

Class VI

COMPUTER

Chapter 1

COMPUTER LANGUAGES

EXERCISES

1. MCQs.

- a. A group of instructions given together to perform a particular task is called _____.
- i) Program ii) High-Level Language iii) Assembler iv) Compiler

Ans. i) Program

- b. A _____ is a language which computer can directly understand.
- i) Machine Language ii) Assembly Language iii) QBASIC iv) Java

Ans. i) Machine Language

- c. A language that uses symbols for machine instructions.
- i) Machine Language ii) Assembly Language iii) QBASIC iv) Java

Ans. ii) Assembly Language

- d. Languages that require a Interpreter/Compiler to convert to machine language.
- i) Assembly Language ii) High Level Languages iii) Both a and b iv) None of the above

Ans. ii High Level Languages

- e. A translator that reads a high-level language program one line at a time and execute it.
- i) Assembler ii) Interpreter iii) Compiler iv) All of these

Ans. ii) Interpreter

2. True (T) or False (F).

- a. Assembly Language uses a string of 1's and 0's for providing instructions.-F
- b. High-Level Languages uses a symbol as one-to-one correspondence with machine instructions.-F
- c. Assembly language is independent of the machine architecture.-F
- d. Machine Language programs are easy to understand and maintain.-F
- e. Compiler converts an entire high-level language program to machine language.-T

3. Fill in the blanks.

- a. It is easy to remove Errors in programs written in high-level languages.
- b. Language Processors are special type of programs that converts programs written in languages other than machine language to machine language.
- c. Assembler is a translator that converts a program written in Assembly Language to Machine Language.
- d. Compiler is a translator program that converts an entire program to machine language, if error free.
- e. Interpreter is a translator program that converts a source code line by line to machine language.

4. Short answer type questions.

- a. A language that uses 1's and 0's for giving machine language instructions.
Ans. Machine Language
- b. A translator that converts an entire program in machine language to an intermediate language or machine language.
Ans. Interpreter
- c. A language that uses mnemonics that corresponds to a machine instruction.
Ans. Assembly Language
- d. A language where you need to have a deep understanding of the hardware.
Ans. Machine Language
- e. Programs written in a high-level language to perform a certain task called.
Ans. Software

5. Long answer type questions.

- a. What is a Program?
Ans. A set of instructions given to the computer for processing using the processor to perform a particular task is called a Program.

- b. What are Programming Languages? Classify them.

Ans. Computer Languages with proper syntax and grammar that are used to give instructions to the computer are called Programming Languages

Classification

1. Low-Level Language 2. Assembly Language 3. High-Level Language

- c. State one advantage and one disadvantage of using the machine language.

Ans. **Advantage:** Execution of Machine Language programs are fast as it do not require any translation.

Disadvantage: Difficult to learn as the programmer needs to have the knowledge of the machine architecture.

d. What is an Assembly Language? State one advantage and disadvantage of using the Assembly Language.

Ans. Assembly Language is a programming language where each instruction given to the computer corresponds to a computer's architecture. The instructions are in the form of symbols called mnemonics.

Advantage: It is easier to write a program in assembly language compared to machine language. **Disadvantage:** Since assembly language is specific to a particular machine architecture, a program written for one processor will not work on a different processor, if it is architecturally different.

e. State two differences between Machine Language and Assembly Language.

Ans.

Machine Language	Assembly Language
Uses a string of 1's and 0's for giving instructions.	Uses mnemonics or symbols to refer to a machine architecture.
Execution is fastest.	Execution is comparatively slower.

f. State 3 differences between High-Level Languages different from Low-Level Languages?

Ans.

High-Level Language	Low-Level Language
Learning: It is easy to learn a high-level language.	Learning: It is difficult to learn a low-level language.
Understanding: As high-level languages are almost like natural languages, it is easy to understand.	Understanding: Low-level languages are difficult to understand.
Execution: Programs in high-level languages are slow in execution compared to low-level languages.	Execution: Programs in low-level languages are faster in execution compared to high-level languages.

g. State two advantages and disadvantages of using a High Level Language.

Ans.

Advantages

- Programs written in high-level languages are comparatively more readable than low-level languages.
- Programs written in high-level languages can run in different machine architecture with little or no change.

Disadvantage

- It requires a translator program to convert a program written in high level language to machine language.
- It does not execute on the computer directly.

h. What are Language Processors? Classify Language Processors.

Ans. Language Processors are programs that converts programs written in High-level language and Assembly Language to Machine Language.
Classification

1. Compiler
2. Interpreter
3. Assembler

i. State three differences between Interpreter and Compiler.

Ans.

Compiler	Interpreter
Compiler takes an entire program as input.	Interpreter takes a line as input.
Intermediate Object Code is Generated .	No Intermediate Object Code is Generated , rather directly executes the machine code.
Conditional Control Statements are executed faster , as compilers can optimise conditional control statements as the entire program is involved.	Conditional Control Statements are Executed slower as translation and execution is a line by line approach.