COMPUTER AWARENESS DIGEST 2015
For SBI, IBPS & other Banking Exams

By: GradeStack
Dear readers,

This Digest is a complete docket of important fundamentals and basics of Computer Application. The Computer Awareness Digest is relevant for all Banking and Insurance exams like SBI PO, SBI Clerk, RBI Assistant, LIC ADO, IBPS PO, IBPS RRB, IBPS Clerk.

Presented by – Gradestack.com

Basics & Fundamentals of Computer

**Computer:** A **computer** is a truly amazing machine that performs a specified sequence of operations as per the set of instructions (known as **programs**) given on a set of data (input) to generate desired information (output).

A complete computer system consists of four parts:

- **Hardware:** Hardware represents the physical and tangible components of the computer.
- **Software:** Software is a set of electronic instructions consisting of complex codes (Programs) that make the computer perform tasks.
- **User:** The computer operators are known as users.
- **Data:** Consists of raw facts, which the computer stores and reads in the form of numbers.

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The following features characterize this electronic machine:

- **Speed**
- **Accuracy**
- **Storage and Retrieval**
- **Repeated Processing Capabilities**
- **Reliability**
- **Flexibility**
- **Low cost**

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Computer hardware consists of the following components:

1. **CPU (Central Processing Unit):** CPU is considered as the brain of the computer. It performs all types of data processing operations, stores data, intermediate results and instructions (program). It controls the operation of all parts of computer.
Fig: The relationship between different hardware components

[A] CPU itself has following three components:

- **ALU (Arithmetic Logic Unit):** When the control unit encounters an instruction that involves mathematical calculation or decision/logic, it passes the control to the second component, i.e., the arithmetic logic unit (ALU). The ALU includes a group of registers - memory locations built directly into the CPU - that are used to hold data that are being processed by the current instruction.
- **Registers:** The register is the smallest high-speed storage area in the CPU. All data must be represented in a register before it can be processed.
- **Control Unit:** This unit controls the operations of all parts of computer but does not carry out any actual data processing operations.

[B] Primary memory consists of mainly two types of memories:

- **Random Access Memory (RAM):** RAM is the internal memory of the CPU for storing data, program and program result. It is read/write memory which stores data until the machine is working. As soon as the machine is switched off, data is erased. RAM is volatile, i.e. data stored in it is lost when we switch off the computer or if there is a power failure. Hence a backup uninterruptible power system (UPS) is often used with computers. RAM is small, both in terms of its physical size and in the amount of data it can hold.

There are mainly three types of RAM available:

- **Dynamic Random Access Memory (DRAM):** A type of physical memory used in most personal computers. The term dynamic indicates that the memory must be constantly refreshed (reenergized) or it loses its contents. This type of memory is more economical.

- **Static Random Access Memory (SRAM):** A type of memory that is faster and less volatile than DRAM, but requires more power and is more expensive. The term static is derived from the fact that it does not need to be refreshed like DRAM.

- **Synchronous Dynamic Random Access Memory (SDRAM):** A type of DRAM that can run at much higher clock speeds.

- **Read Only Memory (ROM):** The memory from which we can only read but cannot write on it. This type of memory is non-volatile. The information is stored permanently in such memories during manufacture. A ROM, stores such instructions that are required to start a computer. This operation is referred to as bootstrap.

There are mainly three types of ROM available:

- **MROM (Masked ROM):** The very first ROMs were hard-wired devices that contained a pre-programmed set of data or instructions. These kinds of ROMs are known as masked ROMs which are inexpensive.

- **PROM (Programmable Read only Memory):** PROM is read-only memory that can be modified only once by a user. The user buys a blank PROM and enters the desired contents using a PROM program.

- **EPROM (Erasable and Programmable Read Only Memory):** The EPROM can be erased by exposing it to ultra-violet light for a duration of up to 40 minutes. Usually, an EPROM eraser achieves this function.

- **EEPROM (Electrically Erasable and Programmable Read Only Memory):** The EEPROM is programmed and erased electrically. It can be erased and reprogrammed about ten thousand times. Both erasing and programming take about 4 to 10 ms (milli second).
Memory

A memory is just like a human brain. It is used to store data and instructions. Computer memory is the storage space in computer where data is to be processed and instructions required for processing are stored. The memory is divided into large number of small parts called cells. Each location or cell has a unique address which varies from zero to memory size minus one.

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<th>Secondary Memory</th>
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<td>Cache Memory</td>
<td>Main Memory</td>
<td>➢ Magnetic Disk (HDD)</td>
</tr>
<tr>
<td>Registers</td>
<td>RAM</td>
<td>➢ Optical Disk (CD, DVD, BRD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ Flash Memory (Memory card, Pen Drive)</td>
</tr>
<tr>
<td>Memory is primarily of three types</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Cache Memory: It is a very high speed semiconductor memory which can speed up CPU. It acts as a buffer between the CPU and main memory.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Primary Memory/Main Memory: Primary memory holds only those data and instructions on which computer is currently working. It has limited capacity and data is lost when power is switched off.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Secondary Memory: This type of memory is also known as external memory or non-volatile. It is slower than main memory. These are used for storing data/Information permanently.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Secondary Storage (External Storage Devices): Floppy diskettes, hard disk, tapes and optical disks come under the category of external storage devices or ancillary storage devices. These devices are very sensitive to environmental conditions (humidity and temperature) as well as to external magnetic fields and need to be stored carefully.

✓ Floppy Disk: Floppy disks are primarily used on PCs. Information on a floppy disk is recorded in the magnetized states of particles of iron oxides evenly placed upon concentric circles known as tracks.

✓ Hard Disk: It is a non-removable enclosed magnetic disk included in most PCs. It contains a stack of metal platters, each coated with iron oxide, that spin on a spindle and the entire unit is encased in a sealed chamber.

✓ Magnetic Tape: This is plastic tape, usually made of Mylar that is coated with iron oxide, thereby enabling the introduction (writing); retention (memory) and reading of magnetically recorded information. The best use of tape storage is for data that you do not use very often.

3. Peripherals: Peripheral devices are devices connected to the computer externally. If a peripheral device is disconnected, the computer will still be able to work; only functions performed by this peripheral device will not be available.

Mainly there are following types of peripheral devices:

1. Input Devices (How to tell it what to do): This unit makes link between user and computer. The input devices translate the information into the form understandable by computer.

   ➢ Keyboard- The most common and very popular input device which helps in inputting data to the computer
   ➢ Mouse- Mouse is the most popular pointing device and cursor-control device having a small palm size box with a round ball at its base which senses the movement of mouse and sends corresponding signals to CPU when the mouse buttons are pressed.

   ➢ Joy Stick- To move cursor position on a monitor screen. It is mainly used in Computer Aided Designing (CAD) and playing computer games.
   ➢ Light pen- It is used to select a displayed menu item or draw pictures on the monitor screen.
   ➢ Track Ball- Mostly used in notebook or laptop computer, instead of a mouse. This is a ball which is half inserted and by moving fingers on ball, pointer can be moved.
- **Scanner**: A scanner allows you to scan printed material and convert it into a file format that may be used within the PC.
- **Digitizer**: It converts analog information into digital form.
- **Microphone**: Microphone is an input device to input sound that is then stored in digital form.
- **Magnetic Ink Card Reader (MICR)**: MICR input device is generally used in banks because of a large number of check to be processed every day.
- **Optical Character Reader (OCR)**: OCR scans text optically character by character, converts them into a machine readable code and stores the text on the system memory.
- **Bar Code Reader**: A device used for reading bar coded data (data in form of light and dark lines). Bar coded data is generally used in labeling goods, numbering the books.
- **Optical Mark Reader (OMR)**: A special type of optical scanner used to recognize the type of mark made by pen or pencil.

2. **Output Devices**: *How it shows you what it is doing*

   **Monitors**: Monitors, commonly called as Visual Display Unit (VDU), are the main output device of a computer. It forms images from tiny dots, called pixels that are arranged in a rectangular form. The sharpness of the image depends upon the number of pixels.

   **There are two kinds of viewing screen used for monitors.**
   - **Cathode-Ray Tube (CRT)**: The CRT display is made up of small picture elements called pixels. The smaller the pixels, the better the image clarity, or resolution.
   - **Flat-Panel Display**: The flat-panel display refers to a class of video devices that have reduced volume, weight and power requirement in comparison to the CRT.

   **Printer**: Printer is an output device, which is used to print information on paper.
   - **Impact Printers**: The impact printers print the characters by striking them on the ribbon which is then pressed on the paper.
   - **Non-Impact Printers**: Non-impact printers print the characters without using ribbon. These printers print a complete page at a time so they are also called as Page Printers. Laser Printers, Inkjet Printers.

**Note:**

- **Data**: Data can be defined as a representation of facts, concepts or instructions in a formalized manner which should be suitable for communication, interpretation, or processing by human or electronic machine.
- **Information**: Information is organized or classified data which has some meaningful values for the receiver. Information is the processed data on which decisions and actions are based.
- **Data Processing Cycle**: Data processing is the re-structuring or re-ordering of data by people or machine to increase their usefulness and add values for particular purpose. Data processing consists of basic steps input, processing and output.

   **These three steps constitute the data processing cycle.**
   - **Input**: Input data is prepared in some convenient form for processing. The form will depend on the processing machine. For example, when electronic computers are used, the input data could be recorded on any one of several types of input medium, such as magnetic disks, tapes and so on.
   - **Processing**: In this step input data is changed to produce data in a more useful form. For example, paychecks may be calculated from the time cards, or a summary of sales for the month may be calculated from the sales orders.
   - **Output**: The result of the proceeding processing step are collected. The particular form of the output data depends on the use of the data. For example, output data may be pay-checks for employees.

**Language Processors:**

- **Assembler**: This language processor converts the program written in assembly language into machine language.
- **Interpreter**: This language processor converts a HLL (High Level Language) program into machine language by converting and executing it line by line.
- **Compiler**: It also converts the HLL program into machine language but the conversion manner is different. It converts the entire HLL program in one go, and reports all the errors of the program along with the line numbers.
Classification of Computers:

Computers can be broadly classified by their speed and computing power:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PC (Personal Computer)</td>
<td>It is a single user computer system having moderately powerful microprocessor.</td>
</tr>
<tr>
<td>2</td>
<td>WorkStation</td>
<td>It is also a single user computer system which is similar to personal computer but have more powerful microprocessor.</td>
</tr>
<tr>
<td>3</td>
<td>Mini Computer</td>
<td>It is a multi-user computer system which is capable of supporting hundreds of users simultaneously. Software technology is different from minicomputer.</td>
</tr>
<tr>
<td>4</td>
<td>Main Frame</td>
<td>It is a multi-user computer system which is capable of supporting hundreds of users simultaneously. Software technology is different from minicomputer.</td>
</tr>
<tr>
<td>5</td>
<td>Supercomputer</td>
<td>It is an extremely fast computer which can execute hundreds of millions of instructions per second.</td>
</tr>
</tbody>
</table>

Following are the main memory storage units:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bit(Binary Digit)</td>
<td>A binary digit is logical 0 and 1 representing a passive or an active state of a component in an electric circuit.</td>
</tr>
<tr>
<td>2</td>
<td>Nibble</td>
<td>A group of 4 bits is called nibble.</td>
</tr>
<tr>
<td>3</td>
<td>Byte</td>
<td>A group of 8 bits is called byte. A byte is the smallest unit which can represent a data item or a character. (1 byte = 8 bits)</td>
</tr>
<tr>
<td>4</td>
<td>Word</td>
<td>A computer word, like a byte, is a group of fixed number of bits processed as a unit which varies from computer to computer but is fixed for each computer. The length of a computer word is called word-size or word length and it may be as small as 8 bits or may be as long as 96 bits. A computer stores the information in the form of computer words.</td>
</tr>
</tbody>
</table>

Few higher storage units are following:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kilobyte (KB)</td>
<td>1 KB = 1024 Bytes</td>
</tr>
<tr>
<td>2</td>
<td>Megabyte(MB)</td>
<td>1 MB = 1024 KB</td>
</tr>
<tr>
<td>3</td>
<td>GigaByte (GB)</td>
<td>1 GB = 1024 MB</td>
</tr>
<tr>
<td>4</td>
<td>TeraByte (TB)</td>
<td>1 TB = 1024 GB</td>
</tr>
<tr>
<td>5</td>
<td>PetaByte (PB)</td>
<td>1 PB = 1024 TB</td>
</tr>
</tbody>
</table>

Software: software represents the set of programs that govern the operation of a computer system and make the hardware run. There are two types of software

- **System Software**: The system software is collection of programs designed to operate, control, and extend the processing capabilities of the computer itself. System software are generally prepared by computer manufacturers. System software serves as the interface between hardware and the end users. **Examples**: Operating System, Compilers, Interpreter, Assembler etc.

- **Application Software**: It is the set of programs necessary to carry out operations for a specified application.
Application software can subdivide into three categories:

(A) Packages:

<table>
<thead>
<tr>
<th>Packages</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Processing</td>
<td>A package that processes textual matter and creates organized and flawless documents.</td>
</tr>
<tr>
<td>Spreadsheets</td>
<td>An electronic spreadsheet is a program that accepts data in a tabular form and allow users to manipulate, calculate, analyze data in the desired manner.</td>
</tr>
<tr>
<td>Database Management Systems</td>
<td>DBMS is a package that can handle and manage bulk of stored data.</td>
</tr>
<tr>
<td>Desktop Publishing Software</td>
<td>Handles page layout by combining the functions of a traditional typesetter and a layout artist.</td>
</tr>
<tr>
<td>Graphics, Multimedia and Presentation applications</td>
<td>Application software that manipulates images is known as Graphics software.</td>
</tr>
</tbody>
</table>

(B) Utilities: Utilities are those application programs that assists the computer by performing housekeeping functions like backing up disk or scanning viruses etc.

<table>
<thead>
<tr>
<th>Utilities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Editor</td>
<td>Program is used for creating, editing text files.</td>
</tr>
<tr>
<td>Backup Utility</td>
<td>Program facilities the backing-up of disk.</td>
</tr>
<tr>
<td>Compression Utility</td>
<td>Large files can be compressed so that it takes less storage area.</td>
</tr>
<tr>
<td>Disk Defragmentor</td>
<td>It speeds up disk access by rearranging the files and free space on your computer.</td>
</tr>
<tr>
<td>Antivirus Software</td>
<td>It scans yours disk for viruses and removes them if any virus is found.</td>
</tr>
</tbody>
</table>

(C) Customized Software: This type of software is tailor-made software according to a user’s requirements.

Following are the main five generations of computers:

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<thead>
<tr>
<th>S. No.</th>
<th>Generation &amp; Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>First Generation (1946-1959) Vacuum tube based</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Second Generation (1959-1965) Transistor based</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Third Generation (1965-1971) Integrated Circuit based</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Fourth Generation (1971-1980) VLSI microprocessor based</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fifth Generation (1980-onwards) ULSI microprocessor based</td>
<td></td>
</tr>
</tbody>
</table>

Boot: When computer starts, the operating system is first loaded (as it is essential for running all other programs), this process is known as booting.

Cold Boot: -When you turn the computer ON from an OFF position.

Warm Boot: - When you reset the computer that is already ON.

Motherboard: The motherboard serves as a single platform to connect all of the parts of a computer together. A motherboard connects CPU, memory, hard drives, optical drives, video card, sound card, and other ports and expansion cards directly or via cables. It can be considered as the backbone of a computer.
Software categories

**Freeware:** Software which is completely costless. The producers of this software are either public institutions such as universities or developers who do it for personal interest or advertisement or private company who do it for dumping reasons.

**Shareware:** Software which is initially costless but after a certain period the user is asked to pay a fee or delete it. Or software which has two versions a free one, but incomplete or with advertisement banners and a complete advertisement free one for which the user must pay. The most common example is WinZip compression program.

**Commercial:** Software for which the user has to pay a license to use it. Common examples are Microsoft Windows operating system and Microsoft word.

**Private:** Software uniquely built, under payment for a specific customer to fit his need. Only the customer may use it.

**Open Source:** Software may be modified by anyone, sometimes under certain restrictions. Open source software is also freeware.

**Proprietary:** Software is distributed with the explicit with the explicit legal warning not to modify it and technically locked to prevent other developers to see or modify its source.

Number System

When we type some letters or words, the computer translates them in numbers as computers can understand only numbers. A computer can understand positional number system where there are only a few symbols called digits and these symbols represent different values depending on the position they occupy in the number.

A value of each digit in a number can be determined using

- The digit
- The position of the digit in the number
- The base of the number system (where base is defined as the total number of digits available in the number system).

1. **Decimal Number System:** The number system that we use in our day-to-day life is the decimal number system. Decimal number system has base 10 as it uses 10 digits from 0 to 9. In decimal number system, the successive positions to the left of the decimal point represent units, tens, hundreds, thousands and so on.

2. **Binary Number System:** Uses two digits, 0 and 1, also called base 2 number system. Each position in a binary number represents a 0 power of the base (2). Last position in a binary number represents a x power of the base (2).

3. **Octal Number System:** Uses eight digits, 0,1,2,3,4,5,6,7, also called base 8 number system. Each position in an octal number represents a 0 power of the base (8).

4. **Hexadecimal Number System:** Uses 10 digits and 6 letters, 0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F. Letters represents numbers starting from 10. A = 10. B = 11, C = 12, D = 13, E = 14, F = 15. Also called base 16 number system. Each position in a hexadecimal number represents a 0 power of the base (16).

**DBMS – Data Base Management System**

**DBMS:** DBMS is the acronym of Data Base Management System. DBMS is a collection of interrelated data and a set of programs to access this data in a convenient and efficient way. It controls the organization, storage, retrieval, security and integrity of data in a database.

**Architecture of DBMS** divided into three levels:

1. **External view or User view/View Level:** It is the highest level of data abstraction. This includes only those portions of database of concern to a user or Application program. Each user has a different external view and it is described by means of a scheme called external schema.

2. **Conceptual view/Logical Level:** All the database entities and the relationship among them are included. One conceptual view represents the entire database called conceptual schema.

3. **Internal view/Physical Level:** It is the lowest level of abstraction, closest to the physical storage method. It describes how the data is stored, what is the structure of data storage and the method of accessing these data. It is represented by internal schema.

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Keys in DBMS:

- **Super key** of an entity set is a set of one or more attributes whose values uniquely determine each entity.
- **Candidate key** of an entity set is a set of fields from which primary key can be selected. It is an attribute or a set of attributes that can act as a primary key for a table to uniquely identify each record in a table.
- **Primary key** is a candidate key that is most appropriate to become main key of the table. It is a key that uniquely identifies each record in the table.

**LOGIC GATES**

**Logic gate**: is an elementary building block of a digital circuit. Most logic gates have two inputs and one output. At any given moment, every terminal is in one of the two binary conditions low (0) or high (1). There are seven basic logic gates: AND, OR, XOR, NOT, NAND, NOR, XNOR.

**Networking**

**Network**: Computer Networks means interconnected set of autonomous system that permits distributed processing to information.

**Five components:**

- Sender Computer
- Sender equipment (Modem)
- Communication Channel (Telephone Cables)
- Receiver Equipment (Modem)
- Receiver Computer

**Classified on the basis of Geographical Coverage:**

- **Local Area Network (LAN)**: A local area network is relatively smaller and privately owned network with the maximum span of 10 km.
- **Metropolitan Area Network (MAN)**: MAN is defined for less than 50 Km and provides regional connectivity within a campus or small geographical area.
- **Wide Area Network (WAN)**: A wide Area Network (WAN) is a group Communication Technology, provides no limit of distance.

**Types of Network**

1. **Point to Point Network**: When a packet is sent from one router to another intermediate router, the entire packet is stored at each intermediate router, stored there till the output line is free and then forwarded. A subnet using this principle is called point to point or packet switched network.

**Topologies for a point to point Subnet**

- **Star**: Each device has a dedicated point to point link only to a central controller, usually called a hub.
- **Tree**: A tree topology is a variation of a star.
- **Ring**: Each device has a dedicated point to point line configuration only with the two devices on either side of it.
- **Bus**: One long cable acts as a backbone to link all the devices in the network.

2. **Broadcast Networks**: Broadcast networks have a single communication channel that is shared by all the machines on the network.
Open Systems Interconnection model (OSI)

The Open Systems Interconnection model (OSI) is a conceptual model that characterizes and standardizes the internal functions of a communication system by partitioning it into abstraction layers. The model is a product of the Open Systems Interconnection project at the International Organization for Standardization (ISO).

Seven layers of OSI Model are:

- **Application Layer**: The application layer is the OSI layer closest to the end user, which means both the OSI application layer and the user interact directly with the software application.
- **Presentation Layer**: The presentation layer establishes context between application-layer entities, in which the application-layer entities may use different syntax and semantics if the presentation service provides a big mapping between them.
- **Session Layer**: The session layer controls the dialogues (connections) between computers. It establishes, manages and terminates the connections between the local and remote application.
- **Transport Layer**: The transport layer provides the functional and procedural means of transferring variable-length data sequences from a source to a destination host via one or more networks, while maintaining the quality of service functions.
- **Network Layer**: The network layer provides the functional and procedural means of transferring variable-length data sequences from one node to another connected to the same network.
- **Data link Layer**: The data link layer provides node-to-node data transfer -- a link between two directly connected nodes. It detects and possibly corrects errors that may occur in the physical layer.
- **Physical Layer**: It defines the electrical and physical specifications of the data connection. It defines the relationship between a device and a physical transmission medium.

**Transmission Media**

- **Network Cables**: Network cables are used to connect computers. The most commonly used cable is Category 5 cable RJ-45.
- **Distributors**: A computer can be connected to another one via a serial port but if we need to connect many computers to produce a network, this serial connection will not work. The solution is to use a central body to which other computers, printers, scanners etc. can be connected and then this body will manage or distribute network traffic.
- **Repeaters**: A repeater is an electronic device that receives a signal and retransmits it at a higher level or higher power, or onto the other side of an obstruction, so that the signal can cover longer distances.
- **Bridge**: A bridge is a product that connects a local area network (LAN) to another local area network that uses the same protocol (for example, Ethernet or token ring).
- **Routers**: A router is a device that forwards data packets along networks. A router is connected to at least two networks, commonly two LANs or WANs or a LAN and its ISP's network. Routers are located at gateways, the places where two or more networks connect.
- **Internal Network Cards**: Network card is a necessary component of a computer without which a computer cannot be connected over a network. It is also known as network adapter or Network Interface Card (NIC). Most branded computers have network card pre-installed. Network cards are of two types: Internal and External Network Cards.
- **External Network Cards**: External network cards come in two flavours like Wireless and USB based. Wireless network card needs to be inserted into the motherboard but no network cable is required to connect to network.
- **Universal Serial Bus (USB)**: USB card are easy to use and connect via USB port. Computers automatically detect USB card and can install the drivers required to support the USB network card automatically.
- **Modem (Modulator –DE Modulator)**: Modem is a device attached to computers that can convert digital signals to analog signals and vice versa.
An Operating system is a program, which acts as an interface between a user and the hardware.

**Characteristics of Operating System:**

- **Memory Management** -- keeps track of primary memory i.e. what part of it is in use by whom, what part is not in use etc. and allocates the memory when a process or program requests it.
- **Processor Management** -- allocates the processor(CPU) to a process and de-allocates processor when it is no longer required.
- **Device Management** -- keeps track of all devices. This is also called I/O controller that decides which process gets the device, when, and for how much time.
- **File Management** -- allocates and de-allocates the resources and decides who gets the resources.
- **Security** -- prevents unauthorized access to programs and data by means of passwords and similar other techniques.
- **Job accounting** -- keeps track of time and resources used by various jobs and/or users.
- **Control over system performance** -- records delays between request for a service and from the system.
- **Interaction with the operators** -- The interaction may take place via the console of the computer in the form of instructions. Operating System acknowledges the same, does the corresponding action and informs the operation by a display screen.
- **Error-detecting aids** -- Production of dumps, traces, error messages and other debugging and error-detecting methods.
- **Coordination between other software and users** -- Coordination and assignment of compilers, interpreters, assemblers and other software to the various users of the computer systems.

**MS - Window**

MS-Windows is a GUI based operating system. In Windows Operating system multiple applications can be simultaneously run in different windows.

- In **MS-Windows**, the screen upon which icons, windows, too are displayed is known as **desktop**.
- An **icon** is a graphic symbol that represents a window element like, file, folder, or **shortcut**.
- Loading up of operating system files into the computer’s memory in called **booting up**.
- The **taskbar** is a bar, which is usually located at the bottom of the screen.
- **My computer** is helpful for viewing the contents of a single folder or drive.
- **Windows Explorer** is another way of seeing what is on your computer. Windows Explorer shows the computer’s contents as a hierarchy.
- **File**: A program or document stored on a disk.

**MS-Word**

- A **word processor** is a package that processes textual matter and creates organized and flawless documents.
- The word processor offers very useful features like speed, powerful editing and formatting features, permanent storage, Graphics, object linking and embedding, spell check and mail merge etc.
- The word processor automatically fits the typed text within the specified left and right margins. This feature is called word wrapping.
- Margins can be four type viz. left, right, top and bottom.
- The distance between text boundaries and page margins is called indent. The indent can be positive, negative or hanging indent.
- The text layout
In Word, paragraphs can be formatted through Paragraph option of Format menu and the borders can be applied through Borders and shading option of Format menu.

The page formatting in Word can be controlled through Page Setup ... option of File menu. The header and footer can be created and formatted using Header and Footer option of the view menu.

In word, the document can either be printed through print button of standard toolbar or through the Print.. option of File menu. The help is available in Word through the Help menu.

In word, spelling and grammar can be checked either through the spelling and Grammar option of Tools menu.

The Autocorrect feature of Word converts shorthand into longer strings. You can create your own Autocorrect entries by clicking to Autocorrect command to Tools menu.

Tables can be inserted in a Word document through Table button of Standard toolbar and can be manipulated through the table drop menu.

In MS-Word, the mail merge involves two files – Main document and data source file to produce the merged document. The main document and data source can handled through Mail Merge option of Tools menu.

**Shortcuts**

<table>
<thead>
<tr>
<th>Shortcut</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+W</td>
<td>Close the active window / document</td>
</tr>
<tr>
<td>Ctrl+Z</td>
<td>Undo an action</td>
</tr>
<tr>
<td>Ctrl+Y</td>
<td>Redo the last action or repeat an action</td>
</tr>
<tr>
<td>Ctrl+S</td>
<td>Save a document</td>
</tr>
<tr>
<td>Ctrl+P</td>
<td>Print a document</td>
</tr>
<tr>
<td>Ctrl+K</td>
<td>Insert a hyperlink.</td>
</tr>
<tr>
<td>Alt+Right.</td>
<td>Arrow Go forward one page.</td>
</tr>
<tr>
<td>Ctrl+C</td>
<td>Copy selected text or graphics to the Office Clipboard.</td>
</tr>
<tr>
<td>Ctrl+V</td>
<td>Paste the most recent addition to the Office Clipboard.</td>
</tr>
<tr>
<td>Ctrl+Shift+A</td>
<td>Format all letters as capitals.</td>
</tr>
<tr>
<td>Ctrl+B</td>
<td>Applies or removes bold formatting.</td>
</tr>
<tr>
<td>Ctrl+I</td>
<td>Applies or removes italic formatting.</td>
</tr>
<tr>
<td>Ctrl+=</td>
<td>Apply subscript formatting (automatic spacing).</td>
</tr>
<tr>
<td>F1</td>
<td>Open Help</td>
</tr>
<tr>
<td>F4</td>
<td>Repeat the last action performed (Word 2000+)</td>
</tr>
<tr>
<td>F5</td>
<td>Open the Find, Replace, and Go To window in Microsoft Word</td>
</tr>
<tr>
<td>F7</td>
<td>Spellcheck and grammar check selected text or document</td>
</tr>
<tr>
<td>F12</td>
<td>Save As</td>
</tr>
</tbody>
</table>

Some of the valid file names are as follows:

<table>
<thead>
<tr>
<th>Type of File</th>
<th>File name and Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notepad File</td>
<td>Type.txt</td>
</tr>
<tr>
<td>Paintbrush File</td>
<td>Painting.bmp</td>
</tr>
<tr>
<td>Word</td>
<td>Document.doc</td>
</tr>
<tr>
<td>Excel</td>
<td>Book.xls</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>Presentation.ppt</td>
</tr>
<tr>
<td>Database</td>
<td>Db1.mdb</td>
</tr>
<tr>
<td>Executable</td>
<td>Game.exe</td>
</tr>
</tbody>
</table>
MS-EXCEL

- A spreadsheet is a software tool that lets one enter, calculate, manipulate and analyze set of numbers.
- A Worksheet is a grid of cells made up of horizontal rows and vertical columns.
- A workbook is a group of worksheets.
- Three types of data can be entered in a worksheet:
  - (i) **number**
  - (ii) **Text**
  - (iii) **Formulas**
- Cell can be referenced in three ways:
  - (i) **relative**
  - (ii) **absolute**
  - (iii) **mixed**
- A cell can be edited either by overwriting or by partially modifying the cell contents.
- A range can be selected using mouse or keyboard.
- A range can be either through **copy** and **paste** operations or by dragging the fill handle.
- A range can be moved either through cut and paste operations or by dragging the range border.
- A range can be cleared through **Edit--Clear** command.
- To erase everything from a worksheet, select all the cells in the worksheet and then use **Edit--Clear--All**.
- To save a workbook use **File--Save** command.
- To open a workbook use **File--Open** command.
- To insert cells, rows or columns in worksheet, use **Insert---Cells----, Insert-----Rows or Insert-----Column** command respectively.
- General arrangement of data is known as **formatting**.
- Formatting does not affect the actual cell value only the appearance change.
- Formatting is performed in MS-Excel through options available in Format menu.
- Charts are the pictorial representation of worksheet data.
- Various chart types in MS-Excel are area chart, column chart, bar chart, line chart, pie chart, XY(Scatter) chart.
- Chart in MS-Excel saved in two ways: (i) embedded chart (ii) chart sheet
- Embedded chart is a chart object that is placed on a worksheet and saved with that worksheet.
- Chart sheet is a sheet in workbook that contains only a chart.
- Charts are created using chart wizard.

Powerpoint

- The application software that can create professional looking visual aids is called Presentation Graphics Software.
- **MS-PowerPoint** can be started by clicking at Start—Program---Microsoft PowerPoint.
- A slide can contain one or more of these components: **Titles, Graphs, Drawing objects, ClipArt** and **Pictures**.
- The slide components that are used for reference are: **Handouts, Notes, Outlines**.
- A new presentation can be created through one of these methods:
  - (i) **Auto content Wizard**
  - (ii) **Design Templates**
  - (iii) **Sample Presentation**
  - (iv) **Blank Presentation**
- A new slide can be added by either clicking at **Common Tasks** options of Formatting toolbar and then selecting New Slide option, by clicking at Insert menu's **New Slide** option.
- A presentation in PowerPoint can viewed in any of these views: **Normal, Outline, Slide, Slide Sorter, Slide Show** and **Notes Page View**.
- To apply new design to slides, click either at **Apply Design Template** option of **Common Tasks** options of Formatting toolbar, or at Format menu's **Apply Design Template** option or ever from the shortcut menu.
- A color scheme is a combination of various colors used for text and other presentation elements.
- A color scheme can be changed by clicking at **Slide Color Scheme** option of Format menu.
- Background color can be changed by clicking at **Format-----Background** command or even through slide's shortcut menu.
- You can change text font and style by using **Format---Font command**.
- Header and Footer information can be viewed and changed by clicking at **View---Header** and Footer option.
- The slide ---shorter view in useful for viewing the slides in miniature forms and for rearranging them.
- Movies (Vedio) & Sound can be inserted by using **Insert---Movies & Sounds command**.
- While creating slide shows you can add transitions to slides by using Slide Show --- Slide Transition command.
- To add animation, you can use Slide Show-----**Custom** Animation commands.
Internet

- The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to link several billion devices worldwide. It also known as “network of networks” that consists of millions of private, public, academic, business, and government networks.

Various Applications of Internet are:

- Exchange messages using e-mail (Electronic mail).
- Transfer files as well as software.
- Browse through information on any topic on web.
- Communicate in real time (chat) with others connected to the Internet.
- Search databases of government, individuals and organizations.
- Read news available from leading news groups.
- Send or receive animation and picture files from distant places.
- Set up a site with information about your company's products and services.

- The World Wide Web commonly known as the Web or www developed founded by Tim Berners – Lee in 1989, is a system of interlinked hypertext documents that are accessed via the Internet. These multimedia pages are ever-changing.

- A web browser (commonly referred to as a browser) is a software application for retrieving, presenting and traversing information resources on the World Wide Web.

Various features of a Web Browser are:

- **Menu bar:** The menu bar, located at the very top of the screen, can be accessed using the mouse. Actions that are in black can be performed, while actions that cannot be performed will be in gray or lightened.
- **Tool bar:** The tool bar is located at the top of the browser; it contains navigational buttons for the Web. Basic functions of these buttons include:

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Opens or returns to starting page</td>
</tr>
<tr>
<td>Back</td>
<td>Takes you to the previous page</td>
</tr>
<tr>
<td>Forward</td>
<td>Takes you to the next page</td>
</tr>
<tr>
<td>Print</td>
<td>Prints current page</td>
</tr>
<tr>
<td>Stop</td>
<td>Stops loading a page</td>
</tr>
<tr>
<td>Reload</td>
<td>Refresh/redisplays current page</td>
</tr>
<tr>
<td>Search</td>
<td>Accesses search engine</td>
</tr>
</tbody>
</table>

- **Location bar:** The location bar, below the tool bar, is a box labelled "Location," "GoTo," or "Address." You can type in a site’s address, and press the Return or Enter key to open the site.
- **Status bar:** The status bar is located at the very bottom of the browser window. You can watch the progress of a web page download to determine if the host computer has been contacted and text and images are being downloaded.
- **Scroll bar:** The scroll bar is the vertical bar located on the right of the browser window. You can scroll up and down a web page by placing the cursor on the slider control and holding down the mouse button.
- **Website** is a set of related web pages served from a single web domain.
- The Uniform Resource Locator, abbreviated as URL is the Address for web sites. Most of them begin with http (Hyper Text Transfer Protocol), followed by a colon and two slashes.. In most web browsers, the URL of a web page is displayed on top inside an address bar. An example of a typical URL would be "http://www.gradestack.com".
- A Home page, index page, or main page is a page on a website. A home page usually refers to:
- A Hyperlink is a reference to data that the reader can directly follow either by clicking or by hovering or that is followed automatically.
- **Downloading** means to receive data to a local system from a remote system, or to initiate such a data transfer.
- **Uploading** refers to the sending of data from a local system to a remote system such as a server or another client with the intent that the remote system should store a copy of the data being transferred.
- An email attachment is a computer file sent along with an email message. One or more files can be attached to any email message, and be sent along with it to the recipient. The first email was sent by Ray Tomlinson to himself in 1971.
- **CC (Carbon Copy)** in e-mail indicates those who are to receive a copy of a message addressed primarily to another. The list of CCed recipients is visible to all other recipients of the message.

Now get GK updates, quizzes and notifications on mobile
An additional **BCC (blind carbon copy)** field is available for hidden notification; recipients listed in the BCC field receive a copy of the message, but are not shown on any other recipient’s copy (including other BCC recipients).

- **The Drafts folder** retains copies of messages that you have started but are not yet ready to send.
- **Hotmail**, a free e-mail service provided by Microsoft which was established in 1995 was co-founded by an Indian American entrepreneur Sabeer Bhatia along with Jack Smith in July of 1996.
- An **Internet Protocol address** (also known as an IP address) is a numerical label assigned to each device (e.g., computer, printer) participating in a computer network. It acts as an identifier for a computer. It is a unique address for every computer.
- **Top-level domain**: Each part of a domain name contains certain information. The first field is the host name, identifying a single computer or organization. The last field is the top-level domain, describing the type of organization and occasionally country of origin associated with the address. For e.g. `- .com – Commercial, .edu – Educational.

**Important Key in a Keyboard**

**Toggle keys** - toggle the input from a group of keys on a keyboard between two different input modes.

- Caps Lock
- Num Lock

**Modifier Keys** - In computing, a modifier key is a special key (or combination) on a computer keyboard that temporarily modifies the normal action of another key when pressed together. For e.g.-

- Shift
- Alt
- Ctrl
- Fn

**Function keys** - A function key is a key on a computer or terminal keyboard which can be programmed so as to cause an operating system command interpreter or application program to perform certain actions, a form of soft key. For e.g. - F1 through F12 keys are known as function keys. Each keys perform different functions.

**Computer Viruses:**

A virus is a parasitic program that infects another legitimate program, which is sometimes called the host. To infect the host program, the virus modifies the host so that it contains a copy of the virus.

- **Boot sector viruses**: A boot sector virus infects the boot record of a hard disk. The virus allows the actual boot sector data to be read as through a normal start-up were occurring.
- **Cluster viruses**: If any program is run from the infected disk, the program causes the virus also to run. This technique creates the illusion that the virus has infected every program on the disk.
- **Worms**: A worm is a program whose purpose is to duplicate itself.
- **Bombs**: This type of virus hides on the user’s disk and waits for a specific event to occur before running.
- **Trojan Horses**: A Trojan Horses is a malicious program that appears to be friendly. Because Trojan Horses do not make duplicates of themselves on the victim’s disk. They are not technically viruses.
- **Stealth Viruses**: These viruses take up residence in the computer’s memory, making them hard to detect.
- **Micro Viruses**: A macro virus is designed to infect a specific type of document file, such as Microsoft Word or Microsoft Excel files. These types of documents can include macros, which are small programs that execute commands.

**Commonly Used Computer Terms**

- **Abort**: To stop a program or function before it has finished.
- **Algorithm**: A set of instructions that provides a solution to a given problem.
- **Animation**: A simulation of movement created by displaying a series of pictures, or frames. For example, cartoons on television.
- **ANSI**: American National Standards Institute, a powerful industry association of USA, promoting Programming language standards.
- **Antivirus**: Program A utility that searches a hard disk for viruses and removes any, that is found.
- **Architecture**: A design. It can refer to either hardware or software or to a combination of
hardware and software. The architecture of a system defines its broad outlines.

- **ASCII:** American Standard Code for Information Interchange. This is a seven/eight bit code widely used in computers for the transfer of data.

- **Bandwidth**: The amount of data that can be transmitted in a fixed amount of time. It is usually expressed in bits per second (bps) or bytes per second.

- **Bit**: The smallest unit of information in a computer system. A bit is short for binary digit; either a "1" or a "0".

- **Boot**: The process of getting the computer started.

- **Byte**: A byte is made up of 8 bits. The amount of memory it takes to store a single character.

- **Cache**: A separate area of Primary Memory (RAM) where the computer stores a copy of frequently used information for quick access. This is meant to speed up the operation of the hard disk.

- **CD-ROM**: Compact Disk-Read Only Memory. This is a permanent storage device used to store large quantities of information that need not be changed.

- **CGA**: Color Graphics Adapter. Low-resolution screen (640x200 pixels) with color capability.

- **Character**: A number, letter, symbol, or punctuation mark.

- **Chip**: A small piece of silicon containing thousands or millions of electrical elements. Also called an Integrated Circuit (IC).

- **Compatible**: The ability of one device or program to work with another device or program. For example, a printer and a computer are said to be compatible if they can be connected to each other.

- **Conventional Memory**: The first 640K of electronic Memory (RAM) in a computer used to run OS and applications.

- **Debug**: In computer-related systems, fixing software related problem is known as debugging.

- **Digitize**: To scan a piece of artwork in very fine detail and store it in a form that computer understands.

- **DOS**: It stands for Disk Operating System. It is a single user operating system.

- **EDP**: Electronic Data Processing.

- **E-Mail**: Electronic Mail. A facility to send electronic messages to another person on a computer network.

- **End-User**: The end user is the individual who uses the product after it has been fully developed and marketed.

- **EPROM**: Erasable Programmable Read Only Memory. A type of ROM that can be programmed or reprogrammed usually by exposing a normally covered sector to UV-Light.

- **Extended Memory**: Memory in addition to conventional memory used to run and manage applications; together with expanded memory, it helps PCs to address increased amounts of data in memory.

- **Fax/Facsimile**: A way of transmitting copies of documents over telephone lines. Fax is short for Facsimile.

- **Gigabyte**: Abbreviated as GB, is equal to 1024 MB. GUI Graphical User Interface. A user interface that works visually and is based on the selection of actions using a mouse or a similar pointing device to click on icons or to pick options from menus; see also icon.

- **Hertz**: A unit of frequency that means Cycles per Second.

- **High Density**: The amount of information a disk can hold. High Density disks hold more information than Double Density disks.

- **Hypertext**: A method of presenting information so the user can view it in a non-sequential way, regardless of how the topics were originally arranged. It has now evolved as a flexible software technology to create electronic books provides fast and flexible access to search criteria and provides quick access to information in large documents.

- **HTML**: HyperText Markup Language. A markup or structuring language used to describe Web and Intranet documents. It is used to define structure, appearance and placement of HTML elements including, fonts, graphics, text, hypertext links to other sites and many more details.

- **IBM**: International Business Machines, a USA based multinational Company.

- **Icon**: A graphical screen element that executes one or more commands when selected with a mouse or other pointing device.

- **IDE**: Integrated Device Electronics, a standard used for connecting hard drive to a computer. IDE hard drives are very common and relatively inexpensive.

- **Intel**: The manufacturer of the most popular microprocessors or CPUs.

- **Intelligent**: Printer Printer combining laser, computer and photocopying technology.

- **Internet**: The world's largest computer network that links many of the scientific, research and educational computers as well as commercial networks. The Internet uses TCP/IP protocols, and computers on Internet can run on any operating system, like, several variations of UNIX, Windows NT, and VMS etc.

- **Intranet**: In the most general sense, a private corporate network that uses Internet technology based software and TCP/IP protocol standards. Many companies use intranets for tasks as simple as distributing a company letter and for tasks as complex as posting and updating technical support bulletins to service personnel worldwide. An intranet does not always include permanent connection to Internet.

- **Kilobyte** (K, KB) Approximately one thousand characters; actually 1024 bytes.
LAN: An acronym for local area network. A system of PCs that are located relatively near to each other and connected by wire so that individual users can cooperatively process information and share resources; see also WAN.

Laptop Computer: A portable computer, small enough to be held on a lap, but slightly larger than a notebook computer.

LED: Light Emitting Diode. An electronic device that lights up when electricity is passed through it.

Light Pen: An input device that allows a user to write on or point to a special pad or the screen of a pen-based computer, such as a PDA.

Macintosh: A PC based on a Motorola microprocessor employing GUI. Apple Macintosh has been in use since late eighties.

Macro: A symbol, name, or key that represents a list of commands, actions or keystrokes.

Math co-processor: Part of the microprocessor; a companion chip designed to perform complex calculations.

Megabyte (M, MB): Approximately one million characters; actually 1,048,576 bytes. A measure of memory or storage.

Megahertz (MHz): A measure of processing speed. The higher the value, the faster a computer can work.

Microprocessor: A single chip containing all the elements of a computer's CPU.

MIPS: Million Instructions Per Second, a unit for measuring the speed of a computer.

Mother Board: The main circuit board of a computer, which carries electrical signals to and from various parts of the computer.

Multimedia: A computer system that combines text, graphics, animation, music, voice and video media; may include stereo speakers as an output device.

Multiprocessing: It refers to a computer system's ability to support more than one process at the same time. It is also called multitasking.

Nibble: Half a byte i.e. 4bits.

Non-Volatile Memory: This is data storage that does not lose its contents on power off; for example, ROM.

Notebook Computer: A portable computer, approximately 8½ by 11 inches, that fits inside a briefcase.

Numeric keypad: The part of a keyboard that looks like an adding machine, with 10 digits and mathematical operators; usually located on the right side of the keyboard.

Office-Automation: The use of computer systems to execute a variety of office operations, such as word processing, accounting and Email.

Parallel Port: An outlet on a computer used to attach a device, such as a printer. A parallel port sends data (bits) down the wire side by side (parallel to each other).

Pentium: The fifth generation of microprocessors. The Pentium is 2 to 3 times faster than the 80486, the fourth generation of microprocessors.

Peripheral: Any piece of hardware attached to the outside of a computer. Examples are printers and modems.

Pixel: Short for "Picture Element". A Pixel is the smallest dot the computer can control on the screen.

Portable computer: A small computer that usually runs on batteries. In the categories of portable computers are laptop, notebook, sub-notebook and palmtop.

Protocol: In networking and communications, the formal specification that defines the procedures to follow when transmitting and receiving data. Protocol defines the format, timing, sequence and error checking used on the network.

Resolution: The size and quantity of dots that make up a printed page, screen or scanned image.

Runtime: Error An error that occurs during the execution of a program.

Scanner: An input device used to copy a printed document into a computer's memory in digital form, without requiring manual keying.

SCSI: Small Computer System Interface. A standard for connecting a hard drive to a computer.

Serial Port: An outlet on a computer used to attach a device, such as a modem. A serial port sends data (bits) down the wire one at a time (in a series).

Service Pack: It is an update to a software version that fixes an existing problem, such as a bug or provides enhancements to the product that will appear in the next version of the product.

TCP/IP: Transmission Control Protocol / Internet Protocol is a set of communication protocols that encompass media access, packet transport, session communications, file transfer, e-mail, and terminal emulation. TCP/IP is supported by a large number of H/W and S/W vendors and is available on many computer systems, from PCs to mainframes.

Troubleshoot: To isolate the source of a problem and fix it. In case of computer systems, troubleshoot is usually used when the problem is hardware related.

UNIX: A multi user operating system.

Upgrade: A new version of a software or hardware product designed to replace an older version of the same product.

UPS: Uninterruptible Power Supply. It is a power supply that includes a battery to maintain power in the event of a power cut for several minutes to some hours.

Utility: A program that performs a very specific task, usually related to managing system resources.
Some expected and important questions of Computer Awareness for upcoming examinations

**Computer Questions**

1. The copy command saves to:
   - A. the desktop  
   - B. the clipboard  
   - C. Microsoft Word  
   - D. Paste  
   - E. None of these  
   **Ans (B)** A special file or memory area where data is stored temporarily before being copied to another location is called clipboard. Copying data saves in clipboard.

2. Vacuum Tube is the invention ......generation.
   - A. 1st generation  
   - B. 2nd gen  
   - C. 4th gen  
   - D. 5th gen  
   - E. None of these  
   **Ans: (A)** In first Generation (1940-1956), the first computers used vacuum tubes for circuitry and magnetic drums for memory and were often enormous, taking up entire rooms.

3. The computer size was very large in ___.
   - A. First Generation  
   - B. Second Generation  
   - C. Third Generation  
   - D. Fourth Generation  
   - C. None of these  
   **Ans: (A)** First generation computers used 1000s of vacuum tubes that required lot of space made them gigantic in size. Single transistor could replace 1000 vacuum tubes and a single IC chip replaced 1000s of transistors made computers smaller and more speedy.

4. ____ is responsible for overall control and co-ordination of instruction execution.
   - A. CPU  
   - B. ALU  
   - C. RAM  
   - D. Control Unit  
   - E. None of these  
   **Ans: (D)** The control unit (CU) is a component of a computer’s central processing unit (CPU) that directs operation of the processor. It tells the computer’s memory, arithmetic/logic unit, input and output devices how to respond to a program’s instructions.

5. Which of the following is the fastest type of computer?
   - A. Minicomputer  
   - B. Mainframe computer  
   - C. Supercomputer  
   - D. Digital computer  
   - E. None of these  
   **Ans: (C)** Skylake is Intel’s Sixth generation Core Processors.

6. Which of these is a not a computer manufacturer?
   - A. IBM  
   - B. Apple  
   - C. Microsoft  
   - D. Sun  
   - E. None of these  
   **Ans: (C)** Microsoft manufactures a variety of software programs and its Operating System Windows is one of the most popular Operating Systems around. It however does not manufacture computers.

7. Which of the following is not an input device?
   - A. OCR  
   - B. Optical scanners  
   - C. Voice recognition device  
   - D. COM (Computer Output to Microfilm)  
   - E. None of these  
   **Ans: (D)** An input device is a peripheral used to provide data and control signals to an information processing system such as a computer or information appliance. Examples of input devices include keyboards, mice, Optical scanners, digital cameras, Voice recognition device, OCR and joysticks.

8. Who among the following is the odd one_____?
   - A. Mouse  
   - B. Scanner  
   - C. Printer  
   - D. Keyboard  
   - E. None of these  
   **Ans: (C)** Except Printer (Output device) all are examples of input devices (keyboards, mouse, scanners).

9. What is Skylake?
   - A. NASA’s new mission  
   - B. Upcoming James Bond’s Movie  
   - C. Core Processors  
   - D. China’s New Fourth Generation Aircraft  
   - E. None of these  
   **Ans: (C)** Skylake is Intel’s Sixth generation Core Processors.
10. Which is not a storage device?
   A. Printer       B. CD
   C. Hard disk     D. Floppy Disk
   E. DVD
   Ans (A) Storage device is a piece of computer equipment on which information can be stored. But Printer is the External device that communicates with another digital device to print what a user sees on a screen.

11. ___ ___technologies is used by banks for faster processing of large volumes of cheques.
   A. OCR       B. OMR
   C. MICR     D. Bar code
   E. None of these
   Ans: (C) Magnetic Ink Character Recognition Code is a character-recognition technology used mainly by the banking industry to ease the processing and clearance of cheques and other documents.

12. Who invented Analytical engine?
   A. Blaise Pascal       B. George Bool
   C. Charles Babbage     D. Dr. Herman Hollerith
   E. None of these
   Ans (C) The Analytical Engine was a proposed mechanical general-purpose computer designed by English mathematician and computer pioneer Charles Babbage.

13. Memory which forgets everything when you switch off the power is known as___.
   A. Corrupted       B. Volatile
   C. Non-Volatile     D. Non-Corrupted
   E. None
   Ans (B) Non-volatile keeps memory when the computers power is switched off. Volatile dumps everything in RAM when the computer loose power.

14. Which of the following code used in present day computing was developed by IBM Corporation?
   A. ASCII      B. Hollerith Code
   C. EBCDIC Code    D. Baudot Code
   E. None of these
   Ans: (C) Extended Binary Coded Decimal Interchange Code (EBCDIC) is an 8-bit character encoding used mainly on IBM mainframe and IBM midrange computer operating systems.

15. An image editing software in which we can draw and edit images is?
   A. PageMaker       B. MS-Paint
   C. Coral Draw      D. Photo Image
   E. Front page
   Ans: (C) Corel Draw is a vector graphics editor. A vector graphics editor is a computer program that allows users to compose and edit vector graphics images interactively on a computer.

16. In DOS, Which of the following command is used to delete all the files as well as sub-directories of a directory?
   A. Delete       B. Del
   C. Deltree     D. Move
   E. None of these
   Ans: (C) Deltree command is used to delete all the files as well as sub-directories of a directory.

17. Physical components that make up your computer are known as___.
   A. Software       B. Operating Systems
   C. Hardware     D. Web Browsers
   E. None of these
   Ans: (C) The most common hardware components are Monitor, Keyboard, Mouse, CPU etc.

18. In MS- Word WYSIWYG stands for______?
   A. Preview      B. What you see is what you get
   C. What you see is where you get
   D. Print        E. None of these
   Ans: (B) WYSIWYG is an acronym for "What you see is what you get".

19. Which of the following is suitable after you install new drivers?
   A. Shut Down      B. Restart
   C. Sleep        D. Hibernate
   E. None of these
   Ans: (B) Restart is suitable after you install new drivers.

20. Which of the following cannot be shared?
   A. Printer       B. Scanner
   C. Plotter      D. Mouse
   E. None of these
   Ans (D) Mouse is a pointing device that detects two-dimensional motion relative to a surface. Mouse cannot be shared.
21. A terabyte comprises_____.
   A. 1025 byte  B. 1024 byte
   C. 1024 bits  D. 1024 gigabyte
   E. None of these
   **Ans (D)** A terabyte (TB) is a measure of **computer storage** capacity approximately **1,024 gigabytes** (GB).

22. What does MICR stand for?
   A. Magnetic Ink character Register
   B. Magnetic Ink Code Reader
   C. Magnetic Ink Code Register
   D. Magnetic Ink character Recognition
   E. Magnetic Ink cases Reader
   **Ans: (D)** Magnetic Ink Character Recognition (MICR) is a character-recognition technology used mainly by the banking industry to ease the processing and clearance of cheques and other documents.

23. Virtual memory is______?
   A. Memory on the hard disk that the CPU uses an extended RAM
   B. Access the page table
   C. CPU generates a physical address
   D. Automatic storage allocation
   E. None of these
   **Ans (A)** Virtual memory is a feature of an **operating system (OS)** that allows a computer to compensate for shortages of physical memory by temporarily transferring pages of data from **random access memory** (RAM) to **disk storage**.

24. In DVD, V stands for______.
   A. Video  B. Versatile
   C. Both A and B  D. Volatile
   E. None of these
   **Ans (B)** DVD (digital versatile disc or digital video disc) is a digital optical disc storage format, invented and developed by Philips, Sony, Toshiba and Panasonic in 1995.

25. What is the full form of SIM?
   A. Station Identity Module
   B. System Identity Module
   C. Subscriber Identity Module
   D. Subscriber Trunk Dialling
   E. None of these
   **Ans (C)** A **Subscriber Identity Module** card is a portable memory chip that enables you to make **phone calls** from any corner of the Globe, where you get the subscriber's Network.

26. Who among the following has coined The term ‘Multimedia’?
   A. Bob Goldstein  B. Tay Vaughan
   C. NASA  D. Mc Graw Hills
   E. None of these
   **Ans (A)** The term **multimedia** was coined by singer and artist **Bob Goldstein** to promote the **July 1966** opening of his "LightWorks at L'Oursin" show at **Southampton, Long Island**.

27. What is GIS stands for?
   A. Geological Information System
   B. Genetics Information Systems
   C. Geographic Information Systems
   D. Gene Information systems
   E. None of these
   **Ans (C)** A **geographic information system** (GIS) is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or **geographical data**.

28. A ____is a software program used to view Web pages.
   A. Site  B. Host
   C. Link  D. Browser
   E. None of these
   **Ans (D)** A **browser** is a software application used to locate, retrieve and display **content** on the **World Wide Web**, including **Web pages, images, video and other files**.

29. Micro-programming introduced by_____?
   A. John Mauchley  B. Maurice Wilkies
   C. William Shockley  D. Blaise pascal
   E. None of these
   **Ans (B)** In 1951, Maurice Wilkies was developed the concept of **microprogramming** from the realization that the **Central Processing Unit** of a computer could be controlled by a miniature, **highly specialised computer program** in high-speed ROM.

30. On color monitor each pixel is composed of ____.
   A. two mini dots  B. five mini dots
   C. six mini dots  D. three mini dots
   E. None of these
   **Ans (D)** On color monitor each pixel is composed of **three mini dots**.
Ans (D) On color monitors, each pixel is actually composed of three dots: a red, a blue, and a green one.

31. Numbers and formulae entered in a cell are called ____.
   A. Labels  
   B. Numeric entries 
   C. Intersection  
   D. Text 
   E. Fellers 

Ans (B) When entering numbers in a cell, the spreadsheet interprets the data as being numbers, which makes the use of mathematical formulas on the data possible. By default, the data recognized as being numbers will be right justified in the cell.

32. Fax machines are used to send documents through a?
   A. Telephone line  
   B. Modems 
   C. Co-axial wire  
   D. All of these 
   E. None of these 

Ans (A) Fax is the telephonic transmission of scanned printed material normally to a telephone number connected to a printer or other output device.

33. Date and time are available on the desktop at _____.
   A. Keyboard 
   B. Recycle bin 
   C. My computer 
   D. Task bar 
   E. None of these 

Ans (D) A taskbar is an element of a graphical user interface. It shows which programs or applications are running on the device as well as provide links or shortcuts to other programs or places, such as a start menu, notification area and clock.

34. To save an existing file with new name at a new location we should use ____ command.
   A. Save 
   B. Save and replace 
   C. Save as 
   D. New file 
   E. None of these 

Ans (C) Choosing "Save As" brings up a prompt to save your work as a file with a different name. Just be sure to rename the file something new when you choose "Save As" or you will overwrite the current saved version.

35. 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+z 
   D. shift+c, alt+p 
   E. ctrl+d, ctrl+a 

Ans (A) We can use ctrl+c to copy selected text and ctrl+v to paste it to the document.

36. A red wavy line under a word indicates that the word_____.
   A. Is too long for the line of text 
   B. Is not in the dictionary file and therefore might be spelled incorrectly 
   C. Is not appropriate for that particular sentence 
   D. Is a verb 
   E. None of these 

Ans (B) MS word can check the text for correctness and allows you to make amendments. If there is a spelling mistake, the word gets underlined with a red color line indicating the error.

37. Windows xp, windows 7, windows 8.1 are known as what?
   A. Processors 
   B. Domain names 
   C. Modems 
   D. Operating system 
   E. None of these 

Ans (D) An operating system is system software that manages computer hardware and software resources and provides common services for computer programs.

38. ____ 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. Standby mode 
   D. The shutdown procedure 
   E. None of these 

Ans (C) When electronic devices are receiving power but are not running, they are in standby mode. A computer in standby mode requires a small amount of current called a "trickle charge" that keeps the current state of running software saved in the computer's RAM.
39. Video-conferencing requires a microphone, speakers and a _____ attached to your computer.
   A. Mouse  B. Keyboard  C. Video camera  D. Scanner  E. Light pen
   Ans (C) Video-conferencing is a set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions. For a videoconferencing system video camera, computer monitor, television, projector is required.

40. Which of the following is an operating system?
   A. Linux  B. Debugger  C. Mozilla  D. Google chrome  E. Intel 8085
   Ans (A) Linux is a Unix-like computer operating system assembled under the model of free and open-source software development and distribution.

41. What is Dr. Watson?
   A. IT Expert  B. Application Debugger  C. Surgeon  D. Operating system  E. None
   Ans (B) Dr. Watson is an application debugger included with the Microsoft Windows operating system.

42. Which of the following cables can transmit data at high speeds?
   A. Flat cables  B. Coaxial cable  C. Optic fiber cable  D. Twisted pair cable  E. UTP cable
   Ans (C) A fiber optic cable consists of a bundle of glass threads, each of which is capable of transmitting messages modulated onto light waves.

43. Which of the following is not a binary number?
   A. 11101  B. 110  C. 233  D. 1001  E. 10010
   Ans (C) A binary number is a number expressed in the binary numeral system which represents numeric values using two different symbols, typically 0 and 1.

44. What does the computer abbreviation MB used for?
   A. Mega Bit  B. Million Bytes  C. Mega Bytes  D. Million Bit  E. Micro Bytes
   Ans (C) The megabyte is a multiple of the unit byte for digital information. Its recommended unit symbol is MB.

45. What is the base of hexadecimal number system?
   A. 2  B. 8  C. 16  D. 10  E. None of these
   Ans (C) The hexadecimal numeral system, is a numeral system made up of 16 symbols (base 16).

46. RTGS stand for_____.
   A. Real Time Gross Settlement  B. Real Time General Settlement  C. Run Time Gross Settlement  D. Regular Time General Settlement  E. None of these
   Ans (A) Real-time gross settlement (RTGS) systems are specialist funds transfer systems where transfer of money or securities takes place from one bank to another on a "real time" and on "gross" basis.

47. What is the name given to the temporary storage area that a web browser uses to store pages and graphics that it has recently opened?
   A. Niche  B. Webspace  C. Cache  D. Cellar  E. None of these
   Ans (C) Images are often stored in a cache so the next time you request for that image it is obtained locally rather than from the website.

48. Oracle is an example of ____ application software.
   A. Database  B. Word processing  C. Project management  D. Presentation graphics  E. Desktop
   Ans (A) Database software tools are primarily used for storing, modifying, extracting and searching for information within a database.

49. MySQL is_____.
   A. a hierarchical model  B. a RDBMS  C. a relational model  D. a database scheme  E. None of these
   Ans (B) MySQL is a relational database management system (RDBMS). It was the world's
second most widely used RDBMS and the most widely used open-source RDBMS.

50. Primary key is a ____?
   A. Common key   B. Unique key  
   C. Input key    D. Output key  
   E. None of these
   \textbf{Ans (B)} A primary key is a key in a relational database that is unique for each record. It is a unique identifier, such as a driver license number, telephone number or vehicle identification number (VIN). A relational database must always have one and only one primary key.

51. Which of the following computer language is a mathematically oriented languages used for scientific problems?
   A. FORTRAN   B. COBOL  
   C. LISP       D. PROLOG  
   E. APPLE
   \textbf{Ans (A)} FORTRAN is used for scientific & Engineering while COBOL is oriented language commercial and PROLOG is a general purpose logic programming language associated with artificial intelligence and computational linguistics.

52. Which of the following is NOT a computer programming language?
   A. C      B. C++  
   C. Java    D. COBOL  
   E. Microsoft
   \textbf{Ans (E)} C, C++, Java, COBOL are the computer programming languages while Microsoft is an application software.

53. Which of the following is not an operating system?
   A. DOS     B. UNIX  
   C. MAC(OS) D. DBMS  
   E. Windows XP
   \textbf{Ans (D)} Operating system is a system software that manages computer hardware and software resources and provides common services for computer programs.

54. One nibble is equal to how many bits?
   A. 4 bits     B. 8 bits  
   C. 12 bits    D. 16 bits  
   E. None of these
   \textbf{Ans (A)} In computing, a nibble is a four-bit aggregation. It is also known as half-byte.

55. Verification of a Login name and password is known as______.
   A. Configuration    B. Accessibility 
   C. Authentication   D. Logging in  
   E. None of these
   \textbf{Ans (C)} Authentication is the process of identifying an individual, usually based on a login name and password.

56. Which of the following can be used to select the entire document?
   A. Ctrl+A   B. Alt+F5  
   C. Shift+A  D. Ctrl+K  
   E. Ctrl+H
   \textbf{Ans (A)} For selecting entire document we use Ctrl+ A.

57. Which of the following will you require to hear music on your computer?
   A. Video Card    B. Sound Card  
   C. Mouse        D. Joy Stick  
   E. None of these
   \textbf{Ans (B)} A sound card is used to generate sound and provides audio output to external devices like speakers and headphones.

58. What is the meaning of OSI, in terms of computers?
   A. Open Software Interrelation  
   B. Open System Interrelation 
   C. Open System Interconnection  
   D. Open Software Interconnection 
   E. None of these
   \textbf{Ans (C)} The Open Systems Interconnection (OSI) model is a conceptual model that characterizes and standardizes the communication functions of computing system without regard of their underlying internal structure and technology.

59. Father of ‘C’ programming language______.
   A. Dennis Ritchie    B. Prof Jhon Kemeny  
   C. Thomas Kurtz     D. Bill Gates  
   E. None
   \textbf{Ans (A)} Dennis Mac Alistair Ritchie was an American computer scientist. He created the C programming language.
60. Which of the following is not a method of accessing the web?
A. modem  B. ISDN  
C. DSL  D. CPU  
E. None of these  
**Ans (D)** CPU (central Processing Unit) is a part of the computer. All the others can be used to access the net.

61. Yahoo (www.yahoo.com) is a _______.  
A. Website for Consumers  
B. Portal  
C. Organization that allocates web addresses  
D. Super Computer  
E. None of these  
**Ans (B)** Yahoo is one of the largest portals in the world. A portal is a website intended to be a starting point for exploring and searching the www.

62. Time during which a job is processed by the computer is___.  
A. Execution Time  B. Delay Time  
C. Real Time  D. Waiting Time  
E. None of these  
**Ans (A)** Time during which a job is processed by the computer is Execution Time.

63. Internet Explorer is a ___.  
A. Web Browser  B. Graphing Package  
C. News Reader  D. Any person browsing the net  
E. None of these  
**Ans (A)** Internet Explorer (IE) is the most common web browsers. Web Browser is a program that you use to surf the internet.

64. USB in data cables stands for?  
A. Unicode smart Bus  B. Universal structural Bus  
C. Unicode Serial Bus  D. Universal serial Bus  
E. None of these  
**Ans (D)** Universal Serial Bus (USB) is an industry standard developed in the mid-1990s that defines the cables, connectors and communications protocols used in a bus for connection, communication, and power supply between computers and electronic devices.

65. You must install a (n) _______ on a network if you want to share a broadband Internet connection.  
A. router  B. modem  
C. node  D. cable  
E. None of these  
**Ans (A)** A router is a device that forwards data packets along networks. A router is connected to at least two networks. Routers are located at gateways, the places where two or more networks connect.

66. To reload a web page, press the __button.  
A. Redo  B. Reload  
C. Restore  D. Ctrl  
E. Refresh  
**Ans (E)** In general refresh is another way of saying reload or updating what is being displayed in web page.

67. ___ mouse uses laser rays for the movement of curser.  
A. Mechanical mouse  B. Optical mouse  
C. Magnetic mouse  D. Normal mouse  
E. None of these  
**Ans (B)** An optical computer mouse uses only a light source, typically a laser and a light detector, such as an array of photodiodes to detect movement relative to a surface.

68. Full form of PSU which is an internal component used to supply the power.  
A. Power supply unit  B. Permanent supply unit  
C. Placement supply unit  D. Programmable supply unit  
E. None of these  
**Ans (A)** A power supply unit (PSU) converts mains AC to low-voltage regulated DC power for the internal components of a computer. Modern personal computers universally use a switched-mode power supply.

69. Disk access times are measured in ____.  
A. minute  B. Milliseconds  
C. Hours  D. seconds  
E. None of these  
**Ans (B)** Disk access times are measured in milliseconds, often abbreviated as ms.
70. Blaise Pascal has introduced__________?
   A. Adding machine  B. Abacus
   C. Calculator        D. difference engine
   E. None of these
   Ans (A) In 1642, Balise Pascal has introduced an
   adding machine that could perform additions and
   subtractions directly and multiplication and
divisions by repetition.
71. 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
   Ans (C) Creating and sending an e-mail message
   is in many ways similar to writing a letter without
   a stamp.
72. You can use the _____bar to type a URL and display
   a webpage or type a keyword to display a list of
   related webpages.
   A. Menu          B. Title
   C. Search        D. Web
   E. Address
   Ans (E) The graphical control element address bar
   shows the current URL and accepts a typed URL
   that navigates the user to a chosen website in a
   web browser.
73. Which one of the following is a search engine?
   A. Airtel     B. Jagran
   C. Live Hindustan   D. Google
   E. None of these
   Ans (D) A web search engine is a software system
   that is designed to search for information on the
   World Wide Web. The search results are generally
   presented in a line of results often referred to as
   search engine results pages.
74. A web ______consists of one or more Web pages
   located on a Web server.
   A. Hub          B. Site
   C. Story        D. Template
   E. None of these
   Ans (B) A web site is a set of related web pages
typically served from a single web domain.
75. ________are used to identify a user who returns to a
   Website.
   A. Cookies     B. Plug-ins
   C. Scripts      D. ASPs
   E. None of these
   Ans (A) An HTTP cookie is a small piece of data
   sent from a website and stored in a user's web
   browser while the user is browsing that website.
76. The ______specifies the operation to be performed
   and the operands provide the data on which the
   operation is to be performed:
   A. source code   B. opcode
   C. object code    D. program code
   E. None of these
   Ans (B) An opcode is the portion of a machine
   language instruction that specifies the operation
to be performed. Beside the opcode itself,
instructions usually specify the data they will
process, in form of operands.
77. Which of the following is Open Source Software?
   A. Windows       B. Linux
   C. IOS           D. Adobe Photoshop
   E. None of these
   Ans (B) Linux is a Unix-like computer operating
   system (OS) assembled under the model of free
   and open-source software development and
distribution.
78. What is the name of the software that allows us to
   browse through web pages called?
   A. Browser       B. Mail client
   C. FTP client    D. Messenger
   E. None of these
   Ans (A) A web browser is a software application
   for retrieving, presenting and traversing
   information resources on the World Wide Web.
79. When you purchase a product over a Mobile Phone,
   the transaction is called______.
   A. Web commerce    B. e-commerce
   C. m-commerce      D. Mobile Purchase
   E. None of these
   Ans (C) M-commerce (mobile commerce) is the
   buying and selling of goods and services through
   wireless handheld devices such as cellular
   telephone and personal digital assistants (PDAs).
80. Named collection of fields which represent a
   complete unit of information is called______.
   A. Field          B. Record
   C. Table          D. File
   E. None of these
   Ans (B) A record is a collection of elements,
typically in fixed number and sequence and
typically indexed by serial numbers or identity
numbers. The elements of records may also be called fields or members.

81. A _______ is a grid with labeled columns and rows.
A. Dialog box       B. Worksheet
C. Clipboard        D. Toolbar
E. None of these

Ans (B) An Excel worksheet is a single spreadsheet that contains cells organized by rows and columns.

82. An example of a telecommunication device is a_______.
A. Keyboard       B. Mouse
C. Modem         D. Printer
E. Scanner

Ans (C) Modem is one that turns the digital data of a computer into modulated electrical signal for transmission over telephone lines and demodulated by another modem at the receiver side to recover the digital data.

83. Programs that automatically submit your search request to several search engines simultaneously are called_______.
A. Metasearch engines          B. Webcrawlers
C. Spiders          D. Hits
E. None of these

Ans (A) Metasearch engine is a search tool that uses another search engine’s data to produce their own results from the Internet.

84. What kind of Protocol is used to provide Internet access from mobile?
A. TCP/IP       B. ISD
C. WAP          D. HTTP
E. None of these

Ans (C) WAP (Wireless Application Protocol) is a technical standard for accessing information over a mobile wireless network.

85. What is the slowest transmission medium?
A. Twisted pair wire    B. Coaxial cable
C. Fiber optic cable    D. All of above
E. None of these

Ans (A) Twisted pair wire is the most widely used but slowest medium for telecommunication. It consists of copper wires that are twisted into pairs. The transmission speed ranges from 2 million bits per second to 10 billion bits per second.

86. What is an e-mail attachment?
A. A receipt sent by the recipient
B. A separate document from another program sent along with an e-mail message
C. A malicious parasite that feeds off of you messages and destroys the contents
D. A list of CC and BCC recipients
E. None of these

Ans (B) An email attachment is a computer file sent along with an email message. One or more files can be attached to any email message and be sent along with it to the recipient.

87. The _______ program compresses large files into a smaller file.
A. WinZip       B. WinShrink
C. WinStyle      D. Microsoft
E. None of above

Ans (A) WinZip is a program that lets you archive and compress files so that you can store or distribute them more efficiently.

88. The _______ folder retains copies of message that you have started but are not yet ready to send.
A. Inbox       B. Outbox
C. Drafts      D. Sent Items
E. Address Book

Ans (C) A draft is simply an email message you haven’t yet sent. It’s not the same thing as an email waiting to be sent.

89. Which is not an internet protocol?
A. HTTP      B. FTP
C. STP       D. UDP
E. None of these

Ans (C) The Internet Protocol (IP) is the principal communications protocol in the Internet protocol suite for relaying datagrams across network boundaries. Some protocols are TCP, IP, UDP, POP, SMTP, HTTP, FTP.

90. What kind of server converts IP addresses to domain names?
A. DNS       B. MNS
C. UTP      D. RTP
E. None of these

Ans (A) The Domain Name System (DNS) is a hierarchical distributed naming system for computers, services, or any resource connected to the Internet or a private network.
91. POST stands for______.
   A. Power On Selfie Test
   B. Power One Self-Test
   C. Power On Self-Test
   D. Power On Self-Testing
   E. None of these
   Ans (C) The first thing that the BIOS does when it boots the PC is to perform what is called the Power-On Self-Test. The POST is a built-in diagnostic program that checks your hardware to ensure that everything is present and functioning properly, before the BIOS begins the actual boot.

92. Which of the following is a network in which computers are located physically close together, often in the same building?
   A. LAN
   B. WAN
   C. RAM
   D. ROM
   E. None of these
   Ans (A) A **local area network** (LAN) is a computer network that interconnects computers within a limited area such as a residence, school, laboratory, or office **building**.

93. Programs such as Mozilla Firefox that serve as navigable windows into the Web are called______.
   A. Internet
   B. Data card
   C. Web browsers
   D. RAM
   E. None of these
   Ans (C) **Mozilla Firefox** is a free and open-source **web browser** developed by the **Mozilla Foundation** and its subsidiary, the Mozilla Corporation.

94. Start or restart the computer means ___.
   A. exit
   B. kick
   C. boot
   D. kick-start
   E. None of these
   Ans (C) **Boot** means - start (a computer) and put it into a state of readiness for operation.

95. You click at B to make the text ______.
   A. Italics
   B. Underlined
   C. Italics and under lined
   D. Bold
   E. None of these
   Ans (D) If i click at B it makes the text **Bold**.

96. Each ____ on a menu performs a specific action.
   A. Client
   B. Server
   C. Node
   D. Command
   E. None of these
   Ans (D) **Command** is a directive to a **computer program** acting as an interpreter of some kind in order to perform a specific task.

97. An e-mail address typically consists of a user ID followed by the ___ sign and the name of the e-mail server that manages the user's electronic post office box.
   A. @
   B. #
   C. &
   D. *
   E. None of these
   Ans (A) An e-mail address typically consists of a user ID followed by **@** sign and the name of the e-mail server that manages the user's **electronic** post office box.

98. ____are devices used to transmit data over telecommunications lines.
   A. Drives
   B. Drives bays
   C. Modems
   D. Platform
   E. None of these
   Ans (C) A **modem** is a device that **modulates** signals to **encode** digital information and **demodulates** signals to **decode** the transmitted information. This device used to transmit data over telecommunication.

99. What is the file extension of MS-Power point ?
   A. .exe
   B. .xls
   C. .pp
   D. .pst
   E. None of these
   Ans (C) **.ppt** is a **file extension** for a presentation file format used by **Microsoft PowerPoint**, the popular **presentation** software commonly used for office and educational slide shows.

100. The information stored in the catalog is called ______.
   A. Meta-data
   B. Mini-world
   C. Record
   D. All of these
   E. None of these
   Ans (A) The system **catalogs** are the place where a **relational database management system** stores schema **metadata**, such as information about **tables** and **columns** and internal **book keeping** information.
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