

Correct Answer: b) Traditional accounting practices

4. Big Data analytics helps organizations to:

a) Limit market expansion

b) Reduce product diversity

c) Derive insights from large datasets for informed decision-making

d) Monitor only financial transactions

Answer: a) Limit market expansion

5. The implementation of smart manufacturing and cyber-physical systems falls under:

a) Traditional manufacturing practices

b) Industry 2.0

c) Industry 4.0 framework

d) E-commerce protocols

Answer: c) Industry 4.0 framework

5.33 Self-Assessment Questions

1. Explain the nature of industry 4.0.
2. Discuss the importance of technological environment. What are the possible impacts of technology on business?
3. Define Block Chain, Artificial Intelligence (AI) and Machine Learning (ML). Mention some areas where they are frequently used.
4. Discuss Block Chain. Explain significance of Block Chain in industrial application.
5. What is Cloud computing? What is its contribution?