Chapter – 2 Computer Languages

Answer the following questions

1. What do you mean by Machine Language?

   Machine language is the only language that a computer understands. It is expressed in binary form, i.e., '0's and '1's where 0 means 'Off' state and 1 means 'On' state.

2. How is Assembly Language different from Machine Language?

   This language uses Mnemonic codes or Symbols in place of 0 and 1. For example, if the operation code for add is 0010 in binary language, it can be directly written as 'ADD' in

   assembly language. Since Assembly language uses symbolic codes, it is easier to work with Assembly language than in binary language.

3. What are the features of a High – Level Language?

HIGH-LEVEL	● Uses English words and Mathematical operators. ● Machine-independent. ● Has to be converted into Machine language by Translator programs (Interpreters and Compilers).

4. Differentiate between an Interpreter and a compiler

Basis of difference	Compiler	Interpreter
Input	It takes an entire program	It takes a single line of code.
Output	Compliers generates intermediate machnie code.	Interpreter never generate any intermediate machnie code.
Errors	Display all errors after, compilation, all at the same time.	Displays all errors of each line one by one.
Programming languages	C,C++,C#, Scala, Java all use compiler.	PHP, Perl, Ruby uses an interpreter.

5. List any three characteristics of the fourth generation language

- Highly user-friendly and independent of any operating system.
- Very high speed of execution. Designed to reduce the level of programming efforts.
- Minimum efforts from the user to obtain any information.