

# Institute of Advanced Management & Research, Ghaziabad

## Model Question Bank

### Subject: Management Information System

**Q-1. What do you understand by Business and Business Process?**

**Ans.-**

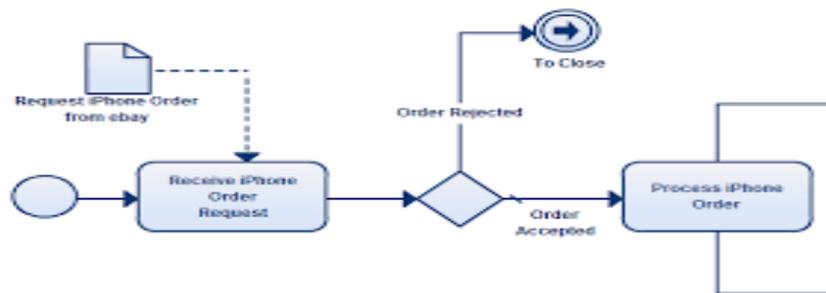
**Business:** A business (also known as an enterprise, a company or a firm) is an organizational entity involved in the provision of goods and services to consumers.

Businesses as a form of economic activity, where most of them are privately owned and provide goods and services to customers in exchange for other goods, services, or money.

A business owned by multiple individuals may form as an incorporated company or jointly organise as a partnership. Countries have different laws that may ascribe different rights to the various business entities.

**Business Process:** Business Process or Business Method is a collection of related, structured activities or tasks that produce a specific service or product (serve a particular goal) for a particular customer or customers.

It may often be visualized as a flowchart of a sequence of activities with interleaving decision points or as a process matrix of a sequence of activities with relevance rules based on data in the process.



**Q. 2 What do you understand by Information and what are its main characteristics?**

**Ans.:**

**Data:** Data is raw facts. Data is like raw material. Data does not interrelate and also it does not help in decision making. Data is defined as groups of non- random symbols in the form of text, images, voice representing quantities, action and objects.

**Information:** Information is the product of data processing. Information is interrelated data. Information is equivalent to finished goods produced after processing the raw material. The information has a value in decision making. Information brings clarity and creates an intelligent human response in the mind.

**According to Davis and Olson:** "Information is a data that has been processed into a form that is meaningful to recipient and is of real or perceived value in the current or the prospective action or decision of recipient."

It is a most critical resource of the organization. Managing the information means managing future. Information is knowledge that one derives from facts placed in the right context with the purpose of reducing uncertainty.

#### **Characteristics of Information:**

The parameters of a good quality are difficult to determine for information. Quality of information refers to its fitness for use, or its reliability. Following are the essential characteristic features:

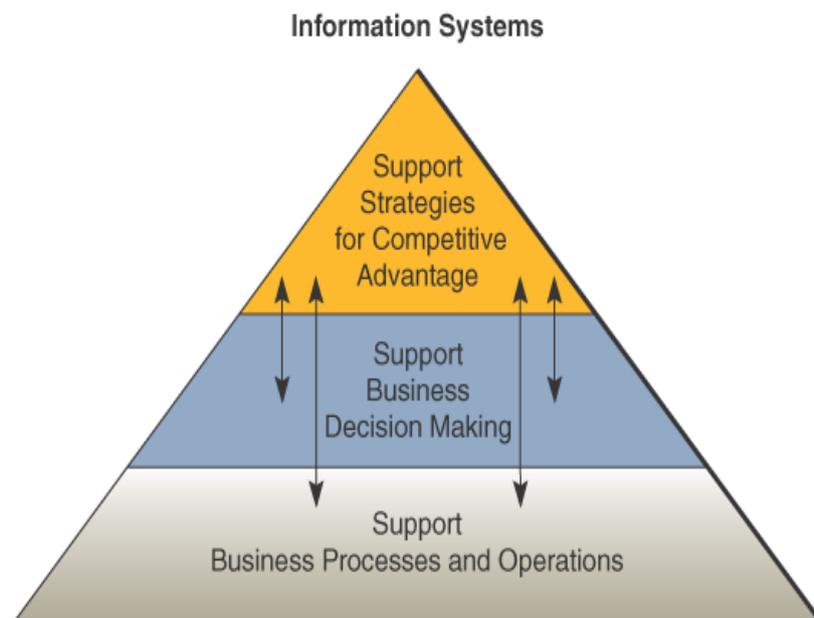
- 1. Timeliness:** Timeliness means that information must reach the recipients within the prescribed timeframes. For effective decision-making, information must reach the decision-maker at the right time, i.e. recipients must get information when they need it. Delays destroy the value of information. The characteristic of timeliness, to be effective, should also include up-to-date, i.e. current information.
- 2. Accuracy:** Information should be accurate. It means that information should be free from mistakes, errors &, clear Accuracy also means that the information is free from bias. Wrong information given to management would result in wrong decisions. As managers decisions are based on the

information supplied in MIS reports, all managers need accurate information.

3. **Relevance:** Information is said to be relevant if it answers especially for the recipient what, why, where, when, who and why? In other words, the MIS should serve reports to a manager which is useful and the information helps them to make decisions.
4. **Adequacy:** Adequacy means information must be sufficient in quantity, i.e. MIS must provide reports containing information which is required in the deciding processes of decision-making. The report should not give inadequate or for that matter, more than adequate information, which may create a difficult situation for the decision-maker. Whereas inadequacy of information leads to crises, information overload results in chaos.
5. **Completeness:** The information which is given to a manager must be complete and should meet all his needs. Incomplete information may result in wrong decisions and thus may prove costly to the organization.
6. **Explicitness:** A report is said to be of good quality if it does not require further analysis by the recipients for decision making.
7. **Impartiality:** Impartial information contains no bias and has been collected without any distorted view of the situation.

**Q. 3 Explain the Fundamental Role of Information system in Business.**

**Ans.:**



There are three fundamental reasons for all business applications of information technology.

They are found in the three vital roles that information systems can perform for a business enterprise.

- Support of its business processes and operations.
- Support of decision making by its employees and managers.
- Support of its strategies for competitive advantage.

Figure illustrates how the fundamental roles interact in a typical organization. At any moment, information systems designed to support business processes and operations may also be providing data to, or accepting data from, systems focused on business decision making or on achieving competitive advantage. The same is true for the other two fundamental roles of IS. Today's organization is constantly striving to achieve integration of their systems that allows for information to flow freely through its systems, thus adding even greater flexibility and business support than any of the individual system roles could provide.

**Q. 4 What do you understand by Information System? Discuss various type of Information.**

**Ans.:** An information system (IS) is typically considered to be a set of interrelated elements or components that collect (input), manipulate (processes), and disseminate (output) data and information

and provide a feedback mechanism to meet an objective. People rely on modern information systems to communicate with each other using a variety of physical devices (hardware), information processing instructions and procedures (software), communications channels (networks), and stored data (data resources).

A business has several information systems:

- A. Formal Information System
- B. Informal Information System
- C. Computer Based Information System
  - A. **Formal Information System:** It is based on organizational chart represented by the organization. Organizational chart is concerned with the pattern of authority, communication and work flow.
  - B. **Informal Information System:** It is an employee based system designed to meet personal and vocational needs and to help in the solution of work-related problems. It also funnels information upward through indirect channels. It works within the framework of the business and its stated policies.
- C. **Computer Based Information System (CBIS):** This category of information system depends mainly on the computer for handling business application. System analysis develops different types of information system to meet variety of business needs. There is class of system known as collectively as computer based information system. They can be classified as:
  - Transaction Processing System (TPS)
  - Management Information System(MIS)
  - Decision Making System (DSS)
  - Office Automation System (OAS)

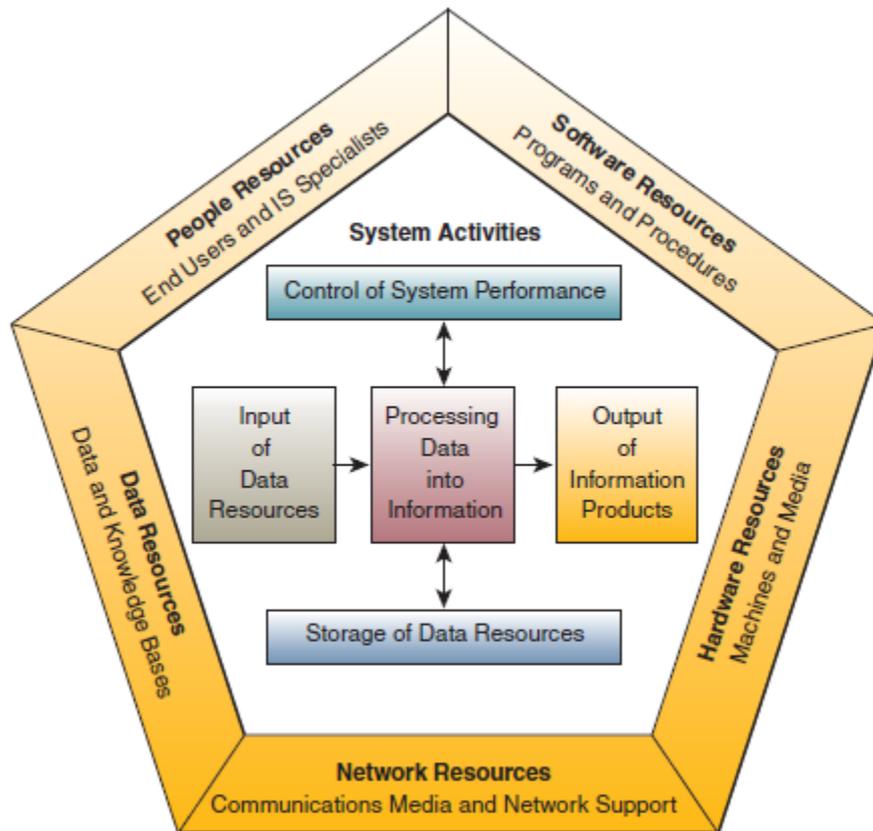
#### **Q.5 What system components and activities are involved to accomplish the processing of Data?**

**Ans.** Figure illustrates an information system model that expresses a fundamental conceptual framework for the major components and activities of information systems.

An information system depends on the resources of people (end users and IS specialists), hardware (machines and media), software (programs and procedures), data (data and knowledge bases), and networks (communications media and network support) to perform input, processing, output, storage, and control activities that convert data resources into information products.

This information system model highlights the relationships among the components and activities of information systems. It provides a framework that emphasizes four major concepts that can be applied to all types of information systems:

- People, hardware, software, data, and networks are the five basic resources of information systems.
- People resources include end users and IS specialists, hardware resources consist of machines and media, software resources include both programs and procedures, data resources can include data and knowledge bases, and network resources include communications media and networks.
- Data resources are transformed by information processing activities into a variety of information products for end users.
- Information processing consists of the system activities of input, processing, output, storage, and control.



**Q.6 Explain the various types of Information Systems.**

**Ans.** Conceptually, the applications of information systems can be classified in several different ways. For example, several types of information systems can be classified as either operations or management support systems. Figure 1 illustrates this conceptual classification of information systems applications. Information systems are categorized this way to spotlight the major roles each plays in the operations and management of a business.

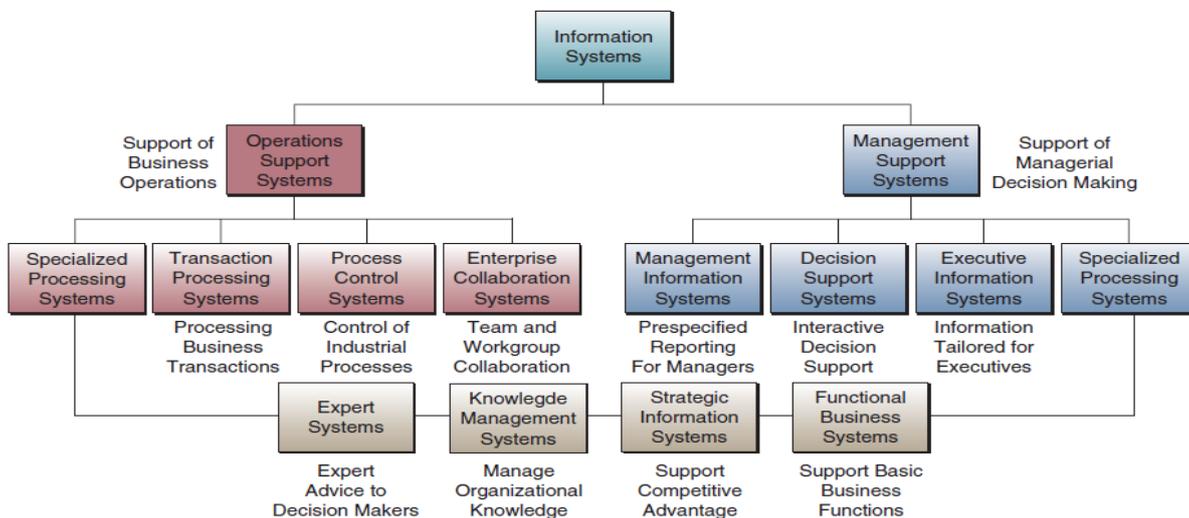


FIGURE 1 Operations and management classifications of information systems.

**Operations Support Systems:** operations support systems produce a variety of information products for internal and external use. However, they do not emphasize producing the specific information products that can best be used by managers. Further processing by management information systems is usually required. The role of a business firm’s operations support systems is to efficiently process business transactions, control industrial processes, support enterprise communications and collaboration, and update corporate databases.

**Management Support Systems:** When information system applications focus on providing information and support for effective decision making by managers, they are called management support systems.

Providing information and support for decision making by all types of managers and business professionals is a complex task. Conceptually, several major types of information systems support a variety of decision-making responsibilities: (1) management information systems, (2) decision support systems, and (3) executive information systems.

**Q.7 Explain the concept of Management Information Systems and its main characteristics.**

**Ans.:** Primary objective being applying IT to the management, planning, and decision making functions. Over time, the MIS concept covered different facts of the organizational functional and information system related concepts.

Primarily it was seen as an organizational data. The data was collected, processed and presented in the form of reports. Each individual could choose the data according to his requirements and get the appropriate report at regular interval.

It becomes individual oriented by putting into account "information" not the "data". Format of the report was decided by the user so that user can take the better decision.

Gathering all the reports at regular intervals was wastage of resources; the concept was modified so that the system should present information whenever needed by the individuals.

Databases were used to store the data and information was produced from these database on some rule for processing. System was seen as a highly integrated system which handles the databases and support management planning and the judgment process. The MIS concept becomes a mixture of theories, principles, and concepts from various academic disciplines.

The MIS function underwent a transaction from centralized control of information system resources. Now, is the federation of various related systems serving the managerial decision making needs.

**Characteristics of MIS:**

- **System Approach**  
It provides a comprehensive view or a complete look at the interlocking that operate with in an organization.
- **Management Oriented**  
System is designed to provide information indirectly to the top management means the other levels of management are also provided with the relevant information.
- **Sub-system concept**  
A system may be collection of sub-system. For example, human body is a system and this has many sub-systems like nervous system, digestive system, respiratory system, etc.
- **Integrated**  
It means that the system has to be holistic in its approach.
- **Planning Element**  
Planning is required for MIS development to fulfill the future needs and objectives of an organization.
- **Flexibility**  
Easy to use.
- **Common Data Flow –**  
Avoid repetition and overlapping in collection and storage of data.

**Q.8 What is Decision Support System and how it is differ from Management Information System?**

**Ans.:** **Decision Support System:** Decision Support Systems (DSS) deal with the design and the use of compatible computerized systems for -

1. Assisting the managers in taking more effective decisions concerning semi-structured and unstructured tasks.
2. Supporting, rather than replacing, managerial intuition and judgment.
3. Improving the effectiveness of decision making rather than its efficiency.

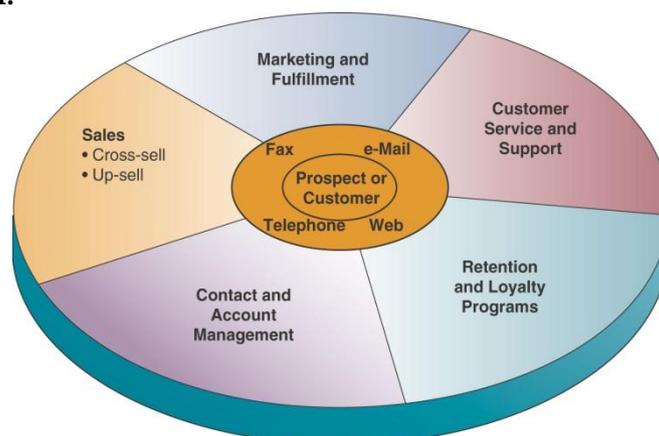
S.NO.	MIS	DSS
1.	The main focus is on the structured tasks and the routine decisions.	Focus is mainly on the semi / un-structured tasks, which demand the managerial judgment.
2.	Identifies the information requirement.	Develops certain tools for using in the decision process.
3.	Data storage is of great importance	The main emphasis is on the data – manipulation.
4.	Delivers system depending on the frozen requirements.	Current data can be used in the Decision Support System.
5.	Only the in – direct access to the data by the managers is provided.	Managers enjoy direct access to the data.
6.	Very much dependent on the computer expert.	Depends on the managerial judgment.
7.	Access to the data possibly requiring a ‘wait’ for the manager’s turn.	Waiting is not at all required.
8.	MIS manager may not completely understand the nature of the decision.	Manager possesses the knowledge about the nature of the decision and the decision making environment.
9.	Main stress is on the efficiency.	Main emphasis is laid on the effectiveness.

**Q.9 What do you understand by CRM? What are its main components?**

**Ans.:** It provides customer-facing employees with a single, complete view of every customer at every touch point and across all channels.

- It provides the customer with a single, complete view of the company and its extended channels.
- It integrates and automates many of the customer serving processes.
- It Creates an IT framework of Web-enabled software & databases that integrates these processes with the rest of the company’s business operations.
- It includes software modules that provide tools that enable a business & its employees to provide fast, convenient, dependable, consistent service.

**Main Components of CRM:**



- Contact & Account Management
  - Helps capture and track relevant data about past and planned contacts with prospects & customers.
- Sales
  - Provides sales reps with software tools & company data needed to support & manage their sales activities.
  - Helps optimize cross-selling & up-selling
- Marketing & Fulfillment

- Helps accomplish direct marketing campaigns by automating tasks
- Helps capture & manage prospect & customer response data
- Helps in fulfillment by quickly scheduling sales contacts & providing appropriate information on products & services to them
- Customer Service and Support
  - Provides software tools & real-time access to the common customer database
  - Helps create, assign, & manage requests for service from customers
    - Call center software
    - Help desk software
- Retention and Loyalty Programs
  - Helps the company identify, reward, and market to their most loyal and profitable customers
- **Q.10 What do you understand by ERP? What are its Benefits and Challenges?**

**Ans.:**

- Serves as a cross-functional enterprise backbone that integrates & automates many internal business processes and information systems
- Helps companies gain the efficiency, agility, & responsiveness needed to succeed today
- Gives a company an integrated real-time view of its core business processes

**Benefits:**

- Quality and efficiency
  - Helps improve the quality and efficiency of customer service, production, & distribution by creating a framework for integrating and improving internal business processes
- Decreased Costs
  - Reductions in transaction processing costs and hardware, software, and IT support staff
- Decision support
  - Provides cross-functional information on business performance to assist managers in making better decisions
- Enterprise agility
  - Results in more flexible organizational structures, managerial responsibilities, and work roles.
- Costs of ERP
  - The costs and risks of failure in implementing a new ERP system are substantial.
  - It includes Hardware, software, Training & Change Management, Data Conversion, and Re-Engineering Cost.

**Challenges:**

- Underestimating the complexity of the planning, development, and training required
- Failure to involve affected employees in the planning & development phases and change management programs
- Trying to do too much, too fast
- Insufficient training
- Believing everything the software vendors and/or consultants say.

### **Q.11 What is Supply Chain Management?**

**Ans.:** Supply Chain Management is a cross-functional inter-enterprise system that uses information technology to help support and manage the links between some of a company's key business processes and those of its suppliers, customers, and business partners. The goal of SCM is to create a fast, efficient, and low-cost network of business relationships, or a supply chain, to get a company's products from concept to market.

Let's consider a company wants to manufacture and sell a product to other businesses. Then it must buy

raw materials and a variety of contracted services from other companies. The interrelationships with suppliers, customers, distributors, and other businesses that are needed to design, build, and sell a product make up the network of business entities, relationships, and processes that is called a supply chain. And since each supply chain process should add value to the products or services a company produces, a supply chain is frequently called a value chain. In any event, many companies today are using Internet technologies to create inter- enterprise e-business systems for supply chain management that help a company streamline its traditional supply chain processes.

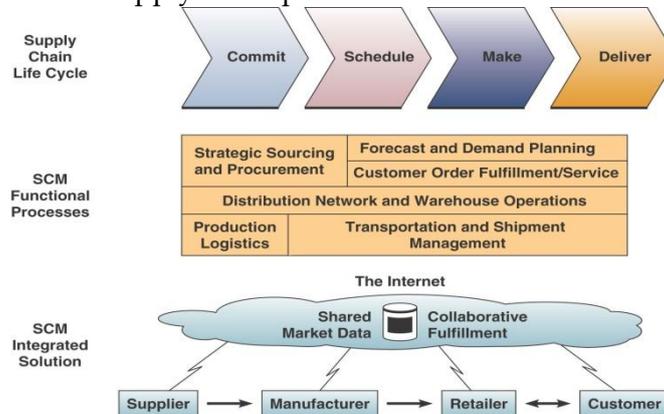


Figure illustrates the basic business processes in the supply chain life cycle and the functional SCM processes that support them. It also emphasizes how many companies today are re-engineering their supply chain processes, aided by Internet technologies and supply chain management software. For example, the demands of today's competitive business environment are pushing manufacturers to use their intranets, extranets, and e-commerce Web portals to help them re-engineer their relationships with their suppliers, distributors, and retailers. The objective is to significantly reduce costs, increase efficiency, and improve their supply chain cycle times. SCM software can also help to improve inter-enterprise coordination among supply chain process players. The result is much more effective distribution and channel networks among business partners.

### Q.12 What are Parallel, Pilot, Direct, Phased forms of IS Conversion?

Ans.:

#### Parallel Conversion:

- Old and new systems are run simultaneously until the project coordinator and the end user are fully satisfied that the new system is working correctly and old system is no longer necessary.
- To execute parallel approach properly, the end user must perform all daily functions with both the systems, result data redundancy and double the work.
- If it is not possible to operate two systems simultaneously then parallel conversion may not be possible.

#### Pilot Conversion:

- A new system may be installed in multiple locations.
- A location can be selected that best represents the conditions across the organization.
- The pilot conversion allows an organization to test out a new system in a controlled way.
- Less risky in terms of any loss of time or delay in process.
- A pilot conversion creates additional burdens for the IS staff in the maintenance and support of two different systems that may or may not be able to effectively communicate with each other.

#### Phased Conversion:

- A new information system is broken down into smaller functional components that can be brought into operation one at a time, with each one adding more improvements and functionality to the overall system.
- A phased installation is gradual, incremental, and easier to manage than the other installation approaches.
- Phased installation works well with systems that are building on existing systems or enhancing those systems.

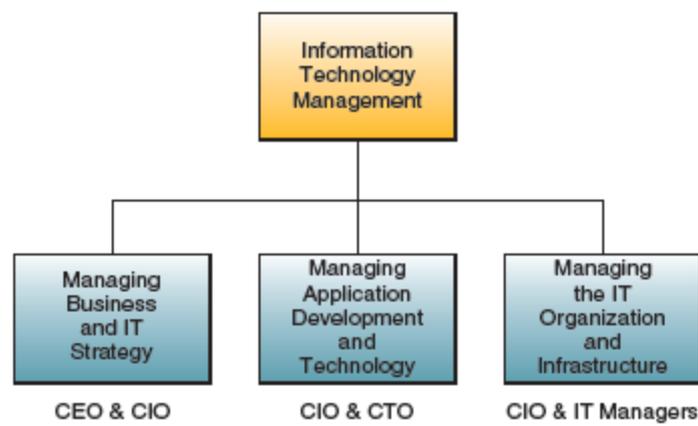
### Direct Conversion:

- Using this approach, the old system is just turned off, and the new system is turned on in its place.
- It is less expensive.
- Direct conversion should be considered only in extreme circumstances where no other conversion strategy is viable.

### Q.13 How Information Technology should be managed in Business organization?

**Ans.:** Figure illustrates one popular approach to managing information technology in a Business organization. This managerial approach has three components:

- **Managing the Joint Development and Implementation of Business / IT Strategies:** Led by the Chief Executive Officer and Chief Information Officer, proposals are developed by business and IT managers and professionals for using IT to support the strategic business priorities of the company. This business / IT planning process align IT with strategic business goals / the process also includes evaluating the business goals. The process also includes: evaluating the business case for investing in the development and implementation of each proposed business / IT project.



- **Managing the Development and Implementation of new Business / IT application and Technologies:** This is the primary responsibility of the Chief Information Officer and Chief Technology Officer. This area of management of IT involves managing the processes for information systems development and implementation, as well as responsibility for research into the strategic business uses of new information technologies.
- **Managing the IT Application and IT Infrastructures:** The Chief Information Officer and the IT manager share responsibility for managing the work of IT professionals who are typically organized into a variety of project teams and other organizational subunits. In addition, they are responsible for managing the IT infrastructure of hardware,, software, databases, telecommunication networks and other IT resources which must be acquired, operated, monitored and maintained.

### Q.14 How might cultural, political, or geoeconomic challenges affect a global company's use of the Internet?

**Ans.:** There are too many cultural, political, and geoeconomic (geographic and economic) realities that must be confronted for a business to succeed in global markets. As we have just mentioned, global information technology management must focus on developing global business IT strategies and managing global e-business application portfolios, Internet technologies, platforms, databases, and systems development projects. Managers, however, must also accomplish this task from a perspective and through methods that take into account the cultural, political, and geoeconomic differences that exist when doing business internationally.

For example, a major **political challenge** is that many countries have rules regulating or prohibiting transfer of data across their national boundaries, especially personal information such as personnel records. Others severely restrict, tax, or prohibit imports of hardware and software. Still others have local content laws that specify the portion of the value of a product that must be added in that country if it is to be sold there. Some countries have reciprocal trade agreements that require a business to spend part of

the revenue it earns in a country in that nation's economy.

**Geoeconomic challenges** in global business and IT refer to the effects of geography on the economic realities of international business activities. The sheer physical distances involved are still a major problem, even in this day of Internet telecommunications and jet travel. For example, it may still take too long to fly in specialists when IT problems occur in a remote site. It is still difficult to communicate in real time across the world's 24 time zones. It is still difficult to get good-quality telephone and telecommunications service in many countries. There are still problems finding the job skills required in some countries or enticing specialists from other countries to live and work there. Finally, there are still problems (and opportunities) in the great differences in the cost of living and labor costs in various countries. All of these geoeconomic challenges must be addressed when developing a company's global business and IT strategies.

**Cultural challenges** facing global business and IT managers include differences in languages, cultural interests, religions, customs, social attitudes, and political philosophies. Obviously, global IT managers must be trained and sensitized to such cultural differences before they are sent abroad or brought into a corporation's home country. Other cultural challenges include differences in work styles and business relationships.

**Q.15 What are your major concern about computer crime and privacy on the Internet? Explain.**

**Ans.: Computer Crimes:** Computer Crime is defined by the Association of Information Technology Professional (AITP) as including:

1. The unauthorized use, access, modification, and destruction of hardware, software, data, or network resources
2. Unauthorized release of information
3. Unauthorized copying of software
4. Denying an end user his/her own hardware, software, data, or network resources
5. Using or conspiring to use computer or network resources to illegally obtain info.

### **Hacking**

- The unauthorized access and use of networked computer systems

### **Cyber Theft**

- Involves unauthorized network entry and the fraudulent alteration of computer databases

### **Unauthorized use at work**

- Also called time and resource theft
- May range from doing private consulting or personal finances, to playing video games, to unauthorized use of the Internet on company networks

### **Software Piracy**

- Unauthorized copying of software
  - Software is intellectual property protected by copyright law and user licensing agreements

### **Computer viruses and worms**

- Virus
  - A program that cannot work without being inserted into another program
- Worm
  - A distinct program that can run independently

### **Piracy of intellectual property**

- Other forms of intellectual property covered by copyright laws
  - Music
  - Videos
  - Images
  - Articles
  - Books
  - Other written works

### **Privacy Issues**

- IT makes it technically and economically feasible to collect, store, integrate, interchange, and retrieve data and information quickly and easily.
  - Benefit – increases efficiency and effectiveness
  - But, may also have a negative effect on individual's right to privacy
- Examples of important privacy issues
  - Accessing private e-mail and computer records & sharing information about individuals gained from their visits to websites and newsgroups
  - Always knowing where a person is via mobile and paging services
  - Using customer information obtained from many sources to market additional business services
  - Collecting personal information to build individual customer profiles

#### **Privacy on the Internet**

- Users of the Internet are highly visible and open to violations of privacy
- Cookies capture information about you every time you visit a site
- That information may be sold to third parties
- Protect your privacy by
  - Encrypting your messages
  - Post to newsgroups through anonymous remailers
  - Ask your ISP not to sell your information to mailing list providers and other marketers
  - Decline to show personal data and interests online