Body Of Knowledge

Manual Testing. (16 hrs)

Software Testing Concepts and Terminology

What is Testing
Purpose of Software Testing
Approaches of Testing
Objective of Testing
Hurdles Of Testing
Categories of Testing
Defect Distribution
Psychology of Tester
Characteristics of tester
Roll of a Tester

Software Development Life cycle

Requirements Role and Importance
BRS and SRS Documents
Use Case Components
Using Use Cases to find missing requirements

Deriving Tests based on Use Cases

Negative Testing based on Use Cases

Requirement Validation
Planning and Analysis
Designing
HLD and LLD Documents
Coding
Testing
Black box testing
White Box testing
Release and Maintenance
Sequential
Iterative
Incremental
Waterfall Model
Prototype Model
Spiral Model
RAD Model
V- Model

Static Testing

Why do we need to inspect
Benefits of inspection
Why do inspection programs fail
Inspection after or before unit testing
Different forms of inspection
Formal reviews
Internal review cycle
Walkthroughs
Formal inspections
Verification and validation

Testing Life Cycle

Disciplined Software Testing Practices (Planning)
Requirements are crucial for effective testing
Test both functional and quality requirements
Adopt Model-Based requirements
Formally design your tests
Perform both positive and negative testing
Trace requirements to test components
Trace test cases to database components
Perform thorough regression testing
Define your test process
Select tools to support your process
Perform both static and dynamic testing
Test design basics
Test design activities
Deliverables of the test design phase
Conditions and test cases
System Test Planning
Developing a test strategy
Test documentation
Components of a test plan
A test plan template
Test Case Design Techniques
Strategies for generating test cases
Black Box testing
Equivalence Class Partitioning
Boundary Value Analysis
Cause-Effect Diagram
Decision Tables
Glass Box testing
Statement/decision/condition coverage
Path coverage
Program complexity and basis path coverage

Bug Life Cycle
Error, Defect and Bug
Categories of Defects
Defect Report Format
Managing the test process
Project Management
Risk management
Controlling the Testing Process
Measures and Metrics
Product
Process

**Testing Levels**

- Unit testing
- Integration testing
- System testing
- Major areas of systems testing
- Usability and GUI testing
- GUI Navigation Diagrams
- User acceptance
- Regression testing

**Quality**

- Definition of Quality
- Quality Assurance
- Quality Control
- Cmm levels
- Sixsigma

**Data Base fundamentals for testers (3hrs)**

- Why should test professionals know Relational DB basics?
- SQL DML Basics
- Select statements for Testing
- SQL Basics - Select
- Order of clauses in SQL Select statement:
- SQL Basics – Insert, Update, Delete
- Combining Data from Multiple Tables
- Introduction to Joins
- Constraints between fields
- Primary Key Fields
- Cross Joins
- Using Subqueries
Introduction to C Language (2hrs)

Data Types
Variables
Operators
Conditional Statements
Looping Statements
Arrays
Functions
Exercise

Automation Testing (1hr)

Introduction to Automation Testing
Drawbacks in manual Testing
Advantages of Automation Testing
Limitations of Automation Testing
Why to automate When to automate
Selecting test cases for automation

WinRunner (15hrs)

Introduction to Win Runner
Testing Process
Recording Modes
Context sensitive Recording
Analog Recording
GUI Map Editor
GUI Map Configuration
Virtual Object Wizard
Data Driven testing
Recovery Scenario Manager
Checkpoints
Synchronization
Regular Expressions
Transactions
creating functions and calling
Function generator
Debugging
Running Modes
Batch Testing

QuickTest Professional (25hrs)

Introduction to QTP
Advantages of QTP over WR
QTP Supporting Environments
Features of QTP
Testing Process
Recording Modes
Object Identification
Object Repository
Object spy
Associate repository
Repository manager
Actions
Creating the Actions
Call to copy of actions
Call to existing actions
Parameterize the Action
Splitting the Action
Call to win runner
Parameterization
Input through Keyboard
Notepad
Excel Sheet
Front end Objects
Importing data from database
Recovery Manager
Batch Testing
Regular Expressions
Synchronization
Checkpoints
Output Values
Step Generator
Debugging
Running Modes

QTP Object Models
QTP Automation Frameworks
Linear frameworks
Library framework
Keyword driven framework
Datadriven framework
Hybrid framework
Advantages of Descriptive Programming
Descriptive Programming
Creating Objects
Working with Web Application
Introduction to VB Script
Variable
Data Types
String, Date, Array and Conversion functions
Reading the Values from DB, External Excel Sheet and XML File
Test Execution
Test Report
HTML Report

Quality Center (2hrs)
Introduction to QC
Advantage of using Test management tools
Configuration Management
Creating the Domain
Creating the Project
Adding the users
Requirements
Test Plan
Test Lab
Defects
Manual Testing Using QC
Automation Testing using QC

Silk Test (2hrs)

Introduction to Silk Test
Creating the Test Frame
Creating the Test Plan
Creating the Test Script
Check Points
Parameterization
Data Driven Framework
Recovery System
Batch Testing
Regular Expressions
Synchronization

Load Runner (4hrs)

Introduction to Performance Testing
Manual Vs Automation Performance Testing
Need for performance testing
Introduction to Load Runner
Load Runner Components
Virtual user generator
Controller
Result analysis
Record and Runtime settings
Ramp Up and Ramp down
Manual scenario
Goal Oriented scenario
Correlation
parameterization
Transactions
Rendezvous Point