CS507 Information System Short Notes

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'MIS' is a planned system of collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management. According to Phillip Kotler "A marketing information system consists of people, equipment, and procedures to gather, sort, analyse, evaluate, and distribute needed, timely, and accurate information to marketing decision makers." (Kotler, Phillip and Keller, Kevin Lane; Marketing Management, Pearson Education, 12 Ed, 2006)

The terms MIS and information system are often confused. Information systems include systems that are not intended for decision making. MIS is sometimes referred to, in a restrictive sense, as information technology management. That area of study should not be confused with computer science. IT service management is a practitioner-focused discipline. MIS has also some differences with Enterprise Resource Planning (ERP) as ERP incorporates elements that are not necessarily focused on decision support. Definition: Management Information Systems (MIS) is the term given to the discipline focused on the integration of computer systems with the aims and *objectives on an organisation.*

The development and management of information technology tools assists executives and the general workforce in performing any tasks related to the processing of information. MIS and business systems are especially useful in the collation of business data and the production of reports to be used as tools for decision making.

Applications of MIS
With computers being as ubiquitous as they are today, there's hardly any large business that does not rely extensively on their IT systems.

However, there are several specific fields in which MIS has become invaluable.

* Strategy Support

While computers cannot create business strategies by themselves they can assist management in understanding the effects of their strategies, and help enable effective decision-making.

MIS systems can be used to transform data into information useful for decision making. Computers can provide financial statements and performance reports to assist in the planning, monitoring and implementation of strategy.

MIS systems provide a valuable function in that they can collate into coherent reports unmanageable volumes of data that would otherwise be broadly useless to decision makers. By studying these reports decision-makers can identify patterns and trends that would have remained unseen if the raw data were consulted manually.

MIS systems can also use these raw data to run simulations – hypothetical scenarios that answer

a range of ‘what if’ questions regarding alterations in strategy. For instance, MIS systems can provide predictions about the effect on sales that an alteration in price would have on a product. These Decision Support Systems (DSS) enable more informed decision making within an enterprise than would be possible without MIS systems

A DSS can take many different forms. In general, we can say that a DSS is a computerized system used for supporting rather than automating decisions. A decision is a choice between alternatives based on estimates of the values of those alternatives. Supporting a decision means helping people working alone or in a group gather intelligence, generate alternatives and make choices. Supporting the choice making process involves supporting the estimation, the evaluation and/or the comparison of alternatives. In practice, references to DSS are usually references to computer applications that perform such a supporting role.

Characteristics and Capabilities of DSS

Because there is no exact definition of DSS, there is obviously no agreement on the standard characteristics and capabilities of DSS. Turban, E.,Aronson, J.E., and Liang, T.P. constitute an ideal set of characteristics and capabilities of DSS. The key DSS characteristics and capabilities are as follows:

1. Support for decision makers in semistructured and unstructured problems.
2. Support managers at all levels.
3. Support individuals and groups.
4. Support for interdependent or sequential decisions.
5. Support intelligence, design, choice, and implementation.
6. Support variety of decision processes and styles.
7. DSS should be adaptable and flexible.
8. DSS should be interactive and provide ease of use.
9. Effectiveness balanced with efficiency (benefit must exceed cost).
10. Complete control by decision-makers.
11. Ease of development by (modification to suit needs and changing environment) end users.
12. Support modeling and analysis.
13. Data access.
14. Standalone, integration and Web-based

A **Strategic Information System** (*SIS*) is a type of Information System that is aligned with business strategy and structure. The alignment increases the capability to respond faster to environmental changes and thus creates a competitive advantage. An early example was the favorable position afforded American and United Airlines by their reservation systems, Sabre and Apollo. Strategic Information System (SIS) is a system to manage information and assist in strategic decision making. A strategic information system has been defined as, "The information system to support or change enterprise's strategy." by Charles Wiseman (Strategy and Computers 1985).

- Data Processing (DP) [efficiency] — Improved efficiency by means of automating back office data processing functions.
- Management Information Systems (MIS) [effectiveness] — Improved information flows and transfers.
- Strategic Information System (SIS) [competitiveness] — Enhance competitiveness of the organization through the application of IT to business processes. Davenport's point of view is that "Information is power and people are unlikely to give it away"

Strategic information system is different from other systems as: -

- they change the way the firm competes.
- they have an external (outward looking) focus.
- they are associated with higher project risk.
- they are innovative (and not easily copied)

Lesson 1

SIR, PLZ TELL ME ABOUT MANAGEMENT INFORMATION SYSTEM.

A management information system (MIS) is a subset of the overall internal controls of a business covering the application of people, documents, technologies, and procedures by management accountants to solving business problems such as costing a product, service or a business-wide strategy. Management information systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information system.

Respected sir, Kindly explain the concept of tertiary sources by giving example as this concept is still not very clear to me. Thanks

Works which list primary and secondary resources in a specific subject area. Materials in which the information from secondary sources has been "digested", reformatted and condensed, to put it into a convenient, easy-to-read form.

Some examples of tertiary sources:
1. Almanacs and fact books
2. Bibliographies (may also be secondary)
3. Chronologies

Is MIS important for business only?

No. management information system is important for all types of organization. An 'MIS' is a planned system of the collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management. A marketing information system consists of people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision makers.

sir tell why information is necessary in all forms to run an organisation?

In a general sense, the term information system (IS) refers to a system of persons, data records and activities that process the data and information in an organization, and it includes the organization's manual and automated processes. In a narrow sense, the term information system (or computer-based information system) refers to the specific application software that is used to store data records in a computer system and automates some of the information-processing

activities of the organization. Computer-based information systems are in the field of information technology. The discipline of Business process modeling describes the business processes supported by information systems.

SIR KINDLY TELLS ME THE WHAT IS DATA AND HOW MANY TYPES OF DATA??

Data refer to a collection of facts usually collected as the result of experience, observation or experiment, or processes within a computer system, or a set of premises. This may consist of numbers, words, or images, particularly as measurements or observations of a set of variables. Data are often viewed as a lowest level of abstraction from which information and knowledge are derived

What is the Primary source and Secondary source?

Primary sources are original materials on which other research is based they are usually the first formal appearance of results in the print or electronic literature (for example, the first publication of the results of scientific investigations is a primary source.) Secondary sources describe, interpret, analyze and evaluate the primary sources.

Secondary sources are less easily defined than primary sources. What some define as a secondary source, others define as a tertiary source. Nor is it always easy to distinguish primary from secondary sources.
For example,
• A newspaper article is a primary source if it reports events, but a secondary source if it analyses and comments on those events.

Kindly give some examples of tertiary source vs. primary and secondary source in simple wording. Further more definition of this source because i did not understand it clearly by hand outs and lec.
With regards

Primary sources are original materials on which other research is based. They are usually the first formal appearance of results in the print or electronic literature (for example, the first publication of the results of scientific investigations is a primary source.)

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For example,

• A newspaper article is a primary source if it reports events, but a secondary source if it

analyses and comments on those events.

Tertiary Sources are Materials in which the information from secondary sources has been "digested" reformatted and condensed, to put it into a convenient, easy-to-read form. Sources which are once removed in time from secondary sources are called tertiary sources.

sir explaine the"tertiary sources" as compare toprimary and secondary sources .

The term tertiary source is a relative term. What is considered tertiary depends on what is considered primary and secondary. A tertiary source may thus be understood as a selection, distillation, summary or compilation of primary sources, secondary sources, or both.

Salam Sir i want to ask about the importance of the Information System in our life and in the business organizations. What precautions are to be adopt in this topic.

In a general sense, the term information system (IS) refers to a system of persons, data records and activities that process the data and information in an organization, and it includes the organization's manual and automated processes. In a narrow sense, the term information system (or computer-based information system) refers to the specific application software that is used to store data records in a computer system and automates some of the information-processing activities of the organization. Computer-based information systems are in the field of information technology. The discipline of Business process modeling describes the business processes supported by information systems.

What is difference between a complete information and data ?

Data is the only raw facts and figures, whereas the information is the processed or manipulated form of that data.

Sir plz tell me why a well developed information system is crucial for the success of an business enterprise?

Information system is very much important in our daily life, especially in decision making. Without the availability of relevant information, we may take a decision which is wrong or not to our benefit. For instance if the person does not have complete knowledge of facts he might not be able to take the right decision.

can you tell me how can i use it for daily routine life?

Information Technology is an interdisciplinary science primarily concerned with the collection, classification, manipulation, storage, retrieval and dissemination of information. Practitioners within the field study the application and usage of knowledge in organizations, along with the interaction between people, organizations and any existing information systems, with the aim of creating, replacing or improving information systems. Information science is often (mistakenly) considered a branch of computer science. However, it is actually a broad, interdisciplinary field,

incorporating not only aspects of computer science, but often diverse fields such as cognitive science, commerce, communications, law, library science, management, mathematics, public policy, and the social sciences.

Respected sir plz tell me what is the changing need

From the term changing needs we mean that the information requirements vary from business to business and environment to environment. Different Organizations need information on the basis of their working requirements to make. Changing needs help in decision making for the management of the organizations. There are certain levels of management in every Industry. Every level of management needs different type of information. Such as Lower level management (supervisors) need detailed information whereas top level management requires concise information to make the decision.

Lesson 2

What is the meaning of Management System?

A management information system (MIS) is a subset of the overall internal controls of a business covering the application of people, documents, technologies, and procedures by management accountants to solving business problems such as costing a product, service or a business-wide strategy. Management information systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information systems

How we can get the maximum quality of information from various sources?

Information quality (IQ) is a term to describe the quality of the content of information systems. It is often defined as: "The fitness for use of the information provided." Although this is usable for most everyday purposes, specialists often use more complex models for information quality. Most information system practitioners use the term synonymously with data quality. However, as many academics make a distinction between data and information, some will insist on a distinction between data quality and information quality. Information quality assurance is confidence that particular information meets some context specific quality requirements.

"Information quality" is a measure of the value which the information provides to the user of that information. 'Quality' is subjective and the quality of information can vary among users and among uses of the information

AOA! WHAT IS THE DIFFERENCE B/W INFORMATION & KNOWLEDGE & HOW KNOWLEDGE IN ADDITION TO QUALITY INFORMATION HELP OUT IN MAKING EFFICIENT DECISIONS??

Knowledge is defined in the as (i) expertise, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject, (ii) what is known in a particular field or in total; facts and information or (iii) awareness or familiarity gained by experience of a fact or situation. Philosophical debates in general start with Plato's formulation of knowledge as "justified true belief"

Information as a concept has a diversity of meanings, from everyday usage to technical settings. Generally speaking, the concept of information is closely related to notions of constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception, and representation.

Difference between need and wants? how need convert into informations? Thanx

Need can be concluded as the basic necessaries of our life, whereas the wants are the extra requirements to do anything. Information is required in day to day decision making. Without the availability of right quantity of information at the right time, the process of decision making is highly affected. For this reason various sources of information are used to extract information.

Lesson 3

What is the differecnce between Manufacturing Sector, Service Sector Trading sector?

The secondary sector of the economy is one of the three economic sectors, the others being the tertiary sector and the primary sector (extraction such as mining, agriculture and fishing). Sometimes an additional sector, the "quaternary sector", is defined for the sharing of information (which normally belongs to the tertiary sector).

The secondary sector of the economy includes those economic sectors that create a finished, usable product: manufacturing and construction

The tertiary sector of economy (also known as the service sector or the service industry) is one of the three economic sectors, the others being the secondary sector (approximately manufacturing) and the primary sector (extraction such as mining, agriculture and fishing). Sometimes an additional sector, the "quaternary sector", is defined for the sharing of information (which normally belongs to the tertiary sector).

Sir define: MKIS, OIS, CBIS?thanks

MKIS is a type of Information System that helps the firm to achieve following objectives:
o Identification of customers for firm‘s products and services.
o Development of those products and services to meet customers’ needs

o Promotion of the products and services, and
o Provision of after sale customer support

CBIS (Computer based Information System) is an Information System that uses computer & telecommunications technology to perform its intended tasks. In CBIS, Information technology (IT) becomes a subset of the Information system.

AOA! WHAT ARE THE IMPACTS OF CULTURE ON THE INFORMATION REQUIREMENTS OF AN ORGANIZATION?

Organizational culture is the specific collection of values and norms that are shared by people and groups in an organization and that control the way they interact with each other and with stakeholders outside the organization. Organizational values are beliefs and ideas about what kinds of goals members of an organization should pursue and ideas about the appropriate kinds or standards of behavior organizational members should use to achieve these goals. From organizational values develop organizational norms, guidelines or expectations that prescribe appropriate kinds of behavior by employees in particular situations and control the behavior of organizational members towards one another.
Culture is set of Fundamental Assumptions that exist and grow with the organization. It's not publicly announced but spoken about within the organization. It is a combination of implicit values that keep the organization together. It is essential that the employees understand the culture-What drives the organization.

Sir tell me the difference of public sector and private sectors

The public sector is the part of economic and administrative life that deals with the delivery of goods and services by and for the government, whether national, regional or local/municipal. Examples of public sector activity range from delivering social security, administering urban planning and organizing national defenses

In economics, the private sector is that part of the economy which is both run for private profit and is not controlled by the state. By contrast, enterprises that are part of the state are part of the public sector; private, non-profit organizations are regarded as part of the voluntary sector

sir tell me the difference of services sectors and manufacturing sectors

The tertiary sector of economy (also known as the service sector or the service industry) is one of the three economic sectors, the others being the secondary sector (approximately manufacturing) and the primary sector (extraction such as mining, agriculture and fishing). Sometimes an additional sector, the "quaternary sector", is defined for the sharing of information (which normally belongs to the tertiary sector).

Hope you will fine tell me the difference of small and medium size organizations

Small organizations usually have simple management structure. The need invariably grows from the limited scope and operations of management. Since tasks to be handled are usually limited

and manageable, hence need for introducing more levels is not required. Since operations can be managed at the top level by one or two members of the senior management, officers from the lower level of management are not usually
involved in decision making. Hence the final decisions are centrally taken.Information flows and formats are easy to define and change. Since information requirements are not
extensive, number of documents prepared and generated will also be few in number. Mostly the interested party itself is running the business, hence the management is centralized to few people.
Examples of Information requirements of Small Organizations
• Day to day transactions
• Daily Sale
• Cash management
• Receivables and Payables

Medium Sized organizations are normally a family ownership run by brothers, father-son. There are many organizations existing these days which are being run by the family members. The prime concern may be the trust already fostered among the blood relations but this might give rise to informal relationship among them. Since all critical managerial positions are usually controlled by the family members, information is structured only to the extent of external reporting. The level of reporting that could meet the information
needs of the clients is best suited for such an organization.Medium sized organizations are run under direct supervision of the family members which rarely extends to segregation of duties and delegation of authority.
• Centralized decision making
• above mentioned structure rarely changes with complexity and dynamism of environments.

aoa sir.how can big organization change the requirement of the information system?

Usually such organizations are characterized by large scale of operations. Various criteria can be used for this purpose. With such large size of organizations, management structure needs to be multi- tiered for efficient and strong control. This leads to formulation of many departments, management levels, designations, promotional opportunities and salary increments.

With such a large structure, it is inevitable that the detailed planning should be made for proper management control, for both short term and long term.

Which software is used to record information system?

There are different information systems. Such as Geographic information systems (GIS) deal with the storage of information about the Earth for automatic retrieval by a computer, in an accurate manner appropriate to the information's purpose.
Geostatistics deal with quantitative data analysis, specifically the application of statistical methodology to the exploration of geographic phenomena. Geostatistics is used extensively in a variety of fields including: hydrology, geology, petroleum exploration, weather analysis, urban planning, logistics, and epidemiology

Does the small organization, is also characterise on the basis of No. of employees, total assests, or value of transactions/ day or month? Pl. explain

All the organizations, whether small or large, are characterize by the principles of information system. As all the organizations have number of employees and it has also assets. Therefore all the rules and principles of business employ on all organizations.

what is difference between principle of management and MIS

Scientific management is a theory of management that analyzes and synthesizes workflows, improving labor productivity. The core ideas of the theory were developed by Frederick Winslow Taylor in the 1880s and 1890s, and were first published in his monographs, Shop Management (1905) and The Principles of Scientific Management (1911) Taylor believed that decisions based upon tradition and rules of thumb should be replaced by precise procedures developed after careful study of an individual at work. Its application is contingent on a high level of managerial control over employee work practices.

Management information system (MIS) is a subset of the overall internal controls of a business covering the application of people, documents, technologies, and procedures by management accountants to solving business problems such as costing a product, service or a business-wide strategy. Management information systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information systems.

What is the difference between electronic system and computer system? What are specialized hardwares?

Electronics refers to the flow of charge (moving electrons) through nonmetal conductors (mainly semiconductors), whereas electrical refers to the flow of charge through metal conductors. For example, flow of charge through silicon, which is not a metal, would come under electronics; whereas flow of charge through copper, which is a metal, would come under electrical. This distinction started around 1906 with the invention by Lee De Forest of the triode. Until 1950 this field was called "Radio techniques" because its principal application was the design and theory of radio transmitters, receivers and vacuum tubes

A computer is a machine that manipulates data according to a list of instructions. The first devices that resemble modern computers date to the mid-20th century (1940–1945), although the computer concept and various machines similar to computers existed earlier. Early electronic computers were the size of a large room, consuming as much power as several hundred modern personal computers (PC).

sir plz tel me what is the role oof information system in our business environment ..can we say that the pakistani markets are following it completely.if no then what should WE do to compete other international markets

Information systems play a vital role in every organization. Information system (IS) refers to a system of persons, data records and activities that process the data and information in an organization, and it includes the organization's manual and automated processes. In a narrow sense, the term information system (or computer-based information system) refers to the specific application software that is used to store data records in a computer system and automates some of the information-processing activities of the organization. Computer-based information systems are in the field of information technology. The discipline of Business process modeling describes the business processes supported by information systems.

Lesson 4

Sir what is major difference b/w diagonal and lateral information? plz explain it in detail .

One can get information internally in diagonal and lateral way. In diagonal flow, information is generated in some specific pattern, whereas in lateral information is generated on a random pattern and scattered.

aoa sir in all the world no labour like Authoritative style.but when he become boss he used this type management why ?

Decisions are made at the senior management level and than enforced on the lower levels. This type of style centralizes all the decisions at the senior level.

how many kinds of informations?

There are five types of information: Facts, concepts, procedures, processes and principle. You would learn about these in upcoming lectures.]

What is meant by "Lateral flow of information?"

One can get information internally in diagonal and lateral way. In diagonal flow, information is generated in some specific pattern, whereas in lateral information is generated on a random pattern and scattered.

Lesson 5

want to know what is difference between firm,company and organization? sir show difference with the help of example

These are casual rather than legal definitions. In magazines I've written for, the style was to use "firm" for partnership-type companies: law firms, accounting firms, for example. Organization tended to be nonprofit or professional groups, like associations. Company was a profit-making enterprise, although the word "corporation" is used for publicly held companies

sir tell me for keeping long term relationship whith cusotmer which environment shoud be change

Businesses increasingly talk about fostering relationships with their customers. This is important because some modern businesses have literally millions of customers. Hence keeping personal touch with every individual customer is getting difficult to achieve.

• Companies are clearly eager to nurture relationships with their customers. Businesses need to understand the extent to which consumers want to engage with their brands. For some businesses there is

- Either a strong natural need – banks
- Or an emotional attachment – Fashion retailer, car manufacturer

hope you will fine tell me for maximum profit in future which environment should be change

The information needs were and are always there. Information systems used to exist when computerized environments were not available. Automation has enhanced the availability of information. Every industry has its own departmental structure which gives rise to a different set of sub-systems as part of the information system. Therefore environment change depends upon the size, type and nature of the business industry

hope you will fine tell me the importance of change in legal environment

Rules and Policies and Legal Laws established by government effect the Business Environment Change in tariff rate may increase or decrease operation of the business.

Lesson 6

What is main difference among the firm, corporation and listed companies

A corporation is a legal entity separate from the persons that form it. It is a legal entity owned by individual stockholders. In British tradition it is the term designating a body corporate, where it can be either a corporation sole (an office held by an individual natural person, which is a legal entity separate from that person) or a corporation aggregate (involving more persons).
A public company usually refers to a company that is permitted to offer its registered securities (stock, bonds, etc.) for sale to the general public, typically through a stock exchange, but also may include companies whose stock is traded over the counter (OTC) via market makers who use non-exchange quotation services such as the OTCBB and the Pink Sheets.
The term "public company" may also refer to a government-owned corporation. This meaning of a "public company" comes from the tradition of public ownership of assets and interests by and for the people as a whole (public ownership), and is the less-common meaning in the United States.

sir what is major difference b/w procedure and knowledge?

Procedure is a set of instructions that performs a specific task; a subroutine or function. Where as knowledge is familiarity, awareness, or understanding gained through experience or study.

Lesson 7

Kindly elaborate open loop and closed loop system. i couldn't understand it from lecture. Briefly describe it?
Open loop systems is a control system that does not have a feedback loop and thus is not self-correcting where as Close loop system is a control system with a feedback loop that is active
Hope you will fine what is most important component of systems

System is interrelated components linked together according to a plan to achieve specific objectives. So each part of the system is very important because if one of the part is not doing well then all system will suffer.

Lesson 8

sir plz tellme which goals were achieved by CBIS

CBIS is an Information System that uses computer & telecommunications technology to perform its intended tasks. In CBIS, Information technology (IT) becomes a subset of the Information system.
The attributes an Information System should have, to be worthy of being used by an organization for meeting its information requirements. Although information requirements may vary from organization to organization, however common premise is quite the same for many.
• Efficient Processing, including query time
• Large Storage Capacity
• Reduced information Load
• Cross-functional boundaries
• Competitive Tool
• Electronic Document Management/Paper Free environment

Explain CBIS working

An information system is a technologically implemented medium for recording, storing, and disseminating linguistic expressions, as well as for drawing conclusions from such expressions.
The technology used for implementing information systems by no means has to be computer technology. A notebook in which one lists certain items of interest is, according to that definition, an information system. Likewise, there are computer applications that do not comply with this definition of information systems. Embedded systems are an example. A computer application that is integrated into clothing or even the human body does not generally deal with

linguistic expressions. One could, however, try to generalize Langefors' definition so as to cover more recent developments

What is loop management system?

A Loop Management System (LMS) is a kind or a part of network management system which purpose is maximization level of local loop control. Sometimes it is referred to as local loop management (LLM) or copper loop management (CLM).

what is the quality of Purchase System & PLZ tell me sir what is Hire Purchases System.What is main difference between Purshase System And Hire Purchases System.what is its importance in our business organization.

Purchase System
A simple example can be given of a purchase and sales system. In a typical purchase system information related to purchase of materials is kept, for instance,

- Orders for the purchase of various materials
- Status of deliveries received against specific orders
- Changes in the order quantity, time, day or other information
- Quality inspection reports and whether they need to be communicated to the supplier
- Updated status report of stock
- Issues made out of the stock

All and more of information are required to be linked and provided in an organized way.

Sir which loop system is good for accounting records of Plastic Company

Every system that is constructed is expected to generate some sort of output based upon the information fed into it. The output is expected to be used to evaluate system performance – whether the output complies with stated objectives of the system and generate instruction to change input to improve/change output. In this manner the system helps in establishing/re-defining:
The first issue therefore is to define the environment where the systems are required to be operated and the second issue is to describe the system itself.
As there is no feedback required to keep the accounting record of the any organization, therefore open system loop system‘ll be more feasible for such systems.

hope you will fine sir please tell me the difference of open loop system and close loop system
The determinant factor is in an open loop system is that the information from the system not used for control purpose. This is done by using the output to generate feed back for control purposes.
• The output is not coupled to the input for measurement.
• Hence the components of open loop system do not include control and feedback mechanism due to non-existence of internally defined objectives. That is,
Input
Process
Output
Example

An information system that automatically generates report on regular basis and are not used to monitor input or activities.

Feedback is an integral part of the closed loop system. The corrective action as a response to the output requires two other components

· Control Mechanism – Variance Analysis
· Objectives – Predefined expected output from the system

Closed loop system is a system where part of the output is fed back to the system to initiate control to change either the activities of the system or input of the system. In a closed-loop decision environment, the impact of decisions can be measured very precisely. In a closed-loop decision environment, management makes a decision, the computer system singles out exactly to whom the decision applies and a direct action is taken as a result of the decision. The response to the action can then be measured on a case-by-case basis. The results of the management decision can be measured quickly and directly.

Lesson 9

What is difference of Office Automation System and Knowledge System

Office automation system includes formal and informal electronic systems primarily concerned with the communication of information to and from persons both inside and outside the firm. It supports data workers in an organization.

For Instance

• Word processing
• Desktop publishing
• Imaging & Web publishing

The set of processes developed in an organization to create, gather, store, maintain and apply the firm's knowledge is called Knowledge Management. Hence the systems that aid in the creation and integration of new knowledge in the organization are called knowledge systems.

What is difference of Support Systems and Decision Support System

Support System is a term used in Network Marketing to provide supporting tools and education for distributors in establishing their business network. Support system carries very difficult task to allow everyone from different backgrounds to form well established network with strong foundation, both in quality and quantity.

Decision Support Systems (DSS) are a specific class of computerized information system that supports business and organizational decision-making activities. A properly-designed DSS is an interactive software-based system intended to help decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions.

Information System Effects on Organizations Balanced Scorecard work

Abstract: Background: It has long been argued that decision support systems are used to simplify and support businesses. The creators of the Balanced Scorecard, Kaplan and Norton,

have developed their own software application to facilitate and create a support to organizational strategy work. The application is called the Executive Strategy Manager (ESM) and is an online application aimed at helping organizations with their construction of, and reporting on, Balanced Scorecards. The ESM software represents a modern Decision Support System (DSS) in this thesis. Can a modern DSS help an organization with their Balanced Scorecard work by preventing some of the most common pitfalls when working with the Balanced Scorecard? Purpose: The purpose of this thesis is to determine the impact a Balanced Scorecard Decision Support System can have on the success rate of a Balanced Scorecard implementation and work. Methodology: A case study has been conducted to study the ESM through interviews with users of the ESM and the purveyor of the ESM. Conclusion: Through playing a crucial role in the process of implementing the BSC and by that successfully preventing some of the most common pitfalls, a modern DSS can increase the success rate of an organizations Balanced Scorecard work.

The Importance of Utility within Information Systems

Abstract: This candidate thesis is written with the purpose to develop knowledge about utility and to understand utility in information systems. The actual problem we faced was to understand if a system provided the right kind of functionality for its users and also, if the utility provided was sufficient. A software suite developed by Volvo IT, called Tech Tool allowed us to practice our study and gaindeeper understanding about utility in information systems. The empirical data used in this studyconsists of experiences from the respondents, gathered in a semi structured interview. Based on theempirical data acquired, we were able to understand the issues at hand and also helped us drawconclusions about further work needed to be done. The general utility provided by Tech Tool issufficient in most cases but sometimes, user find it hard to complete their tasks due to errors ormissing information or simply, lack of utility in certain areas. We also found out that usability playeda vital role along with utility to create a usable system. This research was conducted at a Volvo IToffice in Gothenburg.

The transfer system was created in order to control player movement between football clubs and has existed since the late nineteenth century. During the negotiation of today's transfer rules FIFA, UEFA and the Commission found that a breach of contract during the season could upset the balance of competition and therefore should be restricted

How MIs helps in middle level management (planning and controlling etc)

Management information system helps middle level management planning, controlling and decision making. The data stored can be used or manipulated to produce differently defined reports from pre-defined reports. It can be presented graphically or pictorially. The reports generated by the MIS are used for analytical decision making by the management. The application software can construct projections, build scenarios, do what if analysis to enable better decision making.

For Example

MIS will use the TPS data to generate monthly and weekly summaries as per requirement (product, customer and salesperson. Major purpose is report generation. We would discuss major types of reports.

• Periodic reports – daily, weekly, monthly, annually, format is predefined and structured for convenience.
• Special – Management by Exception reports only when a special event occurs which needs to be monitored. For instance

AOA! Define key difference b/w TPS & MIRS & is this possible to merge these two systems into a single system?
A Transaction Processing System or Transaction Processing Monitor is a system that monitors transaction programs (a special kind of program). The essence of a transaction program is that it manages data that must be left in a consistent state. E.g. if an electronic payment is made, the amount must be either both withdrawn from one account and added to the other, or none at all. In case of a failure preventing transaction completion, the partially executed transaction must be 'rolled back' by the TPS.
MIRS (Management Information System) makes information available to relevant users by producing pre-determined and pre-designed reports required by the management. Management information system helps middle level management planning, controlling and decision making. The data stored can be used or manipulated to produce differently defined reports from pre-defined reports. It can be presented graphically or pictorially. The reports generated by the MIS are used for analytical decision making by the management. The application software can construct projections, build scenarios, do what if analysis to enable better decision making.

Lesson 10

Tell me the difference of Model Driven DSS Data Driven DSS
Model driven DSS uses following techniques
• **What-If analysis**
Attempt to check the impact of a change in the assumptions (input data) proposed solution e.g. What will happen to the market share if the advertising budget increases by 5 % or 10%?
• **Goal Seek Analysis**
Attempt to find the value of the inputs necessary to achieve a desired level of output. It uses “backward” solution approach.
These are primarily stand alone systems isolated from major organizational information systems (finance, manufacturing, HR, etc). They are developed by end users and are not reliant on central information systems control. These systems combine
• Use of a strong model, and
• Good user interface to maximize model utility

As opposed to model driven DSS, these systems use large pools of data found in major organizational systems. They help to extract information from the large quantities of data stored. These systems rely on Data Warehouses created from Transaction Processing systems.
• They use following techniques for data analysis
• **Online analytical processing, and**
• **Data mining**

For what conditions DSS system requires

DSS processing does not involve the update of data.

Decision Support Systems (DSS) are a specific class of computerized information systems that supports business and organizational decision-making activities. A properly-designed DSS is an interactive software-based system intended to help decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions.

Typical information that a decision support application might gather and present would be:

an inventory of all of your current information assets (including legacy and relational data sources, cubes, data warehouses, and data marts),

comparative sales figures between one week and the next,

projected revenue figures based on new product sales assumptions;

the consequences of different decision alternatives, given past experience in a context that is described

Hope you will fine for what condition office automation systems requires

Office automation refers to the varied computer machinery and software used to digitally create, collect, store, manipulate, and relay office information needed for accomplishing basic tasks and goals. Raw data storage, electronic transfer, and the management of electronic business information comprise the basic activities of an office automation system. Office automation helps in optimizing or automating existing office procedures.

What is Latest information regarding technology in the organization?

The ever-changing world of technology is making the world become smaller every day. Businesses and organizations are taking advantage of the advances in technology to improve their organizations. Technology's influence reaches beyond improving relations within an organization to enhancing an organization's ability to service its customers. But even more than that technology is influencing the shape of the organization itself. In order to realize the impact of technology on business organizations, the following module will focus on how organizations use technology within an organization (intranet, email), how organizations use technology to communicate with and service clients or customers, and finally how organizations are using the current technology to disseminate knowledge (train) both employees and customers.

Explain: Imaging & Web publishing, Electronic calendars – manager's appt. calendars, Email, Audio & video conferencing.

Publishing is the process of production and dissemination of literature or information – the activity of making information available for public view. In some cases authors may be their own publishers, meaning: originators and developers of content also provide media to deliver and display the content

Calendaring software is software enabling users to use electronic versions of a variety of office tools such as calendar, appointment book, address book and contact list. These tools are an extension of many of the features provided by time management software such as desk accessory packages and mainframe office automation systems.

Electronic mail, often abbreviated as e-mail or email, is any method of creating, transmitting, or storing primarily text-based human communications with digital communications systems. Historically, a variety of electronic mail system designs evolved that were often incompatible or not interoperable.

A videoconference (also known as a video teleconference) is a set of interactive telecommunication technologies which allow two or more locations to interact via two-way video and audio transmissions simultaneously. It has also been called visual collaboration and is a type of groupware. It differs from videophone in that it is designed to serve a conference rather than individuals.

Please tell me what is subsystem unit?

Subsystem unit is the part of whole system. Such as in any Organization there are many departments. i.e. Accounts department, purchasing department, sells department etc. There all departments are subsystems of that organization.

Lesson 11

Lesson 12

Describe shortly about "Fuzzy Logic"

The word Fuzzy literally means vague, blurred, hazy, and not clear. Real life problems may not be solved by an optimized solution. Hence allowance needs to be made for any imperfections which may be faced while finding a solution to a problem. Fuzzy logic is a form of algebra employing a range of values from “true” to “false” that is used in decision-making with imprecise data, as in artificial intelligence systems. It is a rule based technology that tolerates imprecision by using non specific terms/ imprecise concepts like "slightly", "quite" and "very", to solve problems. It is based on the Possibility theory, which is a mathematical theory for dealing with certain types of uncertainty and is an alternative to probability theory.

What describe something about ideal management?

Ideal Management in business and human organization activity is simply the act of getting people together to accomplish desired goals. Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources

Sir tell me the importance of market communication in SWOT analysis

SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective.

Marketing management often finds it necessary to invest in research to collect the data required to perform accurate marketing analysis. Accordingly, management often conducts market research (alternately marketing research) to obtain this information. Marketers employ a variety of techniques to conduct market research, but some of the more common include:

Qualitative marketing research, such as focus groups

Quantitative marketing research, such as statistical surveys

Experimental techniques such as test markets

Observational techniques such as ethnographic (on-site) observation

Marketing managers may also design and oversee various environmental scanning and competitive intelligence processes to help identify trends and inform the company's marketing analysis.

Which type of market information is require if we want to see opportunities in market

MKIS helps organizations in efficient channel management. Following can be identified as some of the benefits of MKIS.

1. Customer profiles need to be maintained focusing on their habits and spending patterns. MKIS helps in maintaining these profiles.

2. Information on what competitors have been up to is also critical marketing information. This should not be taken as espionage on competitors.

3. Forecasts of demand are also a critical part of marketing analysis. MKIS helps in achieving this as well.

4. Field sales can also be monitored where sales agents are used to market products.

5. Customers can be quickly updated based on their information kept in MKIS.

6. Dealers involved in sale of product can also be monitored to help enhance revenue.

Lesson 13

What is corporate financing?

Corporate finance is an area of finance dealing with the financial decisions corporations make and the tools and analysis used to make these decisions. The primary goal of corporate finance is to maximize corporate value while managing the firm's financial risks. Although it is in principle different from managerial finance which studies the financial decisions of all firms, rather than corporations alone, the main concepts in the study of corporate finance are applicable to the financial problems of all kinds of firms.

Difference between cockpit crew department and cabin crew department

Cockpit crew includes only pilot and his co pilot. Whereas cabin crew department include all the staff of the plane.

what is difference of corporate financing and consumet banking

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Whereas Consumer banking or Retail banking refers to banking in which banking institutions execute transactions directly with consumers, rather than corporations or other banks. Services offered include: savings and checking accounts, mortgages, personal loans, debit cards, credit cards, and so forth.

hope you will fine tell me the difference of debit card and credit card

A debit card (also known as a bank card or check card) is a plastic card which provides an alternative payment method to cash when making purchases. Functionally, it can be called an electronic check, as the funds are withdrawn directly from either the bank account (often referred to as a check card), or from the remaining balance on the card. In some cases, the cards are designed exclusively for use on the Internet, and so there is no physical card

A credit card is part of a system of payments named after the small plastic card issued to users of the system. It is a card entitling its holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user

Lesson 14

What is the importance accounting information system for any organization?

An accounting information system (AIS) is the system of records a business keeps maintaining its accounting system. This includes the purchase, sales, and other financial processes of the business. The purpose of an AIS is to accumulate data and provide decision makers (investors, creditors, and managers) with information to make decision While this was previously a paper-based process, most modern businesses now use accounting software such as UBS, MYOB etc. Information System personnel need knowledge of database management and programming language such as C, C++, JAVA and SQL as all software is basically built from platform or database.

Lesson 15

Dear sir what is ideal information

Information is pervasive in nation. In any organization, information is ideal if it is

1- Periodically updated / continuously updated – the information should be updated so that whenever accessed, the user should be fully informed.

2- Efficient Processing – data should not be kept unprocessed for long. Timely processing helps in effective decision making.

3- Value driven – the information kept in a computerized system should add value to the user's knowledge.

4- Audience Centered – every one should receive that part of information that is relevant to the user.
These are the characteristics of the information due to which we call any information as Ideal.

Lesson 16

1. Would u please explain with details the ERP and SAP? 2. MTTR, MTBF & Machine down Time

Enterprise resource planning (ERP) is a company-wide computer software system used to manage and coordinate all the resources, information, and functions of a business from shared data stores.

An ERP system has a service-oriented architecture with modular hardware and software units or "services" that communicate on a local area network. The modular design allows a business to add or reconfigure modules (perhaps from different vendors) while preserving data integrity in one shared database that may be centralized or distributed.

The SAP ERP application is an integrated enterprise resource planning (ERP) software manufactured by SAP AG that targets business software requirements of midsize and large organizations in all industries and sectors. SAP stands for Systems, Applications and Products. SAP AG, the company that provides the enterprise resource planning solution has upgraded the package and launched it as SAP ECC 6.0 in 2005.

Mean time to recovery (MTTR) is the average time that a device will take to recover from any failure. Examples of such devices range from self-resetting fuses (where the MTTR would be very short, probably seconds), up to whole systems which have to be repaired or replaced.

Mean time between failures (MTBF) is the arithmetic mean (average) time between failures of a system. The MTBF is typically part of a model that assumes the failed system is immediately repaired (zero elapsed time), as a part of a renewal process. This is in contrast to the mean time to failure (MTTF), which measures average time between failures with the modeling assumption that the failed system is not repaired.

How and when making process decion is to become ideal for any organization in direction to achieving goals

Accurate, reliable and timely information is vital to effective decision making in almost every aspect of business, whether it be undertaken by individuals, community organizations or governments. Its is an essential component of any effort to persuade businesses to maked different decisions from the ones which they might make in the absence of particular pieces of information.

In the absence of accurate, reliable and timely information, people and organizations will make bad decisions; they will be unable to help or persuade others to make better decisions; and no one will be able to ascertain whether the decisions made by particular individuals or organizations were the best ones that could have been made at the time.

In the business sector it is becoming increasingly common – some might say essential – to extract and analyze minutely detailed information about customer behavior and about the profitability of individual products or services, points of sale and business units or even individual employees – in pursuit of goals such as market share, productivity or profit.

Lesson 17

I want to know about waterfall model in detail.

The waterfall model is a sequential development process, in which development is seen as flowing steadily downwards (like a waterfall) through the phases of Conception, Initiation, Analysis, Design (validation), Construction, Testing and maintenance.

To follow the waterfall model, one proceeds from one phase to the next in a purely sequential manner. For example, one first completes requirements specification, which is set in stone. When the requirements are fully completed, one proceeds to design. The software in question is designed and a blueprint is drawn for implementers (coders) to follow — this design should be a plan for implementing the requirements given. When the design is fully completed, an implementation of that design is made by coders. Towards the later stages of this implementation phase, disparate software components produced are combined to introduce new functionality and remove errors.

Please define in detail Iterative Models

Iterative and Incremental development is a cyclic software development process developed in response to the weaknesses of the waterfall model. It starts with an initial planning and ends with deployment with the cyclic interaction in between.

The iterative and incremental development is an essential part of the Rational Unified Process, the Dynamic Systems Development Method, Extreme Programming and generally the agile software development frameworks.

Lesson 18

what is main advantages of water fall

The waterfall model is a sequential development process, in which development is seen as flowing steadily downwards (like a waterfall) through the phases of Conception, Initiation, Analysis, Design (validation), Construction, Testing and maintenance.

The waterfall model is that it places emphasis on documentation (such as requirements documents and design documents) as well as source code. In less designed and documented methodologies, should team members leave, much knowledge is lost and may be difficult for a project to recover from. Should a fully working design document be present (as is the intent of Big Design Up Front and the waterfall model) new team members or even entirely new teams should be able to familiarize themselves by reading the documents.

Some prefer the waterfall model for its simple approach and argue that it is more disciplined. Rather than what the waterfall adherent sees as chaos, the waterfall model provides a structured approach; the model itself progresses linearly through discrete, easily understandable and explainable phases and thus is easy to understand; it also provides easily mark able milestones in the development process. It is perhaps for this reason that the waterfall model is used as a beginning example of a development model in many software engineering texts and courses.

What prototype means

A prototype is an original type, form, or instance of something serving as a typical example, basis, or standard for other things of the same category

Information sys structures and types are creating ambiguity plz explain

As new information technologies are developed, new categories emerge that can be used to classify information systems. Some examples are:

- Transaction processing systems
- Management information systems
- Decision support systems
- Expert systems
- Business intelligence

Please clarify your question that what do u wants to ask by Information system Structures.

Lesson 19

Sir plz explain Entity Relationship Diagram in detail and its purpose

In software engineering, an Entity-Relationship Model (ERM) is an abstract and conceptual representation of data. Entity-relationship modeling is a database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database, and its requirements in a top-down fashion.

Diagrams created using this process are called entity-relationship diagrams, or ER diagrams or ERDs for short.

There are several notations for data modeling. The actual model is frequently called "Entity relationship model" because it depicts data in terms of the entities and relationships described in the data. An entity-relationship model (ERM) is an abstract conceptual representation of structured data. Entity-relationship modeling is a relational schema database modeling method, used in software engineering to produce a type of conceptual data model (or semantic data model) of a system, often a relational database, and its requirements in a top-down fashion.

These models are being used in the first stage of information system design during the requirements analysis to describe information needs or the type of information that is to be stored in a database. The data modeling technique can be used to describe any ontology (i.e. an overview and classifications of used terms and their relationships) for a certain universe of discourse i.e. area of interest

Lesson 20

Lesson 21

Why prototype are used.

A prototype is an original type, form, or instance of something serving as a typical example, basis, or standard for other things of the same category.

In many programming languages, a function prototype is the declaration of a subroutine or function. (This term is rather C/C++-specific; other terms for this notion are signature, type and interface.) In prototype-based programming (a form of object-oriented programming), new objects are produced by cloning existing objects, which are called prototypes.

In many fields, there is great uncertainty as to whether a new design will actually do what is desired. New designs often have unexpected problems. A prototype is often used as part of the product design process to allow engineers and designers the ability to explore design alternatives, test theories and confirm performance prior to starting production of a new product. Engineers use their experience to tailor the prototype according to the specific unknowns still present in the intended design. For example, some prototypes are used to confirm and verify consumer interest in a proposed design where as other prototypes will attempt to verify the performance or suitability of a specific design approach.

Lesson 22

Define SPIR

Strategic Planning for Information Resources (SPIR). When a firm embraces SPIR the strategic plans for information services and the firm are developed concurrently. Business strategy and IT related strategy should go hand in hand. The IT related strategy should be driven by business strategy and the former should support the achievement what's being mentioned in the latter. Any inconsistencies or deviations between the two should be removed and avoided. The investment in IT is costly and inflexible. Such investment is also monitored and controlled by the IT strategy. Hence any investment not supporting the business strategy would be futile

what is the difference between architecture information architecture.

The term architecture can refer to a process, a profession or documentation.As a process, architecture is the activity of designing and constructing buildings and other physical structures by a person or a computer, primarily to provide shelter. A wider definition often includes the design of the total built environment, from the macro level of how a building integrates with its surrounding landscape (see town planning, urban design, and landscape architecture) to the micro level of architectural or construction details and, sometimes, furniture. Wider still, architecture is the activity of designing any kind of system. Information architecture (IA) is the art of expressing a model or concept of information used in activities that require explicit details of complex systems. Among these activities are library

systems, Content Management Systems, web development, user interactions, database development, programming, technical writing, enterprise architecture, and critical system software design. Information architecture has somewhat different meanings in these different branches of IS or IT architecture. Most definitions have common qualities: a structural design of shared environments, methods of organizing and labeling websites, intranets, and online communities, and ways of bringing the principles of design and architecture to the digital landscape.

plz explain the role of system analyst in the current situation in an organizations.

Systems analysts may act as liaisons between vendors and the organization they represent. They may be responsible for developing cost analyses, design considerations, and implementation time-lines. They may also be responsible for feasibility studies of a computer system before making recommendations to senior management.

Basically a systems analyst performs the following tasks:

- Interact with the customers to know their requirements
- Interact with designers to convey the possible interface of the software
- Interact/guide the coders/developers to keep track of system development
- Perform system testing with sample/live data with the help of testers
- Implement the new system
- Prepare High quality Documentation

Dear sir plz expalin the system analysit who are they? with common examples

A systems analyst is responsible for researching, planning, coordinating and recommending software and system choices to meet an organization's business requirements. The systems analyst plays a vital role in the systems development process. A successful systems analyst must acquire four skills: analytical, technical, managerial, and interpersonal. Analytical skills enable systems analysts to understand the organization and its functions, which helps him/her to identify opportunities and to analyze and solve problems. Technical skills help systems analysts understand the potential and the limitations of information technology. The systems analyst must be able to work with various programming languages, operating systems, and computer hardware platforms. Management skills help systems analysts manage projects, resources, risk, and change. Interpersonal skills help systems analysts work with end users as well as with analysts, programmers, and other systems professionals.

Question 1: Compare the information requirement of small and large sized organizations with the reference of a real time example.

Small organizations usually have simple management structure. The need invariably grows from the limited scope and operations of management. Since tasks to be handled are usually limited and manageable, hence need for introducing more levels is not required. Since operations can be managed at the top level by one or two members of the senior management, officers from the lower level of management are not usually involved in decision making. Hence the final decisions are centrally taken.
Information flows and formats are easy to define and change. Since information requirements are not extensive, number of documents prepared and generated will also be few in number. Mostly the interested party itself is running the business, hence the management is centralized to few people.

As size of the organization increases, the importance of planning for information also increases. The planning on long-term basis also helps in monitoring of information against planning

With large size of organizations, management structure needs to be multi- tiered for efficient and strong control. This leads to formulation of many departments, management levels, designations, promotional opportunities and salary increments. Usually such organizations are characterized by large scale of operations. Various criteria can be used for this purpose like number of employees, amount of turnover, number of branches, profit size, value of assets, number of businesses the organization is working in
With such a large structure, it is inevitable that the detailed planning should be made for proper management control, for both short term and long term.

Information requirements of Small Organizations can be day to day transactions, daily Sale, cash management, receivables and Payables etc whereas in large organizations information requirement can be categorized according to the nature of business. There can be different business sectors in large organizations like manufacturing sector, service sector or trading sector etc. Examples of information requirement of these sectors can be day to day costs, production targets, quality of product in manufacturing sector, customer satisfaction, time scheduling etc in service sector.

Question 2: Define the ideal information. Discuss its importance in decision making.

Ideal Information:

Information is pervasive in nation. In any organization, information is ideal if it is

1- Periodically updated / continuously updated – the information should be updated so that whenever accessed, the user should be fully informed.
2- Efficient Processing – data should not be kept unprocessed for long. Timely processing helps in effective decision making.
3- Value driven – the information kept in a computerized system should add value to the user's
knowledge.
4- Audience Centered – every one should receive that part of information that is relevant to the user.

Accurate, reliable and timely information is vital to effective decision making in almost every aspect of business, whether it be undertaken by individuals, community organizations or governments. Its is an essential component of any effort to persuade businesses to maked different decisions from the ones which they might make in the absence of particular pieces of information.

In the absence of accurate, reliable and timely information, people and organizations will make bad decisions; they will be unable to help or persuade others to make better decisions; and no one will be able to ascertain whether the decisions made by particular individuals or organizations were the best ones that could have been made at the time.

In the business sector it is becoming increasingly common – some might say essential – to extract and analyze minutely detailed information about customer behavior and about the profitability of individual products or services, points of sale and business units or even individual employees – in pursuit of goals such as market share, productivity or profit.

Q1. Is CBIS cost-effective solution? Discuss it from the point of view of medium to large level organizations. (1+4 marks)

Yes, as it helps to manage information requirements for organizations at low cost rate

Although information requirements may vary from medium to large organizations, as large organizations comprise of various department of medium size organization itself However common premise is quite the same.

1- Every transaction affects our records. CBIS helps in updating every change in less time and with less effort.

2- CBIS enables instant access to data and decision making parameters by providing larger storage capacity and fast search & access algorithms. This would save huge amount of time and cost in long run for the organization.

3- Managers and staff members are usually faced with the problem of communication. By implementing computerized solutions organizations save money on traditional communication ways that are lengthy, time consuming and hard to manage. For example simple email would save time and cost of typical mail system.

4- Organization can save huge amount by providing paper free environment due to CBIS.

Q2. Explain reliability factor of a Transaction processing system with a real time example. (5 marks)

E-Bay relay heavily on its TPS;

It is a complex E-Commerce solution for Internet users. A break down will disrupt online transactions or even stop the business. It centralizes its whole business on transactions done among the bidders, buyers and sellers. These transactions are of worth of millions of dollars. System failures are crucial and complete avoidance is hard to achieve target in real time. These failures can occur at any time for any reason, but if TPS are not effectively developed to perform recovery process, business and its stakeholders are at risk. E-bay user would likely to participate in the business if he or she is sure about the reliability of the system. This makes backup and accurate recovery process crucial for the system.

Q3. An airline maintains flights and reservation for various classes of society. Describe major tasks that decision support system should perform for management. (5 marks)

A decision support system can be considered effective if it perform at least following tasks for the management.

1. Discount and fair calculation
2. Measure the rush season for re-pricing the ticket price
3. Deciding about discount percentages
4. Measure customer reactions(feedback)
5. Deciding about flight routes

Q4. Compare MIS and DSS from functionality perspective. (5 marks)

	MIS	DSS
1.	MIS provides information on monitoring and controlling the business.	Helps in non routine decision making.
2.	Fixed and regular reports are generated from data kept in TPS.	Users are not linked with the structured Information flows.
3.	Report formats are predefined.	Greater emphasis on models, display Graphics & ad hoc queries.

4.	User is part of the system	DSS is a small part of users' actions.
5.	Controlled by IT Dept.	Directly used by middle level managers

Q.1 Identify the major deficiencies which an organization can face to meet its organizational goals and objectives effectively and efficiently.

Answer.

Common deficiencies and reasons in an organization due to efficiency and out put of an organization degraded are following;

1. **Fuzzy Vision:**
   Corporate vision and mission don't inspire people; lack of strategic alignment; people don't know where the organization is going and what it is trying to achieve in the future.
2. **Lack of Leadership Skills:**
   Fear of change; leaders lack entrepreneurial spirit; leadership style on the part of management is either too directive or too hands-off; managers do not lead, they just administrate and micromanage; weak leadership development program.
3. **Discouraging Culture:**
   No shared values; lack of trust; blame culture; focus on problems, not opportunities; people don't have fun at work; diversity is not celebrated; failures are not tolerated; people lose confidence in their leaders and systems.
4. **High Bureaucracy:**
   Bureaucratic organizational structures with too many layers; high boundaries between management layers; slow decision making; too close monitoring of things and subordinates; too many tools and documents discouraging creative thinking; bureaucracy is tolerated.
5. **Lack of Initiative:**

Poor motivation and encouragement; people do not feel their contributions make a difference; management fails to engage the organization effectively; people work defensively and not creatively, they do their job, and nothing more.

6. **Poor Vertical Communication:**
   People have no clue of the big picture and do not feel that their contributions are important; too much uncertainty; people don't know what top-managers are thinking and planning.
7. **Poor Cross-functional Collaboration:**
   Functional mindset; lack of cross-functional goals and cross-functional collaboration spirit; functional, not enterprise-wide business process management; no cross-functional management committees; lack of or powerless cross-functional teams.
8. **Poor Teamwork:**
   No organizational commitment to team culture; lack of shared and worthwhile goals; weak team leaders; team members who don't want to play as part of a team are tolerated; teams are too large; lack of shared rewards.
9. **Poor Idea and Knowledge Management:**
   Cross-pollination of ideas is not facilitated; no idea management and knowledge management strategies and systems; "know-it-all" attitude; "not invented here" syndrome.

Q.2 How can you understand the business process within an organization? Discuss the features of business process.

Answer.

A **business process** or **business method** is a collection of interrelated tasks, which solve a particular issue. A business process is a collection of activities designed to produce a specific output for a particular customer or market. It implies a strong emphasis on how the work is done within and organization, in contrast to a product's focus on what. A process is thus a specific ordering of work activities across time and place, with a beginning, an end, and clearly defined inputs and outputs: a structure for action.

1. **Large and complex**, involving the end-to-end flow of materials, information and business commitments.
2. **Dynamic**, responding to demands from customers and to changing market conditions.
3. **Widely distributed and customized across boundaries** within and between businesses, often spanning multiple applications on disparate technology platforms.
4. **Long-running**: a single instance of a process such as "order to cash" or "develop product" may run for months or even years.
5. **Automated**: at least in part. Routine or mundane activities are performed by computers wherever possible, for the sake of speed and reliability.
6. **Both "business" and "technical" in nature:** IT processes are a subset of business processes and provide support to larger processes involving both people and machines. End-to-end business processes depend on distributed computing systems that are both transactional and collaborative. Process models may therefore comprise network models, object models, control flows, message flows, business rules, metrics, exceptions, transformations and assignments.

7. **Dependent on and supportive of the intelligence and judgment of humans:** People perform tasks that are too unstructured to delegate to a computer or that require personal interaction with customers. People also make sense of the rich information flowing through the value chain, solving problems before they irritate customers and devising strategies to take advantage of new market opportunities.
8. **Difficult to make visible:** In many companies business processes have been neither conscious nor explicit. They are undocumented, embedded, ingrained and implicit within the communal history of the organization, or if they are documented or definition is maintained independently of the systems that support them.

Discuss CRM to share your views for the following points:

1. For the purposes of discussing CRM, we need to think of the "customer" in the broadest sense.

2. Building Community of e-Customers.

3. Building Value for the Customer

4. How can one Establishing Long-Term Relationships

5 Services provided by CRM .

CRM stands for Customer Relationship Management. It is a process or methodology used to learn more about customers' needs and behaviors in order to develop stronger relationships with them. There are many technological components to CRM, but thinking about CRM in primarily technological terms is a mistake. The more useful way to think about CRM is as a process that will help bring together lots of pieces of information about customers, sales, marketing effectiveness, responsiveness and market trends.

CRM helps businesses use technology and human resources to gain insight into the behavior of customers and the value of those customers.

CRM Software

Sales Force Automation

- Contact management
  Contact management software stores, tracks and manages contacts, leads of an enterprise.
- Lead management
  Enterprise Lead management software enables an organization to manage, track and forecast sales leads. Also helps understand and improve conversion rates.

eCRM or Web based CRM

- Self Service CRM
  Self service CRM (eCRM) software Enables web based customer interaction, automation of email, call logs, web site analytics, campaign management.
- Survey Management Software
  Survey Software automates an enterprise's Electronic Surveys, Polls, Questionnaires and enables understand customer preferences.

Customer Service

- Call Center Software
- Help Desk Software

Partner Relationship Management

- Contract Management Software
  Contract Management Software enables an enterprise to create, track and manage partnerships, contracts, agreements.
  Example: Upside Software, Accruent Software, diCarta, I-Many.
- Distribution management Software

1) For the purposes of discussing CRM, we need to think of the “customer” in the broadest sense. First, many customers want relationships with key suppliers. While companies are using auctions and reverse auctions to purchase commodities, they are choosing a few long-term suppliers for their unique requirements.

Second, customers want close relationships through which they can dialogue with suppliers, for the purpose of detailing their customization desires.

Third, these dialogues create opportunities for astute suppliers to discover unmet customer needs and requirements, and can then expand their offerings to include more products and services. More importantly, however, these suppliers can create packages of products and services that create value for customers. These packages or solutions make the customer more effective, and the more effective the customer feels as a result, the more the customer will dialogue with and use the supplier. A virtuous circle can result.

Following this prescription to establish a relationship ultimately leads a corporation to offer more than stand-alone products; it leads you into offering what are now called "solutions."

2) Those organizations that understand the opportunity to build community on the Internet will be successful. A great example of this is an Alberta-based producer of specialty flower bulbs. This company began building its web presence by learning where its customers “hung out” on the web. They discovered their customers visited other

flower-related sites and gardening portals, associated chat groups, and online forums. Therefore, the company spent time establishing links and alliances with these other sites to attract customers to its site. The company recognized early on that they did not seek a technology solution, but rather a solution that provided a place for flower lovers to find new and unique products. As a result, they have attracted customers from all over North America and are making inroads into Asia.
They also have seen another significant benefit—their average order size has increased by almost seven times. When people find their site and decide to place an order, orders are large.The concept of community is also illustrated by the success of e-businesses like EBay, where specialty products are auctioned as well as more common products. People interested in antiques and collectibles have "gathered" at E-Bay to buy and sell. Portals, those sites that act as anchors, start sites, or comprehensive market-oriented locations have also discovered the power of community. A site like Agriplace.com is one where those who are interested in agriculture can find just about everything related to this industry. News, references, product information and the ability to buy and sell related products are all available on the site.

3) It is important to find ways to add value to the relationship. Keep in mind that value is in the mind of the customer. Find out what they perceive to be valuable by surveying them either online, by phone, or by regular mail. Even though you are using online techniques, do not forget the many other ways to connect with customers. One very successful software company allows prospective customers to register at their web site, download an industry related document, and then phones the prospect within two hours to make sure they received the information successfully. This technique provides a further opportunity to get to know the customer and build the relationship. Afterwards, the company follows up with a letter.
Another way to add value is to produce newsletters that can be delivered online or by mail. Newsletters can be related to product or service announcements and contain general industry information. E-newsletters are simple and inexpensive to produce and deliver. A good rule of thumb is to keep the newsletter small and to discuss only two or three concepts.
As you build the relationship with your online customer you will be able to solicit and build more profile information

4) As you build the relationship with your online customer you will be able to solicit and build more profile information. It is easy to get customers to visit your website for the first time. It is much more difficult to get them to return. You must create value for the return visitor. Ensuring you have good content can do this.

5) **Customer service** is a series of activities designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer expectation."

Its importance varies by product, industry and customer. As an example, an expert customer might require less pre-purchase service (i.e., advice) than a novice. In many cases, customer service is more important if the purchase relates to a "service" as opposed to a "product".

The Internet allows you to deliver customer service on a 24/7 basis. That's not service on the 7th and the 24th of the month—it is service 7 days per week, 24 hours per day. This is a great opportunity because most of the service is "self-service" and does not require you to have staff on duty all of the time. Online service can be as simple as FAQ's (Frequently Asked Questions), or as complex as interactive text, voice, or video service delivered in real time.

Q1 - Discuss the need of end-user computing in an organization?

CRM, or Customer Relationship Management, is a worthwhile endeavor to ensure good returns on investment. In a CRM call center, customers communicate in multiple ways that include phone, e-mail, Web chat, personal sales representative, Voice over Internet Protocol (VOIP) and a host of others.

The CRM software integrates all the forms of customer contact into a central history database where they can be retrieved or viewed together. Using CRM software, a customer issue can be tracked from the original point of contact through to resolution.

CRM call centers help companies realign their entire organization around customers. And thus, is a strategic business initiative. Sales, Marketing and Service as well as other groups are connected and coordinated through the CRM applications. Before a call is made to the customer, all recent activity for that customer should be reviewed to be informed of recent events. Then a sales strategy needs to plan based upon observed opportunities. The use of CRM software in the call center allows the assignment of a value to each customer if the culture supports that philosophy. With that feature, one can choose how to interact with that customer.

CRM helps the company identify most valuable customers and understanding their lifetime values. Using CRM, the call centers design the organization systems and service to best meet the needs of customers and maximize their value. CRM is intended for long-term relationship building. Besides capturing the different forms of customer interaction, CRM allows you to capture and store all available customer information in the central history database. This allows agents the ability to pull up a customer's entire history while the two interact. Communication and service are more effective and efficient. Most CRM products also track trends in purchasing and customer feedback.

Q2- How an Information system can help to meet call center challenges?

Simplify complex tasks (no experts, consultants needed)
Make tasks quicker to perform (efficiency gain)
Fewer errors so quality improves (effectiveness)
Time needed to fix errors is reduced (efficiency).
Output is better quality
Improve communication and collaboration with email, chat etc
Better decision making with management support tools
Frees people from tedious jobs - do better things
Allow the use of virtual teams

Discuss Prototyping Model to share your views for the following points:

1. Introduction

2. Steps Used in Prototyping.

3. Where we can use Prototyping?

4. Tools for Prototyping.

1) A prototype is a working model that is functionally equivalent to a component of the product.

In many instances the client only has a general view of what is expected from the software product. In such a scenario where there is an absence of detailed information regarding the input to the system, the processing needs and the output requirements, the prototyping model may be employed. This model reflects an attempt to increase the flexibility of the development process by allowing the client to interact and experiment with a working representation of the product. The developmental process only continues once the client is satisfied with the functioning of the prototype. At that stage the developer determines the specifications of the client's real needs.

2) The process of prototyping involves the following steps

1. Identify basic requirements

   Determine basic requirements including the input and output information desired. Details, such as security, can typically be ignored.

2. Develop Initial Prototype

   The initial prototype is developed that includes only user interfaces.

3. Review

   The customers, including end-users, examine the prototype and provide feedback on additions or changes.

4. Revise and Enhancing the Prototype

   Using the feedback both the specifications and the prototype can be improved. Negotiation about what is within the scope of the contract/product may be necessary. If changes are introduced then a repeat of steps #3 and #4 may be needed.

3) It has been argued that prototyping, in some form or another, should be used all the time. However, prototyping is most beneficial in systems that will have many interactions with the users.

It has been found that prototyping is very effective in the analysis and design of on-line systems, especially for transaction processing, where the use of screen dialogs is much more in evidence. The greater the interaction between the computer and the user, the greater the benefit is that can be obtained from building a quick system and letting the user play with it.

Systems with little user interaction, such as batch processing or systems that mostly do calculations, benefit little from prototyping. Sometimes, the coding needed to perform the system functions may be too intensive and the potential gains that prototyping could provide are too small.

Prototyping is especially good for designing good human-computer interfaces. "One of the most productive uses of rapid prototyping to date has been as a tool for iterative user requirements engineering and human-computer interface design."

4) Efficiently using prototyping requires that an organization have proper tools and a staff trained to use those tools. Tools used in prototyping can vary from individual tools like 4th generation programming languages used for rapid prototyping to complex integrated CASE tools. 4th generation programming languages like Visual Basic are frequently used since they are cheap, well known and relatively easy and fast to use. CASE tools, like the Requirements Engineering Environment are often developed or selected by the military or large organizations. Object oriented tools are also being developed like LYMB from the GE Research and Development Center.

Evaluate and compare the following System analysis and design methodologies:

- **Organisational Process Modelling (OPM)**
- **Soft Systems Methodology (SSM).**
- **Unified Modelling Language (UML**
- **Structured Systems Analysis and Design Method (SSADM)**

OPM: The Organisation Process Modelling method deals with aspects of both hard and soft systems.

SSADM: The Structured Systems Analysis and Design Method is a detailed method covering almost every element of the information system

UML: The Unified Modelling Language is an expressive modelling language that covers every aspects of the system development process .UML can be adapted with Business-Oriented Software Engineering process (BOE Process) to cover more fully the modelling of enterprises.

SSM: While mainly dealing with soft aspects, the Soft Systems Methodology (SSM) also deals with some aspects of hard systems. SSM supports activities and processes through using a conceptual model to represent the activities of the root definition.

The different methodologies that are used for developing an information system deal with the hard and soft systems aspects as follows.

Organisational Process Modelling (OPM) is a simple method, which handles principally the interactions between agents as they achieve their goals for modelling the organisational process. It deals with some aspects of the hard system approach and most of the soft system issues. For the latter it uses some of the Soft Systems Methodology (SSM) techniques to deal with the problem. The most serious omission from this method is its lack of facilities for representing data structures.

Structured Systems Analysis and Design Method (SSADM) is a detailed method which covers almost every element of the information system. It deals with every aspect of the hard system issues but only some of the soft system issues. So, there is a trend in the later versions of SSADM to use SSM in the early phases.

Unified Modelling Language (UML) is an expressive modelling language that covers all hard aspects of the system development process. UML can be used with any object-oriented development method, such as Unified Process which covers most of the hard system aspects and also some soft system aspects. Unified Process does not support soft aspects such as employee values.

Soft Systems Methodology (SSM) deals with some hard system aspects and all of the soft system aspects. SSM does not support hard system aspects such as data structures, events and the design of interfaces.

It can be concluded that there is no methodology that covers all aspects fully. Organisational Process Modelling (OPM) and Soft Systems Methodology (SSM) are relatively strong on soft aspects and weak on hard aspects. Unified Modelling Language (UML) and Unified Process are relatively strong on hard aspects and weak on soft aspects. Structured Systems Analysis and Design Method (SSADM) is perhaps the most comprehensive but some soft aspects are omitted.

Write a complete report on Intrusion Detection Systems elaborating its components and types.

5 for IDS Definition
5 for Components
10 for types

An **Intrusion detection system** (**IDS**) is software and/or hardware designed to detect unwanted attempts at accessing, manipulating, and/or disabling of computer systems, mainly through a network, such as the Internet. These attempts may take the form of attacks, as examples, by crackers, malware and/or disgruntled employees. IDS cannot directly detect attacks within properly encrypted traffic.

An IDS can be composed of several components: **Sensors** which generate security events, a **Console** to monitor events and alerts and control the sensors, and a central **Engine** that records events logged by the sensors in a database and uses a system of rules to generate alerts from security events received. There are several ways to categorize an IDS depending on the type and location of the sensors and the methodology used by the engine to generate alerts. In many simple IDS implementations all three components are combined in a single device or appliance.

Types:

NIDS:

A network intrusion detection system (NIDS) An intrusion detection system (IDS) monitors network traffic and monitors for suspicious activity and alerts the system or network administrator. In some cases the IDS may also respond to anomalous or malicious traffic by taking action such as blocking the user or source IP address from accessing the network.. Host-based intrusion detection systems are designed to monitor, detect, and respond to user and system activity and attacks on a given host. Some more robust tools also offer audit policy management and centralization, supply data forensics, statistical analysis and evidentiary support, and in certain instances provide some measure of access control.

NID has historically been incapable of operating in the following environments:

1. Switched networks
2. Encrypted networks
3. High-speed networks (anything over 100 Mbps)

- An example of a NIDS is Snort.

- **A protocol-based intrusion detection system (PIDS)** consists of a system or agent that would typically sit at the front end of a server, monitoring and analyzing the communication protocol between a connected device (a user/PC or system). For a web server this would typically monitor the HTTPS protocol stream and understand the HTTP protocol relative to the web server/system it is trying to protect. Where HTTPS is in use then this system would need to reside in the "shim" or interface between where HTTPS is un-encrypted and immediately prior to it entering the Web presentation layer.

- **An application protocol-based intrusion detection system (APIDS)** consists of a system or agent that would typically sit within a group of servers, monitoring and analyzing the communication on application specific protocols. For example; in a web server with database this would monitor the SQL protocol specific to the middleware/business-login as it transacts with the database.

A host-based intrusion detection system (HIDS) consists of an agent on a host which identifies intrusions by analyzing system calls, application logs, file-system modifications (binaries, password files, capability/acl databases) and other host activities and state. Host-based intrusion detection systems are designed to monitor, detect, and respond to user and system activity and attacks on a given host. Some more robust tools also offer audit policy management and centralization, supply data forensics, statistical analysis and evidentiary support, and in certain instances provide some measure of access control. The difference between host-based and network-based intrusion detection is that NID deals with data transmitted from host to host while HID is concerned with what occurs on the hosts themselves. The difference between host-based and network-based intrusion detection is that NID deals with data transmitted from host to host while HID is concerned with what occurs on the hosts themselves.

Host-based intrusion detection is best suited to combat internal threats because of its ability to monitor and respond to specific user actions and file accesses on the host. The majority of computer threats come from within organizations, from many different sources; disgruntled employees and corporate spies are just two examples.

- An example of a HIDS is OSSEC.

- **A hybrid intrusion detection system combines two or more approaches**. Host agent data is combined with network information to form a comprehensive view of the network. An example of a Hybrid IDS is Prelude.

Discuss the following ethical issues in Information System in précised manner

The competition between firms and individuals within a firm in a market economy is compared so that it fulfills the requirements of high ethics, and it is one of the fundamental sources of economic development.

Privacy

Privacy is the interest that individuals have in sustaining a 'personal space', free from interference by other people and organizations. Privacy of the person is concerned with the integrity of the individual's body. What information about one's self or one's associations must a person disclose to others, under what circumstances? Collections of information reveal intimate details about a person and can thereby deprive the person of the opportunity to form certain professional and personal relationships. This is the ultimate cost of an invasion of privacy.

Accuracy

It is the ability of a measurement to match the actual value of the quantity that is being measured. We run the risk of creating and design information systems every time and place information in databases which might be used to make decisions. So it is our responsibility to be vigilant in the pursuit of accuracy in information. Who is responsible for the validity, reliability and accuracy of information? Similarly, who is to be detained responsible for errors in information and how is the injured party to be made whole? Information systems must be accurate to avoid the indignities suffered.

Property

Property designates those things that are commonly recognized the information being possessions of a person or group. Any individual item of information can be extremely costly to produce in the first instance and posses by the owner. Most of the people of the society face the question of intellectual property rights. There are significant financial and ethical concerns contiguous these rights; concerns revolving around the special attributes of information itself and the means by which it is transmitted. Information systems should protect the sanctity of intellectual property to avoid the indignities of unwitting "disemendment" of knowledge from individuals.

Accessibility

Accessibility is a general term used to describe the degree to which a system is usable by as many people as possible. What information about one's self or one's associations must a person disclose to others, under what circumstances and with what protections? And information systems should be accessible to avoid the indignities of information literacy and deprivation. Information systems should protect the capability of the fixed conduit resource through which it is transmitted to avoid the indignities of "The Tragedy of the Commons".

1. How would you differentiate between open system and closed system?

The first issue is to define environment where the systems are required to be operated and the second issue is to describe the system itself. For example,

Book Store

Open system – any and everyone is allowed to view and purchase the books available.

School Library

Closed system – entry to the library is restricted to the students only.

In an open system we refer to the connection it has to its environment by means of inflows and outflows of resources between the environment and organization. When we refer to a closed system we talk of a system that is dependant on internal resources and data for decision making rather than external environment.

2. Differentiate between information infrastructure and architecture?

Information infrastructure **consists of the physical facilities services and management that support all computing resources in an organization. Infrastructure also includes the integration, operation, documentation, maintenance and management the components as defined in infrastructure. It is guideline to how specific computing resources are arranged, operated and managed**
There are five components:

Computer hardware

General purpose software

Networks & communication facilities

Databases

Information management personnel

Each of these components is designed in such manner to collectively meet the needs and objectives of the organization.The infrastructure will include

Configuration

Design of OS

Documentation

Information Architecture is the "Blueprint" that provides the conceptual foundation for building information infrastructure and specific applications that exists within the context of information system design, in which information architecture refers to data modeling and the analysis and design of the information in the system. The term information architecture describes a specialized skill set which relates to the management of information and employment of informational tools. Components:

Business needs of the information

Existing information infrastructure and applications in the organization.

3. What do you understand by office automation system? Give examples.

Office Automation Systems Include formal and informal electronic systems primarily concerned with the communication of information to and from persons both inside and outside the firm. It supports data workers in an organization.

For Instance

Word processing

Desktop publishing

Imaging & Web publishing

Electronic calendars – manager's appt. calendars

Email

Audio & video conferencing – establishing communication between geographically dispersed persons.

1. Explain the techniques through which data warehouse can be used?

Following are the common techniques through which a data warehouse can be used.

1. **Online Analytical Processing (OLAP)**

   Decision support software that helps the user to analyze information which are in form of summarized, multidimensional views and hierarchies. The term online refers to the interactive querying facility provided to the user to minimize response time. It enables users to drill down into large volume of data.

2. **Data Mining is a process of automatically searching large volumes of data for patterns. The purpose is to uncover patterns and relationships contained within the business activity and history and predict future behavior. Data mining has become an important part of customer relationship management (CRM).**

What are the various types of models used in Decision Support System? Explain with examples.

Physical Models

Physical models are three dimensional representation of an entity (Object / Process) and used in the business world include scale models of shopping centres and prototypes of new automobiles.

Narrative Models

The spoken and written description model of an entity and used daily by managers and surprisingly, these are seldom recognized as models.

Graphic Models

These models represent the entity in the form of graphs or pictorial presentations and represents entity with an abstraction of lines, symbols or shapes. Graphic models are used in business to communicate information.

Mathematical Models

They represent Equations / Formulae representing relationship between two or more factors related to each other in a defined manner.

Define CRM? Give various benefits of this concept.

CRM is a business strategy that goes beyond increasing transaction volume and increases profitability, revenue, and customer satisfaction. To achieve CRM, a company wide set of tools, technologies, and procedures promote the relationship with the customer to increase sales. Maintains and enhances customer base

- Encourages customer loyalty
- Gaining more customers' wallet-share
- The more effective a company's customer retention and defection management strategy, the less they need to plug the gap with new customers.
- CRM help in establishing communication to encourage customers to share information about their Habits, Tastes and preferences Interests in Co's brand extension initiatives.

What do you understand by inventory sub-system? Give critical aspects that the subsystem is supposed to cover.

Inventory sub-system focuses on maintaining records and movements on inventory levels and usage. This control of inventory is critical to the organization since money lock-in of raw materials purchase represents substantial investment. Timely production of finished goods require availability of right quantity of material, maintenance of right stock levels, determination of lead times and flex times and exchange of information with supplier at the right time and critical where the organization is following Just in Time approach – a philosophy which encourages zero tolerance for stock levels and placing orders exactly when they are needed for manufacturing.
Proper logistic management is important for the timely and quality production. Various factors which can play critical role are

- Who to purchase from – supplier selection
- When to purchase – time of delivery or raw materials
- How much to purchase – Ideal stock levels

How system analysis may differ in both computerized and manual environments.

Information systems are designed and developed for both types of environments. System analysis is done in both situations covering business processes and flow of documents.

COMPUTERIZED ENVIRONMENT	MANUAL ENVIRONMENT:
1. Logical access control issues in this environment	No logical access control issues in this environment
2. There is no duplication of clerical work in computerized environment.	Duplication of clerical work occurs in manual environment.

3. Automatic generation of specified reports takes place in computerized environment.	No automatic generation of specified reports takes place in manual environment
4. In computerized environment, data integrity is more secured	In manual environment, data integrity is not fully secured.
5. Presentation of data is flexible in it	There is no flexibility in data presentation
6. Computerized environment ensures high data security and confidentiality.	Data security and confidentiality is less in manual environment.
7. Data Security and confidentiality can be assured to a higher degree in a computerized environment**.**	Data Security and confidentiality can be assured to a lower degree in a computerized environment**.**
8. Drill down function to conduct analysis of recorded data is available in a computerized environment.	Drill down function to conduct analysis of recorded data is not fully functional in manual analysis of all data.

What factors should be kept in mind while designing a well defined output?

Various considerations need to be kept in mind while defining parameters for desired output. These should generally focus on:

a) Assuring purposeful output
b) Providing output as defined and required by users
c) Providing appropriate information
d) Assuring distribution of output as per client specified requirements.
e) Minimizing throughput time and Query time
f) Ensuring that output is available in client required mode.

List down recommended practices for flow charts

Recommended practices for flow charts are as follows:

a) Ensure that the flowchart has a logical start and finish.
b) In drawing a proper flowchart, all necessary steps that are a part of process should be listed out in logical order.
c) The flowchart should be clear, neat and easy to follow. There should not be any room for ambiguity in understanding the flowchart.

It is useful to test the validity of the flowchart

What is the primary objective of securing information systems?

Organization for Economic Cooperation & Development, (OECD) in 1992 issued "Guidelines for the Security of Information Systems". These guidelines stated the security objective as

"The protection of the interests of those relying on information, and the information systems and communications that delivers the information, from harm resulting from failures of availability, confidentiality, and integrity."

The security objective uses three terms

- Availability – information systems are available and usable when required;
- Confidentiality – data and information are disclosed only to those who have a right to know it; and
- Integrity – data and information are protected against unauthorized modification (integrity).

The relative priority and significance of availability, confidentiality, and integrity vary according to the data within the information system and the business context in which it is used.

What is meant by control analysis?

The goal of this step is to analyze the controls that have been implemented or are planned for implementation by the organizations to minimize or eliminate the likelihood of occurrence of threat. To derive an overall likelihood rating that indicates the probability that a potential vulnerability may be exercised within the construct of the associated threat environment. Security controls encompass the use of technical and non-technical methods. Technical methods are safeguards that are incorporated into computer hardware, software and firmware such as controls mechanisms, identification and authentication mechanisms, encryption methods, intrusion detection software, etc. Non technical controls are management and operational controls such as security policies and operational procedures and personnel, physical and environmental security. The control categories for both technical and non technical control methods can be further classified as either preventive or detective. These two sub-categories are explained as follows

1. Preventive controls inhibit attempts to violate security policy and include controls as access control enforcement, encryption and authentication
2. Detective controls warn of violations or attempted violations of security policy which include such controls as audit trails, intrusion detection methods.

What is the feasibility study?

The analysis of a problem to determine how it can be solved effectively. The operational (will it work?), economical (costs and benefits) and technical (can it be built?) aspects are part of the study. Results of the study determine whether the solution should be implemented.

Output:

A brief description of the proposed system and its characteristics.

A *brief* description of the business need for the proposed system.
A cost/benefit analysis, including gross estimates of schedules and costs, as well as a payback period.
A proposed tentative schedule for the delivery of key stage deliverables.

Process:

Analyze the proposed project and produce a written description.
Define and document possible types of systems.
Develop a statement of the probable types of system (centralized, decentralized, mainframe, etc.).
Analyze the costs of similar systems.
Produce a rough estimate of the system size, costs, schedules, etc.
Define the benefits of the system. Include both quantitative and qualitative measures.
Produce an estimate of the next life cycle stage.
Present feasibility document to clients for discussion.

Deliverables:

System description (as it is now)
Project team organization
Deliverables schedule

Basically we are studying Information Systems. You are required to study the following Information Systems:

1. MIS.
2. DSS
3. Strategic Information System

First write a complete overview of Information System and then discuss the above IS that one can easily understand the characteristics and differences between them.

'MIS' is a planned system of collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management. According to Phillip Kotler "A marketing information system consists of people, equipment, and procedures to gather, sort, analyse, evaluate, and distribute needed, timely, and accurate information to marketing decision makers." (Kotler, Phillip and Keller, Kevin Lane; Marketing Management, Pearson Education, 12 Ed, 2006)

The terms MIS and information system are often confused. Information systems include systems that are not intended for decision making. MIS is sometimes referred to, in a restrictive sense, as information technology management. That area of study should not be confused with computer science. IT service

***management** is a practitioner-focused discipline. MIS has also some differences with Enterprise Resource Planning (ERP) as ERP incorporates elements that are not necessarily focused on decision support. Definition: Management Information Systems (MIS) is the term given to the discipline focused on the integration of computer systems with the aims and objectives on an organisation.*

The development and management of information technology tools assists executives and the general workforce in performing any tasks related to the processing of information. MIS and business systems are especially useful in the collation of business data and the production of reports to be used as tools for decision making.

Applications of MIS
With computers being as ubiquitous as they are today, there's hardly any large business that does not rely extensively on their IT systems.

However, there are several specific fields in which MIS has become invaluable.

* Strategy Support

While computers cannot create business strategies by themselves they can assist management in understanding the effects of their strategies, and help enable effective decision-making.

MIS systems can be used to transform data into information useful for decision making. Computers can provide financial statements and performance reports to assist in the planning, monitoring and implementation of strategy.

MIS systems provide a valuable function in that they can collate into coherent reports unmanageable volumes of data that would otherwise be broadly useless to decision makers. By studying these reports decision-makers can identify patterns and trends that would have remained unseen if the raw data were consulted manually.

MIS systems can also use these raw data to run simulations – hypothetical scenarios that answer a range of 'what if' questions regarding alterations in strategy. For instance, MIS systems can provide predictions about the effect on sales that an alteration in price would have on a product. These Decision Support Systems (DSS) enable more informed decision making within an enterprise than would be possible without MIS systems

A DSS can take many different forms. In general, we can say that a DSS is a computerized system used for supporting rather than automating decisions. A decision is a choice between alternatives based on estimates of the values of those alternatives. Supporting a decision means helping people working alone or in a group gather intelligence, generate alternatives and make choices. Supporting the choice making process involves supporting the estimation, the evaluation and/or the comparison of alternatives. In practice, references to DSS are usually references to computer applications that perform such a supporting role.
Characteristics and Capabilities of DSS

Because there is no exact definition of DSS, there is obviously no agreement on the standard characteristics and capabilities of DSS. Turban, E.,Aronson, J.E., and Liang, T.P. constitute an ideal set of characteristics and capabilities of DSS. The key DSS characteristics and capabilities are as follows:

15. Support for decision makers in semistructured and unstructured problems.
16. Support managers at all levels.
17. Support individuals and groups.
18. Support for interdependent or sequential decisions.
19. Support intelligence, design, choice, and implementation.

20. Support variety of decision processes and styles.
21. DSS should be adaptable and flexible.
22. DSS should be interactive and provide ease of use.
23. Effectiveness balanced with efficiency (benefit must exceed cost).
24. Complete control by decision-makers.
25. Ease of development by (modification to suit needs and changing environment) end users.
26. Support modeling and analysis.
27. Data access.
28. Standalone, integration and Web-based

A **Strategic Information System** (*SIS*) is a type of Information System that is aligned with business strategy and structure. The alignment increases the capability to respond faster to environmental changes and thus creates a competitive advantage. An early example was the favorable position afforded American and United Airlines by their reservation systems, Sabre and Apollo. Strategic Information System (SIS) is a system to manage information and assist in strategic decision making. A strategic information system has been defined as, "The information system to support or change enterprise's strategy." by Charles Wiseman (Strategy and Computers 1985).

- Data Processing (DP) [efficiency] — Improved efficiency by means of automating back office data processing functions.
- Management Information Systems (MIS) [effectiveness] — Improved information flows and transfers.
- Strategic Information System (SIS) [competitiveness] — Enhance competitiveness of the organization through the application of IT to business processes. Davenport's point of view is that "Information is power and people are unlikely to give it away"

Strategic information system is different from other systems as: -

- they change the way the firm competes.
- they have an external (outward looking) focus.
- they are associated with higher project risk.
- they are innovative (and not easily copied)

Data mining is becoming increasingly common in both the private and public sectors. Discuss

1. **What do you understand by DATA MINING?**
2. **Study and discuss where and how DM can be used?**

1. DM is the process of sorting through large amounts of data and picking out relevant information. It is usually used by business intelligence organizations, and financial analysts, but is increasingly being used in the sciences to extract information from the enormous data sets generated by modern experimental and observational methods. It has been described as "the nontrivial extraction of implicit, previously unknown, and potentially useful information from data" and "the science of extracting useful information from large data sets or databases". Data mining in relation to Enterprise Resource Planning is the statistical and logical analysis of large sets of transaction data, looking for patterns that can aid decision making
2. Uses may be in:

1. Terrorism
2. Games
3. Business

Data mining is used for a variety of purposes in both the private and public sectors. Industries such as banking, insurance, medicine, and retailing commonly use data mining to reduce costs, enhance research, and increase sales. For example, the insurance and banking industries use data mining applications to detect fraud and assist in risk assessment (e.g., credit scoring). Using customer data collected over several years, companies can develop models that predict whether a customer is a good credit risk, or whether an accident claim may be fraudulent and should be investigated more closely. The medical community sometimes uses data mining to help predict the effectiveness of a procedure or medicine. Pharmaceutical firms use data mining of chemical compounds and genetic material to help guide research on new treatments for diseases. Retailers can use information collected through affinity programs (e.g., shoppers' club cards, frequent flyer points, contests) to assess the effectiveness of product selection and placement decisions, coupon offers, and which products are often purchased together. Companies such as telephone service providers and music clubs can use data mining to create a "churn analysis," to assess which customers are likely to remain as subscribers and which ones are likely to switch to a competitor Recently, data mining has been increasingly cited as an important tool for homeland security efforts. Some observers suggest that data mining should be used as a means to identify terrorist activities, such as money transfers and communications, and to identify and track individual terrorists themselves, such as through travel and immigration records. Two initiatives that have attracted significant attention include the now-discontinued Terrorism Information Awareness (TIA) project[13] conducted by the Defense Advanced Research Projects Agency (DARPA), and the now-canceled Computer-Assisted Passenger Prescreening System
II (CAPPS II) that was being developed by the Transportation Security Administration (TSA). CAPPS II is being replaced by a new program called Secure Flight.

3. Discuss the role of SDLC in System development. Also discuss and compare different approaches i-e Water Fall vs Incremental

State your own opinion in favor or against the above two.

Systems Development Life Cycle (**SDLC**) or sometimes just (**SLC**) is defined by the U.S. Department of Justice (DoJ) as a software development process, although it is also a distinct process independent of software or other information technology considerations. It is used by a systems analyst to develop an information system, including requirements,

validation, training, and user ownership through investigation, analysis, design, implementation, and maintenance. SDLC is also known as information systems development or application development. An SDLC should result in a high quality system that meets or exceeds customer expectations, within time and cost estimates, works effectively and efficiently in the current and planned information technology infrastructure, and is cheap to maintain and cost-effective to enhance. SDLC is a systematic approach to problem solving and is composed of several phases, each comprised of multiple steps:

1. Implementation	2. Testing	3. Evaluation				**or**
1. Feasibility Study	2. Analysis	3. Design	4. Development	5. Implementation	6. Maintenance	**or**
1. Feasibility Study	2. Analysis	3. Design	4. Implementation	5. Maintenance		**or**
1. Feasibility Study	2. Analysis	3. Design	4. Development	5. Testing	6. Implementation 7. Maintenance	**or**
1. Analysis (including Feasibility Study)	2. Design	3. Development	4. Implementation	5. Evaluation		**or**
1. Feasibility Study	2. Analysis	3. Design	4. Implementation	5. Testing	6. Evaluation 7. Maintenance	

In general, an SDLC methodology follows the following steps:

1. The existing system is evaluated. Deficiencies are identified. This can be done by interviewing users of the system and consulting with support personnel.
2. The new system requirements are defined. In particular, the deficiencies in the existing system must be addressed with specific proposals for improvement.
3. The proposed system is designed. Plans are laid out concerning the physical construction, hardware, operating systems, programming, communications, and security issues.
4. The new system is developed. The new components and programs must be obtained and installed. Users of the system must be trained in its use, and all aspects of performance must be tested. If necessary, adjustments must be made at this stage.
5. The system is put into use. This can be done in various ways. The new system can phased in, according to application or location, and the old system gradually replaced. In some cases, it may be more cost-effective to shut down the old system and implement the new system all at once.
6. Once the new system is up and running for a while, it should be exhaustively evaluated. Maintenance must be kept up rigorously at all times. Users of the system should be kept up-to-date concerning the latest modifications and procedures

In incremental models, software is built not written. Software is constructed step by step in the same way a
building is constructed. The products is designed, implemented, integrated and tested as a series of incremental builds, where a build consists of code pieces from various modules interacting together to
provide a specific functional capability and testable as a whole. The waterfall model is a software development model (a process for the creation of software) in which development is seen as flowing steadily downwards (like a waterfall) through the various phases