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**