

# **JIMS Engineering Management Technical Campus**

Greater Noida, Ghaziabad-201304

Affiliated to Guru Gobind Singh Indraprastha University, New Delhi)

Recognized u/s 2(f) by UGC & Accredited with 'A' Grade by NAAC

Participant of United Nations Global Compact, New York

ISO 9001:2015 Quality Certified

## **Assignment 4(Based on Unit 4)**

**Course:** B.Tech (CSE)

**Subject Code:** CIC-309

**Semester:** Vth C

**Subject:** Software Engineering

**Note: Last date of Assignment 4 submission 15<sup>th</sup> November 2025**

**Assignment should be in A4 sheet.Also upload on ERP**

**Course:** B.Tech (CSE)

**Subject Code:** CIC-309

**Semester:** Vth C

**Subject:** Software Engineering

1. Explain the software testing process in detail. What are the major steps involved? List any four software testing tools and their applications.
2. Describe boundary value analysis and equivalence class testing with suitable examples.
3. Compare and contrast functional testing and structural testing.
4. What is path testing? Describe how control flow graphs are used in it.
5. Explain data flow testing with an example of a data anomaly.
6. Describe mutation testing, unit testing, integration testing, and system testing with examples.
7. Discuss the importance of software maintenance in the software life cycle. Describe the software maintenance process with its key stages.
8. Explain reverse engineering and its benefits in maintaining legacy systems.
9. Define software re-engineering and explain its process with suitable examples.
10. What is software configuration management (SCM)? Describe its key activities.