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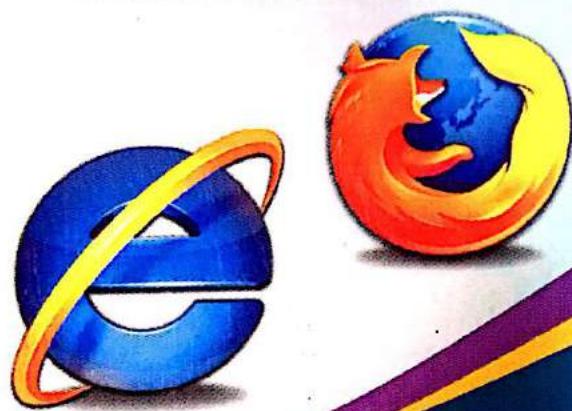


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Lucent's

JASJEET SINGH SEKHON

COMPUTER



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Computer

Rani Ahilya

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Computer

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01



Computer : General Introduction

Introduction

A computer is a man made electronic machine which stores, reads and processes data to produce meaningful information as output. It works very fast and does not make mistakes but its capacity is limited. It is made of English word 'to compute'. It operates under the control of a set of instructions that is stored in its memory unit. A computer accepts data from an input device and processes it into useful information which it displays on its output device.



Actually, a computer is a collection of hardware and software components that helps us to accomplish many different tasks. Hardware consists of the computer itself and includes a CPU, a monitor, a keyboard, a mouse and any equipment connected to it. Software is the set of instructions that the computer follows in performing a task.

Computers and Calculators

A calculator is a small electronic device used for doing mathematical calculations. A calculator cannot be used for writing letters or drawing images, while a computer can be used to calculate, draw images, write letters, and do many other things as well.

Human Being and Computers

Computers cannot work on their own. They do what we want them to do, only we give them the right command. Its memory is better than human memory. It can't forget anything it has saved, so it is also called an *artificial intelligence*.

Comparison between Human beings and Computers

Human being

- Human beings are slow in doing calculations.
- Human beings cannot remember lots of things at one time.
- Human beings can make mistakes.
- Human beings have feelings.
- Human beings can think.
- Human beings get tired if they work for long hours.

Computer

- Computers can do complex calculations in seconds.
- Computers can store and remember a large amount of information at one time.
- Computers do not make mistakes.
- Computers do not have feelings.
- Computers cannot think.
- Computers never get tired.



Elementary words related to computer

➤ **Data**: Data is information required by the computer to be able to operate or to put it the other way information we put into the computer is called data. It is gathered from any source but cannot be organized. It cannot be used for decision making. It is a collection of unprocessed items and combination of characters, numbers and symbols collected for a specific purpose. Generally it is divided into three types : *numeric data, alphabetic data and alphanumeric data*.

1. **Numeric Data** : Numeric data consists of ten digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. There are different types of number system that are used to represent numeric data. These number systems are decimal number system, binary number system, octal number system and hexadecimal number system. Examples are examination score, bank balance and pin-code etc.
2. **Alphabetic Data** : Alphabetic data is used to represent 26 alphabetic. It consists of capital letters from A to Z, small letters from a to z and blank space. Alphabetic data is also called non-numeric data. An example is the address of an employee.
3. **Alphanumeric Data** : Alphanumeric data is used to represent alphabetic data, numeric data, special characters and symbols. An example is any password.

➤ **Information** : Information is well organized data which we get after processing of data and it helps in decision making. It is processed data that is organized, meaningful, and useful.

Characteristics of a computer

Computers are the foundation of business, travel, and leisure of life today. The common characteristics that make computers of all sizes such a powerful machine are speed, accuracy and reliability, storage capacity, ability to operate automatically, diligence, scientific approach and versatility.

1. Speed : Computers provide the processing speed required by all facets of society. The quick service we expect at the bank, at the grocery store, on the stock exchange, and on the Internet are dependent on the speed of computers. The speed of a computer is measured in the following time units for the access time or instructions per second.

Millisecond [1ms]	A thousandth of a second or 10^{-3}
Micro second [1μs]	A millionth of a second or 10^{-6}
Nano second [1ns]	A thousand millionth of a second or 10^{-9}
Pico second [1ps]	A million millionth of a second or 10^{-12}
KIPS	Kilo Instructions Per Second.
MIPS	Million Instructions Per Second.

1. Accuracy and Reliability : Computers are quite accurate and extremely reliable as well. They are only a machine and do not make errors on their own. Errors are caused by humans, not by computers.

2. **High Storage Capacity** : Computers are capable of storing enormous amounts of data that must be located and retrieved very quickly. The capability to store and retrieve volumes of data is the core of the Information Age.

3. **Automation** : Once a process has been initiated, it is capable of functioning automatically. It does not require an operator at each stage of the process.

4. **Diligence** : It is capable of operating at exactly the same level of speed and accuracy even if it has to carry out the most voluminous and complex operations for a long period of time. It does not suffer from physical and mental fatigue, lack of concentration and laziness.

5. **Versatility** : The wide use of computers in so many areas such as commerce, scientific applications, education in day to day life is ample evidence of its versatility.

Basic applications/uses of a computer

1. **Entertainment or Recreation** : Computer is used for playing games, listening to music and watching movies. It is also used for making cartoon movies, animation films and drawing pictures etc.
2. **Education** : Computer is used in schools for teaching, doing mathematical calculations and completing homework.
3. **Banks** : Computer is used in banks for storing information about different account holders, keeping a record of cash and providing all kinds of information regarding any account in the bank. It is also used by ATM (Automatic Teller Machine) of a bank which provides cash without any bank staff.
4. **Railway stations and Airports** : Computer helps in providing information about seat availability, booking tickets and keeping records of all passengers. It helps in providing information about the arrival and departure as well as timing of trains and aeroplanes.
5. **Medical Science** : Computer helps in keeping records of all the patients in a hospital and doing a number of medical tests. It helps doctors in controlling machines in an operation theatre.
6. **Business** : Computers are used to type and print documents, letters etc. They help in keeping records of employees and sending e-mails etc.
7. **Defence** : In defence computer is used to help in building weapons, controlling their functions, launching missiles and keeping record of criminals. It helps in establishing communication links between the soldiers and their commanders through satellites.
8. **Designing** : Computer helps in designing magazines, newspapers, books and advertisements etc. It also helps in designing buildings, houses etc.
9. **Scientific research** : Computer is used in scientific research and is handy for all kinds of scientific research.
10. **Administration** : Computer is used to improve administrative services and their efficiency.
11. **Publication** : Computer is used in desk-top publication.

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12. Communication : Computers are used in communication such as e-mail, chatting etc.

Limitations of a computer

1. Lack of intelligence (Programmed by human/Can't think) : Though computer is programmed to work efficiently, fast and accurately, but it is programmed by human beings to do so. Without a program, computer is nothing. A program is a set of instructions. Computer only follows these instructions. If the instructions are not accurate the working of computer will not be accurate.
2. Prone to virus : The computer sometimes malfunctions and results in loss of data if some virus attacks.
3. Depends on electricity : One of the limitations also includes machine failure in case of some hardware or software problem. The computer sometimes results in loss of data if power fails.

Functions of a computer

1. Data collection : Data collection is a process of preparing and collecting data to obtain information to keep on record, make decisions and pass information on to others. Computers collect or gather data, which means that they allow users to input data.
2. Data storage : Data storage means that it retains digital data used for computing at some interval of time.
3. Data processing : Data processing is a process to convert data into information.
4. Data output : It is a processed data which we get as an output.

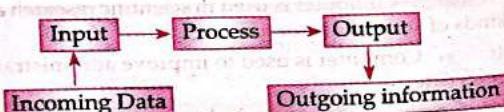
Impact of computerization

- | | |
|-----------------------|---------------------|
| (i) Time saving | (ii) Errorless work |
| (iii) Saving of paper | (iv) Unemployment |

Data Processing and Electronic Data Processing

In the past, manual techniques used for collecting, manipulating and distributing data to achieve certain objectives, were known as Data Processing. As technology advances, computers are used to achieve results accomplished by humans and machines. Example : calculator, typewriter and computer. This is known as Electronic Data Processing (E.D.P).

The major objective of data processing is to get the desired information from any raw data. Data refers to raw facts that are gathered from any source but are not organized. That data cannot be used to make decisions. Information, thus, refers to processed data which is well organized or presented in a meaningful fashion and increase the understanding of the data. This helps in decision making. Processing involves transforming input into output.



Computer System

A group of equipments put together to process a data is called a computer system. A computer system consists of several components to achieve electronic data processing.

1. **Input Units** : They are devices which accept data from user and transmit it to the central processing unit as electronic pulses. For example, the ATM (Automatic teller Machine) system, when we want to withdraw, we are required to enter our Personal identification number (PIN). When we enter our PIN, we are using an input device, the keypad.
2. **CPU (Central Processing Unit)** : It is an abbreviation for central processing unit, and is pronounced as separate letters. The Central Processing Unit is the brain of the computer sometimes referred to simply as the central processor, but commonly called a processor. The Central Processing Unit is the unit where most calculations take place. It is linked with the input units and output units to form the computer system. In terms of computing power, the CPU is the most important component of a computer system. On personal computer (PC) and small workstations, the CPU is housed in a single chip called a microprocessor or microchip.

The fundamental sequence of steps that a CPU performs is also known as the fetch-execute cycle or instruction cycle. It is the time in which a single instruction is retrieved from memory, decoded (determined what actions the instruction requires) and executed (carried out those actions). The first half of the cycle transfers the instruction from memory to the instruction register and decodes it. The second half executes the instruction. This cycle is repeated continuously by the CPU from Start or boot-up to the time when the computer is shut down.

Instruction cycle

Each computer's CPU can have different cycles based on different instruction sets, but will be similar to the following cycle—

1. **Fetch the instruction** : The CPU fetches the instruction from main memory via the data bus, and it is then placed into the CIR. The Program Counter is instructed to contain the address of the next instruction.
2. **Decode the instruction** : The instruction decoder interprets instructions. If an instruction has an indirect address, the effective address is read from main memory, and any required data is fetched from main memory to be processed and then placed into data registers.
3. **Execute the instruction** : The CU passes the decoded information as a sequence of control signals to the relevant function units of the CPU to perform the actions required by the instruction, such as reading values from registers, passing them to the ALU to perform mathematical or logic functions on them, and writing the result back into a register. If the ALU is involved, it sends a condition signal back to the CU.

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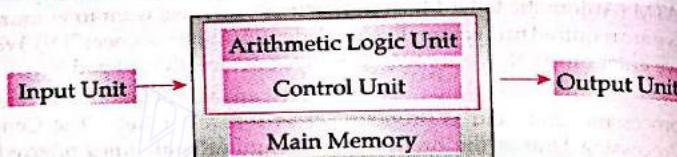
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4. Store results : The result generated by the operation is stored in the main memory, or sent to an output device. Based on the condition of any feedback from the ALU, Program Counter may be updated to a different address from which the next instruction will be fetched. The cycle is then repeated.

There are two main components of a CPU



- A. The arithmetic logic unit (ALU) : It performs all arithmetic operations and decision making operations.

Data transfer : Which includes moving of data from one location to another within the computer.

Arithmetic operation : It includes addition, subtraction, multiplication and division etc.

- B. Decision making : It is an ability to compare two quantities and perform logical operations such as compare, true or false etc.

The control unit (CU) : It extracts instructions from memory and decodes and executes them, calling on the ALU, when necessary. It controls all functions and coordinates all components of computer. It is in-charge of fetch-execution cycle.

Functions of control unit

1. Control flow of data

- > From input devices to memory
- > From memory to output devices or secondary storage
- > From secondary storage to memory
- > From ALU to memory
- > From memory to ALU
- > Decode the instruction

2. Co-ordinates instructions execution

- > Fetch the instruction
- > Execute the instruction

More components of a CPU, that are vital to its operation, are the registers which are very small memory locations that are responsible for holding the data that is to be processed.

3. Output Units : Devices which accept information from CPU and convert it to human readable form. For example, when we pay the cashier in the supermarket, he will give a receipt. This receipt is a form of output from the output device known as printer.

> GIGO (Garbage in Garbage Out) : It is a concept of computer science that the quality of output is determined by quality of input, means wrong input will result in wrong output. It is related to accuracy of input and output.

Objective Question

1. What is a computer ?
 - (a) Electronic machine
 - (b) Power machine
 - (c) Electric machine
 - (d) All of these
 - (e) None of these
2. A is an electronic device that processes data and converts it into information.
 - (a) Computer
 - (b) Processor
 - (c) Case
 - (d) Styles
 - (e) None of these

[SBI 2008, 2009, IBPS 2014]
3. is processed in information by computer processor ?
 - (a) Number
 - (b) Processor
 - (c) Input
 - (d) Data
 - (e) None of these

[SBI 2009, 2011]
4. What is ATM ?
 - (a) Branch of bank
 - (b) Staff counter of bank
 - (c) Withdrawal of cash without staff
 - (d) All of these
 - (e) None of these
5. Meaning of data processing is—
 - (a) Collection of data
 - (b) Working of computer
 - (c) Doing calculation
 - (d) Preparing information for business use
 - (e) None of these
6. Part of CPU which coordinates all functions of computer and other components—
 - (a) Mother board
 - (b) Coordination board
 - (c) Control unit
 - (d) ALU
 - (e) None of these

[SBI 2008]
7. Data going to computer is called—
 - (a) Operate
 - (b) Algorithm
 - (c) Input
 - (d) Calculation
 - (e) Flowchart
8. Input is modified into output by—
 - (a) Peripherals
 - (b) Memory
 - (c) Storage
 - (d) Input output unit
 - (e) CPU
9. Which one of these is not a characteristic or a function of computer—
 - (a) Data collection
 - (b) Data storage
 - (c) Data processing
 - (d) Data output
 - (e) Data copy
10. Which is called data in computer ?
 - (a) Number
 - (b) Symbol
 - (c) Information provided
 - (d) Information containing number and symbol
 - (e) None of these

[SBI 2009]
11. Information in computer is called—
 - (a) Data
 - (b) Number
 - (c) Symbol
 - (d) Stored data
 - (e) None of these
12. Which is a part of CPU ?
 - (a) Key board
 - (b) Printer
 - (c) Tape
 - (d) ALU
 - (e) None of these
13. What is E.D.P. ?
 - (a) Electronic data part
 - (b) Electronic date personal
 - (c) Electronic data power
 - (d) Electronic data processing
 - (e) None of these
14. CPU Stands for—
 - (a) Cover processing unit
 - (b) Control processing unit
 - (c) Central processing unit
 - (d) All
 - (e) None of these

[SBI 2009, Allahabad Bank 2011]

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15. ALU Stands for—
 (a) Arithmetic logic unit (b) Arithmetic large unit
 (c) Arithmetic long unit (d) All
 (e) None of these
16. Which of these is CPU ?
 (a) Chip (b) Box (c) Circuit
 (d) Peripheral (e) None of these
17. Basic operation done by computer is—
 (a) Arithmetic operation (b) Logical operation
 (c) Data storage (d) All
 (e) None of these
18. is called brain of computer—
 (a) CPU (b) Monitor (c) Modem
 (d) Software (e) None of these
19. Which of these establishes link between V.D.U. and Keyboard ?
 (a) Printer (b) Mouse (c) C.P.U.
 (d) Terminal (e) None of these
20. Which part of the computer is used for calculating and comparing ?
 (a) ALU (b) Control unit (c) Disk unit
 (d) Modem (e) None of these
21. Function of CPU is—
 (a) Arithmetic calculation
 (b) Comparison between the value of two objects
 (c) Search of desired data in artificial memory
 (d) A & b both (e) None of these
22. Which unit controls the movement of signals between CPU and I/O ?
 (a) ALU (b) Control unit
 (d) Secondary storage (e) None of these
23. Computer is named as intelligence.
 (a) pure (b) human
 (d) all (e) none of these
24. The three main parts of the processor are
 (a) ALU, Control unit and Registers
 (b) ALU, Control unit and RAM
 (c) Cache, Control unit and Registers
 (d) Control unit, Registers and RAM
 (e) RAM, ROM and CD-ROM
25. What is the function of the Central Processing Unit of a computer ?
 (a) Creates invoices (b) Performs calculations and processing
 (c) Deletes Data (d) Corrupts the data
 (e) None of these
26. Capacity of computer is —
 (a) Limited (b) Unlimited
 (d) High (e) None of these
27. Controlling part of computer is—
 (a) Printer (b) Keyboard
 (d) Hard disk (e) None of these
28. Computer—
 1. A device which is able to store data
 2. A device which is able to analyse data
 3. A device which is able to maintain full security
 4. Sometime attacked by virus

[SBI 2009]

[SBI 2012]

[SBI 2012]

(c) Low

(c) C.P.U.

[SBI 2012]

- Select a correct answer—
 (a) 1 and 2 (b) 1, 2, and 3 (c) 1, 2 and 4
 (d) All (e) None and these [Uttaranchal PCS Pre. 2005]
29. The basic computer processing cycle consists of
 (a) Input, processing and output (b) Systems and application
 (c) Data, information and applications (d) Hardware, software and storage
 (e) None of these [SBI 2012]
30. Compare is—
 (a) Arithmetic function of ALU (b) Logical function of ALU
 (c) Input and output of ALU (d) All
 (e) None of these
31. Theory for working of computer is—
 (a) Input (b) Output (c) Process
 (d) All (e) None of these
32. Main component of CPU is—
 (a) Control unit (b) Memory (c) ALU
 (d) All (e) None of these
33. Processed data of computer is called—
 (a) Input (b) Output (c) Process
 (d) All (e) None of these
34. Function of CPU is—
 (a) Control input and output device
 (b) Immediate storage of data
 (c) Read the instruction and give command
 (d) All (e) None of these
35. What is output ?
 (a) Which is taken by user to processor
 (b) Which is get to processor by user
 (c) Which is get to user from processor
 (d) Which is get to processor by user
 (e) None of these
36. Part of computer which does addition, subtraction, multiplication, division and comparison—
 (a) ALU (b) Memory (c) CPU
 (d) Control (e) All these
37. General mathematical operation performs for CPU is—
 (a) ALU (b) DIMM (c) BUS
 (d) Register (e) None of these
38. The basic goal of computer process is to convert data into—
 (a) Files (b) Tables (c) Information
 (d) Graphs (e) None of these
39. The information you put into the computer is called—
 (a) Facts (b) Data (c) Files
 (d) Directory (e) None of these [SBI 2009]
40. Arithmetic operations—
 (a) Involve matching one data item with another to determine if the first item is greater than or equal to or less than the other item
 (b) Sort data items according to standard, predefined criteria in ascending order or descending order
 (c) Use conditions with operator such as AND, OR and NOT
 (d) Include addition, subtraction, multiplication and division
 (e) None of these [SBI Associates 2009, Union Bank 2011]

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- 41.** Processing involves—
 (a) Inputting data into a computer system
 (b) Transforming input into output
 (c) Displaying output is a useful manner
 (d) Providing relevant answer
 (e) None of these [SBI Associates 200]
- 42.** Input, output and processing devices grouped together represent—
 (a) Mobile device (b) Information processing cycle
 (c) Circuit board (d) Computer system [SBI 200]
- 43.** The name of the location of a particular piece of data is its—
 (a) Address (b) Memory name (c) Storage sits
 (d) Data location (e) None of these [Syndicate Bank P.O. 201]
- 44.** is the part of the computer that does the arithmetic calculations.
 (a) Memory (b) OS (c) CPU [Bank of Baroda 201]
 (d) ALU (e) None of these
- 45.** A CPU contains
 (a) A card reader and a printing device
 (b) An analytical engine and a control unit
 (c) A control unit and an arithmetic logic unit
 (d) An arithmetic logic unit and a card reader
 (e) None of these [Allahabad 2010, Syndicate 2010, Punjab & Sind 2010, Union Bank 201]
- 46.** The benefit of using computer is that—
 (a) Computers are very fast and can store huge amounts of data.
 (b) Computers provide accurate output even when input is incorrect.
 (c) Computers are designed to be inflexible.
 (d) All of these (e) None of these [Allahabad Bank 201]
- 47.** Computations and logical operations are performed by the.....
 (a) RAM (b) ALU (c) Register [Allahabad Bank 201]
 (d) Control unit (e) None of these
- 48.** The function of CPU is
 (a) To provide external storage of text
 (b) To communicate with the operator
 (c) To read, interpret and process the information and instruction
 (d) Assembler (e) None of these [Allahabad Bank 2010, Syndicate Bank 201]
- 49.** Example of non-numeric data is..... .
 (a) Employee address (b) Examination score (c) Bank balance
 (d) All of these (e) None of these [Allahabad Bank 2010, 2011]
- 50.** The information you put into the computer is called
 (a) directory (b) facts (c) data
 (d) files (e) output [Allahabad Bank 2010, 2011]
- 51.** is data that has been organized or presented in a meaningful fashion.
 (a) A process (b) Storage (c) Software
 (d) Information (e) None of these [Syndicate Bank 2011]
- 52.** The part of a computer that coordinates all its functions is called its
 (a) ROM program (b) System board
 (c) Arithmetic logic unit (d) Control unit [Syndicate Bank 2011]
- 53.** represents raw facts. Whereas is meaningful data—
 (a) Information, reporting (b) Data, information
 (c) Information bits (d) Records, bytes
 (e) None of these [Syndicate Bank 2010]
- 54.** The benefit of using computers is that
 (a) computers are very fast and can store huge amounts of data.
 (b) computers provide accurate output even when input is incorrect.
 (c) computers are designed to be inflexible.
 (d) all of the above
 (e) none of these [Syndicate Bank 2010]
- 55.** The function of CPU is
 (a) to provide external storage of text
 (b) to communicate with the operator
 (c) to read, interpret and process the information and instruction
 (d) to provide a hard copy'
 (e) none of these [Syndicate Bank 2010]
- 56.** is the process of carrying out commands.
 (a) Fetching (b) Storing (c) Decoding
 (d) Executing (e) None of these [Syndicate Bank 2010]
- 57.** Computers gather data, which means they allow users to data.
 (a) present (b) store (c) output
 (d) input (e) none of these [Punjab & Sindh Bank 2010]
- 58.** Which of the following is not the major function of a computer ?
 (a) Processing data into information
 (b) Storing data or information (c) Gathering data
 (d) Analysing data or information (e) None of these [P. & Sind 2010]
- 59.** The central processing unit (CPU)
 (a) contains the electronic circuits that cause processing to occur
 (b) makes the information resulting from processing available for use
 (c) allows data programs, commands, and user responses to be entered into a computer
 (d) consists of electronic components that store data
 (e) none of these [Bank of Baroda 2010]
- 60.** A collection of unprocessed items is
 (a) information (b) data (c) memory
 (d) reports (e) none of these [IPNB Clerk 2010]
- 61.** The is responsible for performing calculations and contains decision-making mechanisms.
 (a) Central Processing Unit (b) Memory unit
 (c) Arithmetic and Logic Unit (d) Output Unit
 (e) None of these [IPNB Clerk 2010]
- 62.** This component is required to process data into information and consists of integrated circuits—
 (a) Hard disk (b) RAM (c) CPU
 (d) ROM (e) None of these [SBI Associate 2010]
- 63.** Computers manipulate data in many ways, and this manipulation is called
 (a) utilizing (b) batching (c) upgrading
 (d) processing (e) None of these [Allahabad Bank PO 2010]
- 64.** is the result produced by a computer.
 (a) data (b) Memory (c) Output
 (d) Input (e) None of these [Allahabad Bank PO 2010]

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12. In an information system, alphanumeric data normally takes the form of
 65. In an information system, alphanumeric data normally takes the form of
 (a) Sentences and paragraphs
 (b) Numbers and alphabetical characters
 (c) Graphic shapes and figures
 (d) Human voices and other sounds
 (e) None of these
66. Memory unit is one part of ...
 (a) Control unit (b) Central Processing Unit
 (c) Input device (d) Output device (e) None of these
67. Computer is whatever is typed, submitted, or transmitted to computer system—
 (a) input (b) output (c) data
 (d) circuitry (e) None of these
68. Manipulating data to create information is known as.....
 (a) feedback (b) programming (c) processing
 (d) analysis (e) None of these
69. represents raw facts, whereas is data made meaningful.
 (a) Information, reporting (b) Data, information
 (c) Information, bits (d) Records, bytes (e) Bits, bytes
70. Hardware used to translate words, sounds, images, and actions that people understand into a form that the system unit can process is known as
 (a) device drivers (b) device readers (c) input devices
 (d) output devices (e) None of these
71. The tells the rest of the computer how to carry out a program instructions.
 (a) ALU (b) control unit (c) system unit
 (d) motherboard (e) None of these
72. The information processing cycle includes the following processes ..
 (a) input, processing, output, storage
 (b) input, output, manipulation, arithmetic
 (c) data, processing, printing, editing
 (d) storage, display, data, information
 (e) None of these
73. The arithmetic/logic unit performs the following actions ...
 (a) checks data for accuracy
 (b) does calculations using addition, subtraction, multiplication, and division
 (c) does logical comparisons, such as equal to, greater than, less than
 (d) does both calculations and logical comparisons
 (e) None of these
74. The computer's processor consists of the following parts
 (a) CPU and Main Memory
 (b) Hard Disk and Floppy Drive
 (c) Main Memory and storage
 (d) Operating system and Applications
 (e) Control Unit and ALU
- [Allahabad Bank PO 2010]
 [Panjab & Sind Bank PO 2010]
 [SBI Associate 2011]
 [Union Bank of India 2011]
 [Union Bank of India 2011]
 [Bank of Baroda 2011]
75. A microprocessor is the brain of the computer and is also called a(n)
 (a) microchip (b) macrochip (c) macroprocessor
 (d) calculator (e) software
76. Main memory works in conjunction with
 (a) special function cards
 (b) CPU (c) Intel (d) RAM
 (e) All of these
77. The main job of a CPU is to
 (a) carry out program instructions
 (b) store data/information for future use
 (c) process data and information
 (d) None of these (e) Both (a) and (c)
78. When speaking of computer input and output, input refers to
 (a) any data processing that occurs from new data input into the computer
 (b) retrieval of data or information that has been input into the computer
 (c) data or information that has been entered into the computer
 (d) the transmission of data that has been input into the computer
 (e) Both (c) and (d) above
79. All of the logic and mathematical calculations done by the computer happen in/on the
 (a) system board (b) central control unit
 (c) central processing unit
 (d) mother board (e) memory
80. The primary goal of a computer system is to turn data into
 (a) ideas (b) suggestions (c) information
 (d) reports (e) pictures
81. Arithmetic operations
 (a) involve matching one data item to another to determine if the first item is greater than, equal to, or less than the other item.
 (b) sort data items according to standard, predefined criteria in ascending order or descending order
 (c) use conditions with operators such as AND, OR and NOT
 (d) include addition, subtraction, multiplication, and division
 (e) None of these
82. Once information is input into a computer it becomes
 (a) objects (b) data (c) ideas
 (d) facts (e) None of these
83. Input, output, and processing devices grouped together represent a(n)
 (a) mobile device (b) information processing cycle
 (c) circuit board (d) computer system (e) None of these
84. An electronic device, operating under the control of information, that can accept data, process the data, produce output and store the results for future use
 (a) Input (b) Computer (c) Software
 (d) Hardware (e) None of these
- [Allahabad Bank Clerk 2011]
 [Allahabad Bank Clerk 2011]
 [Allahabad Bank Clerk 2011]
 [SBI 2012]

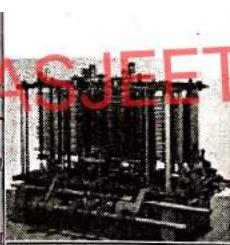
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85. The CPU comprises of Control Memory, and Units.
 (a) Microprocessor (b) Arithmetic/Logic (c) Output
 (d) ROM (e) Input [SBI PO 2011]
86. To display the contents of a folder in Windows Explorer you should—
 (a) Click on it (b) Collapse it (c) Name it
 (d) Give it a password (e) Rename it [SBI PO 2011]
87. 'C' in CPU denotes
 (a) Central (b) Common (c) Convenient
 (d) Computer (e) Circuitry [SBI PO 2011]
88.devices convert human-understandable data and programs into form that the computer.
 (a) Printing (b) Output (c) Solid state
 (d) Monitor (e) Input [SBI PO 2011]
89. The three main components of a computer are—
 (a) RAM, Input/Output Devices, Central Processing Unit
 (b) Tape, Floppy disk, Monitor
 (c) Central Processing Unit, Floppy disk, Monitor
 (d) Central Processing Unit Monitor, Printer [SSC 2011]
90. The octal equivalent of the Binary number $(101001100)_2$ is
 (a) $(515)_8$ (b) $(514)_8$ (c) $(504)_8$
 (d) $(415)_8$ [SSC 2011]
91. Arithmetic & Logic Unit—
 I. Perform Arithmetic operations II. Store Data
 III. Perform comparisons
 IV. Communicate with input devices Which of the following is true?
 (a) I only (b) III only (c) I & II (d) I & III [SSC LDC 2011]
92. The term GIGO is related to
 (a) Accuracy (b) Automatic (c) Flexibility
 (d) Versatility [SSC CGL 2011]
93. A Computer executes Programs in the sequence of
 (a) Store, Fetch, Execute' (b) Fetch, Decode, Execute
 (c) Execute, Fetch, Decode (d) Decode, Fetch, Execute [SSC CGL 2011]

Answers

1. (a) 2. (a) 3. (d) 4. (c) 5. (d) 6. (c) 7. (c)
 8. (e) 9. (e) 10. (d) 11. (d) 12. (d) 13. (d) 14. (c)
 15. (a) 16. (a) 17. (d) 18. (a) 19. (c) 20. (a) 21. (e)
 22. (b) 23. (c) 24. (a) 25. (b) 26. (a) 27. (e) 28. (d)
 29. (a) 30. (b) 31. (c) 32. (d) 33. (b) 34. (d) 35. (c)
 36. (a) 37. (a) 38. (c) 39. (b) 40. (d) 41. (b) 42. (d)
 43. (a) 44. (d) 45. (c) 46. (a) 47. (b) 48. (c) 49. (a)
 50. (c) 51. (d) 52. (d) 53. (b) 54. (a) 55. (c) 56. (d)
 57. (d) 58. (d) 59. (b) 60. (b) 61. (c) 62. (c) 63. (d)
 64. (c) 65. (b) 66. (b) 67. (a) 68. (c) 69. (b) 70. (d)
 71. (b) 72. (a) 73. (d) 74. (e) 75. (a) 76. (c) 77. (d)
 78. (e) 79. (c) 80. (c) 81. (d) 82. (b) 83. (d) 84. (b)
 85. (b) 86. (a) 87. (a) 88. (e) 89. (a) 90. (b) 91. (d)
 92. (a) 93. (b)

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JASJEET SINGH SEKHON

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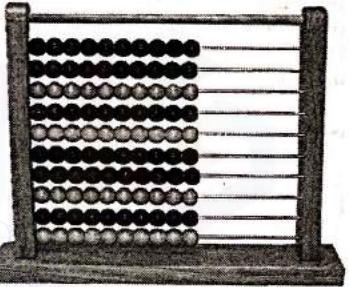
Development of Computer

Introduction

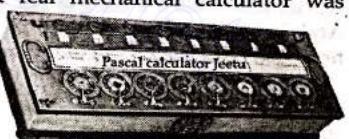
Computer is a man-made electronic machine that changes the way we work, live, and play. A machine that has done all this and more, now exists in nearly every business and one out of every two households. This incredible invention is the computer. The computer is one of the most powerful innovations in human history. The electronic computer has been around for over a half-century, but its ancestor abacus has been around for 2000 years. However, only in the last 40 years it has changed our lifestyle. From the first wooden abacus to the latest high-speed microprocessor, the computer has changed nearly every aspect of people's lives for the better. With the use of computers, people are suddenly able to perform a large amount of computations at dazzling speed. Information can be crunched, organized, and displayed in the blink of an eye. Things that were only dreams a few years ago are now possible due to computers.

Evolution of computers

1. **Abacus:** The abacus is one of the earliest known computation devices. It is a tool that helped in calculating answers of arithmetic problems. It is simply a wooden rack holding parallel wires on which beads are strung. Calculations are done by manipulating the beads. The abacus was developed in China about 5000 years ago. The abacus was so successful that its use spread from China to many other countries.



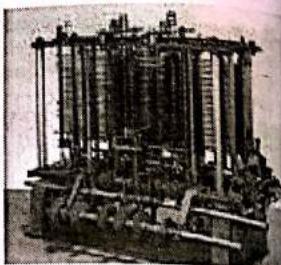
2. **Pascal calculator :** The first real mechanical calculator was invented by a French scientist and mathematician Blaise Pascal, around 1645. The device was constructed by interlocking gears representing the number 0 to 9. It was only able to do addition and subtraction, so it is called adding machine.



3. **Analytical Engine :** In 1801, Joseph Marie Jacquard perfected the idea of the automated weaving loom. Using holes punched into a series of connected cards, Jacquard was able to control the weaving of fabrics. The

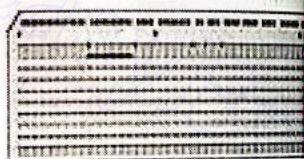
JACQUARD LOOM Computer

Jacquard loom not only cut back on the amount of human labor, but also allowed for patterns to be stored now on cards and to be utilized over and over again to achieve the same product. In 1820 Charles Babbage, a British mathematician and inventor, designed and built the mechanical calculator and the Difference Engine on principles that anticipated the modern electronic computer. The concept Babbage put forward was eventually used by engineers in the development of the first computer prototype. For this reason Charles Babbage is known as father of computing. Despite ten years of work, Babbage failed to build a fully operational model of Difference Analytical Engine. In 1842 Lady Lovelace wrote a demonstration program and her contribution to binary arithmetic was later used by John von Neumann in developing the modern computer. So she is often regarded the "first computer programmer".



4. Herman Hollerith and Punch cards : In 1890 the United States Census Bureau asked Herman Hollerith to find a way to speed up the processing of census data.

Herman Hollerith created punched cards that resemble today's computer cards. He also invented the Hollerith 80 column code and tabulating machine.



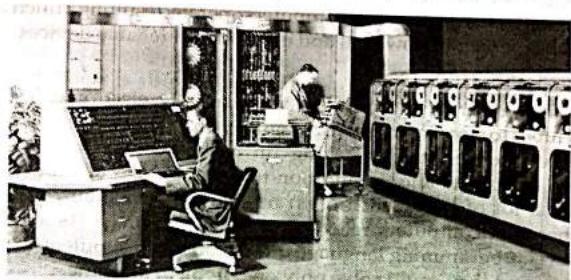
5. First Electronic computer (ENIAC) : Howard Aiken, with colleagues at Harvard and with some assistance from International Business Machines he had built by 1942 the Mark I, the world's first program-controlled calculator, an early form of a digital computer. In 1944 John Mauchley, an American physicist, and J. Presper Eckert, an American engineer, proposed an electronic digital computer, called the Electronic Numerical Integrator And Computer (ENIAC), and completed it in 1946 which is regarded as the first successful general digital computer.



6. Stored Program concept (EDSAC) : According to John Von Neumann concept, the operating instructions and data used in processing should be stored inside the computer. Whenever necessary the computer would have the capability to modify these program instructions, during their execution. This concept was incorporated into the EDSAC computer (Electronic Delay Storage Automatic Computer), which was developed at Cambridge University. This computer was capable of storing a sequence of instruction, the equivalent of the first computer program.

Development of Computer

7. UNIVAC 1 : It is the short form of Universal Automatic Computer. In 1951 it was introduced and became the first commercially available computer. The UNIVAC 1 was characteristic of the first generation of computers.



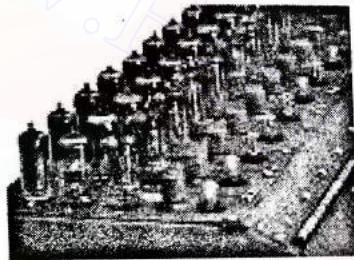
Development	Approximate dates	Important Features
Abacus	2000-3000 B.C.	First mechanical calculator
Leibniz's Calculator	1645	First adding machine capable of counting, adding and subtracting
Jacquard's weaving loom	1801	Utilized metal plates with punched holes to control weaving patterns
Babbage Analytical Engine	1834-1871	Intended to be the first general purpose computer. The engine was never constructed in Babbage's lifetime.
Herman Tabulating Machine	1887-1896	Designed a code and device to punch data into card and tabulate collected data. Used in automating the Census of 1890.
Howard Aiken's Mark I	1937-1944	The largest electromechanical computer ever built. Utilized punch paper tape to store data.
ENIAC	1943-1950	First electronic computing devices in which program wired into a permanent panel. No significant storage capability.
John Von Neumann's Stored Program Concept	1945-1852	Developed the concept of storing program instructions and data in the memory of the computer. Credited with introducing the idea of coding data and instructions in binary.
EDSAC	1946-1952	First computer capable of storing instructions and data in memory.
UNIVAC 1	1951-1954	First computer that was commercially available and produced in quantity.

Computer Generation

The history of the development of computer is often referred to tracing the different generations of computing devices. Each generation of computer is characterized by a major technological development that fundamentally changed the way computers operate, resulting in increasing power, smaller, cheaper, more powerful and efficient and reliable devices.

First Generation (1942-1955)

The first generation computers were entirely electronic. They used vacuum tubes to store instructions. Magnetic drums were used for memory. They were often enormous, taking up entire rooms. They were expensive to operate and, in addition to using a great deal of electricity, generated a lot of heat which often needed expansive air-conditioning. First generation computers relied on machine language (1s and 0s), the lowest-level programming language understood by computers, to perform operations, and they could solve only one problem at a time.



The UNIVAC 1, ENIAC and Mark 1 computers are examples of first-generation computing devices. The UNIVAC was the first commercial electronic computer. This machine was developed specially for scientific purposes but it was dedicated to a business client, the U.S. Bureau in 1951.

Second Generation (1955-1964)

In second generation of computers solid state transistors replaced vacuum tubes in computers. It was invented in Bell Laboratories.

The transistor was far superior than the vacuum tube, allowing computers to become smaller, faster, cheaper, more energy-efficient and more reliable. To represent data a magnetic core is used in computers. About the same time magnetic tape and disks began to be widely used as auxiliary storage. Magnetic disk was layered by iron oxide. Magnetic tape made possible direct access of data.

As a result of these developments, a significant increase in the processing capability of computers was achieved. Businesses began to use computers in increasing numbers and new high-level programming languages also developed at this time, such as early versions of COBOL.

Third Generation (1965-1974)

Further development in electronics brought further reduction in size, greater reliability, speed and lower costs computer. Integrated circuits (IC) placed the transistors, which was developed by J.S.Kilby. This was the hallmark of the third generation of computers.

This development is known as LSI (Large Scale Integration) and it refers to the ability to compress large number of integrated circuits on a single silicon chip. There is also VLSI (Very Large Scale Integration).

Another development that changed the way people use computers was time sharing. A time-shared computer allows many users, each working at separate input/output terminal, to use it at the same time.

Users interacted with third generation computers through keyboards and monitors and interfaced with an operating system, which allowed the device to run many different applications at one time with a central program that monitored the memory. Computers for the first time became accessible to mass users because they were smaller and cheaper than their predecessors. Users could use software according to their need because software and hardware were available separately.

Fourth Generation (1975- Up till now)

Fourth Generation computer continued to be characterized by chips that can contain increasing numbers of items. This further miniaturization components, referred to as ULSI (Ultra Large Scale Integration), resulted increased speed, greater reliability, and enormous storage capacities for current computers.

By using LSI technology, microprocessor was produced. This microprocessor brought the fourth generation of computers, as thousands of integrated circuits were built onto a single silicon chip. Computer of the first generation that filled an entire room could now fit in the palm of the hand. Intel 4004 chip, developed in 1971, located all the components of the computer from the CPU and memory to input/output control on a single chip. In 1981 IBM introduced its first computer for the home user, and in 1984 Apple introduced the Macintosh. Microprocessors also moved out of the realm of desktop computers and into many areas of life. Everyday products such as vehicles, microwave oven and electronic games etc. began to use microprocessors more and more.

As these small computers became more powerful, they could be linked together to form a network, which eventually led to the development of the Internet. Fourth generation computers also saw the development of GUIs, mouse and handheld devices.

Fifth Generation (Present and Beyond)

Unlike all other generation computers, present generation of computers is characterized by the use of the technique used to reduce complex programming. This technique is known as Artificial intelligence (AI). Fifth generation computing devices, based on artificial intelligence, are still in development, though there are some applications, such as voice recognition, that are being used today.

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Development of Computer

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Generations

First Generation	Characteristics
	<ol style="list-style-type: none"> 1. Use of vacuum tubes in circuits. 2. Use of magnetic drum as primary internal storage medium. 3. Limited main storage capacity. 4. Slow input/output. 5. Low-level symbolic language programming. 6. Heat and maintenance problem.
	Applications : Payroll processing and record keeping. Example : ENIAC, IBM 650, UNIVAC 1
Second Generation	<ol style="list-style-type: none"> 1. Use of transistors at the place of vacuum tubes. 2. Use of magnetic core as primary internal storage medium. 3. Increased main storage capacity. 4. Faster input/output. 5. Great reduction in size and heat generation. 6. Increased speed and reliability. 7. High level programming language (COBOL, FORTRAN).
	Applications : Batch oriented (Billing, Payroll processing and Updating inventory files). Example : IBM 1401, Honeywell 200, CDC 1604.
Third Generations	<ol style="list-style-type: none"> 1. Use of IC (Integrated circuit). 2. Use of magnetic core as primary storage medium. 3. More flexible input/output. 4. Smaller size, better performance and reliability. 5. Increased speed and better performance. 6. Extensive use of high level programming languages. 7. Emergence of minicomputers. Remote processing time sharing through communication. 8. Availability of operating system software to control input/output.
	Applications : Airline reservation system, market forecasting and credit card billing. Example : IBM System / 360, NCR 395, Burroughs B6700
Fourth Generation	<ol style="list-style-type: none"> 1. Use of large scale integrated circuit. 2. Increased storage capacity and speed. 3. Modular design and compatibility between hardware provided by different manufacturers. 4. Greater versatility of Input/output devices. 5. Introduction of microprocessors and microcomputers. 6. Increased use of microcomputers.
	Applications : Electronic fund transfer, computer instruction, home computers and mathematical modeling and simulation. Example : IBM PC-XT (microcomputer), Honeywell 6080 series.

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Classification of computer by the purpose which they design :

Special Purpose Computers : The special purpose computers are used to solve a single and dedicated type of problem. For their specialized use, they are extremely efficient and economical. Example- automatic aircraft landing, computerized traffic control systems.

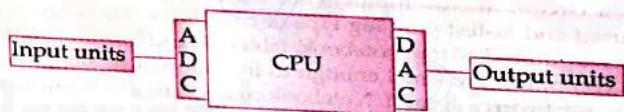
General Purpose Computers : The general purpose computers are flexible and versatile. They can be used to solve a variety of problems by changing the program or instructions .Example – Accounting, Simulation and forecasting.

Classification of computer by the types of data which they are capable manipulating :

Digital computer : In digital computers data are represented as discrete units or electrical pulse, which can be counted and switched. In modern digital computer binary system is used. Digital clock is its good example. Due to fast speed and large storage capacity digital computers are used for business and scientific data processing.

Analog computer : In analog computers data are represented as physical quantities. Physical quantities are best measured in a continuous fashion and thus are ideally suited for analog computation. Analog computer is a machine that works on data which is always changeable. Analog form of electricity is used by us. Speed of this kind of computers are slow. Voltmeter, thermometer and barometer are the examples of analog device. Analog computers are most often used for scientific and engineering purposes.

Hybrid computer : Hybrid computers have combined features of both digital and analog computers with the input and output in analog form and the processing in digital form. This involves analog to digital converter at the input end and digital to analog converter at the output end.



Classification of computers on the basis of Price, Size and Capabilities

1. Supercomputers : Supercomputers are the most powerful computers of now. These computers are large in size and memory compared to all other computers. They work with multi-processing and parallel processing abilities. At present, especially in computing speed, these are very fast. So, these are the fastest, biggest and most expensive computers. These machines contain thousands of microprocessors. First super computer of world was CRAY - 1 which was developed by Cray research company in 1976. First computer of India was PARAM which was developed by C-DAC in 1991. It was designed for ultra high performance task such as creating applications, weather forecasting, nuclear energy research, encryption cracking and designing. Examples are CRAY-1 and IBM's Deep Blue.

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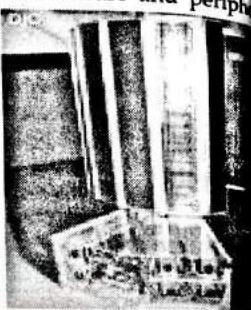
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Computer

Development of Computer

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2. Mainframe Computer : Mainframes are characterized by large internal memory storage and comprehensive range of software and peripheral equipment that might be connected. Mainframe 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. In these computers processing capacity and speed are very fast and more than one user works at a time. Multics was a mainframe timesharing operating system which was developed at Bell Laboratories. A typical super computer the CRAY-1 costs about \$20 million. These computers are used in scientific and business applications. For example, insurance companies use mainframes to process information about millions of policy holders. Examples are IBM - 370, IBM - S/390, VAX - 8800 and UNIVAC - 1110.



3. Minicomputer : Minicomputers are smaller in size, faster, cost lower than mainframes and higher than Personal Computer. They are designed for real time dedicated multi user application. Minicomputer converts into super minicomputer by using the 80386 super chip. Super minicomputer processes 5 lac process per second. These computers are used in company, passenger reservation and research etc. Examples are IBM - 17, DEC PDP 11, HP- 9000, AS 400 and BULL HN- DPX2.

4. Microcomputer : Microcomputers are computers whose central processing unit consists of a microprocessor integrated circuit. Microcomputers are the least powerful, yet the most widely used and fastest growing type of computers. There are four types of microcomputer : desktop, notebook, tablet PC and handheld computer. Desktop computers are small enough to fit on top of or alongside a desk, yet are too big to carry around. Notebook computers, also known as laptop computers, are portable, lightweight, and fit into most briefcases. A tablet PC is a type of notebook computer that accepts your handwriting. This is digitized and converted to standard text that can be further processed by programs such as a word processor. Handheld computers are the smallest and are designed to fit into the palm of one hand. Also known as掌上电脑 (palm-top), they are small enough to fit in one's pocket.

Hardware for a microcomputer system consists of a variety of different devices such as system unit, input/output, secondary storage and communication. The main media of input into a microcomputer is a keyboard and a mouse and output is the monitor. The processing speed of microcomputer is 1 lac process per second. These computers are used for business application, entertainment, at home and the field of medicine. Examples are APPLE MAC, I Mac, IBM PS/2, IBM compatible and PS/2.

5. Personal computer : A small, relatively inexpensive computer designed for an individual user. It is based on the microprocessor technology that enables manufacturers to put an entire CPU on one chip. Businesses use personal computers for word processing, accounting, desktop publishing and for spreadsheet and database management application. At home, the most popular use of personal computers is for playing games, email, chatting etc. Examples are Apple II, IBM PC, Lenovo and HP etc.



6. Laptop : A laptop is a personal computer designed for mobile use. It is small enough to sit on one's lap and fits into a briefcase. It integrates most of the components of a desktop computer, including a monitor, a keyboard, a pointing device (also known as a track pad), speakers, and other drives. It includes a rechargeable battery, so it works anywhere. By using blue tooth and wi-fi we can access the Internet.



7. Notebook computer : An extremely lightweight personal computer. It is generally thinner and smaller than laptop.

8. Workstations : Workstations are special single user computers having the same features as personal computer but have the processing speed equivalent to minicomputer or mainframe computer. A workstation computer can be fitted on a desktop. Scientists, engineers, architects and graphic designers mostly use these computers. Workstation computers are expensive and powerful computers. These have advanced processor, more RAM and storage capacity than personal computers. These are usually used for single-user application but are used as servers on computer network and web servers as well.

9. Palmtop : A small computer that literally fits in our palm. Compared to full-size computers, palmtops are severely limited, but they are practical for certain functions such as phone books and addressbooks. Palmtops that use a pen rather than a keyboard for input. Because of their small size, most palmtop computers do not include disk drives. However, many contain PCMCIA (Personal Computer Memory Card International Association) slots in which we can insert disk drives, modems, memory and other devices. Palmtops are also called PDAs, hand-held computers and pocket computers.



Objective Question

Development of Computer

JASJEET SINGH SEKHUN

Computer

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28. Processing capacity of microcomputer is per second—
 (a) one lac (b) two lac (c) four lac
 (d) five lac (e) none of these
29. IMac is a—
 (a) Processor (b) Modem (c) Network
 (d) Machine (e) None of these
30. Analytical engine was developed by—
 (a) Lovelace (b) H. Aiken (c) Charles Babbage
 (d) All of these (e) None of these
31. What is a main characteristic of computer in the following options—
 (a) File (b) Game (c) Speed
 (d) C.D (e) Floppy
32. Main electronic part in first generation computer was—
 (a) Transistor (b) VLSI (c) Vacuum tube
 (d) IC (e) None of these
33. Which one is not a type of computer on the basis of size—
 (a) Micro computer (b) Mini computer
 (c) Super mini computer (d) Mainframe computer
 (e) Optical computer
34. is not a micro computer—
 (a) Home computer (b) Personal computer (c) Laptop
 (d) Atomic computer (e) None of these
35. At first punched card was used by—
 (a) Blaise Pascal (b) Haward Aiken (c) John Mauchlay
 (d) Joseph Marie (e) None of these
36. The great contribution in the development of computer was by—
 (a) H. Hallerilt (b) C. Babbage (c) Blaise Pascal
 (d) Van Neumann (e) None of these
37. Great contributor in development of blueprint of rhythmical computer was—
 (a) H. Hallerilt (b) C. Babbage (c) Blaise pascal
 (d) Willium Buras (e) None of these
38. Modern computer was developed in—
 (a) 1946 (b) 1950 (c) 1960
 (d) 1965 (e) None of these
39. Who developed integrated chip ?
 (a) C.V. Raman (b) Robet Nayak (c) J.S. Kilbi
 (d) C. Babbage (e) None of these
40. Which material is layered at magnetic disk ?
 (a) Iron oxide (b) Phosphorus bentaioxide
 (c) Magnesium oxide (d) Sodium peroxide
 (e) None of these
41. The most powerful computer is—
 (a) Super computer (b) Micro computer (c) Mini computer
 (d) All of these (e) None of these

/Bank of Baroda

Development of Computer

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2. In a silicon chip of complete electronic circuit with transistors and other the electronic devices is called—
 (a) Work station (b) CPU (c) Integrated circuit
 (d) Magnetic disk (e) None of these
3. The digital computer is worked on the theory of—
 (a) Calculation (b) Measurement (c) Electric
 (d) Logical (e) None of these
4. The super computer is distinguish from other computers by—
 (a) High cost (b) Problem of airconditones
 (c) Large memory and calculating power
 (d) Many uses (e) None of these
5. A modern digital computer uses number system—
 (a) binary (b) decimal (c) hexadecimal
 (d) all these (e) none of these
6. PARAM was developed by
 (a) C-DAC (b) IIT Kanpur (c) BARC
 (d) IIT Delhi (e) None of these [RAS. RTS 1992]
7. Which generation was developed by the discovery of I.C.—
 (a) First generation (b) Second generation (c) Third generation
 (d) Fourth generation (e) None of these
8. The main characteristic of 4th generation was—
 (a) Transistor (b) VLSI (c) IC
 (d) Vacuum Tube (e) None of these
9. CRAY is a—
 (a) Mini computer (b) Micro computer (c) Mainframe computer
 (d) Super computer (e) None of these
10. Which of following refers to the fastest, biggest and most expansive computer ?
 (a) Personal computer (b) Super computer (c) Laptop
 (d) Note book (e) None of these [SBI Association 2009]
- Which type of computer could be found in a digital watch ?
 (a) Mainframe (b) Super computer (c) Embedded computer
 (d) Notebook computer (e) None of these [SBI 2009]
2. The first computer was programmed using
 (a) Assembly language (b) Machine language
 (c) Spaghetti code (d) Source code
 (e) None of these [Syndicate Bank 2010, Union Bank 2011]
3. Digital computers use a system to encode date and programs.
 (a) semiconductor (b) decimal (c) binary
 (d) RAM (e) none of these [Allahabad bank 2010]
4. A computer falls into the category if it is, at the time of construction, one of the fastest computers in the world.
 (a) minicomputer (b) supercomputer (c) microcomputer
 (d) a and b both (e) none of these [Allahabad bank 2010]
5. Microcomputer hardware consists of three basic categories of physical equipment—
 (a) Keyboard, monitor, hard drive
 (b) System unit, input/output, memory

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- (c) System unit, input/output, secondary storage
 (d) System unit, primary storage, secondary storage
 (e) None of these

[Syndicate bank 2012]

6. A is a large and expensive computer capable of simultaneous processing data for hundreds or thousands of users.

- (a) handheld computer (b) mainframe computer
 (c) personal computer (d) tablet computer

[SBI Associate 2012]

7. Which is the smallest of the following computers ?

- (a) Notebook (b) Laptop (c) Desktop
 (d) Workstation (e) None of these

[SBI Associate 2012]

8. A computer (also referred to as a laptop), is a small, lightweight personal computer that incorporates the screen, the keyboard, storage and processing components into a single portable unit.

- (a) notebook (b) journal (c) diary
 (d) briefcase (e) None of these

[Allahabad bank 2012]

9. A personal computer is designed to meet the computing needs of

- (a) individual (b) department (c) company
 (d) city (e) None of these

[SBI Associate 2012]

10. Which device uses a handheld operation system ?

- (a) APDA (b) A personal computer (c) A laptop
 (d) A mainframe (e) None of these

[Bank of Baroda 2012]

11. Supercomputers

- (a) are smaller in size and processing capability than mainframe computers
 (b) are common in majority of households
 (c) contain thousands of microprocessors
 (d) are rarely used by researchers due to their lack of computing capacity
 (e) are of the same size as laptops

[SBI 2012]

12. Of the following, which is the fastest ?

- (a) CD-ROM (b) RAM
 (c) Registers (d) Cache

[SSC Tier-I 2012]

13. Who designed the first electronic computer-ENIAC ?

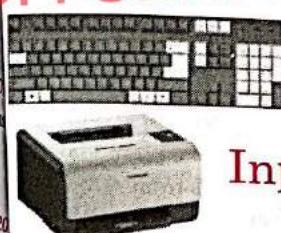
- (a) Van Nuemann (b) Joseph Jacquard
 (c) Presper Eckert & John Mauchly (d) Denis Ritchie

[Jharkhand Sachivalaya 2012]

Answers

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

★★★



03

Input and Output Device**Introduction**

There are a lot of devices that are attached to the computer. Some of them are input devices while others are output devices. These devices are collectively referred to as peripheral devices.

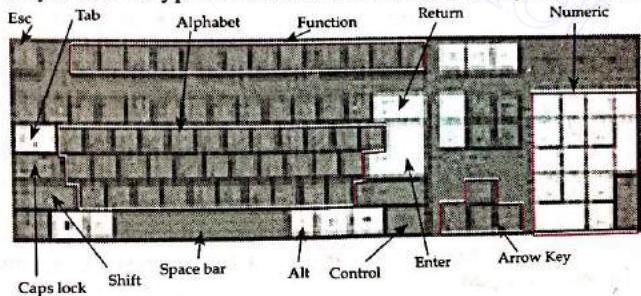
Input Devices : Information or data that is entered into a computer is called input. It can come from an external source and be fed into computer software. It is done by an input device.

In other words, devices that are used to give instruction to the computer are known as input devices. They send information into the CPU. Without any input device that computer would simply be a display device like a TV.

Some most commonly used input devices are given below

1. Keyboard
2. Mouse
3. Trackball
4. Joystick
5. Scanner
6. Microphone
7. Web Cam
8. Bar Code reader
9. OCR (Optical Character Recognition)
10. MICR (Magnetic Ink Character Reader)
11. OMR (Optical Mark Reader)
12. Kimball tag Reader
13. Speech Recognition System
14. Light Pen
15. Touch Screen

1. Keyboard : The keyboard is one of the main input devices used in a computer. It is used to enter text and numeric data in a computer system. It looks very similar to typewriters, with some additional keys like the function



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keys (F1 – F12), the Ctrl keys and Alt keys. A standard keyboard has 101 keys. A port is built for adding the keyboard. Nowadays USB keyboard is also available which is added into USB port of computer system and wireless keyboard which has no need to add into computer system.

The keyboard has five different types of keys

1. **Alphabet Keys** : A keyboard has 26 alphabet keys from A to Z. We can type any text or word with the help of these keys.

2. **Numeric Keys** : These keys are used for typing numbers. They are called number keys. They are marked with digits 0 to 9. We can also use numeric keypad on the right side of the keyboard to type numbers. These are marked with digits 0 to 9, decimal, addition, subtraction, multiplication and division. With the help of shift key, number pad acts as a direction arrow.

3. **Function Keys** : These keys are placed on the top of the keyboard. These keys are used for predefined special functions. They are marked from F1 to F12 and are twelve in number.

4. **Cursor Control Keys** : These keys are used for moving the cursor in the text that has already been entered on the monitor. They are also called arrow keys. They are marked with arrows in four different directions. These are called right, left, up and down arrow keys.

Over and above these arrow keys there are four more keys to control the cursor. They are called Home, End, Page Up and Page Down.

Home : This key is often used to return the cursor to the beginning of the line or the beginning of a document.

End : This key moves the cursor to the end of the line.

Page Up : When this key is pressed, if the page currently being viewed has more than one page, the page view will be moved up one page. The cursor goes to the back page.

Page Down : When this key is pressed, if the page currently being viewed has more than one page, the page view will be moved down one page or cursor goes to the next page.

5. **Special Keys** : Some of the special keys present on a keyboard are:

Caps Lock Key : This key is used to type the letters of the alphabet in capital letters or uppercase without using the shift key. This key is placed on the left side of the keyboard. It is referred to as a toggle key because its function goes back and forth every time it is pressed. It enables or disables all the letters from being typed in capital letters. When the caps lock key is enabled, a user would type in capital letters and when it is disabled, a user would type in small letter or lowercase.

Num Lock Key : This is a short form for numeric lock or number lock. This key is used to enable and disable the numeric keypad. This key is placed on the right side of the keyboard in the numeric keypad. Turning the Num Lock on will allow the user to use the numbers on the keypad and turn the Num Lock off will enable the keys other functions such as using the keypad as an arrow pad.

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Shift Key : This key is used in combination with other keys, so this is also called combination key. There are two shift keys on a keyboard. Some keys on the keyboard, like numeric keys, have special symbol printed on their upper portion. The shift key is used to print these symbols. When we want to type the symbol printed on the numeric key we press the shift key along with the number key on which that symbol is present. This key allows a user to type characters, either upper or lower case, and numbers to symbols. For example, pressing and holding the shift key while pressing the letter A key would generate a capital A. The shift key is commonly located on both the left and right hands of the keyboard and is commonly located below the caps lock key and the enter key on keyboards. This key is also used as a shortcut key to perform various different shortcuts. For example, holding down the shift key and pressing arrow keys will highlight text in the direction of the arrow key you press.

Enter Key : This key is also known as a return key. This is typically to finish an entry and begin the desired process, and is usually, an alternative to pressing an OK button. We put information into the computer by pressing enter key. It is used to move the cursor to the beginning of the next line. If any instruction or command is given to the computer, it will execute that instruction or command only when the enter key is pressed. There are two enter keys on a keyboard, one on the keyboard and the other one on the numeric keypad.

Space bar Key : This is the longest key on the keyboard. It is used to insert blank space between two words or anywhere in the text where needed.

Tab Key : Tab key is the abbreviation of tabulator key. It is used to advance the cursor to the next tab stop. This key can also move between selectable items in a dialog box. Spreadsheet and database management applications usually respond to the Tab key by moving the cursor to the next field or cell. In dialog boxes and menus, pressing the Tab key highlights the next button or option. In word document page margin, indent a paragraph and distance between two words is defined by tab setting and by pressing the tab key the cursor moves 1/2 inch across the page.

Escape Key (Esc) : It is a powerful key placed on a keyboard that allows user to cancel or abort operations, which he is executing at present and lets exit a program when pressed. Such as slide-show in power point, opening animation on web page is stopped by using this key. With the combination of Ctrl key it opens Start Menu.

Back Space Key : This key is used to erase anything typed on the left side of the cursor. It is placed just above the Enter key.

Delete Key : This key is used to erase anything typed on the right side of the cursor. By using this key selected word, line, page, file and drawing can be erased. It is a key that will erase information from the computer's memory and characters on the screen.

Control Key (Ctrl) : This key is also used in combination with other keys. When it is pressed in combination with another key, it performs a special operation.

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For example, when Ctrl + Alt + Delete are pressed together they open task manager. Ctrl + C and Ctrl + V performs the cut and paste. Similarly, the Shift key, the Ctrl key rarely performs any function when pressed itself. There are two Ctrl keys on a keyboard. The control key is located below the shift keys.

Print Screen Key (Prt Scr) : When this key is pressed, it either sends the current screen image to the computer clipboard or the computer prints depending on the operating system or software program the key is pressed in.

Scroll Lock Key : This key is placed on a keyboard near the keyboard pause key. This key is intended to temporarily stop the scrolling of text and halt the operation of a program.

Pause Key : This key is commonly placed near the top right of a keyboard. This key allows a user to temporarily halt the action of the program being run. For example, in computer games, the pause key is commonly used to temporarily stop the game while the user steps away from his or her computer and is shared with the break key.

Modifier key : Alt, Ctrl and Shift keys on the keyboard, that are often used in combination with another key, are modifier keys.

2. Mouse : It is an input device that was invented by Douglas Engelbart at the Stanford Research Institute in 1963. It is also called pointing device which is used to point to the things on the monitor screen. There are three types of mouses : two-button mouse, three-button mouse and optical mouse. A two-button mouse has right and left buttons, a three-button mouse has right, left and center buttons and optical mouse has right, left buttons and a scroll wheel at the centre. When we turn the mouse upside down, we see a ball under it. This mouse ball helps to move the mouse on a plane surface. The movement of the ball is reflected by the movement of the mouse pointer on the monitor. A mouse pointer takes different shapes depending on the task we are performing. The mouse is placed on a slate shaped object which is called mouse pad.



There are four mouse actions : Click, Double click, Right click and Drag and Drop.

(i) **Click** : It is a press and release of left mouse button. The mouse makes a clicking sound. A click selects an item on the screen. For example, take the mouse pointer over the My Computer icon and click on it. It will turn blue which means it is selected. Generally it is used for OK.

(ii) **Double click** : To double click, means to press and release the mouse button twice in a short interval. It is used to open a document or a program. For example, take the mouse pointer over the My Computer icon and double-click on it. The 'My Computer' window will open.

(iii) **Right click** : To right click, means to press and release the right mouse button. It often displays a list of commands on the screen. For example, take the mouse pointer over the 'My Computer' icon and right-click on it. A shortcut menu will appear. So, right clicking is used to access the properties of any object.

(iv) **Drag and drop** : Drag and drop are used to move an item on the screen. Drag and drop hold the mouse firmly. Position the pointer over an item on the screen and then press and hold down the left mouse button. Holding down the button, move the pointer to where you want to place the item and then release the button. This way we can drag and drop the item. To select text by shading by drag the mouse arrow over the text is referred to as highlight.

3. Trackball : A trackball is an alternative to a mouse. It has a ball, rotated by the hand to move the pointer in a desired direction. It is mainly used in the CAD, CAM and medical field.



4. Joystick : A joystick is an input device which helps in playing computer but it has stick in the place of ball and video games. It also works as a Trackball.



5. Scanner : A scanner is used to convert a text or an image into its electronic or digital representation, which can be viewed on the screen. These scanned or digital images can be used in different fields. They can be processed, edited and stored in memory or in any storage device. It looks like a photocopy machine. A sales clerk at a checkout counter scanning a tag on an item rather than keying it into the system is using source data automation process by scanning. Digital photos and scanned images are typically stored as bitmap graphics with extension such as .bmp, .png, .jpg, .tif or .gif.

6. Microphone : A microphone is used to record any voice or sound into the computer.



7. Web Camera : A web camera is used to view images on the Internet. Using it with the help of Internet we can view the photo of a far away person, but he should also have a web camera. It is like a digital camera which is used as an input device by adding to the computer. It captures images in digital format that can be easily transferred into a computer and manipulated using graphics software. A web cam is a video capture device connected to a computer, often using a USB port or, if connected to a network, Ethernet or Wi-Fi.



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8. Bar Code reader : A bar code reader is an electronic device for reading information contained in a printed bar code. It is also called a point-of-sale (POS) scanner. Today supermarkets commonly use bar code data for machine-readable input. Speech recognition and inventory updating. The black and white lines or bars of varying widths and lengths that we see on a grocery item at supermarket are bar codes almost any body's voice such as a call-center read by bar code reader. The bar code reader translates black and white system of different widths into electrical impulses and sends them to the computer. Now-a-days it is used in supermarkets, libraries, banks and post-offices.

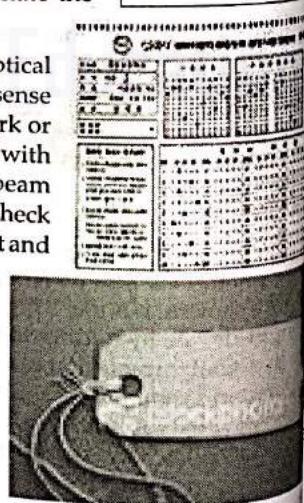


9. OCR (Optical Character Recognition) : Optical Character Recognition devices can read data that has been typed or handwritten on a source document. It is a combination of a scanner and a special software which converts the printed or handwritten data to ASCII. It is used to convert paper record into electric filling and scanned chalan into a spreadsheet.

10. MICR (Magnetic Ink Character Reader) : Magnetic Ink Character Recognition machines are capable of reading magnetic ink character on MICR documents. Magnetic Ink Character Recognition is a character recognition technology adopted mainly by the banking industry to facilitate the processing of cheques.

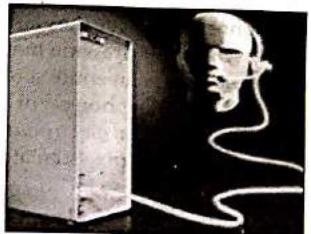
11. OMR (Optical Mark Reader) : Optical Mark Reader, sometimes called a mark sense reader, detects the presence of pencil mark or predetermined grids. OMR devices work with a dedicated scanner device that throws a beam of light on the form paper. It is used to check the objective test mark-sheet, lottery ticket and official form etc.

12. Kimball tag Reader : Kimball tag Reader is a popular data capture device. The Kimball tag is a miniature punched card containing the coded description of an item such as a garment or a box of parts.



13. Speech Recognition System : Speech recognition converts spoken words to machine-readable input. Speech recognition is a broad term which means it can recognise almost any body's voice such as a call-center system designed to recognise many voices.

Speech recognition applications include voice dialing, call routing, simple data entry, preparation of structured documents, speech-to-text processing. They are also used in aircraft cockpits.



14. Light Pen : A light pen is an input device, similar to a mouse. It is used to directly write and draw any figure on the computer screen.



15. Touch Screen : A Touch Screen is also an input device. When we touch the screen it can detect the presence and location of touch within the display area. The term generally refers to touch the screen by a finger. Touch screens can also sense other passive objects, such as a stylus. The ability to interact directly with a display typically indicates the presence of a touchscreen. It is used to listening music and selects the available choices at bank ATM and public information center.



Output devices are those devices which display or give the desired results from the computer. We use our hand and mouth to express ourselves. similarly a computer gives its output with the help of its output devices.

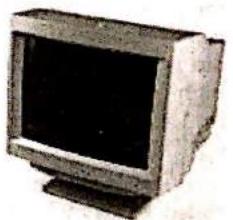
Some of the most commonly used output devices are given below

- 1. Monitor
- 2. Printer
- 3. Speaker
- 4. Plotter
- 5. Screen Image Projector

1. Monitor : A monitor is an output device that displays all work done and images on its screen. It is also called a VDU (visual display unit). After processing the input, the result is shown on the monitor. The three most common specifications about quality of monitors are dot pitch, resolution, and the refresh rate.

Mainly two types of monitor technologies available are CRT monitors and LCD.

(a) **CRT (Cathode Ray Tube) monitors :** A CRT traditionally used in most computer monitors. A CRT works by moving an electron beam back and forth across the back of the screen. Each time the beam makes a pass across the screen, it lights up



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phosphor dots inside the glass tube, thereby illuminating the active portion of the screen. By drawing many such lines from the top to the bottom of the screen, it creates an entire screen full of images. The screen is covered with fine layer of phosphorescent elements, called phosphors, which emits light by excitation when electrons strike them, creating a lit-up dot called a pixel. These small dots pixels create images on monitor.

(b) LCD (Liquid crystal display) monitors : A Liquid crystal display (LCD) is a thin, flat and lightweight screen made up of any number of color or monochrome pixels arrayed in front of a light source or reflector. It uses very small amount of electric power, and is therefore suitable for use in battery-powered electronic devices.



2. Printer : A printer is the primary output device used to get the print copy or hard copy of work on paper, slides, clothes etc. It is used to prepare lasting documents.

Types of printer

Printers are mainly divided into three groups.

1. Serial Printers (Character Printers) : Serial printers print one character at a time moving across the paper, its speeds ranging from 20 to 400 characters per second (cps), which is about 90 to 180 lines per minute (lpm).

2. Line Printers : Line printers print approximately 400 to 2,000 lines per minute (lpm) at a time, and are commonly used in data centers and industrial environments.

3. Page Printers : Page printers print more than 800 pages per minute (ppm) at a time. It is able to print large data.

Printers are of two types according to the manner of printing

(a) Impact Printer : Impact printing devices transfer the image on paper by striking a paper, ribbon and character together. They include dot-matrix printers and daisy-wheel printers.



(i) Dot-matrix Printer : The term dot matrix refers to the process of placing dots to form an image, the quality of the image being determined by the dots per inch (dpi). A dot matrix printer is a type of printer with a print head that runs to and fro, or up and down, on the page and prints by striking an ink-soaked ribbon against the paper. Dot-matrix printers are relatively expensive and do not produce high-quality output. Quality of output is poor because characters are formed by dots. Printing speed ranges from 180cps to 240cps, 260cps, 300cps and 350cps.

(ii) Daisy-wheel Printer : It is a printer that uses a printing element called a daisy wheel or print wheel that consists of a disk with a plastic

metal hub with spokes at the place of the print head. At the end of each spoke is the carved image of a type character. The wheel rotates until the correct character faces the paper, and an image is formed by a hammer striking the character against the paper through an ink-coated ribbon. The mechanism is then moved to the next location. Daisy-wheel printers are relatively slow. Its printing speed ranges from 180cps to 280cps. Daisy-wheel printers cannot print graphics and images and in general they are noisy and slow.

(b) Non-impact Printer : It is a type of printer that does not operate by striking a head against a ribbon. The term non-impact is important primarily in that it distinguishes quiet printers from noisy (impact) printers. Examples of non-impact printers include laser and ink-jet printers.

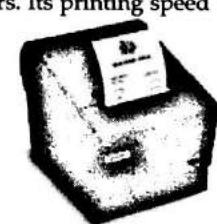
(i) Ink jet Printer : It is a non impact character printer for home computer users that prints by spraying streams of quick-drying ink on paper. There are two types of ink jet printer called mono and color. The ink is stored in disposable ink cartridges. Often a separate cartridge is used for each of the major colors. These colors are usually Black, Red/Magenta, Green/Cyan, and Yellow. A jet of special ink is ejected from a fine nozzle and produces images and characters. Although ink jet printers are often relatively inexpensive, the ink cartridges used in the printers increase the overall cost of the printer and also increase the printing cost. The print quality is good and printing speed ranges from 360 dpi to 600 dpi.



(ii) Laser Printer : Laser printer is a fast speed page printer. It is a type of printer that utilizes a laser beam to produce an image on a drum. The light of the laser alters the electrical charge on the drum wherever it hits. The drum is then rolled through a reservoir of toner, which is picked up by the charged portions of the drum. Finally, the toner is transferred to the paper through a combination of heat and pressure. Thus we get the print. There are two types of laser printer e.g. mono and color. Its printing speed and quality is better than those of other printers. Its printing speed ranges from 12 to 20 pages per minute.

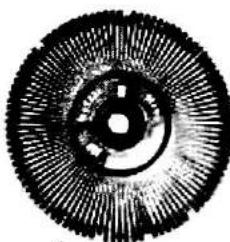


(iii) Thermal Printer (Electro Thermal Printer) : A thermal printer is a type of printer that uses heated pins to burn images onto coated thermo-chromic paper or thermal paper. When the paper passes over the thermal print head the coating turns black in the areas where it is heated producing an image. These



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Input and Output Device



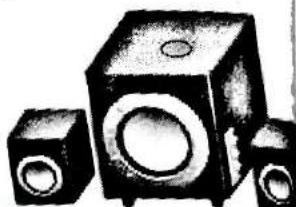
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types of printers are commonly used in calculators and fax machines. They produce noiseless high resolution print jobs.

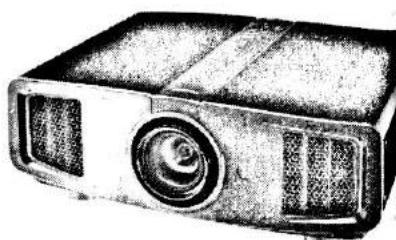
3. Speaker : A speaker is an output device which is often used as entertainment to listen to music and sound. It needs a sound card connected to a CPU that generates sounds by the card. The speakers attached to our computer are used for handling sound and music.



4. Plotter : A plotter is an output device which is used to generate graphical outputs. Plotters differ from printers in that they draw lines using a pen. As a result, they can produce continuous lines, whereas printers can simulate lines by printing close series of dots. It produces high-quality output. It is mainly used to generate the design required by engineers, doctors, city planners etc.



5. Screen Image Projector : It is an output device that enables an image such as a computer screen, to be projected on a flat surface. These devices are commonly used in meetings and presentations as they project a large image covering everyone present there.



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Objective Question

1. The two types of output devices are—
 (a) Monitor and Printer (b) Floppy disc and CD
 (c) Keyboard and Mouse (d) Windows 2000 and windows NT
 (e) None of these [SBI 2008]
2. Mouse technique used for access in properties of any object is—
 (a) Dragging (b) Dropping (c) Right clicking
 (d) Shift clicking (e) None of these [SBI 2008]
3. Dotmatrix is a type of device—
 (a) Scanner (b) Printer (c) Keyboard
 (d) Mouse (e) None of these
4. Tab key is used—
 (a) To move the cursor on screen (b) To indent a paragraph
 (c) To move a cursor (d) Only a and b
 (e) None of these
5. To go to the beginning of a text line press—
 (a) Home (b) Page up
 (c) Enter (d) None of these [SBI 2010]
6. The most common input devices are—
 (a) Microphone, printer (b) Scanner, monitor
 (c) Digital camera, speaker (d) Keyboard, mouse
 (e) None of these [SBI 2008]
7. To see all information which device output uses ?
 (a) Monitor (b) Keyboard (c) ALU
 (d) CPU (e) None of these [SBI 2009]
8. Type of mouse is—
 (a) Mechanical, general (b) Optical, mechanical
 (c) Full duplex (d) Automatic
 (e) None of these
9. The number of function keys in a keyboard is—
 (a) 14 (b) 13 (c) 12
 (d) 15 (e) 16
10. Printing head and paper is touched in—
 (a) Non-impact printer (b) Impact printer (c) Both a and b
 (d) Thermal printer (e) None of these
11. By which printer a character prints in only one stroke ?
 (a) Laser printer (b) Dot matrix printer (c) Line printer
 (d) Plotter (e) None of these
12. Which of following is not an input device ?
 (a) Keyboard (b) Monitor (c) Joystick
 (d) Microphone (e) None of these [SBI 2009]
13. What is a function of a keyboard in computer ?
 (a) Print (b) Input (c) Type
 (d) In between input and output
 (e) None of these [SBI 2009]

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40. Which of following produces high quality output—
 (a) Impact printer (b) Non-impact printer
 (c) Plotter (d) a and b
 (e) Non plotter
14. The work done by a computer operator is displayed in which part of computer?
 (a) CPU (b) VDU (c) ALU
 (d) IBM (e) None of these
15. Which of the following is a medium of output ?
 (a) Scanner (b) Mouse (c) Printer
 (d) Keyboard (e) None of these
16. Which of the following is used to input in computer in digital form?
 (a) Keyboard (b) Monitor (c) Scanner
 (d) Mouse (e) None of these
17. When was the computer mouse invented by Douglas Engelbart at Stanford research Laboratory ?
 (a) 1977 (b) 1980 (c) 1970
 (d) 1952 (e) None of these
18. How many types of printers are there?
 (a) One (b) Two (c) Three
 (d) Four (e) Five
19. A character printer prints characters per second.
 (a) 100 to 200 (b) 5 to 50 (c) 5 to 100
 (d) 5 to 75 (e) 200 to 4000
20. A line printer prints lines per minutes.
 (a) 100 to 200 (b) 5 to 50 (c) 5 to 100
 (d) 20 to 50 (e) 400 to 200
21. A scanner looks like a machine.
 (a) Type machine (b) Franking machine (c) Photocopier
 (d) Cyclostyle (e) None of these
22. How many arrow keys are there in a computer ?
 (a) One (b) Two (c) Three
 (d) Four (e) None of these
23. In any current available keyboard, how many times number keys are repeated?
 (a) One (b) Two (c) Three
 (d) Four (e) None of these
24. The slate shaped object below mouse is called—
 (a) Mouse cover (b) Mouse pad (c) Mouse port
 (d) Mouse conductor (e) None of these
25. Which of the following is an output device ?
 (a) Printer (b) Monitor (c) Mouse
 (d) a and b both (e) None of these
26. What can be the form of data ?
 (a) Written (b) Unwritten (c) Visual
 (d) Unheard (e) a and b both

Input and Output Device

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28. Link between computer and a human is possible by—
 (a) Input and output (b) Input (c) Output
 (d) CPU (e) None of these
29. Which of the following is not a type of input and output ?
 (a) Sound (b) Light (c) Mechanical
 (d) Visual (e) None of these
30. Which of the following works as mouse ?
 (a) Keyboard (b) Scanner (c) Icon
 (d) Track ball (e) None of these
31. Generally which button of the mouse is used for OK ?
 (a) Left (b) Right (c) Middle
 (d) Wheel (e) None of these
32. is fast speed printer.
 (a) Laser printer (b) Jet printer (c) Thermal printer
 (d) Daisy wheel printer (e) None of these
33. LCD stands for—
 (a) Lead crystal device (b) Light central display
 (c) Liquid central display (d) Liquid crystal display
 (e) None of these
34. The general method for to input the text and numerical data in computer is by
 (a) Keyboard (b) Scanner (c) Printer
 (d) Platter (e) None of these
35. Output devices make it possible to
 (a) View and print a data (b) Scan a data
 (c) Input a data (d) Sending a data
36. Hard copy of a document is
 (a) Printed on printer (b) Stored in floppy (c) Store in CD
 (d) Store in hard disk (e) None of these
37. Which of following groups have only input devices ?
 (a) Mouse, Keyboard, Monitor (b) Mouse, Keyboard, Printer
 (c) Mouse, Keyboard, Plotter (d) Mouse, Keyboard, Scanner
 (e) None of these
38. Which of following groups have only output devices ?
 (a) Scanner, Printer, Monitor (b) Keyboard, Printer, Monitor
 (c) Mouse, Printer, Monitor (d) Platter, Printer, Monitor
 (e) None of these
39. Any data and instruction entered in the memory of a computer is—
 (a) Storage (b) Output (c) Input
 (d) Information (e) None of these
40. To make the number pad act as a directional arrow, we press
 (a) Num lock (b) Caps lock (c) Arrow lock
 (d) Shift (e) None of these
41. Which key is used in combination with another key to perform a specific task ?
 (a) Function (b) Spacebar (c) Arrow
 (d) Control (e) None of these

[SBI 2009]

[SBI 2009]

[SBI 2009, PS. 10]

[SBI 2009, 2011]

[SBI Associates 2009]

[Allahabad 2011]

[SBI]

JASJEET SINGH SEKHON

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Computer

42. Ctrl, Shift and Alt are called keys.
 (a) modifier (b) function
 (d) adjustment (e) none of these
43. The pattern of printed lines on most products are called
 (a) prices (b) OCR
 (d) bar codes (e) none of these
44. What type of device is a computer printer ?
 (a) Input (b) Output
 (d) Storage (e) None of these
45. A scanner scans
 (a) Pictures (b) Text
 (c) Both picture and text (d) Neither picture nor text
 (e) None of these
46. What would you do to highlight a word ? You position the cursor to the word, and then
 (a) Drag mouse while holding button down
 (b) Click mouse once (c) Roll mouse around
 (d) Roll and then click mouse (e) None of these
47. A can make it easier to play games.
 (a) mouse (b) joystick
 (d) pen (e) none of these
48. In MICR, C stands for
 (a) Code (b) Colour
 (d) Character (e) None of these
49. Soft copy is an intangible output, so then what is a hard copy ?
 (a) The physical parts of the computer
 (b) The printed parts of the computer
 (c) The printed output
 (d) The physical output device
 (e) None of these
50. A printer is this kind of device—
 (a) Input (b) Word Processing (c) Processing
 (d) Output (e) None of these
51. The most common method of entering text and numerical data in computer system is through the use of a—
 (a) Keyboard (b) Scanner
 (d) Pother (e) None of these
52. A keyboard is this kind of device—
 (a) Black (b) Input
 (d) Word Processing (e) None of these
53. Which part of a computer displays the work done ?
 (a) RAM (b) Printer (c) Monitor
54. Codes consisting of bars or lines of varying widths or lengths that computer readable are known as—
 (a) An ASCII code (b) A magnetic tape (c) An OCR scanner
 (d) a Bar code (e) None of these
- (c) alphanumeric /SBI 2009
- (c) scanners /SBI 2012
- (c) Software /SBI 2012
- (c) Computer /Allahabad 2012
- (c) keyboard /SBI 2012
- (c) Printer /SBI 2012
- (c) Output /SBI Associates
- (c) Monitor /SBI Associates
55. Whenever we have to give space between the two words while typing on a PC we have to press a key known as—
 (a) Backspace (b) Shift (c) Ctrl
 (d) Escape (e) Space Bar
56. The key and the key can be used in combination with other keys to perform shortcuts and special tasks.
 (a) Control, Alt (b) Function, toggle (c) Delete, insert
 (d) Caps lock, num lock /BOB 2008
57. Which type of device is the computer monitor ?
 (a) Input (b) Output (c) Processing
 (d) Software (e) None of these /Syndicate Bank P. O. 2010
58. Which of these keys is not on the number keypad ?
 (a) Ctrl (b) Del (c) Enter
 (d) Num Lock (e) None of these /Syndicate Bank P. O. 2010
59. The primary output device for computers is a
 (a) Video monitor (b) Printer (c) Keyboard
 (d) Mouse (e) None of these /Syndicate Bank P. O. 2010
60. provides the means to move the pointer on the screen and give information to the computer by clicking its buttons.
 (a) Scanner (b) Mouse (c) Keyboard
 (d) Program (e) None of these /Syndicate Bank P. O. 2010
61. Soft copy refers to
 (a) Printed output (b) Music sounds (c) Screen output
 (d) Digitizing (e) None of these /Syndicate Bank P. O. 2010
62. Why is the Caps Lock key referred to as a toggle key ?
 (a) Because its function goes back and forth every time it is pressed
 (b) Because it cannot be used for entering numbers
 (c) Because it cannot be used to delete
 (d) Because it cannot be used to insert
 (e) None of these /Bank of Baroda Clerk 2010
63. One puts information into the computer by pressing this key—
 (a) Caps lock (b) Tab (c) Enter
 (d) Esc (e) None of these /Bank of Baroda Clerk 2010
64. The key that must be pressed each time a new command or information is entered—
 (a) Esc (b) Return/Enter (c) Delete
 (d) Home (e) None of these /Bank of Baroda Clerk 2010
65. What term is used to describe using the mouse to move an item on the screen to a new location ?
 (a) Click (b) Double-click (c) Drag and drop
 (d) Point (e) Right-click /Allahabad Bank Clerk 2010
66. To select text by shading as you drag the mouse arrow over the text is referred to as
 (a) Clip art (b) Highlight (c) Fetch
 (d) Decode (e) None of these /Allahabad Bank Clerk 2010

Input and Output Device

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JASJEET SINGH SENSATION

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Computer

67. A button that makes characters either upper or lower case and numbers to symbols—
 (a) Monitor (b) Shift key (c) Icon
 (d) Mouse (e) None of these [Syndicate Bank Clerk 2010]
68. Pick the odd one—
 (a) Mouse (b) Scanner (c) Printer
 (d) Keyboard (e) None of these [Syndicate Bank Clerk 2010]
69. Letters, numbers, and symbols found on a keyboard are
 (a) Icon (b) Screen (c) Keys
 (d) Menu (e) None of these [Syndicate Bank Clerk 2010]
70. A piece of hardware that is used to enter information into the computer by using keys
 (a) Keyboard (b) Monitor (c) Hard disk
 (d) Icon (e) None of these [Syndicate Bank Clerk 2010]
71. Capital letters on a keyboard are referred to as
 (a) Caps lock key (b) Grownups (c) Big guys
 (d) Upper case letters (e) None of these [Syndicate Bank Clerk 2010]
72. Powerful key that lets you exit a program when pushed
 (a) Arrow key (b) Space bar (c) Escape key
 (d) Return key (e) None of these [Syndicate Bank Clerk 2010]
73. Printed information called exists physically and is a permanent form of output than that presented on a display device.
 (a) Soft copy (b) Carbon copy (c) Hard copy
 (d) Desk copy (e) None of these [Syndicate Bank Clerk 2010]
74. Moves the cursor one space to the right or puts spaces in between words
 (a) Control key (b) Space bar (c) Printer
 (d) Mouse (e) None of these [Punjab & Sind Bank Clerk 2010]
75. Use this when you want to make all letters capital without having to use the shift key for each character
 (a) Shifter (b) Upper case (c) Caps lock key
 (d) Icon (e) None of these [Punjab & Sind Bank Clerk 2010]
76. Devices that let the computer communicate with you
 (a) Input (b) Output (c) Type
 (d) Print (e) None of these [Punjab & Sind Bank Clerk 2010]
77. Devices that allow you to put information into the computer
 (a) Input (b) Output (c) Type
 (d) Print (e) None of these [Punjab & Sind Bank Clerk 2010]
78. Any letter, number, or symbol found on the keyboard that you can type into the computer
 (a) Output (b) Character (c) Type
 (d) Print (e) None of these [Punjab & Sind Bank Clerk 2010]
79. A key that will erase information from the computer's memory characters on the screen
 (a) Edit (b) Delete key (c) Dummy out
 (d) Trust key (e) None of these [Punjab & Sind Bank Clerk 2010]

Input and Output Device

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- performing—
 (a) active tab (b) insertion point (c) mouse pointer
 (d) ribbon (e) none of these [Bank of Baroda 2010, Union Bank of India 2011]
81. You can use the tab key to
 (a) move a cursor across the screen
 (b) indent a paragraph
 (c) move the cursor down the screen
 (d) only (a) and (b)
 (e) none of these [Bank of Baroda Clerk 2010]
82. Information that comes from an external source and is fed into computer software is called
 (a) Input (b) Output (c) Throughput
 (d) Reports (e) None of these [PNB Clerk 2010]
83. Which keys enable the input of numbers quickly ?
 (a) Function keys (b) The numeric keypad
 (c) Ctrl, shift and alt (d) Arrow keys
 (e) None of these [PNB Clerk 2010, Union Bank of India 2011]
84. You use a(n) ..., such as a keyboard or mouse, to input information.
 (a) storage device (b) processing device (c) input device
 (d) output device (e) None of these [SBI Associate 2010]
85. A(n) ... camera is a peripheral device used to capture still images in a digital format that can be easily transferred into a computer and manipulated using graphics software.
 (a) digital (b) analog (c) classic
 (d) film (e) None of these [Allahabad 2010]
86. Digital photos and scanned images are typically stored as ... graphics with extensions such as .bmp, .png, .jpg, .tif, or .gif.
 (a) vector (b) bitmap
 (c) either vector or bitmap (d) neither vector nor bitmap
 (e) None of these [SBI Associate 2010]
87. OCR stands for
 (a) Optical Character Recognition (b) Optical CPU Recognition
 (c) Optimal Character Rendering (d) Other Character Restoration
 (e) None of these [Panjab & Sind Bank PO 2010]
88. Which device is used as the standard pointing device in a Graphical User Environment ?
 (a) Keyboard (b) Mouse (c) Joystick
 (d) Track ball (e) None of these [Panjab & Sind Bank PO 2010]
89. Which of the following is not an output device ?
 (a) Plotter (b) Printer (c) Monitor
 (d) Touch Screen (e) None of these [Panjab & Sind Bank PO 2010]
90. The arrow keys can be used to
 (a) delete text
 (b) move the cursor in the text that has already been entered
 (c) save the document
 (d) move the cursor while deleting text
 (e) None of these [Union Bank of India 2011]

JAS JEET SINGH SEKHON

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Computer

- 91.** What is a keyboard used for ?
 (a) Input text and numbers and send commands to the computer
 (b) To create new keys to use with your computer
 (c) To open the computer up
 (d) To create pictures and images and send them to your computer
 (e) None of these [BOB 2]
- 92.** What are the speakers attached to your computer used for ?
 (a) Displaying images (b) Sending messages (c) Storing message
 (d) Handling sound and music (e) None of these [BOB 2]
- 93.** The mouse ... usually appears in the shape of an arrow.
 (a) indicator (b) marker (c) meter
 (d) pointer (e) None of these [BOB 2]
- 94.** The most common storage device for the personal computer is the
 (a) floppy disk (b) USB thumb drive (c) zip disk
 (d) hard disk drive (e) pen drive [BOB 2]
- 95.** Which of the following could be digital input devices for computer
 (a) Digital camcorder (b) Microphone (c) Scanner
 (d) All of the above (e) None of these [Allahabad Bank 2]
- 96.** A sales clerk at a checkout counter scanning a tag on an item rather than
 keying it into the system, is using ...
 (a) input automation (b) item data automation
 (c) scanning automation (d) source data automation
 (e) None of these [Allahabad Bank 2]
- 97.** If you open a menu and then decide you don't want to select an option
 after all, click the menu title again or press the ... key to close the menu
 (a) Shift (b) Tab (c) F1
 (d) Esc (e) None of these [Allahabad Bank 2]
- 98.** A key that will erase information from the computer's memory a
 characters on the screen
 (a) edit (b) delete key (c) dummy out
 (d) trust key (e) esc key [Allahabad Bank Clerk 2]
- 99.** A is often used to select or highlight.
 (a) icon (b) keyboard (c) hard disk
 (d) floppy disk (e) mouse [Allahabad Bank Clerk 2]
- 100.** Mr. X has no printer to print his report. He wants to take it to Mr.
 computer because Mr. Y has a printer. Mr. X could save his report on

 (a) hard drive (b) piece of paper (c) scanner
 (d) monitor (e) floppy disk [Allahabad Bank Clerk 2]
- 101.** The most frequently used piece of hardware for inputting data is the
 (a) keyboard (b) floppy disk (c) cursor
 (d) software (e) hardware [Allahabad Bank Clerk 2]
- 102.** The may also be called the screen or monitor.
 (a) printer (b) scanner (c) hard disk
 (d) software (e) display [Allahabad Bank Clerk 2]

Input and Output Device

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- 103.** In a computer which device is functionally opposite to a keyboard
 (a) Joystick (b) Trackball
 (c) Mouse (d) Printer [SSC CPO 2015]
- 104.** Devices that enter information and let you communicate with the
 computer are called
 (a) Software (b) Output devices (c) Hardware
 (d) Input devices (e) Input/output devices [SBI 2012]
- 105.** Which of the following does not relate to input unit ?
 (a) It accepts data from the outside world
 (b) It converts data into binary code that is understandable by the
 computer
 (c) It converts binary data into the human readable form that is
 understandable to the users
 (d) It sends data in binary form to the computer for further processing
 (e) None of these [SBI 2012]
- 106.** Which of these is a point-and-draw device ?
 (a) Mouse (b) Scanner (c) Printer
 (d) CD-ROM (e) Keyboard [IBPS PO 2012]
- 107.** Which of the following software could assist someone who cannot use
 their hands for computer input ?
 (a) Video conferencing (b) Speech recognition (c) Audio digitizer
 (d) Synthesizer (e) None of these [IBPS PO 2012]
- 108.** A is used to read handwritten or printed text to make a digital
 image that is stored in memory.
 (a) Printer (b) Laser beam (c) Scanner
 (d) Touch pad (e) None of these [RBI 2012]
- 109.** A joystick is primarily used to/for
 (a) Print text (b) Computer gaming (c) Enter text
 (d) Draw pictures (e) Control sound on the screen [SBI-PO 2013]
- 110.** The first computer mouse was built by—
 (a) Douglas Engelbart (b) William English
 (c) Oaniel Coogher (d) Robert Zawacki [AB 2013]

Answers

- | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|
| 1. (a) | 2. (c) | 3. (b) | 4. (b) | 5. (a) | 6. (d) | 7. (a) |
| 8. (b) | 9. (c) | 10. (b) | 11. (b) | 12. (b) | 13. (b) | 14. (c) |
| 15. (b) | 16. (c) | 17. (c) | 18. (e) | 19. (b) | 20. (e) | 21. (e) |
| 22. (c) | 23. (d) | 24. (b) | 25. (b) | 26. (d) | 27. (e) | 28. (a) |
| 29. (b) | 30. (d) | 31. (a) | 32. (a) | 33. (d) | 34. (a) | 35. (a) |
| 36. (a) | 37. (d) | 38. (d) | 39. (c) | 40. (d) | 41. (d) | 42. (a) |
| 43. (d) | 44. (b) | 45. (c) | 46. (a) | 47. (b) | 48. (d) | 49. (c) |
| 50. (d) | 51. (a) | 52. (b) | 53. (c) | 54. (d) | 55. (e) | 56. (a) |
| 57. (b) | 58. (a) | 59. (a) | 60. (b) | 61. (c) | 62. (a) | 63. (c) |
| 64. (b) | 65. (c) | 66. (b) | 67. (b) | 68. (c) | 69. (c) | 70. (a) |
| 71. (a) | 72. (c) | 73. (c) | 74. (b) | 75. (c) | 76. (a) | 77. (a) |
| 78. (b) | 79. (b) | 80. (c) | 81. (d) | 82. (a) | 83. (b) | 84. (c) |
| 85. (a) | 86. (b) | 87. (a) | 88. (b) | 89. (d) | 90. (b) | 91. (a) |
| 92. (d) | 93. (d) | 94. (a) | 95. (d) | 96. (c) | 97. (d) | 98. (b) |
| 99. (e) | 100. (e) | 101. (a) | 102. (e) | 103. (d) | 104. (d) | 105. (c) |
| 106. (a) | 107. (b) | 108. (c) | 109. (b) | 110. (a) | | |

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JASJEET SINGH SEKHON

Memory

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04

Memory

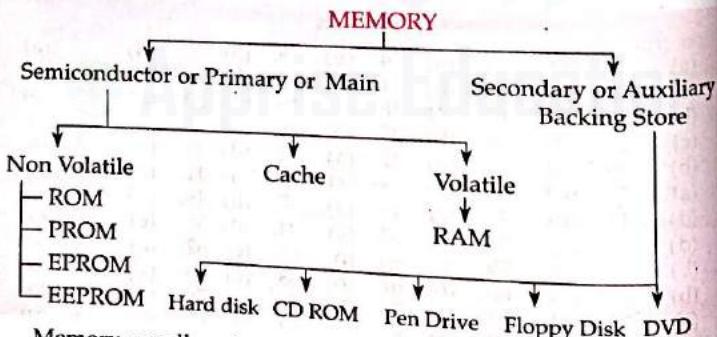


Computer memory refers to the devices that are used to store data or programs on a temporary or permanent basis for use in a computer. Data or instruction entered into the memory of a computer is considered storage. It is one of the fundamental components of all modern computers coupled with a central processing unit. For central processing unit to process the input data, there must be a place for storing the data and instructions. This is provided in the memory unit.

Data representation

The memory unit of the CPU consists of a large number of cells called location. Each location is identified with a unique label called an address which is used to store data or instruction. The CPU keeps track of all memory and program instructions through the use of memory address. Computer represent information in binary code, written as sequences of 0s and 1s. The CPU to hold instructions and data in order represents an on state and '0' represents an off state in a circuit. To store to be processed. It is the first place where data in location is called 'Write' and fetch the data in location is called 'Read'. And instructions are placed after being input, location can contain fixed number of bits called word length. Word length and processed information is placed in it to be can be 8, 16, 32 or 64 bits. Bit is smallest unit of binary digit. A word is returned to an output device. But it can hold arrangement of binary digits. A byte is the unit of memory which is a group of data only temporarily because it requires a continuous flow of electrical current. If current is interrupted, data is lost. It allows data to be read and written randomly not in sequence, so read and write of data is bit quickly. RAM is available in 64 MB, 128 MB, 256MB, 512MB and 1GB capacity.

Types of Memory



Memory usually refers to a form of semiconductor storage known as Random-Access Memory (RAM) and sometimes other forms of fast temporary storage. It is a place in the computer system where data and programs are temporarily stored in internal storage areas in the computer. The term memory identifies data storage that comes in the form of chips.

Similarly, storage today more commonly refers to mass storage such as optical discs, forms of magnetic storage such as hard disk drives, and other types slower than RAM, but of a more permanent nature. The primary device that a computer uses to store information is hard drive. Memory and storage were respectively called main memory and secondary storage. The terms internal memory and external memory are also used. Storage and memory differ with respect to price reliability and speed.

Primary or Main Memory or Semiconductor Memory or Internal Memory

Computer memory usually refers to the semiconductor technology that is used to store information in electronic devices. Current primary computer memory makes use of IC consisting of silicon-based transistors.

There are two main types of memory

Volatile and Non-volatile. Volatile memory is computer memory that requires power to maintain the stored information, unlike Non-volatile memory which does not require a maintained power supply.

Volatile Memory

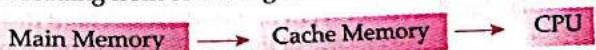
RAM (Random Access Memory) : It is a volatile memory. It is the most common type of memory used in computer. It works with the CPU to hold instructions and data in order to be processed. It is the first place where data to be processed. It is the first place where data in location is called 'Write' and fetch the data in location is called 'Read'. And instructions are placed after being input, location can contain fixed number of bits called word length. Word length and processed information is placed in it to be can be 8, 16, 32 or 64 bits. Bit is smallest unit of binary digit. A word is returned to an output device. But it can hold arrangement of binary digits. A byte is the unit of memory which is a group of data only temporarily because it requires a continuous flow of electrical current. If current is interrupted, data is lost. It allows data to be read and written randomly not in sequence, so read and write of data is bit quickly. RAM is available in 64 MB, 128 MB, 256MB, 512MB and 1GB capacity.



There are two types of RAM: Dynamic RAM and Static RAM.

- Dynamic RAM** : It requires constant refreshing of its contents. It loses its content in a very short period even though computer is working. It is cheaper than static RAM (SRAM).
- Static RAM** : It does not require refreshing. It retains its content till computer is working. It is faster than dynamic RAM (DRAM).

Cache Memory : Cache is a faster, costlier and a temporary storage area where frequently accessed data can be stored. Once the data is stored in the cache, it can be used in the future by accessing the cached copy rather than recomputing the original data. The CPU and hard drive frequently use a cache. When the processor needs to read from or write to a location in main memory, it first checks whether a copy of that data is in the cache. If so, the processor immediately reads from or writes to the cache, which is much faster than reading from or writing to main memory.



JASJEET SINGH SEKHON

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Computer

Non Volatile Memory

ROM (Read Only Memory): It is a non volatile memory. Data and instructions stored in it which can be read, only modified or destroyed. It is commonly used for storing program instructions that are not required to change. It is an internal storage area in the computer. It is a silicon chip on motherboard on which instructions are burned at the time of manufacture. When switched on, the computer instruction stored there automatically initiated and after switching off instructions do not get lost. These permanent instruction stored in ROM are called BIOS (Basic Input Output System). On computer the BIOS contains all the instruction required to control the keyboard, display screen, disk drives, serial communication and number of miscellaneous functions. The BIOS is copied from ROM RAM each time the computer is booted. This is known as shadowing.

In computing **firmware** is the combination of read-only memory and program code pre-installed and data stored in it. Firmware is a combination of software and hardware. Typical examples of devices containing firmware are embedded systems, computers, computer peripherals, mobile phones and digital cameras. The firmware contained in these devices provides control program for the device. Computer chips that have data or programs recorded on them are firmware. Firmware is held in non-volatile memory devices such as ROM, PROM, EPROM, or flash memory.

PROM (Programmable Read Only Memory): It is a non volatile memory. In PROM instructions can burn once, then it is unalterable. After that behaves like ROM.

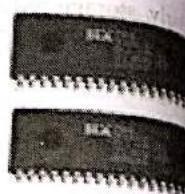
EPROM (Erasable Programmable Read Only Memory) : It is a non volatile (memory) similar to PROM, but the burning process is reversible by exposure to ultraviolet light. It can be erased by exposure to strong ultraviolet light, then rewritten. It is also called ultraviolet EPROM.

EEPROM (Electrically Erasable Programmable Read Only Memory) is a non volatile similar to EPROM, but the burning process is reversible by exposure to electric pulses. It can be electrically erased, then rewritten electrically. So that they need not be removed from the computer.

Secondary or Auxiliary Memory

The main memory is volatile and limited in capacity so there is a need to store data in a more permanent and cheaper form. Such kind of storage is known as secondary memory. It is also known as auxiliary or backing store. Secondary storage does not lose data when the device is powered off. It is non-volatile. Data that is not currently required by the CPU is kept in backing store and copied into main storage when needed. The operating system retrieves data from secondary storage in same block size called page. The most common storage media used as backing store is magnetic tape and magnetic disk. It differs from primary storage because it is not directly accessible by the CPU.

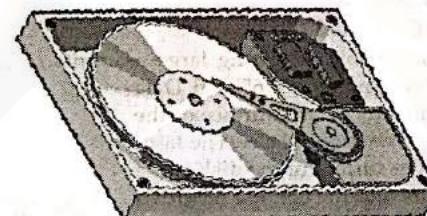
1. Hard Disk : A hard disk is a magnetic disk which stores and provides relatively quick access to large amounts of data. It provides higher capacity and greater reliability than other types of disk drives. A hard disk is real a set of several stacked platters. Each of these looks like an old song record.



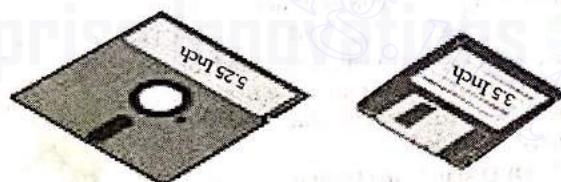
Memory

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All platters are mounted on a vertical shaft forming a disk pack. Both surfaces of the platters in a pack are used for recording except for the top and bottom platters. The top and bottom platters have data recorded only on their inner surfaces. Each platter requires two read and write heads, one for each side. Data is recorded on concentric rings on the surface of the platters called tracks. Each platter has the same number of tracks. Each track is subdivided into sectors and each sector stores a fixed amount of data. The process of dividing a disk into tracks and sectors is called formatting. Thus the operating system can store and locate data and information on the disk. Read/write head can read and write data direct to any track, so access or writing of data becomes very fast. It is sealed into a single module with the read/write heads so it is protected from the environment and any scratches. Often it is called C drive in computer. All programs and data of computer are installed in hard disk. Today's computers are available with a hard disk capacity 10 GB, 20 GB, 40 GB, 80 GB.



2. Floppy Disk : It is a soft removable magnetic disc that holds information. The disk is enclosed in an envelope to protect it from dust and scratches. Data is retrieved or recorded on the surface of the disk through a slot on the envelope. On most disk drives, the read/write head is in physical contact with the disk surface. After reading and writing the head lifts away to reduce any harm to disk. It is slower to access than hard disks and has less storage capacity, but it is much less expensive. And most important, they are portable and most popular form of backing store. It is an external memory.

**Floppy Disks come in three basic sizes :**

- 8-inch** : The first floppy disk design. The typical desktop/laptop computer does not use the 8-inch floppy disk.
- 5 1/4-inch** : The common size for personal computer and the predecessor to the 3 1/2-inch floppy disk. It is generally capable of storing between 100K and 1.2MB of data. The most common sizes are 360K and 1.2MB.
- 3 1/2-inch** : Floppy is encased in a rigid envelope.

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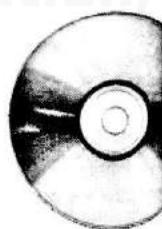
3. Magnetic Tape : This is the most successful backup storage medium. Storage of data in magnetic tape is similar to the cassette tape that we use for the storage and recording of music. It is made of mylar or polyester. It is generally 2400 to 3600 feet long and half an inch wide. The amount of data that can be stored on magnetic tape is enormous in comparison to punched cards and paper tapes. It can be re-used for storing the data by writing, modifying and erasing the old data. Magnetic tape drive is used for reading and writing data in magnetic tape. All magnetic tape drives have two tape reels. The one reel containing the tape to be read and write is called file reel and the other is called take up reel.



4. CD-ROM (Compact Disc Read Only Memory) : CD-ROM is a optical disk capable of storing large amounts of data up to 650MB. Data is recorded permanently on the surface of the optical disk through the use of laser. The laser burns the hole on the surface of the disk at the time of manufacture and the content recorded cannot be changed or erased by users. A laser beam of low intensity is used to read the data recorded on the disk. To access the data from the CD, CD-Drive and to write the data on the CD, CD-Writer is needed. It is also called WORM (Write Once Read Many) disk because data can be read many times from CD but any modification is not possible. Erasable optical disks are also available. CD-ROM are particularly well-suited for applications that support color, graphics, sound, and video.



5. CD-R/W (Compact Disc Read / Write) : CD-R/W is also an optical disk. Data is recorded on the surface of the optical disk through the use of laser but it can be erased. To access the data from the CD, CD-R/W drive is needed.



6. DVD : DVD stands for Digital Versatile Disk or Digital Video disk. Its working technique is like a CD-ROM. It is single or double sided and each side can store one or two layers of data. It stores minimum 4.37GB data or full movie of very good quality DVD-Video, including several audio tracks in formats like stereo, Dolby Digital and also advanced menu systems, subtitles and still pictures. It can be played by DVD Players and most computer DVD-ROM. Double sided and double layered DVD can store 17 GB audio and video.

Memory

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7. Pen Drive : It looks like small key ring. Most pen drives use a standard USB (Universal Serial Bus) connection allowing plugging into a port on a personal computer. USB pen drive emulates a small disk drive and allows data to be transferred easily from one device to another. The way it works is very simple. It also works very fast. It consists of flash memory data storage device integrated with a USB interface. It is typically removable and rewritable. Since it is a relatively new device, storage capacities can range from 64 MB to 256 GB. It is also called Flash drive. It is an example of EEPROM memory. The common use of USB pen drive is to transport personal data or store personal files such as documents, pictures and video. One can also store medical alert information for emergency use or as preparation against disaster.



8. Flash Memory : It is sometimes called flash RAM. It is a non volatile computer storage that can be electrically erased and reprogrammed. It is used in cellular phone, digital camera and digital set top box etc.

Objective Question

1. Typical acronym of reusable optical storage will be
 - (a) CD
 - (b) CD-RW
 - (c) DVD
 - (d) RPM
 - (e) None of these[SBI 2009, IBPS 2014]
2. Storage which stores or retains data after power off is called—
 - (a) Volatile storage
 - (b) Non-volatile storage
 - (c) Sequential storage
 - (d) Direct storage
 - (e) None of these[BOB 2010]
3. Data gathering in computer means, they allow to use data.
 - (a) Present
 - (b) Input
 - (c) Output
 - (d) Store
 - (e) None of these[SBI 2008]
4. A permanent memory, which holds data and instruction for start-up the computer and does not erase data after power off.
 - (a) Network interface card
 - (b) CPU
 - (c) RAM
 - (d) ROM
 - (e) None of these[SBI 2008]
5. The process to copy the software in hard disk from secondary storage media is called—
 - (a) Configuration
 - (b) Download
 - (c) Storage
 - (d) Upload
 - (e) Escalation
6. Which of the following memories must be refreshed many times per second ?
 - (a) EPROM
 - (b) ROM
 - (c) Static RAM
 - (d) Dynamic RAM
 - [SSC LDC 2015]
7. When we work on any document on PC, it is stored temporarily on—
 - (a) RAM
 - (b) ROM
 - (c) CPU
 - (d) Flash memory
 - (e) CD-ROM

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59. is the process of dividing the disk into tracks and sectors
 (a) Tracking (b) Formatting (c) Crashing
 (d) Allotting (e) None of these [PNB Clerk]

60. Saving is the process of—
 (a) Copying a document from memory to a storage medium
 (b) Making changes to a document's existing content
 (c) Changing the appearance, or overall look, of a document
 (d) Developing a document by entering text using a keyboard
 (e) None of these [Syndicate bank]

61. The term ... refers to data storage systems that make it possible for a computer or electronic device to store and retrieve data.
 (a) retrieval technology (b) input technology
 (c) output technology (d) storage technology
 (e) None of these [SBI Associate]

62. is the maximum amount of data that can be stored on a storage medium.
 (a) Magnetic storage (b) Optical storage (c) Solid-state storage
 (d) Storage capacity (e) None of these [SBI Associate]

63. Which of the following can only have sequential access ?
 (a) Disk (b) Tape (c) CD-ROM
 (d) DVD-ROM (e) None of these [SBI Associate]

64. When you save to, your data will remain intact even when the computer is turned off.
 (a) RAM (b) mother board
 (c) secondary storage device (d) primary storage device
 (e) None of these [Allahabad Bank PO]

65. A CD-RW disk
 (a) has a faster access than an internal disk
 (b) is a form of optical disk, so it can only be written once
 (c) holds less data than a floppy disk
 (d) can be erased and rewritten
 (e) None of these [Panjab & Sind Bank PO]

66. Which device can understand difference between data and program?
 (a) Input device (b) Output device (c) Memory
 (d) Microprocessor (e) None of these [Panjab & Sind Bank PO]

67. Which of the following devices have a limitation that we can only read it but can not erase or modify it ?
 (a) Tape drive (b) Hard disk (c) Compact disk
 (d) Floppy disk (e) None of these [Panjab & Sind Bank PO]

68. Which of the following is the storage area within the computer itself which holds data only temporarily as the computer processes instructions?
 (a) the hard disk (b) main memory (c) the control unit
 (d) read-only memory (e) None of these [Panjab & Sind Bank PO]

69. If a memory chip is volatile, it will
 (a) explode if exposed to high temperatures
 (b) lose its contents if currents it turned off
 (c) be used for data storage only
 (d) be used to both read and write data
 (e) None of these [Panjab & Sind Bank PO]

[Panjab & Sind Bank PO]

Memory

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70. What characteristic of read-only memory (ROM) makes it useful ?
 (a) ROM information can be easily updated
 (b) Data in ROM is nonvolatile, that is, it remains there even without electrical power

- (c) ROM provides very large amounts of inexpensive data storage
 (d) ROM chips are easily swapped between different brands of computers
 (e) None of these [Union Bank of India Clerk 2011]

71. A DVD is an example of a (n)
 (a) hard disk (b) optical disc (c) output device
 (d) solid-state storage device (e) None of these [Bank of Baroda 2011]

72. Which of the following are advantages of CD-ROM as a storage media?
 (a) CD-ROM is an inexpensive way to store large amounts of data and information
 (b) CD-ROM disks retrieve data and information more quickly than magnetic disks do
 (c) CD-ROMs make less errors than magnetic media
 (d) All of these (e) None of these [Allahabad Bank PO 2011]

73. Storage and memory differ with respect to which of the following characteristics ?
 (a) Price (b) Reliability (c) Speed
 (d) All of these (e) None of these [Allahabad Bank PO 2011]

74. Which media have the ability to have data/information stored (written) on them by users more than once ?
 (a) CD-R disks (b) CD-RW disks (c) Zip disks
 (d) Optical Disks (e) Both CD-RW disks and Zip disks [Allahabad Bank PO 2011]

75. Storage media such as a CD read and write information using
 (a) a laser beam of red light (b) magnetic dots
 (c) magnetic strips (d) All of these (e) None of these [Allahabad Bank PO 2011]

76. Cache and main memory will lose their contents when the power is off. They are
 (a) dynamic (b) static (c) volatile
 (d) non-volatile (e) faulty [Allahabad Bank PO 2011]

77. Which of the following is a storage device that uses rigid, permanently installed magnetic disks to store data/information
 (a) floppy diskette (b) hard disk (c) permanent disk
 (d) optical disk (e) None of these [Allahabad Bank PO 2011]

78. Which of the following is an example of storage devices ?
 (a) Magnetic disks (b) Tapes (c) DVDs
 (d) All of these (e) None of these [Allahabad Bank PO 2011]

79. Which of the following is an example of an optical disk ?
 (a) Digital versatile disks (b) Magnetic disks
 (c) Memory disks (d) Data bus disks (e) None of these [Allahabad Bank PO 2011]

80. The main memory of a computer can also be called ...
 (a) primary storage (b) internal memory (c) primary memory
 (d) all of these (e) None of these [Allahabad Bank PO 2011]

81. is the process of dividing the disk into tracks and sectors.
 (a) Tracking (b) Formatting (c) Crashing
 (d) Allotting (e) Dicing [Allahabad Bank 2011]

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82. A disk's content that is recorded at the time of manufacture and cannot be changed or erased by the user is
 (a) memory-only (b) write-only (c) read-only
 (d) run-only (e) non-changeable [Allahabad Bank]
83. This is a permanent storage device
 (a) floppy disk (b) monitor (c) RAM
 (d) cache (e) hard disk [Allahabad Bank]
84. The space in your computer that loads and works with data
 (a) cache memory (b) CPU (c) megabyte
 (d) RAM memory (e) ROM memory [Allahabad Bank Clerk]
85. What part of the computer provides only temporary storage of files?
 (a) ROM memory (b) RAM memory (c) hard drive
 (d) mother board (e) processor [Allahabad Bank Clerk]
86. What does RAM stand for ?
 (a) Read Access Memory (b) Read Anywhere Memory
 (c) Random Anything Memory (d) Random Access Module
 (e) Random Access Memory [SBI]
87. What type of device is a 3½ inch floppy drive ?
 (a) Input (b) Output (c) Software
 (d) Storage (e) None of these [SBI]
88. Which of the following memory chip is faster ?
 (a) There is no certainty (b) DRAM (c) SRAM
 (d) DRAM is faster for larger chips (e) None of these [SBI]
89. Which is not a storage device ?
 (a) A CD (b) A DVD (c) A floppy disk
 (d) A printer (e) A Hard disk [SBI-PO]
90. Which of the following is *not* a secondary storage unit ?
 (a) RAM (b) DVD (c) Floppy
 (d) Magnetic tape [INDIA]
91. The file system resides permanently on storage.
 (a) Primary (b) Secondary
 (c) Device (d) Direct memory [SBI-PO]
92. DVD is—
 (a) Digital Video Disk (b) Dynamic Versatile Disk
 (c) Digital Versatile Disk (d) Dynamic Video Disk [ITI]

Answers

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

★★★



05

Personal Computer

Introduction

A personal computer (PC) is a general-purpose computer which is designed for personal uses. Its size, capabilities, and low cost make it useful for individuals. A personal computer may be a desktop, a laptop, tablet or palmtop. It is based on microprocessor technology. Software applications for personal computers include word processing, accounting, spreadsheet, databases, web browsers and e-mail, games and special-purpose software. Modern personal computers often have high-speed or dial-up connections to the Internet, allowing access to the Internet and a wide range of other sources. A PC may be used at home, or may be found in an office. Personal computers can be connected to a LAN (Local Area Network) either by a cable or wireless.

Development of Personal Computer

Personal Computers were made possible by two technical innovations in the field of microelectronics viz. the integrated circuit (IC), which was developed in 1959 and the microprocessor, which first appeared in 1971. The IC permitted the miniaturization of computer-memory circuits, and the microprocessor reduced the size of a computer's CPU to the size of a single silicon chip. The first complete personal computer was the Commodore PET introduced in January 1977. It was soon followed by the popular Apple II. In 1981, IBM (International Business Machine) introduced its own microcomputer model, the IBM PC. IBM PC was the most popular personal computer.

Parts of A Personal Computer

A personal computer isn't a single part called the "computer." A computer is a system that has many parts working together and each part is a special function.

1. System Unit: The system unit is the main part of a computer system. It is a rectangular box placed on or under your desk that houses the important parts of a computer system. It includes the motherboard, microprocessor, random memory, bus, and ports, but does not include the keyboard, monitor, and peripheral devices. Inside this box are the microprocessor, disc drives and other elements that work together to do the actual computing. The most important of these components is the central processing unit (CPU), or microprocessor, which acts as the "brain" of computer. Another component is random access memory (RAM), which temporarily stores information that the CPU uses while the computer is on. The information stored in RAM is erased when the computer is turned off. All these functions are

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controlled by software which makes it possible for us to use computer. Almost every other part of computer such as keyboard, monitor, and printer connects to the system unit using cables. The cables plug into specific ports, typically on the back of the system unit. Hardware that is part of the system unit is sometimes called a peripheral device.

There are two types of system unit

(a) Desktop Type System unit : The desktop type system unit is a square box shaped structure which can lie flat on the desk or table and the monitor is usually placed on the system unit.

(b) Tower type System unit : This is another type of system unit. This type of system unit is vertically placed on the side of the monitor. The tower models are mostly used at homes and offices.

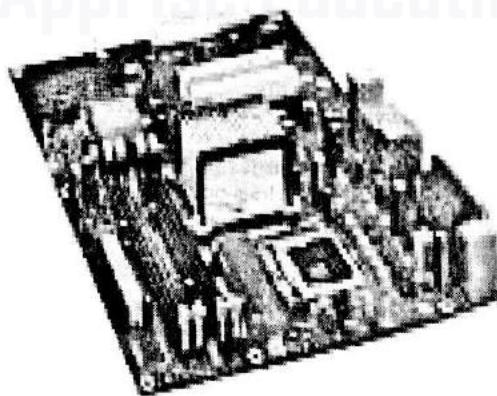
Main Parts of System Unit

(i) CPU : CPU is the most important part of a computer, where actual processing takes place. It is the brain behind all computers. It is also referred to as a processor or microprocessor.

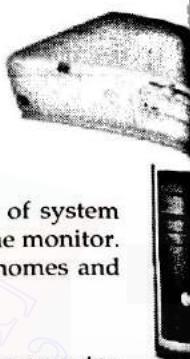
Following are the various type of CPU chips

Intel Pentium	AMD Athlon
Intel Pentium Pro	AMD Celeron
Intel Pentium III	AMD Duron
Intel Pentium IV	Cyrix

(ii) Motherboard : The motherboard is a flat circuit board on which like structures of metal connecting pins are mounted. These pins connect components to each other through which data, instruction and information are transferred. These fiber like structures of metal or electronic parts are called bus. The motherboard is the main circuit board of a computer on which the processor, video card, sound card, IDE hard drive, etc. are connected.



Plugged into the various slots and connectors. The CPU also plugs into the motherboard through a Socket or a Slot. On most computers, it is possible to add memory chips directly to the motherboard. We can also upgrade to a faster PC by replacing the CPU chip. To add additional core features, we may need to replace the motherboard entirely.



(iii) RAM : This is where our computer keeps the information it is using at the moment. RAM stands for Random Access Memory, and information kept here only as long as it is needed by the application running on the computer.

(iv) RAM Chip Slots : These slots are meant to expand the computer's memory by adding RAM Chips.

(v) ROM : It is a silicon chip on motherboard on which instructions are burned at the time of manufacture. When computer is switched on, the instruction stored is automatically initiated and after switching it off, these instructions do not get lost.

(vi) Math Co-processor Slot : Some Personal computers have a slot here. Math Co-processor can be inserted. This processor assists the CPU in performing its mathematical operations.

(vii) Video Card : A video card is also called video adapter, graphics accelerator card, display adapter or graphics adapter or graphics card. Its function is to generate an output image to a display.

(viii) Sound Card : This card enables us to play sound and music. The sound card converts the digital information into electrical signals.

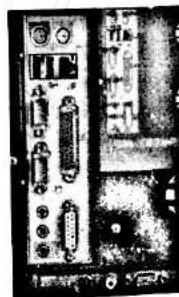
(ix) Power Supply : A power supply unit (PSU) is the component that applies power to other components in a computer. A power supply unit is typically designed to convert AC from the mains to DC power for the different components of the computer. Most components require 5 volt while the floppy and hard disk require about 12 volts.

(x) Internal Speaker : It is a speaker on the computer motherboard that is responsible for beeps, beeping noises and other tones. This speaker is very basic and is not a speaker for playing songs, music, or other complex sounds generated in a game.

(xi) Timer : It is an internal clock on the motherboard which is battery operated.

(xii) Expansion Slot : It is a long narrow connector which allows us to plug expansion card like the sound card, network card etc. The primary purpose of an expansion card is to provide extra features not offered by the motherboard. The back side of system unit have ports and jacks to connect different accessories. They are given below.

- | | |
|---|-------------------|
| (1) Power Socket | (2) Keyboard Port |
| (3) Monitor Port | (4) Serial Port |
| (5) Parallel Port | (6) Audio Jack |
| (7) Network Port | |
| (8) USB (Universal Serial Bus Port) | |
| (9) SCSI (Small Computer System Interface) Port | |



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2. Hard Disk : It is a hardware device which stores all programs and permanent memory. So programs and data are not lost when the computer is turned off. Larger the hard disk capacity, more the amount of program and data that can be stored in it. In nearly all cases, it is permanently in the system unit and stores both the software the computer uses and data files the user creates.

3. CD Drive : CD drive is a device that enables us to read and store information on CD disks. It is usually located on the front of the unit. CD drives use lasers to read data from a CD.

4. Floppy disk drive : Floppy disk drive is a device that enables read and store the information on floppy disks, also called floppies. They also retrieve information more slowly and are more prone to damage.

5. Monitor : It is the part of the computer that looks like a small screen. It shows you what is going on. Usually it has two cords, one for power and the other for connecting to the system unit. It displays text characters and graphics in gray shades or in colors.

6. Mouse : It is an input device and is used to point and select on your computer screen. By sliding the mouse around on a flat surface (usually on mouse pad) the user moves a pointer on the screen. When the tip of the pointer is positioned over the desired item, the user clicks the mouse (a single or double click) to select the item. A single cord connects the mouse to the system unit.

7. Key Board : It is a typewriter which contains keys to feed information into the computer. It is attached to the system unit with a cord. These and IBM keyboard have 83 keys but enhanced keyboard has 104 keys.

8. Speaker : It is an output device. When the speaker is connected to a sound card, the output as a sound can be heard on the speaker. Often used for entertainment.

10. Printer : It is an output device that produces print of images as numbers, alphabets, graphs etc. on paper or hard-copy which is printout.

11. Scanner : It is an input device that transfers typed or handwritten texts, graphs, diagrams and photographs to the computer in digital form.

12. CD-ROM Drive : CD-ROM drive is a device that reads the information stored on CD-ROM. CD-ROM is an abbreviated term for Compact Read Only Memory. The information stored in CD-ROM can neither be changed nor can new information be added to it.

13. CD-Writer : CD-Writer is a device that reads and writes information from CD.

14. Modem : It is a short form of Modulator-Demodulator. To connect our computer to the Internet, we need a modem. A modem is a device that sends and receives information over a telephone line or high-speed

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15. UPS (Uninterruptible Power Supply) : Sudden power cut erases any present data. So a UPS can be used to provide uninterrupted power supply to the computer system and save the data typically for 5 to 15 minutes until auxiliary power supply can be turned on and utility power restored, or equipment is safely shut down. It is also known as a battery backup.

Objective Question

PC Stands for—

- (a) Personal computer
- (b) Private computer
- (c) Public computer
- (d) a and b both
- (e) None of these

In motherboard information between components travels by

- (a) Flash memory
- (b) CMOS
- (c) Port
- (d) Bus
- (e) None of these

Main circuit board of a computer is called

- (a) Father board
- (b) Mother board
- (c) Keyboard
- (d) All of these
- (e) None of these

Which part of a computer helps to store information ?

- (a) Disk drive
- (b) Keyboard
- (c) Monitor
- (d) Printer
- (e) None of these

[SBI Associates, 2009]

Meaning of IBM is —

- (a) Indian business machine
- (b) International business machine
- (c) International banking machine
- (d) International business model
- (e) None of these

Accessories connect the system unit with

- (a) Port
- (b) Ring
- (c) Bus
- (d) Zip
- (e) None of these

What is the short form for 'uninterrupted power supply' in computer ?

- (a) Inverter
- (b) Generator
- (c) UPS
- (d) Stabilizer
- (e) None of these

Which of the following parts has direct connection from a computer motherboard ?

- (a) Hard disk
- (b) VDU
- (c) Microprocessor
- (d) Modem
- (e) None of these

[SBI 2009]

To run a CD in a computer we need

- (a) FD drive
- (b) CD drive
- (c) Zip drive
- (d) Pen drive
- (e) None of these

Information from one unit to another unit is carried by

- (a) Data bus
- (b) System
- (c) Control bus
- (d) Address bus
- (e) None of these

Where is the disc put in a computer ?

- (a) In a modem
- (b) In the hard drive
- (c) Into the CPU
- (d) In the disk drive
- (e) None of these

The is a box that houses the most important parts of a computer system.

- (a) software
- (b) hardware
- (c) input drive
- (d) system unit
- (e) none of these

[SBI 2009]

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13. The main system board of a computer is called the.
 (a) integrated circuit (b) mother board (c) processor
 (d) microchip (e) None of these
14. Which of the following is a part of the system unit?
 (a) CPU (b) Monitor (c) CD-ROM
 (d) Floppy disk (e) None of these *[IBPS]*
15. The box that contains the central electronic components of the computer is the
 (a) motherboard (b) system unit (c) peripheral
 (d) input device (e) none of these *[Syndicate Bank 2010]*
16. Storage device found inside the computer—
 (a) CD ROM (b) Zip Disk (c) Super Disk
 (d) Hard Disk (e) None of these *[Syndicate Bank]*
17. A device that provides emergency power to your computer, controls the voltage, and protects against power surges is called a
 (a) PSU = Power supply unit
 (b) USP = Universal Surge Protector
 (c) UPPS = Universal Protection and Supply
 (d) UPS = Uninterruptible Power Supply
 (e) None of these *[Syndicate Bank]*
18. Which of the following is a part of the system Unit?
 (a) Monitor (b) CPU (c) CD-ROM
 (d) Floppy Disk (e) None of these *[Allahabad Bank]*
19. A UPS
 (a) limits damage caused by fluctuating levels of electricity
 (b) provides battery backup for a limited time
 (c) delivers electronic messages via a bus
 (d) conducts a power-on self test, or POST
 (e) none of these *[Syndicate Bank]*
20. A disk on which you store information—
 (a) Plate (b) Data disc (c) Paper disk
 (d) TV disk (e) None of these *[Punjab & Sind Bank]*
21. A computer's hard disk is
 (a) an arithmetic and logical unit (b) computer software
 (c) operating system (d) computer hardware
22. A ... is a device that not only provides surge protection, but also your computer with battery backup power during a power cut.
 (a) surge strip (b) USB (c) UPS
 (d) battery strip (e) None of these *[PNB]*
23. The motherboard is the ...
 (a) circuit board that houses peripheral devices
 (b) same as the CPU chip
 (c) the first chip that is accessed when the computer is turned on
 (d) circuit board that contains a CPU and other chips
 (e) None of these *[Allahabad Bank]*

Personal Computer

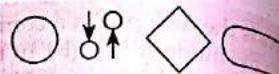
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- Where is the disk put in a computer?
 (a) in the modem (b) in the hard drive (c) into the CPU
 (d) in the disk drive (e) None of these *[SBI Associate Clerk 2011]*
- The controls communications for the entire computer system.
 (a) arithmetic-logic unit (b) semiconductor
 (c) motherboard (d) coprocessor
 (e) None of these *[Bank of Baroda 2011]*
- The system component that controls and manipulates data in order to produce information is called the
 (a) keyboard (b) microprocessor (c) monitor
 (d) mouse (e) None of these *[Bank of Baroda 2011]*
- These provide expansion capability for a computer system
 (a) sockets (b) slots (c) bytes
 (d) bays (e) None of these *[Bank of Baroda 2011]*
- An example of a processing device would be
 (a) a magnetic ink reader (b) a tablet PC
 (c) Special function cards (d) scanners
 (e) keyboards *[Allahabad Bank PO 2011]*
- A is hardware used to read disks.
 (a) floppy disk (b) hardware (c) software
 (d) disk drive (e) CPU *[Allahabad Bank Clerk 2011]*
- The is the box that houses the most important parts of a computer system.
 (a) software (b) hardware (c) input device
 (d) system unit (e) None of these *[Allahabad Bank Clerk 2011]*
- hard drives are permanently located inside the system unit and are not designed to be removed, unless they need to be repaired or replaced.
 (a) Static (b) Internal (c) External
 (d) Remove (e) None of these *[Allahabad Bank Clerk 2011]*
- What resides on the motherboard and connects the CPU to other components on the motherboard?
 (a) Input unit (b) System bus (c) ALU
 (d) Primary memory (e) None of these *[SBI 2012]*
- An electronic path, that connects one part of computer to another is—
 (a) Logic gate (b) Serial Port (c) Modem
 (d) Bus *[SSC LDC 2015]*

Answers

- 1. (a) 2. (d) 3. (b) 4. (a) 5. (b) 6. (a) 7. (c)
- 8. (c) 9. (b) 10. (a) 11. (d) 12. (d) 13. (b) 14. (a)
- 15. (b) 16. (d) 17. (d) 18. (b) 19. (b) 20. (b) 21. (d)
- 22. (c) 23. (d) 24. (d) 25. (c) 26. (b) 27. (b) 28. (c)
- 29. (d) 30. (d) 31. (b) 32. (b) 33. (d)

JASJEE I SINGH SECTION



06

Design Tools and Programming Languages

Introduction

Design Tools : Before any program coding, input, output, flow and logic should be defined. For this purpose we need design tools.

DFD (Data Flow Diagram) : Data flow diagrams are the most commonly used as a pictorial way of showing the flow of data through a logic in English like manner. It is easier to understand and grasp. For diagram representation it also uses symbols and notation.

	NCC	Yourdon	Gene & S
Data Flow	→	→	→
Process	□	○	□
Decision	◇	◇	◇
Connector	○ ↕		
Input/Output	○ ↘	□	
Data Store	○ ↗	□	—

Data Flow : It is represented by line arrow. It shows the direction of data.

Process : It changes the incoming data flow to outgoing data flow.

Decision : It shows the logical process which has resultant Yes or No.

Connector : It connects the flowcharts of more than one page.

Input/Output : It shows input/output in program.

Data Store : It shows storage of data.

Algorithm : To make a computer do something, we need to write a computer program or group of instructions. To write a computer program, we have to tell the computer, step by step, exactly what we want it to do. The computer then executes the program, following each step to find out how it is going to do it. That's the point where computer algorithm comes in. Algorithm is a set of instructions and basic techniques used to solve a problem. An algorithm is an effective method for solving a problem.

Design Tools and Programming Languages

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Sequence of instructions. Each algorithm is a list of well defined instructions for completing a task from an initial state to the final state. A mistake in an algorithm that causes incorrect results is called a logical error.

Flowchart : The pictorial representation of a program or the algorithm known as a flowchart. It is nothing but a diagrammatic representation of the various steps involved in designing a system. The purpose of using flowcharts is to graphically present the logical flow of data in the system and defining major phases of processing. For diagrammatic representation also uses symbols and notations.

Start & Stop

Decision box

Output & input

Process

Connector

Flow of data

Pseudocode : It is also called Program Design Language (PDL) and is an alternative to flowcharts. Pseudocode allows the programmer to represent logic in English like manner. It is easy to modify, so many programmers prefer it.

Programming Languages : Programming Languages are the medium used by one to communicate instructions to a computer. A programming language is an artificial language to express computation that can be performed by a computer. It is a set of keywords, symbols, and a system of rules for constructing statements by which humans can communicate instructions to be executed by a computer. Each programming language has its own syntax that is the set of specific rules and words that express the logical steps of an algorithm.

Programming languages are mainly of two types :

- (a) Low level language
- (b) High level language

Machine Language : It is a low level programming language, also called machine code or object code. It is the only language understood directly by computer's central processing unit because it is a collection of binary digits. It has no need of translator program. At the early era of programming it was used for program coding. While easily understood by computers, machine languages are almost impossible for humans to use because they consist of numbers, that is, series of '0' and '1'. Coding in machine language is very difficult and has more possibilities of error.

Machine language instruction has two parts : one is the operation code or **opcode** that specifies the operation to be performed and the other is **operand** such as data on which the operation should act.

Assembly Language : Assembly language was developed to make coding easier than machine language. At the place of binary code of machine language mnemonic code and symbolic addresses were developed, that were easy to remember. This symbolic language made program writing easy. But it must be translated into machine codes before being used operationally. The program used to convert or translate programs written in assembly language to machine code is called assembler. Coding in assembly language is simpler than machine language and error detection is easy.

High level language : High level language is a programming language

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High level language : High level language is a programming language which is machine independent and uses translator. It is closer to natural languages. It is also called a source code. Some commonly used high level languages are C, BASIC, FORTRAN, ALGOL, PASCAL etc.

There are five types of high level languages to solve a wide variety of problems.

1. Scientific language : It is a programming language that was designed for the use of mathematical formulas and matrices. Although all programming languages allow for this kind of processing but scientific languages are easier to express these actions. Examples are FORTRAN, ALGOL etc.

2. Commercial languages : It is a programming language that was designed for solving everyday commercial problems. Examples are COBOL etc.

3. Special purpose languages : It is a programming language that is designed for a specific function such as payroll, simulation etc. Examples are ADA, Modula and Modula, SQL, QUEL etc.

4. Multipurpose languages : These are languages intended to cover a number of different types of application area such as business and scientific. Examples are APL, BASIC, PL1, C and PASCAL.

5. Command languages for operating system : These languages are used to control operation of a computer. Most command languages are specific to the particular manufacturer's operating system. Examples are DCL, SHELL, MS-DOS.

There are some high level languages

1. FORTRAN (Formula Translation) : FORTRAN was the first high level programming language invented by John Backus for IBM 704 in 1956 but the first FORTRAN compiler delivered in April 1957. The language was widely adopted by scientists and engineers for writing numerical intensive programs, which encouraged compiler writers to use compilers that could generate faster and more efficient code. Fortran is most popular programming language and it is widely used on many different platforms as mathematical calculation, function and formula.

2. ALGOL (Algorithmic Language) : It has originally developed by Backus in 1958 known as ALGOL 58. It was revised and expanded by Naur in 1960 and known as ALGOL 60. It used for scientific and engineering purpose and has powerful mathematical facilities.

3. COBOL (Common Business Oriented Language) : It was one of the earliest high level programming languages. It was developed in 1959 by Grace Hopper. Its primary domain is business, finance, and administration systems for companies and governments. Group of sentences in a program is called paragraph. All paragraphs together make a section. All sections make a division. For mathematical terms, COBOL uses SUBTRACT and MULTIPLY etc. It is English like language and provides much suitable documentation.

Design Tools and Programming Languages

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4. RPG (Report Program Generator) : It is a high level programming language for business applications, which generates report. It is developed by IBM in 1961 and primary vendor of RPG is also IBM.

5. Modula and Modula 2 : Modula is a descendant of the programming language Pascal. It was developed in Switzerland in the late 1970s by Niklaus Wirth. The main innovation of Modula over Pascal is a module system, used for grouping sets of related declarations into program units. Modula 2 is a computer programming language invented by Niklaus Wirth around 1978, as a successor to Modula. It is specially suited to computer systems development work.

6. SQL (Structured Query Language), QUEL (Query Language) : Examples of database query language.

7. APL (A Programming Language) : It was developed in 1964 by Kenneth E. Iverson. It is an oriented interactive language for algorithmic processing which is available from a number of commercial and non-commercial vendors for most computer platforms. It is a specially powerful language in defining vectors and matrices.

8. BASIC (Beginner's All purpose Symbolic Instruction Code) : It was developed in 1964 by John George Kemeny and Thomas Eugene Kurtz to provide computer access to non-science students. It is simple, powerful and interactive language for beginners and provides clear error message.

9. PL1 (Programming Language One) : It was developed by IBM in the early 1960s, and is still actively used. It is designed for scientific, engineering, and business applications. It has been used by various academic, commercial and industrial users. It is a very successful language except that its multipurpose facilities made it too large for use on small machines.

10. C : C is a general purpose computer language developed in 1972 by Dennis Ritchie at the Bell Laboratories for use on the Unix Operating System. Although C was designed for implementing system software, it is also widely used for developing portable application software. It is one of the most popular programming language and it is widely used on many different platforms.

11. C++ : It is object oriented general purpose programming language. It is regarded as a middle level language, as it comprises a combination of both high level and low level language features. It is better than C programming language but tough to code.

12. PASCAL : Pascal is a procedure programming language developed in 1970 by Niklaus Wirth. It supports structured programming than many other languages such as COBOL or FORTRAN. It is based on the ALGOL programming language and named in honor of the French mathematician and philosopher Blaise Pascal. Initially, Pascal was developed to teach students structured programming and teaching purpose.

13. COMAL (Common Algorithmic Language) : It was developed by Benedict Lofstedt and Borge Christensen in 1973. It was a mixed form of the prevalent educational programming languages namely BASIC and Pascal. It was designed to educate students.

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14. PROLOG (Programming in Logic) : It is a general purpose programming language. It has a rich collection of data structures. It is used to express artificial intelligence.

15. C Sharp : It is a programming language which also expresses object oriented programming language. It was developed by Microsoft. It is a simple, modern, general

16. Java : Java is a programming language originally developed by Gosling at Sun Microsystems and released in 1995 as a core component of Microsystems' Java platform. It is object oriented programming language which derives much of its syntax from C and C++. It is primarily used in the form of Java applets side-by-side with JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic content.

17. LOGO (Logic Oriented Graphic Oriented) : LOGO was created in 1967 for educational use and constructive teaching. It is known mainly as turtle. The turtle moves with commands that are relative to its own position. When turtle moves it draw a line. To teach a child to draw a line and we use logo. It is so easy for a child that they can use it to draw shapes and lines.

18. DCL : It is a command language and used on DEC VAX operating system.

19. SHELL : It is also a command language and used with Unix operating system. Unix is mostly used for and web servers.

20. MS DOS : It is one of the most popular operating systems developed by Microsoft.

Fourth Generation Language (4th GL) : The third generation languages needed a large number of codes for typical commercial system. It is consuming to debug, and the modification of complex system is difficult. It is a 4th generation language developed by the software engineers in various application tools offering further improvement in productivity. A fourth generation programming language is designed for a specific purpose in mind, such as the development of commercial software. All 4GLs are designed to reduce programming effort, the time taken to develop software, and the cost of software development.

Objective Question

1. Computer program had been done in early stages by using
 (a) Assembly language (b) Machine language
 (c) Source code (d) Object code
2. BASIC computer language was developed by in 1964.
 (a) Nicol Berl (b) John G. Kemeny
 (c) Grace Moonie Hoper (d) Jim Clark
 (e) None of these

Design Tools and Programming Languages

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- Pascal—
- (a) is a computer language (b) is a unit of computer
 - (c) is a computer operating system (d) is a type of computer (e) None of these
- The first computer language developed for programming is—
- (a) Cobol (b) Fortran (c) C
 - (d) C++ (e) None of these
- Which of the following is not a computer language ?
- (a) Basic (b) C (c) Fast
 - (d) Fortran (e) None of these
- The pictorial representation of a program or algorithm is called a
- (a) chart (b) slave chart (c) flow chart
 - (d) mix chart (e) none of these
- [SBI 2008]
- Which programming language is used to teach graphical shapes to a schoolgoing child ?
- (a) Pailot (b) C (c) LOGO
 - (d) COMAL (e) None of these
- Which of the following is a Scientific computer language ?
- (a) Basic (b) Cobol (c) Fortran
 - (d) Pascal (e) None of these
- Computer language fortran is appropriate for
- (a) business (b) graphic (c) science
 - (d) commercial (e) none of these
0. Computer language Cobol is appropriate for—
- (a) Commercial purpose (b) Graphic purpose
 - (c) Scientific purpose (d) All
 - (e) None of these
1. Which of the following computer languages is appropriate for commercial purpose ?
- (a) Fortran (b) Basic (c) Cobol
 - (d) Pascal (e) None of these
2. High level computer language like English language is.....
- (a) fortran (b) pascal (c) cobol
 - (d) C++ (e) none of these
3. In which language is the most appropriate documentation possible ?
- (a) Fortran (b) Cobol (c) Pascal
 - (d) C++ (e) None of these
14. Which language is used in a complex scientific calculation.
- (a) Basic (b) Fortran (c) Cobol
 - (d) Pascal (e) None of these
15. BASIC programming language is used for
- (a) commercial purpose (b) scientific calculation
 - (c) to teach a child (d) simple language for beginners
 - (e) none of these

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16. The language which is understood by computers is
 (a) American language (b) Machine language
 (c) Secret language (d) All of these
 (e) None of these
17. Computer language JAVA was developed by
 (a) IBM (b) Microsoft (c) Sun microsystems
 (d) Infosystem (e) None of these
18. Mostly computer can understand—
 (a) English like high level instruction
 (b) Basic (c) Any language
 (d) All of these (e) None of these
19. is applicable in all computers.
 (a) Basic language (b) Cobol language (c) Machine language
 (d) Fortran (e) None of these [MBA Entrance]
20. is a set of symbols, keywords and set of rules to construct statement.
 (a) Computer program (b) Programming language
 (c) Assemble (d) Syntax [SBI 2009, Punjab & Sind]
21. Computer language used on the internet is
 (a) Basic (b) Cobol (c) Java
 (d) Pascal (e) None of these [SBI]
22. Computer programs are written in a high level programming language however the human readable version of a program is called—
 (a) Cache (b) Instruction set (c) Source code
 (d) Word size (e) None of these [SBI]
23. A prescribed set of well-defined instructions for solving mathematical problems is called—
 (a) A compiler (b) A code (c) A description
 (d) An algorithm (e) None of these [SBI 2009, BOB 2010, Allahabad]
24. Which of the following is a popular programming language for developing multimedia web pages.
 (a) COBOL (b) Java (c) BASIC
 (d) Assembler (e) None of these [Syndicate Bank]
25. A contains specific rules and words that express the logical steps of an algorithm.
 (a) programming language (b) programming structure
 (c) syntax (d) logic chart [Panjab & Sind Bank PO]
26. A graphic presentation of the sequence of steps needed to solve a programming problem is called a—
 (a) program flowchart (b) step chart
 (d) program graph (e) None of these [Panjab & Sind Bank PO]

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7. The operating system called UNIX is typically used for
 (a) desktop computers (b) laptop computers
 (c) supercomputers (d) web servers (e) All of these [Allahabad Bank PO 2011]
8. C, BASIC, COBOL, and Java are examples of language.
 (a) low-level (b) computer
 (c) system programming (d) high-level
 (e) None of these [Allahabad Bank Clerk 2011]
9. A set of rules for telling the computer what operations to perform is called a
 (a) Procedural language (b) Structures
 (c) Natural language (d) Command language
 (e) Programming language [IBPS PO 2012]
10. A mistake in an algorithm that causes incorrect results is called a
 (a) Logical error (b) Syntax error (c) Procedural error
 (d) Compiler error (e) Machine error [IBPS PO 2012]

Answers

1. (b) 2. (b) 3. (a) 4. (b) 5. (c) 6. (c) 7. (c)
 8. (c) 9. (c) 10. (a) 11. (c) 12. (c) 13. (b) 14. (b)
 15. (d) 16. (b) 17. (c) 18. (a) 19. (c) 20. (d) 21. (c)
 22. (c) 23. (d) 24. (b) 25. (c) 26. (a) 27. (d) 28. (d)
 29. (e) 30. (a)

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07

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Data Representation and Number System

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Data Representation and Number System

Introduction

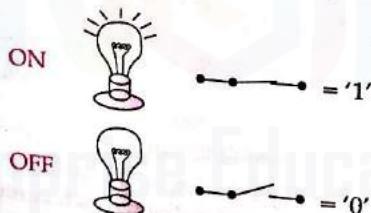
Data representation is a method to represent data in a computer we enter different forms of data such as number, text, graphics etc. All These data look different, but in the computer process in only one form, that is, 0 and 1, binary or digital form. Each information is stored in a computer as a digital data.

Generally, we use the decimal number system which, with the help of 10 digits, represents any number. But in a computer any number is represented by a combination of 0 and 1.

These are the number systems used in computer

1. Binary Number system
2. Octal Number system
3. Hexadecimal Number system

Binary Number system : In the binary number system, there are only two possible values 0 and 1 which represent the ON and OFF state of electronic pulse in the circuit. These 0 and 1 are binary digits and each is called bit. This number system is used by computer to data process and storage.



In decimal number system there is a base of 10, because there are 10 possible digits (0 to 9). Each digit in a decimal number has a place value. Such as in a decimal number 17, place value of 1 is 10 and 7 is 1. But in a binary number system there is a base of 2 because there are 2 possible digits (0 and 1). Each digit position in a binary number represents a power of two. So, when we write a binary number, each digit is multiplied by an appropriate power.

Conversion of Decimal to Binary : To convert decimal to binary we simply divide the decimal value by 2 and then write down the remainders. We repeat this process until we cannot divide it by 2 anymore.

Example : Convert $(35)_{10}$ to its binary equivalent.

2	35	Remainder
2	17	1
2	8	1
2	4	0
2	2	0
1	1	0

Read from bottom

$$\therefore (35)_{10} = (100011)_2$$

Conversion of Binary to Decimal : To convert binary to decimal we simply multiply the digits of binary value by its place value and then add all the values we get from multiplication.

Example : Convert $(100011)_2$ to its decimal equivalent.

Binary number	=	1	0	0	0	1	1
Place	=	5	4	3	2	1	0
Value	=	2^5	2^4	2^3	2^2	2^1	2^0
	=	32	16	8	4	2	1

$$\begin{array}{l}
 \begin{array}{l}
 | \quad | \quad | \quad | \quad | \quad | \\
 1 \times 1 = 1 \\
 1 \times 2 = 2 \\
 0 \times 4 = 0 \\
 0 \times 8 = 0 \\
 0 \times 16 = 0 \\
 1 \times 32 = 32
 \end{array} \\
 \hline
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 \end{array}$$

$$\begin{aligned}
 100011 &= 1 \cdot 2^5 + 0 \cdot 2^4 + 0 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0 \\
 &= 32 + 0 + 0 + 0 + 2 + 1 = 35
 \end{aligned}$$

$$\therefore (100011)_2 = (35)_{10}$$

1. Octal Number system : In Octal number system there is a base of 8 because there are 8 possible digits (0 and 7). Each digit position in an octal number represents a power of eight. Each octal digit is thus equivalent to three binary digits.

Octal Number Equivalent three binary digits

0	000
1	001
2	010
3	011
4	100
5	101
6	110
7	111

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Conversion of Decimal to Octal: To convert decimal to octal we simply divide the decimal value by 8 and then write down the remainder. We repeat this process until we cannot divide by 8 anymore.

Example : Convert $(385)_{10}$ to its binary equivalent.

$$\begin{array}{r} 8 \mid 385 \mid \text{Remainder} \\ 8 \mid 48 \quad 1 \\ 8 \mid 6 \quad 0 \\ \hline & & \end{array}$$

↑
Read from bottom

$$\therefore (385)_{10} = (601)_8$$

Conversion of Octal to Decimal: To convert octal to decimal we simply multiply the digits of octal value by its place value and then add the value we get from multiplication.

Example : Convert $(601)_8$ to its decimal equivalent.

$$(601)_8 = 6 \cdot 8^2 + 0 \cdot 8^1 + 1 \cdot 8^0 = 384 + 0 + 1 = (385)_{10}$$

$$\therefore (601)_8 = (385)_{10}$$

Conversion of Octal to Binary

There are two methods to convert octal to binary

1. To convert octal to binary we simply multiply the digits of octal by its place value and then add the value we get from multiplication. That is decimal value of binary number. Again we calculate the binary value of this decimal value.

Example : Convert $(601)_8$ to its binary equivalent.

$$(601)_8 = 6 \cdot 8^2 + 0 \cdot 8^1 + 1 \cdot 8^0 = 384 + 0 + 1 = (385)_{10}$$

$$\therefore (601)_8 = (385)_{10}$$

Again, we calculate the binary value of 385_{10} .

$$\begin{array}{r} 2 \mid 385 \mid \text{Remainder} \\ 2 \mid 192 \quad 1 \\ 2 \mid 96 \quad 0 \\ 2 \mid 48 \quad 0 \\ 2 \mid 24 \quad 0 \\ 2 \mid 12 \quad 0 \\ 2 \mid 6 \quad 0 \\ 2 \mid 3 \quad 0 \\ \hline & 1 \quad 1 \end{array}$$

↑
Read from bottom

$$\therefore (601)_8 = (110000001)_2$$

2. Octal number is represented by collection of three digits of number, such as octal number 1 is represented by 001 in binary numbers. So, to convert octal to binary we replace each digit of octal by the collection of binary number.

Example : Convert 601_8 to its binary equivalent.

$$601_8 = 110 \ 000 \ 001 = 110000001_2$$

Data Representation and Number System

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Conversion of Binary to Octal

There are two methods to convert octal to binary.

1. To convert binary to octal we simply multiply the digits of octal value by its place value and then add the value we get from multiplication. That is decimal value of binary number. Again we calculate the octal value of this decimal value.

Example : Convert 111010101_2 to its octal equivalent.

$$111010101_2 = 1 \cdot 2^8 + 1 \cdot 2^7 + 1 \cdot 2^6 + 0 \cdot 2^5 + 1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 = 256 + 128 + 64 + 16 + 4 + 1 = 469_{10}$$

$$\therefore 111010101_2 = 469_{10}$$

Again, we calculate the octal value of 469_{10} .

$$\begin{array}{r} 8 \mid 469 \mid \text{Remainder} \\ 8 \mid 58 \quad 5 \\ 8 \mid 7 \quad 2 \\ \hline & & \end{array}$$

↑
Read from bottom

$$\therefore 111010101_2 = 725_8$$

To convert binary to octal we replace the three digits group of binary by its octal value.

Example : Convert 111010101_2 to its octal equivalent.

$$111010101_2 = 111 \ 010 \ 101 = 725_8$$

2. Hexadecimal Number system : In Hexadecimal number system there is a base of 16 because there are 16 possible digits (0 and 15). Each digit position in a hexadecimal number represents a power of sixteen. In the hexadecimal number system the numbers 0-9 are represented in their normal way, but numbers 10-15 are represented by the letters A-F respectively. Each hexadecimal digit is, thus, equivalent to four binary digits.

Hexadecimal	Decimal	Equivalent four binary digits
0	0	0000
1	1	0001
2	2	0010
3	3	0011
4	4	0100
5	5	0101
6	6	0110
7	7	0111
8	8	1000
9	9	1001
A	10	1010
B	11	1011
C	12	1100
D	13	1101
E	14	1110
F	15	1111

Conversion of Decimal to Hexadecimal : To convert decimal hexadecimal we simply divide the decimal value by 16 and then down the remainder repeat this process until we cannot divide it anymore.

Example : Convert 382_{10} to its binary equivalent.

$$\begin{array}{r} 16 \quad | \quad 382 \quad \text{Remainder} \\ 16 \quad | \quad 23 \quad 14 = E \\ 1 \quad | \quad 7 \end{array}$$

↑
Read from bottom

$$\therefore 382_{10} = 17E_8$$

Conversion of Hexadecimal to Decimal : To convert hexadecimal decimal we simply multiply the digits of hexadecimal value by its place value and then add the value we get from multiplication.

Example : Convert 10_{16} to its decimal equivalent.

$$10_{16} = 1 \cdot 16^1 + 0 \cdot 16^0$$

$$\therefore 10_{16} = 16_{10}$$

Conversion of Hexadecimal to Binary

There are two methods to convert octal to binary.

1. To convert hexadecimal to binary we simply multiply the digit hexadecimal value by its place value and then add the value we get from multiplication. That is decimal value of hexadecimal number. Again calculate the binary value of this decimal value.

Example : Convert $B6A_{16}$ to its binary equivalent.

$$\begin{aligned} B6A_{16} &= B \cdot 16^2 + 6 \cdot 16^1 + A \cdot 16^0 \\ &= 11 \cdot 256 + 6 \cdot 16 + 10^1 \\ &= 2816 + 96 + 10 \\ &= 2922_{10} \\ \therefore B6A_{16} &= 2922_{10} \end{aligned}$$

Again, we calculate the binary value of 2922_{10}

$$\begin{array}{r} 2 \quad | \quad 2922 \quad \text{Remainder} \\ 2 \quad | \quad 1461 \quad 0 \\ 2 \quad | \quad 730 \quad 1 \\ 2 \quad | \quad 365 \quad 0 \\ 2 \quad | \quad 182 \quad 1 \\ 2 \quad | \quad 91 \quad 0 \\ 2 \quad | \quad 45 \quad 1 \\ 2 \quad | \quad 22 \quad 1 \\ 2 \quad | \quad 11 \quad 0 \\ 2 \quad | \quad 5 \quad 1 \\ 2 \quad | \quad 2 \quad 1 \\ 1 \quad | \quad 0 \end{array}$$

↑
Read from bottom

$$\therefore B6A_{16} = 101101101010_2$$

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Data Representation and Number System

1. Hexadecimal number is represented by a collection of four digits of binary number, such as hexadecimal number 1 is represented by 0001 in binary number system.

2. So to convert hexadecimal to binary we replace each digit of hexadecimal by four digit collection of binary number.

Example : Convert $B6A_{16}$ to its binary equivalent.

$$B6A_{16} = 1011 0110 1010 = 101101101010_2$$

Conversion of Binary to Hexadecimal

1. To convert binary to hexadecimal we replace the four digits group of binary by its hexadecimal value.

Example : Convert 10110111_2 to its hexadecimal equivalent.

$$10110111_2 = 0001 0110 1111_2 = 16F_{16}$$

Place value of digits

Number system	Place Value				Place value after decimal		
	Thousands	Hundreds	Tens	Ones	-1	-2	-3
Decimal	$10^3 = 1000$	$10^2 = 100$	$10^1 = 10$	$10^0 = 1$	$10^{-1} = \frac{1}{10}$	$10^{-2} = \frac{1}{100}$	$10^{-3} = \frac{1}{1000}$
Binary	$2^3 = 8$	$2^2 = 4$	$2^1 = 2$	$2^0 = 1$	$2^{-1} = \frac{1}{2}$	$2^{-2} = \frac{1}{4}$	$2^{-3} = \frac{1}{8}$
Octal	$8^3 = 512$	$8^2 = 64$	$8^1 = 8$	$8^0 = 1$	$8^{-1} = \frac{1}{8}$	$8^{-2} = \frac{1}{64}$	$8^{-3} = \frac{1}{512}$
Hexadecimal	$16^3 = 4096$	$16^2 = 256$	$16^1 = 16$	$16^0 = 1$	$16^{-1} = \frac{1}{16}$	$16^{-2} = \frac{1}{256}$	$16^{-3} = \frac{1}{4096}$

Adding binary numbers

Adding binary numbers is very similar to adding decimal numbers, but it uses only two digits 0 and 1.

There are four basic rules of binary addition

- (i) $0 + 0 = 0$
- (ii) $0 + 1 = 1$
- (iii) $1 + 0 = 1$
- (iv) $1 + 1 = 0$ (carry one because $1 + 1 = 10$)

Example : Add $1011011_2 + 100111_2$

$$1011011$$

$$+ 100111$$

$$\hline 10000010$$

Carries — 11111

$$\text{So, } 1011011_2 + 100111_2 = 10000010_2$$

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Subtracting binary numbers

Subtracting binary numbers is very similar to subtracting decimal numbers, but it also uses only two digits 0 and 1.

There are four basic rules of binary subtraction :

1. $0 - 0 = 0$
2. $0 - 1 = 1$ (borrow from nearest left side digit)
3. $1 - 0 = 1$
4. $1 - 1 = 0$

Example : Subtract $1011011_2 + 100111_2$.

$$\begin{array}{r} 1011011 \\ - 100111 \\ \hline 110100 \end{array}$$

$$\text{So, } 1011011_2 - 100111_2 = 110100_2.$$

Binary Memory

Memory is a data storage device in a computer system. The data is stored in binary form (0 and 1).

Bit : A bit is the smallest unit of computer memory. There is only one value of a bit either 1 or 0.

Nibble : It is a sequence of four bits.

Byte : It is a sequence of 8 bits and any data can be measured in bytes. To store in memory any alphabet, symbol or space etc needs minimum byte space.

Word : A word is a string of bits stored in computer memory. Its length can vary in different machines.

Memory measurement : Memory or any storage device's capacity is expressed as a quantity of bits or bytes, such as kilobyte, megabytes, gigabyte etc. The total amount of stored information that a storage device or medium can hold is called a capacity of that memory or storage device.

4 bits	1 Nibble
8 bits	1 byte
1024 bytes	1 kilobyte (KB)
1024 kilobytes	1 megabyte (MB)
1024 megabytes	1 gigabyte (GB)
1024 gigabytes	1 terabyte (TB)

A gigabyte is equal to approximately one billion bytes or about 1,000 megabytes. A gigabyte is equal to exactly 1,073,741,824 bytes and to 1,048,576 bytes.

Computer codes

In computer any characters like the alphabet, digit or any special character is represented by collection '1's and '0's in a unique coded pattern. These patterns are of different types, and are called computer codes.

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There are two types of coding system

1. **Binary Coded Decimal (BCD)** : It is also called Packet decimal. Binary Coded Decimal is a number system where four bits are used to represent each decimal digit.

BCD Table

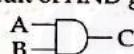
Decimal	BCD	Decimal	BCD
0	0000	5	0101
1	0001	6	0110
2	0010	7	0111
3	0011	8	1000
4	0100	9	1001

1. **ASCII Code** : It stands for American Standard Code For Information Interchange. In ASCII system a character is represented by seven bits.

2. **EBCDIC Code** : It stands for Extended Binary Coded Decimal Interchange code. In EBCDIC system a character is represented by eight bits. ASCII and EBCDIC are very popular coding systems.

Logic Gate : There are three basic gates in any digital system. They are AND, OR and NOT gate. Gate is an electronic circuit in which we can get output by one or more bit input.

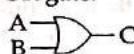
AND gate : This is the circuit of AND gate.



Switch A	Switch B	Switch C
Off (0)	Off (0)	Off (0)
Off (0)	Off (1)	Off (0)
Off (1)	Off (0)	Off (0)
Off (1)	Off (1)	Off (1)

Means, $C = A \cdot B$

OR gate : This is circuit of OR gate.



Switch A	Switch B	Switch C
Off (0)	Off (0)	Off (0)
Off (0)	Off (1)	Off (1)
Off (1)	Off (0)	Off (1)
Off (1)	Off (1)	Off (1)

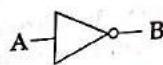
Means, $C = A + B$

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NOT gate : This is circuit of NOT gate.

**Switch A**

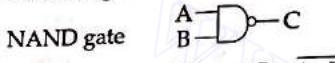
- Off (0)
- On (1)

Switch B

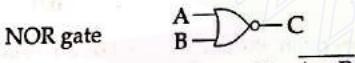
- On (1)
- Off (0)

Means, $B = \bar{A}$

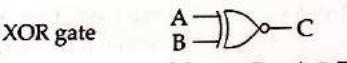
All other gates can be constructed by using these three gates.



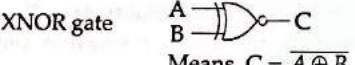
$$\text{Means, } C = \overline{A \cdot B}$$



$$\text{Means, } C = \overline{A + B}$$



$$\text{Means, } C = A \oplus B$$



$$\text{Means, } C = \overline{A \oplus B}$$

NAND gate and NOR gate are called Universal gates because by using these gates any digital circuit can be constructed.

Objective Question

1. To calculate perform calculation and store data computer uses number system.
 - (a) Decimal
 - (b) Hexadecimal
 - (c) Octal
 - (d) Binary
 - (e) None of these
 2. The largest unit of storage is
 - (a) GB
 - (b) KB
 - (c) MB
 - (d) TB
 - (e) None of these
 3. The time bit is short for
 - (a) Megabyte
 - (b) Binary language
 - (c) Binary digit
 - (d) Binary number
 - (e) None of these
 4. is approximately one billion bytes.
 - (a) Kilobyte
 - (b) Bit
 - (c) Gigabyte
 - (d) Megabyte
 - (e) None of these
 5. Which of the following is true ?
 - (a) Byte is a single digit in binary number.
 - (b) Bit represents a group of digital numbers.
 - (c) Byte is an eight digit binary number.
 - (d) Bit is an eight digit binary number.
 - (e) None of these
- [SBI]
6. How many choices are there in binary choice ?
 - (a) One
 - (b) Two
 - (c) It depends upon the amount of memory in a computer.
 - (d) It depends upon the speed of the processor of a computer.
 - (e) None of these
 7. How many bits are represented in one byte?
 - (a) 8
 - (b) 16
 - (c) 64
 - (d) 256
 - (e) 512
 8. One megabyte is equal to approximately
 - (a) 1000 bits
 - (b) 1000 bytes
 - (c) 1 million bytes
 - (d) 1 million bits
 - (e) 2000 bytes

[Allahabad 2010, BOB 2011]
 9. The smallest unit of computer memory is called
 - (a) Byte
 - (b) Bit
 - (c) Megabyte
 - (d) These all
 - (e) None of these
 10. One kilobyte makes from
 - (a) 612
 - (b) 1024
 - (c) 2048
 - (d) 4096
 - (e) 8192
 11. Which of the following is used for memory measurement ?
 - (a) Lb
 - (b) Mg
 - (c) Tb
 - (d) Ghz
 - (e) Sb
 12. In binary number which number system is used ?
 - (a) decimal
 - (b) Binary
 - (c) Byte
 - (d) Bit
 - (e) None of these
 13. How many digits are there in binary number system ?
 - (a) One
 - (b) Two
 - (c) Three
 - (d) Four
 - (e) None of these
 14. What are the two digits of binary system ?
 - (a) 1 and 9
 - (b) 1 and 0
 - (c) 1 and 4
 - (d) 1 and 2
 - (e) None of these
 15. The method to store characters and symbols in bytes is called
 - (a) Number system
 - (b) Alpha system
 - (c) Byte system
 - (d) Coding system
 - (e) None of these
 16. Today's mostly used coding system is
 - (a) ASCII and EBCDIC
 - (b) ASCII
 - (c) EBCDIC
 - (d) All of These
 - (e) None of these
 17. Series of eight bits is called
 - (a) Bit
 - (b) Byte
 - (c) Number
 - (d) Kilobyte
 - (e) None of these
 18. shows 'off' state of current in binary code.
 - (a) 1
 - (b) 0
 - (c) 3
 - (d) 2
 - (e) 5
 19. Group of eight bits 10010110 or 01100101 is called
 - (a) Nibble
 - (b) Byte
 - (c) Bit
 - (d) Robote
 - (e) None of these

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20. The length of any word in a computer is measured in
 (a) Byte (b) Millimeter (c) meter
 (d) Bits (e) None of these
21. Series of four bits is called
 (a) Byte (b) Nibble (c) Bit
 (d) Input (e) None of these
22. What is logic gate ?
 (a) A software (b) A type of circuit (c) A special Cd
 (d) A computer game (e) None of these
23. measures in megabyte.
 (a) Intensity of earthquake
 (b) Capacity of power
 (c) Memory capacity of computers
 (d) None of these
24. One kilobyte is equivalent to
 (a) 1000 byte (b) 1024 byte (c) 10000 byte
 (d) 100000 byte (e) None of these
25. Generally a computer's memory represented in kilobyte and megabyt and byte is made of
 (a) Eight binary digit (b) Two binary digit (c) Eight decimal digit
 (d) Two decimal digit (e) None of these
26. How many options does a binary choice offer ?
 (a) One (b) Two (c) Three
 (d) It depends on the amount of memory in the computer
 (e) None of these
27. The indicates how much data a particular storage medium can hold.
 (a) access (b) capacity (c) memory
 (d) storage (e) none of these
28. The smallest unit of information a computer can understand and process is known as a
 (a) digit (b) kilobyte (c) bit
 (d) byte (e) none of these
29. A computer works on a number system.
 (a) binary (b) octal (c) decimal
 (d) hexadecimal (e) none of these
30. Computers use the system to process data.
 (a) processing (b) kilobyte (c) binary
 (d) representational (e) none of these
31. Information on a computer is stored as
 (a) analog data (b) digital data (c) modem data
 (d) watts data (e) none of these

Data Representation and Number System

32. In the binary language each letter of the alphabet, each number and each special character is made up of a unique combination of
 (a) eight bytes (b) eight kilobytes (c) eight characters
 (d) eight bits (e) none of these [Bank of Baroda Clerk 2010]
33. A string of eight 0s and 1s is called a
 (a) megabyte (b) kilobyte (c) gigabyte
 (d) byte (e) none of these [Bank of Baroda Clerk 2010]
34. Which of the following is the largest unit of storage ?
 (a) GB (b) KB (c) MB
 (d) TB (e) None of these [PNB Clerk 2010]
35. A is approximately one billion bytes.
 (a) Kilobyte (b) Bit (c) Gigabyte
 (d) Megabyte (e) None of these [PNB Clerk 2010]
36. The smallest unit in a digital system is a
 (a) Byte (b) Kilobyte (c) Word
 (d) Character (e) bit [Bank of Baroda 2011]
37. The computer abbreviation KB usually means
 (a) Key Block (b) Kernel Boot (c) Kilo Byte
 (d) Kit Bit (e) None of these [Allahabad Bank Clerk 2011]
38. Information on a computer is stored as what ?
 (a) analog data (b) digital data (c) modem data
 (d) watts data (e) None of these [Allahabad Bank Clerk 2011]
39. One thousand bytes is a
 (a) kilobyte (b) megabyte (c) gigabyte
 (d) terabyte (e) None of these [Allahabad Bank Clerk 2011]
40. Which of the following is the second largest measurement of RAM ?
 (a) Terabyte (b) Megabyte (c) Byte
 (d) Gigabyte (e) Megahertz [SBI 2012, IBPS 2014]

Answers

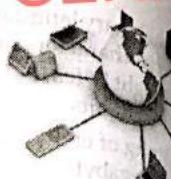
1. (d) 2. (d) 3. (c) 4. (c) 5. (c) 6. (b) 7. (a)
 8. (c) 9. (b) 10. (b) 11. (c) 12. (b) 13. (b) 14. (b)
 15. (d) 16. (a) 17. (b) 18. (b) 19. (b) 20. (d) 21. (b)
 22. (b) 23. (c) 24. (b) 25. (a) 26. (b) 27. (b) 28. (c)
 29. (a) 30. (c) 31. (b) 32. (d) 33. (d) 34. (d) 35. (c)
 36. (e) 37. (c) 38. (b) 39. (a) 40. (d)

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Software



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Introduction

A computer is really a system of many parts working together. Every component of a computer is either called hardware or software. The physical parts, which we can see, touch and feel are collectively called hardware. The computer and all the peripheral devices such as printers, scanners, microphones, speakers, and webcams etc. connected to it that are used for input and output the data are hardware. Peripheral devices are hardware devices that are connected to the motherboard but not part of the main computer system and were added later to the system.

The program needs a kind of documentation that gives a comprehensive procedural description of a program. It shows as to how software is written. Program documentation even has the capability to sustain any maintenance or development of the program. The program documentation describes what exactly a program does by mentioning about the requirements of the input data and the effect of performing a programming task.

Software, on the other hand, refers to the set or series, of instructions or programs, that tell the hardware what to do. It is the combination of Instructions and Data, that forms the building blocks of applications such as Word Processor, Computer Game or Spreadsheet. The main purpose of software is to process the data into information. The interface between a human and a computer is called a user interface. Interfaces between hardware components are physical. Operating system provides interfaces between hardware and software. Compatibility, in regard to computer, refers to the software being able to run on the computer. The person who writes and tests computer program is called a programmer and a person who determines a buyer's need and matches it to the correct hardware is called a computer sales representative. The process of writing computer instruction is known as coding. Copying computer program software without the permission of its author is called a software piracy.

Thus, if we want to know what a program is meant to do and how it has to be executed, we should refer to the program documentation. Most common examples would be the instruction manuals for a software product, which is given to the end-user. The description languages used are informal and are intended to make life easy for the end-user.

Software is often divided into two categories

Software

System Software

Operating System
DBMS
Data Communication Software

- 1. Operating System
- 2. DBMS
- 3. Data Communication Software
- 4. Translator
- 4. Utility

Application Software

- 1. Medical Software
- 2. Education Software
- 3. Business Software
- 4. Entertainment Software

System software: The user interacts primarily with application software. System software enables the application software to interact with the computer hardware. System software is "background" software that helps the computer to manage its own internal resources. It is not a single program. Rather it is a collection of programs, including the operating system, Utilities and Device drivers etc.

System software includes the operating system and all the utilities that enable the computer to function. It refers to the files and programs that make up our computer's operating system. System files include libraries of functions, system services, drivers for printers and other hardware, system preferences, and other configuration files. The programs that are part of the system software include assemblers, compilers, loaders, linkers, file management tools, system utilities and debuggers. The system software is installed in computer when we install operating system. Since system software runs at the most basic level of computer, it is called "low-level" software. It refers to the operating system and all utility programs that manage computer resources a low level. It generates the user interface and allows the operating system to interact with the hardware. Every computer that receives some sort of human input needs a user interface, which allows a person to interact with the computer. While devices like keyboards, mouse and touch-screens make up the hardware end of this task, the user interface makes up the software for it. The two most common forms of a user interface are the command-line interface, where computer commands are typed line-by-line, and the Graphical user interface, where a visual environment (such as windows, buttons, and icons) is present.

Operating system

The operating system works as a mediator between hardware, application software and user. Operating systems are programs that coordinate computer resources, provide an interface between users and the computer, and run applications. They manage the computer's processes functioning as an interface, connecting users with the application software and hardware. Every general purpose computer must have an operating system to run other programs. It performs basic tasks, such as recognizing input from the keyboard, sending output to the display screen, keeping track of files and directories on the disk, and controlling peripheral devices such as disk drives and printers. It controls different components of a computer and allows users to interact with computer. For large systems, the operating system has even greater responsibilities and powers. It makes sure that different programs running at the same time do not interfere with each other. Memory management is also a function of an operating system in which rearranging and allocating memory for multiple computing task. The operating system is also responsible for security, ensuring that unauthorized users do not access the system. It makes computer work properly. Some most popular operating systems are MS DOS, Windows 95, Windows 98, Windows XP, Windows 2000, Windows Vista and Mac OS X etc.

As a user, we interact with the operating system through a set of commands. For example, the DOS operating system contains commands such as COPY and RENAME for copying files and changing the names of files.

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The commands are accepted and executed by a part of the operating system called the command processor or command line interpreter. Graphical user interfaces allow us to enter commands by pointing and clicking at objects that appear on the screen.

When we first turn on computer, the only thing it is capable of doing is finding the BIOS (Basic Input Output System), ROM (Read Only Memory) chip on computer's system main board. This BIOS chip has a program burned onto it that knows where to look for, and how to access the different expansion slots, ports, drives, and the Operating System.

The computer begins the start up process or boot sequence, it loads programming code and instructions on the BIOS chip into memory, then carries out the instructions in order. It takes an internal and external inventory of equipment and performs several self-tests which are called Power on Self Tests (POST). The POST is a built-in diagnostic program that checks hardware to ensure that everything is present and functioning properly. The POST checks things like the bus, ports, system clock, disk adapter memory, RAM, DMA, keyboard, floppy drives, hard drives, and so forth. The CPU sends signals over the system bus to make sure that the devices are functioning. If the POST is successfully completed, the computer has to locate the Operating System.

Booting also known as "booting up", is a bootstrapping process that starts the operating system when the user turns on a computer system. Boot sequence is the initial set of operations that the computer performs when power is switched on. The boot-loader loads the main operating system for the computer. 'Warm boot' is pressing the restart button while the computer is on and a cold boot is pressing the power switch when turned off.

Types of operating system

Operating systems can be classified as a method of operating the system and a mode of system access. As computers have progressed and developed so have the types of operating systems. Many computer operating systems will fall into more than one category.

1. Real time operating system : A real time system is a computer system capable of processing data so quickly that the results are instantly available. There is often a need for front end processor in the system. A real-time operating system is an operating system that guarantees a certain capability within a specified time constraint. If the calculation could not be performed within the specified time, the operating system would terminate at the designated time, the operating system would terminate with a failure. A Real time operating system typically has very little user-interface capability, and no end-user utilities, since the system will be a "sealed box" when delivered for use. A very important function of an RTOS is managing the resources of the computer so that a particular operation executes in precisely the same amount of time, every time it occurs. Some real-time operating systems are created for a special application, others are more general purpose. General-purpose operating systems, such as DOS and UNIX are not real-time.

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2. Multi-access operating system : It allows two or more users to run programs at the computer's resources simultaneously. Some operating systems permit hundreds or even thousands of concurrent users. The operating system must make sure that the requirements of the various users are balanced, and that each program they are using has sufficient and separate resources so that a problem with one user doesn't affect the entire community of users. Unix, Linux and Windows 2000 are examples of multi-user operating systems.

3. Multiprocessing operating system : It is an operating system when two or more processors are present in a computer system sharing some or all of the memory. It supports running a program on more than one CPU. Unix, Linux and Windows 2000 are examples of multi-processing operating systems.

4. Multitasking operating system : It allows more than one program to run concurrently. An operating system that is capable of allowing multiple software processes to run at the same time. Unix and Windows 2000 are examples of multi-tasking operating systems.

5. Timesharing operating system : Processor time is divided into small units called time-slices and is shared in turn between users to provide multi-access.

6. Multi-programming operating system : More than one program resides in main storage and is being processed apparently at the same time. This is accomplished by taking turns at short bursts of processing time.

7. Batch processing operating system : The job is not processed till there is full input. The jobs are entered and stored on a disk in a batch queue and then run together under the control of the operating system. A job may wait in a batch queue for minutes or hours depending on the work load..

8. Single tasking operating system: Single-user, single task : As the name implies, this operating system is designed to manage the computer so that one user can effectively do one thing at a time. The Palm operating system for Palmtop computers is a good example of a modern single-user, single-task operating system.

9. Single-user, multi-tasking : This is the type of operating system most people use on their desktop and laptop computers today. Microsoft's Windows and Apple's Mac operating system are both examples of operating systems that will let a single user have several programs in operation at the same time. For example, it's entirely possible for a Windows user to be writing a note in a word processor while downloading a file from the Internet while printing the text of an e-mail message.

There are some important operating systems

1. MS-DOS : It was the main operating system of Microsoft installed in personal computers. Its most popular version is 7.0. It is simple, non-graphical and command line operating system but remembering all commands are very difficult task. So it was gradually replaced on desktop computers by operating systems offering a graphical user interface (GUI).

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2. MS Windows : Microsoft Windows is a series of operating systems with graphical user interface produced by Microsoft. It has other versions like Windows 95, Windows 98, Windows XP and Windows vista. The most recent client version of Windows is Windows 7; the most recent server version is Windows Server 2008 R2.

3. UNIX : Unix is a computer operating system originally developed in 1969 by a group of AT&T employees at Bell Labs including Ken Thompson, Dennis Ritchie, Brian Kernighan, Douglas McIlroy and others. Today the term Unix is used to describe any operating system that conforms to Unix standards, meaning the core operating system is the same as the original Unix operating system. Unix operating systems are widely used in both servers and workstations. First time it was written in assembly language but in 1973 it was rewritten in C programming language. Unix was designed to be portable, multi-tasking and multi-user and sharing configuration.

4. Linux : It is a Unix-like operating system based on the Linux kernel. The name "Linux" comes from the Linux kernel, originally written by Linus Torvalds. Linux is predominantly known for its use in servers, but it is also a example of open source software.

Virtual memory : It is a space on hard disk which is used by CPU extended RAM. It can be called logical memory which is controlled by operating system. It is an imaginary memory area which is supported by the operating system. It is an alternate set of memory address. Virtual memory enables a user to make an exact duplicate of everything currently used on a direct-access storage device on-line with the computer. Programs use these virtual addresses rather than real addresses to increase address space.

Translator

Translator is a computer program or set of instruction that converts instructions written in programming languages or source code to machine language or object code.

1. Assembler : The assembler translates the source program in assembly language into machine code.

2. Compiler : The compiler is a program that translates the user program written in high level language to an object code ready for execution. It reads the entire source code, collecting and reorganizing the errors, have to correct the syntax or it won't compile. After correcting all the mistakes, it translates the entire source code into object code.

3. Interpreter : The interpreter is also a program that translates the source program written in high level language to an object code. A compiler translates an entire program but, an interpreter translates individual instructions and execute the translated object code without saving it. So, when all programs are executed, at the end it gives result.

1. Database management system : DBMS is a computer software system which constructs, expands, sorts and maintains the database. It also provides the interface between the user and the data in the database.

It is also called service program. It is a small system program which provides a useful service to the user and enhances the capabilities of operating system. It makes it easier to use computer. It performs a very specific task, usually related to managing system resources and tells the computer how to use its components. The operating system contains a number of utilities for managing disk drives, printers and other devices. Some utilities are :

1. Disk formatting : Disk formatting is the process of preparing a hard disk or other storage medium for use according to operating system, including setting up an empty file system.

2. Disk cleaner : Disk cleaner is a computer maintenance utility designed to free up disk space on a computer's hard drive. The utility first searches and analyzes the hard drive for files that are no longer of any use, and then removes the unnecessary files.

3. Disk Compression : Disk compression increases the amount of information that can be stored on a hard disk by compressing all information stored on a hard disk. A disk compression utility works automatically and the user doesn't need to be aware of its existence.

4. Backup program : Backup program is a computer program used to perform a complete copy or backup of a file, data, database system. The full backup program enables a user to make an exact duplicate of everything contained on the original source or computer system. This software must be used to perform a recovery of the data or system in the event of a disaster.

5. Virus Scanner : It is also called anti-virus. It is used to prevent, detect, remove computer viruses, worms, adware, spyware and other types of malware.

6. Debugger : In a computer a bug is a coding error which causes wrong result. The process of searching and correcting bugs in a program is called debugging and debugger is a program that is used as an aid to removing bugs from program. Debugging starts after the code is first written and continues through successive stages as code is combined with other units of programming to produce a result, such as an application or operating system. After a product is released bugs are discovered and then patch is released from the originators of the code. A patch is a piece of object code that is used to fix known program bug. It is also available free of cost over the Internet to download.

7. Disk defragmentation : Fragmentation happens to a hard disk over time as we save, change or delete files. Disk defragmenter is a tool that arranges the data on hard disk and reunites fragmented files so computer can run more efficiently.

Device driver : A device driver or software driver is a computer program that allows high-level computer programs to interact with a hardware device. A driver interacts with the device through the bus or communications system to which the hardware connects. Device drivers are hardware dependent.

Application software

Applications software perform the specific jobs for the user producing a payroll, or stock control program or solving problem on top of systems software because it is unable to run without the system and system utilities. It includes programs that do real users. It is also called end-user programs and it includes word processing etc.

There are two types of application software

1. Special purpose application software : Special purpose software is a type of software that can only be used for only one specific example weather forecasting, aeroplane control etc.

2. General purpose application software : General purpose software is generally tools that provide specific capabilities, but support of a specific purpose. For example, a spreadsheet program general purpose application.

There are some general application packages : Application packages available in market for use in computer.

1. Electronic Spreadsheet : It is a computer software allowing numbers of mathematical computations on numbers arranged in columns, in which the numbers can depend on the values in other columns, allowing large numbers of calculations to be carried simultaneously. We can also represent these numbers in graph and Examples are MS Excel, Lotus 123, K-spread, Open Calc and Star calc.

2. Word Processor : It is a computer software that is used to create documents on the screen and lets go back to edit and make corrections necessary. It can be printed and stored on disk. Examples are MS Word star, Word perfect etc.

3. Computer Graphics : It is a computer program that is used and amend design, graphs, charts etc. Examples are CAD/CAM, graphics.

4. Desktop Publishing : DTP software is used to produce high publications at low cost. It takes in text created on a word processor direct to the DTP system and combine this electronically with a graphic element and the resulting completed pages are then printed on high resolution output device. Examples are Page-Maker, Coral Draw, Microsoft Publisher etc.

5. Database package : It allow users to manipulate large amounts of information and retrieve any part of the information that is of interest. It is an electronic filing system which allow us to define what information to store and then provide powerful facilities for entering, changing, searching and reporting the information. Examples are D-base, MySQL etc.

6. Report generator : It extracts data from a database and creates kind of reports to meet user's requests. Examples are RPG.

7. Accounting Package : A computer program that performs accounting operations, bank accounts, stock, income and automated cheque and record keeping. Examples are Tally etc.

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8. Presentation Software : Presentation software is used to create presentations of slides containing text and graphics. It typically includes three major functions: an editor that allows text to be inserted and formatted, a method for inserting and manipulating graphic images and a slide-show system to display the content. Examples are MS Power-Point, Freelance, Page etc. it is also called presentation graphics.

Operating System	Word Processing	Spreadsheet	Presentation	Database
MS-DOS	Word Star	Lotus 1-2-3		D base
MS-Windows	Word Pad	MS-Excel	MS-Power Point	MS-Access
	MS-Word		Page Maker	
	K-Word	K-Spread	K-Presentes	
	Ab-Word	Open Calc		
	Open writer	Star Calc	Star Impress	Star Base
	Star writer			

Turnkey system : A computer system that has been customized for a particular application. The term derives from the idea that the end user can just turn a key and the system is ready to go. Turnkey systems include all the hardware and software necessary for the particular application.

Free ware : It is a software offered free of charge, downloadable from internet. Ex.- Instant messaging and Google tool bar.

Objective Question

..... is a program which make easy to use a computer.

- (a) Operating system (b) Application (c) Utility
(d) Network (e) None of these

[SBI 2009]

An error in a program which causes wrong result is called a

- (a) bug (b) byte (c) attributes
(d) init problem (e) none of these

[SBI 2011]

Each component of computer is either

- (a) hardware or software (b) software or CPU/RAM
(c) application software (d) input devices or output devices
(e) none of these

[Punjab & Sind 2010]

The main purpose of software is to convert data into

- (a) web site (b) information (c) program
(d) object (e) none of these

..... is a process of searching bugs in software.

- (a) Compiling (b) Testing (c) Running
(d) Debugging (e) None of these

[Punjab & Sind 2010]

What is virtual memory ?

- (a) Memory of hard disk which is used by CPU as extended RAM
(b) Located in RAM
(c) It needs when there is no any RAM in computer
(d) Backup device for floppy discs (e) None of these

Computer **JASIEFT SINGH SEKHON** **Software**
how to use its components.

Computer

Software

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33. The set of instruction which tells a computer how to perform any work is called
 (a) data calculation (b) program (c) file
 (d) information (e) none of these
34. Which of the following works as an agent between hardware and software
 (a) Compiler (b) Operating system (c) Translator
 (d) All of these (e) None of these
35. Programs written in an assembly language are converted into machine language in a computer by
 (a) assembler (b) compiler (c) interpreter
 (d) processor (e) none of these
36. Any program translated into machine language is called
 (a) analog program (b) object code (c) personal program
 (d) official program (e) none of these
37. The original program written in programming language is called
 (a) Youth program (b) Source program (c) Ferm program
 (d) Loop program (e) None of these
38. The word CAD is related to
 (a) account (b) design (c) media
 (d) science (e) arts
39. What is the use of backup in a database ?
 (a) To check the working of the system (b) For safety
 (c) To provide record of transaction (d) To find the lost data
 (e) None of these
40. Page maker software is related to which operating system ?
 (a) MS-DOS (b) Unix (c) Windows
 (d) All of these (e) None of these
41. A Software which converts a high level language program into assembly language is called—
 (a) Compiler (b) Assemble (c) Loader
 (d) Interpreter (e) None of these
42. Oracle is a
 (a) An operating system (b) Word processor
 (c) Database software (d) All of these
 (e) None of these
43. Which software is used in word processing ?
 (a) Page maker (b) Word star (c) MS-Word
 (d) All (e) None of these
44. CAD stands for—
 (a) Computer algorithm for design
 (b) Computer aided design
 (d) All of these (c) Computer application in
45. The function of an assembler is
 (a) To convert basic language into machine language
 (b) To convert high level language into machine language
 (c) To convert assemble language into machine language

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- (d) To convert assemble language into high level language
 (e) None of these [Uttaranchal PCS 2005]
6. The legal right to use software based on specific restrictions is granted via a
 (a) Software privacy policy (b) Software license
 (c) Software password manager (d) Software log
 (e) None of these [RBI 2012]
7. Which software is used for creating resume ?
 (a) MS-Word (b) Page maker (c) a and b both
 (d) Java (e) None of these
8. MS-Word is an example of—
 (a) Operating system (b) Application software
 (c) Processing device (d) Input device [IBPS 2009]
9. People who write and test the programs are called—
 (a) Programmer (b) Computer scientists
 (c) Software engineer (d) Project developer
 (e) None of these
10. When you turn on the computer, the boot routine will perform this test—
 (a) RAM test (b) Disk drive test (c) Memory test
 (d) Power-on-self-test (e) None of these [IBPS 2009]
11. A detailed written description of the programming cycle and the program, along with the test results and a printout of the program is called
 (a) Documentation (b) Output (c) Reporting
 (d) Spec sheets (e) Directory [IBPS PO 2012]
12. After turns on computer light the process of start is called
 (a) application (b) system (c) boot strap
 (d) strap (e) none of these
13. The type of software that controls the internal operations in the computer and controls how the computer works with all its parts is which of the following ?
 (a) Shareware (b) Public domain software
 (c) Application software (d) Operating system software
 (e) None of these [RBI 2012]
14. Physical components that make up your computer are known as
 (a) Operating system (b) Software (c) Hardware
 (d) Web browsers (e) None of these
15. What is correcting errors in a program called ?
 (a) Compiling (b) Debugging (c) Grinding
 (d) Interpreting (e) None of these [SBI 2009, Punjab & Sind Bank 2010]
16. A compiler translates a program written in a high level language into
 (a) machine language (b) an algorithm
 (c) a debugged program (d) java
 (e) none of these [SBI 2009]

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57. The of a system includes the programs or instructions.
 (a) hardware (b) icon (c) information
 (d) software (e) none of these

This can be another word for program—
 (a) Software (b) Disk (c) Floppy
 (d) Hardware (e) None of these

59. The person who writes and tests computer program is called—
 (a) Programmer (b) Computer scientist (c) Software engineer
 (d) Project developer (e) None of these

60. Hardware includes—
 (a) All devices used to input data into a computer
 (b) Sets of instructions that a computer runs or executes
 (c) The computer and all the devices connected to it that are input and output data
 (d) All devices involved in processing information including memory and storage
 (e) None of these

61. The role of a generally is to determine buyers, needs and the correct hardware and software.
 (a) computer scientist (b) computer sales representative
 (c) computer consultant (d) corporate trainer
 (e) none of these

62. Which is the part of a computer that one can touch and feel?
 (a) Hardware (b) Software (c) Programs
 (d) output (e) None of these

63. A series of instructions that tells a computer what to do and how it is called a
 (a) program (b) command (c) user response
 (d) processor (e) none of these

64. What happens when you boot up a PC ?
 (a) Portions of the operating system are copied from disk into memory
 (b) Portions of the operating system are copied from memory onto the hard drive
 (c) Portions of the operating system are compiled
 (d) Portions of the operating system are emulated
 (e) The PC gets switched off

65. Which of the following statements is true concerning ?
 (a) Virtual memory is the space on the hard drive where it begins to store data when it becomes memory bound
 (b) Accessing data from RAM is slower than accessing data from memory
 (c) Both of these
 (d) If a computer is memory bound, adding more RAM will not solve the problem
 (e) None of these

66. Copying computer program or software without permission author is called—
 (a) Highway robbery (b) Larceny (c) Software piracy
 (d) Embezzlement (e) None of these

Software

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57. Peripheral devices such as printers and monitors are considered to be
 (a) Hardware (b) Software (c) Data
 (d) Information (e) None of these

58. Another word for software is
 (a) input (b) output (c) program
 (d) system (e) none of these

59. Antivirus software is an example of
 (a) business software (b) an operating system (c) a security utility
 (d) an office suite (e) none of these

60. A backup contains a copy of every program, data and system file on a computer.
 (a) restoration (b) bootstrap (c) differential
 (d) full (e) none of these

61. Restarting a computer that is already on is referred to as—
 (a) Shut down (b) Cold booting (c) Warm booting
 (d) Logging off (e) None of these

62. Which is not an item of hardware ?
 (a) An MP3 file (b) A keyboard (c) A monitor
 (d) A mouse (e) None of these

63. Compatibility in regard to computers refers to
 (a) The software doing the right job for the user
 (b) It being versatile enough to handle the job
 (c) The software being able to run on the computer
 (d) Software running with other previously installed software
 (e) None of these

64. A device that is connected to the motherboard is
 (a) called an external device (b) called an adjunct device
 (c) called a peripheral device
 (d) must connect using ribbon cable
 (e) none of these

65. Documentation of computer programs is important so that
 (a) users can learn how to use the program
 (b) other programmers can know how to maintain the program
 (c) the programmer can see why the code is written that way while hunting for sources of error
 (d) all of the above (e) none of these

66. The process of preparing a floppy diskette for use is called
 (a) assembling (b) translating (c) parsing
 (d) formatting (e) none of these

67. The physical components of a computer system
 (a) software (b) hardware (c) ALU
 (d) control unit (e) none of these

68. The ability of an OS to run more than one application at a time is called
 (a) multitasking (b) object-oriented programming
 (c) multi-user computing (d) time-sharing
 (e) none of these

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Computer Software

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79. Developing sets of instructions for the computer to follow and task the same way as many times as needed is called
 (a) listing (b) sequencing (c) programming
 (d) directing (e) none of these [Allahabad Bank Clerk]
80. The term used to define all input and output devices in a system is
 (a) monitor (b) software (c) shared resources
 (d) hardware (e) none of these [Allahabad Bank Clerk 2010, Syndicate Bank Clerk]
81. Which is not an item of hardware ?
 (a) An MP3 File (b) A keyboard (c) A Disk drive
 (d) A Monitor (e) None of these [Allahabad Bank Clerk]
82. Which of the following is not an example of hardware ?
 (a) Mouse (b) Printer (c) Monitor
 (d) Excel (e) None of these [Allahabad Bank Clerk]
83. Hardware devices that are not part of the main computer system are often added later to the system are
 (a) clip art (b) highlight (c) execute
 (d) peripherals (e) none of these [Allahabad Bank Clerk]
84. A computer cannot "boot" if it does not have the
 (a) compiler (b) loader (c) operating system
 (d) assembler (e) none of these [Syndicate Bank 2010, Allahabad Bank 2010]
85. Programs designed specifically to address general-purpose applications and special-purpose applications are called
 (a) operating system (b) system software
 (c) application software (d) management information systems
 (e) none of these [Allahabad Bank Clerk]
86. What is the name for the process that is used to convert a set of instructions or programs, written in a high-level language, into instructions (or a program) that can be run on a computer ?
 (a) Assembling (b) Compiling (c) Translating
 (d) Uploading (e) None of these [Syndicate Bank Clerk]
87. Which of the following peripheral devices displays information to the user ?
 (a) Monitor (b) Keyboard
 (c) Secondary storage devices (d) Secondary storage media [Syndicate Bank Clerk]
88. An assembler is used to translate a program written in
 (a) A low level language (b) Machine language
 (c) A high level language (d) Assembly language [Punjab & Sind Bank]
89. The capability of the operating system to enable two or more programs to execute simultaneously in a single computer system using a single processor is
 (a) multiprocessing (b) multitasking
 (d) multi execution (e) none of these [Punjab & Sind Bank]
90. A program which helps create written documents and lets you go back and make corrections as necessary
 (a) Spreadsheet (b) Personal writer (c) Word printer
 (d) Word processor (e) None of these [Punjab & Sind Bank 2010]
91. Start or restart of the computer
 (a) Exit (b) Kick (c) Boot
 (d) Kick-start (e) None of these [Punjab & Sind Bank 2010]
92. is when the computer is turned on and the operating system is loading.
 (a) Booting (b) Flashing (c) Tracking
 (d) Taping (e) None of these [Bank of Baroda Clerk 2010]
93. A compiler is used to translate a program written in
 (a) a low level language (b) a high level language
 (c) assembly language (d) machine language
 (e) none of these [IPNB Clerk 2010]
94. Computer programs are also known as
 (a) operating systems (b) documents
 (c) peripherals (d) applications [IPNB Clerk 2010]
95. The operating system is the most common type of software.
 (a) communication (b) application (c) system
 (d) word-processing (e) none of these [IPNB Clerk 2010]
96. In Windows 95 as a word processing is
 (a) Unix (b) Write pro (c) Word
 (d) Animation (e) None of these
97. A computer system includes
 (a) hardware (b) software (c) peripheral devices
 (d) All of these (e) none of these [ISBI Associate 2010]
98. One who designs, writes tests and maintains computer programs is called a
 (a) User (b) Programmer (c) Designer
 (d) Operator (e) none of these [ISBI Associate 2010]
99. The human-readable version of a program is called
 (a) source code (b) program code (c) human code
 (d) system code (e) None of these [Allahabad Bank PO 2010]
100. A(n) converts and executes one statement at a time.
 (a) compiler (b) interpreter (c) converter
 (d) instructions (e) None of these [Allahabad Bank PO 2010]
101. The term designates equipment that might be added to a computer system to enhance its functionality.
 (a) digital device (b) system add-on (c) disk pack
 (d) peripheral device (e) None of these [Allahabad Bank PO 2010]
102. Which is the best definition of a software package ?
 (a) An add-on for your computer such as additional memory
 (b) A set of computer programs used for a certain function such as word processing

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Computer

- (c) A protection you can buy for a computer
 (d) the box, manual and license agreement that accompany computer software
 (e) None of these
- 103.** If a new device is attached to a computer, such as a printer or scanner, its driver must be installed before the device can be used.
 (a) buffer (b) driver (c) pager
 (d) server (e) None of these [Panjab & Sind Bank PO 2010]
- 104.** Compiling creates a(n)
 (a) program specification (b) algorithm
 (c) executable program (d) subroutine
 (e) None of these [Panjab & Sind Bank PO 2010]
- 105.** What disk is used to cold boot a PC ?
 (a) Setup disk (b) System disk (c) Diagnostic disk
 (d) Program disk (e) None of these [Panjab & Sind Bank PO 2010]
- 106.** The process of writing out computer instructions is known as
 (a) assembling (b) compiling (c) executing
 (d) coding (e) None of these [Panjab & Sind Bank PO 2010]
- 107.** The general term "peripheral equipment" is used for
 (a) any device that is attached to a computer system
 (b) large-scale computer systems
 (c) a program collection
 (d) other office equipment not associated with a desktop computer
 (e) None of these [Panjab & Sind Bank PO 2010]
- 108.** Which process checks to ensure the components of the computer operating and connected properly ?
 (a) Booting (b) Processing (c) Saving
 (d) Editing (e) None of these [SBI Associate]
- 109.** What happens when you boot up a PC ?
 (a) Portions of the operating system are copied from disk memory
 (b) Portions of the operating system are copied from disk
 (c) Portions of the operating system are copied from memory
 (d) Portions of the operating system are compiled
 (e) None of these [Union Bank of India 2011, REPO]
- 110.** Hardware includes
 (a) all devices used to input data into a computer
 (b) sets of instructions that a computer runs or executes
 (c) the computer and all the devices connected to it that are used for input and output data
 (d) all devices involved in processing information including the processing unit, memory, and storage
 (e) None of these [Union Bank of India 2011]
- 111.** A(n) is a program that makes the computer easier to use.
 (a) application (b) utility (c) network
 (d) operating system (e) None of these [Union Bank of India]

Software

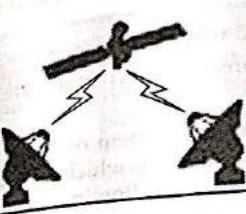
- 12.** The manual tells you how to use a software program.
 (a) documentation (b) programming (c) technical
 (d) user (e) None of these [Union Bank of India 2011]
- 13.** A computer cannot "boot" if it does not have the
 (a) Compiler (b) Loader (c) Operating System
 (d) Assembler (e) None of these [UBI Clerk 2011]
- 14.** The combination of operating system and processor in a computer is referred to as a computers'
 (a) firmware (b) specifications
 (c) minimum requirements (d) platform
 (e) None of these [Bank of Baroda 2011]
- 15.** What is software ?
 (a) A type of computer code (b) A computer language
 (c) A set of instructions for your computer (d) A cover for the computer (e) None of these [BOB 2011]
- 16.** What are two example of freeware ?
 (a) WinZip and Linux (b) Shareware and file sharing
 (c) Microsoft Word and the Google toolbar
 (d) Instant messaging and the Google toolbar
 (e) Microsoft Power Point and Microsoft Excel [Allahabad Bank PO 2011]
- 17.** Vendor-created program modifications are called
 (a) patches (b) antivirus (c) holes
 (d) fixes (e) overlaps [Allahabad Bank PO 2011]
- 18.** Every computer has a(n); many also have
 (a) Operating system; a client system
 (b) Operating system; instruction sets
 (c) application programs; an operating system
 (d) application programs; a client system
 (e) operating system; application programs [Allahabad Bank PO 2011]
- 19.** Which of the following is not a type of computer software which can be bought ?
 (a) Off-the-shelf (b) Tailor-made (c) Custom-developed
 (d) Off-the-shelf with alterations (e) All of these can be purchased [Allahabad Bank PO 2011]
- 20.** Computer software can be defined as
 (a) the computer and its associated equipment
 (b) the instructions that tell the computer what to do
 (c) computer components that act to accomplish a goal
 (d) an interface between the computer and the network
 (e) the interaction between the computer and its database. [Allahabad Bank PO 2011]
- 21.** Computer equipment itself is called
 (a) hardware (b) byte (c) mouse
 (d) software (e) default [Allahabad Bank 2011]
- 22.** A is the general term for hardware not necessary to the basic function of the computer, connected externally.
 (a) icon (b) bit (c) keyboard
 (d) printer (e) peripheral [Allahabad Bank 2011]
- 23.** The of a system includes the programs or instructions.
 (a) peripheral (b) software (c) information
 (d) icon (e) hardware [Allahabad Bank 2011]

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124. A(n) backup contains a copy of every program, data, and spyware on a computer.
 (a) restoration (b) bootstrap (c) differential
 (d) full (e) None of these
125. Every component of your computer is either
 (a) application software or system software
 (b) software or CPU/RAM (c) hardware or software
 (d) input devices or output devices (e) None of these
126. All the characters that a device can use is called is ?
 (a) Skill set (b) Character alphabet (c) Characters
 (d) Keyboard characters (e) Character set
127. "Booting the System" means—
 (a) Loading the operating system (b) Dismissing the computer
 (c) Running an application program called 'Booting'
 (d) Physically kicking the computer
128. A compiler is—
 (a) A program which translates an assembly language program into machine language
 (b) Any program written in machine language
 (c) A program which translates a high level language into machine language
 (d) A program which translates a program written in a high level language to another high level language
129. In MS-DOS, the command that is used to clear the screen is:
 (a) CIS (b) Clear
 (c) Clear screen (d) Wipe
130. Pick the odd man out.
 (a) UNIX (b) MS-DOS (c) WINDOWS
131. Related to computers, what is meant by 'software'?
 (a) Computer programs (b) Computer circuitry
 (c) Human brain (d) Floppy discs

Answers

1. (c) 2. (a) 3. (a) 4. (b) 5. (d) 6. (a) 7. (a)
 8. (c) 9. (b) 10. (b) 11. (c) 12. (e) 13. (d) 14. (a)
 15. (a) 16. (a) 17. (a) 18. (b) 19. (d) 20. (a) 21. (a)
 22. (d) 23. (c) 24. (a) 25. (b) 26. (b) 27. (c) 28. (a)
 29. (b) 30. (a) 31. (b) 32. (e) 33. (b) 34. (b) 35. (a)
 36. (b) 37. (b) 38. (b) 39. (d) 40. (c) 41. (a) 42. (a)
 43. (d) 44. (b) 45. (c) 46. (b) 47. (c) 48. (b) 49. (a)
 50. (d) 51. (a) 52. (c) 53. (d) 54. (c) 55. (b) 56. (a)
 57. (d) 58. (a) 59. (a) 60. (c) 61. (b) 62. (a) 63. (a)
 64. (a) 65. (a) 66. (c) 67. (a) 68. (c) 69. (c) 70. (a)
 71. (c) 72. (a) 73. (d) 74. (c) 75. (d) 76. (d) 77. (a)
 78. (a) 79. (c) 80. (d) 81. (a) 82. (d) 83. (d) 84. (a)
 85. (c) 86. (b) 87. (a) 88. (d) 89. (b) 90. (d) 91. (a)
 92. (a) 93. (b) 94. (a) 95. (d) 96. (c) 97. (d) 98. (a)
 99. (a) 100. (b) 101. (d) 102. (b) 103. (b) 104. (c) 105. (a)
 106. (d) 107. (a) 108. (d) 109. (a) 110. (c) 111. (b) 112. (a)
 113. (c) 114. (d) 115. (c) 116. (a) 117. (a) 118. (e) 119. (a)
 120. (b) 121. (a) 122. (c) 123. (b) 124. (d) 125. (c) 126. (a)



09

Data Communication**Introduction**

Data communication is the transmission of coded data between remote terminals and a centralized computer installation, or between two or more computer centers over established communication links.

Advantages of Data Communication System

- Saving of time in data preparation and physical transportation of prepared data.
- Full utilization of processing power and storage capacity of modern computer.
- Quick retrieval of information from files.
- Eliminates duplication of files.
- Reducing the cost of data transmission.

Types of transmission channel

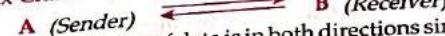
There are mainly two types of transmission channel

1. Simplex Channel :

In this channel transmission of data is always in one direction, i.e. after receiving the radio signal from radio-station, the receiver can't send back the signal to radio-station. Transmission always flows from A to B.

2. Half Duplex Channel :

In this channel transmission of data is in both directions, but at any one instant of time it is only in one direction. It means there is flow of transmission from either A to B or from B to A at one time, such as telephone line.

3. Full Duplex Channel :

In this channel transmission of data is in both directions simultaneously. It means there is flow of transmission from A to B and from B to A at any one instant of time.

Parity Check : In communication parity bit is used to check data that has been transmitted accurately. The parity bit is added to every data unit that are transmitted. The parity bit for each unit is set so that all bytes have either an odd number or an even number of number 1s. Parity bits are used as the simplest form of error detecting code.

Information Transfer speed : Information Transfer speed is measured by bit and baud rate.

Bit rate indicates the speed of bits transmitted within one second.

Baud rate counts the number of times of a transmission changes.

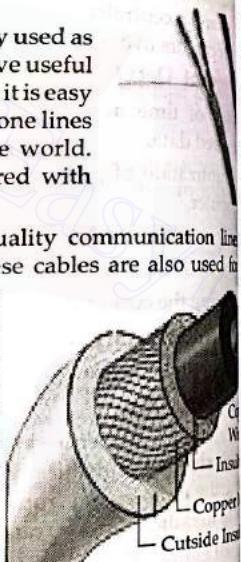
Data communication channels

Data is transmitted from a terminal to a computer system or computer system to a terminal over communication channels which are called communication lines or data links. They are of the following:

1. Standard telephone line
2. Coaxial cables
3. Microwave transmission
4. Satellite communication
5. Fiber optics.

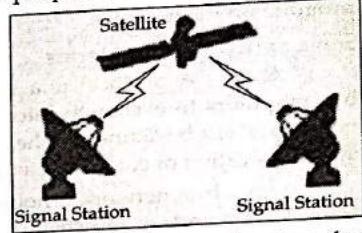
1. Standard telephone line : It is widely used as communication channels. It is very effective useful to the user of data communication because it is easy to join and the complex network of telephone lines has been already established all over the world. It consists of two wires of copper covered with insulator.

2. Coaxial cable : These are high quality communication lines have been under the ground or sea. These cables are also used for communication. A type of wire that consists of a centre wire surrounded by insulation and then a grounded shield of braided wire. The shield minimizes electrical and radio frequency interference. The layers of insulation help minimize interference and distortion. Transmission speed ranges from 200 million to more than 500 million bits per second. Coaxial cabling is the primary type of cabling used by the cable television industry and is also widely used for computer networks, such as Ethernet. Although it is more expensive than a standard telephone wire, it is much less susceptible to interference and can carry much more data.

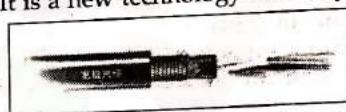


3. Microwave transmission : It transmits signals through open space like radio signal. It provides a much faster transmission rate than telephone line or coaxial cable. In this system data transmits on a line of sight path and needs antenna. Microwave antennas are usually placed on top of buildings, towers, hills, and mountain peaks. It consists of series of relay stations approximately 30 miles apart. For transmitting to long distances, signals are amplified and retransmitted from station to station. It provides higher bandwidth but it is affected by rain, dust, cloud and bad weather. It is used in cellular network and television broadcasting.

4. Satellite Communication : A satellite communication is known for fast communication. It is ideal for long distance communication. An artificial satellite station positioned in space for the purpose of telecommunications. These satellites serve as relay stations for the transmission of signals generated from the earth. The satellite amplifies signal received from one earth station and retransmits the signals to another earth station which can be located many thousands of miles away. They are also used for mobile applications such as communications to ships, vehicles, planes and hand-held terminals, and for TV and radio broadcasting, for which application of other technologies, such as cable, is impractical or impossible.



5. Fiber Optics : These cables consist of one or more thin filaments of glass fiber wrapped in a protective layer. It is a new technology that may serve to replace conventional wire and cable in communication. It is a glass or plastic fiber that carries light along its length. Optical fibers are widely used in fiberoptic communications, which permits transmission over longer distances and at higher bandwidths than other forms of communications. It works on the theory of total internal reflection. It is free from radio frequency interference. The speed of fiber optics is hundreds of times faster than coaxial cables and thousands of times faster than twisted-pair wire.



Network

A computer network is a group of computers that are connected to each other for the purpose of communication. A computer network allows computers to communicate with many other computers and to share resources and information. It is a combination of hardware and software, which provide facility of sending and receiving of information between computers or sharing of information between computing devices. To establish any network needs sender, receiver, medium and protocol. ARPANET was the first operational computer network in the world.

Computer networks can be used for several purposes

1. Facilitating communications : Using a network, people can communicate efficiently and easily via e-mail, instant messaging, chat rooms, telephone, video telephone calls, and video conferencing.

2. Sharing hardware : In a network environment, each computer on a network can access and use hardware on the network. Suppose several personal computers are on a network and each requires the use of a laser printer. If the personal computers and a laser printer are connected to a network, each user can then access the laser printer on the network, as they need it.

3. Sharing files, data, and information : In a network environment, any authorized user can access data and information stored on other computers.



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on the network. The capability of providing access to data and information stored on shared storage devices is an important feature of many networks.

4. Sharing software: Users connected to a network can access application program on the network.

Some network related terms

Protocol : A protocol is a set of rules and standards which are used by computers to exchange information or data with each other over a network. It can be defined as the rules governing the syntax, semantics and synchronization of communication.

Nodes : In a network a node is a connection point where either transmission ends or redistribution of data starts.

Server : A server is a main computer that manages resources of all computers connected to a network. Any user on the network can access resources stored on the server. It is a main and powerful computer on the network.

It is a central computer which holds collection of data and programs for workstations and other computers. Servers are often dedicated, meaning that they perform no other tasks besides their server tasks. A server may also refer to the program that is managing resources rather than the entire computer. Server is a computer which provides resources to all computers connected in a network. Server computer needs to be powerful to have a large storage capacity hard disk and lots of RAM.

Terminal : In data communication terminal is a computer equipment at the end of the link from the host processor. The terminal may be a general purpose terminal device such as keyboard, monitor, mouse, a special purpose terminal cash registers, banking terminals. A terminal is an electronic device that is used for entering data into a computer, displaying data from a computer. It is used to share the resources of a mainframe or supercomputer.

Dumb terminals : Dumb terminals are display and input devices which don't process data and input locally, instead transmitting input to a computer to which it is connected and displaying the resulting output. Dumb terminal refers to a monitor and keyboard that have no processing power of their own. It is simply an input and output device without its own processing power.

Networking device

There are devices to establish a network :

1. Repeaters, 2. Hub, 3. Switches, 4. Routers, 5. Gateways

Types of Network :

There are different types of network

1. Local Area Network (LAN) : A local area network is a computer network covering a small geographical area like a home, office, or a group of buildings, such as a school, or an airport. It is small in size and usually provides higher data-transfer rates. It is suitable for small equipments. At present LAN is based on Ethernet.

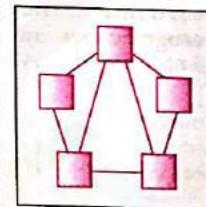
2. Wide Area network (WAN) : A wide area network is a computer network that covers a broad area such as any network whose communications links cross metropolitan, regional, or national boundaries. WANs are used to connect LANs and other types of networks together, so that users and computers in one location can communicate with users and computers in other locations. WANs are often built using leased lines or switched circuit. Internet, Indonet developed by CMC in India and ATM services of bank are good examples of WAN.

3. Metropolitan Area network (MAN) : A metropolitan area network is a large computer network that usually spans a city or a large campus. A MAN usually interconnects a number of local area networks and provides up-link services to wide area networks and the Internet. Routers, switches and hub all together forms a MAN.

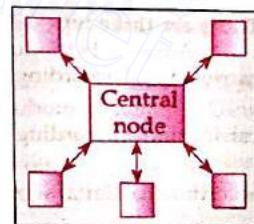
Network Topology

There are different types of network topology -

1. Mesh Network : Mesh networking is a type of networking wherein each node in the network may act as an independent router, regardless of whether it is connected to another network or not. It may be used for instances of high traffic conditions to provide alternate routes for transmission. It allows for continuous connections and reconfiguration around broken or blocked paths by "hopping" from node to node until the destination is reached. A mesh network whose nodes are all connected to each other is called a fully connected network. The cost of fully connected mesh network is high because of large amount of cable required and each node requires intelligence. As a result, the network may typically be very reliable, as there is often more than one path between a source and a destination in the network.



2. Star Network : Star networks are one of the most common computer network topologies. In star network consists of one central node which has a hub. All other nodes are connected to this central hub. Thus hub, other nodes linking any peripheral node to the central node will result in the isolation of that peripheral node from all others, but the rest of the systems will be unaffected. If the central node fails then the whole system goes down.



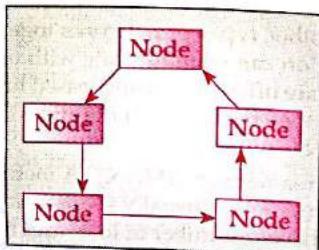
3. Ring Network : A ring network is a network topology in which each node has equal amount of intelligence. The direction of data flow around the ring is usually one way. Each node connects to exactly two other nodes, forming a single continuous pathway for signals through each node like a chain. Because a ring topology provides only one pathway between any two nodes.

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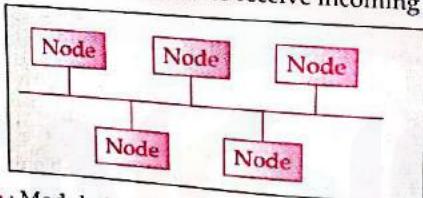
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nodes, ring networks may be disrupted by the failure of a single link. Any failure or cable break might isolate every node attached to the ring.



4. Bus Network : A bus network topology is a network in which all nodes are connected by a single communications line, called a bus. Bus networks are the simplest way to connect multiple nodes, but may have problems when two nodes want to transmit at the same time on the same bus. When a node wishes to transmit data to another node it must listen to the bus to see if anyone else is transmitting. If no data is on the bus then the node will transmit. The node must be intelligent enough to listen to the bus and recognize their own address in order to receive incoming data.



Modulation : Modulation is used to send an information bearing signal over long distances. It usually involves varying one waveform in relation to another waveform. Modulation is a process to change the analog signal to digital signal and digital signal to analog signal. A device that performs these operations is called a modem.

There are three types of modulation

1. **Amplitude modulation :** It is a process to change the amplitude of carrier signal according to digital signal having information.
2. **Frequency modulation :** It is a process to change the frequency of carrier signal according to digital signal having information.
3. **Phase modulation :** It is a process to change the phase of carrier signal according to digital signal having information.

Data Transmission Service

The service used to transmit data from one place to another place is called data transmission service and the organisation which provide this service is called data transmission service provider.

1. VSNL (Videsh Sanchar Nigam Limited)
2. BSNL (Bharat Sanchar Nigam Limited)
3. MTNL (Mahanagar Telephone Nigam Limited)



Data Communication

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Various Data Transmission Services

1. Dial up lines : Dial up lines are related with telephone connection which are connected to a telephone connection in a system of many lines shared by many users. It is used by dialing the number like telephone and it is used to already established telephone lines over the world. Dial-up lines are sometimes called switched lines. Broad band technique is also used by dial up lines.

2. Digital subscriber line (DSL) : DSL is a very high-speed internet connection that uses the same wires as a regular telephone line. The speed is much higher than a regular modem. DSL doesn't necessarily require new wiring; it can use the phone line we already have.

3. Leased line : A leased line connects the two locations for voice and data transmission. It is also called dedicated line and it makes transmission possible near and far both. It is not only dedicated line between two points, it is reserved circuit between two points. Generally, leased lines are used by businesses to connect geographically distant branch offices, because it makes sure to provide higher quality bandwidth in network traffic.

4. ISDN (Integrated services Digital Network) : ISDN is used to transmit voice, video, images and data through switched telephone network. Voice, video, images and data are transmitted through this system are noise-free and digital form. There is no need of modem in ISDN because data is transmitted in digital form.

Network Interface Card : A network interface card is a hardware component designed to allow computers to communicate over a computer network or enables our computer to connect to other computers. Computer sends and receives data packets in network under a protocol.

Wireless Technology : It is a technology which make possible to send or receive data without cable and saves the cable cost. It uses electromagnetic, microwave and infrared waves etc. at the place of cable. The applications of wireless technology are television remote control, Cellular phone and Wi-fi etc.

WiMAX (World wide Interoperability for Microwave Access) : It is a wireless transmission of data using a variety of transmission modes. The technology provides up to 10 Mbit/s broadband speed without the need for cables.

WLL (Wireless Local Loop) : It is another name for fixed wireless. Wireless local loop is a term for the use of a wireless communications link in which a user connects with network through radio frequency. It is popular in that locations where land-line telephone connection is not available. It is based on CDMA (Code Division Multiple Access) technology.

Objective Question

1. Users use often for access to mainframe or supercomputer.

(a) terminal	(b) node	(c) desktop
(d) hand held	(e) none of these	

[SBI 2009]
2. To create a personal computers can connect together.

(a) server	(b) super computer	(c) enterprise
(d) network	(e) none of these	

[Punjab & Sind 2010]



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3. What is used to identify whether a data word has an odd or even number of 1s ?
 (a) Gary bit (b) Zero bit (c) Parity bit
4. A combination of hardware and software, which provides facilities for sending and rationing of information between computer devices.
 (a) Network (b) Peripheral (c) Expansion slot
5. Server is a computer which provides resources other computers commuted in a
 (a) network (b) mainframe (c) super computer
6. LAN, WAN and MAN are computer networks covering different areas.
 Their first alphabets L, W and M respectively stand for
 (a) Local, Wide and Metropolitan (b) Long, Wireless and Metropolitan
 (c) Local, world and Middle (d) Least, Wireless and Maximum
7. In topology, network components are connected by only one path.
 (a) Star (b) Ring (c) Bus
8. Two or more than two computers connected to each other for sharing an information forms a
 (a) network (b) router (c) serves
9. On the large scale, geographically spreaded LAN's office are connected by using
 (a) CAN (b) LAN (c) serves
10. Which of following is a small single site network ?
 (a) LAN (b) DSL (c) DAN
11. Computer connected with LAN
 (a) work fast (b) go online (c) RAM
12. LAN is useful for
 (a) railway (b) bank (c) can e-mail
13. Telephone broadcast is an example of transmission.
 (a) Simplex (b) Half duplex (c) businessman
14. A parity bit is :
 (a) Used to indicate upper case letters
 (b) the last bit in a byte
 (c) the first bit in a byte
 (d) Use to detect errors
- [SSC CGL / SBI 2008]
15. The first computer network of the world is
 (a) I net (b) NSF net (c) Arpanet
16. Which of the following techniques needs source device and destination device in line of sight for data transfer ?
 (a) LAN (b) Bluetooth (c) WAN
17. When more computers are connected at one place, it is called
 (a) LAN (b) WAN (c) Infinite
18. Bank's ATM facility is an example of
 (a) LAN (b) WAN (c) Multipurpose networking
19. Which of the following is not of the same group ?
 (a) Internet (b) Apple talk (c) Bus
20. WAN is not useful for—
 (a) Ministry of Foreign affair (b) Foreign banks
21. is a central computer which is concerned with collections of data and programs for PCs workstation and other computers.
 (a) Super computer (b) Minicomputer (c) Laptop
22. A device that connects to a network without the use of cables is said to be
 (a) distributed (b) wireless (c) centralised
23. Several computers linked to a server to share programs and storage space—
 (a) Network (b) Grouping (c) Library
24. Computers connected to a LAN (local area network) can
 (a) run faster (b) go on line
 (c) share information and/or share peripheral equipment (e) none of these
25. What type of resource is most likely to be a shared common resource in a computer network ?
 (a) Keyboards (b) Speakers (c) Floppy disk drives
26. The enables your computer to connect to other computers.
 (a) Video card (b) Sound card
 (c) Network interface card (NIC) (d) Controller card
- [Allahabad Bank 2010, SBI Associate 2010]
- [Bank of Baroda Clerk 2010]

Data Communication

27. A(n) is a small group of computers and peripherals linked together in a small geographic area.

 - MAN
 - PAN
 - CAN
 - LAN
 - None of these

[Bank of Baroda Clerk 2001]

28. To access a mainframe or supercomputer, users often use a

 - terminal
 - node
 - desktop
 - hand held
 - none of these

[Bank of Baroda Clerk 2001]

29. A word in a web page that, when clicked, opens another document

 - Anchor
 - Hyperlink
 - Reference
 - URL
 - None of these

[Bank of Baroda Clerk 2001]

30. Dumb terminals have terminals and

 - mouse
 - speakers
 - keyboard
 - mouse or speakers
 - none of these

[PNB Clerk 2001]

31. A typically connects personal computers within a very limited geographical area, usually within a single building.

 - LAN
 - BAN
 - TAN
 - NAN
 - None of these

[Allahabad Bank PO 2001]

32. Computers connected to a LAN can

 - run faster
 - share information and / or share peripheral equipment
 - e-mail
 - go online
 - None of these

[SBI Associate PO 2001]

33. The most important or powerful computer in a typical network.

 - desktop
 - network station
 - network client
 - network server
 - None of these

[Union Bank of India 2001]

34. Which of the following refers to a small, single-site network ?

 - LAN
 - DSL
 - RAM
 - USB
 - CPU

[Union Bank of India 2001]

35. What type of resource is most likely to be a shared common resource in a computer network ?

 - printers
 - speakers
 - floppy disk drive
 - keyboards
 - None of these

[Union Bank of India 2001]

36. A(n) is a combination of hardware and software that facilitates sharing of information between computing devices.

 - network
 - peripheral
 - expansion board
 - digital device
 - None of these

[Union Bank of India 2001]

37. A is a set of rules.

 - resource locator
 - domain
 - hypertext
 - URL
 - protocol

[Union Bank of India 2001]

38. Terminal is

 - a device to give power supply to the computer
 - a point at which data enters or leaves the computer
 - the last instruction in a program
 - any input/output device
 - None of these

[Allahabad Bank PO 2001]

Answers

1. (a) 2. (d) 3. (c) 4. (a) 5. (a) 6. (a) 7. (c)
 8. (a) 9. (d) 10. (a) 11. (d) 12. (c) 13. (b) 14. (b)
 15. (c) 16. (d) 17. (a) 18. (b) 19. (b) 20. (c) 21. (d)
 22. (b) 23. (a) 24. (c) 25. (d) 26. (c) 27. (d) 28. (a)
 29. (b) 30. (c) 31. (a) 32. (b) 33. (d) 34. (a) 35. (a)
 36. (a) 37. (e) 38. (b) 39. (b) 40. (a) 41. (d) 42. (b)
 43. (d) 44. (d) 45. (a) 46. (c)

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Internet

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Internet

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Introduction

The Internet is a massive body of networks, a networking infrastructure which connects millions of computers together globally, forming a network which any computer can communicate with any other computer as long as they are both connected to the Internet. In other words, it is a global system of interconnected computer networks, connecting millions of computers through which exchange of information such as data, news and opinion etc. is possible. It uses the TCP/IP (Transmission Control Protocol/Internet Protocol) to serve billions of users worldwide. So, TCP/IP can be called backbone of Internet. It is a network of networks that consists of millions of private and public, academic, business, and government networks. The Internet is often called "The Information Highway," that implies that there is a straight, clear path of obtaining information. It connects thousands of computer networks. Each computer in Internet is called a host, independent. Through telephone wires, Fiber optical cable and satellite links, Internet users can share variety of information.

The Internet is a huge ocean of information of resources and services such as inter-linked hypertext documents of the World Wide Web (WWW), online chatting, online banking, file transfer and sharing, online gaming, online education, books, movies, sports and e-mail etc. It allows users to connect to servers all around the world, view web pages and send e-mails etc.

During 1991-1993 commercial use of Internet took its speed. For the first time, on 15 August 1995 VSNL (Videsh Sanchar Nigam Limited) and ISP (Internet Service Provider) launched Internet services in India. The First political party of India is Bharatiya Janata Party, which created its own website on internet. First telephone directory on internet was made available by Sikkim state, India's first Hi-speed rural broadband network has been commissioned in district of Idukki, Kerala.

Equipment required for using Internet

1. Computer
2. Modem
3. Web browser
4. Telephone line
5. Internet service provider (ISP)

Computer : Any good IBM compatible, Macintosh or UNIX computer that has good storage space 4 GB or more hard disk, 32 MB RAM and 300 MHZ processor.



Modem : It is a short form of modulator and demodulator. To connect the Internet through telephone or telecommunications line a modem is required. It is a link between Internet service provider and browser. Our computer sends data in binary code to our modem which converts the binary-coded data to an analogue signal. This data then travels along the telephone network. When the data reaches the destination computer, the modem connected to that computer converts the analogue signal back into binary coded data which can be read by destination computer. Thus the modem transmits data in pulse form over the network through telephone line. To maintain compatibility in between computer system and telephone line needs modem which converts digital signal to analog signal and analog signal to digital signal. The speed of modem measures in BPS (Bits Per Second).

There are two types of modems :

- (i) External Modem and (ii) Internal Modem.

The External Modem has to be connected to our computer and telephone line with cables and electric socket while the Internal Modem is already built inside our computer. The billing of our telephone starts from the moment we get connected to Internet. So a modem with good speed ensures low telephone bills.

Web Browser : Web Browser is a software that is used to navigate the world wide web. It connects computer to Internet. Before, start working on the Internet, we make sure that we have a web browser in our computer otherwise, we will not be able to surf the net. The most popular types of browser today are Netscape Navigator and Microsoft Internet Explorer, Mozilla Firefox, Safari, Opera, Chrome etc. We can get available resources from any location through visit site of that location. Each location has a unique address called URL (Uniform Resource Locator), which we type in Web Browser to get resources.

Internet Service Provider (ISP) : ISP is an organisation that provides Internet access to users. If we have a computer with a web browser, a modem and a telephone line connected to our computer, we also need an Internet connection. We can get an Internet connection from various ISPs. Earlier in India, Internet connection was only available through VSNL (Videsh Sanchar Nigam Limited). Now, we can choose from popular Internet service providers of India such as VSNL, BSNL, Satyam Online, Mantra On Line, MTNL etc. These companies have DNS servers in different cities of India. DNS server is a computer which translates domain name to IP address.

At present BSNL provides the following types of connections to access Internet to users.

1. PSTN : Public Switched Telephone Network
2. ISDN : Integrated Services digital Network
3. Leased line access
4. Direct Internet Access (DIAS)
5. Account free Internet dial up access based on CLI

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Computer

Internet

6. Broadband connection: Broadband service is based on DSL technology (on the same copper cable that is used for connecting telephone). It provides high speed Internet connectivity up to 8 Mbps. This provides continuous Internet access service with speed ranging from 256 Kbps to 25 Mbps.

7. Wi-Fi : Wi-Fi Services have been introduced for providing high speed Internet access at convenient public locations such as like Airports, Railways Stations, Universities and their campus etc.

8. Sancharnet card : BSNL has also launched "SANCHARNET CARD" recently. The Sancharnet Card is a prepaid Internet Access Card for users.

Browsing the websites using Web Browser : To browse the website first we open the browser of our computer. It opens automatically with chosen homepage. The homepage is the first page of URL that automatically loads, when a web browser starts or when the browser's "home" button is pressed. Homepage is a main page of website, which acts as a doorway to the rest of the website pages. We can select a homepage according to our choice or keep it blank. Now, we type the URL of specific websites in address bar, which we want to visit (open). At resultant we get all the resources and services of that websites. We use BACK button to go one page back a current page and FORWARD button to go one page forward of current page. These buttons are only applicable between pages which we have opened. At anytime by using HOME button we can go to homepage or by typing the other URL go to other websites. Websites are collection of web pages such as www.google.com, www.msn.com etc. If we use any site repeatedly then instead of type it again and again we should bookmark it.

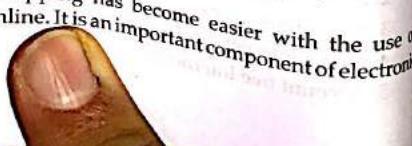
Uses of Internet : Internet has become a part of our everyday life. From being used in defence purposes by the United States military for communication initially, to being used worldwide for hundreds of thousands of different purposes of our every day life now.

There are millions of applications of Internet and we are in fact dependent on Internet as we are on other utility things like electricity, water etc. Before a few years, people used to get up in the morning and read the newspaper or watch television. Now most people log onto the Internet first thing in the morning. So Internet has become so essential in our daily life.

These uses of the Internet

1. Search engine : It is a specialized program that assists users in locating information on the web. It can be used to search anything and everything. Most popular search engines are Google, MSN, Lycos, Yahoo, Khoj and Cyber 411 etc. Cyber 411 is a mega search engine that queries over a dozen major search engines in parallel, then returns queries ranked by relevance. It gives the search results of 16 parallel queries.

2. Online shopping : Shopping has become easier with the use of Internet. We can buy or sell online. It is an important component of electronic commerce.



3. Net banking : Net banking or Internet banking means banking through internet. It has replaced the conventional way of banking. Now, there is no need to stand in long queues for deposit/ withdrawal to check the account status. All these are possible with just a few clicks of a mouse. Marketing of internet banking means marketing the uses of banking transactions through internet.

4. Communication : This is a major role of the Internet. It helps people to communicate either with the use of social networking websites or through e mails or through chatting. A chat is a real time typed conversation that takes place on a computer. Internet telephony allows voice conversation to travel over internet.

5. Job search : Nowadays, many people search for their jobs online as it is quicker and there is a larger variety of job vacancies present.

6. Hobbies : Those who are having certain hobbies can try to improve on it by reading up on many aspects of their hobby.

7. Research : Research papers are present online which helps in the researcher doing a literature review.

8. Studying : Now right from kindergarten children are exposed to Internet and computers. They find many useful things to learn on the Internet though with supervision of the elders. Upto doctorate level education, people rely on Internet for their education. Online educational books have even reduced the need for a library.

9. Usenet : Usenet has diminished in importance with respect to Internet forums, blogs and mailing lists. The difference, though, is that Usenet requires no personal registration with the group concerned, that information need not be stored on a remote server, that archives are always available, and that reading the messages requires not a mail or web client, but a news client. The format and transmission of Usenet articles is similar to that of e-mail messages. The difference between the two is that Usenet articles can be read by any user whose news server carries the group to which the message was posted, as opposed to email messages which have one or more specific recipients.

10. File download and upload : To download or upload any file to the Internet FTP (File Transfer Protocol) is a common way for users, our Web browser can also make FTP requests to download programs we select from a Web page. Using FTP, we can also update files at a server.

11. Videoconferencing : Videoconferencing is a service that allows multiple participants to converse with each other regardless of their location through personal computers and Internet. It uses telecommunications of audio and video to bring people at different sites together for a meeting. It's about connecting people. Besides the audio and visual transmission of meeting activities, videoconferencing can be used to share documents, computer-displayed information, etc.

The components required for a videoconferencing are :

- 1. Video camera or Webcam
- 2. Computer system
- 3. Microphones
- 4. Speaker
- 5. Internet

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Internet

12. E-Commerce (Electronic Commerce) : In other words, E-Commerce is a technology enabled communication of a business organisation with its customers and suppliers. It is conducting business through the electronic media, particularly through paperless IT (information technology) over the Internet. E-commerce is the buying and selling of goods and services on the Internet. It allows us to carry out transactions without the barriers of time or distance. It minimizes the cost of transaction.

13. E-learning : A popular way to learn about computer without ever going to a classroom.

14. E-mail : It is the most widely used application on the Internet. It is simple, very fast and a reliable tool for sending and receiving messages from an individual or a group of people across the world via the internet as similar to writing a letter. In 1971, Ray Tomlinson created the first ARPANEI email application, so he is considered to be the father of E-mail. Hotmail was the first free email service launched in June 1996 by Sabeer Bhatia. Today, hotmail is still one of the biggest free email services.

An e-mail message consists of two parts, the e-mail address and the message. We can get the e-mail address by creating an e-mail account. Each account has an e-mail address and a password. Each email address has two parts user name followed by @ sign and domain name. Password is a secret code or string of characters that restricts entry of unknown user and retains confidentiality. It is used for authentication, to prove identity or gain access to a resource. The password should be kept secret from those not allowed access. 'E-mail address' identifies a location to which e-mail messages can be delivered and password maintains security of users e-mail account. Sent messages are stored in electronic mailboxes until the recipient fetches them. To see if you have any mail, you may have to check your electronic mailbox. 'Subject' of e-mail gives information about contents of messages. Email has the option to attach any separate file like image, graph, sound and document etc from another program, that is called attachments. The draft folder retains copies of messages that have started but are not ready to send. E-mail saves time of sending and receiving messages and stamp's cost. At present popular free-mail service provider sites are www.hotmail.com, www.gmail.com, www.yahoo.com, www.rediffmail.com and www.india.com etc. Junk e-mail or unsolicited e-mail is known as Spam. It is unwanted messages or advertisements with e-mails which is not requested by users.

15. On-line entertainment : It allow us to visit on-line an electronic zoo or museum or favourite movies or songs, story books, puzzles, computer games, and more etc.

Internet related terms

1. URL : URL stands for Uniform Resource Locator. It is a standard way to locate a resource such as file or document on the Internet. The URL specifies the address of a file and every file on the Internet has a unique address. Every URL consists of three parts. The first part of the URL contains the name of the protocol to be used to access the file resource, the other is IP address or domain name that identifies a specific computer on the Internet. Such as a URL is <http://www.hotmail.com> in which http is protocol and

www.hotmail.com is IP address or the domain name where the resource is located.

The actual URL is a set of four numbers separated by periods. An example of this would be 202.147.23.8 but as these are difficult for humans to use, addresses are represented in alphanumeric form that is more descriptive and easy to remember. The Internet Domain Name System translates the alphanumerical address to numeric.

2. World Wide Web (WWW) : It is commonly known as Web, is a way of accessing information over the medium of the Internet. In March 1989, Tim Berners-Lee played an active role to develop the World Wide Web. World Wide Web is interlinked hypertext documents that contain resources. It is a vast collection of information related pages called web pages. Web pages are written in HTML (Hyper Text Markup Language) computer language. Each page may contain text, images, videos, sounds and other multimedia and navigate between them using hyperlinks. Mouse pointer appears like a hand when it points to a hyperlink. A hyperlink which is often called link is the "address" to a document or a resource on the web. When we click it then it makes available the resources of linked web pages. To reload a web page, we use reload button.

3. Web server : For a web site to be available to everyone all over world at all times, it needs to be stored or hosted on a computer. Such a computer is known as a web Server. A web server can mean two things, a computer on which a web site is hosted or stored and a program that runs on such a computer and can send web pages out to other computers over Internet. But the most important is to have a Permanent Internet address also known as an I.P. address. If the I.P. address changes, the web site would not be found and will appear off line, the browser will display an error 'cannot find web site'.

4. Bookmark : A bookmark is a saved link to a Web page that has been added to a list of saved links. When we are looking at a particular Web site and want to be able to quickly get back to it later, we can create a bookmark for it. If we are going to a site that we often use, instead of having to type in the address every time we should bookmark it.

5. HTML (Hyper Text Markup Language) : It is a computer's language used to create hypertext documents for the World Wide Web. Web pages are created using HTML.

6. TCP / IP (Transmission Control Protocol / Internet Protocol) : TCP / IP is the communication protocol for the Internet, it defines the rule which computers must follow to communicate with each other over the Internet.

7. FTP (File Transfer Protocol) : It is a standard network protocol used to exchange and manipulate files over the Internet. FTP represents the network functionality that enables users to upload web page files like simple text files, images, multi-media files, etc. from their personal computers to the server where their websites are located and vice versa - to download files from a particular server to their own machines.

8. HTTP : It is short for Hyper Text Transfer Protocol, used by the World Wide Web. HTTP defines how messages are transmitted, and what actions

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Internet

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Web servers and browsers should take in response to various commands. For example, when we enter a URL in our browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit requested Web page.

9. ICMP (Internet Control Message Protocol) : It is one of the main protocols of the internet protocol suite. It is used by network devices, routers to send error messages.

10. IP address : The format of an IP address is a 32-bit numeric address, written as four numbers separated by periods. Each number can be zero to 255. For example, 1.177.10.248 could be an IP address. It is an identifier for a computer on a TCP/IP network.

11. Domain name : Domain names are specific names used in URLs to identify particular Web pages. A name that identifies one or more IP addresses. For example, in the URL <http://www.hotmail.com>, the domain name is hotmail.com. Every domain name has a suffix that indicates which top level domain it belongs to. There is only a limited number of such domains. For example:

- .aco : aviation
- .gov : Government agencies
- .in : India
- .org : organisations (nonprofit)
- .com : Commercial business
- .asia : Asia

- .jobs : Jobs
- .name : Personal
- .edu : Educational institutions
- .mil : Military
- .net : Network organisations
- .biz : Business organisation

12. Upload : The term upload can refer to the sending of data from a local system to a remote system such as the remote system should store a copy of the data being transferred. When we are sending the copy of file from our system to a remote system by using Internet, then we are uploading the files.

13. Download : The term download can refer to the receiving of information to a local system from a remote system or server on the internet. When we are receiving a copy of the file from a remote system to our system by using Internet, then we are downloading the files. Software piracy is the act of copying or down loading a program from a network and making multiple copies of it.

14. Gateway : A gateway is a network point that acts as an entrance to another network. A gateway can accept a packet formatted for one protocol and convert it to a packet formatted for another protocol before forwarding it.

15. Flash : Flash is a vector animation software, originally designed to create animations for display on web pages. It is a small application that allows animations, interactive forms, games etc. It is to be embedded in web pages.

16. Web Surfing : Internet is a necessity for today's computer users. It is the world's largest encyclopedia. Whatever we need, we can find it and download it over the Internet, often for free. To search and explore the resources from websites which we need is called web surfing. Web surfing is usually seen as fun, dangerous, or a tremendous waste of time.

17. Virus : A computer virus is a computer program that can load and replicate itself without even the user knowing about the damage being done. It infects a computer system. It does so by being copied and uses all

over memory, resulting into system being slow or crashes. Some viruses are initiating its copying to another program such as computer boot sector or document. If our computer keeps rebooting itself, then it is likely that it has a virus. It can be transmitted as attachments to an e-mail or in a downloaded file and it is the most common way to get a virus in computer. So, if we get an e-mail from unknown user we should erase it without opening. It is a program designed to destroy data on computer system, which can travel to infect other computers. As with all code, viruses use the host's resources memory and hard disk space amongst others, and are sometimes deliberately destructive such as erasing files, formatting hard disks or allowing others to access the machine without authorization across a network. If a virus corrupts the file allocation table, the operating system DOS cannot retrieve any data from the dist. File allocation table provides a map of clusters in which the file has been stored.

Viruses are categorized to several parts based on their features

- | | |
|------------------------------|-------------------|
| (a) Boot Sector Viruses | (b) Macro Viruses |
| (c) Multipartite Viruses | (d) Link Virus |
| (e) Parasitic Virus | (f) Worms |
| (g) Trojans or Trojan Horses | |

To prevent, detect and remove these computer viruses a software is used which is called anti-virus. Such software may also prevent and remove adware, spyware and other forms of malware. It also provides the facility of auto-protection and real time protection which detects the virus in files before downloading from Internet. If virus activates then it informs the user by pop-up window and after that user removes it by system scan. To protect from virus the computer system needs periodically full scan.

The first actual computer virus was the Creeper, which first showed up on a very early edition of the Internet, the ARPANET. 'Happy Birthday Joshi' virus was first discovered in India in June 1990. Brain was the first virus to hit computers running Microsoft's then popular operating system MS-DOS. Elk Cloner is regarded as the first virus to hit personal computers worldwide, it spread through Apple II floppy disks.

Some computer viruses are
 1. Creeper 2. Brain 3. Monkey 4. Michelangelo

18. Hacker : A person who used his or her expertise to get access to other people's computers to get information illegally or do damage for personal gain.

19. Phishing : Phishing is a way of attempting to acquire sensitive information such as username, password and credit card details. Phishing scams attempt to trick people into providing sensitive personal information. In order to carry out this trick the phishing scammers send a fraudulent email disguised as an official request for information from the targeted company. They also create a lookalike website that is designed to closely resemble the target company official site.

Multimedia : We use different medium to say any information to others. These mediums can be text, sound, pictures, animation, and video.

Multimedia is the presentation of information through more than one presentation medium or the combination of text, sound, pictures, animation, and video.

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.asia : Asia	.biz : Business organisation

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Hardware and Software requirement for Multimedia : To develop a multimedia system, the required various hardware/software components are:

- 1. Graphics Accelerator Card
- 2. Sound Card
- 3. CD-ROM drive
- 4. Microphone
- 5. Camera
- 6. Multimedia Software

Elements of Multimedia : The elements of multimedia are following

1. **Text :** Text is the most fundamental element of any multimedia project. Of all multimedia elements, text is the easiest to manipulate. It is used to add special visual effects to text to create a more appealing presentation using special tools such as bold, blink and underline etc.

2. **Graphics :** Graphics can be added into a multimedia project in the form of photographs or designs. It can be imported from a variety of resources such as the Internet, a digital camera, a scanner etc. Original graphic designs also can be created with the help of graphic applications. It is used to inform about anything to people easily because image can say more than text.

3. **Sound :** Sound can be added to a multimedia presentation from a variety of sources. Original sounds can be also recorded using a microphone and programs such as HyperStudio, MovieWorks, or SmartSound.

4. **Video :** Moving images or video can be incorporated into a multimedia project as Quick-Time movies.

5. **Animation :** It is a group of graphics images that contain movement and look like a movie. It is used for making cartoon film, video game etc.

Uses of Multimedia

1. **Entertainment :** Multimedia is used in the entertainment industry especially to develop special effects in movies and animations. It is also used in video games.

2. **Education and Training :** In Education and training multimedia is used to produce computer-based training courses and reference books like encyclopaedia and almanacs.

3. **Engineering :** Software engineers may use multimedia in Computer simulations for anything from entertainment to training.

4. **Business :** In business, multimedia is used as a way of helping present information to shareholders, superiors and co-workers. Multimedia is also helpful for providing employee training, advertising and selling products all over the world through unlimited web-based technologies.

5. **Mathematical and Scientific Research :** In Mathematical and Scientific Research, multimedia is mainly used for modeling and simulation.

6. **Medicine :** In medicine, doctors can get trained by looking at a virtual surgery or they can simulate how the human body is affected by disease.

Objective Question

A word on a web page which opens other document when clicks on it is a

- (a) Anchor
- (b) Hyper link
- (c) Reference
- [Punjab & Sind 2010]
- (d) URL
- (e) None of these

Internet banking means

- (a) Meeting of banks on internet
- (b) Net practice
- (c) Banking from internet
- (d) All of these
- (e) None of these

Which of following is a example of continuity ?

- (a) Internet
- (b) Floppy disk
- (c) Power cord
- [BOB 2010]
- (d) Data
- (e) None of these

When sending an e-mail, the line describes the contents of the message.

- (a) Subject
- (b) To
- (c) Contents
- [BOB 2010, SBI 2009]
- (d) CC
- (e) None of these

..... is a device which uses for data transmission through telecommunication line.

- (a) Drives
- (b) Modem
- (c) Platform
- [Punjab & Sind 2010]
- (d) All of these
- (e) None of these

Specialized programs that assist users in locating information on the Web are called

- (a) Information engines
- (b) Locator engines
- (c) Web browsers
- [RBI 2012]
- (d) Resource locators
- (e) Search engines

Unsolicited e-mail is called a

- (a) Newsgroup
- (b) Usenet
- (c) Backbone
- [SBI 2011]
- (d) Spam
- (e) None of these

A code of webpage has been written by using

- (a) Hyper text markup language
- (b) 5th generation language
- (c) Winzip
- (d) Perl
- (e) None of these

Small application program which runs on webpage and stores that forms completed correctly of provide animation is called

- (a) Flask
- (b) Spiders
- (c) Corkies
- (d) Applets
- (e) None of these

When pointer points then pointer appears like a hand.

- (a) Grammar error
- (b) Hyperlink
- (c) Screen tip
- (d) Spelling error
- (e) None of these

What is an E-mail attachment ?

- (a) A receipt sent by the recipient
- (b) A separate document from another program sent along with and E-mail message
- (c) A malicious parasite that feeds off of your messages and destroys the contents
- (d) A list of CC : or BCC : recipients
- (e) A friend to whom E-mail is sent regularly

[RBI 2012]

12. The first political party of India which created its own web-site on internet is

- (a) Bhartiya Janata Party
- (b) Lok Janshakti Party
- (c) Rastriya Janta Dal
- (d) Samajwadi Party
- (e) Janata Party

- | Internet | | | | |
|--|---|--------------------------------|-----------------------|-----|
| 13. Which state of India first available the telephone directory on internet? | (a) Sikkim | (b) Arunachal Pradesh | (c) Andhra Pradesh | 129 |
| | (d) Bihar | (e) Uttar Pradesh | | |
| 14. Which of the following must be contained in a URL? | (a) A protocol identifier | (b) the letter, WWW. | | |
| | (c) The unique registered domain name | | | |
| | (d) WWW. and the unique registered domain name | | | |
| | (e) A protocol identifier, WWW. and the unique registered domain name | | | |
| 15. Who runs internet? | (a) I & B | (b) IETF | (c) Inter NIC | |
| | (d) VSNL | (e) None of these | | |
| 16. is a device that connects two or more networks. | (a) Gateway | (b) Pathway | (c) Roadway | |
| | (d) Bus | (e) None of these | | |
| 17. uses HTTP. | (a) Workbook | (b) Server | (c) Worksheet | |
| | (d) Web page | (e) None of these | | |
| 18. WWW uses protocol. | (a) FTP | (b) HTTP | (c) WBC | |
| | (d) MTP | (e) None of these | | |
| 19. Website is a collection of | (a) HTML documents | (b) Graphic files | (c) Lock key | |
| | (d) All of these | (e) None of these | | |
| 20. A website's main page is called its | (a) Home page | (b) Browser page | (c) Search page | |
| | (d) Book mark | (e) None of these | | |
| 21. Which of the following cannot be part of an email address? | (a) Period (.) | (b) At sign (@) | (c) Space () | |
| | (d) Underscore (_) | (e) None of these | | |
| 22. For document exchange on network which of the following is necessary? | (a) Floppy | (b) Telephone line | (c) Connector | |
| | (d) Satellite | (e) None of these | | |
| 23. It helps to connect a computer from internet. | (a) Browser | (b) Netfit | (c) Windows-95 | |
| | (d) Cable | (e) None of these | | |
| 24. Which field .org is related to? | (a) Education | (b) Non-commercial | (c) Art | |
| | (d) Organization | (e) None of these | (d) Information | |
| 25. .com is related to | (a) Personal characteristic | | | |
| | (c) Commercial organization | | | |
| | (e) None of these | | | |
| 26. Internet was started in India at— | (a) 15 August, 1995 | (b) 9 August, 1995 | (c) 8 August, 1994 | |
| | (d) 7 August, 1996 | (e) None of these | | |
| 27. What is used in computer for communication purpose? | (a) Netsurfing | (b) Software | | |
| | (d) Modem | (e) None of these | (c) Language | |
| | | | | |
| 28. F.T.P. stands for— | (a) File transfer protocol | (b) File transfer | | |
| | (c) File transfer premium | (d) File transfer perfect | | |
| | (e) None of these | | | |
| 29. An address that starts from WWW is related to— | (a) Modem | (b) Internet | (c) Telephone | |
| | (d) Website | (e) None of these | | |
| 30. is selling and buying of goods and services through internet. | (a) E-commerce | (b) Internet | (c) E-mail | |
| | (d) Website | (e) None of these | | |
| 31. Address of a website is called an | (a) User ID | (b) URL | (c) Time stamp | |
| | (d) All of These | (e) None of these | | |
| 32. Which of the following uses to send a data of one computer to the farthest other computer? | (a) Telex | (b) Modem | (c) Fax | |
| | (d) Telegraph | (e) None of these | | |
| 33. Internet service is provided in India through | (a) VSNL | (b) MTNL | (c) Both | |
| | (d) WLL | (e) None of these | | |
| 34. Full name of Modem is— | (a) Modulator demodulator | (b) Modulator demodulation | | |
| | (c) Modulator discussion | (d) All of these | | |
| | (e) None of these | | | |
| 35. Full name of E-mail is | (a) English mail | (b) Electric mail | (c) Electronic mail | |
| | (d) Essential mail | (e) None of these | | |
| 36. Full form of Internet is | (a) Intercontinental network | (b) International network | | |
| | (c) Internal network | (d) Intercom network | | |
| | (e) None of these | | | |
| 37. A device which sends data by telephone is | (a) Modem | (b) Monitor | (c) Mouse | |
| | (d) O.C.R. | (e) None of these | | |
| 38. is called information highway. | (a) E-mail | (b) Page | (c) Cellular phone | |
| | (d) Internet | (e) None of these | | |
| 39. Inventor of e-mail— | (a) Bill gates | (b) Timothi Bil | (c) Linkan Galitobery | |
| | (d) Ray Tomlinson | (e) None of these | | |
| 40. Full form of WWW is | (a) World working window | (b) Window world wide | | |
| | (c) World wide web | (d) World working web | | |
| | (e) None of these | | | |
| 41. Inventor of WWW is | (a) Bill Gates | (b) Lee. N. Feyong | (c) N. Ressl | |
| | (d) Tim Berners Lee | (e) None of these | | |
| 42. Yahoo, Google and MSN are | (a) Internet sites | (b) Computer brand | | |
| | (c) Saturan ring | (d) Watch made in sartzor land | | |
| | (e) None of these | | | |

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43. Which of the following is not term of information technology
 (a) Cyber space (b) Upload (c) Light storage
 (d) Modem (e) None of these [UPPCS]
44. Spam is related to
 (a) Computer (b) Art (c) Music
 (d) Game (e) None of these [Chhattisgarh PCS 2008]
45. Which of the following is not defined in information technology
 (a) Login (b) Modem (c) Password
 (d) Pinaca (e) None of these [Chhattisgarh PCS 2008]
46. The first computer virus seen in India is —
 (a) C-Brain (b) Calambus (c) Mac bug
 (d) Michel Angelo (e) None of these [Chhattisgarh PCS 2008]
47. When internet is used to send a message then this facility is called
 (a) Cyber space (b) Nicknet (c) E-mail
 (d) I-net (e) None of these [Chhattisgarh PCS 2008]
48. Which of the following is not a computer virus?
 (a) Wanhaaff (b) Monkey (c) Change mange
 (d) Manoj (e) None of these [Chhattisgarh PCS 2008]
49. In Michel Angelo virus was subject of thinking in world.
 (a) 1999 (b) 1992 (c) 1994 [Chhattisgarh PCS 2008]
50. Passwords enables users to
 (a) Get into the system quickly (b) Make efficient use of time
 (c) Retain confidentiality of files (d) Simplify file structure [SBI 2008]
51. What is an e-mail ?
 (a) An internet standard, which allow users to upload and download files
 (b) An online area on which a user can converse in written form about any special subject
 (c) Transmission of files and messages through computer network
 (d) A real time typed conversation
 (e) None of these [SBI 2008]
52. A chat is—
 (a) An internet standard, which all users use to upload and download files
 (b) An online area on which a user can converse in written form about any subject
 (c) Transmission of files and messages through computer network
 (d) A real time typed conversation
 (e) None of these [SBI 2008]
53. Secret code that restricts entry in the same programs is—
 (a) Password (b) Passport (c) Entry code [SBI 2008]
54. Sending an e-mail is like a
 (a) Creating an image of any event (b) Writing a letter
 (c) Telling a story (d) Creating an image [SBI 2008]
55. The process of a computer receiving information from a server on the internet is known as—
 (a) Pulling (b) Pasting (c) Downloading
 (d) Transforming (e) None of these [SBI Asso. 2009, UBI 2011]
56. IT stands for—
 (a) Information technology (b) Integrated technology
 (c) Intelligent technology (d) Interesting technology [SBI Associates 2009]
57. Sending an e-mail is similar to—
 (a) Petering an event (b) Narrating a store (c) Writing a letter
 (d) Creating a drawing (e) None of these [SBI Associates 2009]
58. E-commerce allows companies to—
 (a) Issue important business reports (b) Conduct business over the internet
 (c) Support decision making processes (d) Keep track of paper based transaction
 (e) None of these [BOB 2008]
59. Junk e-mail is also called—
 (a) Spam (b) Spoof (c) Sniffer script
 (d) Spool (e) None of these [BOB 2008]
60. The internet allows you to—
 (a) Send e-mail (b) View web pages
 (c) Connect to servers all around the world (d) All of the above (e) None of these [BOB 2008]
61. A program designed to destroy data on your computer which can travel to infect other computers is called a —
 (a) Disease (b) Tarpedo (c) Hurricane
 (d) Virus (e) None of these [BOB 2008, RBI 2012]
62. What is the most common way to get a virus in your computers hard disk ?
 (a) By installing games from CD ROMs
 (b) By opening e-mails
 (c) By uploading pictures from mobile to the computers
 (d) By sending e-mails(e) None of these [BOB 2008]
63. Marketing of internet banking means—
 (a) Meeting of banks on the net (b) Net Practice
 (c) Marketing the usage of banking transactions through internet
 (d) Transactions with forcing countries
 (e) None of these [SBI 2008]
64. are devices used to transmit data over telecommunications lines.
 (a) Drives (b) Drive bays (c) Modems
 (d) Platform (e) None of these [SBI 2008]
65. Most websites have a main page, the which acts as a doorway to the rest of the website pages.
 (a) Search engine (b) Home page (c) Browser
 (d) URL (e) None of these [SBI 2009, Allahabad Bank 2011]
66. If you are going to a site you use often, instead of having to type in the address every time, you should
 (a) Save it as a file (b) Make a copy of it (c) Bookmark it
 (d) Delete it (e) None of these [Syndicate Bank 2010]
67. Output which is made up of pictures, sounds, and video is called
 (a) COM (b) Hard copy (c) Graphics
 (d) Multimedia (e) None of these [Syndicate Bank 2010]

- (b) High Transmission Markup Language
 (c) Hypertext Markup Language
 (d) Hypermedia Markup Language
 (e) None of these
91. The software that allows users to surf the internet is called a/an
 (a) Search engine
 (b) Internet Service Provider [SBI Associate PO 2011]
 (c) Multimedia application
 (d) Browser
 (e) None of these
92. A modem
 (a) translates analog signals from a computer into digital signals & can travel along conventional telephone lines
 (b) translates digital signals from a computer into analog signals & can travel along conventional telephone lines
 (c) demodulates digital signals from a computer
 (d) modulates signals an analog telephone line
 (e) None of these
93. A Web site address is a unique name that identifies a specific on the Web.
 (a) Web browser
 (b) PDA
 (c) Web site
 (d) link
 (e) None of these
94. The Internet allows you to
 (a) send electronic mail
 (b) view Web pages
 (c) connect to servers all around the world
 (d) All of these
 (e) None of these
95. Most mail programs automatically complete the following two parts of an e-mail
 (a) From : and Body :
 (b) From : and Date :
 (c) From : and To :
 (d) From : and Subject :
 (e) None of these
96. The Internet allows you to
 (a) Send electronic mail
 (b) view Web pages
 (c) connect to servers all around the world
 (d) All of these
 (e) None of these
97. What is the most common way to get a virus in your computer's hard disk ?
 (a) By installing games from their CDROMS
 (b) By uploading pictures from mobile phones to the computer
 (c) By opening emails
 (d) By sending emails
 (e) None of these
98. A chat is
 (a) an Internet standard that allows users to upload and download files
 (b) a typed conversation that takes place on a computer
 (c) an online area in which users conduct written discussions about particular subject
 (d) the transmission of messages and files via a computer network
 (e) None of these
99. The Internet is
 (a) a large network of networks
 (b) an internal communication system for a business

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- (c) a communication system for the Indian government
 (d) All of these
 (e) None of these [Union Bank of India 2011]
100. Junk e-mail is also called
 (a) spam
 (b) spoof
 (c) sniffer script
 (d) spool
 (e) None of these [Union Bank of India 2011]
101. To view information on the web you must have a
 (a) cable modem
 (b) web browser
 (c) Domain Name Server
 (d) hypertext viewer
 (e) None of these [Union Bank of India 2011]
102. A word in a web page that, when clicked, opens another document....
 (a) anchor
 (b) URL
 (c) hyperlink
 (d) reference
 (e) None of these [Union Bank of India 2011]
103. is the most popular internet activity.
 (a) Art
 (b) Shopping
 (c) Searching
 (d) Entertainment
 (e) Communication [Bank of Baroda 2011]
104. What is e-commerce ?
 (a) Buying and selling international goods
 (b) Buying and selling products and services over the internet
 (c) Buying and selling products and services not found in stores
 (d) Buying and selling products having to do with computer
 (e) Buying and selling of electronic goods [Allahabad Bank PO 2011]
105. What are the four things needed to connect to the Internet ?
 (a) telephone line, modem, computer, and an ISP
 (b) modem, computer, PDA, and ISP
 (c) telephone line, PDA, modem, and computer
 (d) computer, ISP, modem, and communication software
 (e) monitor, keyboard, mouse, modem [Allahabad Bank PO 2011]
106. Which of the following functions are not performed by servers ?
 (a) e-mail processing
 (b) database sharing
 (c) processing websites
 (d) storage
 (e) word processing [Allahabad Bank PO 2011]
107. The process of transferring files from a computer on the Internet to your computer is called
 (a) downloading
 (b) uploading
 (c) FTP
 (d) JPEG
 (e) downsizing [Allahabad Bank PO 2011]
108. To reload a Web page, press the button.
 (a) Redo
 (b) Reload
 (c) Restore
 (d) Ctrl
 (e) Refresh [Allahabad Bank PO 2011]
109. You can use the ... bar to type a URL and display a Web page, or type a keyword to display a list of related Web pages.
 (a) menu
 (b) Title
 (c) Search
 (d) Web
 (e) Address [Allahabad Bank PO 2011]
110. The collection of links throughout the Internet creates an interconnected network called the
 (a) WWW
 (b) Web
 (c) World Wide Web
 (d) All of the above
 (e) Wide Area Web [Allahabad Bank PO 2011]
111. A(n) is composed of several computers connected together to share resources and data.
 (a) Internet
 (b) network
 (c) backbone
 (d) hyperlink
 (e) protocol [Allahabad Bank PO 2011]
112. A popular way to learn about computers without ever going to a classroom is called
 (a) i-learning
 (b) isolated learning
 (c) e-learning
 (d) close learning
 (e) Distance Learning [Allahabad Bank PO 2011]

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Computer

- 113.** A person who used his or her expertise to gain access to other people's computers to get information illegally or do damage is a
 (a) spammer (b) hacker (c) instant messenger
 (d) programmer (e) analyst *[Allahabad Bank PO 2012]*
- 114.** The folder retains copies of messages that you have started but are not yet ready to send.
 (a) Inbox (b) Outbox (c) Drafts
 (d) Sent Items (e) Address Book *[Allahabad Bank PO 2012]*
- 115.** are attempts by individuals to obtain confidential information from you by falsifying their identity.
 (a) Phishing trips (b) Computer viruses (c) Spyware scams
 (d) Viruses (e) Phishing scams *[Allahabad Bank PO 2012]*
- 116.** Which of the following is not true ?
 (a) Chatting is like e-mail
 (b) Chatting can only be done with a single person
 (c) Chatting can involve multiple persons
 (d) Chatting is an electronic dialogue
 (e) None of these *[Allahabad Bank 2012]*
- 117.** What are the two parts of an E-mail address ?
 (a) User name and street address
 (b) Legal name and phone number
 (c) Initials and password
 (d) User name and domain name
 (e) None of these *[Allahabad Bank 2012]*
- 118.** Sending an E-mail is similar to
 (a) writing a letter (b) drawing a picture
 (c) talking on the phone
 (d) sending a package (e) None of these *[Allahabad Bank 2012]*
- 119.** If you are going to a site you use often, instead of having to type in the address every time, you should
 (a) make a copy of it (b) save it as a file (c) memorise it
 (d) bookmark it (e) note it in your diary *[Allahabad Bank 2012]*
- 120.** What does a Browser do ?
 (a) Looks through magazines and books in the library
 (b) Reads material really fast
 (c) It provides help menus
 (d) It is software used to view web pages
 (e) It wastes your time *[Allahabad Bank 2012]*
- 121.** An email account includes a storage area, often called a(n)
 (a) attachment (b) hyperlink (c) mailbox
 (d) IP address (e) None of these *[Allahabad Bank 2012]*
- 122.** What is a modem connected to ?
 (a) processor (b) mother board
 (c) phone line (d) None of these *[Allahabad Bank 2012]*
- 123.** Mr. XYZ wants to send an electronic message to a friend. He should use this type of application
 (a) word processing (b) e-mail
 (c) printer (d) paper and pencil
 (e) None of these *[Allahabad Bank 2012]*
- 124.** If your computer keeps rebooting itself, then it is likely that
 (a) It has a virus
 (b) There is no printer
 (c) There is no CD-ROM
 (d) It needs a power surge
 (e) None of these *[Allahabad Bank 2012]*

Internet

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- 125.** What utility do you use to transfer files and exchange messages ?
 (a) Web browsers (b) WWW (c) E-mail
 (d) Hypertext (e) Search engines *[SBI 2012]*
- 126.** Which of the following terms is just the collection of networks that can be joined together ?
 (a) Virtual private network
 (b) LAN
 (c) Intranet (d) Extranet (e) Internet *[SBI 2012]*
- 127.** What is the name given to those applications that combine text, sound, graphics, motion video and/or animation ?
 (a) Motionware (b) Anographics (c) Videoscapes
 (d) Multimedia (e) Maxomedia *[IBPS PO 2012]*
- 128.** a document means the file is transferred from another computer to your computer.
 (a) Uploading (b) Really simple syndication (RSS)
 (c) Accessing (d) Downloading (e) Upgrading *[IBPS PO 2012]*
- 129.** What is a URL ?
 (a) A computer software program
 (b) A type of programming object
 (c) The address of a document or 'page' on the World Wide Web
 (d) An acronym for Unlimited Resources for Learning
 (e) A piece of hardware *[IBPS PO 2012]*
- 130.** A computer hacker is—
 (a) A person who maintains computer security
 (b) A person who violates computer security with malicious intention for personal gain
 (c) A person responsible for safe computer operation
 (d) A person who repairs computer *[SSC 2012]*
- 131.** Video conferencing is :
 (a) Conduct of video calls using telecom technology
 (b) Conduct of telephone calls
 (c) Conduct of video conference using a set of telescopic technology
 (d) None of the above *[SSC 2012]*
- 132.** Which of the following is free e-mail service provider ?
 (a) Hotmail (b) Rediffmail (c) Yahoo
 (d) All of the above *[SSC 2012]*
- 133.** HTML stands for—
 (a) Hybrid Text Markup Language
 (b) Hypertext Markup Language
 (c) Higher Text Markup Language
 (d) None of the above *[SSC 2012]*
- 134.** A computer virus is—
 (a) A computer program that replicate itself
 (b) A virus that affects health of human being
 (c) Both of the above (d) None of the above *[SSC 2012]*
- 135.** The software that is used to create text-based documents are referred to as
 (a) DBMS (b) Suites
 (c) Word processors (d) Presentation software *[SBI PO 2013]*
- 136.** is a Windows utility program that locates and eliminates unnecessary fragments and rearranges files and unused disk space to optimize operations.
 (a) Backup (b) Disk Cleanup (c) Disk Defragmenter
 (d) Restore (e) Disk Restorer *[SBI PO 2013]*

- 137.What does the ".com" in the URL : www.abcd.com indicate?
 (a) Commercial (b) Corporate (c) Co-operative
 (d) Conceal
- 138.DOS can not retrieve any data from a disk if a computer virus corrupts the — of the computer.
 (a) File allocation table (b) BAT files
 (d) Directory Area
- 139.Which one of the following is an example of a Web Browser?
 (a) Opera (b) Star Works
 (c) Google Apps (d) Odilla
- 140.ICMP is used for
 (a) Addressing (b) Forwarding (c) Multicasting
- 141.Which of the following is a valid domain name extension?
 (a) .com (b) .gov (c) .net
- 142.URL stands for—
 (a) Universal Resource Locator (b) Universal Resource Locator
 (c) Uniform Resource Locator (d) United Resource Locator
- 143.e-Mail stands for :
 (a) Electrical Mail (b) Electronic Mail (c) Elastic Mail
- 144.India's 1st Hi-Speed Rural Broadband Network has been commissioned in district of
 (a) Kerala (b) Karnataka (c) Telangana

Answers

1. (b)
2. (c)
3. (a)
4. (a)
5. (b)
6. (e)
7. (d)
8. (a)
9. (a)
10. (b)
11. (b)
12. (a)
13. (a)
14. (e)
15. (e)
16. (a)
17. (d)
18. (b)
19. (a)
20. (a)
21. (c)
22. (a)
23. (a)
24. (d)
25. (c)
26. (a)
27. (d)
28. (a)
29. (d)
30. (a)
31. (b)
32. (b)
33. (c)
34. (a)
35. (c)
36. (b)
37. (a)
38. (d)
39. (d)
40. (c)
41. (d)
42. (a)
43. (c)
44. (a)
45. (d)
46. (e)
47. (c)
48. (d)
49. (d)
50. (c)
51. (c)
52. (d)
53. (a)
54. (c)
55. (c)
56. (a)
57. (c)
58. (b)
59. (a)
60. (d)
61. (d)
62. (b)
63. (c)
64. (c)
65. (b)
66. (c)
67. (d)
68. (d)
69. (d)
70. (b)
71. (c)
72. (d)
73. (a)
74. (b)
75. (a)
76. (d)
77. (a)
78. (d)
79. (d)
80. (a)
81. (b)
82. (b)
83. (b)
84. (d)
85. (c)
86. (c)
87. (d)
88. (a)
89. (a)
90. (c)
91. (d)
92. (b)
93. (c)
94. (d)
95. (b)
96. (d)
97. (c)
98. (b)
99. (a)
100. (a)
101. (b)
102. (c)
103. (e)
104. (b)
105. (d)
106. (e)
107. (a)
108. (b)
109. (e)
110. (d)
111. (b)
112. (c)
113. (b)
114. (c)
115. (e)
116. (b)
117. (d)
118. (a)
119. (d)
120. (e)
121. (c)
122. (d)
123. (b)
124. (a)
125. (c)
126. (e)
127. (d)
128. (d)
129. (c)
130. (b)
131. (a)
132. (d)
133. (b)
134. (a)
135. (e)
136. (c)
137. (a)
138. (a)
139. (a)
140. (d)

★ ★

JASJEET SINGH SEKHON**11****Microsoft Windows****Introduction**

Microsoft Windows is an operating system and GUI (Graphical User Interface) produced by Microsoft, the software company. Bill Gates is the chairman of Microsoft, which he founded with Paul Allen. Nowadays approximately 90% of all personal computers are running on windows. It was introduced as a GUI that simplified DOS commands and tasks by converting programs and commands to icons.

In 1983 Microsoft announced the development of windows, a GUI for its own operating system MS-DOS, which has developed for IBM PC and compatible computers since 1981.

The first independent version of Microsoft Windows, version 1.0, released on 20 November 1985, achieved little popularity. It was originally going to be called "Interface Manager" but Rowland Hudson, the head of marketing at Microsoft, convinced the company that the name would be more appealing to consumers. Windows 1.0 was not a complete operating system, but it was an improved extended MS-DOS.

Microsoft Windows version 2 launched on 9 December 1987 became slightly more popular than its predecessor Microsoft Windows version 1 because it had new graphical application, Excel and Word.

Microsoft Windows got major success when Adlus PageMaker appeared in a windows version. At the start it could run only on Macintosh. It was beginning of the success of Windows. After that there were launched many versions of Microsoft Windows such as 2.0X, 2.03, 3.0 etc. Microsoft Windows 3.0 released in 1990, that scored significant success. In this version Windows introduced multitasking and virtual memory better than older DOS.

After that Microsoft Windows became the most popular operating system. Some popular versions of Microsoft Windows are

Microsoft Windows 95 – In 1995

Microsoft Windows 98 – In 1998

Microsoft Windows ME – In 2000

Microsoft Windows XP – In 2004

Microsoft Windows Vista – In 2007

MS-Windows related terms

1. GUI (Graphical User Interface): GUI uses graphics or pictures to help the user navigate and access programs. A graphical user interface allows users

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to interact with electronic device such as computers, MP3 players, portable media player and gaming device etc. It offers graphical icons, images and visual indicators instead of text commands. There is no need to remember the commands. It provides easy and effective interface between users and electronic devices by direct manipulation of the graphical elements. It is user friendly because it provides easily understood instruction. The Xerox Star was the first commercial computer developed by Xerox Corporation, which uses a graphical user interface with the desktop with icons and a mouse.

2. Icon : Icons are small images on desktop that represent various computer's applications or programs, files, folders, printers and other things. To activate the program or file or folder that an icon represents we have to simply double click on it with the left mouse button. This will activate the icon and either start a program or open a file or folder. By right clicking we have access to a menu offering options, actions and properties. The icons can be renamed by right clicking on them and selecting rename. They can be deleted by right clicking and selecting delete. The user can put his own icons on the desktop that will quickly access programs or files like a shortcut. Icons can be moved around on the desktop by clicking and dragging them.

3. Interface : It is a technique to communicate or meet two independent systems with each other. An interface allows a human being to interact with a computer, a telephone system, or other electronic information system. It can be of several types. The user interface allows the user to communicate with the operating system with the help of keyboard and mouse etc. Languages and codes that the applications use to communicate with each other and with the hardware are called software interface. The hardware interface are wires, plugs and sockets that hardware devices use to communicate with each other. Network interface allows users to communicate with terminals or terminal and network.

Windows Desktop : The desktop is the main screen area that we see after we turn on our computer and log on to Windows. When computer is booted up and ready to use, the screen we see is called the desktop. In other words, it is a screen that comes on when we turn on our computer that shows all the icons. When we open any programs or folders, they appear on the desktop. It is the background for all programs and contains the commands needed for accessing those programs. Desktops vary from one operating system to another, and even vary from version to version of a particular OS. It is the base for all computer operations. This background graphic or picture by accessing "Display" in the Control Panel. A small arrow or blinking symbol on desktop is called cursor. When programs run on top of the desktop, the desktop itself is often partially or completely hidden. To see the whole desktop without closing any open programs or windows click the 'Show Desktop' button on the taskbar. The desktop is revealed. Click the icon again to restore all of your windows to the way they were.

Micorosoft Windows



Some important graphic features that we will find on a desktop is an icon. Icons are small pictures that are linked to programs on the window desktop when we press F5, it refreshes the screen.

Some of the most important icons on the desktop are

1. My Computer : It is an important icon on the desktop which allows to access drives, printers, the Control Panel and other system applications. The Control Panel gives the user access to the computer system and many support applications, such as 'Add New Hardware', 'Add/Remove Programs' and 'Accessibility Options'. From the Control Panel, we can access hardware settings for the keyboard, mouse speed, printers and modem; as well as settings for the monitor display and sound. It tells about used and free space available in computers.

2. Recycle bin : It is another important icon on the desktop. When we delete a file or folder, it goes into the Recycle Bin where it stays until the bin is emptied. Double-clicking on the Recycle bin icon will open a window that will show what is stored in the Recycle Bin. If we delete something by mistake we can find it in the Recycle Bin and restore it to its proper place. When the Recycle Bin is emptied, everything in it is permanently deleted.

3. My Network Places : It shows all network connections, which makes possible to connect the computer system from internet.

4. My Document : It is a location for storing all documents, such as text files, spreadsheets, and presentations. It is available on the Start menu, and we can also create a shortcut to it on the desktop for faster access.

Organize the desktop icons

1. Click on the desktop with the right button of the mouse.
2. Select on the menu "Arrange Icons By".
3. As the menu is displayed you can choose to organize them by name, type, size or modified (date).

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Create a shortcut

1. Click on the desktop with the right button of the mouse.
2. Select the option Shortcut on the New menu. A dialog box will appear so that we can indicate the program for which we want the shortcut created.
3. Click on Browse button, to find the program.
4. Select the desired unit and look for the file or folder you want.
5. After selecting the file or folder click on Ok.
6. Click Next.
7. Type a name for the Shortcut.
8. Click Finish.

Taskbar : The taskbar is the long horizontal bar at the bottom of desktop and it is visible almost all the time. It has four main sections.

- > The Start button, which opens the Start menu.
- > The Quick Launch Toolbar, which lets start programs with one click.
- > The middle section, which shows programs and documents we have opened and allows us to quickly switch between them.
- > The notification area, on the far right side of the taskbar, which includes a clock and icons that communicate the status of certain programs and computer settings.
- > To do any changes in taskbar we select the setting option in Start Menu then click on 'Taskbar and Start Menu' in sub-menu of setting that opens the 'Taskbar and Start menu Properties'.
- > 'Taskbar and Start menu Properties' window has several options, which we select upon own choice.

1. **Lock the taskbar :** We can keep the taskbar in one place by locking it, which can prevent accidental moving or resizing. If we unlock it, we can move it to the bottom, side, or top of the desktop. Right-click an empty space on the taskbar, and if 'Lock the Taskbar' has a check mark next to it, the taskbar is locked. If it does not have a check mark, click on 'Lock the Taskbar' to lock the taskbar.

2. **Auto-hide the taskbar :** The taskbar is usually located at the bottom of your screen. We can hide the taskbar to create more space. To hide the taskbar click to open 'Taskbar and Start menu Properties'. Clear the 'Lock the taskbar' check box. Select the 'Auto-hide the taskbar' check box. If we don't see the taskbar anywhere on the screen, it might be hidden. If the taskbar is hidden, point to where we last saw it to show it again. If we can't remember where we last saw it, try pointing to the bottom of the screen first, and then to the side or top of the screen, if necessary.

3. **Keep the taskbar on top of the window :** If selected, make sure the taskbar is visible at all times, even when large maximized program windows are covering the rest of the screen.

4. **Group similar taskbar buttons :** If selected, allow multiple taskbar buttons to collapse into a single button so the buttons don't become too small to see on the taskbar.

5. **Show Quick Launch :** If selected, display the optional Quick Launch toolbar to the right of the Start button.

6. **Show the clock :** If selected, display clock on right side of the taskbar.

7. **Hide inactive Icons :** If selected, hide the buttons which is not currently used.

Start Menu

At the edge of the screen usually the bottom, we see a long, thin bar with a box labeled "Start" on one end and a clock on the other end. If we click on the "Start" button, a box called a start menu will appear. It is the main gateway to computer's programs, folders, and settings. It's called a menu because it provides a list of choices. Some choices have small arrows next to them which access other menus. The Start Menu can be personalized by adding and removing programs, files and folders.

Start-menu has the following options

Programs : It is a list of installed programs, we can access the installed programs from here. If we install a new program, it is typically added to the program menu.

Favorites : It is a list of book-marked web pages, we can access book-marked web pages from here.

Documents : It is a list of most recently opened documents, we can access the most recently opened documents from here.

Settings : It is a list of system applications, we can access system applications such as Control Panel, printers, taskbar and Start Menu options from here.

Find : Searches for specific files or folders.

Help : Offers helpful topics related to computer and program.

Run : User can input commands to run specific programs or open any file, folder and document.

LogOff-Allows a password: Protected user to log off and another to log on.

Turn off or Shut Down : Shuts down or restarts the computer.

Title Bar

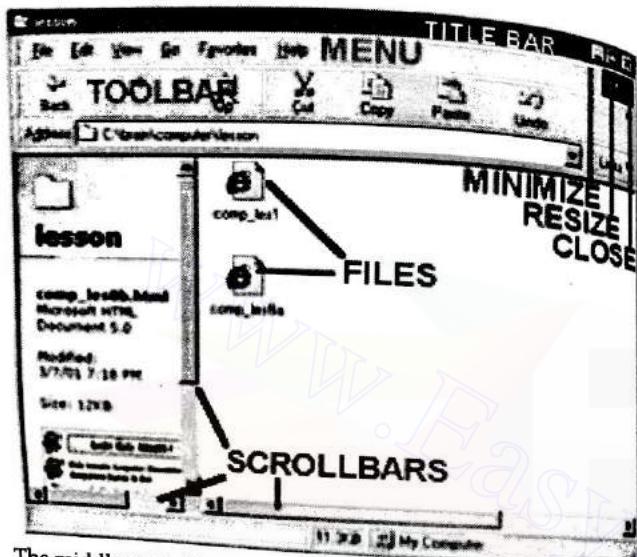
Most of the programs, data or information and applications run within a rectangular area that is a window. The horizontal bar at the top of a window that contains the name of the window are called title bar. Most title bars also contain three control buttons in the far right hand side. These buttons are Minimize, Maximize/Restore and Close.

The left first control button in Minimize button that is visually represented by a minus sign Minimizing the window clears it from the screen and application will be reduced to an icon on the task bar. But keeps the program running. A raised button on taskbar indicates a minimized window. A depressed button indicates an open or active window. Minimizing a window is helpful if the user is temporarily not using the program, but plans to return to it soon. To redisplay the minimized window, click on the button on the taskbar.

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The middle control button in these is Maximize button that is visually represented by or two small boxes on it. When we click on it, it controls the size of the window display. Restore reduces the window to smaller size on the desktop. Maximize resize the window to full screen.

The far right control button in these is Close button and is visually represented by . It closes the window, which also closes the program. In MS-Word, if we have not saved our most recent edits, the system will prompt to save when we click on it.

Scroll Bar
When a document, webpage, or picture exceeds the size of its window, scroll bars appear to allow us to see the information that is currently out of view. It appears at right side and bottom of window, which are called horizontal and vertical scroll bars. It has an arrow on both ends and a box in the middle that we use with the help of mouse to move the pages up and down. We click the up or down scroll arrows to scroll the window's contents up or down. We click an empty area of a scroll bar above or below the scroll box to scroll up or down one page and drag a scroll box up, down, left, or right to scroll the window in that direction. To move down, up, right and left a page in a document we use scroll bar.

Menu Bar

In the Windows operating system, each window contains its own menu bar that contains commands which perform specific actions when they have been selected. It is found just under the title bar and menu bar contains several choices that will access drop-down menus of options and actions. The menu bar vary from one program to another.

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There are some main options of menu bar

1. File menu : It contains options like new, open, close, save, save as send and print etc.
2. Edit menu : It contains options like undo, cut, copy, paste and clear etc.
3. View menu : It contains options for changing things appear on the screen such as Normal, Print Layout, and Toolbar etc.
4. Insert menu : It contains options like Header, Footer etc
5. Help menu : It contains options to access tutorials or helpful information.

Types of Menu- Generally menu is two types.

1. Pull-Down Menu : It is also called drop-down menu. It is a menu of options that appear just below the menu bar which we access by clicking with mouse. Fields with a drop-down menu have a small downward-pointing arrow next to them. You click the arrow and a list of options appears. You select the option you want from the list. You can also open the drop-down menu by holding down the Alt key and pressing the down arrow. We can use the arrow keys to move up and down in a drop-down menu. You can also move to an item by typing the first few letters of the option. Some commands are faded or dimmed means the command is not currently accessible.

2. Pull-up menu : It is also a menu of options that appears just up of option which we select with mouse.

Any option of menu can open by clicking a mouse or pressing Ctrl key with underline letter of that option. Some options have symbols such as—

1. Triangle () : A small triangle in right side of command indicates that has another submenu and after clicking on it opens another submenu.
2. Ellipses (...): It indicates that command needs additional information. So by using this command a dialog box appears for selecting or inputting information.
3. Dot (.) : It appears at the left side of option, which indicates that only one option can be selected.
4. Check Mark (): It appears at the left side of active options. Its boxes allow to select one or more options at the same time.
5. Gray option : If any command is currently inactive, unavailable and cannot be clicked, it is shown in gray or light color.

Toolbar

Under the Menubar, we will often find a toolbar. It is a bar of command icons that allow us to perform specific tasks within a program. For example, in WordPad, the toolbar contains buttons which we can click to apply bold formatting to text, print a file, or open a new document etc. The toolbar buttons provide shortcuts to common tasks frequently accessed from the menu.

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Shortcut Keys

It has been written in front of commands. It provides an easier and usually quicker method of navigating and using programs. Shortcut keys enable the user to select a command without using the menus. Shortcut keys generally combine the Alt, Ctrl or Shift key with a letter key. If a shortcut key is available, it is listed on the pull-down menu to the right of the command. As example to open a file or folder we have to press 'Ctrl+O' and save the file 'Ctrl+S' etc as shortcut keys.

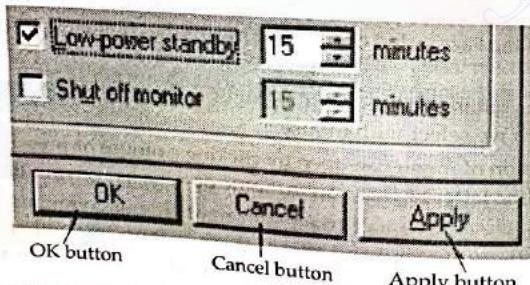
Dialog box

Dialog box is a small, secondary window that contains options and buttons for completing a task. For example, when the user saves a file first time, a dialog box appears with options for naming the file and choosing which folder to save it in. Titlebar of this box also contains name of the box and close button.

Elements of dialog box

These are the elements of dialog box.

1. **OK button**: When clicking on the OK button, save the settings or carry out the commands specified in the dialog box and close the dialog box.



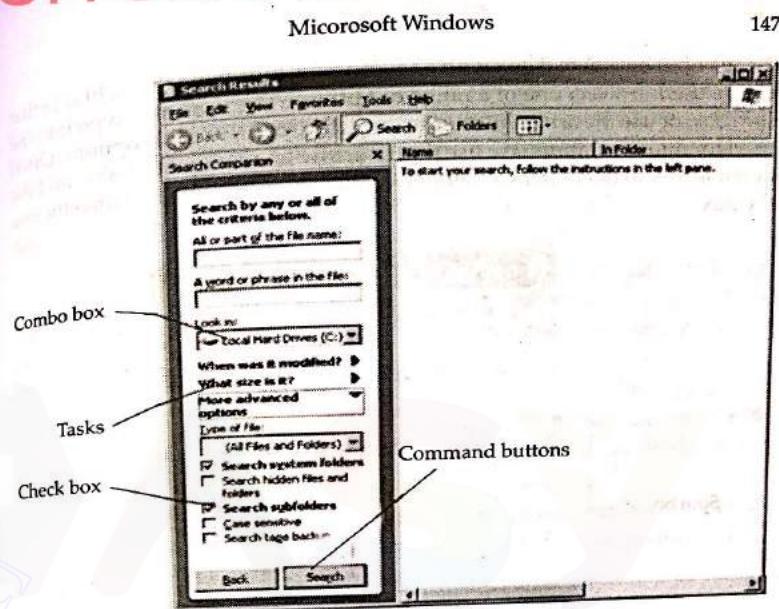
2. **Cancel button**: When clicking on the Cancel button, close the dialog box and restore the settings in the dialog box to the state they were in when the dialog box was opened.

3. **Apply button**: Use the Apply button to carry out the changes users specify in the dialog box without closing the dialog box.

4. **Tab**: In some dialog boxes, options are divided into two or more tabs. Tabs represent multiple pages of a dialog box. Only one tab, or set of options, can be viewed at a time. Choosing a tab changes the options that appear in the dialog box.

5. **Option button**: Option buttons present a group of related choices from which we can choose only one. Simply click on the option button which we want to select, and all others become deselected.

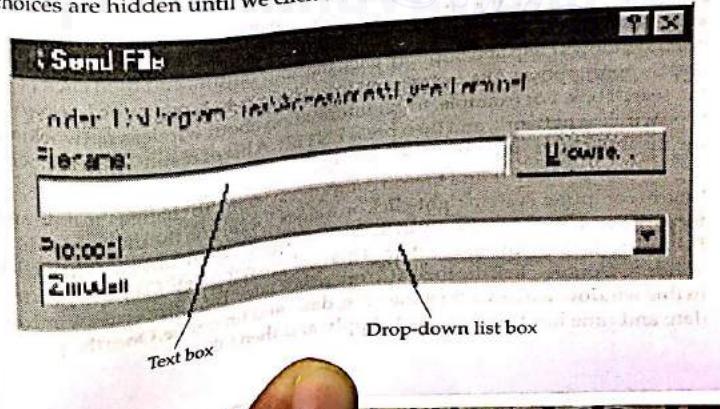
6. **Check box**: Check boxes present a single option or group of related options. A check mark appears in the box next to an option to indicate that it is active.



7. **Combo box**: It is a combination of a drop-down list or list box and a single-line text box, allowing the user to either type a value directly into the control or choose from the list of existing options.

8. **Text box**: A text box allows to type information, such as a search term, password, name for a file which we want to save or a path we want to use to find a specific file. A blinking vertical line called the cursor indicates where text that we type will appear.

9. **Drop-down list box**: This box is a single-line list box with a down-arrow button to the right of it. When you click on the arrow, the drop-down list box opens to display a list of choices. We choose a choice. When closed, a drop-down list shows only the currently selected choice. The other available choices are hidden until we click the control.

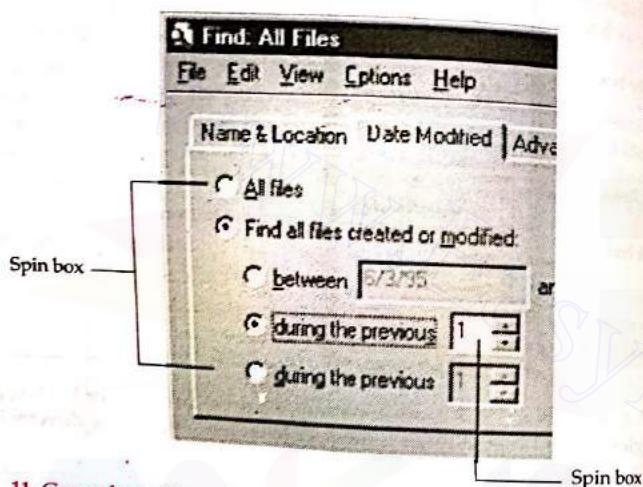


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10. Spin box : A text box with a set of arrow button on the right side that can be used to select one of a range of options. The user may type into the spin box, or use the arrow buttons to scroll through available options. Often used for numeric inputs. We use the up arrow to increment a value and the down arrow to decrement a value. We can also type the value directly into the box.



11. Group box : Group box is rectangular box with optional labels. It is a group of related controls such as option buttons, check boxes, or closely related contents into one visual unit.

12. Slider : A slider is a way to adjust a setting within a range of values, such as from slow to fast, small to large, soft to loud etc. Simply hold down the mouse button on the lever and move it in the desired direction. A slider along the bar shows the currently selected value.

Help in Windows : Windows Help and Support is the built-in help system for Windows. It's a place to get quick answers to common questions, open Windows Help and Support, click the Start button, and then click Help and Support option. The fastest way to get help is to type a word or two in the search box. For example, to get information about wireless networking, type wireless network, and then press ENTER. A list of results appears, with the most useful results shown at the top.

To change the date and time in computer system : To change the date and time in computer system right-click on a clock located on the the right side of the task bar. This is commonly in the bottom right hand of taskbar. Then click the Adjust Date/ Time menu item. This will open the Date/ Time Properties window. Double-click the time also open the Date/ Time Properties window. In this window we can adjust the time, date, and time zone. Once the proper date and time has been set, click Apply and then OK.

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To change the desktop appearance and background : We can change the general look of desktop by changing the desktop appearance and background. To open the 'Display property' dialog box, right-click an empty area of desktop, and then click Properties. After changing click ,Apply to test a changes. If we don't like to change any settings click Cancel, and return. After that click OK to close the Display Properties dialog box.

There are following options in display property window-

- 1. Theme :** Theme is a collection of visual elements and sounds for computer desktop. A theme determines the look of the various visual elements of desktop, such as windows, icons, fonts, and colors, and it can include sounds.

- 2. Desktop background :** Desktop background is also called wallpaper. It can be a digital picture from personal collection or one that comes with Windows. We can also select a color for our desktop background or use a color to frame our background picture.

- 3. Screen saver :** A moving picture or pattern that appears on a computer screen when the mouse or keyboard has not been used for a specified period of time.

- 4. Appearance :** It finetunes the color and style of our window. It provides more potential customizations into one area than any other in Windows between the Windows and Buttons, Color Scheme, and Fonts etc.

- 5. Settings :** Using this option we adjust our monitor resolution, which changes the view, so more or fewer items fit on the screen. We can also control monitor refresh rate.

Windows Explorer : The Explorer is a necessary tool in an operating system, since with it we can organize and control the files and folders of the different storage systems such as the hard drive, disk drive, etc.

To start the Windows Explorer

1. Click on 'Start'
2. Select 'All programs'
3. Select 'Accessories'
4. Select 'Windows Explorer'

The explorer consists basically of two sections. On the left side there is the directory tree, which is the list of units and folders that we have. On the right side there is another section, which will show the content of the folder that we have opened on the left section. This section shows its folders and files.

Windows Explorer is also known as the 'File Manager'. Through it we can delete, see, copy, or move files and folders. A file is text documents, spreadsheets, digital pictures, and even songs etc., that has been given a name and is stored in secondary memory. A folder is the place that a user can create to store group of files. Computer represents files and folders with icons. Each folder has facility to Open, Explore, Search, Winzip, Cut, Copy, Delete, Rename and Create shortcut. Files are organized by storing them in folder.

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1. Open : Opening a file or folder is needed to editing, viewing, printing, and sharing information. First find the file or folder that we want to open. Then double-click the file or folder to open it. Double-clicking a file automatically opens its associated program.

2. Explore :

3. Search : When we need to find a particular file, we will know that it is located somewhere in a common folder like Documents or Pictures etc. Search box is located at the top of every folder. To find a file, open the folder that contains the file, click the Search box, and start type the of that file or part of file name. The Search box filters the current view based on the text that typed. Files are displayed as search results if search term matches the file's name.

4. Winzip : Compressed files take up less storage space and can be transferred to other computers more quickly than uncompressed files. To compress a file locate the file or folder that we want to compress. Right-click the file or folder then click on winzip option. A new compressed folder is created. To rename it, right-click the folder, click Rename, and then type the new name.

5. Cut and paste : This option is used to store the file any other places. Cut is a command used to remove text, graphics and files and it is then stored on a clipboard so we can paste it.

6. Delete : To delete locate a file or folder that we want to delete. Right-click the file or folder then click Delete. When we delete a file or folder, it is not deleted right away. Instead, it is stored in the Recycle Bin and we can get the deleted file by using Restore option in Recycle Bin until the Recycle Bin is emptied.

7. Rename : Using it we give a new name to a file. To rename a file, we do not need to open the file. Right-click the file that we want to rename, and then click Rename. Type the new name, and then press ENTER.

8. Properties : Properties are descriptive information that help us to find and organize files. To view the properties of any file and folder Right-click the file whose properties we want to see, and then click Properties. They provide information such as type, location, size, created date and many other properties of files.

There are two more option

(a) Read only : Setting a file to read-only helps to protect the file from accidental deletion and changes to the file's content. If a file is set to read-only, we will not be able to save changes to it unless we turn off the file's read-only status.

(b) Hidden : Setting a file to hidden it shows in tree view.

In a system running Windows XP, to conserve PC power, we actually have three choices : shut down, hibernate, and standby.

Standby : Standby drops the computer into a very low power mode. This mode saves significant electrical consumption compared to leaving a device fully on and idle but allow the user to avoid having to reset programming

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codes or wait for a machine to reboot. When the system is placed in this mode, aside from the RAM which is required to restore the machine's state, the computer attempts to cut power to all unneeded parts of the machine. Because of the large power savings, most laptops automatically enter this mode when the computer is running on batteries and the lid is closed. The display turns off, the disk drive stops spinning, and the processor shuts down almost completely. In standby, power is used mainly to keep the contents of random access memory refreshed.

Hibernate : It is a feature of many computer operating systems where the contents of RAM are written to non-volatile storage such as a hard disk, before powering off the computer. When the computer is restarted it reloads the content of memory and is restored to the state it was in when hibernation was invoked. While starting from a hibernated state is usually quicker than starting up and opening all applications, it still requires a few seconds or more, depending on the system's general speed.

Shutdown : It turn a machine off. To shutdown check that if any users are currently on the system. If they are, ask them to log off. Once all of the users are logged off of the system, we may execute the 'shutdown' command.

Useful programs inside windows

1. Notepad : Notepad is a basic text editing program and it is most commonly used to view or edit text files. A text file is a file type typically identified by the .txt file name extension.

To open a Notepad : Click Start Programs Accessories Notepad

2. Word pad : Word Pad is a text-editing program and we can use to create and edit documents. Unlike Note pad, Word pad documents can include complex formatting and graphics such as pictures or other documents within a Word Pad document.

To open a Word pad : Click Start Programs Accessories Word pad.

3. Paint : Paint is a drawing program that we can use to create drawings or edit digital pictures. We can also use Paint to save picture files using different file formats.

To open a Paint : Click Start Programs Accessories Paint

4. Calculator : We can use Calculator to perform addition, subtraction, multiplication, and division. Calculator also offers the advanced capabilities of scientific and statistical calculators.

To open a Calculator :

Click Start >> Programs >> Accessories Calculator.

5. Phone Dialer :

To open a Phone Dialer : Click Start >> Programs >> Accessories >> Phone Dialer

6. Imaging

To open a imaging : Click Start >> Programs >> Accessories >> Scanner and Camera wizard.

7. Media Player : Windows Media Player provides an easy-to-use interface to play digital media files, organize digital media collection, burn CDs of favorite music, rip music from CDs etc.

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To open a Media Player :

Click Start >> Programs >> Accessories >> Entertainment >> Media Player

8. CD Player : Using this we can use our computer system as a powerful CD Player.

To open a CD Player : Click Start >> Programs >> Accessories >> Entertainment >> CD Player

9. Sound recorder and Volume control -Using Sound Recorder, we can record sound as a digital media file on computer from a variety of devices such as a microphone that is plugged in to sound card.

To open a Sound recorder : Click Start >> Programs >> Accessories >> Entertainment >> Sound recorder

We can control the overall level of sound using Windows.

To open a Volume control :

Click Start >> Programs >> Accessories >> Entertainment >> Volume control

10. Game : Windows comes with a small set of games that we can play.

To open a Game : Click Start >> Programs >> Accessories >> Entertainment >> Game

11. Clipboard : The Clipboard is a temporary storage area for information that we have copied or moved from one place to somewhere else. We can select text or graphics and then use the Cut or Copy commands to move our selection to the Clipboard, where it will be stored until we use the Paste command to insert it elsewhere.

Objective Question

1. The of software contains lists of commands and option.
 - (a) Menu bar
 - (b) Tool bar
 - (c) Title bar
 - (d) Formula bar
 - (e) None of these
2. MS. Office 2000 was developed by /SBI 2009, Punjab & Sind 2011
 - (a) Novel
 - (b) Coral
 - (c) Lotus
 - (d) Microsoft
 - (e) None of these
3. Founder of Microsoft company is
 - (a) Paul Allen
 - (b) Bill Gates
 - (c) Both
 - (d) All of These
 - (e) None of these
4. Microsoft is an
 - (a) Organization to manufacture a microchip
 - (b) Organization to develop a software
 - (c) Organization for micro engineering
 - (d) Organization to manufacture hardware
 - (e) None of these
5. A small arrow or blinking symbol on desktop is called a
 - (a) Mouse
 - (b) Logo
 - (c) Hand
 - (d) Cursor
 - (e) Palm

/Allahabad 2011

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6. Which of the following refers to the rectangular area for displaying information and running program—
 - (a) Desktop
 - (b) Dialog box
 - (c) Menu
 - (d) Window
 - (e) Icon

(SBI-PO 2013)
7. A popular window environment Windows -3 launched by Microsoft in
 - (a) 1985
 - (b) 2000
 - (c) 1995
 - (d) 1990
 - (e) None of these
8. Technique to link two computers is called
 - (a) Internet
 - (b) E-mail
 - (c) E-prom
 - (d) Interface
 - (e) None of these
9. While on the desktop in Windows, what happens pressing F5 do ?
 - (a) Refreshes the screen
 - (b) Opens help menu
 - (c) Does Nothing
 - (d) Opens Search

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10. To increase or decrease a speed of mouse cursor, which option is need?
 - (a) Settings
 - (b) Control
 - (c) Control panel
 - (d) Drive
 - (e) None of these
11. Windows software was developed by
 - (a) IBM
 - (b) Apple corporation
 - (c) Wipro
 - (d) All of These
 - (e) None of these
12. Which of the following type of software is MS-Windows ?
 - (a) CUI
 - (b) MUI
 - (c) LUI
 - (d) GUI
 - (e) None of these
13. Which of the following tells us about used and free space available in a computer ?
 - (a) My computer
 - (b) My document
 - (c) My briefcase
 - (d) My search
 - (e) None of these
14. Driver software does not need
 - (a) Windows -95
 - (b) DOS
 - (c) 3D
 - (d) Photostyler
 - (e) None of these
15. Windows 98 was developed in
 - (a) 1994
 - (b) 1998
 - (c) 2001
 - (d) 2004
 - (e) None of these
16. What is close button ?
 - (a) Window which is present at the end of title bar
 - (b) Like small button
 - (c) To click it opened dialogue box and document is closed ?
 - (d) All of These
 - (e) None of these
17. Background of screen is known as
 - (a) Application
 - (b) Window
 - (c) Desktop
 - (d) Frame
 - (e) None of these
18. and keys are used with the combination of other key for shortcut and other special functions.
 - (a) Ctrl, Alt
 - (b) Function, Toggle
 - (c) Delete, Insert
 - (d) Caps lock, Num lock
 - (e) None of these

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19. If text was highlighted and 'Edit' 'Copy' was clicked, what would happen ?
 (a) Text would be copied from the document and placed in the clipboard
 (b) Text would be removed from the document and placed in the clipboard
 (c) Text from the clipboard would be placed in the document at the place where the cursor is blinking
 (d) Only b and c (e) None of these

20. At which button is Help Menu available ? [SBI 2008]
 (a) End (b) Start (c) Turn off
 (d) Restart (e) None of these

21. You can keep your personal files / folders in [SBI 2008]
 (a) My folder (b) My documents (c) My files
 (d) My text (e) None of these

22. Data that is copied from an application is stored in the [SBI 2009, Punjab & Sind 2011]
 (a) Driver (b) Terminal (c) Prompt
 (d) Clipboard (e) None of these

23. Various applications and documents are represented on the windows desktop by [Allah. bank 2010, UBI 2011]
 (a) Symbols (b) Labels (c) Graphs
 (d) Icons (e) None of these

24. All the deleted files go to
 (a) Recycle Bin (b) Task bar (c) Tool bar
 (d) My computer (e) None of these

25. The rectangular area of the screen that displays a program, data and information is a [Allah. bank 2010, UBI 2011]
 (a) Title bar (b) Button (c) Dialog box
 (d) Window (e) None of these

26. A contains commands that can be selected. [SBI Associates 2010]
 (a) Pointer (b) Menu (c) Icon
 (d) Button (e) None of these

27. Text and graphics that have been cut or copied are stored in an and called the [SBI Associates 2010]
 (a) Paste board (b) Copy board (c) Clip board
 (d) Cutting board (e) None of these

28. What is the significance of a faded (dimmed) command in a pull-down menu ?
 (a) The command is not currently accessible
 (b) A dialog box appears if the command is selected
 (c) A help window appears if the command is selected
 (d) There are no equivalent keystrokes for the particular command
 (e) None of these

29. Generally, you access the recycle bin through [IBPS PO 2012]
 (a) On the desktop (b) On an icon located
 (c) On the short cut menu (d) In the properties dialog box

30. What menu is selected to cut, copy, and paste ? [SBI 2008]
 (a) File (b) Edit (c) Tools
 (d) Table (e) None of these

31. What is a file ?
 (a) A file is a section of main storage used to store data.
 (b) A file is a collection of information that has been given a name and is stored in secondary memory.
 (c) A file is the part of a program that is used to describe what the program should do.
 (d) Floppy disks can only store data, not programs.
 (e) None of these [Syndicate Bank P.O. 2010]

32. When you cut or copy information it gets place in the
 (a) Clipart (b) Clipboard (c) Internet
 (d) Mother board (e) None of these [Syndicate Bank P.O. 2010]

33. Deleted data remains on a disk until
 (a) The data is overwritten (b) The recycle bin is emptied
 (c) A file compression utility is used (d) The disk is scanned
 (e) None of these [Syndicate Bank P.O. 2010]

34. Which is a graphical representation of an application ?
 (a) Windows 95 (b) Windows Explorer (c) Icon
 (d) Taskbar (e) None of these [Syndicate Bank P.O. 2010]

35. The side bar in a window or word processor that has an arrow on both ends and a box in the middle that you use your mouse to move the pages up or down—
 (a) Scroll bar (b) Roll bar (c) Page bar
 (d) Box bar (e) None of these [Bank of Baroda Clerk 2010]

36. To shrink a window to an icon
 (a) Open a group window (b) Minimise a window
 (c) Maximise a window (d) Restore a window
 (e) None of these [Allahabad Bank Clerk 2010]

37. Something which has easily-understood instructions is said to be
 (a) Analog data (b) Digital data (c) Modem data
 (d) Watts data (e) None of these [Allah Bank 2010, 11, UBI 2011]

38. The portion that shows all the choices you can make while working in a window is called the
 (a) Options (b) Table (c) Menu bar
 (d) Item bar (e) None of these [Allahabad Bank Clerk 2010]

39. A(n) contains commands that can be selected.
 (a) Pointer (b) Menu (c) Icon
 (d) Button (e) None of these [Allahabad Bank Clerk 2010]

40. A(n) is a small image that represents a program, an instruction, a file, or some other object.
 (a) Keyword (b) Interface (c) Menu
 (d) Icon (e) None of these [Allahabad Bank 2010, 2011]

41. A is an icon on the desktop that provides a user with immediate access to a program or file.
 (a) Kernel (b) Buffer (c) Shortcut
 (d) Spooler (e) None of these [Allahabad Bank Clerk 2010]

42. Date and Time are available on the desktop at
 (a) Keyboard (b) Recycle bin (c) My computer
 (d) Task bar (e) None of these [Syndicate Bank Clerk 2010]

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43. A symbol on the screen that represents a disk, document or program that you can select
 (a) Keys (b) Caps (c) Icon
 (d) Monitor (e) None of these [Syndicate Bank Clerk 2010]
44. To "maximize" a window means to
 (a) Fill it to capacity (b) Expand it to fit the desktop
 (c) Put only like files inside (d) Drag it to the Recycle bin
 (e) None of these [Syndicate Bank Clerk 2010]
45. Easy to use
 (a) User friendly (b) Select (c) Helpful
 (d) Ever-ready (e) None of these [Punjab & Sind Bank Clerk 2010]
46. Choices are referred to as
 (a) Options (b) Exit (c) Boot
 (d) Folder (e) None of these [Punjab & Sind Bank Clerk 2010]
47. A place that a user can create to store files
 (a) Cursor (b) Text (c) Folder
 (d) Boot (e) None of these [Punjab & Sind Bank Clerk 2010]
48. Commands at the top of a screen such as FILE-EDIT-FONT-TOOLS to operate and change things within programs
 (a) Menu bar (b) Tool bar (c) User friendly
 (d) Word processor (e) None of these [Punjab & Sind Bank Clerk 2010]
49. To insert a copy of the clipboard contents, whatever was last cut or copied at the insertion point
 (a) Paste (b) Stick in (c) Fit in
 (d) Push in (e) None of these [Punjab & Sind Bank Clerk 2010]
50. The command used to remove text or graphics from a document. The information is then stored on a clipboard so you can paste it.
 (a) Chop (b) Cut (c) Clip
 (d) Cart away (e) None of these [Punjab & Sind Bank Clerk 2010]
51. To move down a page in a document
 (a) Jump (b) Fly (c) Wriggle
 (d) Scroll (e) None of these [Punjab & Sind Bank Clerk 2010]
52. Screen that comes on when you turn on your computer that shows all the icons
 (a) Desktop (b) Face to face (c) Viewer
 (d) View space (e) None of these [Punjab & Sind Bank Clerk 2010]
53. Each on a menu performs a specific action.
 (a) Client (b) Server (c) Node
 (d) Command (e) None of these [Punjab & Sind Bank Clerk 2010]
54. A menu contains a list of
 (a) Commands (b) Data (c) Objects
 (d) Reports (e) None of these [Bank of Baroda Clerk 2010, Allahabad Bank 2011]
55. Files are organized by storing them in
 (a) Tables (b) Databases (c) Folders
 (d) Graphs (e) None of these [Bank of Baroda Clerk 2010, SBI 2010]
 [IPNB Clerk 2011]

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56. is when the more power-hungry components, such as the monitor and the hard drive are put in idle.
 (a) Hibernation (b) Power down (c) Stand by mode
 (d) The shutdown procedure (e) None of these [IPNB Clerk 2010]
57. When you install a new program on your computer, it is typically added to the menu.
 (a) all programs (b) select programs (c) start programs
 (d) desktop programs (e) None of these [SBI Associate PO 2010]
58. A contains buttons and menus that provide quick access to commonly used commands.
 (a) menu bar (b) toolbar (c) window
 (d) action bar (e) None of these [Punjab & Sind 2010]
59. Which of the following menu types is also called a drop-down menu?
 (a) fly-out (b) cascading (c) pop-up
 (d) pull-down (e) None of these [Punjab & Sind 2010]
60. Most application software today comes with an interface called a(n)...
 (a) graphical user interface (b) character user interface
 (c) icon user interface (d) button user interface
 (e) None of these [Union Bank of India 2011]
61. shows the files, folders, and drives on your computer, making it easy to navigate from one location to another within the file hierarchy.
 (a) Microsoft Internet Explorer (b) Windows Explorer
 (c) My Computer (d) Folders Manager (e) None of these [Union Bank of India 2011, RBI 2012]
62. are lists of commands that appear on the screen.
 (a) GUIs (b) Icons (c) Menus
 (d) Windows (e) None of these [Union Bank of India 2011]
63. Each on a menu performs a specific action.
 (a) client (b) server (c) node
 (d) command (e) None of these [Union Bank of India 2011]
64. A(n) uses pictures (called icons) and menus displayed on the screen to send commands to the computer system.
 (a) command-based user interface (b) GUI
 (c) system utility (d) API (e) None of these [Union Bank of India 2011]
65. The allows you to access objects and start programs.
 (a) Default menu (b) XP menu (c) Start menu
 (d) Stop menu (e) None of these [Union Bank of India 2011]
66. "GUI" stands for
 (a) Gnutella Universal Interface (b) Graphical User Interface
 (c) Graphic Uninstall/Install (d) General Utility Interface
 (e) None of these [Union Bank of India Clerk 2011]
67. What is Windows Explorer ?
 (a) A drive (b) APC (c) A Wev browser
 (d) A network (e) A file manager [BOB 2011]
68. The is the term used to describe the window that is currently being used.

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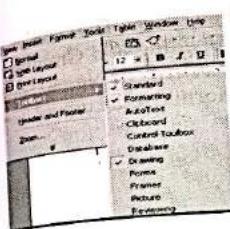
Computer

- (a) Web Window (b) display area
 (d) active Window (e) monitor (c) WordPad Windows [Allahabad Bank PO 2010]
69. Files deleted from the hard disk are sent to the
 (a) Recycle Bin (b) floppy disk (c) clipboard [Allahabad Bank Clerk 2010]
 (d) motherboard (e) None of these
70. The copy command saves to
 (a) the desktop (b) the clipboard (c) printer [Allahabad Bank Clerk 2010]
71. Windows 95, Windows 98, and Windows NT are known as what?
 (a) processors (b) domain names (c) modems
 (d) operating systems (e) None of these [Allahabad Bank Clerk 2010]
72. The taskbar is located
 (a) on the Start menu (b) at the bottom of the screen
 (c) on the Quick Launch toolbar (d) at the top of the screen
 (e) None of these [Allahabad Bank Clerk 2010]
73. Generally, you access the Recycle Bin through an icon located
 (a) on the desktop (b) on the hard drive
 (c) on the shortcut menu (d) in the Properties dialog box
 (e) None of these [Allahabad Bank Clerk 2010]
74. The Recycle Bin stores discarded items until
 (a) another user logs on (b) the computer is shut down
 (c) the end of the day (d) you empty it [Allahabad Bank Clerk 2010]
75. A blinking indicator that shows you where your next action will happen
 (a) CPU (b) Cursor (c) Tool bar
 (d) Boot (e) None of these [P. & Sind B. 2010, Allah 2010]
76. Which of the following is the first step in sizing a window?
 (a) Point to the title bar
 (b) Pull down the view menu to display the toolbar
 (c) Point to any corner or border
 (d) Pull down the view menu and change to large icons
 (e) None of these [IBPS PO 2010]
77. In Windows, Icons such as Add/Remove program Add New Hardware Modems etc, are found in—
 (a) Control Panel (b) Network Neighbourhood [SSC 2010]
 (c) My Computer (d) Task Bar

Answers

- | | | | |
|---------|---------|---------|---------|
| 1. (a) | 2. (d) | 3. (c) | 4. (b) |
| 8. (d) | 9. (a) | 10. (e) | 11. (a) |
| 15. (b) | 16. (b) | 17. (c) | 18. (a) |
| 22. (d) | 23. (d) | 24. (a) | 25. (d) |
| 29. (a) | 30. (b) | 31. (b) | 32. (b) |
| 36. (b) | 37. (a) | 38. (c) | 39. (b) |
| 43. (c) | 44. (b) | 45. (a) | 46. (a) |
| 50. (b) | 51. (d) | 52. (a) | 53. (d) |
| 57. (a) | 58. (b) | 59. (d) | 60. (a) |
| 64. (a) | 65. (c) | 66. (b) | 67. (e) |
| 71. (d) | 72. (b) | 73. (a) | 74. (d) |
| | | | 75. (b) |
| | | | 76. (a) |
| | | | 77. (d) |

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Microsoft Office

Microsoft Office is an office suite of interrelated desktop applications, servers and services for the Microsoft Windows. It is a horizontal market software that is used in a wide range of industries. Microsoft Office was introduced by Microsoft in 1989 for Macintosh. Again it introduced Windows in 1990. After that many new versions were released. Microsoft Office for Windows 1.0 started in October 1990 with three applications Microsoft Word for Windows 1.1, Microsoft Excel for Windows 2.0, and Microsoft PowerPoint for Windows 2.0. In 1994, Microsoft Office 4.0 was released containing Word 6.0, Excel 5.0, PowerPoint 4.0, Mail, and Access. More versions are Microsoft Office 95, Microsoft Office 97, Microsoft Office 2000, Microsoft Office XP, Microsoft Office 2003, Microsoft Office 2003 and Microsoft Office 2007.

Microsoft Word : Microsoft Word is a popular word processing package which provides facilities to write common letters to desktop publishing. This means that it is useful for typing and storing letters, articles, brochures, tests, quizzes and anything that consists mainly of words. Many organisations now use computers to produce and organize written material, correspondence, membership lists and so on. These are possible with the most common program MS-Word, that is used on most computers. It provides an incredibly powerful tool to create and share documents.

To open or start Microsoft Word : There are two methods to open or start Microsoft Word.

1. Double click on Microsoft Word icon on desktop.
2. Click on the Start button in the bottom left hand corner of computer screen.
3. When the menu pops up, move our mouse up to Programs. A sub menu will appear showing all the software we have.
4. Now click Microsoft office then select Microsoft Word from them. Microsoft Word will start up.

Click Start >> Program >> MS-Office >> MS-Word

Viewing the Toolbar

In Microsoft Word the toolbar is the line of boxes and symbols that are shortcuts of many commands and appear across the top of the computer screen. It increases the working capacity of a user. We may recognize it by the picture of a file folder, scissors, and paint brush etc.

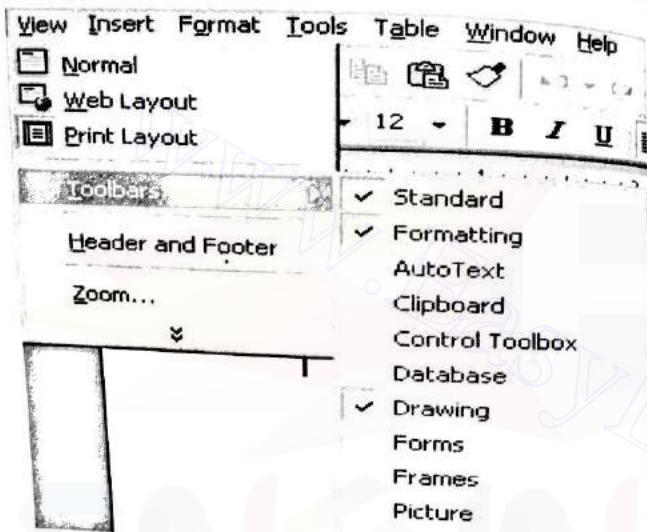
If the toolbar does not appear at the top of the screen, pull down the View menu in Menubar and select Toolbars. In the Toolbars dialog box, click standard, formatting, drawing and then OK.

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In all toolbars a standard toolbar is used more than others. The standard toolbar has tools such as New, Open, Close, Save, Spelling and Grammar etc. and Formatting toolbar has tools such as Font Style, Font Name, Font Size, Margin, Paragraph and Bullets etc. When we format a document, we change its appearance.



Creating a document : When we create a document, we enter text or a number, insert images and perform other tasks using input devices. To create a document we start word, a new document window opens. This is a blank page, where we start typing. After the first page gets over we automatically go to the next page.

Another method to create a new document is

1. On the File menu from Menubar, click New.
2. Select the Blank Document in pull-down menu.

Save a document : After we create or edit a document, we try to save it. A command that saves our work on into the hard drive, or onto a disk is Save. When we save a document, the computer transfers the document from memory to a storage medium such as hard disk or USB flash drive. A saved document is referred to as a file. Hence, to save any file,

1. Select File option from Menubar, click Save.
2. Select the location or drive to store a file and enter a name for the file or filename in the File name box.
3. Click Save.

A file name is a unique name that a user gives to a file, but two different files can have the same name if they are in different folders. In Microsoft Word .doc is file name extension by default. Filename extension represents a file type such as .bas for Basic source code file, .htm for Hypertext Markup Language file, .bat for DOS batch file and .doc for word document file etc.

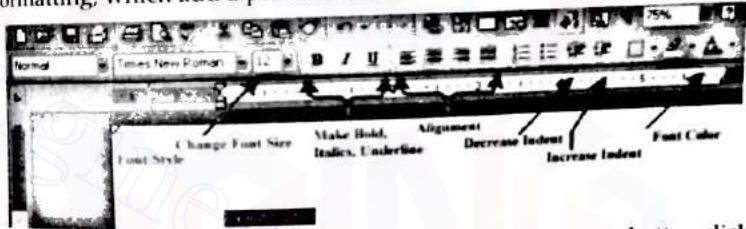
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2. Close a document : When we want to close a document without leaving the application, we use on the File menu from Menu bar, click Close.

Editing a document : We can open a document and modify it the way we want. It can be possible by using the Edit features in word such as Cut, Copy and Paste etc. To edit a document means to make changes to its existing content. Cut is the process of removing a portion of the document and storing it in a temporary storage location, called a clipboard. Paste is a process of transferring an item from a clipboard to a specific location in a document. Editing a document consists of reading through the document created by a user and correcting the errors. The edit buttons are also found in standard tool bar. After editing document must be saved again to store the changes.

Formatting Text : When we format a document, we change its appearance. We can format a text by changing fonts, font size, and font style etc. A font is a name assigned to a specific design of characters. Font size indicates the size of characters in a particular font. Font style adds emphasis to a font, Bold, Italic, Underline and colour. MS-Word provides a wide variety of text formatting, which add a professional look to documents.



1. Select or highlight the text by holding down left mouse button click which we want to format.

2. Go to the Format toolbar menu and select buttons such as Font tab, Font, Font Style, Font Size, Font color, Bold, Italics and Underline etc. which we want to use.

Inserting a Table : Tables are an easy way to arrange data in a Word document. With tables, we can align data in columns and rows easily. There are many ways to insert tables in Word document. (Numbers and text in table columns are usually left aligned).

1. To insert a table click the Insert Table toolbar button when our cursor is positioned at the place in our document where we would like the table.

2. A grid will pop up allowing to select how many rows and columns we would like in table.

3. After selecting the number of rows and columns, click on OK. A table will be inserted.

4. While this method will create a table with uniform columns and rows, we can still customize a table.

Inserting a picture

1. To insert a picture click the Insert option in Menubar when cursor is

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positioned at the place in the document where we would like to insert a picture.

2. Select a Picture option in pull-down menu.
3. Select a Clip art or From File.
4. Select a picture and click insert.

Inserting page number and date/time

1. To insert a picture, click the 'Insert' option in Menubar.
2. Select one by one 'Page Number' and 'Date and Time'.

Spell check in document

The spell check looks for spelling mistakes in the text area. To remove spelling and grammar mistakes in a document we use a *Autospellcheck* tool. It indicates the wrong word by underlining it.

1. With the document open, click the Check Spelling and Grammar tools.
2. If a spelling error is found, a window opens with suggested corrections.
3. To accept the default correction, click Replace. If the initial suggestions not the correct word, click on the correct word in the list of suggestions or enter the word into the Replace with field, then click the Replace button.
4. Repeat these steps to correct all spelling errors. When there are no more errors, the message Spell check complete appears.
5. Click OK to return to editing the document.

File operations in word

Opening a document: To open a document or get a file from the memory where it was stored we use Open command. It retrieves a saved document from computer's memory and bring it up on the screen to view. To open a document, complete the following steps—

1. Select File option from Menubar.
2. Click on the Open option in pull-down menu.
3. Click on the file from the available list.
4. Click on Open button.

Copy a document :

The copy function can create a new copy of a document. To copy a document, complete the following steps—

1. Select File option from Menubar.
2. Click on the Open option in pull-down menu.
3. Find the document that we want to copy.
4. Select the document, then Right click. We get a pull-down menu where we select Copy option. It creates a copy of the document and places it on the clipboard.
5. Find the folder where we want to place the copy, then click Paste.

We can place a document copy in the same folder or a different folder. The document copy is now placed in the selected folder, with the name "Copy of <Document Name>"

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Send a document : In order to e-mail a word document from within—

1. Select file option from menu bar.
2. select the option send to/ mail recipient.

Move a document

We use the move functions to rearrange and create new documents. The move function deletes the document in the original location and pastes it into a new location. The move function can also move a folder, including all the documents in that folder. To move a document, complete the following steps—

1. Select File option from Menu bar.
2. Click on the Open option.
3. Find the document that we want to move.
4. Select the document, then Right click. We get a pull-down menu where we select Cut option.
5. Find the folder where you want to place the moved document, then click Paste.

Rename a document

To rename a document, complete the following steps—

1. Select File option from menu-bar.
2. Click on the Open option in pull-down menu.
3. Find the document that we want to rename.
4. Select the document, then Right click.
5. We get a pull-down menu where we select Rename option.
6. Give the new name to a file and press Enter.

To save a file into new location with new name we use 'Save as' option in File option from menu-bar.

Delete a document

Deleting a document removes the document permanently. To delete a document, complete the following steps—

1. Select File option from menu bar.
2. Click on the Open option in pull-down menu.
3. Find the document that we want to delete.
4. Select the document, then Right click.
5. We get a pull-down menu where we select Delete option.

Undo and redo

Every time the document is changed, we save the previous state on a list. To undo, we take the data at the current position in the list, and use it to restore the document. We also need to save the document state before we restore it. This enables us to redo. To delete a document, complete the following steps—

1. Press arrow mark of "Undo" button in the standard toolbar and we get a list of current work which we can undo.
2. If we do not want modification done by undo, then press 'Redo' to get back.

Page preview : We can see all pages of documents in page preview mode but cannot edit the document.

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Print a document

Print is a command that takes what has been typed and can be seen on the screen and sends it to the printer for output on paper. When we print a document, the computer prints the contents of the document on paper. By default it prints in portrait mode. To print a document, complete the following steps—

1. Select File option from menu-bar.
2. Click on the Print option in pull-down menu.
3. We get a print dialog box where we fill the needed information and after that click OK. Finally we get a print of a document.

Create a header and footer : Sometimes we want some information to appear on every page. This information would normally appear either in top or bottom of the page. We can insert it by using Header and Footer option. To create a header and footer, we can take the following steps—

1. Open an existing document and select View option of the menu bar.
2. Click on the Header and Footer option.
3. Click on Insert Page Number on the 'Header and Footer' toolbar to insert page number on the header.
4. Click on Insert Date icon on the 'Header and Footer' toolbar to insert date on the header.
5. Click on Insert Time icon on the 'Header and Footer' toolbar to insert time on the header.
6. Click on 'Switch between header and footer' to create a footer and repeat step.
7. Click 'Close header and footer' on header and footer toolbar.

Insert a picture from the clipart

1. Move the cursor where we want clip art.
2. Click on 'Insert Clip-art' of Drawing toolbar.
3. Click on picture that we want to insert.
4. Close the clip art gallery.

Text operations in MS-Words

Find text : To find text in a document, complete the following steps—

1. Select Edit option from Menubar.
2. Click on the Find and Replace option in pull-down menu.
3. Type the text in Find what window which we want to find.
4. Click on Find Next button.
5. Cursor will be placed at the first occurrence of the text.
6. Click on Find Next button to get the next occurrence.

Find and Replace a text : Find and Replace is the easiest way to locate and change a particular word or phrase in a document and modify it. To

Find and Replace a text in a document, complete the following steps—

1. Select Edit option from Menubar.
2. Click on the Find and Replace option in pull-down menu.
3. Type the text in Find what window which we want to find and replace.
4. Click on Replace tab.

5. Type the text in the replace with text box.
6. Click on Replace button if we want to replace the text at only one place or Click on Replace All button if we want to replace the text all over document.

Autocorrect Text: The autocorrect feature in word automatically corrects certain spelling, typing, capitalization or grammar errors.

Change case : Sometimes we type a document in capitals by mistake. Rather than retyping the whole section we can take the following stapes—

1. Select or highlight a text.
2. Go to Format option in Menubar.
3. Go to Change case and select any option from Sentence case, Lower case and Uppercase. It will correct it.

Sentence case : It changes first letter of sentence into capital letter and rest changes in small letter.

Lower case : It changes all letters into small letters.

Uppercase : It changes all letters into capital letters.

Delete Text : Deleting text means removing text and other contents.

Table-I : Standard toolbar

Tools Name	Keyboard Operation	Description
New Blank Document	Ctrl + N	Creates a new blank document based on the default template.
Open (File menu)	Ctrl + O	Opens or finds a file.
Save (File menu)	Ctrl + S	Saves the active file with its current file name, location and file format.
Mail Recipient		Sends document as e-mail body.
Print (File menu)	Ctrl + P	Prints the active file : for more print options go to the File menu and select Print.
Print Preview (File Menu)	Ctrl + F2	Print preview : Shows how the document will look when you print it.
Spelling and Grammar (Tools menu)	F7	Spelling, grammar and writing style checker.
Cut (Edit menu)	Ctrl + X	Cut : Removes the selection from the document and places it on the clipboard.
Copy (Edit menu)	Ctrl + C	Copies the selected item(s) to the clipboard.
Paste (Edit menu)	Ctrl + V	Places the content of the clipboard at the insertion point.
Undo (Edit menu)	Ctrl + Z	Reverses the last command, uses pull-down menu to undo several steps.
Redo (Edit menu)	Ctrl + Y	Reverses the action of the Undo button, uses the pull-down menu to redo several steps.

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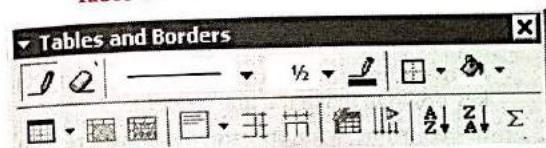
Tools Name	Keyboard Operation	Description
Hyperlink	Ctrl + K	Inserts hyperlink and displays the destination object, document or page.
Tables and Borders		Displays the Tables and Borders toolbar.
Insert Table		Inserts a table into the document, or makes a table of selected text.
Insert Excel Worksheet		Inserts an Excel spreadsheet into the Word document
Zoom		Enlarges or reduces the display of the active document
Office Assistant	F1	Provides help topics and tips to accomplish our task
Format Painter		Copies the format from a selected object or text and applies to other objects or text.

Table-II : Formatting Toolbar

Tools Name	Keyboard Operation	Description
Style	Ctrl + Shift + S	Selects the style to apply to paragraphs.
Font	Ctrl + Shift + F	Changes the font of the selected text.
Font size	Ctrl + Shift + P	Changes the size of the selected text and numbers.
Bold	Ctrl + B	Makes selected text and numbers bold.
Italic	Ctrl + I	Makes selected text and numbers italic.
Underline	Ctrl + U	Underlines selected text and numbers.
Align Left	Ctrl + L	Aligns to the left with a ragged right margin.
Centre	Ctrl + E	Centers the selected text.
Align Right	Ctrl + R	Aligns to the right with a ragged left margin.
Justify	Ctrl + J	Aligns the selected text to both the left and right margins.
Numbering		Makes a numbered list or reverts back to normal.
Bullets		Adds, or removes, bullets in a selected paragraph.
Decrease Indents		Decreases the indent to the previous tab stop.
Increase Indents		Indents the selected paragraph to the next tab stop.
Outside Borders		Adds or removes a border around selected text or objects.

Tools Name	Keyboard Operation	Description
Highlight		Marks text so that it is highlighted and stands out.
Font Color		Formats the selected text with the color we click.

Table-III : Tables and Borders Toolbar



Tools Name	Description
Draw Table	Creates a table by inserting horizontal and vertical lines using the mouse.
Eraser	Deletes unnecessary lines and borders from a table.
Line Weight	Assigns a line weight or thickness of the line of the border for the next table or line drawn or inserted.
Line Style	Assigns a style of border for the next table or line drawn.
Border color	Chooses from the colour palette the colour of the border for the next table or line drawn.
Outside Border	Assigns borders or lines to the selected table cells.
Fill color	Fills colour for the selected table cells or changes the prior colour.
Insert Table	Inserts a table into the document or into an existing table.
Merge Cells	Combines the selected cells within a row or column into one cell.
Split cells	Splits the selected cells into the specified number of rows and columns.
Align Top Left	Aligns top left the contents of the selected cells.
Distribute Rows Evenly	Adjusts all the rows in the current selection to the same row height.
Distribute Columns Evenly	Adjusts all the columns in the current selection to the same column width.
Table Auto	Displays the Table Auto Format dialog box.
Change Text Direction	Changes the text orientation.
Sort Ascending	Sorts the contents of the selected cells into ascending order (A to Z).
Sort Descending	Sorts the contents of the selected cells into descending order (Z to A).
Auto Sum	Inserts a formula field into the active cell containing the sum of the cell above or to the left of this cell.

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Table-IV : Drawing Toolbar

Tools Name	Description
Draw	A pull down menu with several drawing options.
Select Objects	Changes the pointer to a selection arrow.
Free Rotate	Rotates the selected object to any degree.
Auto Shapes	A pull down menu with several libraries of shapes.
Line	Draws a line where you click and drag. Holds the Shift key down to make the line straight.
Arrow	Inserts a line with an arrowhead where you click and drag.
Rectangle	Draws a rectangle where you click and drag. Holds down Shift to draw a square.
Oval	Draws an oval where you click and drag. Holds down Shift to draw a circle.
Text Box	Draws a text box where you click and drag.
Word Art	Creates text effects with Word Art.
Fill Color	Adds, modifies, or removes filled color from a selected object.
Clip Art	Formats the selected text with the color you click..
Font Color	Adds, modifies, or removes line color..
Line Color	Changes the thickness of lines.
Line Style	Selects dash style for dashed lines.
Dash Style	Selects arrow style; placement and shape of arrowhead.
Arrow Style	A pull down menu offers shadow choices.
Shadow	Add 3-D effects to rectangles or ovals.
3-D	Footnote and Endnote : Footnote is a term used to describe additional information found at the bottom of a page and endnote is additional information at the end of the document.
	Within Microsoft Word move the cursor to where you want to insert the number that points to the footnote.
	1. Select Insert option from Menubar. 2. On the Insert menu, click Footnote. 3. Specify whether or not you wish to insert a Footnote or Endnote and click Ok.
	By default, Word places footnotes at the end of each page and endnotes at the end of the document.
	The Ruler : The ruler is generally found below the main toolbars. The ruler is used to change the format of your document quickly.

To display the ruler

1. Click View on the Menu bar.
2. The option Ruler should have a check mark next to it. If it has a check mark next to it, press Esc to close the menu. If it does not have a check mark next to it, continue to the next step.
3. Click Ruler. The ruler now appears below the toolbars.

View a document : In Word, we can display our document in five views

1. **Normal View** : Normal view is the most often used and shows formatting such as line spacing, font, point size, and italics.
2. **Web Layout** : Web layout view enables us to view our document as it would appear in a browser such as Internet Explorer.
3. **Print Layout** : The Print Layout view shows the document as it will look when it is printed. It is also called page layout.
4. **Reading Layout** : Reading Layout view formats our screen to make reading our document more comfortable.

5. Outline view : Outline view displays the document in outline form. Headings can be displayed without the text. If we move a heading, the accompanying text moves with it.

Text area : Text area is a large area just below the ruler. We type document in the text area. The blinking vertical line in the text is the cursor which shows our position. It marks the insertion point of text. As we start type, our work shows at the cursor location.

Meaning of different colors underlines in document : If text on our document is underlined, without applying underline formatting to it, it could be of the following reasons.

1. Red and green wavy underlines : When we automatically check spelling and grammar, Microsoft Word uses wavy red underlines to indicate possible spelling errors and wavy green underlines to indicate possible grammatical errors.

2. Blue wavy underlines : Word uses wavy blue underlines to indicate possible instances of inconsistent formatting.

3. Blue or other color underlines : Hyperlink display text is blue and underlined by default.

Word wrap : Word wrap is the additional feature of most text editors, word processors and web browsers of breaking lines between and not within words, except when a single word is longer than a line.

Exit from MS-Word : When we have completed and saved our work we exit from MS-Word. To exit from Word

1. Select File option from Menubar.
 2. Click on the Exit in pull-down menu.
- If we have typed any text, we will be prompted : "Do you want to save your changes?" To save our changes, click Yes. Otherwise, click No.

1. Specify the correct folder in the Save In box.
2. Name our file in the File Name field.

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Microsoft Excel : Microsoft Excel is an electronic spreadsheet. It is a tool for numeric and statistical calculation, evaluation, analysis, and it also offers capabilities for creating charts, reports and presentations to communicate what analysis reveals. It is used by people to perform quick numeric calculations, store and analysis data periodically, for preparing financial statements and tax worksheet. A program that works like a calculator for keeping track of money and making budgets. It is a program that works like a calculator for keeping track of money and making budgets. It is a utility software package.

Microsoft Excel is a logical worksheet consisting of cells organised into rows and columns. A cell is the intersection of a row and a column. In which we can enter a single piece of data. The data is usually text, a numeric value, or a formula. The entire spreadsheet is composed of rows and columns of cells.

Each row and column creates a unique cell. Each cell refers to a cell reference, or cell address, that is the row and column label of cells. Cell address is a unique co-ordinate system used to identify a specific cell. Cell address contains first column then row's name. They identified by a column letter and a row number of a cell, such as C4 or D8. Each cell is displayed on the screen as a rectangular shape which can store text, value, or a formula. Once formula is specified, calculations are done automatically and the results are displayed for the user to see. Often text is left align in column, we can change it according to our need. A workbook is the MS Excel file in which we enter and store related data in worksheet. A worksheet is also known as a spreadsheet, that is a collection of cells on a single "sheet" where we actually keep and manipulate the data. Each workbook can contain many worksheets.

There are some examples of electronic spreadsheets

1. Lotus 1-2-3
2. Quattro Pro
3. VPP
4. MS-Excel

To open or start Microsoft Excel : There are two methods to open or start Microsoft Word.

1. Double click on Microsoft Excel icon on desktop.
2. Click on the Start button in the bottom left hand corner of computer screen.
3. When the menu pops up, move our mouse up to Programs. A sub menu will appear showing all the software we have.
4. Now click Microsoft office then select Microsoft Excel from them. Microsoft Excel will start up.

Click Start → Program → MS-Office → MS-Excel.

Creating Formula

1. Start Microsoft Excel and open the file.
2. Double-click on the cell where you want to insert the formula.
3. Type = key on the keyboard. This tells Excel that we are entering formula into the cell. **[fx]**
4. Enter the formula, then press Enter to accept the formula.
5. We can also enter a formula into a range of cells by copying a formula from another cell.

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Adding borders to a cell : To add borders to cells, follow these steps

1. Select the cell or range of cells that we want bordered.
2. Select the Cells option from the Format menu. We will get the Format Cells dialog box.
3. Click on the Border tab.
4. In the Border section of the dialog box, select where you want the border applied. (Outline will surround the entire cell or cell range.)
5. Select a line type from the Style area.
6. Click on OK.

Adding shading to a cell : To add shading to cells, follow these steps

1. Select the cells or ranges of cells that we want to apply shading.
2. To fill cells with a solid color, click the arrow next to Fill Color on the Formatting toolbar and then click the color that you want on the palette.
3. To apply the most recently selected color, click Fill Color.
4. To fill cells with a pattern, click Cells on the Format menu. On the Patterns tab, under Cell shading, click the background color that you want to use for the pattern. Then click the arrow next to the Pattern box, and click the pattern style and pattern color.

Inserting a chart in Spreadsheet : Charts are used to display series of numeric data in a graphical format to make it easier to understand large quantities of data. To create a chart in Excel, you start by entering the numeric data for the chart on a worksheet.

1. On the worksheet, arrange the data that you want to plot in a chart. The data can be arranged in rows or columns.
2. Select the cells that contain the data that you want to use for the chart.
3. Click on the Insert, then click the chart option in drop-down menu. Chart Wizard will appear on computer.
4. Chart Wizard is now asking for Chart Type, Data Range etc.
5. After selecting and updating in Chart Wizard, click finish.

Microsoft Power point : Microsoft Power point is a part of MS- Office. It was introduced to generate business presentation, slide show and graphics on computer system.

Use of Power point

1. Creating business application presentation slide.
2. Creating graphical objects with animations.
3. Create artistic slides for general use using art gallery.
4. To provide training in business world.

Starting Power point : There are two methods to open or start Power point.

1. Double click on Microsoft Power point icon on desktop.
2. Click on the Start button in the bottom left hand corner of computer screen.

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3. When the menu pops up, move our mouse up to Programs. A sub menu will appear showing all the software we have.
4. Now click Microsoft office then select Microsoft Power point from them. Microsoft Power point will start up.
Click Start → Program → MS-Office → MS. Power point.

The Power Point Screen

We use Power Point to create effective slide show presentations. The power point screen has many elements.

1. Title Bar : The title bar generally appears at the top of the screen. The title bar displays the title of the current presentation.

2. Menu Bar : The menu bar displays the menu. You use the menu to give instructions to Power Point.

3. Standard and Formatting Toolbars : Power Point has several toolbars. Toolbars provide shortcuts to menu commands. The most commonly used toolbars are the standard and formatting toolbars. You use the standard toolbar to do such things as open a file; save a file; print a file; check spelling; cut, copy, and paste; undo and redo; or insert a chart or table. You use the formatting toolbar to change the font, font size or font color; bold, underline or italicize text; left align, right align, center, or justify, bullet or number lists; highlight; or decrease or increase the indent.

4. Rulers : Rulers are vertical and horizontal guides. You use them to determine where you want to place an object. They are marked in inches.

5. Placeholders : Placeholders hold the objects in your slide. You use placeholders to hold text, clip art, and charts.

6. Status Bar : The Status bar generally appears at the bottom of the screen. The Status bar displays the number of the slide that is currently displayed, the total number of slides, and the name of the design template in use or the name of the background.

7. Outline Tab : The Outline displays the text contained in your presentation.

8. Slides Tab : The Slides tab displays a thumbnail of all your slides. You click the thumbnail to view the slide in the slide pane.

9. View Buttons : The view buttons appear near the bottom of the screen. You use the view buttons to change between Normal view, Slide sorter view, and the Slide Show.

10. Drawing Toolbar : The drawing toolbar generally appears near the bottom of the screen. It contains tools for creating and editing graphics.

11. Common Tasks Buttons : Using the common tasks buttons, you can select the type of tasks you want to perform.

12. Task Pane : The task pane enables you to select the specific task you want to perform.

13. Vertical Splitter Bar : You can click and drag the vertical splitter bar to change the size of your panes.

14. Minimize Button : You use the minimize button to remove a window from view. While a window is minimized, its title appears on the taskbar.

15. Maximize/Restore Button : You use the maximize button to cause a window to fill the screen. After you maximize a window, if you click the restore button, the window returns to its former size.

16. Close Button : You use the close button to exit the window and close the program.

Create a new presentation

We can create a new presentation in many ways. It will cover everything from creating a simple blank presentation to one that is created from our favorite photograph.

1. Auto Content Wizard : It creates new presentation by providing information about title, subject, style and output. It will help to create presentations quickly by asking a number of questions about what users want and then create a presentation based on answers. A user can modify the contents of the presentation according to his needs once he has finished.

2. Design Template : It is created so that different slide types can have different layouts and graphics, the whole presentation goes together as an attractive package. It creates new presentation based on provided power point design template.

3. Blank presentation : It is displayed as blank presentation to create own design. It starts with a blank presentation with all values for color scheme, fonts and other design features set to default value. After selecting blank presentation user selects layout from layouts window.

These layouts are of different types

- | | | |
|-----------------------|-------------------------|-------------------|
| 1. Blank slide | 2. Title slide | 3. Bulleted list |
| 4. Two column text | 5. Table | 6. Text and chart |
| 7. Chart and text | 8. Organisational chart | 9. Chart |
| 10. Text and clip art | 11. Clip art and text | 12. Title only |

To save a presentation : When we create a presentation, it needs to save. So to save a presentation.

1. Select File option from Menubar, click Save.
2. Select the location or drive to store a presentation and enter a name in the File name box.

3. Click Save.

To save a presentation into new location with new name we use 'Save as' option in File option from menu-bar.

Different Ways to View Slides : Slides in any power point presentation can be viewed in a variety of ways depending on the task.

Normal View

Normal view splits your screen into three major sections : The outline and slides tabs, the slide pane, and the task pane. The outline and slides tabs are on the left side of your screen. They enable you to shift between two different ways of viewing your slides. The slides tab shows thumbnails of your slides. The outline tab shows the text on your slides. The slide pane is located in the center of your screen. The slide pane shows a large view of the slide on which you are currently working. The task pane is located on the right side of your screen. The tasks pane enables you to select the task you want to perform.

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Slide Sorter View

Slide sorter view enables you to view thumbnails of all your slides. In slide sorter view you can easily add, delete, or change the order of your slides. When you are in slide sorter view, a special formatting toolbar appears. It has options that allow you to make changes to your slides.

Slide Show

Use the slide show view when you want to view your slides, as they will look in your final presentation. When in Slide Show view,

Esc

Returns you to the view you were using previously.

Left-clicking

Moves you to the next slide or animation effect. When you reach the last slide, you automatically return to your last view.

Right-clicking

Opens a pop-up menu. You can use this menu to navigate the slides, add speaker notes, select a pointer and mark your presentation.

Adding Notes in Power Point

There are two ways to insert notes in Power Point

1. To insert short notes : In the normal view, click on the notes box at the bottom of our screen and type our text.

2. To insert longer notes : Click on the view tab. Under presentation views select the notes page button. Type our notes in the space that appears below our slide.

Inserting Headers & Footers

Headers and/or footers are used on Power point slide to include important information about the slides. This can be information for the presenter or audience, such as the date this presentation was created or delivered, to brand the slides with your company name or simply to automatically place a slide number on each slide. To add a header and footer, click on the insert tab, then on the Header & Footer button. The date and time and slide number buttons will bring up the same dialog box.

1. **Fixed and Automatic dates** : Power Point gives the option to add either a fixed date and time, which will remain the same, or a date and time that automatically update. If we choose to have a date and time that time that we run our slide show.

2. **Slide Number** : Check this box to show the slide number.

3. **Footer** : Check the Footer box and add text to have text appear at the bottom of the slide.

4. **Apply/Apply to All** : To insert our chosen elements into our slide, select apply to have the information appear only on our current slide, or apply to all to have it appear on every slide. If any of the information is repeated on the title slide, check the Don't show on title slide box to avoid repeating the information.

5. **Preview** : The Preview box shows us where on our slide the information will appear. We can not change this from within this screen, but once we insert the information we can click and drag the box anywhere in our slide, just like any other text box.

6. **Notes and Handouts** : Under this tab, we can choose our header and footer preferences for our handouts.

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Power Point Shortcut Key**Action****Power Point shortcut**

Bold	Ctrl-B
Close	Ctrl-W
Close	Ctrl-F4
Copy	Ctrl-C
Find	Ctrl-F
Italics	Ctrl-I
Menu bar	F10
New slide	Ctrl-N
Next window	Ctrl-F6
Open	Ctrl-O
Paste	Ctrl-V
Print	Ctrl-P
Repeat Find	Shift-F4
Repeat/Redo	Ctrl-Y
Replace	Ctrl-H
Save	Ctrl-S
Slide Show : Begin	F5
Slide Show : Black screen show / hide	B
Slide Show : End	Esc
Slide Show : Erase annotations	E
Slide Show : Go to next hidden slide	H
Slide Show : Hide pointer and button always	Ctrl-L
Slide Show : Hide pointer and button temporarily	Ctrl-H
Slide Show : Mouse Pointer to arrow	Ctrl-A
Slide Show : Mouse pointer to pen	Ctrl-P
Slide Show : Next slide	N
Slide Show : Previous slide	P
Slide Show : Set new timings while rehearsing	T
Slide Show : Stop / restart automatic slide show	S
Slide Show : Use mouse-click to advance (rehearsing)	M
Slide Show : Use original timings	O
Slide Show : White screen show / hide	W
Spelling and Grammer Check	F7
Switch to the next presentation window	Ctrl-F6
Switch to the next tab in a dialog box	Ctrl-Tab/Ctrl-Page Down
Switch to the previous presentation window	Ctrl-Shift-F6
Switch to the previous tab in a dialog box	Ctrl-Shift-Tab/Ctrl-page Up
Turn character formatting on or off	Num/
Underline	Ctrl-U
Undo	Ctrl-Z

Microsoft Access : Microsoft Access is a relational DBMS (Database Management System). It handles data management tasks. Microsoft Access allows users to manipulate large amounts of information and retrieve any part of the information. It is a structured database containing data tables that are arranged in a uniform structure of records and fields. A spreadsheet is a table used by small organisations that operates with a limited amount of data but for big organisations a Database Management System is preferred because it needs storing huge amount of data and retrieves it much faster. In database management system the content and the location of the data is defined by meta data.

Terms related to Microsoft Access

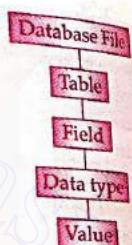
Database File : A database is a collection of related information that is organized so that it can easily be accessed, managed and updated. We organize files by storing them in folders. The process of arranging data in logical sequence is called sorting. It is an integrated collection of logically-related records that provide data for one or more multiple uses. We can also perform operations on the data that is in a database. For example, retrieve data and modify data. Periodically reviewing and altering the records in a file to ensure that the information they contain is accurate and up-to-date. We can use a database as a computerized record-keeping system that maintains information and example addresses of employees in an organisation or maintain details of students etc.

File updating : In computing, reviewing and altering the records in a file to ensure that the information they contain is accurate and up-to-date. Three basic processes are involved: adding new records, deleting existing records, and amending existing records. The updating of a file is a continuous process because records can be accessed individually and changed at any time. This type of updating is typical of large interactive database systems, such as airline ticket-booking systems. Each time a ticket is booked, files are immediately updated so that double booking is impossible.

In large commercial applications, however, millions of customer records may be kept in a large sequentially ordered file, called the master file. Each time the records in the master file are to be updated such as, when quarterly bills are being drawn up, a transaction file must be prepared. This will contain all the additions, deletions, and amendments required to update the master file. The transaction file is sorted into the same order as the master file, and then the computer reads both files and produces a new updated master file, which will be stored until the next file updating take place.

Database engine : A database engine is a part of a DBMS. It provides a link between the DBMS and the physical data on the hard disk.

Data dictionary : The data dictionary contains data about data or list of data files. It means that it contains the actual database descriptions used by the DBMS, no original data. In most DBMS, the database descriptions used and integrated. It means that the DBMS checks the data dictionary every time the database is accessed.



Directory : It is a hierarchical structure used to organize folders and files. It has information about files. It is a virtual container in which groups of computer files and other folders can be kept and organized. The topmost or main directory in any file is called the root directory. A directory that is below another directory is called a sub directory. A directory above a subdirectory is called the parent directory.

Table : A table is a collection of data about a specific topic that is stored in rows and columns or in relational database a table is a data structure that is organized using a structure of columns and rows. A table has a specified number of columns, but can have any number of rows. When we create a new table, Access asks to define fields, giving each a unique name and data type. In one database there can be multiple tables.

Field : A space allocated for a particular item of information is field. A field is a column in a table. SQL Server supports more fields, but only 255 fields are visible in Access. The definition of a field includes the name of the field, the type of data that is stored in the field, and any validation rules that you must have to validate the stored data. For example a tax form, contains a number of fields such as name, address, income and so on. In database systems, fields are the smallest units of information. In spreadsheets, fields are called cells.

Record : In database management systems, a record is a row in a table. We may store any number of records in a table. Records are composed of fields, each of which contains one item of information. A set of records makes a file. For example, a personnel file contains records that have fields such as name, address and a phone number etc.

Data type : A data type determines the type of data that the field can store. After naming a field, we must decide what type of data the field will hold. Before you begin entering data, you should decide the data types that our system would use such as in any database numeric field can store numbers used to perform calculations. Data type can be Text, Memo, Numeric, Date/ Time, Currency, Auto-Number etc.

Forms : Forms are screens for displaying data from and inputting data into tables. In Access, we can use a form as the graphical user interface to data. Forms do not store any data but they fetch data from tables or from queries and then present this data for us. We can use a form to insert data in a table, to modify the existing data in a table, or to delete data from a table.

Reports : Reports are output. Anything we decide to print deserves a report, whether it is a list of names and addresses, a financial summary for a period, or a set of mailing labels. Access Wizards allow us go through the process of defining reports. A report presents the data from a table or from a query in a pre-formatted and useful manner. You can control the appearance of a report. Reports can use controls to improve the graphical representation of data and to make the reports more useful.

Page : We use pages to enter or display data via Internet. Pages are stored as HTML files, with data read from and written to the database.

Macros : An Access Macro is a script for doing some job. For example, to create a button which opens a report, you could use a macro which fires off the "Open Report" action. Macros can also be used to set one field based on the value of another. Each line of a macro performs some action, and the

bottom half of the macro screen provides the details of how the action is to apply.

Primary Key : Primary key is a field or group of fields that uniquely identify records in a table. Every table can have only one primary key. Primary key cannot be null value, it always has unique value. Primary key is used to relate one table to another as a foreign key.

Foreign key : Foreign key is a key in a table that refers to primary key field in another table.

Relationship : A relationship is a link that is created between two tables and enables us to access data from both tables simultaneously. A relationship is an association between access tables or queries that use related fields. It can be one-to-one, one-to-many, many-to-one, or many-to-many.

Objective Question

1. You can use to copy selected text; and to paste it in a document
 (a) CTRL + C, CTRL + V (b) CTRL + C, CTRL + P
 (c) CTRL + S, CTRL + S (d) SHIFT + C, ALT + P
 [Allahabad Bank PO 2011]
2. Numbers in table columns are usually
 (a) right-aligned (b) left-aligned
 (d) centered (e) None of these
 [Allahabad Bank 2011]
3. Each box in a spreadsheet is called a
 (a) cell (b) empty space
 (d) field (e) table
 [Allahabad Bank 2011]
4. A collection of related files is called
 (a) Character (b) Field
 (d) Record (e) None of these
 [Allahabad Bank 2011]
5. When a file is saved for the first time
 (a) a copy is automatically printed
 (b) file name and folder name must be the same
 (c) it does not need a name
 (d) it only needs a name if it is not going to be printed
 (e) it must be given a name to identify it
 [P & Sind 2010, Allah 2010]
6. In which group do we work at the time of text formatting in word ?
 (a) Table, Paragraph and Indexes
 (b) Paragraph, Indexes and Sections
 (c) Characters, sections and paragraphs
 (d) Indexes, Characters and Tables
 (e) None of these
 [Allahabad Bank 2011]
7. The letter and number of the intersecting column and row is the—
 (a) Cell location (b) Cell position
 (d) Cell coordinates (e) Cell contents
 [Union Bank of India 2011]
8. To save an existing file with new name at new location we should use command.
 (a) Save (b) Save and replace
 (d) New file (e) None of these
 [IBPS PO 2012]

[IBPS PO 2012]
 (c) Save as
 [SBI 2009, Union Bank 2011]

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9. Forms that are used to organize business data into rows and columns are called
 (a) Transaction sheets (b) Registers (c) Business forms
 (d) Sheet-spreads (e) Spreadsheets
 [IBPS PO 2012]
10. In power point, the Header & Footer button can be found on the insert tab in what group ?
 (a) Illustrations group (b) Object group (c) Text group
 (d) Tables group (e) None of these
 [IBPS PO 2012]
11. The PC productivity tool that manipulates data organized in rows and columns is called a
 (a) Spreadsheet (b) Word processing document
 (c) Presentation mechanism (d) Database record manager
 (e) EDI creator
 [IBPS PO 2012]
12. Which Powerpoint view displays each slide of the presentation as a thumbnail and is useful for rearranging slides ?
 (a) Slide Sorter (b) Slide Show (c) Slide master
 (d) Notes Page (e) Slide Design
 [IBPS PO 2012]
13. If a previously saved file is edited
 (a) it cannot be saved again
 (b) the changes will automatically be saved in the file
 (c) the file will only have to be saved again if it is more than one page in length
 (d) its name must be changed
 (e) the file must be saved again to store the changes [Allah Bank 2011]
14. To print a document
 (a) select the Print command and then select OK
 (b) select the Ready Printer command then select OK
 (c) type Print and then press Enter
 (d) close the document, select the Print command, then select OK
 (e) None of these
 [Allahabad Bank 2011]
15. Which option is correct to enter the charts in ms excel—
 (a) Formulas>>charts (b) Data>>charts
 (c) Insert menu>>charts (d) View>>charts [Jharkh. Sachivalaya 2013]
16. A is a collection of information saved as a unit.
 (a) folder (b) file (c) path
 (d) file extension (e) None of these
 [Allahabad Bank 2011]
17. What is a list of data files of any database called ?
 (a) Data diary (b) Data list (c) Data disc
 (d) Data dictionary (e) None of these
18. What is the overall term for creating, editing, formatting, storing, retrieving and printing a text document ?
 (a) Word processing (b) Spreadsheet design (c) Web design
 (d) Database management
 (e) Presentation generation
 [IBPS PO 2012]
19. What is the main folder on a storage device called ?
 (a) Root directory (b) Interface (c) Device driver
 (d) Platform (e) Main directory
 [RBI 2012]
20. A file is often referred to as a (n)
 (a) Wizard (b) Document (c) Pane
 (d) Device (e) Documentation
 [RBI 2012]

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21. Excel workbook is a collection of
 (a) Chart (b) Word book (c) Worksheet
 (d) a and c (e) None of these [Punjab & Sind 2011]
22. Microsoft Office is an example of a
 (a) closed source software (b) open source software
 (c) horizontal market software (d) vertical market software
 (e) compiler [Allahabad Bank PO 2011]
23. Which of the following is not related to text formatting ?
 (a) Line spacing (b) Text spacing (c) Margin change
 (d) Searching (e) None of these
24. To correct the spelling in Ms-Word we use
 (a) Spellpro (b) Spellcheck (c) Outlook Express
 (d) All of These (e) None of these
25. In a spreadsheet program the contains related worksheets and documents.
 (a) Workbook (b) Column (c) Call
 (d) Formula (e) None of these
26. Which one of the following software applications would be the most appropriate for performing numerical and statistical calculations ?
 (a) Data base (b) Document processor
 (c) Graphics package (d) Spreadsheet
 (e) None of these
27. The word wrap feature—
 (a) Automatically moves the text to next line when necessary
 (b) Appears at the bottom of the document
 (c) Allows you to type over text
 (d) Is the short horizontal line indicating the end of the document [Jharkhand Sachivalaya 2013]
28. The background of any word document
 (a) is always white colour
 (b) is the colour you preset under the option menu
 (c) is always the same for the entire document
 (d) Can have any colour you choose
 (e) None of these
29. What is a default file extension for all word documents ?
 (a) TXT (b) WRD (c) FIL
 (d) DOC (e) None of these [SBI 2008, 2009]
30. Text in a column is generally aligned
 (a) Justified (b) Right (c) Center
 (d) Left (e) None of these [SBI 2009]
31. A directory within a directory is called
 (a) Mini directory (b) Junior directory (c) Part directory
 (d) Sub directory (e) None of these [SBI 2009]
32. For opening and closing of a file in excel, you can use which bar ?
 (a) Formatting (b) Standard (c) Title
 (d) Formatting or Title (e) None of these [SBI 2009, Allahabad PO 2010]
33. You click at B to make the text
 (a) Italics (b) Underlined
 (c) Italics and underlined (d) Bold
 (e) None of these [SBI 2009]



[SBI 2009]

34. For creating a document, you use command at file menu.
 (a) Open (b) Close (c) New
 (d) Save (e) None of these [SBI 2009]
35. You can start Microsoft word by using button.
 (a) New (b) Start (c) Program
 (d) Control panel (e) None of these [SBI 2009]
36. In excel, charts are created using which option ?
 (a) Chart wizard (b) Pivot table (c) Pie chart
 (d) Bar chart (e) None of these [SBI 2009]
37. In page preview mode
 (a) You can see all pages of your document.
 (b) You can only see the page you are currently working on.
 (c) You can only see pages that do not contain graphics.
 (d) You can only see the title page of your document.
 (e) None of these [SBI 2009, Union Bank of India 2011]
38. File extensions are used in order to
 (a) Name the file (b) Identify the file
 (c) Answer the file name is not last
 (d) Identify the file type (e) None of these [SBI 2009]
39. Which one of the following software applications would be the most appropriate for performing numerical and statistical calculations ?
 (a) Database (b) Document processor
 (c) Graphic package (d) Spreadsheet
 (e) None of these [SBI 22009]
40. Which elements of a word document can be displayed in colour ?
 (a) Only graphics (b) Only text (c) All elements
 (d) All elements, but only if you have a colour printer
 (e) None of these [SBI 2009]
41. Which keyboard shortcut bolds selected text ?
 (a) Ctrl + B (b) Alt + B (c) File/format/bold
 (d) These all (e) None of these
42. A collection of related information sorted and dealt with as a unit is a
 (a) Disk (b) Data (c) File
 (d) Floppy (e) None of these [SBI Associates 2009]
43. MS-Word is an example of—
 (a) An operating system (b) A processing device
 (c) Application software (d) An input device
 (e) None of these [SBI Associates 2009]
44. The blinking point which shows your position in the text is called—
 (a) Blinker (b) Cursor (c) Causer
 (d) Pointer (e) None of these [SBI 2009]
45. Which application is commonly used to prepare a presentation/slide show?
 (a) Photoshop (b) Power point (c) Outlook Express
 (d) Internet explorer (e) None of these [BOB 2011]
46. The quickest and easiest way in word, to locate a particular word or phrase in a document is to use the command.



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- (a) Replace (b) Find (c) Lookup
 (d) Search (e) None of these [SBI 2008, Union Bank 2011]
47. What kind of software would you most likely use to keep track of a billing account ?
 (a) Word processing (b) Electronic publishing (c) Spreadsheet
 (d) Web authoring (e) None of these [BOB 2008]
48. What are bas, doc and htm examples of ?
 (a) Data bases (b) Extensions (c) Domains
 (d) Protocols (e) None of these [BOB 2008, 2009, P. & Sind 2010]
49. A is a unique name that you give to a file of information.
 (a) Device letter (b) Folder (c) File name
 (d) File name extension (e) None of these [BOB 2008]
50. Editing document consists of reading through the document you've created, then—
 (a) Correcting your errors (b) Printing it
 (c) Saving it (d) Defeating it [BOB 2009, SBI 2011]
51. In a database, fields store numbers used to perform calculation.
 (a) Next (b) Key (c) Alphanumeric
 (d) Numeric (e) None of these [SBI 2008]
52. All of the following terms are associated with spreadsheet software except—
 (a) Worksheet (b) Cell (c) Formula
 (d) Virus detection (e) None of these [SBI 2008]
53. Which of the following is not true about computer files ?
 (a) They are collections of data saved to a storage medium.
 (b) Every file has a file name.
 (c) A file extension is established by the user to indicate the files content
 (d) Files usually contain data. (e) None of these [SBI 2008]
54. The main directory of a file is called the directory.
 (a) Root (b) Sub (c) Folder
 (d) Network (e) None of these [SBI 2009, Allahabad 2011]
55. To add or put into your document such as a picture or text use—
 (a) TV (b) Insert (c) Push in
 (d) Squeeze in (e) None of these [BOB 2010]
56. What is the main folder on a storage device called ?
 (a) Platform (b) Interface (c) Root Directory
 (d) Home page (e) None of these [BOB 2010]
57. For creating a document, you use command at file menu.
 (a) Open (b) Close (c) New [Syndicate Bank 2010]
58. A(n) is created by an application.
 (a) Executable file (b) Software program (c) Document
 (d) Operating system (e) None of these [Syndicate Bank 2010]
59. Two different files can have the same name if
 (a) They are in different folders. (b) They are on different drives.
 (c) Never.

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- (d) The names are capitalized differently.
 (e) None of these [Syndicate Bank 2010]
60. Meaningful filename helps in easy file
 (a) Storing (b) Accessing (c) Identification
 (d) Printing (e) None of these [Syndicate Bank 2010]
61. A program that enables you to perform calculations involving rows and columns of numbers is called a
 (a) Spreadsheet program (b) Word processor
 (c) Graphics package (d) Window [Syndicate Bank 2010]
- (e) None of these
62. To a document means to make changes to its existing content.
 (a) Format (b) Save (c) Edit
 (d) Print (e) None of these [Allahabad Bank Clerk 2010]
63. Periodically adding, changing and deleting file records is called file
 (a) Updating (b) Upgrading (c) Restructuring
 (d) Renewing (e) None of these [Allahabad Bank Clerk 2010, Syndicate Bank 2010]
64. How do you save a presentation under a new file name ?
 (a) Select the file menu and choose save as
 (b) When you close power point the file will automatically be saved
 (c) Select the file menu and choose save
 (d) The file will automatically be saved under the new name if you change the title
 (e) None of these [Allahabad Bank Clerk 2010]
65. Saving is the process of
 (a) copying a document from memory to a storage medium
 (b) making changes to a document's existing content
 (c) changing the appearance, or overall look, of a document
 (d) developing a document by entering text using a keyboard
 (e) none of these [Allahabad Bank Clerk 2010]
66. When computer users a document, they change its appearance.
 (a) Edit (b) Create (c) Save
 (d) Format (e) None of these [Allahabad Bank Clerk 2010]
67. What menu is selected to print ?
 (a) File (b) Tools (c) Special
 (d) Edit (e) None of these [Syndicate Bank Clerk 2010]
68. A saved document is referred to as a
 (a) File (b) Word (c) Folder
 (d) Project (e) None of these [PNB Clear 2010]
69. A command that takes what has been typed into the computer and can be seen on the screen and sends it to the printer for output on paper
-
 (a) Print (b) Return (c) Jump
 (d) Attention (e) None of these [Syndicate Bank Clerk 2010]
70. To find a saved document in the computer's memory and bring it up on the screen to view
 (a) Reverse (b) Rerun (c) Retrieve
 (d) Return (e) None of these [Syndicate Bank Clerk 2010]

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71. Allows you to print
 (a) Ribbon (b) Monitor (c) Go now
 (d) Control-P (e) None of these [Punjab & Sind Bank 2010]
72. The different styles of lettering in a word processing program
 (a) Font (b) Calligraphy (c) Writing
 (d) Manuscript (e) None of these [Punjab & Sind Bank 2010]
73. To change written work already done
 (a) File (b) Edit (c) Cut
 (d) Close (e) None of these [Punjab & Sind Bank 2010]
74. To exit the program without leaving the application
 (a) File (b) Edit (c) Copy
 (d) Cart away (e) None of these [Punjab & Sind Bank 2010]
75. A command that saves what you are working on into the hard drive, or onto a disk
 (a) View (b) Hold (c) Save
 (d) Go (e) None of these [Punjab & Sind Bank 2010]
76. A command to get a file you worked on from the memory where it was stored
 (a) Close (b) Delete (c) Open
 (d) Get it (e) None of these [Punjab & Sind Bank 2010]
77. A program that works like a calculator for keeping track of money and making budgets
 (a) Calculator (b) Spreadsheet (c) Budgeter
 (d) Financier (e) None of these [Punjab & Sind Bank 2010]
78. What menu is selected to save or save as ?
 (a) Tools (b) File (c) Format
 (d) Edit (e) None of these [Bank of Baroda Clerk 2010]
79. A includes the file name and possibly a directory of folder
 (a) File information packet (b) File button
 (c) File directory (d) File specification
 (e) None of these [Bank of Baroda Clerk 2010]
80. To print a document, press then press Enter.
 (a) Shift + P (b) Ctrl + P (c) Alt + P
 (d) Esc + p (e) None of these [Bank of Baroda Clerk 2010]
81. A(n) in text that you want printed at the bottom of the page.
 (a) Header (b) Endnote (c) Footnote
 (d) Footer (e) None of these [B O B Clerk 2010, UBI 2011]
82. What menu is selected to change font and style ?
 (a) Tools (b) File (c) Format
 (d) Edit (e) None of these [Bank of Baroda Clerk 2010]
83. Items such as names and addresses are considered
 (a) information (b) input (c) records
 (d) data (e) None of these [IPNB Clear 2010]
84. A telephone number, a birth date, and a customer name are all examples of
 (a) a record (b) data (c) a all
 (d) a database (e) None of these [Allahabad PO 2010]

85. Which of the following contains information about a single "entity" in the database—like a person, place, event or thing ?
 (a) query (b) form (c) record
 (d) table (e) None of these [SBI Associate PO 2010]
86. Numbers in table columns are usually
 (a) right-aligned (b) left-aligned (c) justified
 (d) centered (e) None of these [Panjab & Sind Bank PO 2010]
87. By default, your documents print in mode.
 (a) Landscape (b) Portrait (c) Page Setup
 (d) Print View (e) None of these [Panjab & Sind Bank PO 2010]
88. Which type of file is created by word processing programs ?
 (a) database file (b) storage file (c) worksheet file
 (d) document file (e) graphical file [Panjab & Sind Bank PO 2010]
89. Data (information) is stored in computers as
 (a) files (b) directories (c) floppies
 (d) matter (e) graphical file [Panjab & Sind Bank PO 2010]
90. The name a user assigns to a document is called a(n)
 (a) filename (b) program (c) record
 (d) data (e) None of these [SBI Associate 2011]
91. What is the main folder on a storage device called ?
 (a) Platform (b) Interface (c) Root directory
 (d) device driver (e) None of these [Union Bank of India 2011]
92. In order to e-mail a Word document from within Word
 (a) Go to file / Send To / Mail Recipient
 (b) Save the file as an e-mail attachment
 (c) Start Outlook and attach the file while open in Word
 (d) This is an impossible operation
 (e) None of these [Union Bank of India 2011]
93. The feature in Word automatically corrects certain spelling, typing, capitalization, or grammar errors.
 (a) AutoFix (b) AutoSpell (c) AutoMark
 (d) AutoCorrect (e) None of these [Union Bank of India 2011]
94. You organize files by storing them in
 (a) archives (b) folders (c) indexes
 (d) lists (e) None of these [Union Bank of India 2011]
95. In order to create columnar data in Word you need to
 (a) Tab consecutively until cursor reaches the desired place
 (b) Set tabs or use the Table menu
 (c) You need to use Excel
 (d) Press the space bar until your cursor reaches the desired place
 (e) None of these [Union Bank of India 2011]
96. When you want to move some text from one page to a different page, the best method is
 (a) drag and drop (b) cut and past (c) delete and retype
 (d) find and replace (e) None of these [Union Bank of India 2011]
97. A red wavy line under a word indicates that the word
 (a) is too long for the line of text

Computer

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Answers

- | Answers | | | | | | | | | |
|---------|----------|----------|----------|----------|----------|---------|--|--|--|
| 1. (a) | 2. (a) | 3. (a) | 4. (c) | 5. (e) | 6. (a) | 7. (c) | | | |
| 8. (c) | 9. (e) | 10. (c) | 11. (a) | 12. (a) | 13. (e) | 14. (a) | | | |
| 15. (c) | 16. (b) | 17. (d) | 18. (a) | 19. (a) | 20. (b) | 21. (c) | | | |
| 22. (c) | 23. (d) | 24. (b) | 25. (a) | 26. (b) | 27. (a) | 28. (d) | | | |
| 29. (d) | 30. (d) | 31. (d) | 32. (b) | 33. (d) | 34. (c) | 35. (b) | | | |
| 36. (a) | 37. (a) | 38. (d) | 39. (d) | 40. (c) | 41. (a) | 42. (c) | | | |
| 43. (c) | 44. (b) | 45. (b) | 46. (b) | 47. (c) | 48. (b) | 49. (c) | | | |
| 50. (a) | 51. (d) | 52. (d) | 53. (c) | 54. (a) | 55. (b) | 56. (c) | | | |
| 57. (c) | 58. (e) | 59. (a) | 60. (c) | 61. (a) | 62. (c) | 63. (a) | | | |
| 64. (a) | 65. (a) | 66. (d) | 67. (a) | 68. (a) | 69. (a) | 70. (c) | | | |
| 71. (l) | 72. (a) | 73. (b) | 74. (d) | 75. (c) | 76. (c) | 77. (b) | | | |
| 78. (b) | 79. (c) | 80. (b) | 81. (d) | 82. (c) | 83. (c) | 84. (d) | | | |
| 85. (c) | 86. (b) | 87. (b) | 88. (d) | 89. (a) | 90. (a) | 91. (c) | | | |
| 92. (a) | 93. (d) | 94. (b) | 95. (b) | 96. (b) | 97. (b) | 98. (c) | | | |
| 99. (b) | 100. (d) | 101. (d) | 102. (b) | 103. (a) | 104. (a) | | | | |

Abbreviation Related to Computer

- ADC** : Analog Digital Converter
AI : Artificial Intelligence
ALGOL : Algorithmic Language
ALU : Arithmetic Logic Unit
ASCII : American Standard Code for Information Interchange
ATM : Automated Teller Machine
BARC : The Bhabha Atomic Research Centre
BASIC : Beginner's All-purpose Symbolic Instruction Code
BIOS : Basic Input output System
BSNL : Bharat Sanchar Nigam Limited
CAD : Computer Aided Design
CAM : Computer Aided Manufacturing
CD : Compact Disc
CD ROM : Compact Disc Read Only Memory
CD RW : Compact Disc Read and Write
COBOL : Common Business Oriented Language
CPU : Central Processing Unit
CRT : Cathode Ray Tube
CU : Control Unit
DRAM : Dynamic RAM
DAC : Digital Analog Converter
DBMS : Database Management System
DCL : Digital Command Language
DFD : Data Flow Diagram
DNS : Domain Name System
DPI : Dots Per Inch
DRDO : The Defence Research and Development Organisation
DVD : Digital Versatile Disc or Digital Video Disc
E Mail : Electronic Mail
E-Commerce : Electronic Commerce
E-PROM : Erasable Programmable Read Only Memory
EBCDIC : Extended Binary Coded Decimal Interchange Code
EDP : Electronic Data Processing
EDSAC : Electronic Delay Storage Automatic Calculator
EE-PROM : Electrically Erasable Programmable Read Only Memory
ENIAC : Electronic Numerical Integrated and Computer
FORTRAN : Formula Translation
FTP : File Transfer Protocol
GUI : Graphical User Interface
HTML : Hyper Text Markup Language
HTTP : Hyper Text Transfer Protocol
IBM : International Business Machine
ISDN : Integrated Services Digital Network

IT : Information Technology

KBPS : Kilo Byte Per Second

LAN : Local Area Network

LCD : Liquid Crystal Display

LSI : Large Scale Integration

MAN : Metropolitan Area Network

MB : Mega Byte

MICR : Magnetic Ink Character Reader

MODEM : Modulator – Demodulator

MS-ACCESS : Microsoft Access

MS-DOS : Microsoft-Disc Operating System

MS-EXCEL : Microsoft-Excel

MS-WINDOS : Microsoft-Windows

MS-WORD : Microsoft -Word

MTNL : Mahanagar Telephone Nigam Limited

NAL : National Aerospace Laboratories

NIC : Network Interface Card

OCR : Optical Character Reader

OMR : Optical Mark Reader

OS : Operating System

PC : Personal Computer

PDL : Program Design Language

PL 1 : Programming Language 1

POS : Point of Sales

PROM : Programmable Read Only Memory

PSTN : Public Switched telephone Network

RAM : Random Access Memory

ROM : Read Only Memory

RPG : Report Program Generator

S RAM : Static Ram

SCSI Port : Small Computer System Interface Port

TCP/IP : Transmission Control Protocol / Internet Protocol

TFT : Thin- Film Transistor

ULSI : Ultra Large Scale Integration

UPS : Uninterruptible Power Supply

URL : Uniform Resource Locator

USB : Universal Serial Bus

VDU : Visual Display Unit

VLSI : Very Large Scale Integration

VSNL : Videsh Sanchar Nigam Limited

WAN : Wide Area Network

WIMAX : Worldwide Interoperability for Microwave Access

WLL : Wireless Local Loop

WORM : Write Once Read Many

WWW : World Wide Web



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