

## **Ch-01**

### **Hardware Concepts**

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#### **1. What are Input devices for PDA's, Smart Phones and Tablet PC's ?**

**Ans.** A Primary Input device for a PDA is a basic stylus. Some PDAs have a built in keyboard or support voice input. You can attach a full sized portable keyboard to a PDA. Smart phones include PDA capabilities, output devices used with PDAs usually are available for smart phones. The Primary input for a Tablet PC is a digital pen, with which you can write on the device screen.

#### **2. What are various Biometric Devices ?**

**Ans.** A Biometric device translates a personal characteristic into digital code that is compared with a digital code stored in the computer to identify an individual. A Fingerprint scanner captures curves and indentations of a fingerprint. A face recognition system captures a live face image. A hand geometry system measures the shape and size of hand. A voice verification system compares live speech with a stored voice pattern. A signature verification system recognizes the shape of a signature.

#### **3. Recognize the four categories of Output**

**Ans.** Output is a data that has been processed into a useful form. Four categories of output are text, graphics, audio and video

#### **4. How is compiler different from interpreter ?**

**Ans.** A Compiler converts the source code(HLL) into object code (MLL) in one go and reports all the errors along with their line numbers. An interpreter converts source code into object code line by line and executes it there and then. It does not shift to the next line if a line contains errors.

#### **5. What are the differences between hardware, software and firmware ?**

**Ans.** Hardware are the physical tangible components of a computer system.

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**Software** are the computer programs that govern the operation of a computer System

**Firmware** are the prewritten programs permanently stored in read-only memory

**6. Give examples of each system software and application software. Explain the function of each type.**

**Ans.** Examples of System software are : (i) Operating System (ii) Language processors (iii) Application software

Examples of Operating system are : Single User, Multiuser, Batch Processing, Multiprocessing etc As the name suggest single user OS supports single user whereas multiuser OS can support multi users. The batchprocessing OS processes the batch of jobs(one at a time) and multiprocessing OS is capable of handling multiple CPUs at the same time Examples of Language processors are (i) Interpreter (ii) Compiler (iii) Assembler

An **interpreter** converts source code into object code line by line and excutes it there and then. It does not shift to the next line if a line contains errors.

A **Compiler** converts the source code(HLL) into object code (MLL) in one go and reports all the errors along with their line numbers.

Examples of application software are : (i) Customised software (ii) General Software

**7. What are the types of computers? How do they differ**

**Ans.** There are three types of computers (i) Digital (ii) Analog (iii) Hybrid

**Digital** Computers deal with discrete quantities

**Analog** computers del with physical quantities

**Hybrid** computers combine the characteristics of analog and digital computers

**8. Name the super computers developed in India.**

**Ans.** PARAM, PACE, EKA

**9. What are the major strength and weaknesses of a computer ?**

**Ans. Strength :** 1. Speed 2. Accuracy 3. Reliability 4. High storage 5. Versatility

**Weaknesses :** 1. Lack of decision making 2. Zero IQ

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**10. Why is binary language often termed as machine language ? Why is machine language needed?**

**Ans.** A Computer works on Binary numbers which are in the form of 0's and 1's. Thus it needs a language that uses unique symbols to represent these two states. Therefore a computer works on machine language. The Binary language is often termed as machine language as it fulfills the condition of using two unique symbols.

**11. What is MICR? Where it is mostly used?**

**Ans.** MICR stands for Magnetic Ink Character Reader. This device can read human readable characters that are printed using a special magnetic ink. The MICR is mostly used in banks.

**12. What is the difference between OCR and OMR ?**

**Ans.** An OCR (Optical Character Reader) is used to read characters of special type font that are printed on paper or it is a scanned document

On the other hand an OMR (Optical Mark Reader) is used to transcribe marks that are marked with a dark pencil or ink on a special preprinted form (answer sheet of multiple choice question paper where choice of the answer is reflected by shading the correct box)

**13. What are the two categories of printers ? Which type of printer is more speedy**

**Ans.** The printers can be classified in two categories

1. **Impact Printers** : In these type of printers, there is a physical connection between the paper and the print head. They are (i) Line Printer (ii) Dot Matrix Printer (iii) Daisy Wheel Printer

2. **Non Impact Printer** : In these types, there is no physical connection between the paper and the print head. The printing takes place with some electromagnetic, thermal, laser techniques. The Non Impact printers are more speedy than Impact printers

**14. What is the difference between RAM and ROM ?**

**Ans.** RAM stands for Random Access Memory where both read and write operation can take place, but this is volatile memory; its contents are lost when power is turned off ROM stands

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for Read Only Memory where only read operation can take place. This is a non volatile memory Both RAM and ROM are the parts of primary memory.

**15. What does a Bus mean ?**

**Ans.** A Bus is a group of conducting lines that carries data, address and control signals between a CPU and memory.

**16. What is Port? Name some port types**

**Ans.** Port is a point on a computer having circuitry to allow connection of external devices with computer.

Ports are of various types

Serial Port, Parallel Port, InfraRed Port, Phone Port, USB Port, AGP Port, Network Port.

**17. Can you pick the one that offers maximum read speed along with maximum capacity ?**

**Memory stick ProDuo, SD Card, MMC Plus, Smart Media Card**

**Ans.** Out of these Memory stick ProDuo offers maximum read speed along with maximum capacity.

**18. Write the full forms of the following terms VDU, LCD, DMP, CRT, CD-RW, DVD**

**Ans.** VDU – Visual Display Unit

LCD – Liquid Crystal Display

DMP – Dot Matrix Printer

CRT – Cathode Ray Tube

CD-RW – Compact Disk Read/Write

DVD – Digital Video Disk