

CHAPTER 03

COMPUTER HARDWARE

Computer hardware refers to the physical components of a computer that can be seen and touched by the user. The hardware component could be an electronic, electrical and mechanical devices used in the computer system.

Input Devices

An input device can be defined as an electro-mechanical device that allows the user to feed data into the computer. This data is useful for analysis and storage and to give commands to the computer.

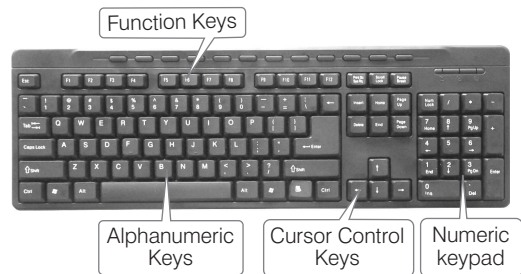
The data is entered into the main memory through these input devices. They accept instructions from the user and convert these accepted instructions into machine language.

Some of the commonly used input devices are described below

Keyboard

Keyboard is used to enter data or information in a computer system, which may be in numeric form or alphabetic form. When key is pressed, keyboard interacts with a keyboard controller and keyboard buffer. Keyboard controller stores the code of pressed key in keyboard buffer. The user can type text and command using this device. The layout of the keyboard was borrowed from the regular typewriter with some additional keys.

There are different types of keyboard such as QWERTY, DVORAK and AZERTY.



Keyboard

Types of Keys

1. **Alphanumeric Keys** include the alphabet keys (A, B, C, ..., Z) and number keys (0, 1, 2, 3, ..., 9).
2. **Numeric Keys** are located at the right hand side of the keyboard. They consist of digits and mathematical operators.
3. **Function Keys** are the programmable keys, i.e. the programs can assign some specific actions. They are numbered from F1 to F12.
4. **Cursor Control Keys** include four directional (left, right, up, down) arrow keys that are arranged in a inverted T formation between the alphanumeric and numeric keypad. Apart from the above arrow keys, there are four more keys to control the cursor.

These are as follows

- (i) **Home** It is used to return the cursor to the beginning of the line or the beginning of a document.
- (ii) **End** It moves the cursor to the end of line.
- (iii) **Page Up** When it is pressed, the page view will move up one page and cursor goes to the previous page.
- (iv) **Page Down** When it is pressed, the page view will move down one page and cursor goes to the next page.
5. **Other Keys** A keyboard contains some other keys such as follows
 - (i) **Control Key** It performs a special operation as the combination with other keys. *For example*, Ctrl + C is used for copying.
 - (ii) **Enter Key** It is used to finish an entry and begin a new entry in the document. Enter key is an alternative to press OK button.
 - (iii) **Shift Key** Some keys on the keyboard like numeric keys have a symbol printed on their upper portion. Shift key is used to print these symbols. This key is also called combination key, because it is always used with other keys. *For example*, Shift + a, converts small 'a' into capital 'A'.

- (iv) **Escape Key (Esc)** It allows a user to cancel or abort operations, which are executing at present. It opens Start menu with the combination of Ctrl key.
- (v) **Backspace Key** It is used to erase anything typed.
- (vi) **Delete Key** It is used to erase information from the computer's memory and characters on the screen.
- (vii) **Caps Lock Key** It is used to type the alphabet in capital letters. It enables or disables all the letters from being typed in capital letters.
- (viii) **Num Lock Key** It is used to enable and disable the numeric keypad.
- (ix) **Windows Key** It is used to open the Start menu.
- (x) **Spacebar Key** It provides space between two words. It is the longest key on the keyboard.
- (xi) **Tab Key** It is used to move the cursor over the right to a pre-set point. In Word document, tab is used to indent a paragraph.

Note QWERTY keyboard contains total 104 keys.

Caps Lock and Num Lock keys are called as '**toggle keys**' because when they are pressed, they toggle or change their status from one state to another. Shift, Ctrl and Alt keys are also known as **modifier keys**.

Pointing Device

A **pointing device** is used to communicate with the computer by pointing to the location on the monitor. Movements of the pointing device are echoed on the screen by movements of the pointer.

Some commonly used pointing devices are described below

Mouse

Mouse is a small handheld pointing device having two buttons on its upper side and also has a small wheel between these buttons. It was invented by Douglas Engelbart at Stanford Research Centre in 1963.

It provides to input data and commands in graphic form through moving an arrow called pointer on monitor.

The mouse may be used to position the cursor on screen, move an object by dragging or select an object by clicking.

Three types of mouse are as follows

- (i) Wireless mouse
- (ii) Mechanical mouse
- (iii) Optical mouse

Four actions of mouse are as follows

1. **Click or Left Click** It selects an item on the screen.
2. **Double Click** It is used to open a document or program.
3. **Right Click** It displays a list of commands on the screen. Right click is used to access the properties of the selected object.
4. **Drag and Drop** It is used to move an item on the screen.

Trackball

Trackball is another pointing device which is an alternative to a mouse. Trackball is also used to control cursor movements and actions on a computer screen.

It is used on CAD/CAM workstations and sometimes seen on computerised special purpose workstations such as radar consoles in an air-traffic control room and sonar equipment on a ship or submarine.



Trackball

Joystick

Joystick is a device that moves in all directions and controls the movement of the cursor. Joysticks are used in flight simulators, Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) system, etc.

A joystick is similar to a mouse except that the movement of the cursor on screen stops as soon as the user stops



Joystick

moving the mouse. But with a joystick, the pointer continues moving in the previously pointing direction. Joystick allows movements in all directions (360°).

Light Pen

Light pen is a handheld electro-optical pointing device. It is used for making drawings, graphics and menu selection.

The pen contains a photocell in a small tube. It senses the light from the screen when it becomes closer and generates a pulse.

Light pen is used especially in Personal Digital Assistants (PDA). It is very useful in identifying a specific location on the screen. However, it does not provide any information when held over a blank part of the screen.

Touch Screen

Touch screen is an input device that accepts input when the user places a fingertip on the computer screen. Touch screens have an infrared beam that criss-cross the surface of screen. Touch screen is generally used in applications like ATM, hospitals, airline reservation, supermarkets, etc.

Barcode Reader

Barcode reader is an input device used for reading printed barcodes (Universal Product Code) available on products to be sold. A light sensitive detector in the barcode reader identifies the barcode image by recognising special bars at both the ends of the image.



Barcode Reader

A perfect example of a barcode reader is, to use it in a super market where barcode scanner reads the price of a product which is in the form of barcode. A barcode is a machine readable representation of information in the form of stripes of dark and light ink.



5050574807678

Barcode

Optical Mark Reader (OMR)

OMR is also known as Optical Mark Recognition. It is the process of detecting the presence of intended marked responses.

OMR is mainly used to detect marks on a paper. It uses a beam of light that is reflected on the paper with marks, to capture presence and absence of data (marks).



Optical Mark Reader

The OMR interprets the pattern of marks into a data record and sends this to the computer for storage, analysis and reporting. OMR is widely used to read the answer of objective type tests, voting applications and other evaluation studies.

Optical Character Recognition (OCR)

OCR is a technique for scanning a printed page, translating it and then using the OCR software to recognise the image as **ASCII** text that is editable. It translates the array of dots into text that the computer can interpret as words and letters.

OCR is a widely used technique for acquiring textual data from image. It is used in many applications such as telephone bills, electricity bills, insurance premium, etc.

OCR technology is being developed for greater accurate recognition and is also known as Intelligent Character Recognition (ICR).

Magnetic Ink Character Recognition (MICR)

MICR reads the characters by examining their shapes in a matrix form and the information is then passed on to the computer. The characters are printed using a special ink (contains iron oxide) that can be magnetised.



Format of a Cheque

It is generally used in banks to process the cheques for recognising the magnetic encoding numbers printed at the bottom of a cheque.

Smart Card Reader

It is a device which is used to access the microprocessor of a **smart card**.

There are two kinds of smart card reader which are as follows

- Memory cards are the cards which contain only non-volatile memory storage components and some specific security logic.
- **Microprocessor cards** contain volatile memory and microprocessor components.

The card is made-up of plastic, generally PVC. Smart cards are used in large companies and organisations for stronger security authentication.

Biometric Sensor

Biometric Sensor is a device which recognises physical traits of the individual. Biometric sensors are used for marking attendance of employees/ students in organisations/ institutions.



Biometric Sensor

Scanner

Scanner is an optical input device which uses light as an input source to convert an image into an electronic form that can be stored on the computer.

It is used to convert the data and image on paper into the digital form. Scanners can be used for

storing the documents in their original form that can be modified and manipulated later on.

Scanner stores images in both gray scale and color mode. *The most common types of scanners are as follows*

- (i) Handheld scanners
- (ii) Flatbed scanners
- (iii) Drum scanners

Microphone (Mic)

We can send input to the computer through a special manual input device called **microphone** or **mic**. A mic converts the received sound into computer's format, which is called **Digitised Sound** or **Digital Audio**.

To convert a voice into digital form, you need an additional hardware known as **Sound Card**. Sound is used most often in multimedia. *For example*, we can make our presentations more attractive using recorded narration, music or sound effects.

Now-a-days, microphones are also used with speech recognition software. This means that we do not have to type, rather just have to speak and the spoken words appear in our document.

Webcam (Web Camera)

It is a video capturing device. Webcam is a digital camera attached to computer and can be used for video conferencing, online chatting, etc.



Now-a-days, webcams are either embedded into the display with laptop/computer or connected via USB or firewire port or Wi-Fi to the computer.

Output Devices

An output device is a piece of computer hardware that receives data from a computer and then translates that data into another form. That form may be audio, visual, textual or hard copy such as printed document.

Some of the commonly used output devices are described below

Monitor

It is also known as Visual Display Unit (VDU). The monitor is provided along with the computer to view display the result.

An image on the monitor is created by a configuration of dots, also known as **pixels**.

A monitor is of two kinds; *monochrome display monitor* and *colour display monitor*.

A monochrome display monitor uses only one colour to display text and colour display monitor can display 256 colours at a time.

The clarity of image depends on three factors which are as follows

1. **Resolution of Screen** Resolution refers to the number of pixels in horizontal and vertical directions. The resolution of a monitor is higher when the pixels are closer together.
2. **Dot Pitch** It refers to the diagonal distance between two coloured pixels. The smaller the dot pitch, the better the resolution.
3. **Refresh Rate** The refresh rate of your display refers to how many times per second the display is able to draw a new image. The higher the refresh rate, the more solid the image looks on the screen. The refresh rate of monitor is measured in Hertz (Hz).

The popular types of monitor are as follows

1. **Cathode Ray Tube (CRT)** It is a typical rectangular shaped monitor that you see on a desktop computer. The CRT works in a same way as a television. CRT has a vacuum tube. The screen of CRT is covered with a fine layer of phosphorescent elements, called *phosphores*.
2. **Liquid Crystal Display (LCD)** These screens are used in laptops and notebook sized PCs. A special type of liquid is sandwiched between two plates. It is a thin, flat and light weight screen made up of any number of color or monochrome pixels arranged in front of a light source.
3. **Light Emitting Diode (LED)** It is an electronic device that emits light when electrical current

is passed through it. LEDs usually produce red light, but today's LEDs can produce RGB (Red, Green and Blue) light, and white light as well.

4. **3-D Monitor** It is a television that conveys depth perception to the viewer. When 3-D images are made interactive then user feels involved with the scene and this experience is called **virtual reality**.
5. **Thin Film Transistor (TFT)** It is a type of field effect transistor that is usually used in a LCD. This type of display features a TFT for each individual pixel.

These TFTs act as individual switches that allow the pixels to change state rapidly, making them turn ON and OFF much more quickly.

Printers

A printer prints information and data from the computer onto a paper. It can print documents in colour as well as in black and white. The quality of a printer is determined by the clarity of the print.

The speed of a printer is measured in Characters Per Second (CPS), Lines Per Minute (LPM) and Pages Per Minute (PPM). Printer resolution is a numerical measure of print quality that is measured in Dots Per Inch (DPI).

Printers are divided into two basic categories which are as follows

Impact Printer

This type of printer strikes paper and ribbon together to form a character, like a typewriter. Impact printer can print a character or an entire line at a time. They use pins or hammers that pressed an inked ribbon against the paper. They are less expensive, fast and can make multiple copies with multipart paper.

There are four types of impact printer which are described below

1. **Dot Matrix Printer** It forms characters using rows of pins which impact the ribbon on top of the paper therefore also called pin printers. Dot matrix printer prints one character at a time. It prints characters and images as a pattern of dots. Many dot matrix printers are bi-directional, that is they can print the characters from either direction, i.e. left or right.
2. **Daisy Wheel Printer** In daisy wheel printers, characters are fully formed on the petals, like typewriter keys. These printers produce high resolution output and are more reliable than dot matrix.
3. **Line Printer** It is a high-speed printer capable of printing an entire line of a text at once instead of one or more characters at a time. Print quality of line printer is not high.
4. **Drum Printer** It uses a drum to hold paper in place. It receives an image from the laser and transfers it onto the paper. The drum is coated with photoreceptor materials.

Non-Impact Printer

This type of printer uses electrostatic chemicals and inkjet technologies. They do not hit or impact a ribbon to print. It can produce high quality graphics and often a wide variety of fonts than impact printer.

The types of non-impact printer are as follows

1. **Inkjet Printer** It is a printer that places extremely small droplets of ink onto paper to create an image. It sprays ink onto paper to form characters and prints high quality text and graphics.
2. **Thermal Printer** It uses heat on chemically treated paper to form characters.
3. **Laser Printer** They can print in different fonts that is, type, styles and sizes. Laser printer uses laser beam onto photo sensitive surface for printing. It prints high quality graphics.
4. **Electromagnetic Printer** These printers are also known as Electrographic or electro-photographic printers. These are very fast printers and fall under the category of page printers. The electrographic technology have developed from the paper copier technology.
5. **Electrostatic Printer** These printers are generally used for large format printing. They are favoured by large printing shops because of their ability to print fast and making low cost.

Note Chuck Hull, the engineer designed and created the first **3D printer** in 1984. These printers can be used to print almost anything into a real life model.

Plotter

A plotter is a special kind of output channel like a printer, that produces images on paper. It uses a pen, pencil, marker or other writing tools for making vector graphics.

They are mainly used to produce large drawings or images such as construction plans, blueprints for mechanical objects, AUTOCAD, CAD/CAM, etc.

Plotters usually come in two forms as follows

1. Flatbed plotter
2. Drum plotter

Speaker

It is an output device that receives sound in the form of electric current. It needs a sound card connected to a CPU, that generates sound.

These are attached internally or externally to a computer system.

These are used for listening music, for being audible in seminars during presentations, etc.

Headphones

These are a pair of small loudspeakers or less commonly a single speaker, held close to a user's ears and connected to a signal source such as an audio amplifier, radio, CD player or portable media player. They are also known as stereo phones, headsets or cans.

Projector

It is an output device which is used to project information from a computer onto a large screen, so it can be viewed by a large group of people simultaneously.

Projectors are widely used for classroom training or conference halls with a large audience. It provides a temporary output display.

There are mainly two types of projectors; LCD (Liquid Crystal Display) projector and DLP (Digital Light Processing) projector.

Input/Output (I/O) Port

Input/Output ports are the external interfaces that are used to connect input and output devices like printer, monitor and joystick to computer.

The I/O devices are connected to the computer *via* different ports which describe below

1. **Parallel Port** It is an interface for connecting eight or more data wires. The data flows through the wires simultaneously. They can transmit eight bits of data in parallel.
As a result, parallel ports provide high speed data transmission. Parallel port is used to connect printer to the computer.
2. **Serial Port** It transmits one bit of data through a single wire. Since, data is transmitted serially as single bit. It provides slow speed data transmission. It is used to connect external modems, plotters, barcode reader, etc.
3. **Universal Serial Bus (USB)** It is a common and popular external port available with computers. Normally, two to four USB ports are provided on a PC. USB also has the plug and play feature, which allows devices ready to be run.
4. **Firewire** It is used to connect audio and video multimedia devices like video camera. Firewire is an expensive technology used for large data movement. Hard disk drive and new DVD drives connect through firewire. It has data transfer rate of upto 400 MB/second.



Tit-Bits

- **MP3** is an audio coding format for digital audio, which uses a form of lossy data compression.
- The I/O devices that are attached, externally to the computer machine are also called **peripheral devices**.
- **Speech recognition software** can interpret voice data into words that can be understood by the computer.
- A **dumb terminal** is simply an output device that accepts data from the CPU.

QUESTION BANK

1. Any component of the computer you can see and touch is [IBPS Clerk 2015]
(1) software (2) peripheral
(3) storage (4) CPU
(5) hardware
2. Which of the following is not a hardware? [SSC FCI 2012]
(1) Processor chip (2) Printer
(3) Mouse (4) Java
3. A(n) device is any hardware component that allows you to enter data and instructions into a computer. [SBI Clerk 2014]
(1) interaction (2) input
(3) communication (4) output
(5) terminal
4. Computer gets with the help of mouse, joystick or keyboard.
(1) insert (2) delete
(3) input (4) output
5. Computer keyboard is an example of
(1) memory device
(2) input device
(3) output device
(4) Both (2) and (3)
6. The most common method of entering text and numerical data into a computer system is through the use of a [SBI PO 2015]
(1) plotter (2) scanner
(3) printer (4) keyboard
(5) None of these
7. Which key is also known as toggle keys?
(1) Caps lock (2) Num lock
(3) Both (1) and (2) (4) None of these
8. You can use the Tab key to [SBI Clerk 2013]
(1) move a cursor across the screen
(2) indent a paragraph
(3) move the cursor down the screen
(4) Both (1) and (2)
(5) None of the above
9. To move to the beginning of a line of text, press the key.
(1) Page up (2) Shift
(3) Home (4) Enter
10. In a keyboard, left-right-up-down set of keys facilitates which among the following functions? [IBPS RRB PO Mains 2017]
(1) Deleting data or modification
(2) Page scrolling to view a document
(3) Launching Start Menu
(4) Initiating Search and Help
(5) Controlling RAM or process execution
11. Shift, Ctrl, Alt are examples of which among the following category? [IBPS RRB PO Mains 2017]
(1) Modifier keys (2) Primary keys
(3) Function keys (4) Alternate keys
(5) Candidate keys
12. Pointing device includes the following except
(1) mouse (2) joystick
(3) trackball (4) keyboard
13. What type of device is a computer mouse? [IBPS Clerk 2013]
(1) Storage (2) Output
(3) Input (4) Input/output
(5) Software
14. Which of these is a pointing and draw device? [IBPS Clerk 2013]
(1) Mouse (2) Scanner
(3) Printer (4) CD-ROM
(5) Keyboard
15. First computer mouse was built by [SSC CGL 2016, RRB NTPC 2016]
(1) Douglas Engelbart (2) William English
(3) Oaniel Coogher (4) Robert Zawacki
16. Keyboard and are the examples of input device. [SBI Clerk 2014]
(1) monitor (2) modem
(3) printer (4) mouse
(5) CPU

- 17.** Which is the best position for operating the mouse?
 (1) Tail away from the user
 (2) Tail towards the user
 (3) Tail facing the right
 (4) Tail facing the left
- 18.** Which button is called as middle button used as third mouse button by pressing on it? [IBPS RRB PO Mains 2017]
 (1) Right button (2) Scroll wheel
 (3) Touch bar (4) Light bar
 (5) Left button
- 19.** Trackball is an example of a/an
 (1) programming device (2) pointing device
 (3) output device (4) software device
- 20.** Which of the following is an input device used to enter motion data into computers or other electronic devices? [SSC CHSL 2019]
 (1) Plotter (2) Trackball
 (3) Monitor (4) Joystick
- 21.** A joystick is primarily used to/for [SBI PO 2013]
 (1) control sound on the screen
 (2) computer gaming
 (3) enter text
 (4) draw pictures
 (5) print text
- 22.** Which of the following is a lever that can be moved in several directions to control the movement of an image on a computer monitor or similar display screen? [SSC CHSL 2019]
 (1) MIDI devices (2) Optical mark reader
 (3) Visual display unit (4) Joystick
- 23.** Which one of the following is not an output device? [SSC CGL 2018]
 (1) Projector (2) Headphones
 (3) Plotter (4) Joystick
- 24.** CAD stands for [SSC CGL 2014]
 (1) Computer Automatic Design
 (2) Computer Aided Decode
 (3) Computer Automatic Decode
 (4) Computer Aided Design
- 25.** is generally used in applications like ATM, hospitals, airline reservation, etc.
 (1) Light pen (2) Touch screen
 (3) Joystick (4) Trackball
- 26.** Which one does not related to mobile phone touch panel sensing methods? [RRB NTPC 2016]
 A. Finger touch
 B. Voice recognition
 C. Gloved touch
 D. Light transmittance
 (1) B (2) A
 (3) D (4) C
- 27.** The pattern of printed lines on most products are called
 (1) prices (2) OCR
 (3) scanners (4) barcodes
- 28.** A barcode reader is an example of
 (1) processing device (2) storage device
 (3) input device (4) output device
- 29.** An optical input device that interprets pencil marks on paper media is [IBPS RRB PO Mains 2017]
 (1) OMR (2) punch card reader
 (3) optical scanners (4) magnetic tapes
 (5) stylus
- 30.** The OCR is used for the preparation of [IBPS Clerk 2013]
 (1) electricity bills (2) insurance premium
 (3) telephone bills (4) All of these
 (5) None of these
- 31.** The OCR recognises the of the characters with the help of light source.
 (1) size (2) shape
 (3) colour (4) used ink
- 32.** What does MICR stand for? [IBPS Clerk 2014, RBI Grade B 2014]
 (1) Magnetic Ink Character Register
 (2) Magnetic Ink Code Reader
 (3) Magnetic Ink Code Register
 (4) Magnetic Ink Character Recognition
 (5) Magnetic Ink Cases Reader

- 33.** Large amounts of cheques are processed by using
(1) OCR (2) MICR
(3) OMR (4) All of these
- 34.** Which of the following device recognises physical traits of an individual?
(1) Smart card (2) Biometric sensor
(3) Barcode (4) MICR
- 35.** Which of the following consists of an electronic writing area and a special pen that works with it? [SSC CHSL 2019]
(1) Trackball (2) Plotters
(3) Abacus (4) Graphics tablet
- 36.** Which of the following converts analog information into digital form?
(1) Barcode reader [SSC CHSL 2019]
(2) Optical mark reading
(3) Digitizer
(4) Gamepad
- 37.** A..... is used to read handwritten or printed text to make a digital image that is stored in memory.
(1) printer (2) laser beam
(3) scanner (4) touchpad
- 38.** The input device to be used to get a printed diagram into a computer is the
[IBPS Clerk 2013, IBPS Clerk 2015]
(1) printer (2) mouse
(3) keyboard (4) touchpad
(5) scanner
- 39.** A scanner scans [SBI PO 2015]
(1) pictures
(2) text
(3) both pictures and text
(4) neither pictures nor text
(5) None of the above
- 40.** It is a video capturing device
(1) webcam (2) microphone
(3) monitor (4) mouse
- 41.** An example of an input device is [SSC CGL 2018]
(1) soundcard (2) headphones
(3) projector (4) webcam
- 42.** Which of the following could be digital input devices for computers? [RBI Grade B 2014]
(1) Digital camcorder
(2) Microphone
(3) Scanner
(4) All of the above
(5) None of the above
- 43.** Which of the following groups consists of only input devices?
(1) Mouse, Keyboard, Monitor
(2) Mouse, Keyboard, Printer
(3) Mouse, Keyboard, Plotter
(4) Mouse, Keyboard, Scanner
- 44.** Results are obtained from computer through its
(1) input unit (2) ALU unit
(3) CU unit (4) output unit
- 45.** After a picture has been taken with a digital camera and processed appropriately, the actual print of the picture is considered as
(1) data (2) output
(3) input (4) the process
- 46.** Using output device one can [IBPS RRB PO Mains 2017]
(1) view or print data (2) modify data
(3) store data (4) replicate data
(5) enter data
- 47.** Which among the following is the smallest unit in an image in a computer screen? [IBPS RRB PO Mains 2017]
(1) Unit (2) Pixel
(3) Array (4) Resolution
(5) Clip
- 48.** What type of device is a computer monitor? [SBI Clerk 2014]
(1) Software (2) Processing
(3) Storage (4) Input
(5) Output
- 49.** Soft copy refers to [IBPS Clerk 2013]
(1) printed output (2) digitising
(3) music sounds (4) screen output
(5) None of these

- 50.** The higher the resolution of a monitor, the
(1) larger the pixels
(2) less clear the screen is
(3) further apart the pixels
(4) closer together the pixels
- 51.** Screen or monitor device is [UPSSSC 2016]
(1) hard copy (2) soft copy
(3) input device (4) display device
- 52.** The CRT is in shape. [RBI Grade B 2013]
(1) circular (2) rectangular
(3) eclipse (4) conical
(5) None of these
- 53.** CRT has a [RBI Grade B 2013]
(1) hollow tube (2) vacuum tube
(3) long tube (4) round tube
(5) None of these
- 54.** The rate at which scanning is repeated in a CRT is called
(1) refresh rate (2) resolution
(3) pitch (4) bandwidth
- 55.** provides hard copy output on paper. [SBI Clerk 2015]
(1) Mouse (2) Keyboard
(3) LCD monitor (4) Scanner
(5) Printer
- 56.** Printer is an example of [SBI Clerk 2014]
(1) output device (2) input device
(3) processing device (4) storage device
(5) None of the above
- 57.** What are the units used to count the speed of a printer? [IBPS Clerk 2013]
(1) CPM (2) DPI (3) PPM (4) BIT
(5) None of these
- 58.** printer cannot print more than one character at a time. [SSC CHSL 2013]
(1) Line (2) Daisy wheel
(3) Laser (4) Dot matrix
- 59.** Speed of line printer is limited by the speed of [Clerk 2013]
(1) paper movements (2) cartridge used
(3) length of paper (4) All of these
(5) None of these
- 60.** An example of peripheral equipment is
(1) printer
(2) CPU
(3) spreadsheet
(4) microcomputer
- 61.** Dot matrix printer is
(1) unidirectional (2) bi-directional
(3) sequential (4) random
- 62.** The impact printers are
(1) dot matrix (2) drum
(3) inkjet (4) Both (1) and (2)
- 63.** Drum printer is an example of
(1) input (2) output
(3) processing (4) storage
- 64.** The example of non-impact printers are [RBI Grade B 2013]
(1) Laser-Dot matrix (2) Inkjet-Laser
(3) Inkjet-Dot matrix (4) Dot matrix
(5) None of these
- 65.** Line printer speed is specified in terms of
(1) LPM (Lines Per Minute) [RBI Grade B 2013]
(2) CPM (Characters Per Minute)
(3) DPM
(4) Any of the above
(5) None of the above
- 66.** In laser printers, printing is achieved by deflecting laser beam on to surface of a drum. [SBI PO 2013]
(1) magnetised (2) photosensitive
(3) magnetic (4) Either (1) or (2)
(5) None of these
- 67.** Which of the following printers, are you sure, will not to use if your objective is to print on multi carbon forms?
(1) Daisy wheel (2) Dot matrix
(3) Laser (4) Thermal
- 68.** Laser printers belong to
(1) line printer (2) page printer
(3) band printer (4) dot matrix printer
- 69.** A hard copy would prepared on a [SBI Clerk 2013]
(1) line printer (2) dot matrix printer
(3) plotter (4) type writer terminal
(5) All of these

- 70.** Who invented the 3D printer?
[SSC CGL 2016]
(1) Nick Holonyak
(2) Elias Howe
(3) Chuck Hull
(4) Christian Huygens
- 71.** It is used to produce large drawings or images such as construction plans, blueprints for mechanical object, etc.
(1) Printer (2) Plotter
(3) MICR (4) OCR
- 72.** What type of devices are computer speakers or headphones?
[IBPS Clerk 2015]
(1) Input (2) Input/Output
(3) Software (4) Storage
(5) Output
- 73.** Which is not an item of hardware?
[IBPS Clerk 2013]
(1) An MP3 file (2) A keyboard
(3) A mouse (4) Printer
(5) None of these
- 74.** The transfer of data from a CPU to peripheral devices of computer is achieved through
[SSC CGL 2012]
(1) interfaces (2) buffer memory
(3) modems (4) I/O ports
- 75.** A parallel port is most often used by a
[SSC CPO 2011]
(1) printer
(2) monitor
(3) mouse
(4) external storage device
- 76.** USB in data cables stands for
(1) Unicode Smart Bus [IBPS Clerk 2014]
(2) Universal Structural Bus
(3) Unicode Serial Bus
(4) Universal Smart Bus
(5) Universal Serial Bus
- 77.** USB refers to [SSC MTS 2013]
(1) a storage device
(2) a processor
(3) a port type
(4) a serial bus standard
- 78.** Which of the following are properties of USB?
[IBPS Clerk Mains 2017]
(1) Platform independent
(2) Platform dependent
(3) Source dependent
(4) Software dependent
(5) Software Independent
- 79.** The format reduces an audio file to about one-tenth of its original size, while preserving much of the original quality of the sound.
[SBI Clerk 2014]
(1) DOC (2) PNG (3) GIF (4) MP3
(5) VMEG
- 80.** Peripheral devices such as printers and monitors are considered to be
[IBPS Clerk 2013]
(1) hardware (2) software
(3) data (4) information
(5) source code
- 81.** External devices such as printers, keyboards and modems are known as [IBPS Clerk 2015]
(1) add-on devices
(2) peripherals
(3) extra software devices
(4) PC expansion slot add-ons
(5) special buys
- 82.** can interpret voice data into words that can be understood by the computer.
[IBPS Clerk 2014]
(1) Speech input hardware
(2) Speech recognition software
(3) Word recognition software
(4) Talking software
(5) Other than those given as options
- 83.** Dumb terminals have terminals and
[SBI PO 2015]
(1) mouse (2) speakers
(3) keyboard (4) mouse or speakers
(5) None of these
- 84.** Which one of the following input device is user-programmable?
[IBPS Clerk 2015]
(1) Dumb terminal (2) Smart terminal
(3) VDT (4) Intelligent terminal
(5) All of these

85. Input devices are used to provide the steps and tasks the computer needs to process data and these steps and tasks are called
[IBPS Clerk 2015]

- | | |
|-----------------|------------------|
| (1) program | (2) design |
| (3) information | (4) instructions |
| (5) flow chart | |

86. For printing MICR characters, the ink used contains
[RRB NTPC 2016]

- | | |
|------------------|---------------|
| A. Lead oxide | B. Graphite |
| C. Cuprous oxide | D. Iron oxide |
| (1) B | (2) C |
| (3) D | (4) A |

ANSWERS

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