

## **1. What is Software Testing?**

Software testing is the process of verifying and validating that a software application works according to predefined requirements and meets the expected objectives. It ensures that the product behaves as expected.

## **2. Why is Software Testing important?**

Software testing is important to ensure product quality, satisfy end users, and identify bugs before the software is released. Bugs can be introduced knowingly or unknowingly, and testing helps catch them early to avoid failures in production.

## **3. Difference between QA and QC**

Quality Assurance (QA) is process-oriented and focuses on preventing defects by improving processes. Quality Control (QC) is product-oriented and focuses on identifying defects in the actual software product.

## **4. Role of a QA Engineer**

A QA Engineer communicates with stakeholders such as developers, product owners, and business analysts to understand requirements, design test cases, execute tests, report defects, and ensure that the software is delivered with high quality and minimal bugs.

## **5. What is SDLC?**

SDLC stands for Software Development Life Cycle. It is the complete life cycle of software development starting from requirement analysis, followed by design, development, testing, deployment, and maintenance.

## **6. What is STLC?**

STLC stands for Software Testing Life Cycle. It is a subset of SDLC and defines the different phases of testing such as requirement analysis, test planning, test case design, test execution, defect reporting, and test closure.

## **7. What is a Bug or Defect?**

A bug or defect is a deviation between the expected result and the actual result of the software when it does not behave according to the specified requirements.

## **8. Verification vs Validation**

Verification means checking whether we are building the product correctly according to specifications and design documents. Validation means checking whether we are building the right product that meets the actual needs of the end users.

## **9. What is Test Coverage?**

Test coverage is a measure of how much of the application or requirements are tested using test cases. It helps ensure that maximum functionality of the software is tested.

## **10. What is a Test Environment?**

A test environment is a setup that includes hardware, software, databases, network configurations, and tools where testing activities are performed.