

Students, computers, as you know them today, were not always like these. Computers have passed through a number of stages to reach their current form. Let us discuss about early computers or early calculating devices. (Students, Please learn them and also go through the pictures which are given in pages-7, 8, 9)

1. Abacus- It was the first calculating device. Simple calculations, such as addition and subtraction, could be performed using this abacus.

2. Napier's Bones- Sir John Napier made a calculating device and called it Napier's Bones. It was used for addition, subtraction, multiplication and division. It consisted of a set of eleven rectangular ivory rods.

3. Pascaline- The Pascaline was the first mechanical calculator and was invented by Blaise Pascal. It consisted of a rectangular box with eight movable wheels. It could add and subtract numbers. The Pascaline also did multiplication by repeated addition and division by repeated subtraction.

4. Leibnitz Calculator- it was invented by a German Mathematician, Gottfried Von Leibnitz. It could also do addition, subtraction, multiplication and division.

5. Difference Engine- Charles Babbage, a British Mathematician invented the Difference Engine and it was powered by Steam.

6. Analytical Engine – Charles Babbage had given the idea and blueprint of a machine, known as the Analytical Engine. The machine was much similar to modern computers and used the concept of the memory for the first time. That is why Charles Babbage is called “The Father Of Modern Computers”.

#### Quick Recap (Page no. 9)

Answers:- 1. Blaise Pascal 2. Difference Engine 3. Howard Aiken

#### Extra Questions & Answers:-

1. Who invented Tabulating Machine and what was it used for?

Ans:- Dr. Herman Hollerith invented the Tabulating Machine and it was used to calculate the results of the US Census. (Census means an official count or survey, especially of a Population)

2. What is Jacquard's Loom?

Ans:- A French textile weaver, Joseph J. Jacquard invented a weaving machine, known as Jacquard's Loom.

Next, Students please read about all the Generations of the computer and also about Desktop, Laptop and Tablet.

#### Quick Recap(Page 11)

Answers- 1. F 2. F 3. T

#### Exercises (page 15)

1. Answer the following questions:-

- Read Napier's Bones notes.
- Dr. Herman Hollerith put forward the concept and design of the Tabulating Machine.
- See the answer from Quick Recap(page -9)
1. Make Multimedia Presentations  
2. Maintaining Students' Data
- ENIAC and UNIVAC

2. Fill up:-

- It took five generations to develop the modern computers.
- First Generation computers were made of very large and heavy Vacuum Tubes.
- Fifth Generation computers can work without users.
- In defence services, computers are used for controlling and guiding Missiles.
- Computers can be used in schools to keep the fee records of students.

3. Match the following:-

- First Generation Computer ----- ENIAC
- 2<sup>nd</sup> Generation Computer ----- IBM 7090

- c. Blaise Pascal ----- Pascaline
  - d. Pre-recorded Messages ----- Voice Recognition System
  - e. Electric Wires----- Integrated Circuits
  - f. Educational CD-ROMs -----help you learn in a better way
4. a. Abacus b. Abacus c. Napier's Bones d. Napier's Bones
6. a. False b. True c. False d. False

**Home Work**

Write down the names of the places where you have seen the usage of computers.