HISTORY OF COMPUTER

The history of the computer goes back several decades however and there are five definable generations of computers.

Each generation is defined by a significant technological development that changes fundamentally how computers operate –

(a) leading to more compact,

(b) less expensive,

(c) more powerful,

(d) efficient and robust machines.

The Five Generations of Computer are:

(1) First Generation – Vacuum Tubes

(2) Second Generation – Transistors

(3) Third Generation – Integrated Circuits

(4) Fourth Generation – Microprocessors

(5) Fifth Generation – Artificial Intelligence

FOURTH GENERATION : MICROPROCESSOR (1971-1980)

The fourth generation computers was developed using microprocessor.

The Intel 4004 chip was the first microprocessor developed in 1971, which positioned all computer components (CPU, memory, input/output controls) onto a single chip.

What filled a room in the 1940s now fit in the palm of the hand. The Intel chip housed thousands of integrated circuits.

The microprocessor is a silicon chip contains millions of transistors that was designed using LSI and VLSI technology.

In fourth generation computers the semiconductor memory is replaced by magnetic core memory resulting in fast random access to memory.

The instructions to the computer were written in high level language instead of machine language and assembly language.

ADVANTAGES:

(a) Very Large Scale Integration.

(b) More reliable than previous generation computers.

(c) Perform calculations in Picoseconds.

(d) Consumes less power than the previous generation computers.

(e) No air conditioning is required.

(f) Totally general purpose.

(g) Cost is low compared to the previous generation computers.

(h) All types of high level languages is used for fourth generation computers.

(i) Maintenance cost is low compared to the previous generation computers.

(j) Fourth generation computers are portable.

(k) Generates less heat than the previous generation computers.

(l) Learning high level language is easier than assembly and machine language.

DISADVANTAGES:

(a) The soldering of LSI and VLSI chips on the wiring board was not an easy task and required complicated technologies to bind these chips on the wiring board.

(b) The working of these computers is still dependent on the instructions given by the programmer.

Some Computers of the fourth generation include:

(1) ALTAIR 8800

(2) Apple I

(3) Macintosh

(4) IBM PC