Name of Subject : Computer Fundamental

Course Code : CS01

Class :B.Sc. First Year   **Subject :Computer Sci.(Gen).**

Components of Computers
Part-2

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Objective

- **To aware of basic component of computer**

Componetns of Computer

- A computer system process the data using Hardware and Software components.

- Hardware :

- The Computer Hardware is the collection of various physical components of the computer.

- The major hardware components of a computer system are:

  1. Processor

  2. Main memory

  3. Secondary memory

  4. Input devices

  5. Output devices

- These components are tangible ,which one can see and feel.

- For typical desktop computers, the processor, main memory, secondary memory, power supply, and supporting hardware are housed in a metal case.

- Many of the components are connected to the main circuit board of the computer, called the *motherboard.*

- The *power supply* supplies power for most of the components.

- Various input devices (such as the keyboard) and output devices (such as the monitor) are attached through connectors at the rear of the case.

- **Software :**

- Software, is a collection of data or computer instructions that tell the computer how to work.

- Software is set of instructions usually termed as program which are required for processing activities of the computer .

- Data can be any information that a program needs: character data, numerical data, image data, audio data, and countless other types.

- Programs consist of instructions for the processor to solve the real World problems.

- Computer Hardware is capable to do many things using software , it is dead machine without softwares.

- **Software Types**

- There are two main types of software: **systems software** and **application software**.

- **System software** is software on a computer that is designed to control and work with computer hardware.

- The two main types of system software are the operating system and the software installed with the operating system, often called utility software.

- OS is the most prominent example of System Software.

- OS is a collection of software that handles resources and provides general services for the other applications that run over them.

- Some examples of Operating systems given below:

- Android,MS-DOS , Linux , Windows , Unix

- Utility software is designed to aid in analyzing, optimizing, configuring and maintaining a computer system.
- It supports the computer infrastructure.
- Software's like antiviruses, disk cleanup & management tools, compression tools, defragmenters, etc. are all utility tools.
- For examples :Norton Antivirus , McAfee Antivirus, WinRAR, WinZip ,Windows File Explorer etc.
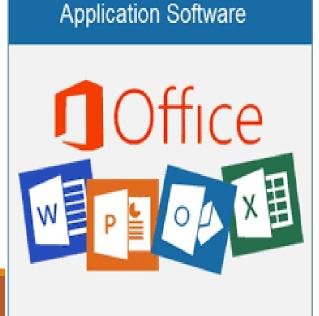
- Application Software :

- An application is any program, or group of programs, that is designed for the end user to accomplish specified task.

- Applications software (also called end-user programs) include such things as database programs, word processors, Web browsers and spreadsheets.

- Examples : MS-Office Suit(Word, Access, Excel, PowerPoint),Google Chrome, Internet Explorer

Paper No.: CSO1 Comp. Sci. (Gen.)   Semester : I   Paper title: Computer Fundamental

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 :** • 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 !