NAME: DANYAL AHMAD ID # 13838

MODULE: SEMESTER-VI

Course: Information system and data processing

Program: BS (SE)

Instructor: MUHAMMAD ABRAR KHAN

Examination: Final paper

Q1. 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.

Answer(1):

Systems:

A system is a group of elements that are integrated with the common purpose of achieving an objective.

Example:

Purchase & Sales System

Components of a system:

Following are the important components of the system.

• Input elements

Raw Data input to the computer system

Process

Computation, analysis, application of any model

Output elements

Results of computation or analysis

Control mechanism

Comparison of actual with expected

• Feedback system

Corrective action

Objectives

Expected/Ideal output

Types of Systems:

Open-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.

Example:

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

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.

Has the ability to control the output due to existence of

Control Mechanism
 Feedback System
 Objectives

Example:

Budgetary control system in a company by which

- The results are communicated through feedback system
- Results are compared with the objectives/budget through controls mechanism

Open Systems:

- A system that is connected to its environment by means of resource flows is called an open system.
- The environment exerts influence on the system and the system also influences the environment.

Example:

Business is a system where management decisions are influenced by or have an influence on suppliers, customers, society as a whole.

Computerized system of a manufacturing entity, that takes influence from the society.

Closed Systems:

- A system that is not connected with its environment
- Neither environment exerts any influence on the system nor does system influence the environment.

Examples:

- An information system designed to control data in a research laboratory is a closed system.
- An information system designed to record highly sensitive information is a closed system so as
- To accept no input for amendment
 To give no output for disclosure

Total Quality management of Apple:

The main aim of Apple Inc. is to offer high-quality products to its customers. Apple Inc. uses the system of Total Quality Management (TQM) to keep the employees satisfied and motivated. The great source of motivation among the team is the communication at the public forums and effective meeting among the employees. The company uses four basic tools of TQM such as – Control chart, Pareto chart, cause and effect diagram, and Histogram. TQM enables the company to bring all the stakeholders together. There are various organizational factors of

Apple that influence Total Quality Management. The senior management of Apple believes that communication is an important key for the implementation of TQM system. The principles of the system enable the company to establish an open culture of innovation and trust. By implementing the system of TQM, Apple Inc. has succeeded in reducing the wastage of the whole supply chain management. The company is able to make a balance between the responsiveness and efficiency by taking into consideration the principles of TQM.

Q2. What is Management information system? Take an example of MIS of any organization and elaborate in your own words.

Answer(2):

Management Information System:

MIS is the use of information technology, people, and business processes to record, store and process data to produce information that decision makers can use to make day to day decisions. The full form of MIS is Management Information Systems. The purpose of MIS is to extract data from varied sources and derive insights that drive business growth.

The need for Management Information System:

The following are some of the justifications for having an MIS system

Decision makers need information to make effective decisions. Management Information Systems (MIS) make this possible.

MIS systems facilitate communication within and outside the organization — employees within the organization are able to easily access the required information for the day to day operations. Facilitates such as Short Message Service (SMS) & Email make it possible to communicate with customers and suppliers from within the MIS system that an organization is using.

Record keeping – management information systems record all business transactions of an organization and provide a reference point for the transactions.

Components of MIS:

The major components of a typical MIS long-form (Management Information System) are:

People – people who use the information system

Data – the data that the information system records

Business Procedures – procedures put in place on how to record, store and analyze data

Hardware – these include servers, workstations, networking equipment, printers, etc.

Software – these are programs used to handle the data. These include programs such as spreadsheet programs, database software, etc.

Nadra management Information system:

In order to improve civil registration system, CRMS was introduced by NADRA at Union Council Level.

Under this system event of Birth, Marriage, Divorce and Death are captured, which very vital in nature.

The pilot projects were launched in 100 UCs of Lahore and till today more than 4,192 UCs are onboard.

NADRA has provided software, certificate paper and also imparting training to UCs Secretaries.

The project is up-and-running for last 3 years.

Converting data into meaningful information for better and timely decision

480 computer touch screen kiosks have been installed all over Pakistan to facilitate the citizens providing them with following offerings

- 1. Utility bills payment
- 2. Cell phone scratch cards
- 3. CNIC verifications

It is probably the largest fully integrated database in the world that is having both an Automatic Finger

Identification System (AFIS) & a Facial Recognition System.

National Data Warehouse

Storage Capacity of 60 Terabytes

Processing Speed of 18 Trillion Instructions/ Sec

Multilingual Support of English/ Urdu/ Sindhi

AFIS with a matching speed of 16 million/sec

World largest Facial Library of 47 million images (ICAO)

Network Infrastructure

Highly redundant, scalable and mission critical

Connected with more than 8000 computers

Equipped Terrestrial, VSAT, and DVB RCS/2 WAN Links

Electronic tickets are issued and data is written on the RFID chip directly using handheld.

Points based ticketing system can be implemented using this technology.

Payment of fines will be made through Kiosk.

Q3.Explain Marketing Information system and its types in detail. (Note: You should make your answer understandable by taking a proper example.)
Answer(3):

Marketing Information System:

The Marketing Information System refers to the systematic collection, analysis, interpretation, storage and dissemination of the market information, from both the internal and external sources, to the marketers on a regular, continuous basis.

MKIS is a type of Information System that helps the firm to achieve following objectives:

- Identification of customers for firm 's products and services.
- Development of those products and services to meet customers' needs
- Promotion of the products and services, and

• Provision of after sale customer support

Components of Marketing Information System:

- **1. Internal Records:** The Company can collect information through its internal records comprising of sales data, customer database, product database, financial data, operations data, etc.
- 2. Marketing Intelligence System: The marketing intelligence system provides the data about the happenings in the market, i.e. data related to the marketing environment which is external to the organization. It includes the information about the changing market trends, competitor's pricing strategy, change in the customer's tastes and preferences, new products launched in the market, promotion strategy of the competitor, etc.
- **3. Marketing Research:** The Marketing Research is the systematic collection, organization, analysis and interpretation of the primary or the secondary data to find out the solutions to the marketing problems. Several Companies conduct marketing research to analyze the marketing environment comprising of changes in the customer's tastes and preferences, competitor's strategies, the scope of new product launch, etc. by applying several statistical tools. In order to conduct the market research, the data is to be

collected that can be either primary data (the first-hand data) or the secondary data (second-hand data, available in books, magazines, research reports, journals, etc.)

The secondary data are publicly available, but the primary data is to be collected by the researcher through certain methods such as questionnaires, personal interviews, surveys, seminars, etc.

4. Marketing Decision Support System: It includes several software programs that can be used by the marketers to analyze the data, collected so far, to take better marketing decisions. With the use of computers, the marking managers can save the huge data in a tabular form and can apply statistical programs to analyze the data and make the decisions in line with the findings.

Marketing Information System Of Starbucks:

Every company that plans to enter international markets follows the Marketing Information System. The above flow chart shows us how any typical internationally recognized company goes about in designing a marketing strategy when moving to new markets. A Market Information System is a 'set of procedures and practices employed in analyzing and managing marketing information, gathered continuously from sources inside and outside of a firm'. Starbucks first does spend a lot of time in gathering information about a market it may want to open up to. They take into consideration the channels, competitors that exist, the political,

legal and economic issues that are faced in that country. Here they try to find out any possible reason as to why it may or may not be a good idea to invest in launching an outlet. Some cases that fall under this research was the Starbucks Logo issue that was held in Saudi Arabia. The logo was considered 'inappropriate' to Saudi Arabia's standards. Starbucks did manage to edit their logo in time to make it more appropriate to markets which had similar issues over their previous old logo.

Starbucks also faced another issue when it came with opening coffee outlets in Israel. Starbucks being an 'iconic American company' made them realize that 'they were a target in Israel.' The company found that it would not be a good idea because they feared that one of their stores would be bombed and concluded as 'a risk' to open in Starbucks.

Q4. Why Decision Making is an important factor to run an organization. Explain your answer with the help of a proper example.

Answer(4):

Decision Making:

Decision making refers to making choices among alternative courses of action—which may also include inaction. While it can be argued that management is decision making, half of the decisions made by managers within organizations ultimately fail. Therefore, increasing effectiveness in decision making is an

important part of maximizing your effectiveness at work. 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.

Steps in Decision Making:

Decision making comprises a series of sequential activities that together structure the process and facilitate its conclusion. These steps are:

- Establishing objectives
- Classifying and prioritizing objectives
- Developing selection criteria
- Identifying alternatives
- Evaluating alternatives against the selection criteria
- Choosing the alternative that best satisfies the selection criteria
- Implementing the decision

Example:

For example, the decisions made by executives and consulting firms for Enron ultimately resulted in a \$60 billion loss for investors, thousands of employees without jobs, and the loss of all employee retirement funds. But Sherron Watkins, a former Enron employee and now-famous whistle blower, uncovered the accounting problems and tried to enact change. Similarly, the

decision made by firms to trade in mortgage-backed securities is having negative consequences for the entire economy in the United States. All parties involved in such outcomes made a decision, and everyone is now living with the consequences of those decisions.

THE END