

CATEGORIES OF COMPUTERS AND COMPUTER LANGUAGES

SHORT ANSWER QUESTIONS :-

1. Define analog computer .

Ans :- An analog computer is the type of computer that works on varying physical quantities in which the data input is continuous in nature irrespective of the variations in input and the results are obtained after comparison .Example- meter scale ,thermometer .

2. What is a digital computer ?

Ans :- A digital computer is the type of computer that accepts data in the binary form (i.e, in 0's and 1's) and gives the result in terms of digits .Example – all personal computers ,digital watches ,etc .

3. Define mainframe computers .

Ans :- Mainframe computers are large computers with huge storage capacities that are generally used in large industries ,banking organisations ,scientific research centres ,etc.

4. What is meant by C++?

Ans :- C++ is an object oriented programming language that is derived from C language and it applies object oriented features of Simula 67. This language allows the user to perform long operations efficiently in short form .

5. What is an assembler ?

Ans :- Assembler is a software which is used to convert a program written in an Assembly level language into a machine level language .

II Differentiate :-

1. MACHINE LEVEL and ASSEMBLY LEVEL LANGUAGES .

Ans :- MACHINE LEVEL LANGUAGE :-

- i) It does not require any language processor .
- ii) The instructions are given in terms of 0's and 1's .
- iii) The process of generating binary codes were time consuming .

Assembly level language :-

- i) It requires a translator .
- ii) The instructions are given in the form of mnemonics .
- iii) It takes less time in coding the instructions .

2. HIGH LEVEL AND LOW LEVEL LANGUAGE :-

Ans :-

High level language :-

- i) These languages are used to write programs in simple English and by using alphabets and numbers
- ii) They are machine independent .

Low -level Language :-

- i) These languages are used to write programs with the combination of 0's and 1's.
- ii) They are machine dependent .

3.COMPILERS AND INTERPRETER

ANS :-

Compilers :-

- i) It converts the entire program into its machine code at once .
- ii) It displays the errors for the entire program only after compilation.

Interpreters :-

- i) It converts the entire program into its machine code line by line .
- ii) It displays the errors of one line at a time during the conversion to its machine code .

III LONG ANSWERS :-

1 What are the limitations of machine level languages ?

Ans :- The limitations are :-

- i) The process of generating binary codes is very time - consuming .
- ii) there is always a chance of making mistakes during the conversion into binary codes.
- iii) It is a machine – dependent language .

2. Enlist three features of the second generation of computers .

Ans :- Three features are :-

- i) They used transistors as the main components .
- ii) They were smaller in size as compared to the first generation computers .
- iii) The processing speed of these computers increased to microseconds .

3. what are the advantages of high -level languages ?

Ans :- The advantages are :-

- i) They are machine independent languages .
- ii) They are easy to learn and help to develop programming logic .
- iii) Programs in these language can be easily modified .

4.State two limitations of the first generation of computers .

Ans :- Two limitations are :-

- i) These computers were difficult to operate .
- ii) These computers consumed a lot of electricity .

5. Give three features of the third generation of computers .

Ans :- Three features are :-

i) They used integrated circuits as the main components .

ii) They could do fast calculations in nanoseconds .

iii) Their capacity to hold data and information increased due to improved secondary storage devices .

INSIDE QUESTIONS :-

1. Write the features of 4th generation computer?

Ans: The features are :-

a) They used Microprocessor.

b) They have high storage capacities.

c) They used keyboard, mouse and scanner etc for input and monitor, printer, speaker etc for output.

2. . Name three types of language Translator.

Ans:- Three types of language translator are:-

i) Compiler. ii) Assembler. iii) Interpreter.

3. Define Integrated Circuits (ICs) .

Ans :- An integrated circuit is a compact electronic circuit containing hundreds of transistors and other electronic components that are packed on a thin piece of semi-conductor material known as the IC chips.

4. Define dedicated computers or special purpose computers .

Ans :- Computers in which a set of instructions are built into the computers for performing a single or a specific task repeatedly are called dedicated computers or special-purpose computers . Examples:- computers used to control Air Traffic , traffic lights , etc .

5. Define Instruction .

Ans :- Instruction is a command or order given to the computer to perform a specific task .

6. Define Translator .

Ans :- Translator is a software that converts instructions written in an assembly level language or high level language into machine level language .

7. Define compiler .

Ans :- Compiler is a software that is used to convert an entire program from a high-level language to a machine level language at once .

8. Define Interpreter .

Ans :- An interpreter is a software that converts instructions from a high-level language to a machine level language line -by-line .

9. Name the following :-

i) The first compiler was designed by Grace Hopper .

ii) The first widely used High level general purpose programming language – FORTRAN

iii) FORTRAN was invented by --- John Backus .

iv) BASIC was developed by ---- John Kemeny and Thomas Kurtz .

v) C programming language was developed by ---- Dennis Ritchie .

vi) The first super computer --- CRAY- I

vii) Two super computer made in India --- PARAM , ANURAG .

Viii) First fully operated electronic and general-purpose computer--- ENIAC .

10. Short Note on Hybrid Computer.

Ans : A hybrid computer has combined features of both analog and digital computer. The result obtained can be compared with the known value of the system and also be directly visualised.

Example:- Hybrid watch .

11. Write two limitations of Assembly language.

Ans : The limitations are : a) It is machine dependent language.

b) Instructions developed in the form of mnemonics must be coded into OP-code form.

12. Write the limitations of High Level Language.

Ans: The limitations are :- i) Different languages have different syntax of writing a statements .

ii) They require translator to convert into machine –readable binary codes.

13. Write a note on Minicomputers .

Ans :- Minicomputers are smaller in size than mainframe computers .They have a higher capacity to store data .They support a multi -user system and Local Area Network .Example – the IBM minicomputer.

14. Short Notes on Micro computer.

Ans:- Micro computer use processor. They are compact, small in size and cheapest among all. They are designed for general uses like entertainment, education and in offices. They are referred to as Personal Computer.

15. Write two advantages of Assembly language.

Ans:- The advantages are :

i) It takes less time in coding instruction.

ii) Programming logic can be developed easily.

16. Write the classification of Computer language.

Ans:- Computer language is classified into two major groups: a) Low Level Language b) High Level Language.

The Low Level Language can be divided into: a) Machine language b) Assembly Language.

Write the full form :-

MLL- Machine Level Language

ALL – Assembly Level Language .

HLL – High Level Language

VB – Visual Basic .

ENIAC – Electronic Numerical Integrator And Calculator .

IBM – International Business Machine .

UNIVAC – Universal Automatic Computer .

COBOL – Common Business - Oriented Language .

BASIC – Beginners All Purpose Symbolic Instruction Code .

LEO – Lyons Electronic Office

Pg 14:- III :-Name the high level language :-

1. C++ ,JAVA

2.C Language

3.JAVA

4.C ++

IV .Match the following :-

1-C

2-E

3-A

4-B

5-D

V :- Name the main component :-

1.Vacuum tubes

2.Transistors

3.Integrated Circuits (ICs)

4.Microprocessors

