PAPER – 7: INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT

SECTION – A: INFORMATION TECHNOLOGY

QUESTIONS

Multiple Choice Questions

1. In Computer Networks Open Systems Interconnection (OSI) Model, _____ defines the relationship between a device and a physical medium.
   (a) Physical Layer
   (b) Data Link Layer
   (c) Network Layer
   (d) Session Layer

2. An aspiring CA in his interview was asked to provide correct sequence of the following sub-processes that represent Procure to Pay Process Flow. The sub processes are - (1) Purchase Order, (2) Receipts, (3) Request for Quote (RFQ), (4) Purchase Requisition, (5) Payments, and (6) Quotation. What should be the sequence?
   (a) (1)-(2)-(3)-(4)-(5)-(6)
   (b) (4)-(3)-(6)-(1)-(2)-(5)
   (c) (1)-(4)-(3)-(5)-(6)-(2)
   (d) (5)-(3)-(1)-(2)-(4)-(6)

3. In real world networks, the terminology _____ refers to the ability of a network to recover from any kind of error like connection failure, loss of data etc.
   (a) Routing
   (b) Resilience
   (c) Contention
   (d) Bandwidth

4. To qualify as a Transaction Processing System (TPS), transactions made by the system must pass the ACID Test – Atomicity, Consistency, Isolation and Durability. Which feature under ACID Test refers to the pre-requisite that "Once transactions are completed, they cannot be undone".
   (a) Atomicity
   (b) Consistency
   (c) Isolation
   (d) Durability

5. In Computer system, _____ establish the authenticity of persons and prevent the denial of messages or contracts when data is exchanged electronically.

    (a) Plastic Cards

    (b) Digital Signatures

    (c) One Time Password

    (d) Encryption

Accounting Information Systems (AIS)

6. Accountants and Auditors must study and understand Accounting Information Systems (AIS) and related concepts so that they can accomplish the functions of accounting, general accounting reports and using accounting reports. Determine the three basic functions of AIS that they should build their understanding upon?

Flowchart

7. The GST of 50 items is to be calculated as per the following details. With Code No. and Value of Supply as input, draw a flowchart to calculate the Tax and print the Tax, Code No. of the Item and the Type of Item. *(Note: The rates have been taken hypothetically)*

Code No.(C_No)	Types of Item	Tax Rate
001	Perishable	15%
002	Textiles	10%
003	Luxury Items	20%
004	Machinery	12%

Mobile Computing

8. Mobile Computing enables enterprises to connect with their employees all times resulting in the increased productivity and a better Return on Investments (RoI). Discuss some examples of its business applications.

Information Systems Life Cycle

9. In an organization, there may come a time when the existing systems may not remain efficient and effective, thus, arising a need for the development of new Information Systems. Identify the various phases involved in the development of an Information System.

Network Architecture and Protocol

10. Discuss Network Architecture and Protocol.

E-Commerce Applications

11. As a user, determine the benefits that can be derived by using E-Commerce applications and their implementation.

Transaction Processing Systems (TPS)

12. Discuss the attributes that any Transaction Processing System (TPS) would possess.

Credit Card

13. A customer contacted a bank's customer care executive to enquire about the processing of Credit Cards. As an executive, what shall be your explanation?

Input Controls

14. Discuss Input Controls under Application Controls.

Grid Computing

15. You are deputed as an IT Administrator in ABC company. From your perspective, determine the reasons why Grid Computing should be used.
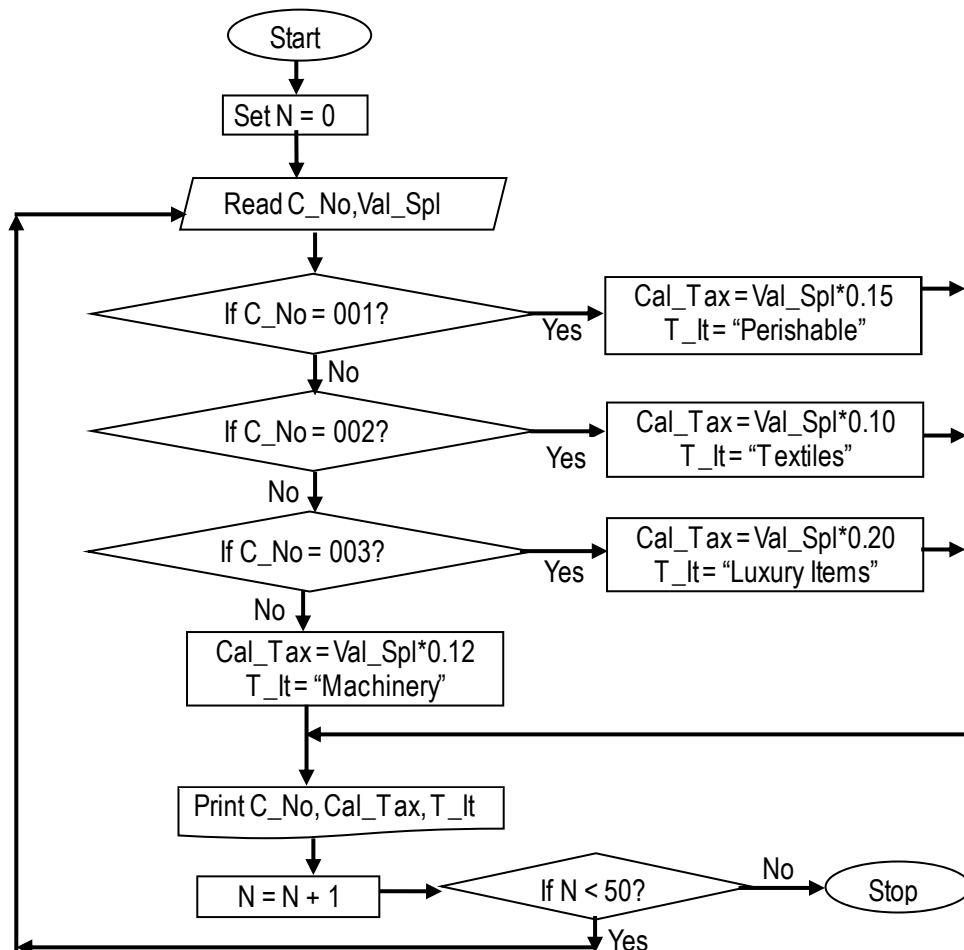
SUGGESTED ANSWERS/HINTS

1. (a) Physical Layer

2. (b) (4)-(3)-(6)-(1)-(2)-(5)

3. (b) Resilience

4. (d) Durability

5. (b) Digital Signatures

6. Accountants and Auditors must study and understand Accounting Information Systems (AIS) and related concepts so that they can accomplish the functions of accounting, general accounting reports and using accounting reports. The Accounting Information System is the mechanism that allows accountants to perform their accounting functions and tasks. As auditors, understanding of AIS is critical for collecting and evaluating evidence to provide an opinion/report on the completeness and accuracy of accounting information which is processed through AIS to produce the financial reports. The three basic functions of AIS are as under:

(i) **Collect and store data:** Collect and store data about organization's business activities and transactions by capturing transaction data from source documents and posting data from journals to ledgers. Source documents are special forms used to capture transaction data such as sales order, sales invoice, order processing, purchase order, etc. Control over data collection is improved by pre-numbering each source document. Accuracy and efficiency in recording transaction data can be further improved if source documents are properly designed.

(ii) **Record transaction:** Record transactions data into journals that present a chronological record of what occurred and provide management with information

useful for decision making. These documents are in the form of reports like financial statements, managerial reports, etc.

(iii) **Safeguard organisational assets:** Provide adequate controls to ensure that data is recorded and processed accurately by safeguarding organizational assets (data and systems). The two important methods for accomplishing this objective are by providing adequate documentation of all business activities and an effective segregation of duties. Documentation allows management to verify that assigned responsibilities were completed correctly. Segregation of Duties refers to dividing responsibility for different portions of a transaction among several people. The functions to be performed by different people are authorizing (approval) transactions, recording (capture) transactions and maintaining custody (protect) of assets, thereby ensuring that business activities are performed efficiently and in accordance with management's objectives.

7.   The required flowchart is as below:

```
                        ┌──────────┐
                        │  Start   │
                        └──────────┘
                             │
                        ┌──────────┐
                        │ Set N = 0│
                        └──────────┘
                             │
                   ┌─────────────────────┐
          ┌───────▶│ Read C_No, Val_Spl  │
          │        └─────────────────────┘
          │                  │
          │            ╱─────────────╲        ┌────────────────────────────┐
          │           ╱ If C_No = 001? ╲─Yes──│ Cal_Tax = Val_Spl*0.15     │
          │           ╲               ╱        │ T_It = "Perishable"        │
          │            ╲─────────────╱         └────────────────────────────┘
          │                  │ No
          │            ╱─────────────╲        ┌────────────────────────────┐
          │           ╱ If C_No = 002? ╲─Yes──│ Cal_Tax = Val_Spl*0.10     │
          │           ╲               ╱        │ T_It = "Textiles"          │
          │            ╲─────────────╱         └────────────────────────────┘
          │                  │ No
          │            ╱─────────────╲        ┌────────────────────────────┐
          │           ╱ If C_No = 003? ╲─Yes──│ Cal_Tax = Val_Spl*0.20     │
          │           ╲               ╱        │ T_It = "Luxury Items"      │
          │            ╲─────────────╱         └────────────────────────────┘
          │                  │ No
          │        ┌────────────────────────┐
          │        │ Cal_Tax = Val_Spl*0.12 │
          │        │ T_It = "Machinery"     │
          │        └────────────────────────┘
          │                  │
          │        ┌────────────────────────┐
          │        │ Print C_No, Cal_Tax, T_It│
          │        └────────────────────────┘
          │                  │
          │        ┌──────────┐   ╱──────────╲   No   ┌──────┐
          │        │ N = N + 1│──▶│ If N < 50? ╲─────▶│ Stop │
          │        └──────────┘   ╲──────────╱        └──────┘
          │                             │ Yes
          └─────────────────────────────┘
```

The variables are defined as follows:

C = Code No; Val_Spl = Value of Supply; T_It = Types of Item

N = Counter; Cal_Tax = Calculated Tax after GST

8. Mobile Computing enables enterprises to connect with their employees all times resulting in increased productivity and a better Return on Investments (RoI). Some examples of business applications are as follows:

- There is an increase in workforce productivity as mobile device enables employees to work from anywhere, anytime by accessing and updating information as required. For example - employees can read/respond to emails using laptops, PDAs or smart phones from office, residence and even when on the move.

- Customer service can be improved by responding to customer queries on site or off site. For example - customer complaints can be accessed and responded by accessing past/latest information of client as required.

- Incident management can be improved by resolving problems faster without limitation of time as the concerned employees can attend to these regardless of their location. Further, escalations can be updated in real time which ensures timely resolution of problems. For example - Computer breakdowns can be serviced by service engineers from their desks/outside by logging into the specific computer, identify problem and resolve it online.

- Business processes can be transformed by using mobile devices. Enterprises can reengineer core business processes. The new and reengineered processes can focus on utilizing the key features of location and time independence. Enterprises can focus on providing customers and employees with access to information in different ways and provide the latest information. This enables employees, customers, and businesses to be available to one another as per their choice. For example - billing can be done by employees using hand held devices at customer site and the information updated online and deliveries to customers can be speeded up.

- Enterprises can dynamically modify and update their offerings and offer new products and services altogether. For example - enterprises can implement telecommuting with flexible working hours and locations allowing for cost savings and better efficiency.

- Mobile computing gives users the freedom to roam, with access to data and services at any time and in any place. Most of the high-end ERP and business software applications for SMEs have in-built capabilities of mobile computing enabling users to access data. Used with proper security, enterprises can harness the power of this technology to create innovative opportunities for improving the quality and efficiency of business processes and services. Mobile devices are increasingly acquiring the must-have status for enterprises because the increasing acceptance as business tools.

9. Various phases that are involved in developing an Information System are as follows:

- **Phase 1: System Investigation:** This phase examines that 'What is the problem and is it worth solving'? The feasibility study under the following dimensions is as follows:

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

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

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

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

  o **Schedule feasibility:** How long will the system take to develop, or can it be done in a desired time-frame?

- **Phase 2: System Analysis:** This phase examines that 'What must the Information System do to solve the problem'? System analyst would be gathering details about the current system and will involve:

  o **Interviewing staff:** at different levels from end-users to senior management;

  o **Examine current business:** systems documents and output including current order documents, computer system procedures and reports used by operations and senior management;

  o **Sending out questionnaires:** that must be carefully constructed to elicit unambiguous answers; and

  o **Observation of current procedures:** by spending time in various departments. A time and motion study can show where procedures could be more efficient or to detect bottlenecks.

- **Phase 3: System Designing:** This phase examines that 'How will the Information System do that it must do to obtain the solution to the problem'? This phase specifies the technical aspects of a proposed system in terms of:

  o **Hardware platform:** Computer, network capabilities, input, storage and output devices;

  o **Software:** Programming language, package and database;

  o **Outputs:** Report layouts and screen designs;

  o **Inputs**: Documents, screen layouts and validation procedures;

  o **User interface:** How users will interact with the computer system;

- o **Modular design:** Of each program in the application;

- o **Test plan:** Develop test data;

- o **Conversion plan:** How the new system is to be implemented; and

- o **Documentation:** Including systems and operations documentation. Later, a user manual will be produced.

- **Phase 4: System Implementation:** This phase examines that 'How will the Solution be put into effect'? This phase involves the following steps:

  - o Coding and testing of the system;

  - o Acquisition of hardware and software; and

  - o Either installation of the new system or conversion of the old system to the new one.

- **Phase 5: System Maintenance and Review:** This phase evaluates results of solution and modifies the system to meet the changing needs. Post implementation review would be done to address:

  - o Programming amendments,

  - o Adjustment of clerical procedures,

  - o Modification of Reports, and

  - o Request for new programs.

10. **Network Architecture:** Network Architecture refers to the layout of the network consisting of the hardware, software, connectivity, communication protocols and mode of transmission, such as wired or wireless. The diagram of the network architecture provides a full picture of the established network with detailed view of all the resources accessible. In other words, Network Architecture includes hardware components used for communication, cabling and device types, network layout and topologies, physical and wireless connections, implemented areas and future. In addition, the software rules and protocols also constitute to the network architecture. The goal of network architecture is to promote an open, simple, flexible, and efficient telecommunications environment. This is accomplished using Standard protocols; Standard communications hardware and software interfaces; and standard multilevel interface between end users and computer systems.

Protocols: Protocols are software that performs a variety of actions necessary for data transmission between computers. Stated more precisely, protocols are a set of rules for intercomputer communication that have been agreed upon and implemented by many vendors, users and standards bodies to ensure that the information being exchanged between the two parties is received and interpreted correctly. Thus, we can say that, Network protocols which are essentially software are sets of rules for-

- Communicating timings, sequencing, formatting, and error checking for data transmission.
- Providing standards for data communication.

A protocol defines the following three aspects of digital communication.

(a) Syntax: The format of data being exchanged, character set used, type of error correction used, type of encoding scheme (e.g., signal levels) being used.

(b) Semantics: Type and order of messages used to ensure reliable and error free information transfer.

(c) Timing: Defines data rate selection and correct timing for various events during data transfer.

At the sending computer, protocols –

(i) Break data down into packets;

(ii) Add destination address to the packet; and

(iii) Prepares data for transmission through Network Interface Card (NIC)

At the receiving computer, protocols –

(i) Take data packets off the cable;

(ii) Bring packets into computer through Network Interface Card (NIC);

(iii) Strip the packets off any transmitting information;

(iv) Copy data from packet to a buffer for reassembly; and

(v) Pass the reassembled data to the application.

11. E-Commerce presents immense benefits to individual organizations, consumers, and society as a whole.

- Reduction in costs to buyers from increased competition in procurement as more suppliers are able to compete in an electronically open marketplace.
- Reduction in errors, time, and overhead costs in information processing by eliminating requirements for re-entering data.
- Reduction in costs to suppliers by electronically accessing on-line databases of bid opportunities, on-line abilities to submit bids, and on-line review of rewards.
- Reduction in time to complete business transactions, particularly from delivery to payment.
- Creation of new markets through the ability to easily and cheaply reach potential customers.

- Easier entry into new markets, especially geographically remote markets, for enterprises regardless of size and location.

- Better quality of goods as specifications are standardized and competition is increased and improved variety of goods through expanded markets and the ability to produce customized goods.

- Faster time to market as business processes are linked, thus enabling seamless processing and eliminating time delays.

- Optimization of resource selection as businesses form cooperative teams to increase the chances of economic successes, and to provide the customer products and capabilities more exactly meeting the requirements.

- Reduction in inventories and reduction of risk of obsolete inventories as the demand for goods and services is electronically linked through just-in-time inventory and integrated manufacturing techniques.

- Reduction in overhead costs through uniformity, automation, and large-scale integration of management processes.

- Reduction in use of ecologically damaging materials through electronic coordination of activities and the movement of information rather than physical objects).

- Reduction in advertising costs.

12. The attributes of Transaction Processing Systems (TPS) are as follows:

- **Access Control - TPS:** Most Transaction Processing Systems come with access control to put a ceiling on users to only those allowed to accomplish so. Access Control ensures that people who are not authorized to use the system are not permissible to influence or transform the transaction process.

- **Equivalence - TPS:** Transactions are processed in the similar format every time to ensure that full effectiveness is achieved. The TPS Interfaces are designed to get hold of identical data for each transaction, despite the consequences of the source.

- **High Volume Rapid Processing - TPS:** In most of the transaction processing, the foremost issue is momentum. The instantaneous processing of transactions is noteworthy to the success of certain industry such as banking. TPS is designed to process transactions in an immediate effect to make confident that the transaction data is available to other users or processes that entail it.

- **Trustworthiness - TPS:** A TPS system is designed to be robust and trustworthy. The system is capable to process transactions very rapidly, yet at the same time, conduct several checks to make certain that the data integrity is preserved.

13. **Credit Cards:** In a credit card transaction, the consumer presents preliminary proof of his ability to pay by presenting his credit card number to the merchant. The merchant can verify this with the bank, and create a purchase slip for the consumer to endorse. The merchant then uses this purchase slip to collect funds from the bank, and, on the next billing cycle, the consumer receives a statement from the bank with a record of the transaction.

Processing of Credit Card involves following steps:

- **Step 1: Authorization –** This is the first step in processing a credit card. After a merchant swipes the card, the data is submitted to merchant's bank, called an acquirer, to request authorization for the sale. The acquirer then routes the request to the card issuing bank, where it is authorized or denied, and the merchant can process the sale.

- **Step 2: Batching –** This is the second step in processing a credit card. At the end of a day, the merchant reviews all the day's sales to ensure they were authorized and signed by the cardholder. It then transmits all the sales at once, called a batch, to the acquirer to receive payment.

- **Step 3: Clearing –** This is the third step in processing a credit card. After the acquirer receives the batch, it sends it through the card network, where each sale is routed to the appropriate issuing bank. The issuing bank then subtracts its interchange fees, which are shared with the card network, and transfers the remaining amount through the network back to the acquirer.

- **Step 4: Funding –** This is the fourth and final step in processing a credit card. After receiving payment from the issuer, minus interchange fees, the acquirer subtracts its discount fee and sends the remainder to the merchant. The merchant is now paid for the transaction, and the cardholder is billed.

14. **Input Controls:** These are responsible for ensuring the accuracy and completeness of data that are input into an application system. Input controls are important since substantial time is spent on inputting data which involves human intervention and are therefore prone to errors and fraud. The type of data input method used in an information system affects asset safeguarding, data integrity, system effectiveness, and system efficiency objectives. If data is keyed into an information system via a terminal, high quality screen design is important to minimizing input errors and to achieving effective and efficient input of data.

- **Source Document Control:** From a control viewpoint, a well-designed source document reduces the likelihood of data recording errors, increases the speed with which data can be recorded and controls the work flow. Source Document Controls facilitates the data entry into a computer system and subsequent reference checking.

- **Data Coding Controls:** Data Coding Controls are put in place to reduce user error during data feeding.

- **Batch Controls:** These are put in place at locations where batch processing is being used. Batch processing is where there is a time gap between occurrence and recording of transactions, that is, transactions are not recorded at the time of occurrence but are accumulated and a set (based on number/ time) is processed.

- **Validation Controls:** These validate the accuracy/correctness of input data. Input Validation Controls are intended to detect errors in transaction data before the data are processed.

15. From an Administrative Perspective, Grid Computing is used because of following reasons:

- **Planning**: The administrator should understand the organization's requirements for the grid to better choose the grid technologies that satisfy grid's requirements. One of the first considerations is the hardware available and how it is connected via a LAN or WAN. Next, an organization may want to add additional hardware to supplement the capabilities of the grid.

  - o **Security:** Security is a much more important factor in planning and maintaining a grid where data sharing comprises the bulk of the activity. In a grid, the member machines are configured to execute programs rather than just move data. This makes an unsecured grid potentially fertile ground for viruses and Trojan horse programs. For this reason, it is important to understand the issues involved in authenticating users and providing proper authorization for specific operations.

  - o **Organization**: It is important to understand how the departments in an organization interact, operate, and contribute to the whole. Often, there are barriers built between departments and projects to protect their resources in an effort to increase the probability of timely success. For example, a project that finds itself behind schedule and over budget may not be able to afford the resources required to solve the problem. A grid would give such projects an added measure of safety, providing an extra margin of resource.

- **Installation**: First, the selected grid system must be installed on an appropriately configured set of machines. These machines should be connected using networks with sufficient bandwidth to other machines on the grid. Machines should be configured and connected to facilitate recovery scenarios. Any critical databases or other data essential for keeping track of the jobs in the grid, members of the grid, and machines on the grid should have suitable backups.

- **Managing enrollment of donors and users:** The administrator is responsible for controlling the rights of the users in the grid. Donor machines may have access rights that require management as well. The rights of these grid user IDs must be properly set so that grid jobs do not allow access to parts of the donor machine to which the users are not entitled. As users join the grid, their identity must be positively

established and entered in the Certificate Authority. Further, procedures for removing users and machines must also be executed by the administrator.

- **Certificate Authority:** It is critical to ensure the highest levels of security in a grid because the grid is designed to execute code and not just share data. Thus, viruses, Trojan horses, and other attacks cane affect the grid system. The Certificate Authority is one of the most important aspects of maintaining strong grid security. An organization may choose to use an external Certificate Authority or operate one itself.

- **Resource Management:** Another responsibility of the administrator is to manage the resources of the grid. This includes setting permissions for grid users to use the resources as well as tracking resource usage and implementing a corresponding accounting or billing system. Usage statistics are useful in identifying trends in an organization that may require the acquisition of additional hardware; reduction in excess hardware to reduce costs; and adjustments in priorities and policies to achieve better for attaining the overall goals of an organization etc.

- **Data sharing:** For small grids, the sharing of data can be fairly easy, using existing networked file systems, databases, or standard data transfer protocols. As a grid grows and the users become dependent on any of the data storage repositories, the administrator should consider procedures to maintain backup copies and replicas to improve performance. All of the resource management concerns apply to data on the grid.

SECTION – B: STRATEGIC MANAGEMENT

Multiple Choice Questions

1. (i)   What do we mean by the term 'strategic change'?

    (a)   The proactive management of change to achieve strategic objectives.

    (b)   The changes that inevitably result in organisations as they evolve in a changing environment.

    (c)   An important organisational change.

    (d)   Planned change.

    (ii)   Which of the following statement is correct for strategy implementation?

    (a)   Strategy implementation positions forces before the action.

    (b)   It requires intellectual skills.

    (c)   It is basically an operational process.

    (d)   It focuses on effectiveness.

    (iii)   An organization's strengths and weaknesses are determined relative to

    (a)   its strategic business units

    (b)   government

    (c)   competitors

    (d)   external opportunities and threats

    (iv)   Developing a vision and mission, identifying an organization's external opportunities and threats, and determining internal strengths and weaknesses are all _____ activities.

    (a)   strategy-formulation

    (b)   strategy-implementation

    (c)   long-range planning

    (d)   short-range planning

    (v)   In a large organization, strategic management activities occur at what level(s)?

    (a)   Corporate and divisional only

    (b)   Divisional

    (c)   Strategic business unit only

    (d)   Functional, divisional, and corporate

(vi)   Developing new digital watch by a company manufacturing analogue watches is:

(a)   a product development strategy

(b)   a market development strategy

(c)   a market penetration strategy

(d)   none of the above

(vii) Which of the following is not a significance of SWOT analysis:

(a)   SWOT provides a logical framework of analysis

(b)   SWOT presents a comparative account

(c)   SWOT overemphasizes a single dimension of strategy.

(d)   SWOT guides the strategist in strategy identification

(viii) The scope of Financial management covers:

(a)   Sources of finance

(b)   Financing mix

(c)   How firm should analyze, plan and control its financial affairs

(d)   All the above

(ix)   What action involves reconfiguring or redesigning work, jobs and processes for the purpose of improving costs, quality, service and speed?

(a)   Restructuring

(b)   Downsizing

(c)   Reengineering

(d)   Benchmarking

(x)   What is not one of Michael Porter's five competitive forces?

(a)   New entrants

(b)   Rivalry among existing firms

(c)   Bargaining power of unions

(d)   Bargaining power of suppliers

Differences between the two concepts

2.   Distinguish between the following:

(a)   SWOT and TOWS matrix

(b)   Operational control and Management control

(c)   Vision and mission

Short notes

3. Write short notes on the following:

    (a) Strategic surveillance

    (b) Objectives of business

    (c) Experience curve

Brief answers

4. Briefly answer the following questions:

    (a) Under what conditions a turnaround strategy can be used in an organization?

    (b) "Six sigma is not merely a quality initiative, it is a business initiative." Elucidate.

    (c) Does HRM function play a role in organizational strategy?

Descriptive answers

Chapter 1-Business Environment

5. "A business enterprise is a sub-system of the larger environmental system." Discuss the relationship between the organization and its business environment.

6. How PESTLE analysis is used for analyzing the macro environment? Explain.

Chapter 2-Business Policy and Strategic Management

7. Explain in detail the term corporate strategy with its characteristics.

8. What are the major dimensions of strategic decision making?

Chapter 3-Strategic Analysis

9. How would you argue that strategic analysis is the starting point for strategic thinking?

10. How an organization analyses its business portfolio explain on market growth rate and relative market share.

Chapter 4-Strategic Planning

11. What are the various bases on which an existing firm can diversify strategically?

12. Discuss how mergers and acquisitions are used for business growth. What are the various types of mergers?

Chapter 5-Formulation of Functional Strategy

13. How Research and Development (R&D) personnel can play an integral part in strategy implementation?

14. What are the requirements for the successful implementation of supply chain management system? Discuss.

Chapter 6-Strategic Implementation and Control

15. Explain the various types of strategic control.

16. What are the leadership roles played by a strategic leader? Distinguish between a transformational leader and a traditional leader.

Chapter 7-Reaching Strategic Edge

17. What is Benchmarking? What are the areas where benchmarking can help?

18. How would you explain the managerial significance of Six Sigma in today's business world?

SUGGESTED ANSWERS / HINTS

1.

i	ii	iii	iv	v	vi	vii	viii	ix	x
a	c	c	a	d	a	c	d	c	c

2. **(a)** TOWS Analysis is a variant of the classic business tool, SWOT Analysis. TOWS and SWOT are acronyms for different arrangements of the words Strengths, Weaknesses, Opportunities and Threats. By analyzing the external environment (threats and opportunities), and internal environment (weaknesses and strengths), we can use these techniques to think about the strategy of a company. Following are the some basic differences between TOWS and SWOT matrix:

   ♦ TOWS emphasise on external environment whereas SWOT emphasises on internal environment.

   ♦ TOWS matrix is about the combinations of SO, ST, WO, WT whereas SWOT matrix is about S, W, O, T.

   ♦ TOWS analysis is an action tool whereas SWOT analysis is a planning tool.

   ♦ TOWS is particularly useful in evaluating the potential impact of sudden events or developments while SWOT is usually employed in evaluating a company's business plan.

   (b) Differences between Operational Control and Management Control are as under:

   (i) The thrust of operational control is on individual tasks or transactions as against total or more aggregative management functions. When compared with operational, management control is more inclusive and more aggregative, in the sense of embracing the integrated activities of a complete department, division or even entire organisation, instead or mere narrowly circumscribed activities of sub-units. For example, procuring specific items for inventory is a matter of operational control, in contrast to inventory management as a whole.

(ii) Many of the control systems in organisations are operational and mechanistic in nature. A set of standards, plans and instructions are formulated. On the other hand, the basic purpose of management control is the achievement of enterprise goals – short range and long range – in an effective and efficient manner.

(c) The vision describes a future identity while the Mission serves as an ongoing and time-independent guide.

The vision statement can galvanize the people to achieve defined objectives, even if they are stretch objectives, provided the vision is specific, measurable, achievable, relevant and time bound. A mission statement provides a path to realize the vision in line with its values. These statements have a direct bearing on the bottom line and success of the organization.

A mission statement defines the purpose or broader goal for being in existence or in the business and can remain the same for decades if crafted well while a vision statement is more specific in terms of both the future state and the time frame. Vision describes what will be achieved if the organization is successful.

3. (a) **Strategic surveillance:** Contrary to the premise control, the strategic surveillance is unfocussed. It involves general monitoring of various sources of information to uncover unanticipated information having a bearing on the organizational strategy. It involves casual environmental browsing. Reading financial and other newspapers, business magazines, meetings, conferences, discussions at clubs or parties and so on can help in strategic surveillance.

Strategic surveillance may be loose form of strategic control, but is capable of uncovering information relevant to the strategy.

(b) Enterprises pursue multiple objectives rather than a single objective. In general, we may identify a set of business objectives pursued by a large cross-section of enterprises. These relate to profitability, productive efficiency, growth, technological dynamism, stability, self-reliance, survival, competitive strength, customer service, financial solvency, product quality, diversification, employee satisfaction and welfare, and so on. Enterprises seek to balance these objectives in some appropriate manner. We may now elaborate some of the more important objectives of business

♦ Survival

♦ Stability

♦ Growth

♦ Efficiency

♦ Profitability

(c) Experience curve is similar to learning curve which explains the efficiency gained by workers through repetitive productive work. Experience curve is based on the commonly observed phenomenon that unit costs decline as a firm accumulates

experience in terms of a cumulative volume of production. The implication is that larger firms in an industry would tend to have lower unit costs as compared to those of smaller organizations, thereby gaining a competitive cost advantage. Experience curve results from a variety of factors such as learning effects, economies of scale, product redesign and technological improvements in production.

The concept of experience curve is relevant for a number of areas in strategic management. For instance, experience curve is considered a barrier for new firms contemplating entry in an industry. It is also used to build market share and discourage competition.

4. **(a)** When firms are losing their grips over market, profits due to several internal and external factors, and if they have to survive under the competitive environment they have to identify danger signals as early as possible and undertake rectification steps immediately. These conditions may be, inter alia cash flow problems, lower profit margins, high employee turnover and decline in market share, capacity underutilization, low morale of employees, recessionary conditions, mismanagement, raw material supply problems and so on.

   (b) Six Sigma is a total management commitment and philosophy of excellence, customer focus, process improvement. Six Sigma is about making every area of the organization better able to meet the changing needs of customers, markets, and technologies - with benefits for employees, customers, and shareholders. So the six sigma is not merely a quality initiative, it is a business initiative.

   (c) 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.

5. A business does not function in isolation, rather, it acts as a sub-system of its environment consisting of society, economy, laws, competitors and so on. Business draws certain inputs from environment in the form of resources and information and transforms them into outputs. The relationship between the organization and its environment may be discussed in terms of interactions between them that can be broadly outlined as below:

   Exchange of information: The organization scans the external environmental variables, their behaviour and changes, generates important information and uses it for its planning, decision-making and control purposes.

   On the other hand, the organization itself transmits information to several external agencies either voluntarily, inadvertently or legally.

Exchange of resources: The organization receives inputs — finance, materials, manpower, equipment etc., from the external environment. It sustains itself by employing the above inputs for involving or producing output of products and services.

The organization is also dependent on the external environment for disposal of its output of products and services to a wide range of clientele.

Exchange of influence and power: The external environment holds considerable power over the organization both by virtue of its being more inclusive as also by virtue of its command over resources, information and other inputs. The external environment is also in a position to impose its will over the organization. Governmental control, competitors, customers, suppliers, investors etc., exercise considerable power and influence over the organization.

In turn, the organization itself is sometimes in a position to wield power and influence over the external environment by virtue of its command over resources and information.

6. The term PESTLE is used to describe a framework for analysis of macro environmental factors. PESTLE analysis involves identifying the political, economic, socio-cultural, technological, legal and environmental influences on an organization and providing a way of scanning the environmental influences that have affected or are likely to affect an organization or its policy. PESTLE is an acronym for:

- P- political

- E- economic

- S- socio-cultural

- T- technological

- L- legal

- E- environmental

The PESTLE analysis is a simple to understand and quick to implement. The advantage of this tool is that it encourages management into proactive and structured thinking in its decision making.

The Key Factors

- **Political** factors are how and to what extent a government intervenes in the economy and the activities of corporate. Political factors may also include goods and services which the government wants to provide or be provided and those that the government does not want to be provided.

- **Economic** factors have major impacts on how businesses operate and take decisions. For example, interest rates affect a firm's cost of capital and therefore to what extent a business grows and expands. The money supply, inflation, credit flow, per capita income, growth rates have a bearing on the business decisions.

- **Social** factors affect the demand for a company's products and how that company operates.

- **Technological** factors can determine barriers to entry, minimum efficient production level and influence outsourcing decisions. Furthermore, technological shifts can affect costs, quality, and lead to innovation.

- **Legal** factors affect how a company operates, its costs, and the demand for its products.

- **Environmental** factors affect industries such as tourism, farming, and insurance. Growing awareness to climate change is affecting how companies operate and the products they offer.

On the basis of these, it should be possible to identify a number of key environmental influences, which are in effect, the drivers of change. These are the factors that require to be considered in matrix. A typical example is as follows:

Political	**Economic**
• Political stability	• Economic situation & trends
• Political principles and ideologies	• Market and trade cycles
• Current and future taxation policy	• Specific industry factors
• Regulatory bodies and processes	• Customer/end-user drivers
• Government policies	• Interest and exchange rates
• Government term and change	• Inflation and unemployment
• Thrust areas of political leaders.	• Strength of consumer spending
Social	**Technological**
• Lifestyle trends	• Replacement technology/solutions
• Demographics	• Maturity of technology
• Consumer attitudes and opinions	• Manufacturing maturity and capacity
• Brand, company, technology image	• Innovation potential
• Consumer buying patterns	• Technology access, licensing, patents
• Ethnic/religious factors	• Intellectual property rights and copyrights
• Media views and perception	

Legal	Environmental
• Business and Corporate Laws	• Ecological/environmental issues
• Employment Law	• Environmental hazards
• Competition Law	• Environmental legislation
• Health & Safety Law	• Energy consumption
• International Treaty and Law	• Waste disposal
• Regional Legislation	

7. The term strategy is associated with unified design and action for achieving major goals, gaining command over the situation with a long-range perspective and securing a critically advantageous position. Strategies are formulated at the corporate, divisional and functional level. Corporate strategies are formulated by the top managers. They include the determination of the business lines, expansion and growth, vertical and horizontal integration, diversification, takeovers and mergers, new investment and divestment areas, R & D projects, and so on. These corporate wide strategies need to be operationalized by divisional and functional strategies regarding product lines, production volumes, quality ranges, prices, product promotion, market penetration, purchasing sources, personnel development and like.

In general, a corporate strategy has the following characteristics:

- It is generally long-range in nature, though it is valid for short-range situations also and has short-range implications.

- It is action oriented and is more specific than objectives.

- It is multi-pronged and integrated.

- It is flexible and dynamic.

- It is formulated at the top management level, though middle and lower level managers are associated in their formulation and in designing sub-strategies.

- It is generally meant to cope with a competitive and complex setting.

- It flows out of the goals and objectives of the enterprise and is meant to translate them into realities.

- It is concerned with perceiving opportunities and threats and seizing initiatives to cope with them. It is also concerned with deployment of limited organizational resources in the best possible manner.

- It gives importance to combination, sequence, timing, direction and depth of various moves and action initiatives taken by managers to handle environmental uncertainties and complexities.

- It provides unified criteria for managers in function of decision making.

8. 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 thinking in totality of the organizations and also there is lot of risk involved. Hence, problems calling for strategic decisions require to be considered by top management.

    *   *Strategic issues involve the allocation of large amounts of company resources*: It may require huge financial investment to venture into a new area of business or the organization may require huge number of manpower with new set of skills in them.

    *   *Strategic issues are likely to have a significant impact on the long term prosperity of the firm*: Generally the results of strategic implementation are seen on a long term basis and not immediately.

    *   *Strategic issues are future oriented*: Strategic thinking involves predicting the future environmental conditions and how to orient for the changed conditions.

    *   *Strategic issues usually have major multifunctional or multi-business consequences:* As they involve organization in totality they affect different sections of the organization with varying degree.

    *   *Strategic issues necessitate consideration of factors in the firm's external environment: Strategic focus in organization involves orienting its internal environment to the changes of external environment.*

9. The external analysis process focuses on scanning of environment in which all organizations work as sub-systems. The scanning of external environment leads to the identification of opportunities and threats & opening the organizations to the external world. While the internal analysis leads to the study of strengths and weakness which will decide to what extent each company is going to capitalize the opportunities and threats.

    Moreover, strategic thinking judges about the nature of strategy and proceeds to flow directly from analysis of a company's external environment and internal situation. The analytical sequence starts from strategic appraisal of the company's external and internal situations and to evaluate alternatives for implanting the strategy choices. Accurate diagnosis of the company's situation is necessary. Managerial preparation for deciding a sound long term direction is done by setting appraisal alternate and creating a winning strategy.

    Understanding of the strategic aspects of a company's external and internal environment, the changes are greatly influenced that how managers will lay out a strategic game plan. Thus, it is a major prospect for building competitive advantage and that is likely to boost company performance.

10. The BCG growth-share matrix is the simplest way to portray a corporation's portfolio of investments. Growth share matrix also known for its cow and dog metaphors is popularly

used for resource allocation in a diversified company. Using the BCG approach, a company classifies its different businesses on a two-dimensional growth-share matrix. In the matrix:

- The vertical axis represents market growth rate and provides a measure of market attractiveness.

- The horizontal axis represents relative market share and serves as a measure of company strength in the market.

Using the matrix, organisations can identify four different types of products or SBU as follows:

- **Stars** are products or SBUs that are growing rapidly. They also need heavy investment to maintain their position and finance their rapid growth potential. They represent best opportunities for expansion.

- **Cash Cows** are low-growth, high market share businesses or products. They generate cash and have low costs. They are established, successful, and need less investment to maintain their market share. In long run when the growth rate slows down, stars become cash cows.

Figure: BCG Growth-Share Matrix

- **Question Marks,** sometimes called problem children or wildcats, are low market share business in high-growth markets. They require a lot of cash to hold their share. They need heavy investments with low potential to generate cash. Question marks if left unattended are capable of becoming cash traps. Since growth rate is high, increasing it should be relatively easier. It is for business organisations to turn them stars and then to cash cows when the growth rate reduces.

- **Dogs** are low-growth, low-share businesses and products. They may generate enough cash to maintain themselves, but do not have much future. Sometimes they may need cash to survive. Dogs should be minimised by means of divestment or liquidation.

Once the organisations have classified its products or SBUs, it must determine what role each will play in the future. The four strategies that can be pursued are:

(i) **Build:** Here the objective is to increase market share, even by forgoing short-term earnings in favour of building a strong future with large market share.

(ii) **Hold:** Here the objective is to preserve market share.

(iii) **Harvest:** Here the objective is to increase short-term cash flow regardless of long-term effect.

(iv) **Divest:** Here the objective is to sell or liquidate the business because resources can be better used elsewhere.

The growth-share matrix has done much to help strategic planning study; however, there are problems and limitations with the method. BCG matrix can be difficult, time-consuming, and costly to implement. Management may find it difficult to define SBUs and measure market share and growth. It also focuses on classifying current businesses but provide little advice for future planning. They can lead the company to placing too much emphasis on market-share growth or growth through entry into attractive new markets. This can cause unwise expansion into hot, new, risky ventures or giving up on established units too quickly.

11. **Diversification Strategy:** Diversification endeavours can be related or unrelated to existing businesses of the firm. Based on the nature and extent of their relationship to existing businesses, diversification endeavours have been classified into four broad categories:

(i) Vertically integrated diversification

(ii) Horizontally integrated diversification

(iii) Concentric diversification

(iv) Conglomerate diversification

In vertically integrated diversification, firms opt to engage in businesses that are related to the existing business of the firm. The firm remains vertically within the same process. Sequence It moves forward or backward in the chain and enters specific product/process steps with the intention of making them into new businesses for the firm. The characteristic feature of vertically integrated diversification is that here, the firm does not jump outside the vertically linked product-process chain.

Horizontal Integrated Diversification: Through the acquisition of one or more similar business operating at the same stage of the production-marketing chain that is going into complementary products, by-products or taking over competitors' products.

Concentric Diversification: Concentric diversification too amounts to related diversification. In concentric diversification, the new business is linked to the existing businesses through process, technology or marketing. The new product is a spin-off from the existing facilities and products/processes. This means that in concentric diversification too, there are benefits of synergy with the current operations. However, concentric diversification differs from vertically integrated diversification in the nature of the linkage the new product has with the existing ones. The new product is only connected in a loop-like manner at one or more points in the firm's existing process/technology/product chain.

Conglomerate Diversification: In conglomerate diversification, no such linkages exist; the new businesses/ products are disjointed from the existing businesses/products in every way; it is a totally unrelated diversification. In process/technology/function, there is no connection between the new products and the existing ones. Conglomerate diversification has no common thread at all with the firm's present position.

12. Many organizations in order to achieve quick growth, expand or diversify use strategies such as mergers and acquisitions. This also helps in deploying surplus funds.

Merger and acquisition in simple words are defined as a process of combining two or more organizations together. There is a thin line of difference between the two terms but the impact of combination is completely different in both the cases.

Some organizations prefer to grow through mergers. Merger is considered to be a process when two or more organizations join together to expand their business operations. In such a case the deal gets finalized on friendly terms. Owners of pre-merged entities have right over the profits of new entity. In a merger two organizations combine to increase their strength and financial gains.

When one organization takes over the other organization and controls all its business operations, it is known as acquisition. In the process of acquisition, one financially strong organization overpowers the weaker one. Acquisitions often happen during recession in economy or during declining profit margins. In this process, one that is financially stronger and bigger establishes it power. The combined operations then run under the name of the powerful entity. A deal in case of an acquisition is often done in an unfriendly manner, it is more or less a forced association where the powerful organization takes over a weaker entity.

Types of Mergers

1. **Horizontal merger:** Horizontal mergers are combinations of firms engaged in the same industry. It is a merger with a direct competitor. The principal objective behind this type of mergers is to achieve economies of scale in the production process by shedding duplication of installations and functions, widening the line of products, decrease in working capital and fixed assets investment, getting rid of competition and so on. For example, formation of Brook Bond Lipton India Ltd. through the merger of Lipton India and Brook Bond.

2. **Vertical merger:** It is a merger of two organizations that are operating in the same industry but at different stages of production or distribution system. This often leads to increased synergies with the merging firms. If an organization takes over its supplier/producers of raw material, then it leads to backward integration. On the other hand, forward integration happens when an organization decides to take over its buyer organizations or distribution channels. Vertical merger results in operating and financial economies. Vertical mergers help to create an advantageous position by restricting the supply of inputs or by providing them at a higher cost to other players.

3. **Co-generic merger:** In co-generic merger two or more merging organizations are associated in some way or the other related to the production processes, business markets, or basic required technologies. Such merger include the extension of the product line or acquiring components that are required in the daily operations. It offers great opportunities to businesses to diversify around a common set of resources and strategic requirements. For example, an organization manufacturing refrigerators can diversify by merging with another organization having business in kitchen appliances.

4. **Conglomerate merger:** Conglomerate mergers are the combination of organizations that are unrelated to each other. There are no linkages with respect to customer groups, customer functions and technologies being used. There are no important common factors between the organizations in production, marketing, research and development and technology. In practice, however, there is some degree of overlap in one or more of these factors.

13. Research and development (R&D) personnel can play an integral part in strategy implementation. These individuals are generally charged with developing new products and improving old products in a way that will allow effective strategy implementation. R&D employees and managers perform tasks that include transferring complex technology, adjusting processes to local raw materials, adapting processes to local markets, and altering products to particular tastes and specifications.

Technological improvements that affect consumer and industrial products and services shorten product life cycles. Companies in virtually, every industry are relying on the development of new products and services to fuel profitability and growth. Surveys suggest that the most successful organizations use an R&D strategy that ties external opportunities to internal strengths and is linked with objectives. Well formulated R&D policies match

market opportunities with internal capabilities. R&D policies can enhance strategy implementation efforts to:

♦ Emphasize product or process improvements.

♦ Stress basic or applied research.

♦ Be leaders or followers in R&D.

♦ Develop robotics or manual-type processes.

♦ Spend a high, average, or low amount of money on R&D.

♦ Perform R&D within the firm or to contract R&D to outside firms.

♦ Use university researchers or private sector researchers.

14. Successful implementation of supply management system requires a change from managing individual functions to integrating activities into key supply chain processes. It involves collaborative work between buyers and suppliers, joint product development, common systems and shared information. A key requirement for successfully implementing supply chain will be network of information sharing and management. The partners need to link together to share information through electronic data interchange and take decisions in timely manner. Implementing and successfully running supply chain management system will involve:

1. **Product development:** Customers and suppliers must work together in the product development process. Right from the start the partners will have proper knowledge. Involving all partners will help in shortening the life cycles. Products are developed and launched in shorter time and help organizations to remain competitive.

2. **Procurement:** Procurement requires careful resource planning, quality issues, identifying sources, negotiation, order placement, inbound transportation and storage. Organizations have to coordinate with suppliers in scheduling without interruptions. Suppliers are involved in planning the manufacturing process.

3. **Manufacturing:** Flexible manufacturing processes must be in place to respond to market changes. They should be adaptive to accommodate customization and changes in the taste and preferences. Manufacturing should be done on the basis of just-in-time (JIT) and minimum lot sizes. Changes in the manufacturing process be made to reduce manufacturing cycle.

4. **Physical distribution:** Delivery of final products to customers is the last position in a marketing channel. Availability of the products at the right place at right time is important for each channel participant. Through physical distribution processes serving the customer become an integral part of marketing. Thus supply chain management links a marketing channel with customers.

5. **Outsourcing:** Outsourcing is not limited to the procurement of materials and components, but also include outsourcing of services that traditionally have been provided within an organization. The company will be able to focus on those activities where it has competency and everything else will be outsourced.
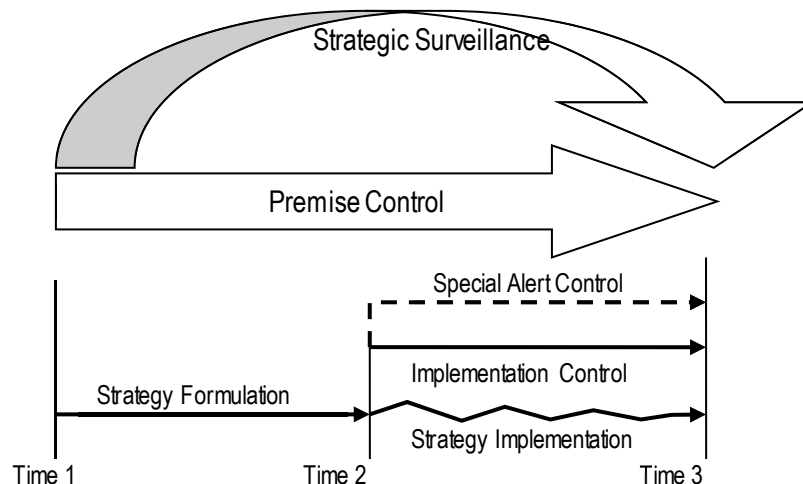
6. **Customer services:** Organizations through interfaces with the company's production and distribution operations develop customer relationships so as to satisfy them. They work with customer to determine mutually satisfying goals, establish and maintain relationships. This in turn help in producing positive feelings in the organization and the customers.

7. **Performance measurement:** There is a strong relationship between the supplier, customer and organisation. Supplier capabilities and customer relationships can be correlated with a firm performance. Performance is measured in different parameters such as costs, customer service, productivity and quality.

15. **Types of Strategic Control:** There are four types of strategic control as follows:

♦ **Premise control:** A strategy is formed on the basis of certain assumptions or premises about the complex and turbulent organizational environment. Over a period of time these premises may not remain valid. Premise control is a tool for systematic and continuous monitoring of the environment to verify the validity and accuracy of the premises on which the strategy has been built. It primarily involves monitoring two types of factors:

(i) Environmental factors such as economic (inflation, liquidity, interest rates), technology, social and regulatory.

(ii) Industry factors such as competitors, suppliers, substitutes.

♦ **Strategic surveillance:** Contrary to the premise control, the strategic surveillance is unfocussed. It involves general monitoring of various sources of information to uncover unanticipated information having a bearing on the organizational strategy. It involves casual environmental browsing. Reading financial and other newspapers, business magazines, meetings, conferences, discussions at clubs or parties and so on can help in strategic surveillance.

Strategic surveillance may be loose form of strategic control, but is capable of uncovering information relevant to the strategy.

♦ **Special alert control:** At times unexpected events may force organizations to reconsider their strategy. Sudden changes in government, natural calamities, terrorist attacks, unexpected merger/acquisition by competitors, industrial disasters and other such events may trigger an immediate and intense review of strategy. Organizations to cope up with these eventualities, form crisis management teams.

♦ **Implementation control:** Managers implement strategy by converting major plans into concrete, sequential actions that form incremental steps. Implementation control is directed towards assessing the need for changes in the overall strategy in light of unfolding events and results associated with incremental steps and actions.

Strategic implementation control is not a replacement to operational control. Unlike operational controls, it continuously monitors the basic direction of the strategy. The

two basis forms of implementation control are:

(i) *Monitoring strategic thrusts:* Monitoring strategic thrusts help managers to determine whether the overall strategy is progressing as desired or whether there is need for readjustments.

(ii) *Milestone Reviews.* All key activities necessary to implement strategy are segregated in terms of time, events or major resource allocation. It normally involves a complete reassessment of the strategy. It also assesses the need to continue or refocus the direction of an organization.

Source: From book "Strategic management-formulation, Implementation and control" by John A Pearce II, Richard B Robinson, Jr. and Amita Mital.

These four strategic controls steer the organisation and its different sub-systems to the right track. They help the organisation to negotiate through the turbulent and complex environment.

16. A strategy manager has many different leadership roles to play: visionary, chief entrepreneur and strategist, chief administrator, culture builder, resource acquirer and allocator, capabilities builder, process integrator, crisis solver, spokesperson, negotiator, motivator, arbitrator, policy maker, policy enforcer, and head cheerleader. Sometimes it is useful to be authoritarian; sometimes it is best to be a perceptive listener and a compromising decision maker; sometimes a strongly participative, collegial approach works best; and sometimes being a coach and adviser is the proper role. Many occasions call for a highly visible role and extensive time commitments, while others entail a brief ceremonial performance with the details delegated to subordinates.

For the most part, major change efforts have to be top-down and vision-driven. Leading change has to start with diagnosing the situation and then deciding which of several ways to handle it. Managers have five leadership roles to play in pushing for good strategy execution:

1.   Staying on top of what is happening, closely monitoring progress, ferreting out issues, and learning what obstacles lie in the path of good execution.

2.   Promoting a culture and esprit de corps that mobilizes and energizes organizational members to execute strategy in a competent fashion and perform at a high level.

3.   Keeping the organization responsive to changing conditions, alert for new opportunities, bubbling with innovative ideas, and ahead of rivals in developing competitively valuable competencies and capabilities.

4.   Exercising ethics leadership and insisting that the company conduct its affairs like a model corporate citizen.

5.   Pushing corrective actions to improve strategy execution and overall strategic performance.

Strategic leadership is the ability of influencing others to voluntarily make decisions that enhance prospects for the organisation's long-term success while maintaining short-term financial stability. Two basic approaches to leadership can be transformational leadership style and transactional leadership style. The difference between transformational and traditional leadership style can be given as follows:

1.   Traditional leadership borrowed its concept from formal Top-down type of leadership such as in the military. The style is based on the belief that power is bestowed on the leader, in keeping with the traditions of the past. This type of leadership places managers at the top and workers at the bottom of rung of power.

      In transformational leadership, leader motivates and empowers employees to achieve company's objectives by appealing to higher ideas and values. They use charisma and enthusiasm to inspire people to exert them for the good of the organization.

2.   Traditional leadership emphasizes characteristics or behaviours of only one leader within a particular group whereas transformational leadership provides a space to have more than one leader in the same group at the same time. According to the transformational leadership style, a leader at one instance can also be a follower in another instance. Thus, there is element of flexibility in the relationships.

3.   Traditional leadership is more focused in getting the work done in routine environment. Traditional leaders are effective in achieving the set objectives and goals whereas transformational leaders have behavioural capacity to recognize and react to paradoxes, contradictions and complexities in the environment. Transformational leadership style is more focus on the special skills or talents that the leaders must have to practice to face challenging situations. Transformational leaders work to change the organisational culture by implementing new ideas.

4.   In traditional leadership, followers are loyal to the position and what it represents rather than who happens to be holding that position whereas in transformational leadership followers dedicate and admire the quality of the leader not of its position.

17. In simple words, benchmarking is an approach of setting goals and measuring productivity based on best industry practices. It developed out of need to have information against which performances can be measured. For example, a customer support engineer of a television manufacturer attends a call within forty-eight hours. If the industry norm is that all calls are attended within twenty-four hours, then the twenty-four hours can be a benchmark.

Benchmarking helps in improving performance by learning from best practices and the processes by which they are achieved. It involves regularly comparing different aspects of performance with the best practices, identifying gaps and finding out novel methods to not only reduce the gaps but to improve the situations so that the gaps are positive for the organization. Benchmarking can help in almost all aspect of business that are amenable to comparison and are significant to business. Typically organisations can use benchmarking process to achieve improvement in diverse range of management function like:

   ♦ Maintenance operations
   ♦ Assessment of total manufacturing costs
   ♦ Product development
   ♦ Product distribution
   ♦ Customer services
   ♦ Plant utilization levels
   ♦ Human resource management

18. Six sigma means maintenance of the desired quality in processes and end products. It takes a systematic and integrated effort towards improving quality and reducing cost besides meeting and improving the organizational goals related to quality, cost, scheduling, manpower, new products and so on. It works continuously towards revising the current standards and establishing higher ones.

Conclusively, six sigma starts with a dream or vision to have the goal of near perfect products and services and superb customer satisfaction. Managers and leaders should accept the challenge to keep the organization adaptable with the changing environment.

Six sigma is often related to Motorola, the company that has invented it. It pointed out that modern technology was so complex that old ideas about acceptable quality levels are no longer acceptable. The success of Motorola effectively changed the focus of quality worldwide. Many corporate giants like Xerox, Boeing, GE, Kodak etc followed Motorola's lead. In India also Tata's, WIPRO and Bharti's and others are effectively reaping the benefits of six-sigma.

With the help of improved technology and other tools, Management is able to enhance the quality of their products and therefore meets the human unending demand for better quality products and services. Six Sigma helps the management to not only restrict itself in satisfying the existing desires of customers or to put boundary on quality by limiting it to current information and perspective of customers rather, it also helps to be futuristic i.e., in addition to meeting customer's present expectations it should also be able to improve them.