Day 1 – Foundations of Testing

- Fundamentals of Testing
    - What is Testing? (Objectives, Testing vs Debugging)
    - Why is Testing Necessary? (Contribution, QA Role, Errors, Defects, Failures)
    - Testing Principles
    - Test Activities, Testware, Roles
    - Essential Skills & Good Practices
- Testing Throughout the Software Development Lifecycle
    - SDLC Models
    - DevOps & Testing
    - Shift-Left Approach
    - Retrospectives & Process Improvement
    - Test Levels (Unit, Integration, System, Acceptance)
    - Test Types (Functional, Non-functional, Regression, Confirmation)
    - Maintenance Testing

Day 2 – Static Testing & Test Design Techniques

- Static Testing
    - Work Products
    - Value of Static Testing
    - Feedback & Review Process
    - Roles & Responsibilities in Reviews
    - Review Types & Success Factors
- Test Analysis & Design Techniques
    - Classification of Test Techniques
    - Black-Box: Equivalence Partitioning, Boundary Value Analysis, Decision Table, State Transition
    - White-Box: Statement & Branch Testing, Coverage
    - Experience-based: Error Guessing, Exploratory, Checklists
    - Collaboration-based: User Story Writing, Acceptance Criteria, ATDD

Day 3 – Test Management & Tools

- Managing Test Activities
    - Test Planning (Purpose, Plan Content, Entry/Exit Criteria, Estimation, Prioritization)
    - Test Pyramid & Testing Quadrants
    - Risk Management (Attributes, Product/Project Risks, Risk Analysis & Control)
    - Monitoring, Control & Completion (Metrics, Reports, Communication)
    - Configuration & Defect Management
- Test Tools
    - Tool Support for Testing
    - Benefits & Risks of Test Automation

Day 4 – Agile Fundamentals & Processes

- Agile Software Development
    - Agile Manifesto & Principles
    - Whole-Team Approach
    - Early & Frequent Feedback
    - Agile Approaches (Scrum, XP, Kanban)
    - Collaborative User Story Creation
    - Retrospectives
    - Continuous Integration
    - Release & Iteration Planning
- Agile Testing Principles, Practices & Processes
    - Differences: Traditional vs Agile Testing
    - Testing & Development Activities
    - Agile Work Products
    - Test Levels in Agile
    - Testing & Configuration Management
    - Independent Testing Options

Day 5 – Agile Testing Methods & Tools

- Agile Testing Methods
    - TDD, ATDD, BDD
    - Test Pyramid
    - Testing Quadrants, Levels, Types
    - Role of a Tester
- Assessing Quality Risks & Estimation
    - Quality Risks in Agile
    - Estimating Test Effort
- Agile Testing Techniques
    - Acceptance Criteria & Coverage
    - Applying ATDD
    - Functional & Non-functional Black-Box Techniques
    - Exploratory Testing in Agile
- Agile Tools
    - Task Management & Tracking
    - Communication & Information Sharing
    - Build & Distribution Tools
    - Configuration Management Tools
    - Test Design & Execution Tools
    - Cloud & Virtualization Tools
- Wrap-up & Exam Readiness
    - Recap of Key Concepts
    - Sample Questions