**Module -1 (SDLC)**

Q1. What is software?

Ans. Software is a set of instructions, data or programs used to operate computers and execute specific tasks. It is the opposite of hardware, which describes the physical aspects of a computer. Software is a generic term used to refer to applications, scripts and programs that run on a device.

Q2. What are the types of Applications?

Ans. The types of Applications software are:-

* Word processors - Simulation software
* Data base - Customer relationship software
* Multimedia - ERP application software
* Web browser - Open-source license
* Spreadsheet software - Business process management
* Freeware - Closed source
* Presentation software - Business
* Educational software - Productivity software
* Graphics software - Information management
* Shareware - Project management
* Project management software - Information software
* Resource management software - Utility software

Q3. What is programming?

Ans. Programming refers to a technological process for telling a computer which tasks to perform in order to solve problems. You can think of programming as a collaboration between humans and computers, in which humans create instructions for a computer to follow in a language computer can understand.

Q4. What is python?

Ans. Python is dynamically typed and garbage collected. It supports multiple programming paradigms, including structured, object-oriented and functional programming. It is often described as a “batteries included” language due to its comprehensive standard library.

Guido van Rossum began working on python in the late 1980s as a successor to the ABC programming language and first released it in 1991 as python 0.9.0. Python 2.0 was released in 2000. Python 3.0, released in 2008, was a major revision not completely backward-compatible with earlier versions. Python 2.7.18, released in 2020, was the last release of python 2.

Python consistently ranks as one of the most popular programming languages, and has gained widespread use in the machine learning community.

**Module 2 (Fundamentals of Python)**

Q1. How memory is managed in python?

Ans. You can classify memory management in python in one of two ways:

- Dynamic allocation

- Static allocation

Dynamic allocation occurs as the program is running. This means that as the program operates, it can dynamically determine where to allocate memory while reusing and releasing it.

Static memory allocation happens before the running if a program, predetermining the amount and distribution of the memory, and without the ability to reuse memory.

Q2. What is the purpose continue statement in python?

Ans. The continue statement is used to skip the remaining code inside a loop for the current iteration only. In other words the continue statement terminates execution of the statement in the current iteration of the current or labeled loop, and continues execution of the loop with the next iteration.

Q3. What are negative indexes and why are they used?

Ans. Negative indexing is used in python to manipulate sequence objects such as lists, arrays, strings, etc. Negative indexing retrieves elements from the end by providing negative numbers as sequence indexes.