

**Session 2020-2021**  
**Class : VI**  
**Subject : Computer**  
**Chapter : 1 (Computer System)**

**Introduction:** Man has developed a most powerful tool, which is called computer. A computer is a type of machine. It doesn't have a brain like us and it can't think or have ideas, but it can follow stored instructions and do lots of useful things.

Generations of computer: A generation refers to the state of improvement in the product development process. In terms of the technological developments over time, Computers have been broadly classified into five generations.

**1. Fill in the blanks:**

- a. A computer is never gets tired.
- b. A computer has unlimited capacity to store data.
- c. A generation refers to the state of improvement in the product development.
- d. First generation computers used vacuum tubes as their main components..
- e. Fifth generation computers work on artificial intelligence.

**2. Tick the correct answer:**

- a. Which of the following is considered a powerful machine?  
(i) Room heater    (ii) Refrigerator    (iii) Computer    (iv) Car
- b. Which one of the following is an example of First generation computer?  
(i) COBOL    (ii) PDP 11    (iii) ENIAC    (iv) IBM 360
- c. Generation of computer can be classified in:  
(i) Five generation    (ii) Six generation    (iii) Three generation    (iv) Four generation
- d. Computers of which generation covered large space for installation:  
(i) First generation    (ii) Second generation    (iii) Fifth generation    (iv) Third generation
- e. The operating speed and programming capability of first generation computers was:  
(i) High    (ii) Low    (iii) Medium    (iv) Average
- f. Computers of which generation used integrated circuits:  
(i) Fifth generation    (ii) Third generation    (iii) First generation    (iv) Second generation
- g. In third generation computer, the language used to run many programs simultaneously are:  
(i) BASIC    (ii) COBOL    (iii) Both (i) and (ii)    (iv) None of these
- h. The set of instructions written for a particular task is known as:  
(i) Computer program    (ii) Flow chart    (iii) Programming language    (iv) Windows

**Answer for tick the correct:**

a	b	c	d	e	f	g	h
(iii)	(iii)	(i)	(i)	(ii)	(ii)	(iii)	(i)

### 3. Write 'T' for True and 'F' for False statements:

- a. A computer can perform its functions on the basis of instructions given by the user. T
- b. Third generation computers were more advanced. T
- c. Computer converts a high level program into English language. F

### 4. Answer the following questions:

#### Question a. Into which generation of computers, vacuum tubes were used?

**Answer:** In first generation of computers vacuum tubes were used as main components and punched tapes were used for Input or Output.

#### Question b. What do you know about machine language?

**Answer:** It is a lowest level of programming language and was the first type of programming language. Machine language is represented inside the computer by binary digit 0 (zero) and 1 (one). The symbol 0 stands for the absence of electric pulse and 1 for the presence of an electric pulse.

#### Question c. Explain the main characteristics of a computers.

**Answer:** Some characteristic of computer are:

**Speed-** It has a very high speed and can perform millions of calculations in a few seconds.

**Storage-** It has unlimited storage capacity.

**Diligence-** It never gets tired nor does it suffer from carelessness.

**Versatility-** It is capable of handling not only the complex arithmetical problems but numbers of other jobs.

**Accuracy-** It never makes mistakes.

#### Question d. What do you mean by high level language and low level language? Give examples of each.

**Answer:**

**High Level Language:** High Level Language is simple and user friendly language. It is similar to English language and designed to be easier to use, more abstract and more portable.

Example- BASIC, FORTRAN, C, C++, JAVA, etc.

**Low Level Language:** Low Level Languages are close to machine language than to human language. Computer cannot understand instructions given in high level language or in English, it can understand only machine language, i.e. language of 0 and 1. Example- Assembly language and Machine language.

### Question e. Differentiate between the First and Second generation computers?

**Answer:**

#### **First generation computer (1942 – 1955)**

1. Very large in size.
2. Very expensive to operate.
3. Main components were Vacuum tubes and Punched tape.
4. They produce lots of heat and consume more electricity.
5. Based on machine language.
6. Example- ENIAC, UNIVAC I, etc.

#### **Second generation computer (1956 – 1964)**

1. Smaller than first generation computers.
2. Less expensive as compared to first generation.
3. Main component used Transistors.
4. They produce less heat and consume less electricity.
5. Based on Assembly language.
6. Example- IBM 700, CDC 160, etc.

### **5. Give the full forms of the following:**

- |              |  |
|--------------|--|
| (i) UNIVAC   | Universal Automatic Computers                    |
| (ii) ENIAC   | Electronic Numerical Integrator And Computers    |
| (iv) AI      | Artificial Intelligence                          |
| (v) IC       | Integrated Circuit                               |
| (vi) FORTRAN | Formula Translation                              |
| (vii) VLSIC  | Very Large Scale Integrated Circuit              |
| (viii) BASIC | Beginner's All-Purpose Symbolic Instruction Code |
| (ix) COBOL   | Common Business Oriented Language                |

### **6. Define the following term:**

**(i) Interpreter:** Interpreter is a translator that converts a high level programming language into a machine language. It takes one line, translates and executes it and then takes another line. It will stop the translation in case an error occurs. It takes more time in execution.

**(ii) Compiler:** Compiler converts a high level program into machine language. It translates the complete program and then executes it at one time. It generates the error report after the translation of the entire page. The execution is very fast.

### **7. Name the components which were used in the following.**

- a. In first generation computers, Vacuum tubes were used.
- b. In second generation computers, Transistors were used.
- c. In third generation computers, Integrated Circuits (IC) were used.
- a. In fourth generation computers, LSIC and VLSIC were used.
- a. In fifth generation computers are based on Artificial Intelligence.

8. Draw the following diagrams:

a. Vacuum Tube:



b. Microprocessor:



Complete all the exercises and diagrams in your note book