



Bharat Shikshan Sanstha's

Shri Chhatrapati Shivaji College, Omerga

Tq. Omerga Dist. Osmanabad - 413606 (MS), India

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad) | NAAC Reaccredited 'B' Grade

Name of Subject : Computer Fundamental

Course Code : CS01

Class :B.Sc. First Year

Subject :Computer Sci.(Gen).

Organization of Computer **Part-3**

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Objective

- **To well understand organization of a computer**

Organization of Computer

A computer is a fast and accurate device, which can accept data, store data, process them and give, desired results as output.

The organization of computer can be understood with the help of a logical block diagram of the computer

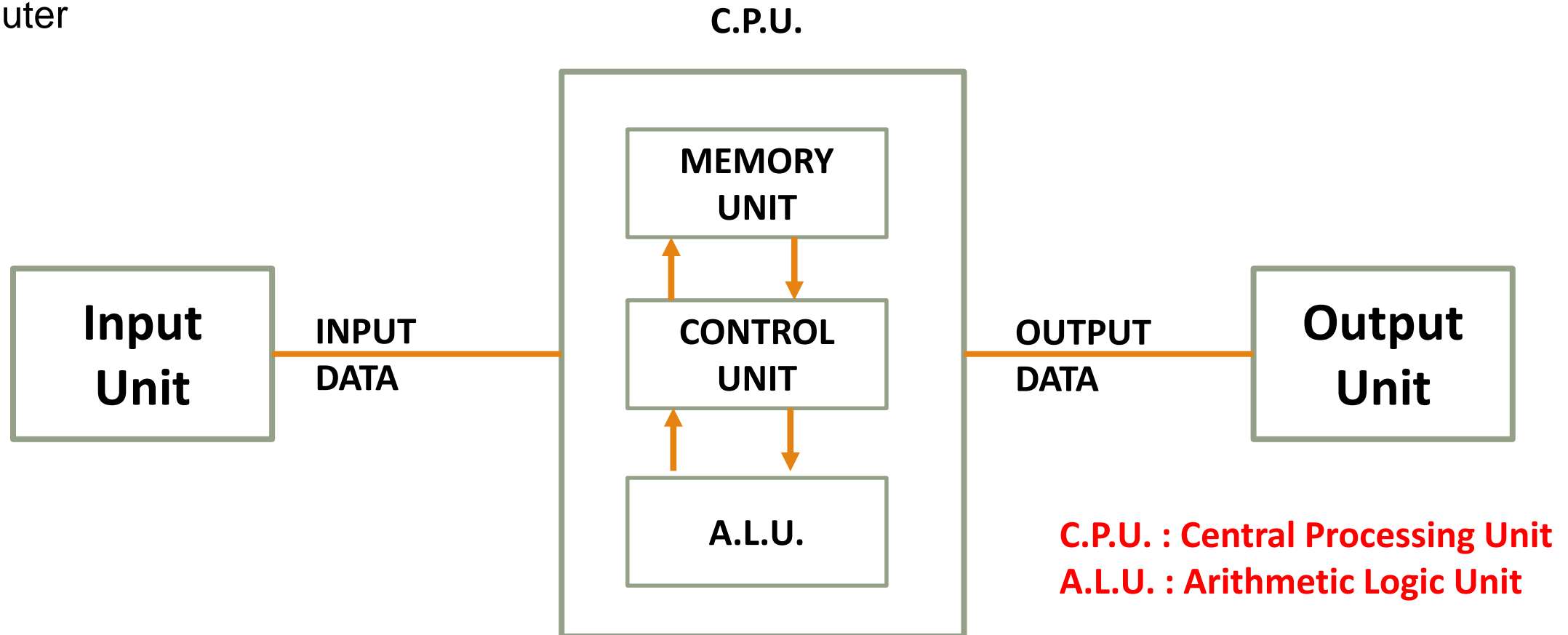


FIGURE : BLOCK DIAGRAM OF COMPUTER

Organization of Computer...

- Computer system consists of three parts, that are Input Devices, central processing unit (CPU) and Output Devices.
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- **Input Unit :**
 - Input unit consists of devices used to transmit information/data from user (external world) to the computer system.
 - This unit does process of entering data and programs(instructions) in to the computer system.
 - An **input device** is a hardware used to provide data to a computer used for interaction and control.
 - **Keyboard** – one of the primary input devices used to input data and commands.
 - **Mouse** – an input device used to control the cursor and coordinates.

Input Devices



The Physical Parts of a Computer System which allows data to be entered into a Computer System

- Keyboard
- Graphics Tablet
- Touch-Sensitive Screen
- Mouse
- Microphone
- Digital Camera
- Digital Video Camera
- Webcam
- Trackball
- Trackpad
- Joystick
- Scanner



- **Central Processing Unit (C.P.U.):**

- The CPU accept the data and process it and generates output.

- It is also known as the brain of computer.

- The CPU is an electronic hardware device which can perform different types of operations such as arithmetic and logical operation.

- The CPU has three important units.

1. Memory Unit

2. Control Unit

3. Arithmetic and Logic Unit



- **1. Memory Unit :**
- **Memory is the unit where the data and instructions are stored.**
- Memory is also called Primary memory or internal memory.

- It is used to store data temporary or permanently.
- **The data stored can be accessed and used by the CPU for processing .**
- **This unit consists of cells which are capable to store unit of information.**
- **These cells can be accessed as they are numbered sequentially, which are called address.**
- **This memory unit is referred as primary storage section.**

- This storage capacity is expressed in terms of Bytes.
- The binary is two logic levels:- Logic (1) , Logic (0)
- The following table lists some storage units –

Sr.No.	Unit & Description
1	Bit: is binary digit (1) or (0)
2	1 Nibble = 4 Bits
3	1 Byte = 8 Bits
4	1 Kilobyte (KB) = 1024 Bytes
5	1 Megabyte (MB) = 1024 KB
6	1 Gigabyte(GB) = 1024 MB
7	1 Terabyte (TB) =1024 GB
8	1 Petabyte(PB) = 1024 TB



- **2. Control Unit :**
- The control unit (CU) controls all the activities or operations which are performed inside the computer system.

- It receives instructions or information directly from the main memory of the computer.
- When the control unit receives an instruction set or information, it converts the instruction set to control signals then; these signals are sent to the central processor for further processing.
- The control unit understands which operation to execute, accurately, and in which order.
- This unit does not process data but it acts as the central system of instructions for data manipulation.
- It controls the flow of data to and from the main storage.

- **3. Arithmetic and Logic Unit(ALU) :**

- The arithmetic logic unit (ALU), which performs simple arithmetic operation such as +, -, *, /.
 - It also does logical operation such as >, <, =<, <= etc. for comparison.
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- This unit helps by processing data and taking logical decisions.

- **OUTPUT Unit :**

- The output unit of a computer provides the information and results of a computation to outside world using output devices.
- Output Unit is the process of producing results from the data.
- Printers, Visual Display Unit(VDU) are the commonly used output devices.
- Other commonly used output devices are Speaker, Headphone, Projector etc.
- These devices convert the data into a human-readable form from binary code.

MONITOR



HEADPHONE



SPEAKER



Output Devices of Computer

PLOTTER



PROJECTOR



PRINTER



Unit No.	Topic Name	Ref.	No. of Lecturers
1	Fundamentals of Computer System : Introduction, Characteristics & features of Computers, Components of Computers ,Organization of Computer.	1/1	3
2	Algorithm and Flowcharts : Algorithm: Definition , Characteristics, Advantages and disadvantages , Examples Flowchart : Definition ,Define symbols of flowchart ,Advantages and disadvantages ,Examples	2/1 3/3 3/4	3 3
3	Computer Generation & Classification Generation of Computers : First to Fifth , Classification of Computers ,Distributed & Parallel computers	2/12	3
4	Computer Languages Types of Programming Languages :Machine Languages ,Assembly Languages ,High Level Languages • Assembler, Linker, Loader, Interpreter & Compiler	2/9 2/9	3

Unit No.	Topic Name	Ref.	No. of Lecturers
5	Computer Memory : <ul style="list-style-type: none"> Memory Cell & Organization Types of Memory (Primary And Secondary) : RAM ,ROM ,PROM ,EPROM, Secondary Storage Devices (FD, CD, HD, Pen drive, DVD, Tape Drive, DAT) 	2/4 2/4	3
6	I/O Devices: Input Devices : Touch screen , OMR, OBR , OCR, Light pen , Scanners , Digitizers Output Devices :Plotters, LCD , Plasma Display, Printers	1/4 1/4	3
7	Processor : Structure of Instruction, Description of Processor , Processor Features ,RISC & CISC	2/5	6
8	Operating system Concepts : Why Operating System , Functions of Operating System, Types of Operating ,System , Batch O.S. , Multiprogramming O.S. , Time Sharing O.S ,Personal Computers O.S. ,Network O.S.	2/9 2/9	3
Core Ref.	1. Fundamentals of Information Technology By Chetan Srivastava, Kalyani Publishers 2. Fundamentals of Computers By V. Rajaraman, PHI Publication, IVth Edition. 3. 3. Fundamentals of Programming By Raj K. Jain, S. Chand Publication		

Fundamentals of Computer System

Core References

1. Fundamentals of Information Technology By Chetan Srivastava, Kalyani Publishers
2. Fundamentals of Computers By V. Rajaraman, PHI Publication, IVth Edition.
3. Fundamentals of Programming By Raj K. Jain, S. Chand Publication

Additional Reference:

1. Computer Today By Suresh K. Basandra, Galgotia Publication, Updated Edition
2. Computer Fundamental By B. Ram, BPB Publication.

Thank you !
