PAPER – 7: INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT

SECTION – A: INFORMATION TECHNOLOGY

*Question No. **1** is compulsory*

*Answer any **three** questions from the rest.*

Question 1

(a) *Telecommunication networks are interconnected by special-purpose communication processors called internetwork processors. Discuss in brief any three (03) of such internetwork Processors.* **(3 Marks)**

(b) *Write down the phases of the early framework of Decision Support System.*

(2 Marks)

Answer

(a) Various Internetwork Processors of Telecommunication Networks are as follows:

   i. **Switch:** Switch is a communications processor that makes connections between telecommunications circuits in a network so that a telecommunication message can reach its intended destination.

   ii. **Router:** Router is a communications processor that interconnects networks based on different rules or protocols, so that a telecommunication message can be routed to its destination.

   iii. **Hub:** Hub is a port-switching communications processor that allows the sharing of the network resources such as servers, LAN workstations, printers, etc.

   iv. **Bridge:** Bridge is a communications processor that connects numerous Local Area Networks (LANs). It magnifies the data transmission signal while passing data from one LAN to another.

   v. **Repeater:** Repeater is a communications processor that boosts or amplifies the signal before passing it to the next section of cable in a network.

   vi. **Gateway:** Gateway is a communications processor that connects networks that use different communication architectures.

(b) The phases of early framework of Decision Support System are as follows:

   i.   Intelligence

   ii. Design

   iii. Choice

   iv. Implementation

Question 2

(a) *"Business Applications are software or set of software used by business people and may also be classified based on business function it covers." In the light of the above statement, as an IT advisor, explain any six (06) business function of Business applications based on Nature of Application.* **(6 Marks)**

(b) *Explain any four (04) key modules of Human Resource Management Systems (HRMS)*

(4 Marks)

Answer

(a) Various business functions of business applications based on Nature of Application are as follows:

  i. **Accounting:** The function of accounting is performed by various accounting applications ranging from application software such as TALLY and WINGS to high-end applications such as SAP and Oracle Financials. These accounting applications are used by business entities to perform the functions of day-to-day transactions of accounting and generating financial information such as balance sheet, profit and loss account and cash flow statements.

  ii. **Office Management:** The Office Management related functions are performed through Office Management Software/applications. These applications help entities to automate their day-to-day office work and administration and manage their office requirements with the help of word processors (MS Word), electronic spreadsheets (MS Excel), presentation software (MS PowerPoint), file sharing systems, etc.

  iii. **Compliance:** Enterprises need to comply with applicable laws and regulations. India has taken a long stride in adopting e-compliance for its citizens with government promoting various functions like e-filing of documents, e-payments, taxes, e-storage of data, etc. This has raised the requirements for software which can help any entity achieve compliances. A separate class of business application are available that facilitate meeting the compliance requirements.

  iv. **Customer Relationship Management:** These are performed by specialized applications that cater to the need of organizations largely in FMCG (Fast-Moving Consumer Goods) categories. These business entities need to function and interact with their customers and respond to them. The response may be in the form of service support or may lead to product innovation. These are sought by entities, which deal directly with consumers.

  v. **Management Support:** There are applications that help management function and provide them support by catering to their decision-making needs. They may be further classified based on the level of management using them. For example - Management Information System are generally used by middle level managers' for their decision-

making needs, whereas Decision Support Systems are used by top management for their information requirements.

vi.   **Enterprise Resource Planning (ERP):** ERP applications/software are also used by entities to manage resources optimally and to maximize the three 'E's i.e. Economy, Efficiency and Effectiveness of business operations and functions.

vii. **Product Lifecycle Management:** This refers to the business functions that are executed by enterprises involved in the development of new products and their launch through various business applications. For example- The auto-sector in India reflects the growing importance and need of such type of software.

viii. **Logistics Management:** For large logistics managing companies, the key business applications are required to perform functions to keep track of products and people across the globe to check whether there are any discrepancies that need action.

ix.   **Legal Management:** In India, lot of effort is being put to digitize the legal system. Government of India is keen to reduce the pendency in courts. As this process goes on, legal profession in India shall need such systems to function efficiently and effectively. There are big legal firms in India, which are already using such business applications.

x.   **Industry Specific:** Specific industry sector are required to perform particular functions by means of specific applications. For example, software designed especially for Banking applications, Insurance applications, Automobile dealer system, billing systems for malls, Cinema ticketing software, Travel industry related software, etc.

(b) The key modules of Human Resource Management Systems (HRMS) are as follows:

i.   **Workforce Management:** Integrated across the strategic Human Capital Management (HCM) solution; Workforce Management provides powerful tools to effectively manage labour rules, ensure compliance, and control labour costs and expenses.

ii.   **Time and Attendance Management:** The time and attendance module gathers standardized time and work related efforts. The most advanced modules provide broad flexibility in data collection methods, labour distribution capabilities and data analysis features. Cost analysis and efficiency metrics are the primary functions.

iii. **Payroll Management:** This module of the system is designed to automate manual Payroll functions and facilitate salary, deductions etc. calculations, eliminates errors and free up HR staff for more productive tasks. Data is generally fed from the human resources and time keeping modules to calculate automatic deposit and manual cheque writing capabilities. This module can encompass all employee-related transactions as well as integrate with existing financial management systems.

iv.   **Training Management:** Training programs can be entered with future dates which allow managers to track progress of employees through these programs, examine the

results of courses taken and reschedule specific courses when needed. The module tracks the trainer or training organization and costs associated with training schedules. The module also tracks training locations, required supplies and equipment and registered attendees. All employees are linked to a skill profile. The skill profile lists the skills brought with them and acquired through training after they were hired. The skill profile is updated automatically through the training module.

v.   **Compensation Management:** Compensation Management is more than just the means to attract and retain talented employees. In today's competitive labour market, organizations need to fully leverage their human capital to sustain a competitive position. This requires integrating employee processes, information and programs with organizational processes and strategies to achieve optimal organizational results.

vi.   **Recruitment Management:** This module helps in hiring the right people with the right target skills. This module includes processes for managing open positions/requisitions, applicant screening, assessments, selection and hiring, correspondence, reporting and cost analysis.

vii.   **Personnel Management:** The personnel management comprises of HR master-data, personnel administration, recruitment and salary administration.

viii.   **Organizational Management:** Organizational management includes organizational structure, staffing schedules and job description.

ix.   **Employee Self Service (ESS):** The ESS module allows employees to query HR related data and perform some HR transactions over the system. Employees may query their attendance record from the system without asking the information from HR personnel. The module also lets supervisors approve Overtime requests from their subordinates through the system without overloading the task on HR department.

x.   **Analytics:** The Analytics module enables organizations to extend the value of an HRMS implementation by extracting HR related data for use with other business intelligence platforms. For example, organizations combine HR metrics with other business data to identify trends and anomalies in headcount in order to better predict the impact of employee turnover on future output.

Question 3

(a)   *Electronic Commerce (E-Commerce) is a sophisticated combination of technologies and consumer-based services integrated to form a new paradigm in business transaction processing. The risks associated with e-commerce are multi-faceted. Being an IT consultant, explain any six (06) risks that are involved in e-commerce.*   **(6 Marks)**

(b) The phase of Information system life cycle examines that "What is the problem and is it worth solving?" In the reference of this statement, discuss the various dimensions of feasibility study in System Investigation phase of SDLC. **(4 Marks)**

Answer

(a) The risks that are associated with e-Commerce are as follows:

  i. **Problem of anonymity:** There is a need to identify and authenticate users in the virtual global market where anyone can sell to or buy from anyone, anything from anywhere.

  ii. **Repudiation of contract:** There is a possibility that the electronic transaction in the form of contract, sale order or purchase by the trading partner or customer may be denied.

  iii. **Lack of authenticity of transactions:** The electronic documents that are produced in the course of an e-Commerce transaction may not be authentic and reliable.

  iv. **Data Loss or theft or duplication:** The data transmitted over the Internet may be lost, duplicated, tampered with or replayed.

  v. **Attack from hackers:** Web servers used for e-Commerce may be vulnerable to hackers.

  vi. **Denial of Service:** Service to customers may be denied due to non-availability of system as it may be affected by viruses, e-mail bombs and floods.

  vii. **Non-recognition of electronic transactions:** e-Commerce transactions, as electronic records and digital signatures may not be recognized as evidence in courts of law.

  viii. **Lack of audit trails:** Audit trails in e-Commerce system may be lacking and the logs may be incomplete, too voluminous or easily tampered with.

  ix. **Problem of piracy:** Intellectual property may not be adequately protected when such property is transacted through e-Commerce.

(b) The various dimensions of Feasibility Study in System Investigation phase of System Development Life Cycle (SDLC) are as below:

  i. **Technical feasibility:** Does the technology exist to implement the proposed system or is it a practical proposition?

  ii. **Economic feasibility:** Is proposed system cost-effective; if benefits do not outweigh costs, it's not worth going ahead?

  iii. **Legal feasibility:** Is there any conflict between the proposed system and legal requirements?

iv. **Operational feasibility:** Are the current work practices and procedures adequate to support the new system?

v. **Schedule feasibility:** How long will the system take to develop or can it be done in a desired timeframe?

Question 4

(a) *A successful BPM implement is to consider, it is hot just as an improvement programs but make it an integral part of business strategy. As an IT consultant discuss the concept of Business Process Management (BPM) and explain any 4 benefits of BPM Systems (BPMS).*   **(2 + 4 = 6 Marks)**

(b) *Explain any four (04) major applications of the concept of the virtualization.*   **(4 Marks)**

Answer

(a) Business Process Management (BPM) may be defined in any of the following way:

- BPM refers to the closed loop, iterative management of business processes over their complete lifecycle. In simple terms, it is about the management of business processes with the organization being the primary focus.

- BPM is the methodology used by enterprises to improve end-to-end business processes in various stages and aim to grow revenues quickly while controlling resource costs.

- BPM may be defined as the achievement of an organization's objectives through the improvement, management, and control of essential business processes.

- BPM is paper-based standard operating procedures taken to their most productive level – throughout the initiation of increasingly business-centric technological advances.

The benefits of Business Process Management Systems (BPMS) are as follows:

i. **Automating repetitive business processes:** Processes such as report creation and distribution or the monitoring of or reporting on company's Key Performance Indicators (KPI) reduces the manual operational costs and helps employees to concentrate on activities that are important to the success of business.

ii. **BPMS works by 'loosely coupling' with a company's existing applications:** This enables enterprises to monitor, extract, format and distribute information to systems and people; in line with business events or rules.

iii. **Operational Savings:** BPM focuses on optimization of processes. The processes that are repetitive are optimized and lead to reduced expenses which translate to immediate cost savings. By automating a task, Return On Investment (ROI) of BPM that requires six hours of manual intervention, one can expect to cut that time to half.

Thus, three hours multiplied by the number of times the process is completed in a cycle will yield significant cost saving.

iv. **Reduction in the administration involved in Compliance and ISO Activities:** Be it a quality assurance initiative such as the ISO standards, a financial audit law, or an IT systems best-practice implementation; companies worldwide are seeing the need to manage compliance as part of their everyday business activities. The BPM is ideally suited to help support companies in their quest for process improvement and compliance/governance certification. It gives full control over process and document change, clarity of inherent risks, and ease with which process knowledge is communicated across the company.

v. **Freeing-up of employee time:** In business, for each additional hour it takes to complete a manual business process, there is a hard cost associated with employee time as well as soft cost associated with losing business or lowered productivity. Another area where time comes into play is in opportunity costs.

(b) Major applications of the concept of virtualization are as follows:

i. **Server Consolidation:** Virtual machines are used to consolidate many physical servers into fewer servers, which in turn host virtual machines. Each physical server is reflected as a virtual machine "guest" residing on a virtual machine host system. This is also known as "Physical-to-Virtual" or 'P2V' transformation.

ii. **Disaster Recovery:** Virtual machines can be used as "hot standby" environment for physical production servers. This changes the classical "backup-and-restore" philosophy, by providing backup images that can "boot" into live virtual machines, capable of taking over workload for a production server experiencing an outage.

iii. **Testing and Training:** Virtualization can give root access to a virtual machine that can be very useful such as in kernel development and operating system courses.

iv. **Portable Applications:** Portable applications are needed when running an application from a removable drive, without installing it on the system's main disk drive. Virtualization can be used to encapsulate the application with a redirection layer that stores temporary files, windows registry entries and other state information in the application's installation directory and not within the system's permanent file system.

v. **Portable Workspaces:** Recent technologies have used virtualization to create portable workspaces on devices like iPods and USB memory sticks.

Question 5

(a) As a cloud service provider, you have been invited by an enterprise to briefly explain them the emerging computing technologies. Kindly explain to the employees of enterprise about the cloud computing and various service models of cloud computing.   *(6 Marks)*

(b) Explain two types of Data Flow Diagram (DFD).   *(2 Marks)*

(c) Explain two major approaches to establish access control. **(2 Marks)**

OR

Explain the two broad types of knowledge.

Answer

(a) **Cloud Computing** is the use of various services such as software development platforms, servers, storage, and software over the Internet often referred to as the "Cloud."

Various service models of Cloud Computing are as follows:

i. **Infrastructure as a Service (IaaS):** It is the foundation of cloud services that provides clients with access to server hardware, storage, bandwidth and other fundamental computing resources. The service is typically paid for on a usage basis. The service may also include dynamic scaling so that if the customer needs more resources than expected, s/he can get them on the fly (probably to a given limit). It provides access to shared resources on need basis without revealing details like location and hardware to clients.

ii. **Software as a Service (SaaS):** SaaS is a model of software deployment where an application is hosted as a service provided to customers across the Internet by removing the need to install and run an application on a user's own computer. It is a well-established sector that includes a complete software offering on the cloud. Users can access a software application hosted by the cloud vendor on pay-per-use basis. It is seen as a way for businesses to get the same benefits as commercial software with smaller cost outlay. SaaS can alleviate the burden of software maintenance and support but users relinquish control over software versions and requirements.

iii. **Platform as a Service (PaaS):** It has evolved from Software as a Service (SaaS) and Infrastructure as a service (IaaS) that provides clients with access to the basic operating software and optional services to develop and use software applications without the need to buy and manage the underlying computing infrastructure. For example - Google App Engine allows clients to run their web applications on Google's infrastructure.

iv. **Network as a Service (NaaS):** It is a category of cloud services where the capability provided to the cloud service user is to use network/transport connecting services. NaaS involves optimization of resource allocation by considering network and computing resources as a whole. Some of the examples are Virtual Private Network, Mobile Network Virtualization etc.

v. **Communication as a Service (CaaS):** CaaS has evolved in the same lines as SaaS which is an outsourced enterprise communication solution that can be leased from a single vender. The CaaS vendor is responsible for all hardware and software management and offers guaranteed Quality of Service (QoS). It eliminates the large capital investments and allows businesses to selectively deploy communication

devices and modes on a pay-as-you-go, as-needed basis. Examples are Voice over IP (VoIP), Instant Messaging (IM), Collaboration and Videoconferencing application using fixed and mobile devices.

(b) Two types of Data Flow Diagram (DFD) are as follows:

i.   **Logical Data Flow Diagram:** A logical DFD focuses on the business and how the business operates. It describes the business events that take place and the data required and produced by each event. The logical model reflects the business.

ii. **Physical Data Flow Diagram:** A physical DFD shows how the system will be implemented. The physical model depicts the system.

(c) Two major approaches to establish system access controls are as under:

i.   **Role-based Access Control (RBAC):** RBAC largely eliminates discretion when providing access to objects. Instead, administrators or automated systems place subjects into roles. RBAC enforces static constraints based on a user's role and Subjects receive only the rights and permissions assigned to those roles. When an employee changes jobs, all previous access is removed, and the rights and permissions of the new role are assigned.

ii. **Rules-based Access Control (RAC):** RAC differs from RBAC methods because it is largely context-based. RAC takes into account the data affected, the identity attempting to perform a task, and other triggers governed by business rules. A manager, for example, has the ability to approve his/her employees' hours worked. However, when s/he attempts to approve his/her own hours, a rule built into the application compares the employee record and the user, sees they are the same, and temporarily removes approval privilege.

OR

The two types of knowledge are as follows:

i.   **Explicit knowledge:** Explicit knowledge is that which can be formalized easily and as a consequence is easily available across the organization. Explicit knowledge is articulated, and represented as spoken words, written material and compiled data. This type of knowledge is codified, easy to document, transfer and reproduce. For example – Online tutorials, Policy and procedural manuals.

ii. **Tacit knowledge:** Tacit knowledge resides in a few often-in just one person and has not been captured by the organization or made available to others. Tacit knowledge is unarticulated and represented as intuition, perspective, beliefs, and values that individuals form based on their experiences. It is personal, experimental and context-specific. It is difficult to document and communicate the tacit knowledge. For example – hand-on skills, special know-how, employee experiences.

PAPER 7 - SECTION - B: STRATEGIC MANAGEMENT

Question paper comprises 5 questions. Question No. 6 is compulsory. Attempt any 3 out of 4 questions.

Question 6

"Samar Electronics Limited" is engaged in manufacturing and sale of consumer electronic goods globally. The company is rated 'best' in "customer satisfaction survey' for 5 years in a row. The spread of the current pandemic has affected the internal and external environment of the company adversely. Such adverse impact has negatively impacted the revenue of the company. In order to survive and· retain the business, the company decided to outsource a major part of its organisational activities, like manufacturing, distribution channels, after sales service etc. Now the organisation's business functions are scattered worldwide with a small headquarter connected to independent business units digitally.

What type of organisational structure is the company transitioning into? List the· basic features of this new structure and the disadvantages that the company may face in future in this new structural arrangement. **(5 Marks)**

Answer

Samar Electronics Limited transitioning into **network structure.** It is a newer and somewhat more radical organisational design. Its essential features are as follows:

1. It is termed as "non-structure" as it eliminates in house functions and outsources many of them.

2. An organisation organised in this manner is often called "virtual organisation" because it is composed of a series of project groups or collaborations linked by constantly changing nonhierarchical, cob-web like structures.

3. Network structures become most useful when the environment of a firm is unstable and is expected to remain so. Under such conditions, there is usually a strong need for innovation and quick response.

4. Instead of having salaried employees, it may contract with people for a specific project or length of time.

5. Long term contracts with suppliers and distributors replace services that company could provide for itself.

However, network structure does have following disadvantages that the company may face in future:

1. The availability of numerous potential partners can be a source of trouble.

2. Co-ordination among the functioning of business partners is perhaps, the biggest problem for the management in the networking structure.

3. Employees may lack the level of confidence necessary to participate actively in organisation sponsored learning experiences.

Question 7

(a) Redefinition of business is involved in both "Expansion" and "Retrenchment" strategy, however, method involved in their execution is completely different. Explain.

(b) Discuss the needs for environmental scanning. Mention briefly the environment factors you need to consider if you are hired to advise on it.   ***(5 + 5 = 10 Marks)***

Answer

(a) Expansion strategy is implemented by redefining the business by adding the scope of business substantially increasing the efforts of the current business. On the other hand, Retrenchment strategy involves redefinition of business by divesting a major product line or market.

Expansion is a promising and popular strategy that tends to be equated with dynamism, vigour, promise and success. Retrenchment or retreat becomes necessary or expedient for coping with particularly hostile and adverse situations in the environment and when any other strategy is likely to be suicidal.

Expansion may take the enterprise along relatively unknown and risky paths, full of promises and pitfalls. Retrenchment involves regrouping and recouping of the resources.

(b) Organizational environment consists of both external and internal factors. Environment must be scanned so as to determine development and forecasts of factors that will influence organizational success. The factors that need to be considered are explained below:

- **Events:** Events are important and specific happenings in the internal or external organisational environment which can be observed and tracked.

- **Trends:** Trends are grouping of similar or related events that tend to move in a given direction, increasing or decreasing in strength of frequency of observation.

- **Issues** are the current concerns that arise in response to events and trends. Identifying an emerging issue is more difficult.

- **Expectations** are the demands made by interested groups in the light of their concern for issues.

Question 8

(a) Sky chemical industry intends to grow its business. Advise the company on the available options using Ansoff's product market growth matrix.

(b) You are appointed as a manager of a company where you find that the company's culture is out of sync with what is needed for strategic success. Discuss steps you would initiate to tackle the problem.   ***(5 + 5 = 10 Marks)***

Answer

(a) The Ansoff's product market growth matrix (proposed by Igor Ansoff) is a useful tool that helps businesses decide their product and market growth strategy. With the use of this matrix, a business can get a fair idea about how its growth depends upon its markets in new or existing products in both new and existing markets.

The Ansoff's product market growth matrix is as follows:

	Existing Products	New Products
Existing Markets	**Market Penetration**	**Product Development**
New Markets	**Market Development**	**Diversification**

Ansoff's Product Market Growth Matrix

Sky chemical industry can adopt market penetration, product development, market development or diversification simultaneously for its different products.

Market penetration refers to a growth strategy where the business focuses on selling existing products into existing markets. It is achieved by making more sales to present customers without changing products in any major way.

Market development refers to a growth strategy where the business seeks to sell its existing products into new markets. It is a strategy for company growth by identifying and developing new markets for the existing products of the company.

Product development refers to a growth strategy where business aims to introduce new products into existing markets. It is a strategy for company growth by offering modified or new products to current markets.

Diversification refers to a growth strategy where a business markets new products in new markets. It is a strategy by starting up or acquiring businesses outside the company's current products and markets.

As market conditions change overtime, a company may shift product-market growth strategies. For example, when its present market is fully saturated a company may have no choice other than to pursue new market.

(b) Changing problem cultures is very difficult because of deeply held values and habits. It takes concerted management action over a period of time to replace an unhealthy culture with a healthy culture or to root out certain unwanted cultural obstacles and instil ones that are more strategy-supportive.

♦ The first step is to diagnose which facets of the present culture are strategy supportive and which are not.

♦ Then, managers have to talk openly and forthrightly to all concerned about those aspects of the culture that have to be changed.

♦ The talk has to be followed swiftly by visible, aggressive actions to modify the culture-actions that everyone will understand are intended to establish a new culture more in tune with the strategy.

The menu of culture-changing actions includes revising policies and procedures, altering incentive compensation, recruiting and hiring new managers and employees, replacing key executives, communication on need and benefit to employees and so on.

Question 9

(a) Modern marketing is highly promotion oriented. Discuss citing major direct promotional methods for products.

(b) "A business organization cannot always plan all their strategies in advance and often need to blend planned strategies with reactive strategies." Do you agree with the statement? Give reasons. **(5 + 5 = 10 Marks)**

Answer

(a) Modern marketing is highly promotional oriented and include personal selling, advertising, publicity and sales promotion.

Personal selling – involves face to face interaction of salespersons with the prospective customers and provides a high degree of personal attention. It involves working with one customer at a time and hence not cost effective. The intention of oral communication is sale.

Advertising – is a non-personal, flexible and dynamic promotion method. The media for advertising are several and choice of an appropriate one is important for effectiveness of message. Sale of the product and the amount of expenditure cannot be directly measured.

Publicity – is also non-personal but no payments are made to the media. Publicity is communication of a product, brand or business by placing information about it in the media without paying for the time or media space directly. It could be through press releases, press conferences, reports, etc.

Sales promotion – includes all activities that are undertaken to promote the business but are not specifically included under personal selling, advertising or publicity. Activities like discounts, contests, money refunds, exhibitions etc. are included.

(b) Yes, a business organization cannot always plan all their strategies in advance and often need to blend planned strategies with reactive strategies.

In planned strategy, organisations will analyse possible environmental scenarios and create strategic framework after proper planning and set procedures and work on these strategies in a pre-determined manner. However, in reality no company can forecast both internal and external environment exactly. Everything cannot be planned in advance. It is not possible to anticipate moves of rival firms, consumer behaviour, evolving technologies and so on.

There can be significant deviations between what was visualised and what actually happens. There can be significant or major strategic changes when the environment demands. Reactive strategy is triggered by the changes in the environment and provides ways and means to cope with the negative factors or take advantage of emerging opportunities.

Question 10

(a) COVID-19 has propelled forward the pace of the internet economy. Discuss important shifts brought about in an industry's competitive forces due to increased use of e-commerce technology.   *(5 Marks)*

(b) Write short note on:

"Phases and significance of Product Life Cycle".   *(5 Marks)*

                        OR

Distinguish between social marketing and services marketing.   *(5 Marks)*

Answer

(a) COVID -19 has undoubtedly paced up the use of e-commerce technology and propelled the internet economy in a forward direction. Increased use of e-commerce technology has brought about important shifts in all industry's competitive forces as given by Michael Porter. Delineated are the forces of competition with their corresponding shifts:

- **Threat of new entrants** - E-commerce has increased the threat of new entrants, as anyone from anywhere can set up their online business in few clicks.

- **Bargaining power of buyers and suppliers** - Due to free information on the internet both buyers and suppliers are aware of the prices, products, alternatives and demand/supply volumes, thus making it difficult for anyone to gain superior bargaining power in the market.

- **Rivalry among existing players** - E-commerce has paved a way for fair and open competition with new players as well as existing players at the helm of demand and supply economy. It has for sure increased the competition at a global level.

- **Threats from substitutes** - Availability and awareness of substitutes has damaged traditional businesses while creating an opportunity for innovative and experimental businesses. This shift has brought about a greater pressure on marketing and R&D functions of a business.

  Therefore, E-commerce has brought about important shifts in an industry's competitive forces, touching all the forces some way or the other, and thus pushing businesses to think beyond their existing strategies and to change with moving times.

Alternate answer

COVID-19 has propelled forward the pace of the internet economy. Growing use of the Internet by businesses and consumers reshapes the economic landscape and alters traditional industry boundaries. The following features stand out:

- The Internet makes it feasible for companies everywhere to compete in global markets.

- Competition in an industry is greatly intensified by the new e-commerce strategic initiatives of existing rivals and by the entry of new, enterprising e-commerce rivals.

- Entry barriers into the e-commerce world are relatively low.

- Online buyers gain bargaining power because they confront far fewer obstacles to comparing the products, prices, and shipping times of rival vendors.

- The Internet makes it feasible for companies to reach beyond their borders to find the best suppliers and, further, to collaborate closely with them to achieve efficiency gains and cost savings.

- Internet and PC technologies are advancing rapidly, often in uncertain and unexpected directions.

- The internet results in much faster diffusion of new technology and new idea across the world.

- The e-commerce environment demands that companies move swiftly.

- E-commerce technology opens up a host of opportunities for reconfiguring industry and company value chains.

- The Internet can be an economical means of delivering customer service.

- The needed e-commerce resource in short supply is human talent-in the form of both technological expertise and managerial know-how.

(b) Product Life Cycle (PLC) is a useful concept for guiding strategic choice. Essentially, PLC is S-shaped curve which exhibits the relationship of sales with respect of time for a product that passes through the four successive stages of introduction (slow sales growth), growth (rapid market acceptance) maturity (slowdown in growth rate) and decline (sharp downward drift). If businesses are substituted for product, the concept of PLC could work just as well.

The first stage of PLC is the introduction stage in which competition is almost negligible, prices are relatively high, and markets are limited. The growth in sales is at a lower rate because of lack of knowledge on the part of customers.

The second stage of PLC is growth stage. In the growth stage, the demand expands rapidly, prices fall, competition increases, and market expands. The customer has knowledge about the product and shows interest in purchasing it.

The third stage of PLC is maturity stage. In this stage, the competition gets tough, and market gets stabilised. Profit comes down because of stiff competition. At this stage organisations may work for maintaining stability.

The fourth stage of PLC is declining stage in which the sales and profits fall down sharply due to some new product replaces the existing product. So, a combination of strategies can be implemented to stay in the market either by diversification or retrenchment.
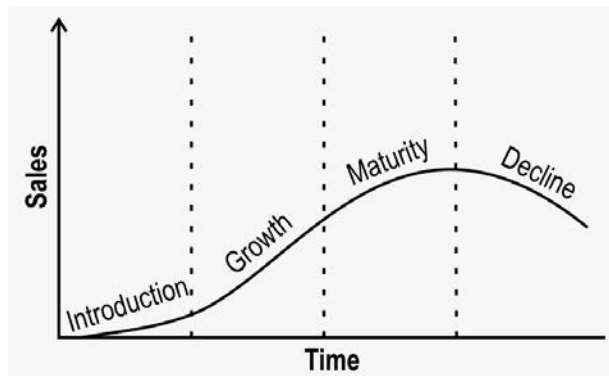

Figure: Product Life Cycle

Significance of PLC

The main advantage of PLC is that it can be used to diagnose a portfolio of products (or businesses) in order to establish the stage at which each of them exists. Particular attention is to be paid on the businesses that are in the declining stage. Depending on the diagnosis, appropriate strategic choice can be made. For instance, expansion may be a feasible alternative for businesses in the introductory and growth stages. Mature businesses may be used as sources of cash for investment in other businesses which need resources. A combination of strategies like selective harvesting, retrenchment, etc.

may be adopted for declining businesses. In this way, a balanced portfolio of businesses may be built up by exercising a strategic choice based on the PLC concept.

Or

Social marketing and service marketing are marketing strategies primarily with different orientations. Social marketing refers to the design, implementation and control of programs seeking to increase the acceptability of a social ideas, cause, or practice among a target group. For instance, the publicity campaign for prohibition of smoking or encouraging girl child, etc.

On the other hand, service marketing is applying the concepts, tools, and techniques, of marketing to services. Service is any activity or benefit that one party can offer to another that is essentially intangible and non-perishing. These may be from business to consumer and from business to business.