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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 : Systems

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

Types of Systems

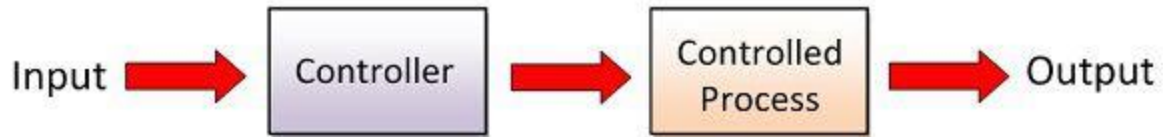
Open Loop System : The system whose control action is free from the output is known as the open loop control system.

Other Name = Non-feedback System

Non-reliable

Examples : Traffic light, automatic washing machine, immersion rod, TV remote etc.

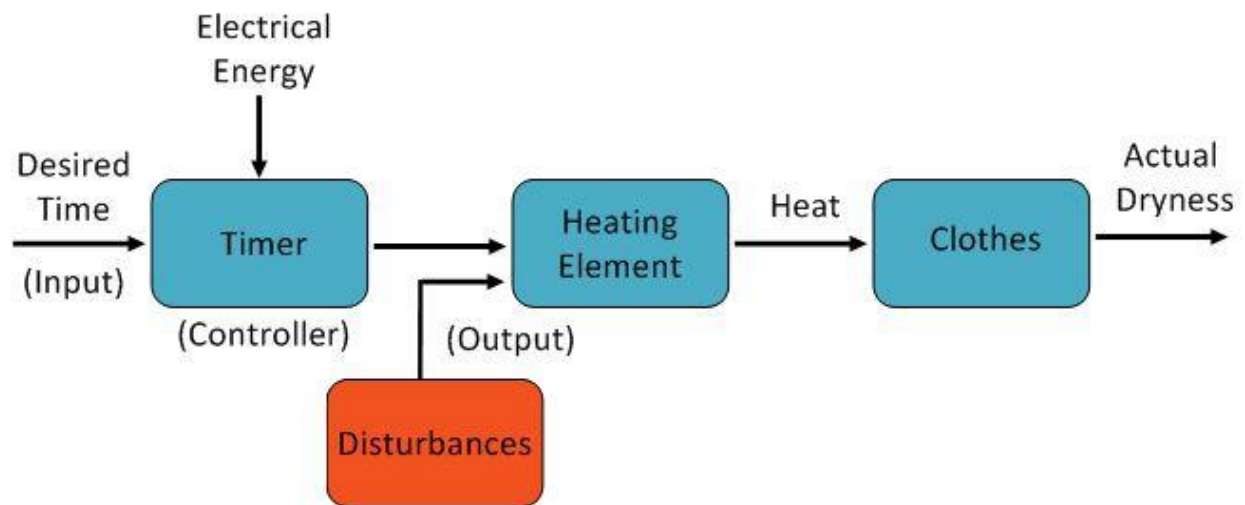
In open loop control system, the output does not affect the control action of the system. In other words, the system whose working depends on time is known as the open loop control system. The open loop system is free from the feedback. Let's understand this with the help of the few examples.



Open Loop System

Circuit Globe

Example 1: Consider the clothes dryer whose control action is done manually by the operator. Depending on the wetness of the clothes suppose the operator set the timer for 30 minutes. After 30 minutes the timer will stop even after the clothes are wet.



Circuit Globe

The dryer stops working even if the desired output is not obtained. This shows that the system has no feedback. Here clothes dryer is the example of the open loop system and the timer is the controller of the system.

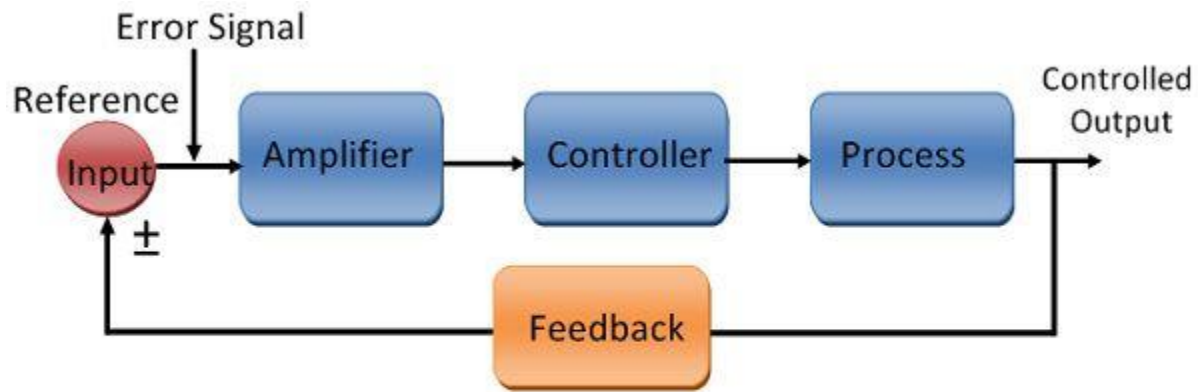
Closed Loop System : In closed loop, the output depends on the control action of the system.

Other name = Feedback System

Reliable

The closed-loop control system means the output of the system depends on their input. The system has one or more feedback loops between its output and input. The closed-loop system

design in such a way that they automatically provide the desired output by comparing it with the actual input. The closed-loop system generates the error signal which is the difference between the input and output.



Closed Loop Control System

Circuit Globe

Example 1: Suppose in the above example of closed dryer we are using the transducer which senses the dryness of the clothes and provides the feedback signal to the controller relating to dryness. Here the dryness is the output of the system. The sensor act as a feedback of the system. The sensor gives the signal to the controller of the machine, and hence the dryer provides the desired output.

Information System

- Control Mechanism
- Feedback System
- Objectives

Example

Budgetary control system in a company by which

- The results are communicated through feedback system o 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

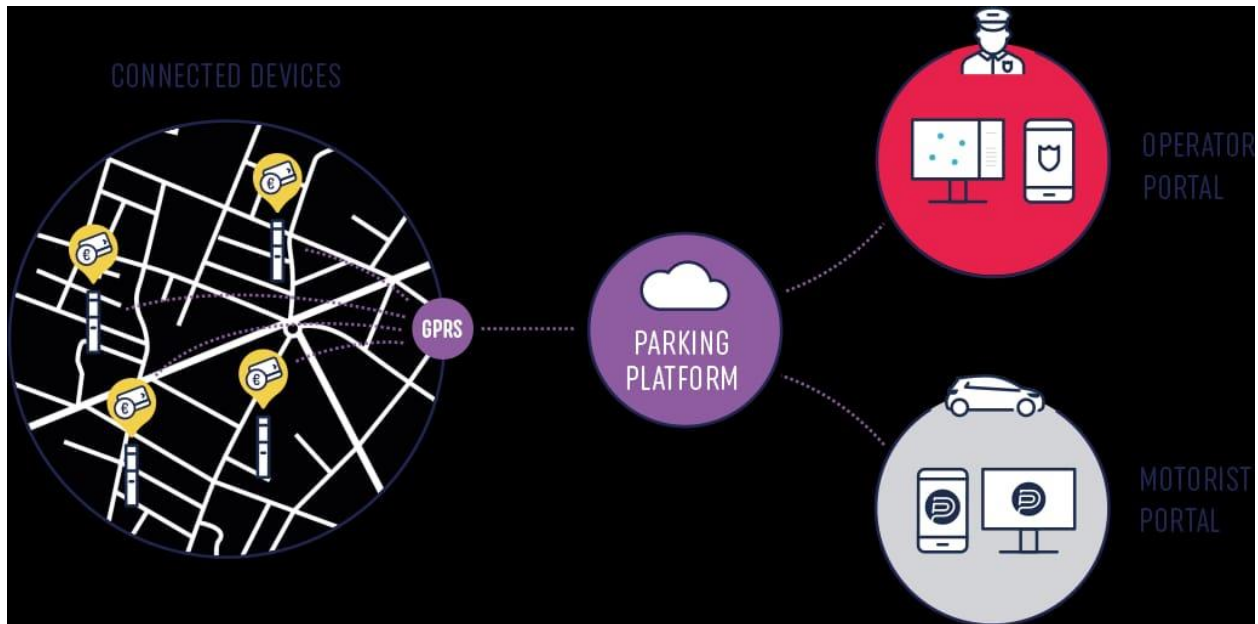
- An information system designed to control data in a research laboratory is a closed system.
- An information system designed to record highly sensitive information is a closed system
- To accept no input for amendment
- To give no output for disclosure

Daily life example of system

Smart Parking Meters

Thanks to the concept of smart parking, parking meters are no longer simple pay stations. They have become real electronic counters for motorists, which goes far beyond hourly payment of parking tickets.

IEM has developed its range of parking meters and applications so that they can adapt to any type of parking policy through the diversification of means of payment and the management of both parking subscriptions and virtual tickets



Equipment /components

PARKING METERS

IEM has developed its latest generation of parking meters using state-of-the-art components and providing excellent comfort for motorists. With its alphanumeric keypad, the Presto Europa offers additional functionalities based on number plate input. Presto Interactive distinguishes itself from other parking meters by a large touch screen providing motorists with a user-friendly interface. Presto Connect is the ideal machine for paperless payment and management of on-street parking.

PARKING PLATFORM

IEM's parking platform contains the parking business logic. Its powerful tariff calculator is easy configurable for any given tariff structure on any given point of sale, be it parking meters or smartphone apps. The Parking Platform is the data source for all payment and technical transactions, which are visualized and processed in Presto 1000, the operator portal.

OPERATOR PORTAL

Presto 1000 is the system which allows the operator to remotely manage and monitor each parking meter. Based on granted user rights, the Operator Portal allows the operator to remotely set and modify any given parameters on any parking meter connected.

MOTORIST PORTAL

Motorists can manage their parking subscription status directly on PrestoPark. Additionally, they can purchase virtual tickets for any given zone in the city, manage and analyse their transactions on their user account.

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:

MIRS 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.

A management information system (MIS) is a computer system consisting of hardware and software that serves as the backbone of an organization's operations. An MIS gathers data from multiple online systems, analyzes the information, and reports data to aid in management decision-making.

The purpose of an MIS is improved decision-making, by providing up-to-date, accurate data on a variety of organizational assets, including:

- **Financials**
- **Inventory**
- **Personnel**
- **Project timelines**
- **Manufacturing**

- **Real estate**
- **Marketing**
- **Raw materials**
- **R&D**

PTCL MIS:

MIS of PTCL is divided into two stages:

1. Strategic, management, knowledge and operational level.
2. Functional areas such as sales and marketing, manufacturing finance, accounting and HR.

It consist of following elements:

- Computerized fault management system CFMS.
- Business and customer care system BCCS.
- Partial office automation system.
- Human resource management information system HRMIS.
- Structural analysis program SAP.



Business and customer care system BCCS:

- PTCL's whole network runs on this software.
- Costs approximately 3 Arab Rupees.
- It is operated at all business levels of PTCL. i.e operational level, Middle level, Top level

BSSC Functions:

- Franchise and payphone management.
- customer information/ Database.
- Product/ Service information.
- Sales management
- Order entry.
- Order management.
- Resource Management.

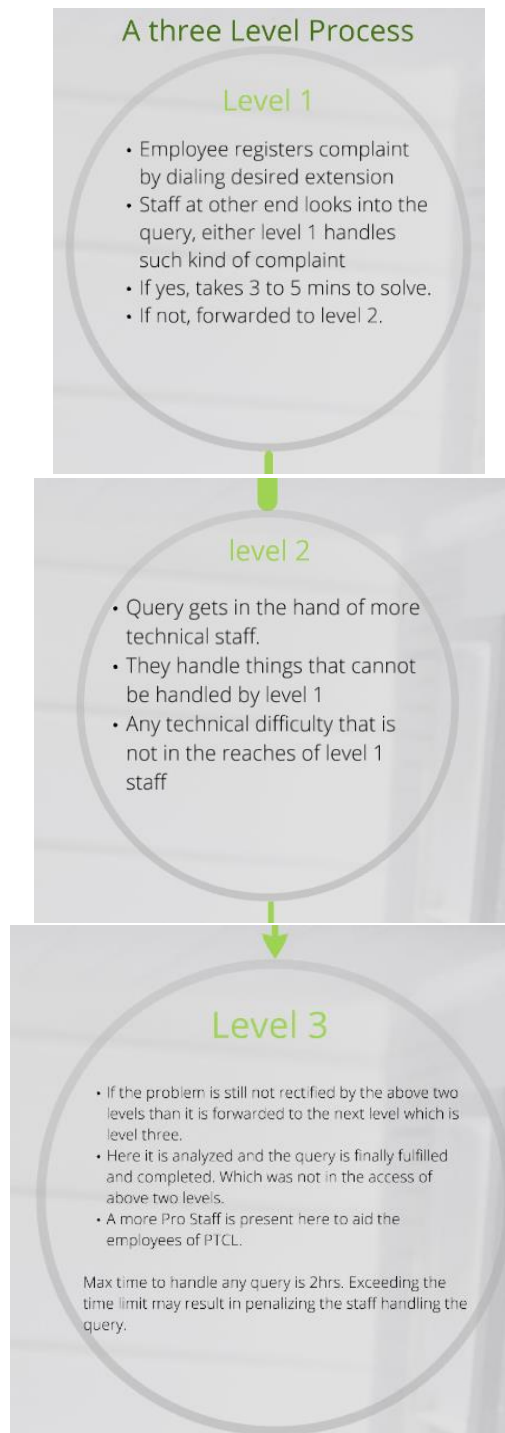
Partial Automation Office:

PTCL also implements a partial office automation system, which is based on databases. Office automation is a great way to save money and time while protecting your important business information.

HRMIS (Human resource management information system):

- PICL introduced "HR Online hiring management system".
- A Special emphasis is being laid on developing a sense of responsibility and politeness in the minds of employees especially in the lower management and staff.
- Training schools like telecom staff college, regional telecom training schools and divisional telecom training centers are also charged with the trends in technical and managerial training.
- This entire training institute is very important for PTCL, as it helps organizations with respect to trends.

IT SERVICE DESK:



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:

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

A marketing information system (MIS) is intended to bring together disparate items of data into a coherent body of information. An MIS is, as will shortly be seen, more than raw data or information suitable for the purposes of decision making. An MIS also provides methods for interpreting the information the MIS provides. Moreover, as Kotler's definition says, an MIS is more than a system of data collection or a set of information technologies:

"A marketing information system is a continuing and interacting structure of people, equipment and procedures to gather, sort, analyse, evaluate, and distribute pertinent, timely and accurate information for use by marketing decision makers to improve their marketing planning, implementation, and control".

TYPES OF MIS:

1)Internal Records: The Company can collect information through its internal records consisting of sales data, customer database, product database, financial data, operations data, etc. The detailed explanation of the internal sources of data is given below:

- The information can be collected from the documents such as invoices, transmit copies, billing documents prepared by the firms once they receive the order for the goods and services from the customers, dealers or the sales representatives.

- The current sales data should be maintained on a regular basis that serves as an aide to the Marketing Information System. The reports on current sales and the inventory levels help the management to decide on its objectives, and the marketers can make use of this information to design their future sales strategy.

- The Companies maintain several databases such as *Customer Database- wherein the complete information about the customer's name, address, phone number, the frequency of purchase, financial position, etc. is saved.

*Product Database- wherein the complete information about the product's price, features, variants, is stored.

*Salesperson database, wherein the complete information about the salesperson, his name, address, phone number, sales target, etc. is saved.

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.

In order to have an efficient marketing Information System, the companies should work aggressively to improve the marketing intelligence system by taking the following steps:

- Providing the proper training and motivating the sales force to keep a check on the market trends, i.e. the change in the tastes and preferences of customers and give suggestions on the improvements, if any.

- Motivating the channel partners viz. Dealer, distributors, retailers who are in the actual market to provide the relevant and necessary information about the customers and the competitors.

- The companies can also improve their marketing intelligence system by getting more and more information about the competitors. This can be done either by purchasing the competitor's product, attending the trade shows, reading the competitor's published articles in magazines, journals, or financial reports.

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.

Marketing research contributes a lot in the marketing information system as it provides the factual data that has been tested several times by the researchers.

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 marketing 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.

Thus, the marketers need to keep a check on the marketing environment, i.e. both the internal (within the organization) and the external (outside the organization, so that marketing policies, procedures, strategies can be designed accordingly.

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 is an important part of maximizing your effectiveness at work.

Decision making is important factor 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 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.

Such examples are as follow

***Problem-solving.**

***Leadership.**

***Reasoning.**

***Intuition.**

***Teamwork.**

***Emotional Intelligence.**

***Creativity.**

***Time management.**

Proper example

when choosing a place to establish a new business, the criteria might include rental costs, availability of skilled labor, access to transportation and means of distribution, and proximity to customers. Based on the relative importance of these factors, a business owner makes a decision that best meets the criteria.

THE END

