CHAPTER 22

INTRODUCTION TO COMPUTERS IN ACCOUNTING

❖ **Computer System**

It is an electronic machine that is used to process a raw data into meaningful information required by the users. It works on set of instructions that are programmed into it in the form of software which helps them in processing the data and producing information as per the requirement.

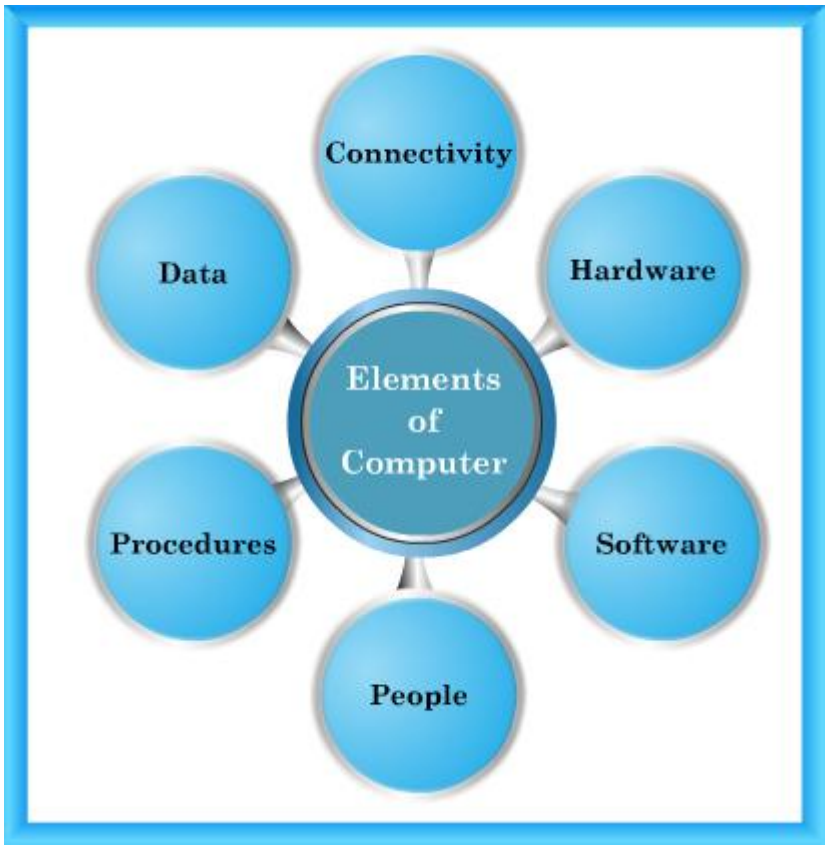
❖ **Elements of a Computer System**

1. **Hardware-** It includes all the physical components of a computer which can be touched such as keyboard, mouse, monitor, processor, etc.
2. **Software-** It is referred to a set of the programs that enables a computer to perform its tasks or commands given by the user. There are following six types of software.
    - *Operating System*- It is an integrated set of specialised programs that are meant to manage and control the resources of a computer. It acts as communication link between the user and the computer hardware.
    - *Utility Programs*- These are the set of pre-written computer programs that are designed to perform certain supporting operations. These are highly specialised which are specifically designed to perform a single task or a small range of tasks.
    - *Application Software*- These are user-oriented programs that are designed and developed for performing certain specified tasks.
    - *Language Processors*- These are the software that interpret or translate a program language into a machine language.

- *System Software*- These are the software that controls the internal functions of the system such as reading data from the input devices.
- *Connectivity Software*- These are the software that creates and controls the connection between a computer and a server with the purpose of sharing the data.

3. **People-** It is basically refers to the individuals or the users who interact with the computer through the use of hardware and software. The following people are involved in a computer system.
   - *System Analysts*- Design the data processing system.
   - *Operators*- Write programs to implement the data processing system.
   - *Programmers*- Participate in operating the computers.
4. **Procedures-** A series of operations that are executed in a certain manner in order to achieve a desired set of results is known as 'Procedures'. The following are the three types of procedures.
   - *Hardware-oriented Procedures*- It provide details about various components of a computer and their uses.
   - *Software-oriented Procedures*- It provide detailed set of instructions required for using the software of a computer system.
   - *Internal Procedures*- It helps in sequencing the operation or working of each sub-set of overall computer system.
5. **Data-** The facts that are gathered and entered into a computer system is known as 'Data'. It may comprise of numbers, text, graphics, etc.

6. **Connectivity-** This refers to the manner, in which a computer system is connected to the other electronic devices through telephone lines, microwave transmission, satellite link, etc., is known as 'Connectivity'.



❖ **Components of a Computer System**

The following are components of a computer system.

1. Input Unit- It controls those devices that are used to transfer inputs in a computer system such as keyboard, mouse, CD ROM, smart card reader etc.
2. Central Processing Unit (CPU)- It refers to brain of computer which performs all the task related to processing of data, storage and reterival of information. It is sub-divided into three parts:

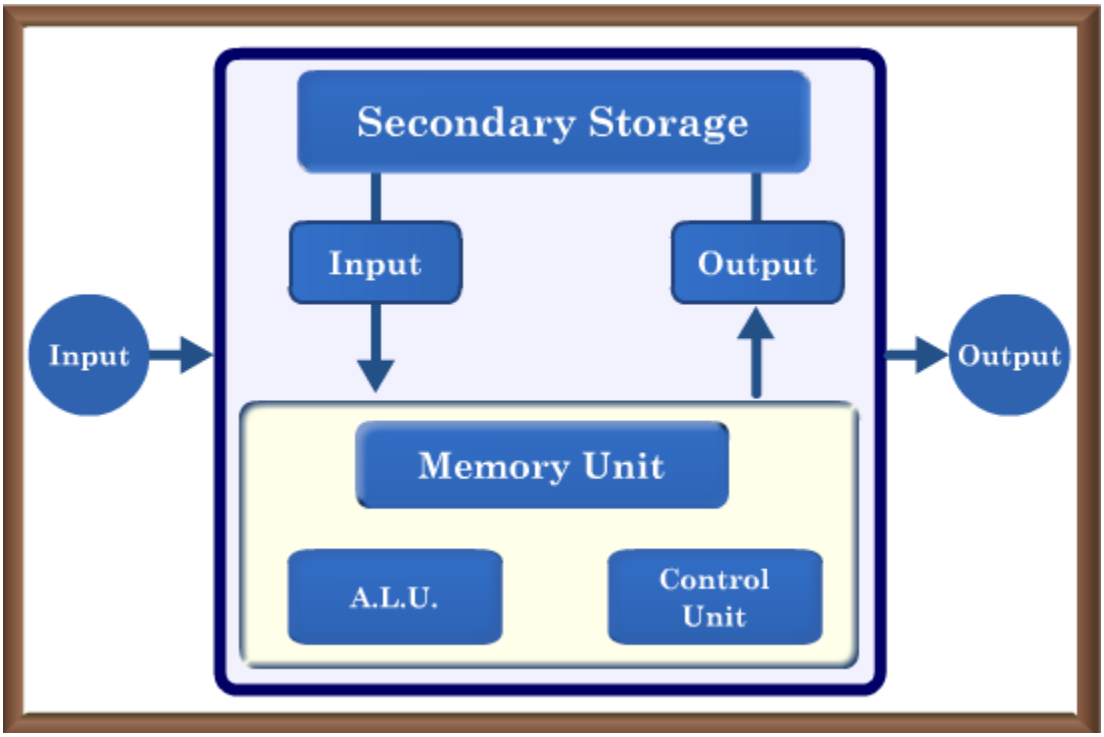
a. *Arithmetic and Logic Unit (ALU)*- It do all the mathematical calculation of computer system such as multiplication, addition, subtraction, divison and logical operations, etc.

b. *Memory Unit*- It helps in storing data that is not processed immediately.

c. *Control Unit*- It helps in control and coordination of all the other units of Computer System.

3. Output Unit- It is a device that is used to display the information to the users in a readable and understandable form.

The given below is a diagrammatic presentation of these components.



❖ **Benefits or Characteristics of a Computer System**

The given below are the various benefits of a computer system-

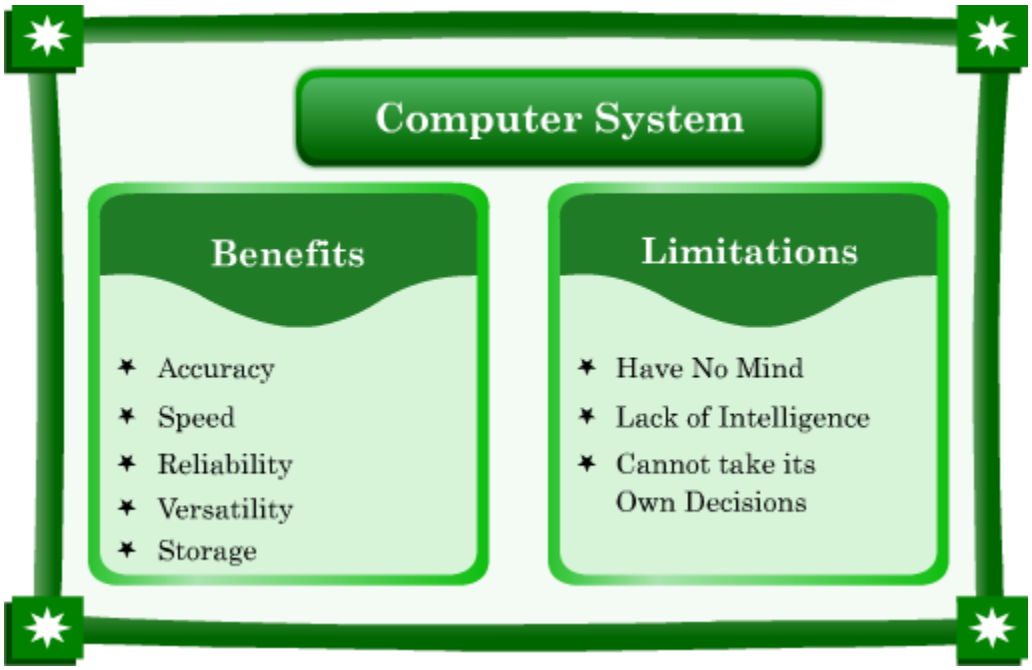
- ***Accuracy***- Output or information produce by a computer system contains high percentage of accuracy.

- ***Speed*** - Computer systems perform the operations at much faster speed as compared to human beings. It takes far less time than the manual systems in performing a task.
- ***Reliability*** - Computers efficiency is not affected by huge quantity of work pressure, long working hours or monotony. A computer can easily perform variety of tasks with great precision and accuracy, thereby making the results highly reliable.
- ***Versatility*** - Computers is specialised in doing different tasks at the same time and with the same efficiency no matters how complex the task.
- ***Storage*** - Computers have a huge storage capacity and can store safely a huge volume of data in a very small physical space.

❖ **Limitations of a Computer System**

The given below are some limitations of a computer system.

- ***Have no mind*** - Computer system works as per the given instructions and does apply their own intelligence while performing a task.
- ***Lack of Intelligence*** - A computer system cannot perform a task on its own. It has to be programmed with set of instructions to perform a particular function.
- ***Cannot take its own decisions*** - As computer works on the set of instructions, so it lacks process of analysing data, comparison with previous data and analysis of present environment for taking a quality decision.



❖ **Computerised Accounting System**

The process of maintaining accounting records with the help of a computing system is known as Computerised Accounting System.

❖ **Features of Computerised Accounting System**

The given below are the various features of a computerised accounting system.

- Helps in online recording and storing of accounting data.
- Helps in generating computerised purchases and sales invoices.
- All accounts and transactions are codified logically.
- Helps in grouping of accounts from the very beginning.
- Provides reports very quickly and instantly.

❖ **Transaction Processing System (TPS)**

It is a computerised system which records, processes, validates and stores routine transactions that occur in various functional areas of a business on daily basis. It facilitates the decision making in a business organisation through the following processes.

- **Data Collection**- TPS collects all the required data either manually or through other devices to complete one or more transactions.
- **Data Editing**- This system checks the data for its accuracy, correctness and completeness.
- **Data Validation**- It refers to a process, where TPS verifies the data for its correctness and rectifies the errors, if detected.
- **Data Manipulation**- TPS performs the process of calculation, then processes and analyses the inputted data on a pre-set design.
- **Data Storage**- It places or stores the data in one or more database.
- **Output Generation**- TPS helps in generating reports and presents it in a pre-designed format either as hardcopy or softcopy.
- **Query Support**- TPS enables its users to raise a query upon the stored data and extract the required information as and when the need arises.

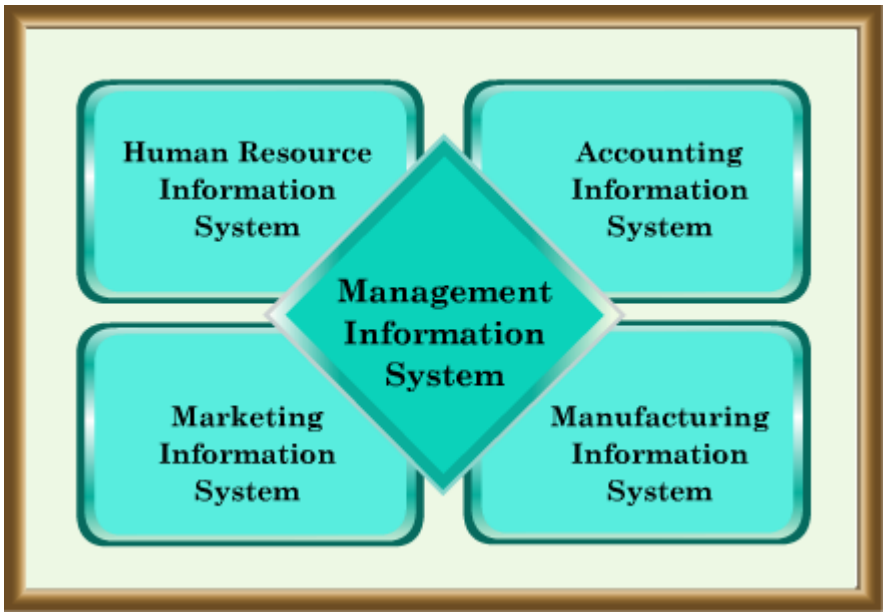
❖ **Components of Transaction Processing System**

The given below are the components of a TPS.

- **Input**- A computerised accounting system accepts the complete transaction data as input through the process of data collection, data editing, data validation and data manipulation.
- **Storage**- The system stores the inputted data in computer storage media such as hard disk.
- **Output**- The stored data can be retrieved and processed as and when required for generating an accounting report as output.

❖ **Management Information System (MIS)**

- It is a planned system of collecting, processing, storing and disseminating the data in the form of information to perform the task of decision making and management of an organisation.
- MIS has functional relationship with other functional management information system namely Manufacturing Information System, Human Resource Information System, Accounting Information System and Marketing Information System.
- MIS receives information from these other functional information systems and uses the received information to take appropriate decisions.



❖ **Accounting Information System (AIS)**

It is a system that identifies, collects, processes, summarises, generates and presents information about a business organisation to a wide variety of users. It provides relevant information by processing voluminous accounting data, which is beyond the human capabilities.

The following are the important features of AIS.

- Helps in handling the huge volume of accounting and financial transactions of an organisation.
- Helps in drafting future plans and accordingly setting the future objectives.
- Acts as a common pool for providing information to different departments besides accounts and finance departments.
- Helps in maintaining the accounting information as per the guidelines laid down by the Law.
- Helps in meeting the informational needs by generating reports for both external as well as for the internal accounting users.

❖ **Accounting Reports**

When the collected data is processed and manipulated in a useful sense that can be understood by the users without any ambiguity, then it becomes information. When this relevant information is further summarised to meet a particular aim, it is called a report. A good report need to fulfill the following criterion-

- Relevance
- Timeliness
- Accuracy
- Completeness
- Summarisation

❖ **Kinds of Accounting Reports**

The following are different types of reports used in MIS.

- **Summary Reports-** These reports summarise all the activities of an organisation. *For example*, Trading and Profit and Loss Account and Balance Sheet.

- **Demand Reports-** These reports are prepared on the request and need of the management. *For example*, Bad-Debts report.
- **Customer/Supplier Reports-** These reports are prepared as per the specifications of the management showing various aspects of the suppliers/customers. *For example*, Report of Top 10 customers.
- **Exception Reports-** These reports are prepared in accordance with some specific conditions or exceptions. *For example*, Inventory Status Report.
- **Responsibility Reports-** These reports are prepared by the managers who are responsible for their respective departments. *For example*, Purchase Manager submits a report regarding different aspects of purchase.

❖ **Designing of Accounting Reports**

Accounting reports should be designed by keeping in mind the following points.

- Clearly specify objective of report.

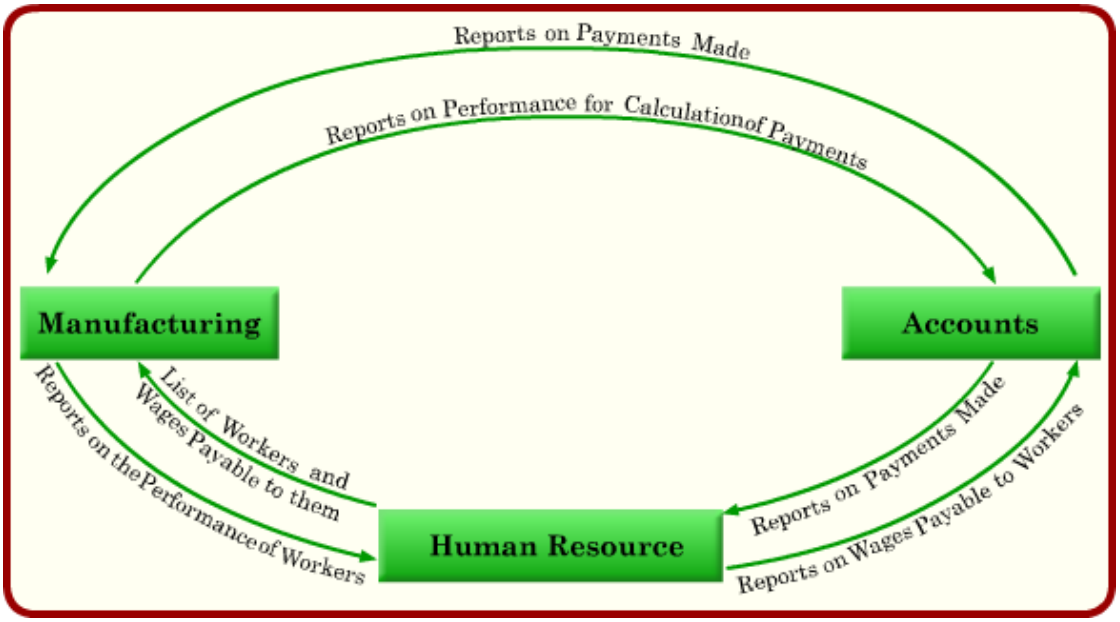
- Presentation and data contained therein is to be designed in such a manner that it fulfils exact requirements of users.
- Must contain a query list that will define database manipulation and also help user to do their independent manipulations.
- End part of report must contain analysis, conclusions and suggestions.

❖ **Data Interface between Information Systems**

Accounting Information System is very crucial element in every business having MIS organisational structure. It involves receiving information from one system and providing information to the other functional MIS. The given below are the relationship and data interface between different sub-components of MIS.

I. Relationship between AIS, Manufacturing Information System and Human Resource Information System

The given below diagram shows the relationship between Accounting Information System, Manufacturing Information System and Human Resource Information System.



Human Resource Information System (HRIS) maintains the records of the employees and prepares salaries and wages payable to them. It sends a list of workers to the Manufacturing Department. The Manufacturing Department on the basis of this information prepares a report on the performance of each worker and deductions to be made from the wages, if any. Thereafter, this report is send to both Accounts Department as well as to Human Resource Department. After this, the Human Resource Department sends report to the Accounts Department to pay the wages. The Accounts Department with the help of these reports calculates the amount payable and statutory dues and subsequently, makes the final payments to the workers. The report of the final payments is send to the HR Department and the Manufacturing Department by the Accounts Department.

II. Relationship between AIS and Manufacturing Information System

Business processes in the Manufacturing Department include the following activities.

- Preparation of Plans and Schedules
- Issue of Material Requisition Form and Job Cards
- Issue of Stock and Inventory
- Issue of Raw Material Procurement Orders
- Handling Supplier Invoices
- Payments to Suppliers

The AIS would accordingly include the process of

- Purchasing Orders
- Payments to Suppliers

- Preparing Inventory Status Reports
- Preparing Reports of Accounts Payable

III. Relationship between AIS and Marketing Information System

Business processes in the Marketing and Sales Department involve the following activities.

- Inquiry Process
- Creation of Contacts
- Entry of Orders
- Dispatching Goods
- Generation of Bills to Customers

The AIS would accordingly include the following activities.

- Processing of Sales Orders
- Authorisation of Credit
- Keeping Custody of the Goods
- Inventory Status
- Shipping Details