2. There are input devices on the computer so that numbers can be read from external sources such as graphs or signals of different kinds and stored in the computer memory. The commonest input device is a punched-card reader which can convert the pattern of holes in the punched card into words of memory. The card itself is prepared by an operator reading the information from some external source.

3. There are output devices, which can take words from memory and transfer them to a typewriter, a printer, or some similar device. The commonest output device, the line printer, can produce up to 1200 lines of printing in one minute, equivalent to six hours of typing by a secretary.

4. The arithmetic unit is a collection of circuitry capable of performing the basic arithmetic operations (addition, subtraction, multiplication and division) on numbers stored in the memory and putting the answers back into the memory. Besides enabling a computer to perform these operations at very high speed (for example, addition of a million numbers per second) this unit also enables it to move numbers around in the memory, splitting them up or combining parts of them together. The many highly sophisticated tasks that a computer can carry out are merely combinations of these simple operations.

5. The control unit enables the computer to follow a predetermined and self-contained sequence of elementary steps. These steps are coded as numbers, stored in the memory, and then executed one after another under supervision of the control unit. A typical instruction defines the operation to be performed and the location in memory where the relevant data are stored.

This sequence of elementary steps is called the computer "program" and they can themselves cause modification of the sequence in which they are executed. To run a problem on a computer, this program is loaded into the memory from the input device. Then the computer is instructed to begin calculating using the instruction in some particular location. The program steps are then executed, one after another, data are read in from the input devices and results are printed on the line printer. To complete a given problem may require several minutes or several hours. When the work is completed the memory is erased, a new program is read in, and the computer is ready to begin a new task.