

Biyani's Think Tank

Concept based notes

IT For Management

MBA - II Sem

Deptt. of MBA
Biyani Institute of science & Management, Jaipur



Published by :

Think Tanks

Biyani Group of Colleges

Concept & Copyright :

©**Biyani Shikshan Samiti**

Sector-3, Vidhyadhar Nagar,

Jaipur-302 023 (Rajasthan)

Ph : 0141-2338371, 2338591-95 • Fax : 0141-2338007

E-mail : acad@biyanicolleges.org

Website :www.gurukpo.com; www.biyanicolleges.org

First Edition : 2015

While every effort is taken to avoid errors or omissions in this Publication, any mistake or omission that may have crept in is not intentional. It may be taken note of that neither the publisher nor the author will be responsible for any damage or loss of any kind arising to anyone in any manner on account of such errors and omissions.

Leaser Type Setted by :

Biyani College Printing Department

Preface

I am glad to present this book, especially designed to serve the needs of the students. The book has been written keeping in mind the general weakness in understanding the fundamental concept of the topic. The book is self-explanatory and adopts the “Teach Yourself” style. It is based on question-answer pattern. The language of book is quite easy and understandable based on scientific approach.

Any further improvement in the contents of the book by making corrections, omission and inclusion is keen to be achieved based on suggestions from the reader for which the author shall be obliged.

I acknowledge special thanks to Mr. Rajeev Biyani, *Chairman* & Dr. Sanjay Biyani, *Director (Acad.)* Biyani Group of Colleges, who is the backbone and main concept provider and also have been constant source of motivation throughout this endeavour. We also extend our thanks to Biyani Shikshan Samiti, Jaipur, who played an active role in co-ordinating the various stages of this endeavour and spearheaded the publishing work.

I look forward to receiving valuable suggestions from professors of various educational institutions, other faculty members and the students for improvement of the quality of the book. The reader may feel free to send in their comments and suggestions to the under mentioned address.

Author

**INFORMATION
TECHNOLOGY FOR
MANAGEMENT**
Course/Paper : 206 MBA
Semester-II

Objective:

The course is an introduction of computer architecture, networks and software tools. This will help students to understand the role of information systems and technology with current business and management application.

Section-A

Information & System Concepts-Introduction --Concepts, Classification of Information, Methods of Data & Information Collection, Value of Information, Organization and Information, System: A Definition. Types of Systems, System Decomposition, Integration of Sub Systems, Elements of a System, Human as an Information Processing System. International Business and IT.

Management Information System-MIS: Definition, Nature & Scope, MIS Characteristics, Functions, Structure of MIS, Role of MIS, MIS as a Control System, Process of Management, Application of MIS, ERP & IT's Benefits.

Internet-Introduction to Internet, Why We Need Internet, Internet Tools & Services, www, Internet in India, Security, Web Browser, Future of Internet, E-Comm. an Introduction, E-Business Fundamentals.

New Information Technology: Interconnection and networking, Multimedia, Neural Networks, Artificial Intelligence, Executive Information System, Decision Support System (DSS) and Expert Systems.

Issues for Senior Management: Management Control, Management Issues, Security Issues: Viruses, Worms and other creatures, I T issues for Management, Management in a Technological Environment, the changing world of Information.

Section-B

Case studies

Chapter-1

Introduction to System

Q.1 What do you understand by System? Discuss the types and characteristics of System?

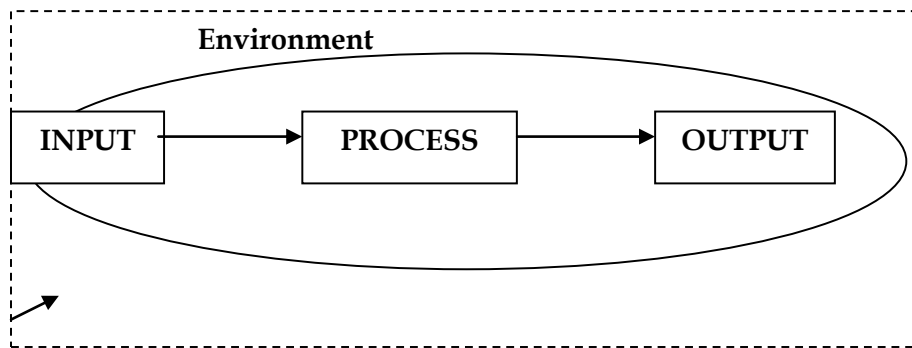
Ans.: The word system is derived from the Greek word "system" which means a organized relationship among the following unit or component.

"A system is an orderly grouping of interdependent components linked together according to a plan to achieve a specific goal."

The word component may refer to physical parts (engine, wheels of cars), management steps (planning, organizing, controlling) or a sub subsystem in a multi level structure. It is to be noted that a system is not a randomly arranged set. It is arranged with some logic governed by rules, regulation, principles and policies.

In MIS we are usually concerned with man-made system involving input, process and output, as represented in figure. A system may have multiple inputs and multiple outputs.

All systems operate in an environment. The environment may influence the system in its design and performance. When a system is designed to achieve certain objective, it automatically sets the boundaries for itself. The understanding of boundaries of the system is essential to bring clarity in explaining the system components and their arrangement.



Characteristics of System :

Following characteristics are present in all systems :

- a) Organization
- b) Interaction
- c) Interdependence
- d) Integration
- e) Central Objective

Organization : Organization implies structure and order. It is the arrangement of components that helps to achieve objectives. Hierarchical relationship starting with the president on top and leading down ward to the blue collar worker represent the organization structure

Interaction : Interaction refers to the procedure in which each component interact with other components of the system. In an organization, for example purchasing must interact with product, advertising with sales and payroll with personnel.

Interdependence : Independence is concerned with how a system is tied together; it is more than sharing a physical part or location. It means that parts of the system part or location with in the system, even through each part performance. A unique function successful integration will typically produce a better request as whole rather than if each component works independently.

Central Objective : Objective may be real or stated. Objective is determined by higher management and user must be aware about the central objective well in advance.

Q.2 Discuss the different types of System?**Ans.: Types of System :**

Physical or Abstract : Physical system is tangible entities that may be static or dynamic in nature. Abstract system is conceptual or non-physical. The abstract is conceptualization of physical situations.

Open and Closed : An open system continually interacts with its environment. It receives input from the outside and delivers output to outside. A closed system is isolated from environment influences.

Sub System and Super System : Each system is part of a large system. The business firm is viewed as the system or total system when focus is on production, distribution of goal and sources of profit and income. The total system consists of all the objects, attributes and relationship necessary to accomplish an objective given a number of constraints.

Sub systems are the smaller systems within a system. Super system denotes extremely large and complex system

Permanent and Temporary System : A permanent system is a system enduring for a time span that is long relative to the operation of human. Temporary system is one having a short time span.

Natural and Man Made System : System which is made by man is called man made system. Systems which are in the environment made by nature are called natural system.

Deterministic and Probabilistic : A Deterministic system is one in which the occurrence of all events is perfectly predictable. If we get the description of the system state at a particular time, the next state can be easily predicted.

Probabilistic system is one in which the occurrence of events cannot be perfectly predicted.

Man-made Information System : It is generally believed that the information reduces uncertainty about a state or event. An information system is the basis for interaction between the user and the analyst. It determines the nature of relationship among decision makers.

An information system may be defined as a set of devices, procedures and operating system designed around user-base criteria to produce information and communicating it to the user for planning control and performance.

Q.3 Discuss the major types of Information System?

Ans.: A business has several information systems :

- a) Formal Information System
- b) Informal Information System
- c) Computer Based Information System

Formal Information System : It is based on organizational chart represented by the organization.

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.

Computer Based Information System (CBIS) : This category of information system depends mainly on the computer for handling business applications. System analyst develops different types of information systems to meet variety of business needs. There is a class of system collectively known as computer based information system. They can be classified as

- Transaction Processing System (TPS)
- Management Information System(MIS)
- Decision Support System (DSS)
- Office Automation System (OAS)

Transaction Processing System (TPS) : The most fundamental computer based system in an organization pertains to the processing of business transactions. A transaction processing system can be defined as a system that captures, classifies, stores, maintains, updates and retrieves transaction data for record keeping and input to the other types of CBIS. Transaction Processing System is aimed at

improving the routine business activities. A transaction is any event or activity that affects the whole organization. Placing order, billing customers, hiring of employees and depositing cheques are some of the common transactions. Types of transactions that occur vary from organization to organization but this is true that all organizations process transaction as a major part of their daily business activities. Transaction Processing System provides speed and accuracy and can be programmed to follow routines without any variance.

Management Information System (MIS) : Data processing by computers has been extremely effective because of several reasons. The main reason is that huge amount of data relating to accounts and other transactions can be processed very quickly. MIS are more concerned with levels of management with information essential to the running of smooth business. This Information must be as relevant, timely, accurate, complete and concise as is economically feasible.

Decision Support System (DSS) : It is an information system that offers the kind of information that may not be predictable. Business professionals may need such information only once. These systems do not produce regularly scheduled management reports. Instead, they are designed to respond to wide range of requests. It is true that all the decisions in an organization are not of a recurring nature. Decision support systems assist managers, who make decisions that are not highly structured, often called unstructured or semi structured decision. The decision support systems support, but do not replace, judgments of managers.

Office Automation System (OAS) : Office Automation Systems are among the newest and most rapidly expanding computer based information systems. They are being developed with the hope and expectation that they will increase the efficiency and productivity of office workers, typists, secretaries, administrative assistants, staff professionals, managers and others.

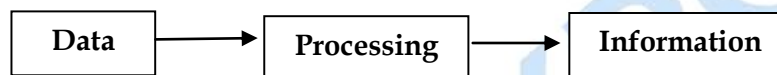
Q.4 What do you understand by Information? What are the characteristics of Information?

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.”



Information Generation

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 :

- i) **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 destroys the value of information. The characteristic of timeliness, to be effective, should also include up-to-date, i.e. current information.

- ii) **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.
- iii) **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 managers which is useful and the information helps them to make decisions..
- iv) **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.
- v) **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.
- vi) **Explicitness** : A report is said to be of good quality if it does not require further analysis by the recipients for decision making.
- vii) **Impartiality** : Impartial information contains no bias and has been collected without any distorted view of the situation.

Q.5 Explain the level of Business Activity with reference to Information required?

Ans.: While developing an information management strategy within an organization, it is useful to consider informations need at on three levels :

- Corporate (Top Level)
- Team, Division, Business Unit (Middle Level)
- Individual (Low Level)

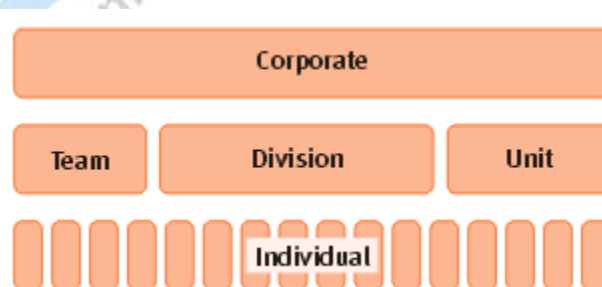
The needs of each of these three levels must be met if a coordinated and effective solution is to be maintained in the long-term.

Failure to address any one of the levels will lead to areas of the business or individuals finding their own solution, which may not fit well within the strategic goals of the organization.

Corporate (Top Level Information) : At the top level corporate informations that is useful for the whole organization. This 'global' information is generally well addressed by the corporate intranet. Examples of corporate information include policies and procedures, HR information, online forms, phone directory, etc. Interestingly, there may be a limited amount of truly global information, and it may not deliver the greatest (measurable) business benefits.

Team, division, business unit (Middle level) : The middle level is perhaps the most important, as it covers all the information shared within teams, divisions, business units, etc. This information may be critical to the day-to-day activities of the group, but of little interest to the rest of the organization. Examples include project documentation, business unit specific content, meeting minutes, etc. This level is generally poorly-served within organizations, although collaboration tools are increasingly being used to address team information needs. It is also being recognized that it is the 'local' information that may be the most valuable, in terms of driving the day-to-day activity of the organization.

Levels of Informations Need



Individual (Low Level) : At the lowest level the personal information need of staff exists throughout the organization. Examples include correspondence, reports and spreadsheets. In most organizations, staff must struggle with using e-mail to meet their information management needs. While staff generally recognizes the inadequacy of e-mail, they have few other approaches or technologies at their disposal.

Managing the Levels : While managing the information at each of the three levels, consider aspects need consideration:

- An information management solution must be provided for staff at each of the three levels.
- If corporate solutions aren't provided, then staff will find their own solutions. This is the source of poor-quality intranet sub-sites, and other undesirable approaches.
- A clear policy must be developed, outlining when and how it will apply at all the three levels and how information should be managed at each level.
- Processes must be put in place to 'bubble up' or 'promote' information from lower levels to higher levels. For example, some team-generated information will be critical for the whole organization.
- As much as possible, a seamless information management environment should be delivered that covers all the three levels.

Q.6 What do you understand by Information System? Discuss various type of Information.

Ans.: A business has several information systems :

- (A) Formal Information System
- (B) Informal Information System
- (C) Computer Based Information System

Formal Information System : It is based on organizational chart represented by the organization.

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.

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 collectively known 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.7 What do you mean by Value of Information?

Ans.: Dimensions of Information : There are three most common dimensions of information for MIS :

- (i) **Economic Dimension :** Economic dimension of information refers to the cost of information and its benefits. Generation of information costs money. Measuring cost and benefit of information is difficult because of intangible characteristic of information.

Cost of Information : Cost of information may include: Cost of acquiring data, Cost of maintaining data, Cost of generating information and Cost of communication information. Cost related to the response time require to generate information and communicating it. Thus, for **system with low response time, the cost is high.** The cost is depends on accuracy, speed of generation etc.

Value of Information : Information has a cost for its acquisition and maintenance. Thus before a particular piece of information is acquired, decision maker must know its value. The information has a perceived value in terms of decision making. The decision maker feels more secured when additional information is received in case of decision making under uncertainty or risk.

Perfect Information : The information is called a **Perfect Information**, if it wipes out uncertainty or risk completely. However, perfect information is a myth.

The value of information is the value of the change in decision behavior because of the information. The change in the behaviour due to new information is measured to determine the benefit from its use. To arrive at the value of information, the cost incurred to get this information is deducted from the benefit.

$$\text{Value of information} = \text{Cost to get information-benefit}$$

Given a set of possible decisions, a decision maker will select one on the basis of the available information. If the new information causes a change in the decision, then the value of information is the difference in the value between outcome of the old decision and that of new decision, less the cost obtaining the new information. The value of the additional information making the existing information perfect (VPI) is:

$$\text{VPI} = (V_2 - V_1) - (C_2 - C_1)$$

Where V is the value of the information and C is the cost of obtaining the information. V_1 and C_1 relate to one set of information V_2 , C_2 relate to the new set.

In MIS, the concept of the value of information is used to find out the benefit of perfect information and if the value is significantly high, the system should provide it. If the value is insignificant, it would not be worth collecting the additional information.

- (ii) **Business Dimension** : Different types of information are required by managers at different levels of the management hierarchy. The information needs of managers at strategic planning level are altogether different that those of operational control managers. It is because of the fact that managers at different levels are required to perform different functions in an organization.

- (iii) **Technical Dimension** : This dimension of information refers to the technical aspects of the database. It includes the capacity of database, response time, security, validity, data interrelationship etc.

Q.8 What is the difference between Data Processing and Information Processing?

Ans.: Data Processing : Data Processing is a process that converts data into information or knowledge. The processing is usually assumed to be automated and running on a computer. Because data are most useful when well-presented and actually informative, data-processing systems are often referred to as information systems to emphasize their practicality. Nevertheless, both terms are roughly synonymous, performing similar conversions; data-processing systems typically manipulate raw data into information, and likewise information systems typically take raw data as input to produce information as output.

Data processing is that a business has collected numerous data concerning an aspect of its operations and that this multitude of data must be presented in meaningful, easy-to-access presentations for the managers who must then use that information to increase revenue or to decrease cost. That conversion and presentation of data as information is typically performed by a data-processing application.

Information Processing : Information processing is the change or processing of information in any manner detectable by an observer.

Information processing may more specifically be defined in terms by Claude E. Shannon as the conversion of latent information into manifest information. Latent and manifest information is defined through the terms of equivocation, remaining uncertainty, what value the sender has actually chosen, dissipation uncertainty of the sender, what the receiver has actually received and transformation saved effort of questioning - equivocation minus dissipation.

Practical Information Processing can be described as a cycle, where data which may have no inherent meaning to the observer is converted into information, which does have meaning to the observer.

Q.9 What are the different methods for Data Collection?

Ans.: Methods of Data and Information Collection : Several methods are available for the collection of data. The choice of method will have an impact on the quality of information. Similarly the design of data collection method also decides the quality of data and information.

Following are the **methods** of data collection :

- i) Observation
- ii) Experiment
- iii) Survey
- iv) Subjective Estimation
- v) Transaction Processing
- vi) Purchase from Outside
- vii) Publication
- viii) Government Agencies

Q.10 What are the different types of Information?

Ans.: Classification of Information : The information can be classified in a number of ways provide to better understanding.

Jhon Dearden of Harvard University classifies information in the following manner :

- (1) **Action Verses No-Action Information :** The information which induces action is called action **Information**. 'No stock' report calling a purchase action is an action information.

The information which communicates only the status is **No-Action Information**. The stock balance is no-action information.

- (2) **Recurring Verses No-Recurring Information :** The information generated at regular intervals is **Recurring Information**. The monthly sales reports, the stock statement, the trial balance, etc are recurring information. The

financial analysis or the report on the market research study is **no-recurring** information.

- (3) **Internal and external information** : The information generated through the internal sources of the organization is termed as **Internal Information**, while the information generated through the govt. reports, the industry survey etc., termed as **External Information**, as the sources of the data are outside the organization.

The information can also be classified, in terms of its application :

- **Planning Information** : Certain standard norms and specifications are used in planning of any activity. Hence such information is called the **Planning Information**. e. g. Time standard, design standard.
- **Control Information** : Reporting the status of an activity through a feedback mechanism is called the **Controlling Information**. When such information shows a deviation from the goal or the objective, it will induce a decision or an action leading to control.
- **Knowledge Information** : A collection of information through the library records and the research studies to build up a knowledge base as an information is known as **Knowledge Information**.
- **Organization Information** : When the information is used by everybody in the organization, it is called **Organization Information**. Employee and payroll Information is used by a number of people in an organization.
- **Functional/ Operational Information** : When the information is used in the operation of a business it is called **Functional/ Operational Information**.
- **Database Information** : When the information has multiple use and application, it is called as **database information**. Material specification or supplier information is stored for multiple users.

Q.11 What are the different Sub-System of MIS?

Ans.: The system approach applies equally to management information system as well. The management information system receives input form various internal and external sources. These inputs are processes through the MIS to produce the desired output, which may be in turn used for different managerial task within

the organization. MIS has several subsystems which are interdependent, interrelated and interacting.

The Sub-Systems within the MIS are :

Computer System : The computer system as a subsystem of MIS includes the Hardware, the operating system and the software.

Management : The management system as a subsystem of MIS includes the managerial task relating to the effective functioning. It includes planning, control and co-ordination, human resource development etc.

System Engineering : The system engineering subsystem of MIS includes system design and development as well as system maintenance. The synergistic combination of hardware and system engineering is evolved into software engineering. Software engineering as defined by Fritz Baucer, as the establishment and use of engineering principals in order to obtain economically feasible software that is reliable and works efficiently on real machines.

Application : The application subsystem of MIS includes various application system, which are developed and implemented to the desire outputs.

This process of integration of business system with management information system involves three key elements. They are :

- a) Technology
- b) People
- c) Business

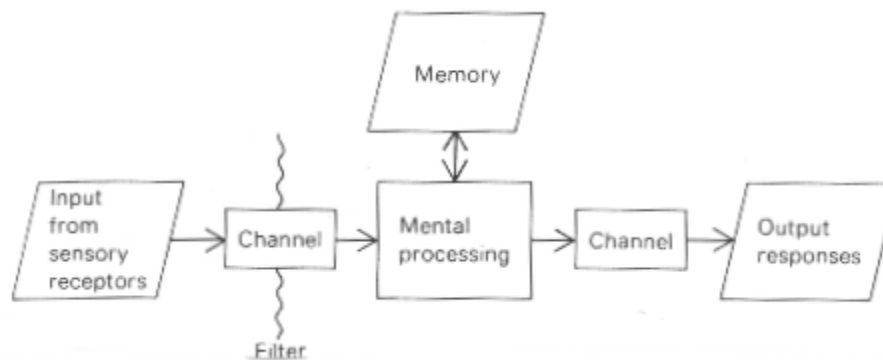
Technology : **Technology** provides the bridge between the business systems, their information needs on one side, the means of providing these information needs on the other. Technology provides the tools and techniques that help to generate the information that are required for the business system. Selection of the appropriate technology has got bearing on effectiveness of the bridge.

People : People generate the required information and apply the same for business planning, control and decision making. The attitude and aspiration of the people involved in generating and utilizing the information has a bearing on effective use of integrated system.

Business : The business function and the environment in which the business organization have an impact on the entire integration exercise.

Q12 What do you mean by Human as an Information Processing System?

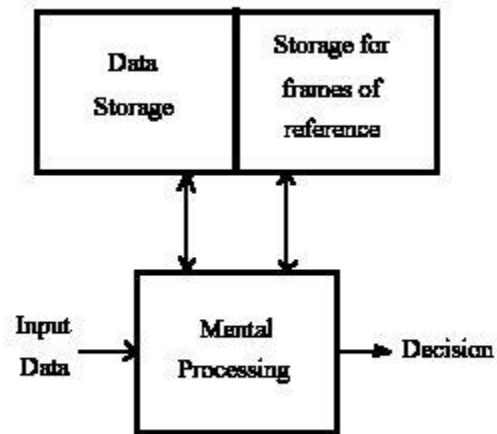
Ans: A human as an information processor may be represented by a simple model in which the senses (sight, hearing, etc.) are receptors that pick up signals and transmit them to the brain (processing unit with storage). After processing, the person produces output responses (physical actions, speech, etc.).



A human's ability to accept inputs and produce responses is limited; when the capacity is exceeded, [information overload](#) may negatively affect response and performance.

A person often receives more input than s/he is capable of accepting and processing, resulting in a need to manage the quantity of input to prevent information overload. A common way to do this is to use a filtering or selection process to block some inputs. Typical filtering may be based on the person's frame of reference (based on experience and knowledge), normal decision procedures, or stress in the decision situation. Deadlines, for example, may be stressful and force a manager to focus on only the most important decision inputs, filtering out lesser ones.

Frame of reference filtering occurs with both input and processing; using experience often consists of using filters that have worked well in the past. The brain, over time, categorizes and patterns data, which becomes a part of how the person develops understanding of an event or situation. These patterns or frames of reference then help reduce processing and input requirements. Effective use of frames of reference accumulated over a long period of time is an element of expertise.



Use of input data, stored data, and frame of reference to process a decision.

Chapter-2

Overview of MIS

Q.1 What is MIS? Discuss in detail?

OR

Describe the three words of MIS: Management, Information, System.

OR

Discuss the objectives and characteristics of MIS.

Ans.: Management Information Systems (MIS), referred to as Information Management and Systems, is the discipline covering the application of people, technologies, and procedures collectively called information systems, to solving business problems.

"MIS' is a planned system of collecting, storing and disseminating data in the form of information needed to carry out the functions of management."

Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support for human decision making, e.g. Decision Support Systems, Expert Systems, and Executive Information Systems.

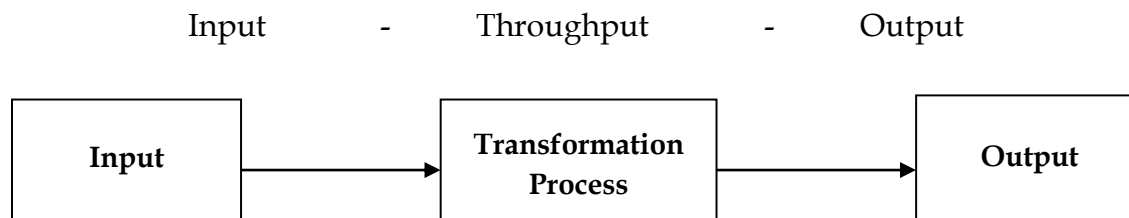
Management : Management is art of getting things done through and with the people in formally organized groups. The basic functions performed by a manager in an organization are: Planning, controlling, staffing, organizing, and directing.

Information : Information is considered as valuable component of an organization. Information is data that is processed and is presented in a form which assists decision maker.



System : A system is defined as a set of elements which are joined together to achieve a common objective. The elements are interrelated and interdependent. Thus every system is said to be composed of subsystems. A system has one or multiple inputs, these inputs are processed through a transformation process to convert these input(s) to output.

These subsystems are interrelated through a process of



Objectives of MIS :

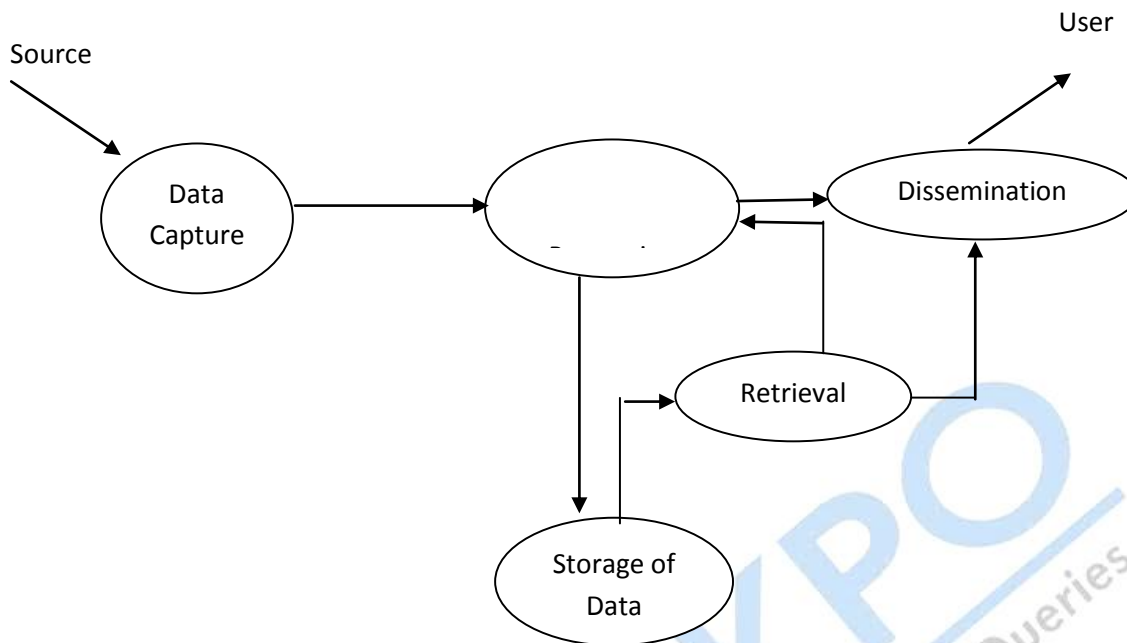
Data Capturing : MIS capture data from various internal and external sources of organization. Data capturing may be manual or through computer terminals.

Processing of Data : The captured data is processed to convert into required information. Processing of data is done by such activities as calculating, sorting, classifying, and summarizing.

Storage of Information : MIS stores the processed or unprocessed data for future use. If any information is not immediately required, it is saved as an organization record, for later use.

Retrieval of Information : MIS retrieves information from its stores as and when required by various users.

Dissemination of Information : Information, which is a finished product of MIS, is disseminated to the users in the organization. It is periodic or online through computer terminal.



Objectives of MIS

Characteristics of MIS :

Systems Approach : The information system follows a systems approach. Systems approach means taking a comprehensive view or a complete look at the interlocking sub-systems that operate within an organization.

Management Oriented : Management oriented characteristic of MIS implies that the management actively directs the system development efforts. For planning of MIS, top-down approach should be followed. Top down approach suggests that the system development starts from the determination of management's needs and overall business objective. To ensure that the implementation of system's policies meet the specification of the system, continued review and participation of the manager is necessary.

Need Based : MIS design should be as per the information needs of managers at different levels.

Exception Based : MIS should be developed on the exception based also, which means that in an abnormal situation, there should be immediate reporting about the exceptional situation to the decision -makers at the required level.

Future Oriented : MIS should not merely provide past of historical information; rather it should provide information, on the basis of future projections on the actions to be initiated.

Integrated : Integration is significant because of its ability to produce more meaningful information. Integration means taking a comprehensive view or looking at the complete picture of the interlocking subsystems that operate within the company.

Common Data Flow : Common data flow includes avoiding duplication, combining similar functions and simplifying operations wherever possible. The development of common data flow is an economically sound and logical concept, but it must be viewed from a practical angle.

Long Term Planning : MIS is developed over relatively long periods. A heavy element of planning should be involved.

Sub System Concept : The MIS should be viewed as a single entity, but it must be broken down into digestible sub-systems which are more meaningful.

Central database : In the MIS there should be common data base for whole system

Q.2 Highlight the Salient Features of Computer which makes it an essential component of MIS

OR

With the Penetration of Computer in Business Society, Information System has got a new meaning, explain.

Ans.: Characteristics of Computerized MIS :

- (i) Ability to process data into information with accuracy and high speed. It involves complex computation, analysis, comparisons and summarization.

- (ii) Organizing and updating of huge amount of raw data of related and unrelated nature, derived from internal and external sources at different periods of time.
- (iii) The information processing and computer technology have been so advanced that managers are able to obtain real time information about ongoing activities and events without any waiting period.
- (iv) The input data in computer can be converted into different output formats for a variety of purpose. The system is so organized that managers at different levels and in different activity units are in a position to obtain information in whatever form they want, provided that relevant “programms” or instructions have been designed for the purpose.
- (v) Super-human memory, tremendous volume of data and information and the set of instructions can be stored in the computer and can be retrieved as and when needed. Management can get bit of stored information from the computer in seconds.

Advantages of Computer : The usage of computer gives following advantages in comparison to manual MIS :

- a) **Speed :** The speed of carrying out the given instructions logically and numerically is incomparable between computers and human beings. A computer can perform and give instructions in less than a millionth of second
- b) **Accuracy :** Computer can calculate very accurately without any errors.
- c) **Reliability :** The information stored in the computer is in digital format. The information can be stored for a long time and have long life. A user may feel comfortable and be rely on, while using information stored in computer.
- d) **Storage :** Computer can store huge data for a long time in comparison to human brain.
- e) **Automaticity :** Computers perform work automatically through user friendly and menu driven program.
- f) **Repetitiveness :** Computer can be used repetitively to process information without any mental fatigue as in case of human brain.

- g) **Diligence** : A computer is an electronic device. It does not suffer from the human traits of lack of concentration.
- h) **No Feeling** : Computers are devoid of any emotions. They have no feelings and no instincts because they are machines.

Limitations of Computer :

- a) **Lack of Common Sense** : Computer is only an electronic device. It can not think. If we provide an incorrect data, it does not have a commonsense to question the correctness of the data.
- b) **Memory Without Brain** : Computer can store data in its memory; however, if a wrong instruction is given to computer it does not have a brain to correct the wrong instruction.

Q.3 Discuss an Organizational Need for MIS in a Company?

Ans.: To facilitate the management decision making at all levels of company, the MIS must be integrated. MIS units are company wide. MIS is available for the Top management. The top management of company should play an active role in designing, modifying and maintenance of the total organization wide management information system.

Information system and Information technology have become a vital component of any successful business and are regarded as major functional areas just like any other functional area of a business organization like marketing, finance, production and HR. Thus it is important to understand the area of information system just like any other functional area in the business. MIS is important because all businesses have a need for information about the tasks which are to be performed. Information and technology is used as a tool for solving problems and providing opportunities for increasing productivity and quality.

Information has always been important but it has never been so available, so current and so overwhelming. Efforts have been made for collection and retrieval of information, However, challenges still remain in the selection analysis and interpretation of the information that will further improve decision making and productivity.

MIS for a Business Organization :

Support the Business Process : Treats inputs as a request from the customer and outputs as services to customer. Supports current operations and use the system to influence further way of working.

Support Operation of a Business Organization : MIS supports operations of a business organization by giving timely information, maintenance and enhancement which provides flexibility in the operation of an organizations.

To Support Decision Making : MIS supports the decision making by employee in their daily operations. MIS also supports managers in decision making to meet the goals and objectives of the organization. Different mathematical models and IT tools are used for the purpose evolving strategies to meet competitive needs.

Strategies for an Organization : Today each business is running in a competitive market. MIS supports the organization to evolve appropriate strategies for the business to assented in a competitive environment.

Q.4 What are the factors responsible for Development of MIS?

Ans.: Factors Responsible for the development of MIS are numerous and have been a prime concern for many Researchers and Practitioners. Both Inter and external factors must be taken into account when trying to understand and organization's criteria for deciding about technology. The following are the factors which are responsible for development of MIS :

1. External
2. Internal

External Factors : External Factors are conditions that exist in organization's external environment. The factors can be found at the industry level or in national policies.

- (a) **Industry level :** At the industry level, we are looking at characteristics as degree of diffusion of certain technologies, the availability of external

know-how, for example, technology suppliers, the degree of innovativeness of the industry, the requirements imposed by major customers and external markets and overall levels of competition and technology sophistication in the industry.

- (b) **National Policies** : For the external factors the national policies also affect the organization that indirectly affects the subsystems of the organization.

Internal Factors : Internal factors internal of the firm that may affect the development of MIS can be grouped into three categories:

- i) **Past Experience with Technology** : The organizations past experience about the technology in terms of exposure and organizational learning ultimately affects its future in developing technology.
- ii) **Organizational Characteristics** : An organization's characteristic like size, influence the adoption of MIS application in organization. The adoption of certain technologies may appear more appropriate for the larger firms because of the large capital investments and the skilled human resources involve in the implementation and operation of such technologies. Smaller firms are less affected by organizational inertia and they show a greater degree of involvement of organizational member's especially top management during implementation. Ready to use software and less expensive equipments of MIS application are more attractive to smaller firms.
- iii) **Organizational Pursued strategy** : Internal factors deal with the organizations pursued strategy on both orientation and technology policy. An organization's strategy reflects its action with market and technology, which ultimately modify its experience and consequently its overall characteristics and capabilities. The need for a strong technology has been advocated by a number of authors and investments in MIS should therefore be closely aligned with overall corporate strategy.

Other Factors :

Customer Satisfaction : Development of MIS is affected by customer satisfaction. Customer of the services should be satisfied by the presented system.

Effective : Development should be effective in terms of organizational benefit & user satisfaction.

Efficient : Development should use all the resources, organization values efficiently.

Q.5 Discuss the Prerequisites of an Effective MIS?

Ans.: Essential Requirement of an Effective MIS :

- (i) **Qualified System and Management Staff** : The prerequisite of an effective MIS is that it should be managed by qualified officers. These officers should have a mutual understanding about the roles and responsibilities of each other and be understand clearly the view of their fellow officers. For this, each organization should have two categories of officers :
 - (a) **System and Computer Experts** who in addition to their expertise in their subject area , they should also be capable of understanding management concepts to facilitate the understanding of problems asked by concern. They should also be clear about the process of decision making and information requirements for planning.
 - (b) **Management experts** who should also understand quite-clearly the concepts and operations of a computer. This basic knowledge of computer will be useful will place them in a comfortable position, while working with systems, technicians in designing or other wise, of the information system.
- (ii) **Futuristic Perspective** : An effective MIS should be capable of meeting the future requirements of its executives as well. This capability can be achieved by regular monitoring and updating the MIS.
- (iii) **Support of Top Management** : For a management information system to be effective, it must receive the full support of top management. The Reasons for this are :
 - (a) Subordinate managers are usually lethargic about activities which do not receive the support of their superiors.

- (b) The resources involved in computer based information system are larger and are growing larger and larger in view of importance gained by management information system.
- (iv) **Common Database :** It is an integrated collection of data and information which is utilized by several information subsystems of an organization. A common database may be defined as a super file which consolidates and integrates data records formerly stored in a separate data file. Such a database can be organized as an integrated collection of data records into a single super file or it can be organized as an integrated collection of several data file.
- (v) **Control and maintenance of MIS :** Control of the MIS means the operation of the system as it was designed to operate. Some times, users develop their own procedures or short cut methods to use the system which reduces its effectiveness.

Q.6 What do you understand by Decision Making? Discuss the nature and characteristics of Decision?

Ans.: The word “**decision**” is derived from the Latin word “**decido**”. Which means “A decision, therefore is

- A Settlement
- A fixed intuition to bringing to a conclusive result
- A judgment
- A resolution

Decision : A decision is the choice out of several options made by the decision maker to achieve some objective in a given situation.

Business Decision : Business decisions are those which are made in the process of conducting business to achieve its objective in a given situation.

Characteristic of Business Decision Making :

- a) Sequential in nature.
- b) Exceedingly complex due to risk and trade off.

- c) Influenced by personal values.
- d) Made in institutional setting and business environment.

Rational Decision Making : A rational decision is the one which, effectively and efficiently, ensure the achievement of the goal for which the decision is made .In reality there is no right or wrong decision but a rational decision or irrational decision which depends on situation.

Type of Rationality :

Objectively : Maximum the value of the objectives.

Subjective : If it is minimize the attainment of value in relation to the knowledge and awareness of subject.

Consciously : Extent the process of the decision making is a conscious one

Organizationally : degree of the orientation towards the organization.

Personal: Rational to the extent is achieve's an individual's personal reason (goals).

Type of Decision Making System : There are two types of decision making system on the basis of knowledge about the environment.

- (i) **Closed :** If the manager operates in a known environment then it is called closed decision making system.

Conditions :

- a) Manager knows the set of decision alternative and know their outcome in term of values.
 - b) Manager has a model, by which decision alternatives can be generated, tested and ranked.
 - c) The manager can choose one of them, based on some goal or objective.
- (ii) **Open :** If the manager operates in unknown environment then it is called open decision making.

Conditions :

- a) Manager does not know all alternatives.
- b) Outcome is not known.
- c) No methods or models are used.
- d) Decide objective or goal; select one where his aspirates or desire are met best.

Types of Decision : Types of decision are based on the degree of knowledge about the out come of the events which are yet to take place.

Certainty : If the manager has full knowledge of event or outcome then it is a situation of certainty.

Risk : If the manager has partial knowledge or probabilistic knowledge then it is decision under risk.

Uncertainty : If the manager does not have any knowledge, it is decision making under uncertainty

MIS converts the uncertainty to risk and risk to certainty. The decision at the low level management is certain, at middle level of the management the decision is under risk and at the top level management the decision is in under uncertain.

Nature of decision : Decision making is a complex task. To resolve the complexity the nature of decision are of two types :

Programmed and Non-Programmed Decision :

- a) If a decision can be based on a rule, methods or even guidelines, it is called the programmed decision.
- b) A decision which can not be made by using a rule or model is the non-programmed decision.

Q.7 What are the different types of systems?

Ans.:

i. Physical or Abstract systems:-

Physical systems are tangible entities that may be static or dynamic in nature. Physical entities can be seen and counted.

Abstract system are conceptual or nonphysical entites.

ii. Open or Closed system:-

In an open system, system take input from the outside and give the processed data as an output. Characteristics of open system are as input from outside, entropy, process, output and cycles, differentiation, equifinality.

In a closed system, system does not take input from outside world as well does not provide any type of output to the outside world. In reality closed systems are rare.

iii. Man-Mad information system:-

Man-Mad information system can be of following types:-

o Formal Information system:-

A formal information system is based on the organization represented by the organization chart.

o Informal Information system:-

The informal information system is employee based system designed to meet personal and vocational need of the system

o Computer-Based Information System:-

Computer-Based Information System relies on computer for handling business application.

It have following types:-

a) Management Information System:-

Management information system is a person-machine system and highly integrated collection of information processing functions.

b) Decision Support System:- A set of interrelated computer programs and the data vital to assist with analysis and decision-making within an organization.

c.) Data Processing System:-

In information processing, a Data Processing System is a system which processes data which has been captured and determined in a format identifiable by the data processing system or has been created and stored by another component of an information processing system.



Figure 1 Computer based information system

Chapter-3

Overview of Internet & E-Commerce

Q1 What is Internet?

Ans: According to the definition provided by Oxford dictionary, the Internet is an arrangement of connected computers, which lets the computer users all over the globe exchange data. At the present time, approximately 33% of the world population has accessibility to the Internet. The Internet is an extraordinary entertainment and learning tool that may be utilized in a number of modes to increase the ability of a user to collect information. The principal components of the Internet are the World Wide Web (WWW) and e-mail. With the passage of time, the Internet has become the most effective business tool in the contemporary world. It can be described as a global meeting place where people from every corner of the world can come simultaneously.

Q2 What are the advantages & disadvantages of Internet?

Ans: The advantages of Internet:

Following are the advantages provided by the Internet:

- 1) **Information** The biggest benefit offered by the Internet is information. It functions as a valuable resource of information. You can find any type of information on any subject with the help of the search engines like Yahoo and Google.
- 2) **Communication** The primary goal of the Internet is communication. It has done extremely well in this field, however the development process is still going on to make it more dependable and quick. By sending an e-mail, we can contact a person who is physically present thousand miles away within the fraction of a second's time.
- 3) **Entertainment** Internet functions as a popular medium of entertainment. A wide variety of entertainment including video games, music, movies, chat room, news and others can be accessed through the Internet.

- 4) E-commerce E-commerce is the idea that is implemented for any form of commercial strategy or business transactions that entails transmission of data from one corner of the world to another. E-commerce has become a fantastic option through which you can shop anything.
- 5) Formation of communities Internet helps in formation of communities or forums. Here a number of people can participate in different types of debates and discussions, express their views and gather valuable knowledge.
- 6) Services A variety of services are offered via Internet, for example job searching, online banking, buying movie tickets, hotel reservations and consultation services etc. When you avail these services offline, they become more expensive.

The disadvantages of Internet:

Following are the disadvantages of Internet:

- 1) Spamming: Spamming denotes distribution of unsolicited e-mails in large numbers. They are meaningless and they unnecessarily block the whole system. These activities are treated as illegal.
- 2) Theft of personal details While using the Internet, there is high probability that your personal details like name, address and credit card number may be accessed by con artists and used for fraudulent purposes.
- 3) Pornography: Pornography is definitely harmful for your children. There are numerous pornographic sites available over the Internet and watching any of those can have very bad influence on the mental health of your children.
- 4) Virus threat Virus is a program that interrupts the usual operation of your personal computer system. PCs linked to the Internet have high probability of virus attacks and as a result of this your hard disk can crash, giving you a lot of trouble.

Q3 What are the services of Internet?

Ans: Internet is used as a communication network using which internet user can communicate with each other. The Internet provides many services & most widely used services are as:

E-mail: Electronic mail, commonly referred to as **email** or **e-mail**, is a method of exchanging digital messages from an author to one or more recipients. Modern email operates across the [Internet](#) or other [computer networks](#).

FTP: File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host or to another host over a TCP-based network, such as the Internet.

FTP is built on a client-server architecture and uses separate control and data connections between the client and the server

Telnet: Telnet is a network protocol used on the Internet or local area networks to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection. User data is interspersed in-band with Telnet control information in an 8-bit byte oriented data connection over the Transmission Control Protocol

Usenet: Usenet is a world-wide distributed discussion system. It consists of a set of "newsgroups" with names that are classified hierarchically by subject. "Articles" or "messages" are "posted" to these newsgroups by people on computers with the appropriate software -- these articles are then broadcast to other interconnected computer systems via a wide variety of networks. Some newsgroups are "moderated"; in these newsgroups, the articles are first sent to a moderator for approval before appearing in the newsgroup. Usenet is available on a wide variety of computer systems and networks, but the bulk of modern Usenet traffic is transported over either the Internet or UUCP.

IRC: Internet Relay Chat (IRC) is a protocol for real-time Internet text messaging (chat) or synchronous conferencing.^[1] It is mainly designed for group communication in discussion forums, called *channels*,^[2] but also allows one-to-one communication via private message^[3] as well as chat and data transfer,^[4] including file sharing

HTTP: Short for *HyperText Transfer Protocol*, the underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands. For example, when you enter a URL in your browser, this actually

sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page.

The other main standard that controls how the World Wide Web works is HTML, which covers how Web pages are formatted and displayed.

HTTP is called a *stateless* protocol because each command is executed independently, without any knowledge of the commands that came before it. This is the main reason that it is difficult to implement Web sites that react intelligently to user input. This shortcoming of HTTP is being addressed in a number of new technologies, including ActiveX, Java, JavaScript and cookies

Q4 Define WWW?

Ans : The **World Wide Web** (abbreviated as **WWW** or **W3**, commonly known as **the Web**), is a system of interlinked hypertext documents accessed via the Internet. With a web browser, one can view web pages that may contain text, images, videos, and other multimedia, and navigate between them via hyperlinks.

Q5 Define Web browser?

Ans: A **web browser** is a software application for retrieving, presenting and traversing information resources on the World Wide Web. An *information resource* is identified by a Uniform Resource Identifier (URI) and may be a web page, image, video or other piece of content. Hyperlinks present in resources enable users easily to navigate their browsers to related resources. A web browser can also be defined as an application software or program designed to enable users to access, retrieve and view documents and other resources on the Internet.

Q6 What is computer security?

Ans: *Computer security* means to protect information. It deals with the prevention and detection of unauthorized actions by users of a computer. Lately it has been extended to include privacy, confidentiality, and integrity.

A rough classification of protective measures in computer security is as follows:

- **Prevention**—Take measures that prevent your information from being damaged, altered, or stolen. Preventive measures can range from locking the server room door to setting up high-level security policies.

- **Detection**—Take measures that allow you to detect when information has been damaged, altered, or stolen, how it has been damaged, altered, or stolen, and who has caused the damage. Various tools are available to help detect intrusions, damage or alterations, and viruses.
- **Reaction**—Take measures that allow recovery of information, even if information is lost or damaged.

The above measures are all very well, but if you do not understand how information may be compromised, you cannot take measures to protect it. You must examine the components on how information can be compromised:

- **Confidentiality.** The prevention of unauthorized disclosure of information. This can be the result of poor security measures or information leaks by personnel. An example of poor security measures would be to allow anonymous access to sensitive information.
- **Integrity.** The prevention of erroneous modification of information. Authorized users are probably the biggest cause of errors and omissions and the alteration of data. Storing incorrect data within the system can be as bad as losing data. Malicious attackers also can modify, delete, or corrupt information that is vital to the correct operation of business functions.
- **Availability.** The prevention of unauthorized withholding of information or resources. This does not apply just to personnel withholding information. Information should be as freely available as possible to authorized users.
- **Authentication.** The process of verifying that users are who they claim to be when logging onto a system. Generally, the use of user names and passwords accomplishes this. More sophisticated is the use of smart cards and retina scanning. The process of authentication does not grant the user access rights to resources—this is achieved through the authorization process.
- **Authorization.** The process of allowing only authorized users access to sensitive information. An authorization process uses the appropriate security authority to determine whether a user should have access to resources.

Q7 What is scope of internet in future?

Ans: **Aims & Scope**

Future Internet (ISSN 1999-5903) is a scholarly open access journal which provides an advanced forum for scientific studies related to Internet technologies and the information society. It publishes regular research papers, reviews and short communications. Our aim is to encourage scientists to publish their experimental

and theoretical results in as much detail as possible. Therefore, there is no restriction on the length of the papers or the use of color figures. The full experimental details must be provided so that the results can be reproduced. There are, in addition, unique features of this journal:

- manuscripts regarding research proposals and research ideas will be particularly welcomed
- electronic files or software regarding the full details of the calculation and experimental procedure, if unable to be published in a normal way, can be deposited as supplementary material
- we also accept manuscripts communicating to a broader audience with regard to research projects financed with public funds

Subject Areas

- internet-related topics, including web and mobile applications
- information society
- big data
- augmented reality
- smart cities
- cloud based computing
- the internet of things
- indexing and search engines and technologies
- semantic web, markup, RDF
- web services
- file formats, protocols
- virtual and mirror worlds
- e-Government
- e-Education and e-Learning
- any emerging topics

Q8 Explain E-Commerce.

Ans: **Electronic commerce**, commonly known as **e-commerce**, is the buying and selling of product or service over electronic systems such as the Internet and other computer networks. Electronic commerce draws on such technologies as electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transaction's life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices social media, and telephones as well.

Q9 Explain E-Business.

Ans: E-business (electronic business), derived from such terms as "e-mail" and "e-commerce," is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners. One of the first to use the term was IBM, when, in October, 1997, it launched a thematic campaign built around the term. Today, major corporations are rethinking their businesses in terms of the Internet and its new culture and capabilities. Companies are using the Web to buy parts and supplies from other companies, to collaborate on sales promotions, and to do joint research. Exploiting the convenience, availability, and world-wide reach of the Internet, many companies, such as Amazon.com, the book sellers, have already discovered how to use the Internet successfully.

Q10 What is role of E-business?

Ans: By E-business main profit is taking by company because they are not waste there time to explain the product money its profit. No extra need of workers shop so i think company also save the money.

This money they apply on either product or add of any product. even company get connect early 4rm customer customer haven't compulsion of time limit there not necessity to by any product, and even we analyze every product in our own way.

It is good 4 customer because it saves the time of customer..... by it we know ab that technology they will come in market. so easy to find any thing about it.

The capitalist system is classically displayed here also. The e commerce alternative makes even the smallest business able to compete nationally and look as large as even a Sears store. The pricing of e commerce is low, in part due to overhead, and this pricing forces local vendors, even in rural areas to remain competitive.

Chapter-4

New Information Technology

Q1 Explain the concept of networking.

Ans: A **computer network**, or simply a **network**, is a collection of computers and other hardware interconnected by communication channels that allow sharing of resources and information. Where at least one process in one device is able to send/receive data to/from at least one process residing in a remote device, then the two devices are said to be in a network. A network is a group of devices connected to each other. Networks may be classified into a wide variety of characteristics, such as the medium used to transport the data, communications protocol used, scale, topology, benefit, and organizational scope.

Q2 What is Multimedia?explain.

Ans Multimedia includes a combination of text, audio, still images, animation, video, or interactivity content forms. Multimedia is usually recorded and played, displayed, or accessed by information content processing devices, such as computerized and electronic devices, but can also be part of a live performance. Multimedia devices are electronic media devices used to store and experience multimedia content. Multimedia is distinguished from mixed media in fine art; by including audio, for example, it has a broader scope. The term "rich media" is synonymous for interactive multimedia. Hypermedia can be considered one particular multimedia application.

Q3 What do you mean by Artificial intelligence?

Ans: AI's scientific goal is to understand intelligence by building computer programs that exhibit intelligent behavior. It is concerned with the concepts and methods of symbolic inference, or reasoning, by a computer, and how the knowledge used to make those inferences will be represented inside the machine.

Q4 What is Executive Information System?

Ans: An **executive information system (EIS)** is the type of information system used by executives to access and manage the data they require to make informed business decisions. Although there are tools for managing an executive information system, the EIS in itself is not a tool, but rather, an infrastructure within a company. In the hierarchical structure of information systems, the EIS is at the top and is designed to convert all relevant data (from project to process to budget) into aggregated information that makes sense and brings value to the overall business strategy.

Q5 Define DSS.

Ans: A **decision support system (DSS)** is a computer-based information system that supports business or organizational decision-making activities. DSSs serve the management, operations, and planning levels of an organization and help to make decisions, which may be rapidly changing and not easily specified in advance. Decision support systems can be either fully computerized, human or a combination of both.

Q6 Define Expert Systems.

Ans: In artificial intelligence, an **expert system** is a computer system that emulates the decision-making ability of a human expert. Expert systems are designed to solve complex problems by reasoning about knowledge, like an expert, and not by following the procedure of a developer as is the case in conventional programming. The first expert systems were created in the 1970s and then proliferated in the 1980s. Expert systems were among the first truly successful forms of AI software.

An expert system has a unique structure, different from traditional programs. It is divided into two parts, one fixed, independent of the expert system: the inference engine, and one variable: the knowledge base. To run an expert system, the engine reasons about the knowledge base like a human. In the 80s a third part appeared: a dialog interface to communicate with users. This ability to conduct a conversation with users was later called "conversational"

Q.7 What is difference between MIS & DSS?

Ans: The terms MIS and DSS stand for Management Information Systems and Decision Support Systems respectively. There has been a lot of talk regarding these two, whether they are actually the same thing or if there are any significant differences between the two.

MIS focus on operational efficiency (help organization "do things right")
DSS focus on making effective decision (help organization "do the right thing")

MIS is basically a kind of link to facilitate communication between managers across different areas in a business organization

MIS plays a pivotal role in enabling communications across the floor of an organization, between various entities therein.

DSS, many consider, is an advancement from the original MIS. However, this is not the sole difference between the two. While there may not be too much separating the two, the difference is still there, as is apparent when we say DSS is an advancement over MIS.

DSS, as the term indicates, is about leadership and senior management in an organization providing good, reliable judgment as well as vision. MIS, on the other hand, is about focusing on the actual flow of information itself.

Issues for Senior Management: Management Control, Management Issues, Security Issues: Viruses, Worms and other creatures, I T issues for Management, Management in a Technological Environment, the changing world of Information.

Chapter-5

Issues of IT in Management

Q1 Explain management issues.

Ans: Issues Management is the process of identifying and resolving issues in a project or organization.

Using this *Issue Management Process*, you can identify and resolve issues quickly, before they have an undesirable impact.

Whether you experience staffing, supplier, equipment or other issues, this process will guide you through the steps towards their speedy resolution.

This Issue Management Process will help you to:

- Identify and record issues clearly
- Use Issue Forms to document issues properly
- Determine the impact of each issue
- Prioritize issues and report on their status
- Review all issues and decide on a course of action
- Take the steps needed to resolve issues quickly

The main issues of management are:

Backup: IT is very important to have backup of the data so that it can be easily retrieved after any type of disaster.

Security: Its purpose is to ensure that a particular system is preserved from all kinds of cyber attack. Thus, computer security is the science that preserves data, keep up interaction and ensure uninterrupted service.

Budget management: Keeping this in mind the managers has to set the priorities for hardware & software selection as per his requirements & the budget at his disposal.

Project Mangement: If the company is developing an it project itself,then it needs to check everytime that the project is on track to under control for this a project management team should be made.

Data Control: Accuracy of data used in making decisions being an important management consideration requires maintenance accuracy of consistency through critical control.

By using this Issue Management Process, you'll also be able to:

- Assign actions to staff to resolve issues
- Monitor the outcome of the actions taken
- Assign roles and responsibilities for managing issues
- Report on the status of issues to management

Q.2 What is the impact of IT on the business organization?

Ans: The managing the new IT infrasture is facing some problems which inculed:

1. The loss of management control over system.
2. The need of carefully manage organizational change.
3. Connectivity & application integration challenges.
4. The difficulty of ensuring network scalability, reliability & security
5. Controlling the hidden cost of enterprise computing.

Q3 What are the issues of security?

Ans: Its purpose is to ensure that a particular system is preserved from all kinds of cyber attack. Thus, computer security is the science that preserves data, keep up interaction and ensure uninterrupted service.

Living in global world is neither easy nor safe. Security issues of computer are continually debated because of their increasing significance and vulnerability. Everyday thousands of confidential document and precious information is shred between users that are always at the risk of hacking.

Earlier computer systems such as Atlas and MULTICS have been attacked far before the formal demand of security. Computer's security issues usually deals

with process that can be used to preserve and protect data that is shared between users, in not only theoretical but also practical aspect.

The aim of computer security is CIA - to secure the confidentiality, integrity and availability of all information stored in our computer.

Confidentiality

Confidentiality can be interpreted as privacy or secrecy. Security gap can range from embarrassment to disaster.

Integrity

By integrity we mean that information is protected from all unauthorized changes that are undetectable to authorized users. In most of the hacking cases, integrity of resources is compromised.

Availability

Availability reflects that the information is accessible to the authorized users. In national news we often heard of "denial of service" attacks; the unavailability of service is an attack of availability.

Other Issues

There are also other concerns of the computer security such as access control and non-repudiation. The maintenance of access control means that users can not only approach those services and resources to which they are legitimately authorized but also those to which their access is not denied.

In the realm of non-repudiation some concrete facts come such as a person who has received certain email cannot deny that he received it and a person who has sent an email can never deny that he has not sent it. Moreover, the canvas of computer security is very broad. It also encompasses the issues of ethics and risk analysis along with special concern to computer crime, remediation of attacks, prevention and detection. Identity and anonymity are also areas of focus in the computer security.

Q4 Define Virus.

Ans **Virus** is a small infectious agent that can replicate only inside the living cells of an organism. Viruses can infect all types of organisms, from animals and plants to bacteria and archaea. Since Dmitri Ivanovsky's 1892 article describing a non-bacterial pathogen infecting tobacco plants, and the discovery of the tobacco mosaic virus by Martinus Beijerinck in 1898, about 5,000 viruses have been described in detail, although there are millions of different types. Viruses are found in almost every ecosystem on Earth and are the most abundant type of biological entity. The study of viruses is known as virology, a sub-speciality of microbiology.

Q4 Define Worms.

Ans: A **computer worm** is a standalone malware computer program that replicates itself in order to spread to other computers. Often, it uses a computer network to spread itself, relying on security failures on the target computer to access it. Unlike a computer virus, it does not need to attach itself to an existing program. Worms almost always cause at least some harm to the network, even if only by consuming bandwidth, whereas viruses almost always corrupt or modify files on a targeted computer.

Q5 Explain the changing world of Information.

Ans: IT service professionals need to keep an eye on the "big picture." The technology market is changing at a continually faster rate. It is highly likely that decisions that made your IT service business successful in the past will not be the same as those required to achieve success in the future. But the biggest differences will not be expanded technological functions, features and device forms. The bigger changes will be the many ways that human factors get stirred into technology. This will require new ways for supporting technology and the people that use technology. The following discussion takes a broad look at macro trends and tees up important perspectives for service providers and educational institutions. Both are agents of important changes that are happening right now

Q6 What are IT issues for management?

Ans: IT provides new ways to control the organization, making possible new organizational structures.

So, it is very important to address the issue of how management will overcome these IT issues:

Change management: Implementing IT in the organization is a business of change the managers should make their employees ready in advance to adopt new strategies & technology.

Involvement of management: While making any decision about technology the personal involvement of management is a must as it related to the huge investments & long term plans.

Integral Part of management: It should be an integral part of a company's corporate strategy. Corporate plans should include the planning for IT also.

Manging an IT architecture: Mangement has the responsibility for planning & designing IT architecture. Mangement should decide on the basic infrastructure needed to take advantage of technology.

Levels of support: Mangement should determine the level of support to provide users working with technology.

Decision On source: Managers must decide on whether to outsource the IT services or to maintain one's own work force..

Need of IT Professional : IT being, a dynamic * complex field of work requires professional **people with requisite IT skills in the organization.**

Q 7 Define Technology management.

Ans Technology Management is set of management disciplines that allows organizations to manage their technological fundamentals to create competitive advantage. Typical concepts used in technology management are technology strategy (a logic or role of technology in organization), technology forecasting (identification of possible relevant technologies for the organization, possibly through technology scouting), technologyI roadmapping (mapping technologies to business and market needs), technology project portfolio (a set of projects under development) and technology portfolio (a set of technologies in use).

Q. What is the role of technology in management?

Ans: Technology can play several roles in business.

1. Productivity increases when data processing tasks can be automated. This allows businesses to serve more customers with less resources.
2. Managers make more informed decisions when the various metrics of business can be tracked and reported on in more meaningful ways.
3. Businesses can use the Internet to broaden their markets and reach new customers. Of course the Internet also means increased competition.
4. Technology based information security and integrity is a significant different over padlocks on filing cabinets. Digitized information improves our ability to preserve and protect data, but also creates new vulnerabilities that must be addressed.
5. Remote desktop and computing abilities create the opportunity for information workers to telecommute. This allows businesses to address a variety of concerns including the need for less office space, reduction in commuting expenses, allowing employees the flexibility to deal with various family circumstances and more.

