* **Software Testing**

**Module-1(Fundamental)**

1. **What is SDLC?** SDLC (Software Development Life Cycle) is a systematic process for planning, creating, testing, and deploying software, ensuring a structured approach from inception to maintenance. It provides a framework for managing complex software projects efficiently.
2. **What is software testing?** Software testing is the process of evaluating a software application to find defects, ensure it meets specified requirements, and verify its quality and performance. It aims to identify errors, gaps, or missing requirements against the actual results.
3. **What is agile methodology?** Agile methodology is an iterative and incremental approach to software development that emphasizes collaboration, flexibility, customer feedback, and rapid delivery of working software. It focuses on adapting to change rather than strict adherence to a plan.
4. **What is SRS?** SRS (Software Requirements Specification) is a comprehensive document detailing all functional and non-functional requirements of a software system. It serves as a blueprint for development, ensuring all stakeholders have a clear understanding of what needs to be built.
5. **What is OOPs?** OOPs (Object-Oriented Programming) is a programming paradigm based on the concept of "objects," which can contain data and code to manipulate that data. It aims to organize software design around data, rather than functions and logic.
6. **Basic Concepts of OOPs:** The fundamental principles of OOPs are Encapsulation, Inheritance, Polymorphism, and Abstraction. These concepts allow for modularity, reusability, and easier management of complex software systems.
7. **What is object?** An object is a real-world entity and a basic run-time entity in an object-oriented system, representing an instance of a class. It has a state (attributes) and behavior (methods).
8. **What is class?** A class is a blueprint or a template from which objects are created, defining their common properties (attributes) and behaviors (methods). It acts as a logical construct for creating instances.
9. **What is encapsulation?** Encapsulation is the bundling of data (attributes) and the methods that operate on the data within a single unit or class, restricting direct access to some of the object's components. It promotes data hiding and security.
10. **What is inheritance?** Inheritance is a mechanism where one class (subclass/child) acquires properties and behaviors (attributes and methods) from another class (superclass/parent). It promotes code reusability and establishes an "is-a" relationship.
11. **What is polymorphism?** Polymorphism means "many forms," allowing objects of different classes to be treated as objects of a common type, enabling a single interface for different data types. It allows methods to behave differently based on the object calling them.