Course Content for Software Quality Assurance

SN	Session	Chapter details
1	**Session 1**	**Chapter 1** **Basic Introduction to Software Quality Assurance** ● Background and Importance ● QA Process ● Methodologies ● Role of QA in SDLC ● Types of testing ● QA as Career Path
2	**Session 2**	**Chapter 2** **Types of QA Documents** ● System Requirement Specification Document ● How to Write SRS Doc ● System User Manual ● How to write SUM Doc ● Release Note Documents ● How to write RN Doc ● Closing Document ● Gantt chart Document ● Wireframes
3	**Session 3**	**Chapter 3** **Types of Testing in Detail** - Types of Software Testing (Functional. Non Functional and its subtypes in detail) **Functional Testing** 1. Unit Testing 2. Integration Testing 3. System Testing 4. Acceptance Testing **Non Functional Testing** 1. Security Testing 2. Performance Testing 3. Usability Testing 4. Compatibility Testing **Other Types of Testing** Difference between Black box and White Box testing

4	**Session 4**	**Chapter 4:** **Defect Life Cycle and Bug Reporting Tool** ● Defect/bug ● Defect Life Cycle ● Bug reporting tool ● Task Status ● Task Assigning parameters ● Defect report sample demo through a defect reporting tool (Github or Gitlab)
5	**Session 5**	**Chapter 5** **Test-plan Document and Test-cases** ● Test Plan Document and sample to write Test Plan ● Deliverable components ● Test Scenario | How to Write ● Test Cases |How to Write ● RTM Document|Importance | Types of RTM
6	**Session 6**	**Chapter 6** **API Testing and Introduction to Swagger** ● What is an API ● Types of API Testing | Importance ● Types of API'S ● Various components of Rest API's ● Types of Error Codes ● Challenges of API Testing ● Introduction to Swagger and Practical on how to Test API through Swagger - Positive & negative api testing
7	**Session 7**	**Chapter 7** **API Automation Through Postman (Part 1)** ● API testing in postman ● Simple API Testing ● API Testing using different types of Environment Variables used in postman ● Saving responses to Variables
8	**Session 8**	**Chapter 7** **API Automation Through Postman (Part 2)** ● How to use code snippets to automate - Code snippets to save responses - Use Variables in URL, Body parameters to cleanup - Save responses and Automate the tests within a collection - Automation using Collection Runner - Automation using datafile (CSV or json file) ● Debugging collection runner results - installation of Newman, node setup - Automation using Command line - API Automation Test Report Generation

9	**Session 9**	**Chapter 8** **API Automation Using Jmeter (Part 1)** ● Basic Introduction ● How to use Jmeter for simple tests ● Debugging responses ● Using variables in fields ● Different post methods
10	**Session 10**	**Chapter 8** **API Automation Using Jmeter (Part 2)** ● - Using Jmeter multiple features ● -Saving variables and responses ● - Debug sampler to identify variable ● - Auto increment to automate the test ● - Carry out data Load testing in server
11	**Session 11**	**Chapter 8** **API Automation Using Jmeter (Part 3)** ● - API test in Jmeter using External File ● - Test using variables ● - Test Using multiple methods ● - Sending out fake data in multiple time frame
12	**Session 12**	**Chapter 8** **API Automation Using Jmeter (Part 4)** ● - Load Testing using command line ● - Report Generation ● - Report Analysis ● - Introduction to Blazemeter ● - How to Record script through Blazemeter, Modify it and run it for Load Testing
13	**Session 13**	**Chapter 9** **Agile Methodology: Agile Model in Software Testing/ Scrum** ● Agile software development ● Agile vs Waterfall ● Agile process and phases in Detail ● Scrum vs Kanban ● QA Challenges with Agile software development ● Roles in Scrum ● Boundary value Analysis and Equivalence Partitioning ● Selenium | Frameworks | Types of Listener in TestNG | Annotations
14	**Session 14**	**Revision class or Practice class before Board Examination**