

Q:1- Introduction to software quality assurance:

- Exploring the importance of quality assurance processes and methodologies?

Ans:- **Introduction to Software Quality Assurance:**

Software Quality Assurance (SQA) is a set of systematic activities and processes carried out to ensure that software products and services meet defined quality standards. It encompasses a range of activities aimed at preventing defects, detecting and resolving issues, and ensuring that software meets the specified requirements and user expectations.



The primary goal of Software Quality Assurance is to establish and maintain high-quality software throughout the software development life cycle (SDLC). It involves a combination of techniques, methodologies, and tools to assess and improve the quality of software products, processes, and resources. SQA is typically implemented by a dedicated team or department within an organisation, responsible for overseeing the quality of software projects.

Importance of Software Quality Assurance Methodologies

Quality assurance is vital for several other parts of the business, including client interactions and the company's reputation in the marketplace. In addition to

discovering flaws and places for improvement in a product. Let's look at some of the major considerations.

- 1: Better quality assurance ensures that the product's quality, as well as competitiveness, are maintained before it is distributed to customers.
- 2: By applying SQA, you can save money and time, because repairing flaws in an already planned and programmed product consumes time and costs more money.
- 3: SQA engineers verify that the system is built without flaws and that it behaves as planned in the hands of end-users during the development process.



- 4: It aids in the discovery of security flaws in software and the development of a completely secure and reliable product.

5: Software quality assurance ensures that the software meets the specified quality standards and requirements.