

# Briefing on Information Technology

## NOTES

### **Introduction**

Computers are everywhere! From office desks to kitchen tables, from library tables to people's laps in coffee shops. Computer is an electronic device for performing arithmetic and logical operation.

### **What is Computer?**

Computer is an electronic device that processes data, converting it into information that is useful to people. Computers have changed the way we work, communicate, create and play. Computers are important because information is so essential to our lives.

### **Advantages of Computers**

#### ***Speed***

- ❖ Computer is a very fast device capable of performing calculation of very large amount of data.
- ❖ It can perform millions of calculations in a few seconds.

#### ***Accuracy***

- ❖ Computers are very accurate. They perform all jobs with 100% accuracy provided that the input is correct.

#### ***Storage Capacity***

- ❖ A computer has much more storage capacity than human beings. It can store any type of data such as images, videos, text, audio etc.

#### ***Diligence***

- ❖ Unlike human beings, computer is free from monotony, tiredless, and lack of concentration. It can work continuously without any error and boredom.

### **Disadvantages of Computers**

#### ***No I.Q.***

A computer cannot take any decision on its own.

#### ***No feeling***

Computers have no feelings or emotions. Unlike human beings computer cannot make Judgment based on feeling, taste, experience, and knowledge.

## **Classification of Computer**

On the basis of size, computers are classified as follows:

### **Micro Computers**

Micro Computer is a computer, whose CPU (Central Processing Unit) is a microprocessor. All components of the microprocessor are on a single integrated circuit chip.

***It can also be categorized as following:***

1. Desktop
2. Programmable
3. Workstation

### **Minicomputers**

They are faster than micro-computers. Basically these are mainly multi-user systems, where many users work on the systems. Generally these types of computer processes larger memories and greater storage capacity. K-202, T1-990 and MicroVAXII are examples of minicomputers.

### **Mainframe Computers**

They are large and expensive machines. Generally they handle huge volumes of information and data. In terms of speed, they have significant processing capacity. More than hundred users they can support at a time. The ICL39 and IBM 3090/4300 are the examples of mainframe computers.

### **Supercomputer**

Supercomputers are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations. The supercomputers are used in scientific, simulations, animated graphics, fluid dynamic calculations, nuclear energy research, and electronic design.

According to technology computers are classified as Digital computer, Analog computer and Hybrid computer,

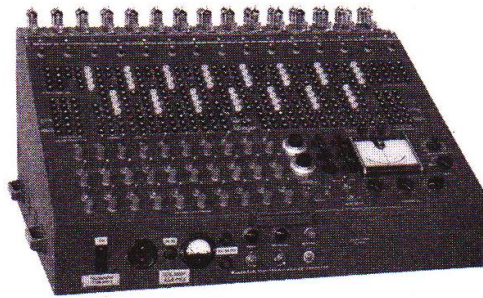
### **Digital Computer**

The digital computer stores data, such as text and picture in the form of numbers and proceed in discrete steps from one state to the next. The state of a digital computer involves binary (0s and 1s) digit. All operations are carried out on those digits at extremely -fast rates. Digital computer can be further classified in the purpose wise, size and performance wise.



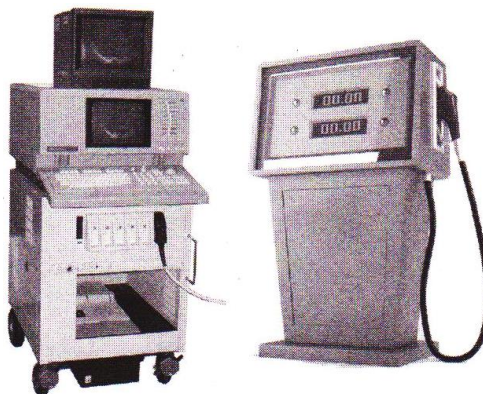
### **Analog Computer**

Analog computers use continuous physical properties for calculations. An analog magnetic tape, for example, manipulates magnetism to record sound. The magnetic imprint on the tape is a direct analog of the sound and is read back by reader. An analog computer uses physical properties in the same way. Analog computers have been built using mechanical, hydraulic, optical and electric principles.



### **Hybrid Computer**

The Hybrid computers combine the best quantities of both analog and digital computers. These types of computers are operated by measuring rather than by calculating. It works with analog or continuous values. Computations are carried out with physical quantities such as temperature, length and voltage. These types of computers are used for the measurement of patient's blood pressure, heart beat and the operation is carried out digitally to monitor patient's initial sign.



## Commonly Asked Question

**1. Which of the following statements is true about micro-computer?**

- (a) Microcomputer is faster than minicomputers.
- (b) Microcomputer is a computer whose CPU (Central Processing Unit) is a microprocessor.
- (c) Microcomputer can be categorized as desktop, workstation and programmable.
- (d) Both (b) and (c) are true
- (e) None of these

**Ans.** (d)

**2. Computers are of three types: Digital computers, Analog computers and Hybrid computers. Which one of the following types of computer is used for measurement of analog and digital input signals?**

- (a) Digital
- (b) Analog
- (c) Hybrid
- (d) All of these
- (e) None of these

**Ans.** (c)

**3. Which one of the following computers works on measurement?**

- (a) Hybrid
- (b) Laptop
- (c) Digital
- (d) All of these
- (e) None of these

**Ans.** (a)