

**MOCK TEST PAPER - 1**  
**INTERMEDIATE (IPC): GROUP – II**  
**PAPER – 7: INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT**  
**SECTION – A: INFORMATION TECHNOLOGY**

**ANSWERS**

**MULTIPLE CHOICE QUESTIONS**

1. (d) Electronic Calendaring
2. (b) Real-time Processing
3. (b) Bluetooth
4. (d) Presentation phase
5. (b) Asynchronous
6. (d) Risk to jobs
7. (a) Indirect Changeover
8. (d) In Mesh network, if one node fails, the whole system breaks down
9. (d) Atomicity, Consistency, Isolation, Durability
10. (c) Confidentiality

**DESCRIPTIVE QUESTIONS**

1. (a) **Computer Network** is a collection of computers and other hardware interconnected by communication channels that allow sharing of resources and information. Where at least one process in one device can send/receive data to/from at least one process residing in a remote device, then the two devices are said to be in a network. A network is a group of devices connected to each other.

In terms of how the devices are connected, the computer networks can be classified as follows:

- **Connection Oriented Networks:** Wherein a connection is first established and then data is exchanged like it happens in case of telephone networks.
  - **Connectionless Networks:** Where no prior connection is made before data exchanges. Data which is being exchanged in fact has a complete contact information of recipient and at each intermediate destination, it is decided how to proceed further like it happens in case of postal networks.
- (b) **Leased Application:** A new method for getting applications is being used today, i.e. leased applications, where user pays fixed rent for using the application for agreed terms. Many specialized vendors provide users with option to get their job done by paying monthly rent; this is referred to as **Outsourcing**.
2. (a) The general classes of e-Commerce applications are as follows:
    - (i) **Business-to-Business (B2B) e-Commerce:** B2B refers to the exchange of services, information and/or products from one business to another. B2B electronic commerce typically takes the form of automated processes between trading partners and is performed in much higher volumes than Business-to- Consumer (B2C) applications. B2B can also encompass marketing activities between businesses, and not just the final transactions that result from marketing.
    - (ii) **Business-to-Consumer (B2C) e-Commerce:** It is defined as the exchange of services, information and/or products from a business to a consumer, as opposed to between one business and another. Typically, a B2C e- Commerce business has a virtual store front for consumers to purchase goods and services eliminating the need to physically view or pick up

the merchandise. The Business-to-Consumer (B2C) model can save time and money by doing business electronically but customers must be provided with safe and secure as well as easy-to-use and convenient options when it comes to paying for merchandise.

- (iii) **Consumer-to-Business (C2B) e-Commerce:** In C2B e-Commerce model, consumers directly contact with business vendors by posting their project work online so that the needy companies review it and contact the consumer directly with bid. The consumer reviews all the bids and selects the company for further processing. Some examples are guru.com, rentacoder.com, getacoder.com, freelancer.com.
- (iv) **Consumer-to-Consumer (C2C) e-Commerce:** C2C e-Commerce is an Internet- facilitated form of commerce that has existed for the span of history in the form of barter, flea markets, swap meets, yard sales and the like. C2C e-Commerce sites provide a virtual environment in which consumers can sell to one another through a third-party intermediary.
- (v) **Business-to-Government (B2G) e-Commerce:** B2G e-Commerce, also known as e-Government, refers to the use of information and communication technologies to build and strengthen relationships between government and employees, citizens, businesses, non-profit organizations, and other government agencies.
- (vi) **Business-to-Employee (B2E) e-Commerce:** B2E e-Commerce, from an intra-organizational perspective, has provided the means for a business to offer online products and services to its employees.

(b) Business Process Management (BPM) Practices are as follows:

- Strive for process-oriented organizational structure;
- Appoint process owners;
- Senior management needs to commit and drive BPM and execution of BPM process improvements should take a bottom-up approach;
- Put in place information technology systems to monitor, control, analyse, and improve processes;
- Work collaboratively with business partners on cross-organizational business processes;
- Continuously train the workforce and continuously improve business processes;
- Align employee bonuses and rewards to business process performance;
- Utilize both incremental (e.g., Six Sigma) and more radical (e.g., BPR) methodologies to implement process improvement.

3. (a) System Maintenance and Review phase of System Development Life Cycle (SDLC) evaluates results of solution and modifies the system to meet the changing needs. Post implementation review would be done to address:

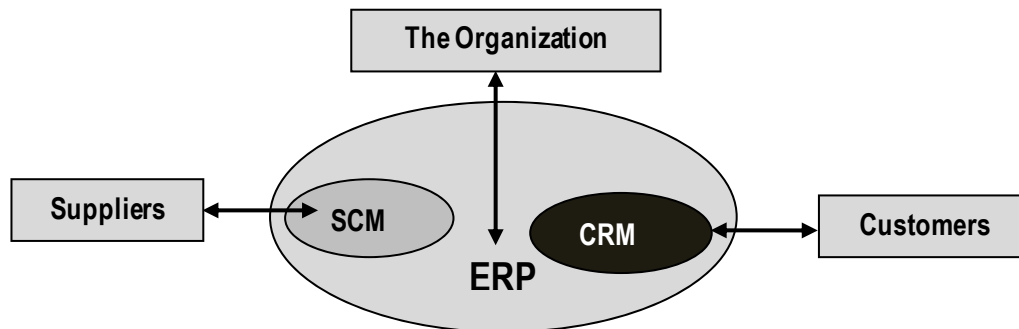
- Programming amendments,
- Adjustment of clerical procedures,
- Modification of Reports, and
- Request for new programs.

System maintenance could be with following different objectives:

- **Perfective Maintenance:** This implies that while the system runs satisfactorily, there is still room for improvement.
- **Adaptive Maintenance:** All systems will need to adapt to changing needs within a company.
- **Corrective Maintenance:** Problems frequently surface after a system has been in use for a short time, however thoroughly it was tested. Any errors must be corrected.

This is often the longest of the stages since it is an on-going process having some sort of long term continuum.

- (b) CRM and SCM are two categories of enterprise software that are widely implemented in corporations and non-profit organizations. While the primary goal of ERP is to improve, and streamline internal business processes, CRM attempts to enhance the relationship with customers and SCM aims to facilitate the collaboration between the organization, its suppliers, the manufacturers, the distributors and the partners.



SCM software chugs along, ensuring that materials and information flow through the supply chain with the highest possible efficiency and the lowest possible cost. Meanwhile, CRM software focuses on the identification, targeting, acquisition and retention of customers, and on the building of strong relationships between the business and its customers. Thus, the two tools tend to sit at opposite ends of the enterprise and deal with different sets of data albeit with the same end goal.

4. (a) The primary purpose for which an enterprise implements automation may vary from enterprise to enterprise. A list of generic reasons for going for BPA may include any or combination of the following:
- Errors in manual processes leading to higher costs.
  - Payment processes not streamlined, due to duplicate or late payments, missing early pay discounts, and losing revenue.
  - Paying for goods and services not received.
  - Poor debtor management leading to high invoice aging and poor cash flow.
  - Not being able to find documents quickly during an audit or lawsuit or not being able to find all documents.
  - Lengthy or incomplete new employee or new account on-boarding.
  - Unable to recruit and train new employees, but where employees are urgently required.
  - Lack of management understanding of business processes.
  - Poor customer service.
- (b) Examples of Office Automation Applications are as follows:
- **Word Processing:** Use of a computer to perform automatically many of the tasks necessary to prepare typed or printed documents.
  - **Electronic mail:** Use of a computer network that allows users to send, store and retrieve messages using terminals and storage devices.
  - **Voice Mail:** Requires computers with an ability to store audio messages digitally and convert them back upon retrieval.

- **Electronic Calendaring:** Use of a networked computer to store and retrieve a manager's appointment calendar. Allows other managers' calendars to be accessed and facilitates scheduling.
  - **Video Conferencing:** Use of television equipment to link geographically dispersed conference participants.
  - **Desktop Video Conferencing:** Video and audio equipment are attached to each workstation in the network enabling the two-way communication of picture and way communication of picture and sound.
  - **FAX:** Uses special equipment that can read a document at one end of a communication channel and make a copy at the other end.
  - **Imaging:** Uses Optical Character Recognition (OCR) to convert data on paper to a digital format for storage in a secondary storage device.
  - **Desktop Publishing:** Uses a computer to prepare output that is very close in quality to that produced by a typesetter.
5. (a) BPMS, as a technology, can deliver endless benefits to any sized organization but more importantly these benefits are unique to a company. These benefits are as follows:
- **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. BPMS works by 'loosely coupling' with a company's existing applications: This enables it to monitor, extract, format and distribute information to systems and people; in line with business events or rules.
  - **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, 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.
  - **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.
  - **Freeing-up of employee time:** While the euphuism "time is money" is often over-used, it is very relevant to this topic, because 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 costs associated with losing business or lowered productivity. Another area where time comes into play is in opportunity costs.
- (b) The Application Layer of OSI layer architecture is closest to the end user, which means that both the OSI application layer and the user interact directly with the software application.
- This layer interacts with software applications and provides user services by file transfer, file sharing, etc.
  - Database concurrency and deadlock situation controls are undertaken at this layer level.
  - This is the layer at which communication partners are identified, quality of service is identified, user authentication and privacy are considered, and any constraints on data syntax are identified.

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**SECTION – B: STRATEGIC MANAGEMENT**  
**SUGGESTED ANSWERS/HINTS**

1.

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
b	a	d	d	c	b	d	b	c	b
(xi)	(xii)	(xiii)	(xiv)	(xv)					
c	a	b	d	c					

2. Woodworld is having a product portfolio that is evidently in the decline stage. The product is being replaced with the latest designs with better quality of the product. Strategically, the company should minimize their dependence on the existing products and identify other avenues for the survival and growth. As a CEO of Woodworld Ltd., following can be the strategic options available with the CEO:

- Invest in new product development and switchover to the latest designs. Woodworld Ltd. also need time to invest in hiring interior designers.
- They can acquire or takeover a competitor, provided they have or are able to generate enough financial resources.
- They may also consider unrelated growth and identify other areas for expansion. This will enable Woodworld Ltd. to spread their risks.
- In longer run, they should divest the existing products. However, they may continue with the existing products in a limited manner for such time there is demand for the product.

3. (a) Substitute products are a latent source of competition in an industry. In many cases, they become a major constituent of competition. With regards to substitute products, factors such as prices, easy availability, and how best they are able to satisfy the needs of customers, determine the amount of competition through them. Substitute products offering a price advantage and/or performance improvement to the consumer can drastically alter the competitive character of an industry. And they can bring it about all of a sudden. Wherever substantial investment in R&D is taking place, threats from substitute products can be expected. Substitutes, too, usually limit the prices and profits in an industry.

(b) Strategic decisions are different in nature than all other decisions which are taken at various levels of the organization during day-to-day working of the organizations. The major dimensions of strategic decisions are given below:

- ◆ Strategic issues require top management decisions.
- ◆ Strategic issues involve the allocation of large amounts of company resources.
- ◆ Strategic issues are likely to have a significant impact on the long term prosperity of the organisation.
- ◆ Strategic issues are future oriented.
- ◆ Strategic issues usually have major multifunctional or multi-business consequences.
- ◆ Strategic issues necessitate consideration of factors in the organisation's external environment.

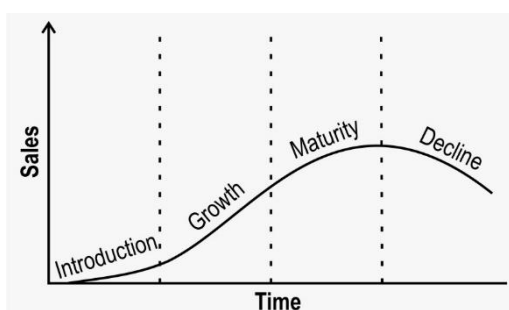
4. (a) Product Life Cycle is an important concept in strategic choice and S-shaped curve which exhibits the relationship of sales with respect of time for a product that passes through the four successive stages.

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 also at a lower rate.

The second stage of PLC is the growth stage, in which the demand expands rapidly, prices fall, competition increases and market expands.

The third stage of PLC is the maturity stage, where in the competition gets tough and market gets stabilized. Profit comes down because of stiff competition.

The fourth stage is the declining stage of PLC, in which the sales and profits fall down sharply due to some new product replaces the existing product.



**Product Life Cycle**

PLC 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.

- (b) Concentric diversification occurs when a firm adds related products or markets. On the other hand conglomerate diversification occurs when a firm diversifies into areas that are unrelated to its current line of business.

In concentric diversification, the new business is linked to the existing businesses through process, technology or marketing. In conglomerate diversification, no such linkages exist; the new business/product is disjointed from the existing businesses/products.

The most common reasons for pursuing a concentric diversification are that opportunities in a firm's existing line of business are available. However, common reasons for pursuing a conglomerate growth strategy is that opportunities in a firm's current line of business are limited or opportunities outside are highly lucrative.

5. (a) The role of human resources in enabling the organization to effectively deal with the external environmental challenges, the human resource management function has been accepted as a strategic partner in the formulation of organization's strategies and in the implementation of such strategies through human resource planning, employment, training, appraisal and rewarding of personnel. An organization's recruitment, selection, training, performance appraisal, and compensation practices can have a strong influence on employee competence is very important.

- (b) The changes in the environmental forces often require businesses to make modifications in their existing strategies and bring out new strategies. For initiating strategic change, three steps can be identified as under:
- (i) Recognize the need for change: The first step is to diagnose facets of the corporate culture that are strategy supportive or not. The idea is to determine where the lacuna lies and scope for change exists.
  - (ii) Create a shared vision to manage change: Objectives and vision of both individuals and organization should coincide. Senior managers need to constantly and consistently communicate the vision not only to inform but also to overcome resistance.
  - (iii) Institutionalize the change: Creating and sustaining a different attitude towards change is essential to ensure that the firm does not slip back into old ways of thinking or doing things. All these changes should be set up as a practice to be followed by the organization and be able to transfer from one level to another as a well settled practice.
6. (a) Business Process Reengineering (BPR) refers to the analysis and redesign of workflows and processes both within and between the organizations. The orientation of the redesign effort is radical. It involves total deconstruction and rethinking of a business process in its entirety
- The workflows are studied, appraised and improved in terms of time, cost, output, quality, and responsiveness to customers. The redesign effort aims to simplify and streamline a process by eliminating all extra avoidable steps, activities, and transactions. With the help of redesigning workflows, organizations can drastically reduce the number of stages of work, and improve their performance.
- (b) A business organization is a part of overall structure of society and functions within wide external environmental factors. It draws its resources from its external environment, processes them and provides output in the form of goods and services. Therefore, it is correct to say that a business enterprise should focus on external perspective to define its mission although enterprise's internal situation cannot be delinked while doing so. Bringing an external perspective justifies the very existence of company. The mission statement is a message designed to be inclusive of the expectations of all stakeholders for the performance of an enterprise / company over the long run. Some of the questions addressed by mission statement are: Why is the firm in business? What are the economic goals? What is the operating philosophy in terms of quality, firm's image and self-concept? What are the core competencies and competitive advantages? What customers do and can a company serve? How does enterprise / company view its responsibilities to stockholders, employees, communities, environment, social issues or competitors?