

Course: Information system and data processing
Program: BS (SE)
Instructor: Muhammad Abrar Khan
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Note: Attempt all questions. Use examples and diagrams where necessary.

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CLASS./SECTION. SEMESTER 8TH SECTION B

Q.1 What are systems? Explain in detail. Take a daily life example of system (any organization or company) and explain its component one by one in detail.

ANS: SYSTEM

A system is a collection of elements or components that are organized for a common purpose. A computer system consists of hardware components that have been carefully chosen so that they work well together and software components or programs that run in the computer.

EXPLANATION.

Every system is bounded by space and time, influenced by its environment, defined by its structure and purpose, and expressed through its functioning. A system may be more than the sum of its parts if it expresses synergy or emergent behavior.

Changing one part of a system may affect other parts or the whole system. It may be possible to predict these changes in patterns of behavior. For systems that learn and adapt, the growth and the degree of adaptation depend upon how well the system is engaged with its environment. Some systems support other systems, maintaining the other system to prevent failure.

General systems theory is about developing broadly applicable concepts and principles, as opposed to concepts and principles specific to one domain of knowledge. It distinguishes dynamic or active systems from static or passive systems. Active systems are activity structures or components that interact in behaviours and processes. Passive systems are structures and components that are being processed.

TYPES:

There are two major types:

NATURAL SYSTEMS and **DESIGNED SYSTEMS**. Natural systems range from

subatomic systems to living systems of all kinds, our planet, the solar systems, galactic systems and the Universe

COMPONENTS :

An information system is described as having five components.

Computer hardware. This is the physical technology that works with information. ...

Computer software. The hardware needs to know what to do, and that is the role of software.

Telecommunications. ...

Databases and data warehouses. ...

Human resources and procedures.

EXAMPLES :

A system is a general set of parts, steps, or components that are connected to form a more complex whole.

For example, a computer system contains processors, memory, electrical pathways, a power supply, etc. For a very different example, a business is a system made up of methods, procedures, and routines.

List three examples of systems. A system is a group of interacting, independent parts that make up a complex whole. Examples of systems include a city transportation system, a weather system, or an automotive cooling system.

Q.2 What is Management information system? Take an example of MIS of any organization and elaborate in your own words.

ANS: Management Information System.

Stands for "Management Information System." An MIS is a system designed to manage information within a company or organization. This includes employees, departments, projects, clients, finances, and other types of data. At its most general level, an MIS may include non-computer based elements, such as the structural hierarchy of an organization. However, in the computing world, an MIS typically refers to the hardware and software used to manage information.

EXPLANATION.

Management Information System, commonly referred to as MIS is a phrase consisting of three words: management, information and systems. Looking at these three words, it's easy to define Management Information Systems as systems that provide information to management.

The hardware required for a management information system can vary widely depending on the size and data processing requirements of an organization. A small business, for example, may only need a single machine to store information, such as employee data,

projects, and invoices. A large business may require several systems that allow employees to share data securely across multiple locations. Data stored in an MIS is often backed up in multiple locations for redundancy. Of course, hardware must have the appropriate software installed to assist in a management information system. Some common functions of MIS software include employee record keeping, invoicing, inventory management, project planning, customer relationship management, and business analysis. Some software programs are designed for specific tasks, such as maintaining financial records or backing up data. Other programs are designed to be comprehensive solutions that perform multiple MIS functions in a single software package.

Examples of MIS software include Microsoft Dynamics, Fleetmatics WORK, Clarity Professional MIS, and Tharstern Limited. MIS programs designed specifically for the graphics and print industry include Avanti Slingshot, EFI Pace, and DDS Accura. Most MIS software programs are available as desktop applications, though many solutions now include web-based interfaces and mobile apps as well.

EXAMPLES.

Facebook is one of the most profitable businesses in the world, and its entire existence depends on the use of information technology and information systems.

Other successful companies such as Google, Amazon, eBay, and Financial Institutions- most of their success is due to technology.

Q.3 Explain Marketing Information system and its types in detail. Note: You should make your answer understandable by taking a proper example.

ANS: Marketing information system.

A marketing information system (MKIS) is a management information system (MIS) designed to support marketing decision making. Jobber (2007) defines it as a "system in which marketing data is formally gathered, stored, analysed and distributed to managers in accordance with their informational needs on a regular basis."

EXAMPLE:

Most platforms (social media sites like Facebook, LinkedIn and Instagram and advertising options like Google Adwords) provide information on usage so these are also examples of marketing information systems. However, unlike Google Analytics their primary purpose is for raising awareness and not reporting.

Q.4 Why Decision Making is an important factor to run an organization. Explain your answer with the help of a proper example.

ANS: Decision making.

Decision making is important to achieve the organizational goals/ objectives within given time and budget. It searches the best alternative, utilizes the resources properly and satisfies the employees at the workplace. As a result, organizational goals or objectives can be achieved as per the desired result.

Decision making refers to making choices among alternative courses of action— which may also include inaction. ... Individuals throughout organizations use the information they gather to make a wide range of decisions. These decisions may affect the lives of others and change the course of an organization.

The Decision-Making Process

Quite literally, organizations operate by people making decisions. A manager plans, organizes, staffs, leads, and controls her team by executing decisions. The effectiveness and quality of those decisions determine how successful a manager will be.

Managers are constantly called upon to make decisions in order to solve problems. Decision making and problem solving are ongoing processes of evaluating situations or problems, considering alternatives, making choices, and following them up with the necessary actions. Sometimes the decision-making process is extremely short, and mental reflection is essentially instantaneous. In other situations, the process can drag on for weeks or even months. The entire decision-making process is dependent upon the right information being available to the right people at the right times.

STEPS

The decision-making process involves the following steps:

1. Define the problem.
2. Identify limiting factors.
3. Develop potential alternatives.
4. Analyze the alternatives.
5. Select the best alternative.
6. Implement the decision.
7. Establish a control and evaluation system.