

## CHARACTERISTICS OF COMPUTERS

### Speed

Electronic pulses travel at incredible speed and because the computer is electronic, its internal speed is virtually instantaneous. The units of speed are the microsecond, the nanosecond and even picosecond.

### Storage

As a human being acquires new knowledge, the brain subconsciously selects what it feels to be important and worth retaining in its memory and relegates unimportant details to the back of the mind or forgets them. However, in computers, the internal memory of the central processing unit CPU is only large enough to retain a certain amount of information. It is therefore impossible to store inside the computer each and every bit of information. All of this data is stored outside the memory of the CPU, in auxiliary or secondary storage devices.

### Accuracy

The accuracy of computers is consistently high. Most of the errors in computing are human rather than those of the machines.

### Versatility

Computers are seen as capable of performing almost any task, provided that the task can be reduced to a series of logical steps.

### Automation

Once a programme is in the computer's memory, the individual instructions are then transferred, one after the other, to control unit for execution. The CPU follows these instructions until it meets a last instruction which says 'Stop Programme Execution', hence leading to automation.

### Diligence

Being a machine, a computer does not suffer from the human traits of tiredness and lack of concentration. It will perform the millionth calculation with exactly the same accuracy and speed as the first.

## INPUT DEVICES

### Keyboard

It is used to input data to the computer. This device allows data to be entered directly into the computers. The electrical contacts and circuits just below the keys translate the information directly into binary. Main drawback of this device is slow speed (It is because speed of work is dependent on the typing speed).

### Optical Mark Reader

It involves recognition of marks or characters. OMR is able to scan forms completed in pen as well as in pencil. The forms or cards are passed under a light source and pressure of a mark is detected by measuring very accurately the infrared light levels.

An advantage of OMR is that it requires no specialist skills to collect and input data. Data collection can be practised at the point at which the information first becomes available, e.g., on the factory floor, on the building site, etc.

### Magnetic Ink Character Recognition (MICR)

The magnetised ink induces a current reading the circuit. The current induced will be directly proportional to the area of the ink being scanned. The patterns of the varying currents can then be compared with, and specified as bit patterns of the selected character. MICR system employs character styles designed specifically for magnetic ink character recognition. Thus, characters have to be accurately formed. They also require magnetic ink. This factor makes printing expensive. The advantage of this device is that characters printed with ink containing magnetisable particles can still be read even when overstamped as may be the case with bank cheques. MICR reader can only identify a cheque, someone still has to verify information like amount, to whom the cheque has to be paid, signature, etc.

### Optical Character Reader (OCR)

It examines each character as if it were made up of a collection of minute spots. Once the whole character has been scanned, the pattern detected is matched against a set of patterns stored in the computer, whichever pattern it matches or nearly matches is considered to be the character read.

## WHAT DOES IT DO?

- A computer is an electronic, data processing device which can read and write, compute and compare, store and process large volumes of data with high speed, accuracy and reliability.
- It works on the instructions given to it, that is, on the stored programme concept.
- Once the data and the instructions set are fed into its memory, it obeys the instructions, performs instructions on the data and produces results.
- Its working is automatic.
- It uses electronic components: Transistors, Resistors, Diodes and Circuits.

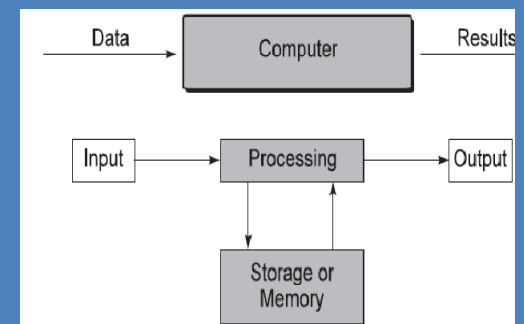
## IMPORTANT PARTS

### Input

Data is collected and entered into the computer. This is called input process.

### Storage

What is entered into the computer is stored in the memory, called physical memory of the computer. Physical memory is supported by another memory called auxiliary memory.



### Processing

Actions are taken on the data stored in physical memory to get required results which is termed as processing. Results are stored back in the physical memory.

### Output

Stored results are taken out of physical memory. This process is known as output.

## COMPUTER ARCHITECTURE

### Input Device

This device is used for Man to Machine communication. Data which is to be processed in the computer is entered through this device, e.g., keyboard, optical character reader, mark reader, magnetic ink character reader.

### Output Device

This device is used for Machine to Man communication. Processed results are retrieved from the system through these devices, e.g., Video Display Unit, printers, plotters, etc.

### C.P.U.

The Central Processing Unit controls the whole system by coordinating and organizing all the operations of the computer. It obeys the instructions issued to it by various input devices such as the keyboard and organizes the output to the various peripheral units such as the printer. It is responsible for fetching instructions that are stored in the primary storage, interpreting them and then issuing commands to all the hardware units that are necessary to carry out the instructions.

### A.L.U.

It is responsible for performing all the arithmetic and logical operations of the computer. The arithmetic operations are used to compare numbers and include 'less than', 'equal to' and 'greater than'. The ALU can handle text as well as numbers. Some computers are equipped with an arithmetic co-processor which is a second microprocessor dedicated to perform arithmetic functions only. The advantage of coprocessor is the increased speed of performing calculations.

### Memory Unit

It is used to store the data and the programme. The whole memory is partitioned into two parts. One part consists of a large number of labelled boxes—one box per data item. Other stores the algorithm. A datum in a box in the memory may be retrieved by referring to the label or name of the box. When a datum is used from a box, a copy of the datum is used; the original datum is not destroyed. When a datum is written in the memory, this datum is stored in the specified box in the memory and old contents of the box are destroyed.

### Primary Storage

**Unit** It is the computer's memory where information is stored permanently. There are two distinct types of memories:

1. **ROM** It contains all the information and instructions necessary to make the computer operate when it is switched on. This information is ROM resident and is put in during the manufacturing and remains stored on the chip permanently. This memory is capable of being read from only but not of being written to and hence known as ROM. It is non-volatile memory.

2. **RAM** It is volatile memory. It is used to store temporary information in the form of data and instructions in the RAM. RAM can be written into as well as read from.

### Secondary Storage Devices

There are a number of secondary storage devices which are used to store the data permanently. These devices are also called auxiliary memories, e.g., hard disk magnetic tapes, floppy, CD-ROM.

## INPUT DEVICES

### Printers

Used for hard copy printing.

### Plotters

Line drawing devices which move a pen under computer control in such a way that continuous lines and curves can be drawn. Used to produce outputs demanding continuous high-precision line drawing, e.g., maps, graphs, mathematical curves, engineering drawings, etc.

### Graphic VDU

These are video display units on which, by selecting a suitable combination of axis, scales and colours, output can be displayed in the pictorial form, e.g., CRT monitors and LCD monitors.

## COMPUTER APPLICATIONS

### Scientific Research

There are worldwide networks linking universities and scientific establishments. Through these networks, the information related to new inventions can be shared.

### Business Applications

Computers have taken one of the following business applications:

1. A/C Package
2. Payroll Package
3. Financial Analysis Package
4. Stock Control System

### Office Automation

1. Word Processing
2. Desktop Publishing

### Banking/Aid to Management/Industrial Applications

There are a lot of computer-based, industrial applications which can provide help in industrial processing, e.g., in tool industry with the help of the computers the designing process for tools has become fast and accurate.

### Communication

Communication is the way through which one person can express his ideas and can understand the ideas of others. Computers have facilitated the communication process. Here, through satellite, information from one place can be sent to a distant place within a few seconds. This type of communication is possible by using the modems. Modem is a device which converts the analog signals to digital, and vice-versa. It stands for modulation-demodulation.

### Traffic Control

With the help of computers the problem of traffic control can be solved—coordination, synchronization, fallback, diversion.

### Medicine

The computer is also helpful in the field of medicine and can be used to diagnose various diseases after knowing their proper symptoms. This type of diagnosis is mainly used in homoeopathy. Computers are also being used in the following areas:

- *Weather Processing*
- *Education: Teaching and Learning*
- *Space Research*

## SOME COMMONLY USED TERMS

### **Programme**

It is a set of instructions given to the computer in a particular sequence for solving a given problem. In other words, it contains a set of actions to be performed by the computer on the data to produce necessary results. Programming is done in one of the computer languages.

### **Software**

It is a collection of programmes written to bring the hardware of a computer system into operation. We cannot do any thing useful with the computer hardware on its own. It has to be driven by certain utility programmes called software which are stored in the computer system.

There are two types of software:

### **Application Software**

It refers to programmes or sets of programmes that perform a specific processing application, e.g., payroll and inventory control.

### **System Software**

It consists of sets of programmes that act as an interface between the user and hardware, e.g., operating system like Windows, MacOS, UNIX etc.

**Hardware** It is the term given to the machinery itself and to the various individual pieces of electronic equipment.

### **Liveware**

The users working on the system are termed as 'liveware'.

### **Firmware**

It is defined as software embedded into the hardware, e.g., ROM, which has the basic input-output system (BIOS).

### **Compiler**

A programme which translates a high-level language programme into machine language.

### **Interpreter**

A programme that translates each instruction of high level language and executes it before passing on to the next instruction.

### **Assembler**

A programme which converts assembly language programme into machine language programme. It is a system software.

### **Multiprocessing**

In this type of processing, the CPU has a number of processors which operate in parallel, thereby allowing simultaneous execution of several programmes.

### **Multiprogramming**

This type of processing enables more than one programme to reside in the central memory at the same time, and share the available processor time and peripheral units.

### **Distributed Data Processing**

It is also called decentralised processing. This approach involves using a network of computers interconnected by datacommunication lines where each remote location has a small computer or minicomputer for input-output communication with a central computer and some local processing.

### **Bit**

It is the basic unit of digital information. It can have only two values—one and zero.

### **Nibble**

Combination of four bits.

### **Byte**

Combination of eight bits.

- 1 Kilobyte = 1024 bytes
- 1 Megabyte = (1024) × (1024) bytes
- 1 Gigabyte = (1024) × (1024) × (1024) bytes

### **Word**

Combination of two or more than two bytes.

### **Database**

It is a general collection of data shared by a variety of users. In particular, it has the following features:

- Redundancy of data is eliminated.
- Data is independent of any programme.
- Data is usable by many users, simultaneously.

## DIFFERENT TYPES OF LANGUAGES

- Low Level Languages
- High Level Languages

### **Low Level Languages**

**Machine Language** These instructions may be coded in the language the machine is capable of understanding. This language is in the form of binary codes—the combination of binary zeros and ones.

**Assembly Language** A machine language programme is the only kind of programme that can be executed by a computer. But it is too hard for the user to remember instructions in the form of zeros and ones. It is also time consuming to write programmes in the machine language. Therefore, another language called assembly language was developed which greatly simplified programming. In this language instructions are written in mnemonic codes such as ADD, SUB, MPY, DIV, etc.

Writing programmes in the assembly language is more convenient for the programmer but it creates a gap as the computer recognises only a programme in binary code. One method of bridging this gap is an assembly programme which translates the programme written by the programmer in assembly language into a programme in machine language.

### **High Level Languages**

These languages resemble the normal languages of the intended application area (e.g., business or mathematical) rather than that of a computer. Since problem or procedure oriented languages are not directly understood by computers, special computer programmes called compilers and interpreters are needed so that the computer itself can translate the problem or procedure oriented language programmes into a machine language programme which can be run on the computer. These languages have found great acceptance in the business accounting and science engineering worlds because they greatly facilitate the use of computer by non professional programmers, e.g., COBOL, FORTRAN, C, C++, ALGOL, LISP, etc.

# OPERATING SYSTEM

It is an organised collection of routines and procedures for operating a computer. It acts as an intermediary between a computer user and the computer hardware. The basic purpose of the OS is to provide an environment in which a user can execute programmes. It is used to make the computer convenient to operate. Another goal is to use the computer hardware in an efficient manner, e.g., DOS, UNIX, XENIX, WINDOWS etc.

## Uses of Operating System

The components of a computer are hardware, software and data. The operating system provides the means for the proper use of these resources in the operation of the computer system. Like a government, the OS performs no useful function by itself. It simply provides an environment within which other programmes can do useful work.

## Resource Allocator

A computer system has many resources (Hardware, Software) that may be required to solve a problem. CPU time, memory space, file storage space, Input/Outputs devices, and so on. The OS acts as the manager of these resources and allocates them to specific programmes and users, as necessary. The operating system must decide which requests are essential resources to operate the computer system efficiently and fairly.

## Control Programme

It controls the execution of user programmes to prevent errors and improper use of the computer. Its functions include: Controlling operation in multi-programming, multi processing & time sharing module.

## Time Sharing

It is the concurrent use of a single computer system by many independent users. In time sharing, many terminals can be attached to a central computer. The terminal users can thus share time on the computer, that is, time sharing. The operating system can allocate the CPU time of the various users by giving each a time slice, each operating independently without awareness of use by others.

## Microprocessor

It is a single chip based device which is a complete processor in itself and is capable of performing arithmetic and logical operations.

## Modem

An electronic device used to convert computer (digital) electronic signals to communication channel (analog) electronic signals and vice-versa. It is used in distributed data processing where terminals are joined by a telecommunication link to the host computer.

# NETWORKING

It means interconnecting of the terminals wherein these are linked to the server and each terminal has its own processors.

## Advantages of Networking are

1. Sharing of Data
2. Transfer of files is possible without floppies
3. Distinct advantage in medicine, engineering, etc.
4. Data security
5. Less memory usage
6. Common hardware, software resources, e.g., printers, memory
7. Less expensive

## There are three types of Networks

- LAN—Local Area Network
- MAN—Metropolitan Area Network
- WAN—Wide Area Network

## LAN

A local area network, which is basically a digital communication network, interconnects different computing devices located in a well defined locality which can be a building, office or a campus. A LAN is characterised by high speed transmission rates and low error rate due to transmission. It mainly consists of the following three components:

## Medium

Over which data transfer takes place. It can be a telephone line; a coaxial cable or a fiber optical cable.

## Network Interface Unit (NIU)

It provides an interface between the LAN medium and the computer hardware, generally a NIU directly interfaces with the main system.

## Network Software

Runs in each of the computer systems connected to LAN and provides network-wide communication capabilities to the user software. A part of this software resides in the network interface unit.

## Most Popularly Used LAN Configuration

### Star Configuration

Here all the nodes in the network are connected to a central node to form a star-like picture.

### Bus Configuration

Here all the nodes on a LAN share the same cable and there is no centralised node.

### Ring Configuration

In this scheme, nodes are connected in series and form a complete ring. The data flows from one node to other which is picked by the appropriate target node.



# THE INTERNET

## How did it originate

The Internet grew out of a series of developments in the academic, governmental, and information technology communities. Listed below are some of the major milestones:

- In 1969, ARPANet, an experimental 4-computer network, was established by the Advanced Research Projects Agency (ARPA) of the US Department of Defence so that research scientists could communicate.
- By 1971, ARPANet linked almost 2 dozen sites, including MIT and Harvard. By 1974, there were over 200 sites.
- During the 1980s, more and more computers using different operating systems were connected. In 1983, the military portion of ARPANet was moved onto the MILnet, and ARPANet was officially disbanded in 1990.
- In the late 1980s, the National Science Foundation's NSFnet began its own network and allowed everyone to access it. It was, however, primarily the domain of "techies," computer-science graduates, and university professors.
- In 1991, Al Gore, then a US senator, proposed widening the NSFnet to include more schools and colleges. Resulting legislation expanded NSFnet, renamed it NREN (National Research and Educational Network), and allowed businesses to purchase part of the network for commercial uses. The mass commercialization of today's Internet is a result of this legislation.
- In 1992, the World Wide Web system and software were released, and in 1993, the National Center for Supercomputing Applications released versions of Mosaic (first graphical Web browser) for Microsoft Win-dows, for Unix systems running the X Window System, and for the Apple Macintosh.
- In 1994, Netscape Communications released the Netscape Navigator browser, and in 1995, Microsoft released Internet Explorer. By mid-1997, these browsers were in head-to-head competition for a place on each Internet user's computer.

## Internet resources

What you can do on the Internet depends on which resource you access. **E-mail**, Electronic mail is probably the most popular and widely used resource on the Internet. To use it you must know and accurately input the recipient's address. An e-mail address consists of a **username**, a **service**, and a **domain**. For example, in Pearsonindia@satyam.com (The Pearson Education's address), Pearsonindia is the username, 'satyam' the service (in this case, Satyam Online), and '.com' the domain (in this case, a commercial organisation). Domains are identified in the Domain Name Service, also known as the Domain Name System. A consortium between AT&T and Network Solutions, called InterNIC (Internet Network Information Center), manages the task of registering addresses, or domain names. In mid-1997 com, org. and net domain names cost \$100 for 2 years (and \$50 per year thereafter). Here are the most familiar domains:

com	a commercial organization, business, or a company
edu	an educational institution
gov	a nonmilitary government entity
int	an international organisation
mil	a military organisation
net	a network administration
org	some other organisation
res	research institute

In general, the final part of a domain name represents the name of the country where the site is located—for example, in for India, jp for Japan, uk for Great Britain, etc.

## How the World Wide Web works

The Internet involves 3 fundamental elements: server, client, and network. A server is a computer program that makes data available to other programs on the same or other computers—it "serves" them. A **client** is a computer that requests data from a server. A **network** is an interconnected system in which multiple computers can communicate. The communication may be via copper wire, coaxial cable, fiber-optic cable, satellite transmission, etc. The software by which one can access Internet resources is called the **browser**. When you go to a **site** on the World Wide Web, you access the site's files.

## What is the Internet

The internet, sometimes called the "information superhighway", is a vast network of computer networks. It is estimated that there are some 50 million Internet users in the world and that, by the year 2010, half of the world will be online. Some other facts about the Internet:

- The Internet is accessible in more than 150 countries, and there are more than 1 million Web servers worldwide.
- An average World Wide Web page contains about 500 words, and experts put the number of Web pages somewhere between 30 million and 50 million.
- The average Web user is 35.2 years old and accesses the Web primarily from home.

The Internet is neither owned nor funded by any one institution, organisation, or government. It does not have a CEO and is not a commercial service. The Internet is, however, directed by the Internet Society (ISOC), composed of volunteers. The ISOC appoints a sub-council, the Internet Architecture Board (IAB), which works out issues of standards, network resources, network addresses, and so on. Another volunteer group, the Internet Engineering Task Force (IETF), handles day-to-day issues of Internet operation.

Practically speaking, the Internet is composed of people, hardware, and software. With proper equipments on both ends, you can sit at your computer and communicate with someone sitting at any place in the world. You can also use the Internet to access vast amounts of information, including text, graphics, sound, and video. From your computer, you can send e-mail, chat with others, work with others on an electronic whiteboard, and with appropriate equipments, video-conferencing is also possible.

## The World Wide Web

The Web may be the most complete realization of the Internet to date. It was developed in the early 1990s at the European Center for Nuclear Research as an environment in which scientists in Geneva and Switzerland could share information. It has evolved into a medium that consists of text, graphics, audio, animation, and video. The address of a Website usually begins with Error! Bookmark not defined. The World Wide Web is a graphical environment that can be navigated through hyperlinks. From one site you can click on hyperlinks to go to any number of related sites.

1. Choose the odd one out
  - (a) Micro computer
  - (b) Mini computer
  - (c) Super computer
  - (d) Digital computer
2. The computer that is not considered as a portable computer is
  - (a) Laptop computer
  - (b) Notebook computer
  - (c) Mini computer
  - (d) None of these
3. The unit of speed used for super computer is
  - (a) KELOPS    (b) MELOPS
  - (c) GELOPS    (d) None of these
4. UNIVAC is an example of
  - (a) First generation computer
  - (b) Second generation computer
  - (c) Third generation computer
  - (d) Fourth generation computer
5. The unit that performs the arith-metical and logical operations on the stored numbers is known as \_\_\_\_\_.
  - (a) Arithmetic Logic Unit
  - (b) Control Unit
  - (c) Memory Unit
  - (d) Both (a) and (b)
6. The \_\_\_\_\_ is the 'administrative' section of the computer system.
  - (a) Input Unit
  - (b) Control Unit
  - (c) Memory Unit
  - (d) Central Processing Unit
7. The number system on which the modern computers operate
  - (a) Decimal number system
  - (b) Octal number system
  - (c) Binary number system
  - (d) Hexadecimal number system
8. A terabyte comprises
  - (a) 1024 gigabyte
  - (b) 1024 kilobyte
  - (c) 1024 megabyte
  - (d) 1024 byte
9. The access time refers to
  - (a) Time required to locate and retrieve stored data
  - (b) Time required to locate the lost data
  - (c) Time required to delete specific data on a certain memory location
  - (d) None of the above
10. Select the smallest memory size
  - (a) Terabyte    (b) Gigabyte
  - (c) Kilobyte    (d) Megabyte
11. The type of memory that uses in-circuit wiring to erase the content by applying electric field is
  - (a) PROM    (b) Flash memory
  - (c) EAROM    (d) EEPROM
12. The secondary storage device that follows the sequential mode of access is
  - (a) Optical Disk    (b) Magnetic Disk
  - (c) Magnetic Tape    (d) None of these
13. FPI stands for
  - (a) Faults per inch
  - (b) Frames per inch
  - (c) Figure per inch
  - (d) Film per inch
14. A spiral shape track formatting is present in
  - (a) Floppy Disk
  - (b) Optical Disk
  - (c) Hard Disk
  - (d) Half-inch Tape Cartridge
15. CD-ROM is a kind of
  - (a) Optical disk
  - (b) Magneto-Optical disk
  - (c) Magnetic disk
  - (d) None of these
16. The ..... data base can be a choice for the SFMS
  - (a) Oracle    (b) My SQL
  - (c) Both (a) and (b)    (d) None of these
17. In SFMS message are ..... with receiving node's public key to protect confidentiality of the message while in transit.
  - (a) shown    (b) hidid
  - (c) encrypted    (d) decrypted
18. Various kinds of users in SFMS are namely:
  - (a) Creator and verifier
  - (b) Authorizer
  - (c) Super users
  - (d) All these
19. In dial up remote access a client uses the ..... . To create a physical connection to a part on a remote access server of the private network
  - (a) Public local area network
  - (b) Public telephone network
  - (c) Bank's branch network
  - (d) Private telephone network
20. The expansion of CCA under the IT Act is:
  - (a) Computer communication authority
  - (b) Computer controlling adjudication
  - (c) Controller of certifying authority
  - (d) Controller of certifying act
21. A VPN (Virtual Private Network) can provide secure remote access through the ..... Rather than direct dial-up connections:
  - (a) Local network
  - (b) Modem
  - (c) Internet
  - (d) None of these
22. With the rapid growth of technologies and internet, it is clear that no activity on internet can remain free from the influence of:
  - (a) Police    (b) Civil court
  - (c) Criminal law    (d) Cyber law
23. What is the full form of IP?
  - (a) Internet program
  - (b) Interface program
  - (c) Internet protocol
  - (d) Interface protocol

24. Full form of TCP is:  
 (a) Transmission control protocol  
 (b) Total control Protocol  
 (c) Transmission control program  
 (d) Totalling control program
25. \_\_\_\_\_ Provides a common address space and routes the packets of data across the entire Internet:  
 (a) IP (b) TCP  
 (c) UDP (d) None of these
26. Cyberspace is being governed by a system of law and regulation called:  
 (a) Civil law  
 (b) Criminal law  
 (c) Electronic law  
 (d) Cyber law
27. A centralized or distributed integrated repository for data storage connecting to one or more communications network:  
 (a) Data centre (b) Data file  
 (c) DBMS (d) None of these
28. How does a bank get access to a good data centre?  
 (a) Build their own data centre  
 (b) Use services of an outsourced data centre  
 (c) Both a & b  
 (d) None of these
29. In CBS the ..... will have low end computer servers which are connected to the central server :  
 (a) Head office  
 (b) Zonal offices  
 (c) Branches  
 (d) Regional offices
30. The core banking solutions are generally based on:  
 (a) closed system  
 (b) open system  
 (c) blind system  
 (d) none
31. \_\_\_\_\_ normally certifies a site on the internet as a secure site:  
 (a) Crisil (b) CRA  
 (c) Verisign (d) None
32. The process of starting the computer and loading of operating system programs for execution is known as:  
 (a) Initialization (b) Booting  
 (c) Loading (d) Searching
33. ATMs can be of \_\_\_\_\_:  
 (a) online type (b) offline type  
 (c) off site type (d) all of the above
34. With introduction of IT the audit methodologies/approaches are:  
 (a) Audit through the computer  
 (b) Audit around computer  
 (c) Audit with the computer  
 (d) All a, b, c  
 (e) Only a and b
35. The committee for proposing legislation on electronic funds transfer and other electronic payments is known as \_\_\_\_ committee.  
 (a) Rangarajan (b) Saraf  
 (c) K. S. Shere (d) All of the above
36. Which of the followings are in-built security features in computers used in branches?  
 (a) Transaction tracking  
 (b) Pass word and locking  
 (c) Data recovery and back ups  
 (d) Disk duplex and mirror
37. The interconnectivity of computers to a common server within a small area is known as \_\_\_\_\_:  
 (a) LAN (b) WAN  
 (c) WWW (d) None
38. \_\_\_\_\_ is not an example of centralized controlling topology.  
 (a) Star (b) Bus  
 (c) Tree (d) Loop
39. When data is written and stored in two hard discs over the same channel and in two hard discs simultaneously over different channels, the system is known as \_\_\_\_\_:  
 (a) data mirroring  
 (b) disc mirroring  
 (c) data duplex  
 (d) disc duplex
40. Primary memory is used by the:  
 (a) User (b) I/O devices  
 (c) CPU (d) None of these
41. In a disk, each block of data is written into  
 (a) one sector  
 (b) three sectors  
 (c) two sectors  
 (d) two or more sectors
42. The Pentium Processor contains-  
 (a) tens of thousands of transistors  
 (b) hundred thousands of transistors  
 (c) thousands of transistors  
 (d) several millions of transistors
43. \_\_\_\_\_ was the precursor to internet as we know it today:  
 (a) ARPANET (b) USENET  
 (c) TELNET (d) None
44. In banking technology, normally \_\_\_\_\_ UPS is used.  
 (a) on-line (b) off-line  
 (c) stand alone (d) all of the above
45. Which of the following is not an operating system?  
 (a) DOS (b) Oracle  
 (c) Linux (d) Windows
46. In Word, what combination of keys do you press to delete an entire word?  
 (a) Ctrl+Del  
 (b) Alt+Del  
 (c) Shift+Backspace  
 (d) Shift+Alt+Del
47. Hardware that adds two numbers is \_\_\_\_\_.  
 (a) the control unit  
 (b) an internal CPU register  
 (c) arithmetic logical unit  
 (d) Browser  
 (e) None of these
48. A data source is made up of \_\_\_\_\_.  
 (a) the text that changes with each version of a merged document.  
 (b) the graphics that change with each version of a merged document.  
 (c) both text and graphics that change with each version of a merged document.  
 (d) the graphics can change only in documentary file

49. WAIS stands for \_\_\_\_\_  
 (a) Wide Assumed Intimation Section  
 (b) Wide Area Internet Service  
 (c) Wide Area Information System  
 (d) Wide Assumed Information Section
50. Identify off term out, while using Web Browser.  
 (a) Lynx  
 (b) Windows-98  
 (c) Internet Explorer  
 (d) Communicator
51. A small amount of memory included in the processor for high speed access is called  
 (a) Register (b) Cache  
 (c) RAM (d) ROM
52. A byte represents a group of  
 (a) 10 bits (b) 40 bits  
 (c) 8 bits (d) 22 bits
53. Which one of the following does not fail under the category of secondary storage devices?  
 (a) Static Random Access Memory  
 (b) Hard Disk  
 (c) Optical Disk  
 (d) Winchester Disk
54. The storage capacity of a cartridge tape is\_\_\_\_\_.  
 (a) 100 MB (b) 40 MB  
 (c) 400 MB (d) 20 MB
55. Which one of the following does not generate a hardware interrupt?  
 (a) Printer (b) Hard disk  
 (c) Program error (d) Floppy disk
56. MS DOS is usually supplied on a -  
 (a) hard disk  
 (b) cartridge tape  
 (c) CD ROM  
 (d) floppy disks or diskettes
57. Which one of the software needs a compiler for its execution?  
 (a) DBASE IV (b) ORACLE  
 (c) LOTUS (d) FORTAN
58. The life of a key switch in a modern keyboard is \_\_\_\_  
 (a) 10 million cycles  
 (b) 1 million cycles  
 (c) 100000 cycles  
 (d) 100 million cycles
59. Windows is popular because of its \_\_\_\_\_  
 (a) GUI features  
 (b) Desktop Technology  
 (c) Multitasking capacity  
 (d) Being expensive
60. Graphics is inserted in \_\_\_\_\_  
 (a) frame (b) page  
 (c) box (d) folder
61. Bug means\_\_\_\_  
 (a) a logical error in a programme  
 (b) a difficult syntax error in a programme  
 (c) documenting programmes using an efficient documentation tool  
 (d) a logical error in text
62. A daemon wakes up\_\_\_\_  
 (a) one in hour  
 (b) once in 10 microseconds  
 (c) once in one minute  
 (d) once in 5 minutes
63. Which one of the following cannot be used to enter a date?  
 (a) Mar-97 (b) 4-Mar-97  
 (c) 97/04/12 (d) 3 / 4 / 97
64. In order to delete the selected sentence, we can press the following key\_  
 (a) Backspace (b) Del  
 (c) Ctl (d) a and b
65. Indicate which one of the following best describes the term Software\_  
 (a) Application programme only  
 (b) Operating System programme only  
 (c) Control system  
 (d) Both a and b
66. Which one of the items given below is not an item of the Menu Bar?  
 (a) Root (b) Tools  
 (c) Catalog (d) Exit
67. Which one of the following is not an internal DOS command?  
 (a) BACKUP (b) COPY  
 (c) CLS (d) BREAK
68. Fifth generation computers are likely to exhibit  
 (a) artificial intelligence  
 (b) heuristic behaviour  
 (c) advanced parallel processing  
 (d) All of the above
69. As compared to diskettes, the third disks are  
 (a) more expensive (b) more portable  
 (c) less rigid (d) slowly accessed
70. The two kinds of main memory are  
 (a) primary and secondary  
 (b) random and sequential  
 (c) ROM and RAM  
 (d) All of the above
71. The first computer mouse is built by  
 (a) Doughlas Engelbart (b) William English  
 (c) Daniel Cougher (d) Robert Zawecki
72. The barcode which is used on all types of items, is read by a scanning device directly into the computer. What is the name of this scanning device?  
 (a) Laser scanner (b) Wand (c) OCR(d) MICR
73. The OCR stands for  
 (a) outsized Character Reader  
 (b) optical Character Recognition  
 (c) operational Character Reader  
 (d) only Character Reader
74. The Central Processing Unit (CPU) consists of  
 (a) Input: output and processing  
 (b) control unit, primary storage, and secondary storage  
 (c) control unit, arithmetic-logic unit, and primary storage  
 (d) control unit, processing, primary storage
75. An Integrated Circuit (IC) is  
 (a) fabricated on a tiny silicon chip  
 (b) a complicated circuit  
 (c) much costlier than a single transistor  
 (d) an integrating device



**Answers**

- |         |         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (d)  | 2. (c)  | 3. (c)  | 4. (a)  | 5. (a)  | 6. (d)  | 7. (c)  | 8. (a)  | 9. (a)  | 10. (c) |
| 11. (d) | 12. (c) | 13. (b) | 14. (b) | 15. (c) | 16. (c) | 17. (c) | 18. (d) | 19. (b) | 20. (c) |
| 21. (b) | 22. (d) | 23. (c) | 24. (a) | 25. (a) | 26. (d) | 27. (a) | 28. (c) | 29. (c) | 30. (b) |
| 31. (c) | 32. (b) | 33. (b) | 34. (d) | 35. (c) | 36. (c) | 37. (a) | 38. (b) | 39. (b) | 40. (c) |
| 41. (d) | 42. (d) | 43. (a) | 44. (a) | 45. (b) | 46. (a) | 47. (c) | 48. (c) | 49. (c) | 50. (c) |
| 51. (b) | 52. (c) | 53. (a) | 54. (c) | 55. (c) | 56. (d) | 57. (d) | 58. (d) | 59. (a) | 60. (a) |
| 61. (a) | 62. (c) | 63. (c) | 64. (d) | 65. (d) | 66. (a) | 67. (a) | 68. (d) | 69. (a) | 70. (c) |
| 71. (b) | 72. (a) | 73. (b) | 74. (c) | 75. (a) |         |         |         |         |         |