UNIT 1 – SDLC MODELS & WHITE-BOX TESTING

1. Phases of software project.

2. Software quality, quality assurance and quality control.

3. Testing, verification and validation.

4. Process models and life cycle models.

5. Types of SDLC models.

6. White-box testing concepts.

7. Static testing.

8. Structural testing.

9. Challenges in white-box testing.

UNIT 2 – BLACK-BOX & INTEGRATION TESTING

1. What is black-box testing?

2. Why black-box testing is required?

3. When to perform black-box testing?

4. Techniques of black-box testing.

5. Challenges in black-box testing.

6. Integration testing.

7. Integration testing as a phase.

8. Scenario testing.

9. Defect bash testing.

UNIT 3 – SYSTEM & ACCEPTANCE TESTING

1. System testing overview.

2. Need for system testing.

3. Functional testing.

4. Non-functional testing.

5. Differences between functional and non-functional testing.

6. Acceptance testing.

7. Summary of testing phases.

UNIT 4 – PERFORMANCE & REGRESSION TESTING

1. Performance testing.

2. Factors governing performance testing.

3. Performance testing methodology.

4. Performance testing tools.

5. Performance testing process.

6. Challenges in performance testing.

7. Regression testing.

8. Types of regression testing.

9. When and how to perform regression testing.

10. Best practices in regression testing.

UNIT 5 – TEST PLANNING & METRICS

1. Test planning.

2. Test management.

3. Test execution process.

4. Test reporting.

5. Best practices in testing.

6. Test metrics and measurements.

7. Project metrics.

8. Progress metrics.

9. Productivity metrics.

10. Release metrics.