CHAPTER 1

Introduction to Computer

Q.1 Write down the definition of computer, Data Information, problem ?

Ans. Definition :

A Computer is an electronic device that can perform activities that involve Mathematical, Logical and graphical manipulations. Generally, the term is used to describe a collection of devices that function together as a system.

It performs the following three operations in sequence.

1. It receives data & instructions from the input device.
2. Processes the data as per instructions.
3. Provides the result (output) in a desired form.

Data :

It is the collection of raw facts, figures & symbols.

Ex : Names of students and their marks in different subjects listed in random order.

Information :

It is the data that is processed & presented in an organized manner.

Ex : When the names of students are arranged in alphabetical order, total and average marks are calculated & presented in a tabular form, it is information.

Program :

Set of instructions that enables a computer to perform a given task.

Q.2 Write down the advantage & disadvantage of computers ?

Ans. Advantages of computers :

1. High speed :

Computers have the ability to perform routine tasks at a greater speed than human beings. They can perform millions of calculations in seconds.

2. Accuracy :

Computers are used to perform tasks in a way that ensures accuracy.

3. Storage :

Computers can store large amount of information. The computer at lightning speeds can retrieve any item of data or any instruction stored in the memory.

4. **Automation :** स्वचालित

Computers can be instructed to perform complex tasks automatically (which increas the productivity).

5. **Diligence :** परिश्रम

Computers can perform the same task repeatedly & with the same accuracy witho getting tired.

6. **Versatility :** अष्टपैलू

Computers are flexible to perform both simple and complex tasks.

7. **Cost effectiveness :**

Computers reduce the amount of paper work and human effort, thereby reducin costs.

Limitations of computers :-

1. Computers need clear & complete instructions to perform a task accurately. the instructions are not clear & complete, the computer will not produce th required result.
2. Computers cannot think.
3. Computers cannot learn by experience.
4. A computer has no brain of its own. It simply executes the instructions given b the user, as long as it can understand them, no matter whether they are right o wrong.

Q.3. Write in brief the history of computers ?

Ans. History of Computers:

Around 1850, when *George Boole*, a mathematician, developed an algebraic systen which is now called as Boolian Algebra. This Boolian algebraic system is used to represen quantities as binary numbers i.e. 0s and 1s and also represent and manipulate logica expressions.

The significance of Boolian Algebra was not utilized at that time. In the nineteenth century, around 1880, Herman. Hollerith developed techniques and machines that had significant impact on the future design of computers. He designed a machine in which data was represented in the form of punched holes on paper cards. He set up his own company "Computing Tabulating Recording Company" which eventually *became International Busines Machine Corporation* (IBM). Today, IBM is one of the largest companies in the computer world.

Early Computers:

In 1937, Howard Alken,of Harward University, designed a huge mechanical calculator called MARK I with a number of switches, mechanical relays and cards. The size was 15 m x 2.4 m x 0.6 m. This was the immediate predecessor of automatic electronic computers.

ENIAC (Electronic Numerical Integrator And Calculator) designed in 1946 was the first electronic calculator. It occupied a room of 15 m x 9 m and its weight was 30 tons. It was water colled and much faster than MARK I.

Around 1950, a Computer named EDVAC (Electronic Discrete Variable Automatic Computer) was designed which was based on Neumann's idea.

First Generation of Computers (1946-1955)

The computers manufactured between 1945-55 are called first Generation Computers. They were extremely large with vacuum tubes in their circuitry, which generated considerable heat. Hence, special air conditioning arrangements were required to dissipate this heat.

They were extremely slow and their storage capacity was also very less compared to today's computers.

Second Generation Computers (1956-1965)

The Computers in which vacuum tubes were replaced by transistors, made from semiconductors, were called second generation Computers.

Third Generation Computers (1966-1976)

The third generation computers started in 1966 with incorporation of Integrated Circuits (IC) in the circuitry.

IBM 360 series computers in this generation had provisions for facilitating time sharing and multiprogramming also.

These were small size and cost effective computers compared to Second Generation Computers. Storage capacity and speed of these computers was increased many folds as compared to the ones in second generation. Other developments that took place during the period include user friendly package programs, word processing and remote terminals. Remote terminals could use central computer facilities and get the results, instantaneously.

Fourth Generation Computers

Fourth Generation Computers were introduced after 1976 and in these computers electronic components were further miniaturized through Large Scale Integration (LSI) techniques Microprocessors, which are programmable Ics fabricated using LSI technique, are used in these computers. Micro Computers were developed by combining microprocessor with other LSI chips, with compact size, increased speed and increased storage capacity. In recent days, Ics fabricated using VLSI (Very Large Scale Integration) technique are used in Computers. Through this technique, more than 1000 electronic components can be put on a single chip. Because of this technique, the storage capacity is increased many folds. Not only that, the speed of these computers is also very high as compared to earlier computers.

During 1980s, some computers called as super computers were introduced in the market. These computers perform operations with exceptionally high speed (approx. 100 million operations per sec). This speed is attained by employing number of microprocessors

simultaneously to perform an operation. These computers have very complex circuitry and consequently there cost is also very high. These are normally used in very complex applications like arterial intelligence etc.

CHAPTER 2

Anatomy of Computer

Q.4 What are the anatomy of computer OR Write down the information system of computer ?

Ans. 1 people :

It is easy to over look people as one of the five parts of a microcomputer system. Yet that is what microcomputers are all about –making people, end users like yourself, more productive.

2. Procedures :

Procedures are rules or guidelines for people to follow when using software, hardware and data. Typically, these procedures are documented in manuals written by computer specialists. Software and hardware manufacturers provide manuals with their products.

3. Software :

Software is another name for programs. A program consists of the step by step instructions that tell the computer how to do its work. The purpose of software is to/convert data (unprocessed facts) in to information (processed facts).

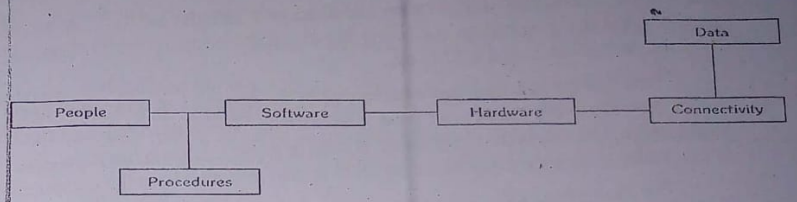
4. Hardware:

The hardware consists of the equipment ; keyboard, mouse, monitor, system unit, and other devices. Hardware is controlled by software. It actually processes the data to create information.

5. Data :

Data consists of the raw, unprocessed facts, including text, numbers, images, and sounds. Examples of raw facts are hours you worked and your pay rate. After data is processed through the computer, it is usually called information. An example of such information is the total wages owed you for a week's work.

In large computer systems, there are specialists who deal with writing procedure , developing software , and computing data . In micro computer systems, however, end users often perform these operations. To be a competent end user, you must understand the essentials of information technology (IT) , including software, hardware, and data.



CHAPTER 3

Input and Output Devices

Q.5 Write down the function of input & out put devices ?

Ans. Input devises translate data and program that humans can understand into a form that the computer can process. The most common input devices are the keyboard and the mouse. Output devices translate the processed information from the computer in to a form that humans can understand. The most common output devices are monitors or video display screens and printers.

Data as well as instructions are fed through an input device. Once the data is processed by the CPU, the results are passed on to the user through an output device.

A Computer is designed to perform variety of tasks. However, it is supposed to be doing what it is generally desired to do by a users. Hence arises a problem of communication between the user and the computer. A description of the task to be performed by the computer is 'fed' or given as *input* to it through an *input device*. A computer could have one or more input devices. However, the description of a task may be fed through only one device at a time.

If somebody were to tell us how to solve a quadratic equation, he would give a description of the method of solution. This description is fed to us through our ears which act as input device. Where does this description go after fed through our ears? We know it resides in the storage cells of our brain. Analogously, the description (information) fed to the computer through an input device, is stored in the memory of the computer.

After the task description is fed and stored in the memory of the computer, it is the Central Processing Unit (CPU) that interprets this and the operations needed to perform the task as per description are executed by the CPU. These operations include arithmetic operations

like addition, subtraction, multiplication and division. It can also perform variety of other operations like logical operations, controlling flow of data/information, coordinating operations by all the devices connected to CPU etc.

Now that the specified task is performed by the computer, it must let us know what are the answers to the problem we gave it for solution. This is accomplished through output device. The results can be displayed, printed or stored in some other form. The results obtained after solving the problem are generally known as *output* from the computer.

The description of the task to be performed, data to be operated up on, the output results can all be stored in Mass Storage Devices for further use, whenever needed.

Q.6 Write down the classified in the information of computer ?

Ans. Information flow within a Computer :

The information that flows within a computer can be classified as

1. Programs and Data
2. Control Information

Programs and Data :

A program is what we have referred to earlier as description - of the task to be performed by a computer. Data refers to a set of values assumed by the variables in the program. For example, if we write a program to solve a quadratic equation $ax^2 + bx + c = 0$ then the particular set of values of a, b and c form the data for this program. Thus, if one desires to solve a particular quadratic equation then he needs to feed in both program and the data for that particular equation.

Program and data enter the computer through an input device and get stored in the memory. The data which come in through input device are termed as *input data* and the one which is communicated to the user through on output device is known as *output data* or simply output from the computer.

Whenever any arithmetic operation is to be performed on the input data, it is to be transformed from memory to ALU. The arithmetic operation is performed in the ALU and the result is again transferred to the memory. The same is then presented to the user through on output device.

Control information :

There is need to control the flow of instructions and appropriate data from memory to CPU. This requires various devices within a computer to behave in a controlled manner. This is accomplished by the control unit in CPU. The control unit controls various devices in the computer by sending them information in the form of control signals. It can also ascertain the present status of the devices by getting status signals from the devices. For example, the control unit has to ascertain whether the output device is ready before signaling it to carry out

the desired work (say printing etc). The control unit controls these devices in accordance with the instructions in the user program.

Q.7 . Write down the input devices ?

Ans. Input and output devices

A wider variety of input and output devices are used for communication with the computer. We will describe some commonly used input and Output devices.

Keyboard :

Keyboard is the most commonly used input device. A keyboard is used to enter information & instructions in to a computer. It consists of a set of keys similar to that used in a typewriter. It has some special keys like Ctrl, Alt, Esc, return, function keys etc. in addition to those in a typewriter. These keys have special functions. The layout is similar to that of a typewriter. A computer keyboard combines a typewriter keyboard with a numeric keypad.

Mouse:

A mouse controls a pointer that is displayed on the monitor. The pointers usually appear in the shape of an arrow. It frequently, however, changes shape depending on the application. The standard mouse has a ball on the bottom and is attached with a cord to the system unit.

Joysticks:

The joysticks are the most popular input device for computer games.

Touch screen:

A touch screen is a particular kind of monitor screen covered with a plastic layer.

Light pen:

Alight pen is a light sensitive pen like device. light pens are used by engineers.

Digitizer:

A Digitizer is a device that can be used to trace or copy a drawing or photograph.

Digital camera:

Digital camera are similar to traditional camera except that images are recorded digitally on a disk or in the cameras memory rather than the film.

Digital video camera:

unlike traditional video cameras, digital video cameras record motion digitally on a disk or in the cameras memory.

a) **Scanning Devices:**

Direct-entry scanning device record images of text, drawing, or special symbols,. The images are converted to digital data that can be processed by a computer or displayed on a monitor Scanning device include , Image scanner, Flat bed scanner, Fax machine, Bar-code readers

b) **Character and mark recognition devices :**

There are three kind of scanning devices, formerly used only with mainframes now found in connection with the more powerful microcomputers. They are Magnetic-ink character recognition (MICR), Optical-character recognition (OCR), optical- mark recognition (OMR)

c) **Voice – Input Devices:**

Voice input devices convert a persons speech in to a digital code. By far the most widely used voice – input device is the microphone. This input device when combined with a sound card and appropriate software forms a voice recognition system. most voice recognition system must be "trained " to the particular users voice. They include Direct speech, continuous speech etc.

Q.8 **Write down the output devices ?**

Ans. **Output Devices:**

Output devices convert machine-readable information in to people readable form. Data that is input to and then processed by the computer remains in machine readable form until output devices make it people readable. the output devices we shall describe for microcomputers are monitor, printers, plotters, and voice output.

1. **Monitors:**

Monitor standards indicate screen quality. Some monitors are used on the desktop; others are portable.

The most frequently used output device is the monitor. Two important characteristics of monitors are size and clarity. A monitors size is indicated by the diagonal length of its viewing area. Common size is 15, 17, 19 and 21 inches.

A monitor's clarity is indicated by its resolution, which is measured in pixels. More the pixels, the better the clarity of the image. For a given level of clarity, larger monitors require a higher resolution (more pixels).

To indicate a monitors resolution capabilities, several standards have evolved. The four most common today are SVGA, XGA, SXGA and UXGA

Cathode – Ray Tubes :

The most common type of monitor for the office and the home is the Cathode – Ray Tubes (CRT). These monitors are typically placed directly on the system unit or on the desk-top. The primary advantages are low cost and excellent resolution .

Flat – panel monitors:

Flat –panel monitors or liquid crystal display (LCD) are much thinner than CRT's. Once used exclusively for portable computers. Flat-panel monitors are now starting to be used for desktop systems as well.

2. **Printers :**

There are three types of printers; ink-jet, laser, thermal.

The images output on a monitor are often referred to as **soft copy.** Information output on paper- whether by a printer or by a plotter- is called **hard** copy. Three popular kind of printers used with microcomputers are ink-jet, laser, and thermal.

Printer	Characteristics	Typical use
Ink-jet	High color quality; inexpensive; sprays drops of ink on paper	Internal and external communications, advertising pieces
Laser	Very high quality uses photocopying process	Desktop publishing, external documents.
Thermal	Very high quality; uses heatelements on special paper.	Art and design work

There are several other types of printers. Two are the dot-matrix printer and the chain printer.

3. **Plotters :**

Plotters are special purpose drawing devices.

Plotters are special purpose output devices for producing bar charts, maps, architectural drawings, and even three – dimensional illustrations. Plotters can produce high-quality multicolor documents and also documents that are larger than most printers can handle. There are four types of plotters: Pen plotter, ink-jet plotter, electrostatic plotter and direct imaging plotter.

4. **Voice –Output Devices:**

Voice –output device vocalize prerecorded sounds.

Voice – output devices make sounds that resemble human speech but actually are prerecorded vocalized sounds. The most widely used voice – output devices are stereo speakers and head-phones. These devices are connected to a sound card in the system unit. The sound card is used to capture as well as play back recorded sounds. Voice output is used as a reinforcement tool for learning, such as to help students study a foreign language. It is also used in many supermarkets at the checkout counter to confirm purchases.

CHAPTER 4

Memory of The Computer

Q.9 What is memory of computer & write the types of storage unit of computer ?

Ans. Memory or storage capacity is one of the important components of a computer. Any storage unit of a computer system is classified on the basis of the following criteria:

1. **Access time:**
   This is the time required to locate and retrieve stored data from the storage unit in response to program instructions.
2. **Storage capacity:**
   It is the amount of data that can be stored in the storage unit.
3. **Cost per bit of storage.**

Q.10 Write down the units of memory ?

Ans. Units of memory:

The computer stores a character in the storage cells with binary (0,1) mechanism. Thus the basic unit of memory is a bit (binary digit – 0,1). To store a character, a computer requires 8 bits or 1 byte. This is called the " word length" of the storage unit. Hence the storage capacity of the computer is measured in the number of words it can store and is expressed in terms of bytes.

The different units of measurement are

8 Bits = 1 Byte

210 (or) 1024 Bytes = 1 Kilo Byte (KB)

210 (or)1024 KB = 1 Mega Byte (MB)

210 (or)1024 MB = 1 Giga Byte (GB)

Conversion :

ASCII – American Standard Code for Information Interchange.

This code has given alphabets like some numbers which can be converted to Binary form. A- 65 .....Z – 90 and a – 97 ..... z – 121

By using these codes the alphabets can be converted to digital & hence to Binary form.

Q.11. Write down the types of Memory ?

Ans. Types of Memory :

A computer memory is of two types

1. Primary Memory (Internal storage)
2. Secondary Memory (External storage)

A. Primary Memory :

Primary memory is also called internal memory and is an important part of a computer. It is the main area in a computer where the data is stored. The stored data can be recalled instantly and correctly whenever desired. This memory can be quickly accessed by the CPU for reading or storing information. Primary memory is further classified into two types: Random Access Memory (RAM) and Read- Only Memory (ROM)

(1.) RAM:

RAM is also known as read/write memory as information can be read from and written onto it. RAM is a place in a computer that holds instructions for the computer, its programs and the data. The CPU can directly access the data from RAM almost immediately. However, the storage of data and instructions in RAM is temporary, till the time the computer is running. It disappears from RAM as soon as the power to the computer is switched off. i.e it is volatile memory.

(2.) ROM:

It is called Read-only memory as information can only be read from and not written or changed on to ROM. ROM is the "built-in" memory of a computer. It stores some basic input – output instructions put by the manufacturer to operate the computer. The storage of data and instructions in ROM is permanent. It does not depend on the power supply. i.e it is non-volatile memory.

B. Secondary memory:

The primary memory which is faster (and hence expensive) is generally not sufficient for large storage of data. As a result, additional memory, called the "auxiliary" or "secondary memory" is used. It is also referred as "backup storage" as it is used to store large volume of data on a permanent basis which can be transferred to the primary memory whenever required for processing.

Data are stored in secondary storage in the same binary codes as in the main (primary memory) storage. Some of the devices of secondary storages are Floppy Disk, Hard Disk, CD-ROM, DVD and Flash drive.

1. Floppy Disk: It is also referred as —Diskette: and is made of flexible Vinyl material. It has a small hole on one side called "Right protect notch", Which protects accidental writing/deleting the information from the disk. There is a hole in the centre through which the spindle of drive unit rotates the disk. The disks are available in two sizes of 5.25 and 3.5 inches and these could be either low density or high-density floppies.

Storage capacity of floppies are measured in kilobytes (KB) and megabytes (MB). T details about the storage capacities of the floppies are presented below:

Floppy Disk Storage Capacity Size (Diameter)

Low Density 360 KB 5.25 inches

High Density 1.2 MB 5.25 inches

High Density 1.44 MB 3.5 inches

Extended 2.8 MB 3.5 inches

2. Hard Disk :
The hard disk can hold more information than the floppy disk and the retrieval of information from hard disk is faster when compared to floppies or tapes. A hard disk is fixed inside the CPU and its capacity ranges from 20 MB onwards. The hard disch is made up of a collection of discs (one below the other) known as platters on which the data is recorded. These platters are coated with magnetic material. It is less sensitive to external environmental disorders and hence the storage in hard disk is safe. A small hard disk might be as much as 25 times larger than a floppy disk. Storage Capacity of hard disks varies from 20 MB to several Gega bytes like 80GB, 160GB

3. CD-ROM :
CD-ROM stands for Compact Disk-Read Only Memory. It is used to store a wide variety of information. Its main advantage is that it is portable and can hold a large amount of data The storage capacity of most CD-ROMs is approximately 650 MB or 700 MB.

CD-ROMs have the following variations:

(i) CD-R(Compact disc Recordable): Data can be written onto it just once. The stored data can be read. Data once written onto it cannot be erased.

(ii) CD-RW(Compact disc Rewritable): It is also called erasable CD. Data once written onto it can be erased to write or record new information many times.

To use a CD-ROM, a device called CD drive is needed.

4. DVD :
DVD stands for Digital Versatile Disc. It is similar to a CD-ROM, except that it can store larger amounts of data. The storage capacity of a DVD is at least 4.7MB; DVDs that can store up to 17GBs are also available. Because of their capacity, DVDs are generally used to store a very large multimedia presentations and movies that combine high quality sound and graphics.

5. Flash Drive:
It is a small, portable device that can be used to store, access and transfer data. Due to its small size, it is commonly called Pen drive. It is also called USB drive. We can read, write, copy, delete, and move data from computer to pen drive or pen drive to

computer. It comes in various storage capacities of 2GB, 4GB, 8GB etc. It is po because533 it is easy to use and small enough to be carried in a pocket. This devi plugged into the USB port of the computer and the computer automatically detects this device.

CHAPTER 5

Computers Hardware

Q 12. Write down the types of computers ?

Ans. Types of computers

Computers have been classified in to two types namely special purpose computers and general purpose computers, according to their use. One may also classify them as Analogue and Digital computers according to their basic engineering design. Modern are all Digital computers.

General purpose computers:

They are designed to meet the needs of many different applications like simulations, solving mathematical equations, payroll, personal database, word processing and many more similar applications. These computers are broadly categorized as Micro Computers, Mini Computers, Mainframe Computers and Super Computers.

There are Four types of computers.

1. Supercomputers:
The most powerful type of computer is the Supercomputer. These machines are special, high-capacity computers used by very large organizations. For example, NASA uses supercomputers to track and control space explorations.

2. Mainframe computers :
These large computers occupy specially wired, air-conditioned rooms. Although not nearly as powerful as supercomputers, Mainframe computers are capable of great processing speeds and data storage. For example, insurance companies use mainframes to process information about millions of policyholders.

3. Minicomputers:
Also known as midrange computers, minicomputers are *desk-sized* machines. Medium sized companies or departments of large companies typically use them for specific purpose. For example Production departments use minicomputers to monitor certain manufacturing processes and assembly-line operations.

4. **Microcomputers:**
Although the least powerful, microcomputers are the most widely used and fastest growing type of computer. Apple recently introduced their iMac computers. Categories of microcomputer include desktop, notebook, and personal digital assistants. Desktop computers are small enough to fit on top of or alongside a desk yet are too big to carry around. Notebook computers are portable, weight between 4 and 10 pounds and fit in to most briefcases. personal digital assistanys (PDAs) are also known as palmtop computers or handheld computers.

Special purpose computers :
They are designed and built solely to cater to the requirement of a particular task or application and either incorporated inside or connected to other devices or machines. The most common example of special purpose computer is a washing machine. A fully automatic washing machine has a built-in computer. This receives instructions through few switches on the control panel and works accordingly. The computer has to take a few decisions and control the operations and switch off when the task is complete.

Automatic teller machine (ATM) is another example of a special purpose computer.

Q.13 Write down the organization of computer system ?
Ans. :- The Organization of a Computer system

A system is a collection of items bound together by well defined relationships. In this sense, a computer is referred to as a system. By organization we mean listing the constituents and bring out their inter-relationship. We will restrict our attention to overall organization of a digital computer, in brief and only those components which are present in almost every computer, in some form or the other.

The basic elements of a computer system are Hardware, Software, Human ware and firmware.

Hardware:
The hard ware consists of the equipment: keyboard , mouse, monitor, system unit, and other devices. Hardware is controlled by software. It actually process the data to create information.

Software:
Software is another namr for a program or programs. A program consists of the step-by step instructions that tell the computer how to do its work. The purpose of software is to convert *data* (unprocessed facts) in to *information* (Processed facts)

There are two major kinds of software- System software and application software. You can think of application software as the kind you use. Think of system software as the kind the computer uses.

Humanware :
A group of personnel associated with various stages, from manufacture to actual use, of a computer is known as Human ware. These are actually interfaced between a machine and the end user. It might include the following personnel.

	Type	Functions
1.	Hardware Engineers	Design, Fabrication & Maintenance of computer system
2.	System Analyst	Studies the problem and prepares the solution and program specifications
3.	Programmer	Writes Computer Programs
4.	Operator	Operates the Computer

Firmware:
Software which is available as part of Hardware is called as Firmware. Computer can retrieve and use this software but cannot modify it easily. These are the programs stored in ROM chip. This ROM chip is affixed on the motherboard of the computer. Thus, it is a part of the CPU.

In this chapter we will discuss the hardware organization of a computer. Software components will be discussed in the next chapter.

Q.14 What are Architecture of computer system ?
Ans. :- Architecture of a Computer System.

The layout of the functional parts of a computer system are shown in Fig.1 in the form of a block diagram. The fundamental parts of a computer are a Central Processing Unit (CPU), Input & Output Devices and Mass Storage Devices.

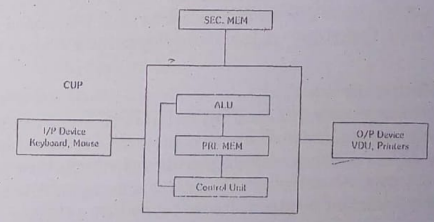


Fig. 1 Architecture of a computer system.

Let us explain the need and functions of each of the components (Boxes shown in Figure)

Central Processing Unit (CPU) :

CPU is the heart of the computer. It consists of three major units Arithmetic Logic Unit (ALU), Control Unit and Primary memory or Main memory.

1. **Arithmetic Logic Unit (ALU) :**
   ALU performs all arithmetic and logical operations on data in accordance with the instructions.

2. **Control Unit :**
   The function of the control unit is like the nervous system of human body. It supervises all operations in CPU. It takes up each instruction from the program and interprets it. It moves appropriate data from the memory to ALU and gets the required operation done on the data. It then transfers results back to the memory. It also communicates with input, output and other peripheral devices. It thus, coordinates and controls all the operations of the CPU as well as all peripheral devices

3. **Primary Memory Or Main Memory :**
   When a job is being executed on the computer, the data as well as instructions are kept in the primary storage. This storage is a high speed memory called Random Access Memory (RAM).

4. **Secondary storage devices:**
   Unlike memory, secondary storage devices hold data and programs even after electrical power to the computer system has been turned off. The most important kind of secondary media are *floppy, hard, and optical disks.* Floppy disk is widely used to store and transport data from one computer to another. Hard disks are typically used to store programs and very large data files. Using a rigid metallic platter, hard disks have a much greater capacity and are able to asses' information much faster than floppy disks. Optical disks use laser technology and have the greatest capacity.

Input/output devices:

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A program is what we have referred to earlier as description - of the task to be performed by a computer. Data refers to a set of values assumed by the variables in the program. For example, if we write a program to solve a quadratic equation $ax2 + bx + c = 0$, then the particular set of values of a, b and c form the data for this program. Thus, if one desires to solve a particular quadratic equation then he needs to feed in both program and the data for that particular equation.

Program and data enter the computer through an input device and get stored in the memory. The data which come in through input device are termed as *input data* and the one which is communicated to the user through on output device is known as *output data* simply output from the computer.

Whenever any arithmetic operation is to be performed on the input data, it is to be transformed from memory to ALU. The arithmetic operation is performed in the ALU and the result is again transferred to the memory. The same is then presented to the user through on output device.

Control information :

There is need to control the flow of instructions and appropriate data from memory to CPU. This requires various devices within a computer to behave in a controlled manner. This is accomplished by the control unit in CPU. The control unit controls various devices of the computer by sending them information in the form of control signals. It can also ascertain the present status of the devices by getting status signals from the devices. For example, the control unit has to ascertain whether the output device is ready before signaling it to carry out the desired work (say printing etc). The control unit controls these devices in accordance with the instructions in the user program.

CHAPTER 6

Software Components

Q.16 Define software ?

Ans. :- Software Components

Computer hardware alone cannot perform any operation/task unless it is instructed exactly what to do and in what order to do it. A set of such instructions is called a *program* and a group of related programs is called a software. A program is written by programmers which enable a computer to obtain solution of a problem. Computer programs are written by programmers in a particular language.

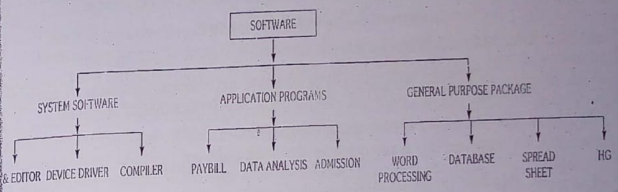
Software is the another name of programs. Programs are the instructions that tell the computer how to process data in to the form you want.

Q.17 Write in brief types of software ?

Ans. :- Types of Software :

Software is mainly classified as :

1. System Software & Operating Systems
2. Application Programs.
3. General Purpose Packages.



System Software :

System software include programs that simplify use of computers, provide man-machine communication and control & drive all input/output devices interfaced to a Computer. The type and utilities depend on the type of computer. However, most of them have system programs like monitor, operating system, editor etc.

BIOS (Monitor) :

BIOS is a program that is stored in ROM and performs basic functions required in a microcomputer. These functions mainly include :

i. Power ON Self Test which tests error free working of RAM, all I/O devices and reports accordingly.

ii. Managing the control devices

iii. Control execution of program.

Operating System :

Computers need a set of programs called Operating System to keep it working. These programs may not be used for a specific problem execution but, they enable the computer to do all the different jobs in proper order and at the required time. For example, they keep track of the priority of different jobs and load the jobs in to the CPU for execution in correct sequence. OS also includes programs, called utilities, which are useful to maintain day to day activities of the computer system like copy, delete, sort, save, rename, print a file etc.

The functions of the Operating System include :

1. Scheduling & Loading of programs or subprograms and continue the job proces sequence.
2. Control over hardware resources such as Input/output devices, Secondary sto Devices etc.
3. Protect Hardware, Software from improper use.
4. Communication with user through commands & responses.
5. File management & Software management
6. Memory Management.

Operating system is a most powerful and important software in a computer. T HW along with OS and other SW forms a complete computer systems.

The most popular operating systems are

I) DOS ii) WINDOWS iii) UNIX/Linux

2. **Application programs:**

These are programs written for a specific job to meet the requirements of a particu user. For example program for pay billing in an organization, statistical data analysi admissions at MAU are all application programs. These are generally written in differe high level computer languages and then compiled to translate them in an executab form.

Application Software might be described as 'end user' software. Application Softwar performs useful work on general-purpose tasks such as word processing and data analysis There are certain general purpose programs or basic applications. These programs ar widely used in nearly all career areas.

Sr. No.	Type	Discretion
1.	Word processor	Prepare written documents
2.	Spreadsheet	Analyze and summarize numerical data
3.	Database management system	Organize and manage or persuade other people
4.	Presentation graphics	Communicate a message or persuade other people
5.	Browser	Navigation the intern ate ,explore, and find information
6.	Information managers lists	Maintain electronic calendars, address books, and to-do
7.	Multimedia	Integrate video, music, voice, and graphics to create interactive presentations
8.	Web publisher	Create interactive multimedia web page

3. **General purpose packages:**

A general purpose package of software is collection of generalized application programs and utilities for a particular type of job so that it can be easily usable by nonprogramming persons. Because of which they are called as *user friendly programs.* With ease of use in mind, selection of commands through menus is frequently incorporated in the design of these general purpose packages. These menus present options which enable the user to select an appropriate course of action, exactly similar to presenting menu to a customer in a restaurant. The user do not need to remember what to do next. Package programs are available for applications which are common to many users. Some examples of popular software packages are WordStar, MS-Word, Word Prefect for word processing; dBase, FoxPro for database management; LOTUS, MS-EXCEL for spreadsheets etc.

Advantages of these packages include

1. The user himself need not write programs in ~~HLL~~ / HTL
2. Easy to use and user friendly
3. Small application programs may be developed by an user as per requirement using a set of commands available in these packages
4. Documentation on how to use and maintain the Software is provided by the vendor.

CHAPTER 7

Computer viruses

Q.18 What is computer viruses ?

Ans. :- Computer viruses

The computer virus is a program which destroys the information /data in the computers. It spreads from computer to computer through media such as floppies. There are thousands of viruses in circulation now a day.

.19 Write down the viruses symptom & precaution ?

Ans. :- Symptoms;

1. Program execution takes longer time
2. Any abnormal screen display.
3. Disk drive indicator is put on at unexpected times.
4. Any abnormal massage.
5. Decrease the size of RAM (Memory, as indicated by scandisk).
6. Increase in size of executable files.
7. excessive increases in disk access time
8. Change in volume label of disk.
9. Unexpected loss of data or information.

Precautions:

1. Do not use unknown floppies
2. Always use 'write protect ' on boot floppy
3. Never use pirated software
4. Check hard disc and floppies periodically using vaccines.
5. Establish a sound backup policy.

Q. 20 Write down the properties of Virus?

Ans. Properties of Virus :

(1) It can duplicate and spread itself from computer to computer, usually without user's knowledge.

(2) Viruses often hide in a system area or program file;

(3) They may do harm to a system and its data, intentionally or unintentionally.

Some of the well known viruses are :

Pakistan, India, Win32, Joshi, Die_Hard-2, Jerusalem, Generic, Brain, May_5th, Gumnam, World peace etc.

Q.21 Write short notes on Cleaning?

Ans. Cleaning :

A antivirus protram or Virus scanner can remove many known viruses from a disk without damaging the infected files or system areas; this is called cleaning a virus. However some viruses damage files or system areas when they invade them, and of course, the scanner can't undo the damage. Such files need to be deleted; you usually can restore them from a backup or reinstall them from their original program disks. If you want maximum protection,

you should scan memory and proaram files, time you boot. Viruses often travel in the boot sectors of disks. When you insert a disk that comes from another system, scan disk for virus as soon as you insert it into the disk drive.

Q.22. Write down the function of Computer Virus?

Ans. Function of Computer Virus :

First of all computer viruses do not effect human beings, so do not be afraid of computer viruses. They are simply programs similar to the ones you will be creating programs and files. Viruses do not affect the hardware of a computer and it worst comes to worst, all you have to do is switch off the computer and that is the end of the virus.

Q.23. WHY PEOPLE ARE SCARED OF VIRUS ?

Ans. The reason is that many of these viruses are destructive. Their target is other programs and data on your disk one virus can and do "Corrupt" data and programs. Many days of hard work can be wiped out by a virus. But this can happen only to people who ignore the menace. A few precautionary measures can be ..taken to prevent damage. We will be looking at the precautions you can take later.

Q. 24. Write down the types of Viruses?

Ans. TYPES OF VIRUSES :

1. BOOT TYPE VIRUS
2. GENERIC VIRUS

1. Boot Type Virus

These programs are placed in the boot sector of a pen drive or disks. The virus picks the original boot program and places it somewhere else on the disks. When the machine is booted with this disk, the virus is first loaded in memory. The virus code takes control of the machine & then loads the original boot record to continue the booting process. All this happens very fast so that a user would not be able to notice the entry of the virus. This virus can only get into the machine at the time of booting. You can avoid these viruses by never starting a computer with a pen drive in USB port. If you are using a PC then boot machine with a known virus-free disk.

2. GENERIC VIRUS

These file viruses uses a different technique. The virus code is attached to the end of an executable program. The virus also changes the program slightly so that when you try to run this program, the virus program is executed first. It then lodges itself in the memory and takes control, the program is then allowed to run as usual. Thus the user does not notice that something is wrong. There is a simple way to know whether there is a virus in the program.

Note the size of program. When a virus attaches itself to the program the size of the program increases. It is difficult to know the size of each & every program you are using but you can try and note the sizes of at least the programs that are used very commonly. You should be careful of new programs that you have never seen or used before. How do you know whether to avoid program size is correct & there is no virus attached to it already? The best policy is to avoid popular programs that have gone through many computers like games. As games are very popular Many people copy it & chances are that one of the machines may have a virus on it.

Q. 24. What is computer Worms

Ans. WORMS

In a computer, a worm is a self-replicating virus or malware computer program that does not alter files but resides in active memory and duplicates itself. Often, it uses a computer network to spread itself, relying on security failures on the target computer to access it. Unlike a computer virus, it does not need to attach itself to an existing program. Worms almost always cause at least some harm to the network, even if only by consuming bandwidth, whereas viruses almost always corrupt or modify files on a targeted computer. Worms usually parts of an operating system that are automatic and used invisible to the user. It is common for worms to be noticed only when their uncontrolled replication consumes system. resources, slowing or halting other tasks.

Q.25. Write down Antivirus or Vaccines?

Ans. Antivirus (Vaccines):

Antivirus (Vaccines) software is computer software used to prevent, detect and remove malicious computer viruses. Most software described as antivirus also works against other types of malware, such as malicious Browser Helper Objects (BHOs), browser hijackers, ransomware, keyloggers, backdoors, rootkits, trojan horses, worms, malicious dialers, fraudtools, adware and spyware. Computer security, including protection from social engineering techniques, is commonly offered in products and services of antivirus software companies.

A variety of strategies are typically employed. Signature-based detection involves searching for known patterns of data within executable code. However, it is possible for a computer to be infected with new malware for which no signature is yet known; and malware is often modified to change its signature without affecting functionality.

Antivirus software has some drawbacks. It can impair a computer's performance. Inexperienced users can be lulled into a false sense of "security when using the computer, considering themselves to be totally protected, and may have problems understanding the prompts and decisions that antivirus software presents them with. An incorrect decision may lead to a security breach. If the antivirus software employs heuristic detection, it must be fine-tuned to minimize misidentifying harmless software as malicious (false positive). Antivirus software itself usually runs at the highly trusted kernel level of the Operating System to allow it access to all the potential malicious process and files, creating a potential avenue of attack.

Examples of antivirus softwares are Norton, Quick Heal Mcaffee Net Protector, AVG, Avira, etc.

CHAPTER 8

Operating System : Windows

Q.26 • Enlist the various versions of windows ?

Ans. :- Microsoft introduced window in 1987. Since then various versions of windows listed below are introduced

WINDOWS 2.0	Oct. 1987
WINDOWS 2.03	Jan. 1988
WINDOWS 3.0	May 1990
WINDOWS 3.1	April 1992
WINDOWS NT	April 1992
WINDOWS for Workgroups	1993
Windows 3.11	1994
Windows 95	1995
Windows 98	1998
Windows 2003	2003
Windows 2007	2007

Q.27 What is graphic user interfare ?

Ans. :- Graphic User Interface (GUI) :

All the earlier versions except WINDOWS 95 are Graphic User Interface (GUI) between the user and MSDOS. But Windows 95 and later versions are independent operating systems with two interfaces: the interface between user and the applications and the interface between application and computer devices and files.

Q.28 What is desktop ?

Ans. :- Desktop :

As soon as the computer with Windows OS is booted, a screen is displayed containing *desktop*, commands in pictorial form called *icons*, a *taskbar* and a *start menu* along with mouse pointer.

The *icons* are small pictures on the screen which represent objects - documents, applications, devices, etc. It has a text *label* which describes the objects. Parts of a desktop are briefed below.

Q.29 What is task bar?

Ans. Task bar:

The long horizontal bar at the bottom of the desktop is the taskbar. The taskbar contains three elements. The start menu button, the button for open windows and the time of the day indicator at the right end of the task bar.

Q.30 What is start menu ?

Ans. Start menu:

The start button when clicked opens the start menu. The start menu contains three kinds of selections: commands, cascaded menus and dialogue box. Command selection run applications immediately e.g. Help, shutdown etc. Selections with the small arrowhead open cascaded menus containing commands which can be selected.

Q.31 Write down basic mouse operation ?

Ans. Basic mouse operations :

Mouse is frequently used for windows operations. when a mouse is in operation, an arrow called *pointer* is displayed on the screen. It has three buttons on the top of it which are used for various actions. Some basic mouse operations are listed below.

Click

Press and release the left button

Double click

Click left button twice rapidly with a very small time gap between successive clicks.

Point

Move pointer on the screen until it rests on the item of choice.

Drag and drop

Move the mouse pointer into the icon of the object to be dragged. Press left mouse button and hold down while the mouse cursor is moved to the desired destination (drag) and then release the mouse button to drop the object there.

Some basic terms used in windows operations are briefed below.

Selecting an object is pointing to it and clicking the mouse with left button. The selected object is highlighted and it is ready to be chosen. The command associated with an object can be activated by double clicking. It is also called choosing an object. One can also choose an object by first selecting it and then pressing `*enter*' key.

Q.32 Write down working with windows ?

Ans. Working with Windows:

A *window* is a rectangular frame on the screen which can represent a folder on the desktop, a running program, or a document or a dialog box in a program. A document window is a subordinate window to the program window - also called *parent window* – that owns the document. Dialog boxes are interactive windows with which the application program communicates with the user.

Q.33 Write in brief parts of windows ?

Ans. Parts of a window :

Title Bar

It is a horizontal bar at the top of the window. The title of the running application or file is displayed in this bar. It is also the means for moving the window - when you point the mouse cursor to this bar and drag the mouse, you move the window on the screen.

Frame :

The frame surrounds the window, when you point the mouse to one of the edges or corners, the mouse cursor changes to arrow cursor with points at both ends. Dragging that cursor changes window size.

Control Menu:

Each window has a control menu, at the left hand top corner, which contain commands for manipulating the Window. i.e. moving, resizing, maximize, minimize etc.

Menu bar :

It contain the titles of pull down menus. The titles in the bar may very from application to application. Clicking title of a menu in the menu bar opens the particular menu of commands.

Work space :

Workspace is the blank portion of a window within it.

Scroll Bars :

Generally, there are two scroll bars to a window. A vertical scroll bar at the right edge of the window and a horizontal scroll bar at the bottom of the window. These scroll enable scrolling the contents in the workspace horizontally and vertically.

There are a number of buttons on the window as briefed below.

Minimise and maximise buttons :

The size of a window can be minimised or maximised by clicking the minimise maximise buttons respectively. These are located at the right hand top corner of the windo

Restore Button :

The window size can be restored to previous size by clicking restore button.

Close button :

This button is located at the right hand top corner of the window, near restore butto Clicking the close button will close the window

Q.34 Write down utilities of computer ?

Ans. :- UTILITIES:

Various utility programs like my computer, network neighborhood, recycle bin etc are, provided by Windows 95 and later versions. These are briefed below.

My computer :

Activating my computer icon on the desktop, you see a window as shown in fig 6.3.4. The contents of this window depend on the devices connected to the computer and the network support. These icons can be activated to open disk derives, control pannel access to printers etc. To see the contents of a drive the specific icon be double clicked to activate it. All file management work can be done using this application by opening respective drive windows and drag and drop technique.

Network neighbourhood:

When this icon is activated, it opens a window that displays other computers and shared printers in the computer network.

Recycle Bin:

All deleted files are put in recycle bin. When the icon is activated, it lists contents of the recycle bin. If needed, a file in the recycle bin can be restored back or deleted permanently by using this utility.

Control Panel :

Control panel utility facilitates setting up of the hardware components in the system, configuration of network, adding new hardware to the system etc.

Q.35 What is working with documents ?

Ans. :- Working with Documents :

Documents are always saved in files and stored in an appropriate folder or a directory. new folder can be created whenever required through the utility My computer and a newly reated document can be stored in this folder. One can also put folders in folders by dragging nd dropping. This practice allows one to organise ones work properly. Windows 95 maintains list of documents on a special documents menu. The document menu can be opened by icking start button and again clicking document menu from it.

Q.36 What is working with application computer ?

Ans. :- Working with Applications :

There may be a number of applications on a computer for various purposes like word rocessing, data base management, statistical data analysis etc. These applications can be voked either by activating an icon or from the start menu. Let us describe some common roperties like menus, tool bars, dialog boxes etc. that most applications share.

Menus :

Applications in windows environment use menus extensively. The menu bar in every pplication displays labels of the menus. Normally file, edit, view and help labels are most ommon in every application. Any menu can be opened by clicking the label, the concerned enu pops down.

The *file* menu contains commands for various operations related with files i.e. to pen, close, save, print etc. alongwith a command to exit the application. *Edit* menu contain ommands for edit operations such as copy, cut, paste, etc. It also includes commands for earching a particular text in the document and also a search and replace command. View menu has commands to control the appearnce of visible items like toolbars, format bar etc. n the application. Many applications have *help* menu to provide access to windows help ystem. Many applications display menu bars with different labels depending on the context f the application. Regardless of the nature and contents of the menus, they all work the ame way as far as opening a menu and selecting a command from the menu is concerned.

Dialog boxes :

If the command *new* or *save as* is activated from file menu a dialog box is opened. Commands that have ellipses (....) following the label, open dialog boxes. One has to key in the required information and click the OK button. These are for interaction between the computer and the user. These dialog boxes contain various objects like command button, heek boxes, text boxes, lists etc.

Tool bar :

A tool bar is a set of buttons usually positioned immediately below the application menu bar. Each button corresponds to a menu command. Clicking a button is same as choosing the corresponding command from the menu. Toolbars are often floating i.e. you

can move them around on the screen at any place. If you move the mouse cursor to a ... on a toolbar, a small yellow tag displays description of the purpose of the button. This ... called *tooltip*.

Status bars :

A thick bar at the bottom of the application window is called status bar. When ... command in a menu is pointed to, the status bar displays a one line explanation of ... command.

Windows support some useful accessaries (small applications) like calcular, paint ... drawing pictures, an editor called WordPad etc.

CHAPTER 9

FILES

Q.37 Write down meaning of files ?

Ans. :- Types of files :

In computer terminology, a file is an organised collection of data/information stored on a storage device such as floppy, Hard Disk or magnetic type. A Computer file is not very different from a conventional paper file. However, usually one computer file is used to store only one type of information. Different types of files are used in computers.

Q.38 What is naming of files ?

Ans. :- Naming of files:

The files, containing information, should have proper names to identify for later use.

Rules for naming files:

1. The file name should contain only letters of alphabet (Characters) and some special Characters.
2. The name should not be longer than 8 characters.
3. Extension of file is optional with a maximum of 3 characters.
4. The file name and the extension should be separated by a period i.e.

Example:

letter, txt, ref-refcrs.not, etc.

Q.39 What is notes ?

Note:

The files should not be named arbitrarily. It is advisable to have some meaningful name so that it represents the contents inside the file.

The following extensions are specifically used:

com/.exe : Command or executable file.

BAT : Batch files

BAK : Backup files of some other files.

Q.40 Write down the function of directory ?

Ans. :- Directory :

A *directory* is a special type of file that contains other files. It is also called as a folder. A group of files can be stored in a directory.

The relation between files, directories and disk is similar to the relation between papers (documents), filing folders and filing cabinets. Just as a folder may contain papers (documents) and other folders, a directory may also contain directories within it. Such directory within a dir is called as *subdirectory*.

Storing group of related files in different directories makes it easy to find a file. For example, all the files that come with MS-DOS software are stored in a single directory that is usually named DOS. If one ever needs to locate an MSDOS file, one knows where to look. Like files, directories can also be created. For example, to store all the files containing information about admission, a directory called ADM can be created to store these so that is easier to find them. A directory can also be created within a directory. which is called as a subdirectory. Strictly speaking all directories are subdirectories, except one, which is called a root directory. It is represented by \ in DOS and / in UNIX .

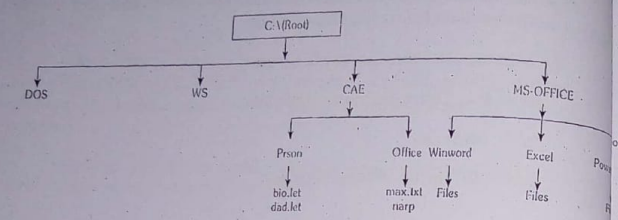
A prompt C:\> on a DOS system indicates that you are presently in the root directory of the drive C.

Q.41 What is drives ?

Ans. :- Drives :

Just like a directory is a group of files, a drive is a group of directories or files themselves and it is represented by a letter. It can be a floppy drive (usually designed as A and B) or a HDD designated as C, D .... etc.

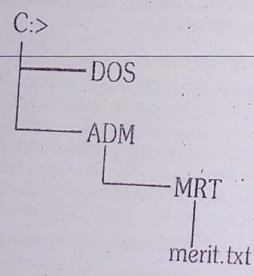
Sample hierarchy of directories.



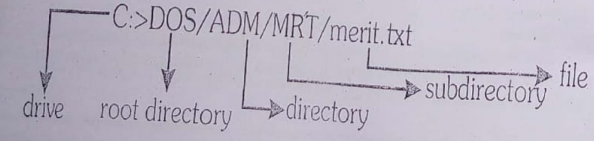
Q.42 What is path.?

Ans. :- Path :

A path is the course that leads from the root directory of a drive to the file, one wa to use. For example, suppose that the drive C has the following directory structure.



To access the file merit.txt one must go from root directory through the ADM director through MRT directory to the file merit.txt. To specify the same path at the command prompt one would type it as shown below.



This is called path to the file merit.txt . It starts with a drive letter and is followed by folder names, separated by a blackslash (/). For various file operations, sometimes full path need to be specified.

Q.43 What is wild cards ?

Ans. :- Wild cards :

If you want to carryout a task for a group of files whose names have something in common, you don't have to use the same command repeatedly for each filename. You can use one or more wildcards to specify group of files. A wildcard is a character that, can represent one or more characters in a filename. The wildcard '*' represents one or more characters that a group of files has in common, whereas '?' represents a single character that a group of files has in common.

The following table shows examples.

Wild card	What it represents
*.txt	all files with a .txt extension
mrt.*	all files named mrt with any extension
m*.*	All files beginning with letter m regardless of their extension
???.*	All files with 3 letter names, with any or no extension.

CHAPTER 10

MS Word

Q.44 What is the MS word ?
Ans. :- MS Word

Word processing enables user to prepare documents. The text can be stored for later manipulation in variety of ways. The packages available for word processing are WordStar, Word perfect, Soft word etc in DOS based Applications and WORDPAD, MSWORD etc in WINDOWS based applications. These packages are user friendly and menu driven.

Menus are displayed to remind you of options that are available. Help messages are used to provide information about how to use the commands.

Q.45 Write the major features of word processing ?
Ans. :- Major Features of Word Processing:

Word wrap :
The computer automatically starts a fresh line when the current line is filled up. One need not press "Carriage Return" except for the change of paragraph.

Cursor control:
Cursor control commands are used to move the cursor at the desired location in the document. It can be moved through a character, a word, a line, a paragraph or pages quickly and with a minimum of keystrokes. One can jump to top or bottom of a screen, or top or bottom of the document quickly.

Tabs:
Tab operate in WP systems much like tabs on a typewriter.

Editing:
WP allows editing of text through full screen editor. Following are some of the features provided for editing the text.

Insert:
Characters, word, sentences can be inserted anywhere in the document.

Delete:
The required length of text can be deleted from the document.

Recovery of deleted text:
If some text is deleted accidentally, it can be recovered.

Find and Replace:
A specific text string can be searched in the document and can be replaced with another text you specify.

Block Manipulation:
A block of required text can be marked for further operations. In Windows based applications, for marking a block bring the mouse pointer to the position where you want to start the block, click the mouse and drag through the text to the position where you want end the block, at this position leave the mouse switch. The area marked is highlighted by a different color, usually black in windows based applications.

Once the block is marked , various operations like deleting the block, moving the block to another position, copying the blocked text or giving some special effects like making the text bold or Italic, centering the text etc. can be carried out

Move and Copy:
A block is marked and the cursor is placed where you want the block to be moved or copied. The difference between "MOVE" and "COPY" is that the first causes the source block to be deleted while the second makes a copy leaving the source as it is. You can easily change the order of sentences/paragraphs using this facility.

Text formatting :
Some of the features of text formatting are briefed below.

Margin settings:
The margin can be set for top, bottom, left and right.

Paragraph :
A paragraph can have altogether different specifications compared to previous text. You can also indent for a hanging paragraph.

Line spacing:
You can specify the amount of space between lines.

Foot notes:
Footnotes can be generated at the bottom of a page whenever required.

Table of contents:
The table of contents which shows specific topics and its page number can be generated using this facility.

Index generator:
An index, generally we see at the end of a book, can be generated using this facility.

Justification:
An option is provided whether a document should be only right justified, or left justified or both sides justified margins.

Centering text:
Text in a line can be centered.

Multiple columns:
Using WP you can create single or multiple print style columns.

Pagination controls:
One can specify, Lines per page, Contents and positioning of page headers/footers Automatic page numbering.

Special facilities :
Like underlining, boldface type, superscripts and subscripts are available in the WP packages.

Spell checker:
WP packages have facility of checking spellings of words in the text and point out errors. It also suggest correct alternatives for a specific word to choose from.

File-Management:
Most of the WP package provide with the file management facilities like Copying a file, Deleting a file, Renaming a file, Backup a file and Changing of directory/drive

Printing:
A document can be printed through the package. You have facilities like, pausing after each page or continuous printing, partial printing, letter quality, fonts selection, Page numbering while printing and specifying number of copies. The print option is enlisted in the *File Menu.*

Graphics :
It is possible to create graphic images that can be embedded in the text and printed at the same time as the text. Facility for incorporating some special graphic characters is also Provided in WP packages.

Document & Non-Document File :
Document file is one which is generally used for correspondence, documentation, reports etc. where as a no document file is used for storage of experimental data , source code of computer program etc. The major differences between the two are enlisted in the table below.

Document file	Non-document file
1. Used for correspondence & documents.	1. Used for data tables & program source codes.
2. Special effects such as underline, subscript, superscript etc. are available.	2. Special effects such as underline, subscript, superscript etc. are not available
3. Automatic word wrapping & paragraph alignment facilities are available.	3. Word wrapping & paragraph alignment facilities are not available.
4. Varous fonts and effects like boldface, Italic, etc. are available.	4. Varous fonts and effects like boldface, Italic, etc. are not available

CHAPTER 11

MS -Excel

Q.46 What is spreadsheet ?
Ans. :- Spreadsheet :
is a software that helps to substitute the paper worksheets in the offices. Spreadsheet displays data in the form of rows and columns. An intersection of row and column is known as a cell.

Q.47 Write the meaning of MS-Excel ?
Ans. : MS-Excel :
is a window based spreadsheet developed by Microsoft corporation. It includes all features of a spreadsheet package like recalculation, graphs & functions. It also provides many Mathematical, Financial & Statistical functions. Thus it is used in many scientific and engineering environments for analyzing data. Excel can even hold graphic objects like pictures & images.

Q.48 Write down important features of MS-Excel ?
Ans. :- Some important features of MS-Excel:

1. **Window based application:**
   Excel like all other applications has Toolbars, Shortcut Menus, Auto correct, Online help and Wizards.
2. **Workbooks:**
   Workbooks are the files in which worksheets related to a project are held.
3. **OLE support:**
   Object linking and Embedding is a feature through which Excel can contain any object like a document, a picture etc.
4. **Maintaining high volume of data:**
   Excel can contain large volume of data. A worksheet can contain 65536 rows and 256 columns. A single cell can contain a maximum of 255 characters. One workbook can contain a maximum of 256 worksheets.
5. **Availability of functions:**
   Several Mathematical, financial & statistical functions are available in an Excel package.

6. **Availability of Charts & Graphs:**
MS-Excel allows users to view data entered as tables in a graphical form as c
which helps the user to easily understand, analyze data & compare data.

7. **Data Analysis Tools:**
MS-Excel provides a set of data analysis tools called Analysis Tool pack.

8. **Sorting capability:**
Excel has the capability of sorting any data in Ascending or Descending order.

9. **Auto fill feature:**
Excel has the feature which allows to fill cells with repetitive data such as chronolo
dates or numbers and repeated text.

Getting started with Excel:
An Excel document is called a workbook. By default, Excel workbook contain
worksheets designated as sheet 1, sheet 2, sheet 3.

The extension name of excel workbook is .xls

We can start excel in many ways:
1. Start => Programs => Microsoft office => Microsoft Excel => hit enter.
2. Start => Run => Type Excel => hit enter
3. Double click on the Microsoft application Icon.

Q.49 Write down the components of the Excel window ?
Ans. :- Components of the Excel window:
An Excel window has several unique elements identified

1. **Rows, columns & cell:**
In a worksheet rows are numbered from top to bottom. The columns are labele
with letters from left to right. Rows are numbered from 1 to 65,536 and colum
labeled from A to IV (256 columns).

2. **Title bar:**
The title bar contains the name of the program Microsoft Excel and the defaul
name of the workbook Book1 that would change as soon as you save your file
and give another name.

3. **Menu bar :**
The Menu bar contains menus that include all the commands you need to use to
work your way through Excel such as File, Edit, View, Insert, Format, Tools,
Data, Window and Help.

4. **Tool Bar:**
Tool Bars are usually shortcuts for menu items. Standard and formatting toolbars
are displayed by default.

5. **Active cell :** The cell in which you are currently working.
6. **Formula bar:** displays the contents of the active cell.
7. **Name box:**
displays the cell address of the active cell. Column letter followed by the row number. Ex: B6
8. **Worksheet area:**
The middle portion of screen which occupies a major area is called worksheet area. In this area, information or data (i.e.) either textual or numerical can be entered and the results can be displayed. A worksheet is a large work area of 65,536 rows and 256 columns.
9. **Status bar:**
located at the very bottom of the screen displays brief information about activating features within the worksheet area.
10. **Sheet tabs:**
appear above the status bar displaying the names of the worksheets.

Standard Toolbar
The Standard toolbar, located beneath the menu bar, has buttons for commonly performed tasks like adding a column of numbers, printing, sorting, and other operations. Excel let's you customize the toolbar or even display multiple toolbars at the same time. figure below.

Formatting toolbar
The Formatting toolbar, located beneath the Standard toolbar bar, has buttons for various formatting operations like changing text size or style, formatting numbers and placing borders around cells.

Formula bar & Name box
The formula bar is located beneath the toolbar at the top of the Excel worksheet. Use the formula bar to enter and edit worksheet data. The contents of the active cell always appear in the formula bar. When you click the mouse in the formula bar, an X and a check mark appear. You can click the check icon to confirm and completes editing, or the X to abandon editing.

Name box
The Name box displays the reference of the selected cells in the form of column label followed by row number.

Creating a New Workbook:
The steps to create a new workbook are,

1. On the File menu, click New.
The new workbook task pane appears at the right side of the screen. Click blank workbook.

A new workbook with 3 worksheets appears. By default, the workbook is named Book 1, and sheet 1 is the active worksheet & A1 is the active cell.

Entering data:

You can enter text, numbers and dates in an Excel worksheet.

To enter data of any type,

1. Select the cell by clicking on it.
2. Type in the information.
3. Press the Enter key.

When you begin typing, your data also appears in the formula bar.

Editing text:

The easiest way to edit the contents of a cell is to select the cell and then retype the entry. The new entry replaces the old contents. Alternatively, to edit the data in a cell, press F2.

Ex : Suppose you find that in the cell A6, you have entered the marks as 78 instead of 87, then click on A6 and type 87 ¡% enter

You can also edit part of the data in a cell:

1. Double click the cell you want to edit. The insertion point appears within the cell.
2. Delete the part of the data that you do not wish to keep.
3. Retype the data & press enter.

Formatting a worksheet:

Changing the style or appearance of data in a worksheet is called formatting. You can format the data in a worksheet by:

=> Changing the position of data in a cell

=> Changing the font, size, style & colour.

Aligning data:

By default, any text you enter in Excel is aligned to the left and any value or number is aligned to the Right. To change the default alignment, you can use the alignment buttons on the formatting tool bar.

Formatting Numbers:

Formatting data in a worksheet includes changing the number of decimal places, displaying dates, times & fractions and adding currency symbols.

To format the number in a cell, the steps are: **Format/Cell/Number/Decimal places/2**

Building Formulas to calculate values :

To really make data useful, you will write formulas. Formulas can do simple things such as adding the values in two cells or they can do much more complex things

You can always identify a formula in MS excel because it starts with an equal sign(=). You normally see the formula it self only when you are editing the cell that contains the formula

Q.50 What are the computer graphics ?

Ans. :- COMPUTER GRAPHICS

Characters (letters, symbols etc) are the fundamental elements of text display. In graphic displays fundamental elements are small dots called *pixels* (Picture elements). These pixels can be combined to form more complex shapes, just as characters are combined to form words, sentences and paragraphs. The level of detail (i.e. the resolution) of a graphic display is measured in terms of the maximum number of pixels that can be displayed in a given area on the screen. PC's typically support graphic displays of 600 x 200, 720 x 350 pixels etc. These values vary from computer to computer. Colored displays are facilitated by the graphic displays. A number of combinations of colors are possible depending on the resoution.

Q.51 What is the meaning of formula for MS-Excel ?

Ans **Formulas:**

In Excel. One of the powerful features is formulas. A formula is an equation that is used to perform calculations on data in a worksheet. We can use formula to perform Mathematical, Statistical & date/time operations on a single value or a set of values by using operators. The cells in which formulas are stored, display the result of the calculation and not the formula.

In Excel, a formula starts with an equal (=) sign and should be followed by the operation to be performed. We can use any number of operators in a single formula. MS- Excel evaluates the formula according to the order of precedence of the operators.

Operator	Operation	Order of precedence
()	Bracket	1
^	Exponentiation	2
*, /	Multiplication, Division	3
+/-	Addition, Subtraction	4
&	Concatenation	5
=/>/<	Comparisons	6

Q.52 Examples of the formula expresson ?

Ans. :- Examples of the formula expressions:

1. Suppose the values in the cells B2, C2, D2 are 34, 28, 56 respectively. T these values and to have the result in the cell F2,

Step i) Click on the cell in which total marks is to be displayed, i.e F2

ii) Type " = (B2 + C2 + D2)"

iii) Press Enter

The value "118" will be displayed in F2.

2. Suppose the value of the cell B6 is 78345. Divide the value by 5 and have the cell E6:

Step i) Click the cell E6.

ii) Type " = (B6/5) "

iii) Press Enter

The value "15669" will be displayed in the cell E6.

3. Multiply the value 549 of the cell C3 with the value 43 of the cell F3 and have result in the cell I3:

Step i) Click the cell I3

ii) Type " = (C3 * F3)"

iii) press Enter

The result " 23607" will be displayed in the cell I3.

Q.53 Write down the statistical Analysis of tools ?

Ans. Statistical Analysis Tools

Microsoft Excel provides a set of data analysis tools— called the Analysis Tool Pak- that you can use to save steps when you develop complex statistical or engineering analyses You provide the data and parameters for each analysis; the tool uses the appropriate statistica or engineering macro functions and then displays the results in an output table. Some tool generate charts in addition to output tables. Related to worksheet functions, Excel provide many other statistical, financial, and engineering worksheet functions. Some of the statistica functions are built-in and others become available when you install the Analysis Tool Pak.

Accessing the data analysis tools:

The Analysis Tool Pak includes the tools described below. To access these tools, click Data Analysis on the Tools menu. If the Data Analysis command is not available, you need to load the Analysis Tool Pak add-in program.

Analysis Tools:

ANOVA: Single factor

ANOVA: Two-Factor with replication

ANOVA: Two-Factor without replication

Correlation

Covariance

Descriptive statistics

F-test two-sample for variances

Histogram

Regression

t-test: two sample assuming equal variances

t-test: two sample assuming unequal variances

Z-test: two sample for means

Steps to use Analysis Tools:

Step i) From the Menu bar choose Tools and click on Data Analysis

ii) When the Data Analysis dialogue box appears, click on the one you want.

iii) The corresponding dialogue box appears. Enter the Input range and Output range (addresses of the cells)

iv) give the address of the cell where you want the result to be shown.

iv) click OK

v) The result will be given in the corresponding output format

Q.54 The following are the results of 5 preschool going children at different levels of protein content in diet. Compute the correlation coefficient using Excel

Protein content (%)	Gain in weight(gm)
5	30
7	40
10	80
12	100
13	120

Step i) From the Menu bar, choose Tools and click on Data Analysis.

ii) Select Correlation in the Data Analysis Dialogue box and click OK.

	Df	SS	MS	F	Significance F
Regression	1	399.7838	399.7838	73.96	0.003305
Residual	3	16.21622	5.405405		
Total	4	416			

	Coefficient	Standard Error	t Stat	P-Value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	13.89189	6.836289	2.032081	0.135073	-7.86423	35.64801	-7.86423	35.64801
(X)	2.324324	0.27027	8.6	0.003305	1.464204	3.184445	1.464204	3.184445

CHAPTER 12

MS- Power Point

Q.55 What is power point ?

Ans. Presentation graphics software helps you create professional and exciting presentations. Microsoft, Power Point is the most widely used presentation graphics programs.

Q.56. Write meaning of presentation, slides, Handouts ?

Ans. Presentations :

A power point presentation is a collection of slides, handouts, speaker's notes and your outline, all in one file. As you create slides, you are creating a presentation.

Slides:

Slides are individual pages of your presentation. Slides can have titles, text, graph, drawn objects, shapes, clip art, visual created with other applications.

Handouts:

To support your presentation, you have the option of providing handouts for your audience.

Q.57. Write down the major elements in power point ?

The power Point Window :

The major elements in power point window as in any other application Windows

The States Bar :

At the bottom of the window to display Message.

Three shortcut buttons appear on the right side of the status bar : New Slide, lay and Template. Clicking the New Slide button presents the New Slide dialog box and add slide to your presentation immediately following the current slide using the slide layout y choose. clicking the Layout button lets you change the layout of the current slide. Fina clicking the Template button allows you to apply or change the template for your presentatio

The scroll bar:

There's a vertical scroll bar, which has an elevator as well as double arrow buttons y can use to move from slide to slide.

The toolbars:

For quick access to commonly used commands and tools. The Standard and formattin toolbars are displayed just below the menu bar.

Views buttons :

The views buttons are at the bottom left of the power point window. These are th power point views.

1. Slide View 2 Slide Sorter View. 3 Notes Pages View 4 Slide Show View

Q.58. Write down steps for creating presentation ?

Ans. :- Quick Steps for Creating Presentation:

Step I :Start Power Point : Double- click the power point button on office bar

Step II : Use the Auto content Wizard to create a Presentation:

When power point opens, you see the power point startup dialog box. select the aut content. Wizard option button: The auto content Wizard prompts you to make a tital slid and then leads you through choosing a presentation category.

Step III: Refine your presentation :

Once you finish the first draft of a presentation, next step may include editing th text, changing colors, changing the order of the slides, or changing the look to change you presentations look, you can apply a template or use the pick a look wizard.

Add a special effects to your electronic presentation.

You can have the bullet option on the slides appear on at a time. using special effects (called creating build slides) And you can use special transition to move to each slide in a slide show (called adding transitions).

Step IV: Preview Your presentation On – Screen :

Preview your show by clicking the slide show button at the boddemof thr power point window

Step V : Save and Print your presentation:

Save presentation using the save command on the file menu. Choose the Print command from the file menu. When you are ready to quit power point , from the file menu, choose the Exit command.

Q.59 Write down adding transition effects to slides ?

Ans. :- Adding Transition effects to slides,

Transitions are the visual special effects you see when you go from one slide to the next in an electronic slide show. you have lot of choice available.

Here's how you set up transitions.

To add transitions to your slide show.

1. Click the slide sorter button on the lower left side of the document window.
2. working in slide sorter view lets you set transitions. for all of your slides without changing views
3. From the tools menu, choose Transition.
4. The Transition dialog box appears
5. In the effect box, select the transitions. You want.
6. The transition you select is applied to the picture in the preview box. click the picture to watch the transition again.
7. Choose how fast you want the transition to take place by selecting the slw, medium, or fast option button.
8. The speed s applied to the picture in the preview box.
9. choose ok.

The transition is applied to the current slide. The transition icon is added below the slide in slide sorter view to show that you have set a transition for this slide. You can also set slide transition by changing to slide sorter view and then selecting an effect in the transition effects box on the slide sorter toolbar.

Creating build slides for a slide show:

A build slide also called a progressive disclosure slide is one where each bullet in the main text appears independently of the others. Use a build slide when you want to reveal bullet points one at a time . you set up the way you want each point to appear (e.g. fly in from the left, for instance) and whether you want the other points already on the slide to dim when a new is added.

CHAPTER 13

MS-Access

Q.60 Write down MS-Access.

Ans. :- The Database is an organized collection of data related to a particular topic or purpose. The database serves as a base from which a desired information can be retrieved. many meaningful conclusions can be drawn. A database stored electronically has distinct advantages over a manually organized system. A database can be maintained in a computer by using a database management system(DBMS).

DBMS is an application that enables to maintain data in a database. Maintaining data involves storing, organizing and retrieving data.

MS-Access is a Relational Database Management System (RDBMS) that is used to store and manipulate large amount of information. The extension name of Ms-Access file is .mdb.

To start MS-Access:

1. Start => Programs => MS office => Ms-Access => Enter
2. Start => Run =>Ms-Access => Enter

Q. 61 Write down the database object ?

Ans. An Access Database consists of 7 different Database objects.

1. **Tables :**
   Store database data in Rows (records) and columns (fields). Every row represents a Record. Each piece of information in a record is called a Field.

   Ex: A table can contain personal information about all the students in a college. Every row containing information about a student represents a record. The records in the student table can include fields such as Admission number, Student name, Address, Phone number etc.

2. **Queries :**
   used to retrieve information from a database based on specific conditions.

   Ex: A Query can be used to extract details about students studying in a particular class.

3. **Forms :**
   used as interfaces for users to enter, view and modify data in a Table.

4. **Reports :**
   used to present data from tables or Queries in a format of our choice. i.e the printable form of the table or query or form. We cannot make changes to the data in a report. We can format the data in a report.

5. **Pages :**
   display shortcuts to data access pages in the database. A data access page displays data stored in a database over the internet.

6. **Macros :**
   used to automate frequently performed tasks.

   Ex: we can create a macro to print a report automatically.

7. **Modules :**
   used to perform advanced database operations, such as validating data against complex conditions.

Q.62 What are creating database ?

Ans. :- **Creating a Database :**

A Database can be created by using the database Wizard or by using the Blank Database command.

- The database Wizard is used to create tables, forms, queries and reports by following a series of steps provided by the wizard.
- The Blank Database command is used to create a blank database. All database objects should be created manually.

Click on File menu =>New => Enter
A window appears => give a name to the database

Q.63 What are creating Tables?

Ans. **Creating a Table :**

1. Open the database in which the table is to be created.
   The database window appears.

2. under objects, click Tables and then click New on the database window tool
The New Table dialog box appears.

Commands in the New Table dialog box

Command	Purpose
Create table by entering data	Used to create a table by entering values direc in a row and column format
Design view	Used to assign fields for the new table an modify field properties
Table wizard	Used to create a table through a guide sequence of steps

I. Create Table by entering data:

- Click on Table (object) in the main switch board.
- Click on create table on Datasheet view ??now a window appears ??here we find fields (field1, field2,.....)
- Give the field names (Name, roll no., marks etc)
- Click on close button of the table and save the table with some name
- To enter details into the table, click on table in the main switch board and double click on the table name.
- Enter the details

Q.64 Write down the data types in MS-Access ?

Ans. :- Working with Database Fields :

Microsoft Access database fields are created by entering a field name and a field data type in each row of the field entry area of the database table window.

Data types in MS-Access :

The following list summarizes all the field data types available in MS- Access, their uses and their storage sizes.

- Text :
used for text or combinations of text and numbers, such as addresses or for numbers that do not require calculations, such as phone numbers, or postal codes. Stores up to 255 characters.

- Memo :
Used for lengthy text and numbers, such as notes or descriptions. Stores upto 64,000 characters.
- Number :
used for data to be included in Mathematical calculations, except calculations involving money. Stores 1,2,4 or 8 bytes.
- Date / Time :
used for dates and times. Stores 8 bytes.
- Currency :
used for currency values and to prevent rounding off during calculations. Stores 8 bytes.
- Auto Number :
used for unique sequential or random numbers that are automatically inserted when a record is added.
- Yes /No :
used for data that can be only one of two possible values, such as yes/ No, True/ False, On/Off.
- OLE object :
used for OLE objects like pictures, graphs and other binary data. Stores up to 1 GB.

Q.65 Write down create table in design view ?

II. Create a table in Design view:

1. click on table (object) in the main switch board.
2. Here click on "create table in design view "?Now a window appears ??heretype the field names and their data types respectively.

Ex:

Roll No	Data types
Roll No	Auto Number
Name	Text
Marks	Number

3. click on the close button of the table and save it with some name
4. To enter data into the table, double click on the table created.
5. Now enter the details.

Q.66 Write down primary & foreign keys ?

Primary & Foreign keys:

Data should be checked for redundancy before it is stored in a database. Keys are used to maintain the integrity of data. Keys contain unique values that help to filter redundant information from the input data. Keys are of two types: primary & foreign.

Primary key :

The field in a table that uniquely identifies each record is called the primary key. Usually this field is sequentially numbered.

Ex : Admission number field

Foreign key :

When a primary key of one table appears as a field in another table, the field is called the foreign key in the second table.

Q.67 Write down Queries ?

Ans. :- Queries :

- By using queries we can view, change and analyze data in different ways. You can also use them as the source of records for forms and reports.
- You can bring together data from multiple tables and sort it in a particular order.
- You can perform calculations on groups of records

Q.68 Write down Forms ?

Ans.:- Forms :

- In a table, number of records are displayed at a time. But, if the table has many fields then it may not be possible for a user to view all of them. The screen may be too small to fit it. The user may have to scroll horizontally or vertically to view the rest of the fields/records.
- In forms, the data can be displayed as per the users requirement. The records are generally displayed one at a time. The fields can be arranged as the user wants it. Pictures can be added to a form. The display and contents of the form is controlled fully by the user.
- In forms there are 3 views,
  i. Design ii. Datasheet & iii. Form view
- The datasheet view shows many records whereas form view displays single record. You can toggle between these three views using the View Tool.

Q.69 Write down Report ?

Ans. :- Report:

The data shown in a table, Query and forms are meant for displaying it on screen, but when you take the printout or the Hard copy, it is known as Report. In the database window, the open button is replaced by the preview button, when you click the report tab. Reports can be viewed either in print preview mode or design mode. Data cannot be edited in the reports. The report preview shows how the data will appear on taking out the printouts.

CHAPTER 14

Internet

Q.70 Write down the meaning of Internet ?

Ans. :- The internet is a global connection of computers. These computers are connected via a huge network of telecommunication links. The internet allows you to access to a whole resource of data and information stored at different sites (called hosts) and locations around the world. The communication links which inter connect each host computer use a common method of transmission known as TCP/IP, which stands for Transmission Control Protocol / Internet Protocol. Internet connection helps us to:

1. Read information on a wide range of topics
2. Send or receive E-mail
3. Down load useful programs such as virus detectors, file compression, decompression utility etc.,
4. Share your opinions and your knowledge on a variety of topics through various new groups.
5. Chat with other people any where in the world
6. View interesting video's listen to music or wander through a 3-D world.

Q.71 Write down the requirement for connecting to the internet ?

Ans. :- Requirements for connecting to the Internet:

a) Modem:
A modem is a peripheral device that allows a computer to connect and communicate with other computers. Modem stands for *Mo*dulator *Dem*odulator.

Web Browser:
A browser is a software program that is necessary in order to view web pages on web. Ex: Internet Explorer, Netscape Navigator, Mozilla Firefox, Microsoft out express etc.

c) **Telephone line:**
A telephone line is required to transfer data from one computer to another. computer is connected to a modem, which, in turn, connected to a telephone lin

d) **Subscription with Internet service provider (ISP):**
ISP's are companies that provide access to the internet. We need subscription w any ISP to get an Internet connection. Some of the ISPs in India are VSNL, MT Sify, Specrta Net etc.

Q.72 Write in short world wide web (WWW) ?
Ans. :- World Wide Web (WWW):

It refers to the collection of information accessible on the internet. The web is simi to a library. It consists of millions & millions of pages of text, pictures, sounds and animati on various topics. These pages, called web pages are stored on different computers that a connected to the internet. The web pages have links between them i.e when we click certain word or picture in a page, it will take us to another page. These words or pictures h help to move from one page to another are called hyperlinks. A collection of related w pages is known as a web site. A web site can be accessed by means of a unique name assign to it.

Internet was initially designed for the transmission of text basing on the protoco mentioned. In order to transmit a graphically designed web page complete with picture Embedded sound and animation a special language was designed which is referred to a Hyper Text Mark up Language (HTML). HTML uses special text codes to define th various elements of a web page. The WWW support a protocol called Hyper Text Transf Protocol (HTTP). All internet servers cannot support HTTP and so the web can be regarde as a subset of the larger internet. HTTP provides a method of transmitting a professiona laid out page over the text based internet. **Uniform Resource Locator: (URL):** Each we site has a unique address commonly referred to as a URL. A URL specifies the exact locatio of the web page on the internet.

A typical web address or URL looks as *http://www.microsoft.com/catalo navigation.asp*

Explanation of the example URL:

http	Element Explanation
http	Identifies protocol necessary to retrieve the file
Indicates the name of the web site	Indicates the name of the web site
Indicates the name of the web site	Indicates the name of the web site
.com	Indicates the domain type of the web site
/catalog/navigation.asp	Specifies the path of the file stored on the web server's hard disk

Q.73 Explain the concepts of Electronic mail (E-mail) & Advantage of E-mail ?
Ans. :- Electronic mail is a name for non-interactive communication of text, data, image or voice messages between two machines using telecommunication lines. Thus FAX, voicemail, and computer based messaging systems fall within the purview of e-mail.

Unlike the telephone conversation, two individuals at either end of an email connection need not be 'on -line' with each other. E-mail massages are from machine to machine. The message sent is stored in the memory of receiving machine and indication is given by the machine whenever it is put ON.

Any kind of text, information, graphs, voice can be transferred via e-mail systems. In case of voice mail, recorded voice messages take place of documents or letters.

ADVANTAGES OF E-MAIL :

1. It is fast. Massages can be sent across the world within minutes.
2. Less expensive as compared to Post & FAX.
3. More reliable than postal services (postal losses & delay).
4. Stationary is saved.
5. Time slot of day is not the binding. Message can be sent at any time .

Q.74 Write down the requirement of E-Mail ?
Ans. :- REQUIREMENTS :

The requirements for operating an e-mail are :

1. A Computer
2. A Modem and appropriate communication Software. Modems are quite inexpensive.

3. A telephone line. A single telephone line can be used for both voice calls as well as e-mail.

4. Subscription to a Network Service Provider.

Thus, if you have a PC and a telephone, you can establish an e-mail service with very little effort.

Using e-mail - Etiquette :

1. Be concise.
2. Keep lines/sentences short.
3. Keep it simple.

Q.75 Explain the concept of Network & advantage of Network ?

Ans: :- NETWORKS :

When standalone computers are connected together, using some media, it forms a Computer Network. When computers at small distances, preferably in a building, are connected together, it is called a Local Area Network (LAN). If the distances are more, then it may be a Wide Area Network (WAN). The computers are connected through variety of cables eg. UTP, Coaxial Cable, Fibreoptic Cable and Network Interface Card (NIC) also called Ethernet card. An appropriate Software is also needed for operating the network.

LAN may be considered analogous to a town. A computer's connection to a LAN is like connecting a house to a local street . Thus all the houses connected through small streets form a town. As a town can be connected to another town through roads, similerly one LAN can be connected another, As each town has a name for identification, each LAN network has a specific address. All the towns can be connected to a highway which connects regions, state and so on. This is the reason that the networks are called as Highway of Information.

ADVANTAGES OF NETWORKING :

1. E-mail:
Data, information message can be sent from one machine in the network to another. One can access the information from any of the computers in the network.

2. Share resources :
Same resource can be shared by all the computers in the network. This results in cost reduction. Suppose one has five PC's. Each PC user wants a laser printer. One can not afford to have five laser printers. If a LAN is formed, all the five can use a single laser printer. Similarly hard disk space, modem, FAX etc. can also be shared by all the PCs in the network.

3. Better management of information :
Information can be managed in a better way with less memory requirement, at a lesser expenditure and quick in time. Expenditure is also reduced due to paperless office. A flatter organization with fewer personnel can manage the in time manifesting process, reduced inventory, quick response to market demands etc.

Q.76 Write down services provided by internet OR Write down the advance method of communication ?

Ans. :- INTERNET :

It is the world's largest network of computers, and people share the information resources on this network. There are a large number of services provided by Internet.

1. E-mail :
E-mail is one such service. message can be sent to any person, having an e-mail address, anywhere in the world.

2. WWW :
Word Wide Web is a large database which spans the globe. Any 'surfer' can scan through this database. To navigate through this maze of information, there are popular software called 'Navigator' or 'Browser'. Netscape is one of the popular browsers.

3. Home page :
Any individual, association, company can avail of this facility. It is actually a document prepared using a special programming language. This contain details about themselves. It can have text, pictures, graphs etc. , which can be accessed by the surfers on the net.

4. Information retrieval :
Large information like encyclopedia, text books, news, magazines, entire newspapers can be found on the NET and one can read this information.

HOW TO ACCESS ? :

In India VSNL and NIC, are the main Internet Service Provider (ISP) with the help of Department of Telecommunication. One needs a computer, a modem, telephone link and the internet accessing Software.

It is a paid service. One has to subscribe through membership. Charges are time based.

5. E- talk :
e-talk is a 24 hour satellite television channel created by Philippine Multi Media System Inc; for their DTH satellite provider Dream Satellite TV. This channel is a Chat Channel and broadcast music videos from their former channels DVMC and ISLA channel

6. E-video or Video Conferencing :
A technology that allows users in different locations to hold face-to-face meetings without having to move to a single location Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data Video conferencing is the process of using internet connection and the web camera to hold a business meeting without everybody needing to be in the same room i.e. some people can be included in the meeting via. The internet link.