

Solved and unsolved questions for you.

SOLVED QUESTIONS

Very Short Answer Questions

1. List the names of two components of the CPU.

Ans. The names of two components of CPU are as follows:

- Control Unit
- Arithmetic Logic Unit

2. What is an I-P-O cycle?

Ans. A computer takes input in the form of data and generates output in the form of information. This process of converting data into some meaningful information is called information processing or Input-Process-Output (I-P-O) cycle.

3. List all the functional components of a computer.

Ans. The functional components of a computer are as follows:

- (a) Input Unit
- (b) Central Processing Unit (CPU)
- (c) Output Unit
- (d) Memory Unit

4. Who invented the mouse?

Ans. Mouse is a pointing (input) device that was developed by Douglas Engelart in 1963.

5. What are the two parts of main memory?

Ans. Two parts of main memory are as follows:

- Random Access Memory (RAM)
- Read-Only Memory (ROM)

6. Why are the secondary storage devices required?

Ans. The secondary storage devices are required because of the following two reasons:

- The primary memory is finite and limited in size.
- In secondary storage, data and programs do not disappear when power is turned off.

7. Two devices used by the supermarket point-of-sale (POS) terminal are a bar code reader and a keyboard. Name two other input/output devices used at the POS and give a use for each device.

Ans. (a) Monitor used to display the information about the items purchased or sold.
(b) Printer used for taking printout of the bill or invoice generated.

8. Given below are some features of two types of computer memories—RAM and ROM. List each feature under RAM or ROM.

- (a) Non-volatile memory
- (b) Contents can't be changed
- (c) Stores data or files the user is currently working on
- (d) Volatile memory
- (e) Can be written to and read from

Ans. RAM: (a), (c), (e); ROM: (b), (d).

9. What does a bus mean?

Ans. A bus is a group of conducting lines that transport data, address and control signals between CPU and memory.

10. Why is data bus bi-directional?

Ans. Data bus is bi-directional because the same bus is used for data transmission from microprocessor to memory location or input/output device and *vice versa*.

Short Answer Questions

1. Six storage devices are described below. Name the storage device being described and also list the appropriate category of storage.

- Optical media which use one spiral track; red lasers are used to read and write data on the media surface; makes use of dual-layering technology to increase storage capacity.
- Non-volatile memory chip: contents of the chip cannot be altered; it is often used to store the start-up routines in a computer (e.g., the BIOS).
- Optical media which use concentric tracks to store data; this allows read and write operations to be carried out at the same time.
- Non-volatile memory device which uses flash memories (which consist of millions of transistors wired in a series on a single circuit board).
- Optical media which use blue laser technology to read and write data on the media surface.
- Magnetic disc with very large storage capacity; can be used to store vast amounts of data; mostly fixed in computer cases and serves as the main storage device.

Ans.

(a) DVD	Offline Storage
(b) ROM	Primary Memory
(c) DVD-ROM	Offline Storage
(d) Solid State Memory/Memory Card	Offline Storage
(e) Blu-ray Disc	Offline Storage
(f) Hard Disk	Secondary Memory.

2. A company is planning to have a videoconference. In its videoconferencing area, there are some microphones, speakers and webcams. Describe the purpose of each of the devices.

Ans. *Microphone:* This device is used to input sound or the vocal input of the people speaking.

Speakers: These are needed so as to hear the sound/audio output from the computer.

Webcam: Webcam or web camera is needed to capture the video image of the scene and all the people participating in videoconferencing.

3. What is the function of memory? What are its measuring units?

Ans. The memory temporarily holds the data and information during processing. The smallest unit of memory is a byte (8 bits). A byte can store one character in binary form. Other measuring units are kilobyte (KB) equal to 1024 (2^{10}) bytes, 1 Megabyte (MB) equal to 1024 KB, 1 Gigabyte (GB) equal to 1024 MB and Terabyte (TB) equal to 1024 GB.

4. A school newsletter contains text and images in it. The head teacher needs one thousand copies of this newsletter. Give four reasons why a laser printer should be used rather than an inkjet or a dot matrix printer.

Ans.

- High quality printouts—better than inkjet or dot matrix
- Fast printouts—faster than inkjet or dot matrix
- Prints very quietly—quicker than inkjet or dot matrix
- Cost per page is low—cheaper than inkjet or dot matrix

5. What is the difference between RAM and ROM?

Ans. RAM refers to random access memory where both read and write operations can take place. But RAM is a volatile memory; its contents are lost when power is turned off. ROM refers to read-only memory where only read or write operation can take place. ROM is a non-volatile memory. Both RAM and ROM are parts of the primary memory.

6. Why is computer beneficial to us?

Ans. Computers are beneficial to us in endless ways like storing and retrieving large volume of data/information easily, efficiently and in a secured manner. Computers can perform calculations on large and complex data sets within a fraction of second with complete accuracy. This device can be used anywhere and everywhere whether at home or at workplace or for scientific purposes.

7. What is the difference between an address bus and a data bus?

Ans. The difference between an address bus and a data bus is as follows:

Address bus: An address bus contains the address of the piece of memory or I/O devices to be read from or written to. One wire is required for each bit which means 16 bits will require 16 wires. A 16-bit binary number allows 2¹⁶ or 32,000 different numbers.

Data Bus: A data bus actually carries the data to be processed in the binary form. It carries the information between the processor and various other external units, such as memory. Its typical size is 8 or 16 bits.

8. Explain the usage of the smart card reader.

Ans. You must be aware of ATM cards that are used in ATM machines. ATM cards store data through magnetic strips, which are pasted on the back of these cards. Magnetic strips hold much more data than printed characters or bar codes per unit of space. These strips are not human-readable and are, therefore, used to store confidential data. Moreover, it is almost impossible to create a duplicate copy of the cards containing such strips. Special reader machines are required to decode the encoded data stored on these magnetic strips.

The enhanced version of a card containing magnetic strips is called a smart card. A smart card is embedded with a microprocessor that can hold a certain amount of personal data in its memory. The special reader machine that is used to decode the data on smart cards is known as smart card reader.

9. What is the difference between data and information?

Ans. The difference between data and information is as follows:

Data is defined as raw facts and figures such as "Tejas", "MBA", "2013", "ABC". This data does not have any meaning when presented as such. However, this data can be organized or processed to transform it into useful information.

Information is defined as a collection of data which is organized in a particular manner to generate some meaning. *For example*, "Tejas passed MBA in 2013 from ABC" is the information that we have obtained after processing the data given above.

10. Why is primary memory termed as 'destructive write' memory but 'non-destructive read' memory? [HOTS]

Ans. When a memory location is read from the primary memory, the contents of the memory word remain the same; they are not altered. Therefore, a primary memory is termed as 'non-destructive read' memory since the read operation does not destruct the contents of a memory word.

When a write operation takes place, the previous contents of the memory word are overwritten. Thus, the primary memory is termed as 'destructive write' memory as the write operation destructs the contents of a memory word.

11. What is Unicode? How is it useful?

Ans. Unicode is a new universal coding standard adopted by all new platforms. It is promoted by Unicode Consortium which is a non-profit organization. Unicode provides a unique number for every character irrespective of the platform, program and the language.

It is a character coding system designed to support the worldwide interchange, processing, and display of the written texts of the diverse languages. A unique number for every character, no matter what the platform, no matter what the program, no matter what the language.

UNSOLVED QUESTIONS

1. Define a computer.
2. How does an ALU work?
3. Briefly explain the working of a control unit.
4. Define hardware and software.
5. What is an operating system?
6. What is software?
7. List some of the hardware in computer equipment.
8. Explain the types of operating systems with examples.
9. "Hardware is of no use without software and software cannot be used without hardware." Explain.

Children for finding the answers if you have difficulty then refer the Google..

11. What is an operating system? Write names of any two popular operating systems.
12. Specify the measuring units of memory.
13. What are output devices? Give some examples.
14. List different types of impact printers.
15. Briefly explain the working of a laser printer.
16. What is the use of a light pen?
17. What do you understand by RAM and ROM?
18. Explain in brief the working of a touch screen.
19. What are plotters? List different types of plotters.
20. What are secondary storage devices? Give examples.
21. What is the major difference between optical and magnetic discs?
22. What do you mean by a communication bus? List its types.
23. List the differences between a CD and a DVD.
24. Explain the statement, "Functioning of a computer is similar to the way the human brain functions."
25. Explain in brief the basic architecture of a computer.
26. What is an input unit? Give its significance.
27. List and briefly explain all the components of a CPU.
28. Why is a control unit referred to as the central controller of a computer?
29. Does an ALU work independently or in coordination with some other unit? Give reasons.
30. Compare data and information.
31. How does an output unit work? Give examples of some output devices.
32. What is the role of memory in the functioning of a computer?
33. List all the hardware components of a computer. Give their significance.
34. Explain various components of a computer system and show the relationship between them with the help of a diagram.
35. Compare volatile memory and non-volatile memory.
36. Define primary storage devices. List their types.
37. What do you mean by a mouse? List its types.
38. What is a bar code? Why is a bar code reader used?
39. Explain in brief the inkjet and bubble jet printers.
40. What is a plotter? Give the benefits and limitations of using plotters.
41. Explain any three types of input devices.
42. Explain any three types of output devices with their purpose.
43. Define VDU. Name its two types.
44. Give the difference between an impact and a non-impact printer.
45. Discuss the following devices:
(a) Light Pen (b) Graphic tablet (c) CD-ROM (d) DVD
46. What is the significance of address and data buses?