Various Peripheral Devices of Computer

Fastrack REVISION

▶ **Computer System:** A computer system comprises two major components—software and hardware that enable it to perform major functions.

▶ **Hardware:** The hardware comprise all the physical and tangible parts of a computer system, which means parts that you can see, touch and feel, for example, keyboard, monitor, mouse, etc. The hardware is the electric, electronic and mechanical equipment that makes up a computer.

▶ **Software:** The software comprise all the instructions and programs that make the computer hardware function. A software is an intangible part of the computer system, i.e., it is the collection of data and programs that you can see and work on, but cannot touch and feel. Software is the series of instructions that tells the hardware how to perform tasks.

▶ A computer system mainly comprises the following major units:

➤ **Input Unit:** It is a combination of different input devices to carry out the task of giving input to a computer.

➤ **Processing Unit:** It is the Central Processing Unit (CPU) that processes the input given by a user.

➤ **Output Unit:** It is a combination of different output devices to carry out the task of displaying/giving output from a computer.

➤ **Memory and Storage Unit:** It is a combination of different types of memory units and storage devices to store data and instructions.

▶ **Computer Peripheral:** A computer peripheral is a device that is connected to a computer, but is not a part of the core computer architecture. The term peripheral usually refers to a device external to the computer case.

▶ **Input Unit/Devices:** The input unit comprises a variety of input devices that are used to give input to the computer. There are many different types of input devices such as the keyboard, mouse, joystick and much more, that are used to give an input to the computer.

➤ **Keyboard:** The keyboard is a basic input device that is used to enter data into a computer or any other electronic device by pressing keys. It has different sets of keys for letters, numbers, characters and functions. Keyboards are connected to a computer through USB or a Bluetooth device for wireless communication. **Types of Keyboards:** There can be different types of keyboards based on the region and language used. Some of the common types of keyboards are as follows:
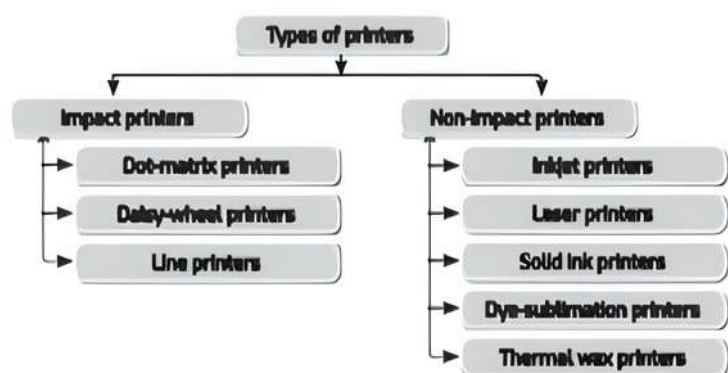
• **QWERTY Keyboard:** It is the most commonly used keyboard with computers in modern times. It is named after the first six letters of the top row of buttons and is even popular in countries that do not use Latin-based alphabet. It is so popular that some people think that it is the only type of keyboard to use with computers as an input device.

• **AZERTY Keyboard:** It is considered the standard French keyboard. It is developed in France as an alternative layout to the QWERTY layout and is mainly used in France and other European countries. Its name is derived from the first six letters that appear on the top left row of the keyboard. The **Q** and **W** keys in AZERTY keyboard are interchanged with **A** and **Z** keys in QWERTY keyboard. Further more, in AZERTY keyboard **M** key is located to the left of the L key.

• **DVORAK Keyboard:** This type of keyboard layout was developed to increase the typing speed by reducing the finger movement while typing. The most frequently used letters are kept in a home row to improve typing.

• **Normal Keyboard:** A normal keyboard has approximately 104 or 108 keys. This type of keyboard is connected to the CPU with/without a wire.

• **Flexible Keyboard or Roll-up Keyboard:** This type of keyboard is made of silicon material that can even be folded. The roll-up computer keyboards are extremely good for travelling as you can easily roll them down when you need them and roll them up when you do not need them.

• **Virtual Keyboard:** It is the one that does not exist physically. A small portable dongle like device is there that makes a keyboard on the dark flat surface with the help of the laser beams.

- **Mouse:** The mouse comes under the category of pointing device. It is the most popular and widely used pointing device. Various types of mouse are available nowadays, such as a mechanical mouse, an optical mouse, a trackball mouse, a cordless mouse and much more.
  - **Mechanical Mouse:** The mechanical mouse has a ball at the bottom that moves the pointer on the monitor screen. This type of mouse is hardly used nowadays.
  - **Optical Mouse:** It is the most commonly used mouse nowadays. It uses an optical light to move the pointer.
  - **Infrared (IR) or Radio Frequency Cordless Mouse:** This type of mouse is usually used with laptops, tablets, etc. It is a wireless mouse.
  - **Cordless 3D Mouse:** This type of mouse is used for gaming purpose. It has many buttons to perform specific tasks while playing a game. It is also a wireless mouse.
  - **Trackball Mouse:** It was initially used with laptops and for playing games.
- **Joystick:** The joystick is also a pointing device which is used to move the cursor on the monitor screen. It is mainly used in Computer Aided Designing (CAD) and playing computer games.
- **Light Pen/Stylus:** The light pen/stylus is a pen-like device that is used to point at the objects directly on the screen. It is used to select a menu item or draw pictures on the monitor screen.
- **Scanner:** The scanner is an input device that works almost like a photocopy machine. It transfers information from paper to the computer which can be manipulated further.
  - **Flatbed Scanner:** It is the most commonly used scanner by various organisations, schools, colleges, etc. It scans physical documents and changes them into digital form which can be stored, edited, transferred and e-mailed, digitally.
  - **Transparency Scanner:** It is used by photographers to digitalise the prints and films taken by them. In addition to scan photos, this scanner can also be used for general purpose scanning.
  - **Handheld Scanner:** It works exactly like a Flatbed scanner, though it is portable and can be held in a hand.
  - **Drum Scanner:** It scans and converts images such as photographs to a digital form. These images can be manipulated and edited, later. It captures images from rolled-up transparencies.
- **Digitizer:** The digitizer is an input device that converts an analog information into a digital form. The Digitizer is also known as Tablet or Graphics

Tablet because it converts the graphics and pictorial data into binary inputs.

- **Microphone:** The microphone is an input device that is used to give the voice and sound input to the computer. The sound input is stored in the digital form, in a computer.
- **Magnetic Ink Card Reader (MICR):** The MICR, an input device, is mainly used in banks. The bank's code number and cheque number are printed on the cheques with a special type of ink that contains particles of magnetic material which are machine readable only.
- **Optical Character Reader (OCR):** The OCR is an input device used to read a printed text. It scans text optically, character-by-character. It converts them into a machine readable code and stores the text on the system memory.
- **Optical Mark Reader (OMR):** The OMR is a special type of optical scanner used to recognise the type of marks made by a pen or a pencil. It is mainly used for checking the answer sheets of examinations having multiple-choice questions.
- **Barcode Reader:** The barcode reader is a device used to read bar coded data (the data in the form of light and dark lines). Bar coded data is generally used in labelling the goods, numbering the books, etc.
- **Magnetic Reader:** The magnetic reader can read magnetic information with a single swipe in either direction. It is used to authenticate and grant access to enter the premises of some organisations.
- **Touchscreen:** A touchscreen is a computer display screen that can be used as an input device. The touchscreen allows a user to interact by touching thumbnails on the screen.
- **Digital Camera:** The digital camera is an input device which produces digital images that can be stored in a computer, displayed on screen and manipulated.
- **Web Camera:** A web camera or webcam, is a video camera that is used to provide a visual input. It is mostly used as a video-conferencing equipment.

- **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 a printed document.
  - **Monitor:** The monitor, also known as Visual Display Unit (VDU), is the main output device of a computer. It forms images using tiny dots, called Pixels. The various types of monitors are CRT (Cathode Ray Tube), LCD (Liquid Crystal Display) and LED (Light Emitting Diodes).

LCD	LED	CRT
a. LCD stands for Liquid Crystal Display which is a thin, flat display screen made up of any number of colour or monochrome pixels arrayed in front of a light source or reflector. b. It is often used in electronic devices because it uses a very small amount of electric power.	a. LED stands for Light Emitting Diode which is a semi-conductor diode that emits incoherent narrow-spectrum light when electrically biased in the forward direction of the p-n junction. This effect is a form of electroluminescence. b. It can be used as a regular household light source.	a. CRT stands for Cathode Ray Tube which is a tube coated with phosphorous in inner surface. When electrons produced by e-gun come in contact with phosphorous wall, light is produced by virtue of which we can see. b. It is generally used in TV screens, monitors, etc.

➤ **Speakers:** The speakers give an audio output in the form of sounds produced from a computer. They receive audio input from a computer's sound card and produce audio output in the form of sound waves.

➤ **Printer:** The printer is an output device that prints the output on a piece of paper. The output obtained is called a hard copy. The printers are broadly classified into two categories—Impact printers and Non-impact printers.

Different Types of Printers

➤ **Impact Printer:** The impact printer is the oldest printer, but is still in use because of its reasonable cost. It is most functional in the specialised environments where low-cost printing is essential.

- **Dot-matrix Printers:** These are robust printers that are not sensitive to dust. They are ideal for environments that must produce carbon copies.
- **Daisy-wheel Printers:** These printers work like typewriters. These printers have print heads composed of metallic or plastic wheels cut into petals.
- **Line Printers:** Line printers are similar in function to the Daisy-wheel printer except that the line printers are much faster than the Dot-matrix or Daisy-wheel printers. Line printers allow multiple characters to be simultaneously printed on the same line.

➤ **Non-impact Printer:** All the impact printers print slow due to the slow mechanical movement of the print head. A non-impact printer uses methods for creating an image that do not involve actually touching the paper and thus can produce high quality output without noise.

- **Inkjet Printers:** Inkjet printers spray tiny drops of ink onto the paper and produce good quality output without making too much of noise.

- **Laser Printers:** Laser printers use static electricity to arrange toner on the paper to form an image. The toner is then bonded to the paper with heat.
- **Solid ink Printers:** Solid ink printers are mostly used in large business organisations. These printers use solid ink sticks instead of cartridges that are easy to store and use.
- **Dye-sublimation Printers:** Dye-sublimation printers use rolls of transparent film that are embedded with solid dyes. The film is heated to vaporise the dye, which then permeates the paper's surface and returns to solid form.
- **Thermal Wax Printers:** Thermal wax printers use a ribbon that passes in front of tiny heated pins that melt the wax from a ribbon onto the paper. These are used for generating bill receipts.

➤ **Plotter:** A plotter is an output device that is used to create layouts, diagrams and banners. It uses line drawings to form an image instead of dots.

➤ **Projector:** A projector is used to produce a computer output on a big screen. This is used in meeting rooms or in the classrooms of educational institutes, to give presentations.

➤ **Headphones:** Headphones are a pair of small loudspeakers that are designed to be worn on the user's ears. They are also known as ear speakers or earphones.

▶ **Storage Devices:** The storage devices are used for storing, porting and extracting data files. They can hold and store information both temporarily and permanently. Storage devices can be classified into two categories—Internal and External storage devices.

➤ **Internal Storage Devices:** These are the devices that are fixed inside the system unit box such as RAM/ROM and Hard disk.

- **Random Access Memory or RAM:** It is also known as temporary memory. It is the place where the operating system, application programs and the data, in current use, are kept temporarily so that they can be accessed by the CPU.
- **Read-Only Memory or ROM:** It is also known as permanent memory as it holds the data and

instructions even if there is no power supplied to it. It is a non-volatile memory as it retains the programs even if the power is turned off.

- **Hard Disk:** The Hard disk is a permanent computer data storage. It is a non–volatile storage medium that stores all data and instructions of the computer.

➤ **External Storage Devices:** The external storage devices are portable storage devices that are used to store information and can be carried out anywhere. The optical discs like CD, DVD, Blu-ray disc and USB/Pen drive are some examples of the external storage devices that are not fixed inside the system unit box.

- **Optical Disc:** An optical disc is a storage medium from which data is read and written by using lasers. There are different types of optical discs—CD/DVD/Blu-ray disc.

- **Compact Disc:** A compact disc is a portable storage medium that can be used to record and store audio, video and other digital media. It has a capacity of 80 minutes of audio or 650 megabytes (MB) to 700 MB of data.

- **Digital Versatile Disc:** A digital versatile disc is an optical disc with a 4.7 GB storage capacity which is enough for a 133-minute film. DVDs can be single or double-sided.

- **Blu-ray Disc:** Blu-ray is the latest technology in the optical disc storage. A Blue-ray disc can store a large amount of High-Definition (HD) data.

- **Flash Drive/Pen Drive:** A flash drive (popularly known as a pen drive) is a small, portable storage device which can be connected to computers and other devices *via* USB port.

- **Memory Stick/Memory Card:** A memory stick/ memory card is also a type of flash drive. It is more compact than a pen drive. It is generally used in the digital devices such as digital cameras, smartphones, tablets, etc.

Practice *Exercise*

? Multiple Choice Questions

Q 1. A device that allows users to feed data into a computer for analysis and storage and to give commands to the computer is called:
a. output device
b. input device
c. memory
d. both a. and b.

Q 2. User communicates with a computer with the help of which devices?
a. Input device
b. Output device
c. Software device
d. Both a. and b.

Q 3. Which device allows you to enter data and instructions into a computer?
a. Input device
b. Output device
c. ALU
d. CPU

Q 4. Which of the following groups are only input devices?
a. Mouse, Keyboard, Monitor, Joystick
b. Mouse, Keyboard, Printer, Light pen
c. Mouse, Keyboard, Scanner, Joystick, Light Pen, Monitor
d. Mouse, Keyboard, Trackball, Touch Screen, Microphone

Q 5. Which of the following is not a pointing device?
a. Mouse
b. Joystick
c. Light pen
d. Digitizer

Q 6. Which input device is used for input text, numbers, and commands to the computer?
a. Mouse
b. Keyboard
c. Scanner
d. All of these

Q 7. Which input device is/are used to move the cursor position on a monitor screen?
a. Mouse
b. Joystick
c. Light pen
d. Both a. and b.

Q 8. The number of function keys in a keyboard is:
a. 14
b. 12
c. 13
d. 15

Q 9. Ctrl, Shift and Alt are known as .... keys.
a. function
b. modifier
c. alphanumeric
d. adjustment

Q 10. Which key of keyboard is used to make characters either upper or lower case?
a. ESC
b. Return
c. Shift
d. Both a. and c.

Q 11. The use of tab key in the keyboard is:
a. to move a cursor across the screen
b. to indent a paragraph
c. to move the cursor down the screen
d. Both a. and c.

Q 12. The first computer mouse was developed by:
a. Douglas Engelbart
b. William English
c. Daniel Cougher
d. Robert Zawaski

Q 13. The MICR stands for:
a. Magnetic Ink Card Reader
b. Magnetic Ink Code Recognition
c. Meta Ink Character Recognition
d. None of the above

Q 14. The computer monitor is connected to CPU through:
a. bus
b. cable
c. wire
d. line driver

Q 15. The number of pixels displayed on the computer screen is called:

a. color depth   b. resolution
c. refresh rate   d. viewing size

Fill in the Blanks
Type Questions

Q 16. A computer .... is a device that is connected to a computer, but is not a part of the core computer architecture.

Q 17. The .... comprise all the physical and tangible parts of a computer system.

Q 18. The .... is the most commonly used mouse, nowadays.

Q 19. The Transparency scanner is used by the photographers to .... the prints and films taken by them.

Q 20. The MICR input device is mainly used in the ....

Assertion and Reason
Type Questions

Directions (Q. Nos. 21-25): *In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.*

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.

Q 21. Assertion (A): The hardware comprise all the physical and intangible parts of a computer system, which means parts that you can see, touch and feel, for example, keyboard, monitor, mouse, etc.
Reason (R): The hardware is the electric, electronic and mechanical equipment that makes up a computer.

Q 22. Assertion (A): A computer peripheral is a device that is connected to a computer, but is not a part of the core computer architecture.
Reason (R): The keyboard is a basic input device that is used to enter data into a computer or any other electronic device by pressing keys.

Q 23. Assertion (A): The mouse comes under the category of pointing devices. It is the most popular and widely used pointing device.
Reason (R): The joystick is also a pointing device which is used to move the cursor on the printing screen. It is mainly used in Computer Aided Designing (CAD) and playing computer games.

Q 24. Assertion (A): The scanner is an output device that works almost like a photocopy machine. It transfers information from paper to the computer which can be manipulated further.
Reason (R): The digitizer is an input device that converts a digital information into an analog form.

Q 25. Assertion (A): The MICR, an input device, is mainly used in banks. The bank's code number and cheque number are printed on the cheques with a special type of ink that contains particles of magnetic material which are machine readable only.
Reason (R): The magnetic reader can read magnetic information with a single swipe in either direction. It is used to authenticate and grant access to enter the premises of some organisations.

Answers

1. (b)	2. (d)	3. (a)	4. (d)	5. (d)
6. (b)	7. (d)	8. (c)	9. (b)	10. (c)
11. (d)	12. (a)	13. (a)	14. (b)	15. (b)

16. peripheral   17. hardware
18. optical mouse   19. digitise
20. banks

21. (d)	22. (b)	23. (c)	24. (d)	25. (b)

Case Study Based
Questions

Case Study 1

A computer peripheral is a device that is connected to a computer, but is not a part of the core computer architecture. The term peripheral usually refers to a device external to the computer case. The input unit comprises a variety of input devices that are used to give input to the computer. There are many different types of input devices such as the keyboard, mouse, joystick and much more, that are used to give an input to the computer. 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 a printed document.

Q 1. Dot-matrix, Deskjet, Inkjet and Laser are all types of which computer peripherals?

a. Printers   b. Software
c. Monitors   d. Keyboards

Q 2. The .... pen is a small input device used to select and display objects on a screen.

a. Ink   b. Magnetic
c. Light   d. None of the above

Q 3. Which device of computer operation dispenses with the use of the keyboard?

a. Joystick   b. Light pen
c. Mouse   d. Touch

Q 4. .... keys are present on the top row of the keyboard.
a. Function
b. Type writer
c. Numeric
d. Navigation

Answers

1. (a)   2. (c)   3. (c)   4. (a)

Case Study 2

Computer being a versatile machine can process different types of data. So, to work with these data types we need different type of devices which can help us to enter such data types in the computer and to receive their outputs as well in this chapter we will cover many such devices like keyboard, mouse, joystick, light pen, printer, speaker, etc. That can be used with the computer. The functioning of a computer system is based on the combined usage of both input and output devices. Using an input device we can give instructions to the computer to perform an action and the device reverts to our action through an output device.

Q 1. What is a scanner?

Q 2. The .... printer fires ink drops on paper for printing.

Q 3. A .... is a video camera that feeds or streams its image in real time to or through a computer to a computer network.

Q 4. Define block

Answers

1. The scanner is an input device that captures information from a page and store them in graphic format.
2. Inkjet
3. webcam
4. A block is a sector or a group of sectors that the operating system can address in a hard disk.

? Very Short Answer
Type Questions

Q 1. What are the two major components of a computer system?

Ans. A computer system comprises two major components—Software and Hardware.

Q 2. Define input unit.

Ans. The input unit is a combination of different input devices to carry out the task of giving input to a computer.

Q 3. How many keys are there on a normal keyboard?

Ans. A normal keyboard has approximately 104 or 108 keys.

Q 4. Define virtual keyboard.

Ans. Virtual keyboard is the one that does not exist physically. A small portable dongle like device is there that makes a keyboard on the dark flat surface with the help of the laser beams.

Q 5. What are mechanical mouse?

Ans. The mechanical mouse has a ball at the bottom that moves the pointer on the monitor screen. This type of mouse is hardly used nowadays.

Q 6. Define joystick.

Ans. The joystick is also a pointing device which is used to move the cursor on the monitor screen. The function of the joystick is similar to that of a mouse. It is mainly used in Computer Aided Designing (CAD) and playing computer games.

Q 7. What is a light pen?

Ans. A light pen is a pen-like device that is used to point at the objects directly on the screen. It is used to select a displayed menu item or draw pictures on the monitor screen.

Q 8. Which type of scanner works exactly like a flatbed scanner, but can be held in our hand?

Ans. Handheld scanner

Q 9. What do you mean by the term Microphone?

Ans. The microphone is an input device that is used to give the voice and sound input to the computer. The sound input is stored in the digital form, in a computer. It is used for various applications like adding sound to a multimedia presentation or for mixing music.

Q 10. How many types of printers are there? Name them.

Ans. There are two types of printers—Impact printers and Non-impact printers.

Q 11. What is the use of a plotter?

Ans. A plotter is an output device that is used to create layouts, diagrams and banners.

Q 12. Which device is a special type of optical scanner used to recognise the type of marks made by a pen or a pencil. It is mainly used for checking the answer sheets of examinations having multiple-choice questions.

Ans. OMR (Optical Mark Reader)

Q 13. How do laser printers work?

Ans. Laser printers use static electricity to arrange toner on paper to form an image. The toner is then bonded to the paper with heat. They produce high quality output and are expensive than inkjet printers.

Q 14. What is the difference between CD and DVD?

Ans. DVDs offer more data storage capacity compared to CDs. CDs are also commonly used for audio and program files, while DVDs are used for video and program files.

? Short Answer
Type Questions

Q 1. Differentiate between Hardware & Software.

Ans. The **hardware** comprise all the physical and tangible parts of a computer system, which means parts that we can see, touch and feel for example, keyboard, monitor, mouse, etc.

The **software** comprise all the instructions and programs that make the computer hardware function. A software is an intangible part of the computer system, *i.e.*, it is the collection of data and programs that we can see and work on, but cannot touch and feel.

Q 2. Define the term computer peripheral.

Ans. A computer peripheral is a device that is connected to a computer, but is not a part of the core computer architecture. The term peripheral usually refers to a device external to the computer case. We connect the device to the computer to expand the functionality of the computer system, for example, a printer. Once the printer is connected to a computer, we can take the print-out of the documents.

Q 3. Discuss the use of a microphone by giving an example.

Ans. The microphone is an input device that is used to give voice and sound input to the computer. The sound input is stored in the digital form in a computer. It is used for various applications like adding sound to a multimedia presentation or for mixing the music.

Q 4. State the difference between a mechanical mouse and an optical mouse.

Ans. Mechanical Mouse: This type of mouse has a ball at the bottom that moves the pointer. This type of mouse is hardly used nowadays.

Optical Mouse: It is the most commonly used mouse nowadays. It uses optical light to move the pointer.

Q 5. State two advantages of using a Dot-matrix printer.

Ans. Advantages of Dot-matrix printer are as follows:

(i) It can print on multi-part stationery or make carbon-copies.

(ii) Among all the printers it has the lowest printing costs per page.

Q 6. State two disadvantages of using a Thermal printer.

Ans. Disadvantages of Thermal printers are as follows:

(i) Too much of heating is a possibility and may damage the printer.

(ii) It is not suitable to print in colour.

Q 7. Define barcode reader?

Ans. The barcode reader is a device used to read bar coded data (the data in the form of light and dark lines). Bar coded data is generally used in labelling the goods, numbering the books, etc. It may be a handheld scanner or may be embedded in a stationery scanner. It is majorly used in the supermarkets and shopping malls for the billing process.

Q 8. Anuska is a video editor and performs video editing in a production house. The files she stores are usually of huge sizes approximately of 30 GB. The company plans for an upgradation and require to keep backup. Suggest Anuska an Optical Disk that will help her in keeping backup, with reasons.

Ans. As Video Editing requires huge amount of storage space for rendering movies, the best optical backup device would be to use Blu-Ray Disc.

Q 9. Phantom is a computer programmer, who is developing a small software for a retail chain. Unfortunately, the shop owner is not able to provide him an internet connection; Phantom carries different modules of this software, installs in the computers connected in various shops and carries sample data back with him for testing. Which storage device will you suggest to him to use for this purpose? This device should have high storage capacity and should be rewriteable.

Ans. A Pen Drive using Flash Memory is more preferable, as it is not only fast for reading and writing, but also portable for the Phantom Programmer to carry here and there.

CHAPTER TEST

Multiple Choice Questions

Q 1. Which of the following units are used to count the speed of the printer?

a. CPM   b. PPM

c. LPM   d. All of these

Q 2. The output quality of a printer is measured in:

a. dots per sq   b. dots per inch

c. dots printer per inch   d. All of these

Q 3. Which of the following is a kind of port?

a. Serial   b. Parallel

c. AGP   d. All of these

Q 4. How many bits of data can be transferred by parallel port?

a. 2   b. 4

c. 8   d. 16

Fill in the Blanks

Q 5. The monitor is also known as the ....

Q 6. The .... are robust printers that are not sensitive to dust.

Q 7. The hard disk is a .... computer data storage.

Assertion-Reason Type Questions

Directions (Q. Nos. 8-9): *In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.*

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not correct explanation of Assertion (A).

c. Assertion (A) is true, but Reason (R) is false.

d. Assertion (A) is false, but Reason (R) is true.

Q 8. Assertion (A): 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 a printed document.

Reason (R): The barcode reader is a device used to read bar coded data (the data in the form of light and dark lines). Bar coded data is generally used in labelling the goods, numbering the books, etc.

Q 9. Assertion (A): The printer is an output device that prints the output on a piece of paper. The output obtained is called a soft copy.

Reason (R): The printers are broadly classified into two categories—Impact printers and Non-impact printers.

Case Study Based Questions

Q 10. A storage unit is a part of the computer system which is employed to store the information and instructions to be processed. A storage device is an integral part of the computer hardware which stores information/data to process the result of any computational work. Without a storage device, a computer would not be able to run or even boot up. Or in other words, we can say that a storage device is hardware that is used for storing, porting or extracting data files. It can also store information/data both temporarily and permanently.

(i) 1 Byte is equal to ....

   a. 1 nibble   b. 2 Bits

   c. 8 Bits   d. 2 Megabyte

(ii) Main memory consists of millions of cells each cell can store a ....

   a. Byte   b. Bit

   c. Kilobyte   d. Megabyte

(iii) Memory cells are logically organized into group of 8-bits called ....

   a. Byte   b. Bit

   c. Kilobyte   d. Megabyte

(iv) Each .... of memory has a unique number assigned to it.

   a. Byte   b. Bit

   c. Kilobyte   d. Megabyte

Q 11. An input device sends information to a computer system for processing and an output device reproduces or displays the results of that processing. Input devices only allow for input of data to a computer and output devices only receive the output of data from another device. Most devices are only input devices or output devices, as they can only accept data input from a user or output data generated by a computer. However, some devices can accept input and display output and they are referred to as I/O devices (input/output devices). An output device can receive data from another device and generate output with that data, but it cannot send data to another device. An input/output device can receive data from users or another device (input) and send data to another device (output).

(i) What is the name of standard keyboard?

(ii) Define the term pixel.

(iii) How is print resolution measured?

(iv) Define Monitor resolution.

Very Short Answer Type Questions

Q 12. What is a scanner?

Q 13. What do you mean by the term touchscreen?

Short Answer Type Questions

Q 14. What are ergonomic keyboard?

Q 15. What is a computer mouse?