Branch: B.Sc.(IT)	Semester-V
Subject Code: 5105	Lecture: 04 Credit: 04
Course Opted	Discipline Specific Elective - 1
Subject Title	SOFTWARE TESTING

Course objectives:

- To learn objectives of Software Testing
- To understand verification and validation
- To understand different testing methods
- To design test plan and test cases
- To understand text execution with the help of tools

Course Outcome:

After successful course completion students will able to

- Understand software testing life cycle
- Understand defects and its life cycle
- Understand various testing strategies
- Design manual test cases for software
- Execute testing using tools

Modules	Sr. No.	Topic and Details	No of Lectures Assigned	Marks Weightage %
UNIT-I	1	**Introduction to Software Testing** Testing Fundamentals, QA and QC, SDLC (Water Fall, Agile, Interactive), SCRUM Model, STLC, V-Model, role of testers,	6	12
	2	**Verification and Validation** Definition of V &V , Different types of V & V Mechanisms, Concepts of Software Reviews, Inspection and Walkthrough	6	12
UNIT-II	3	**Software Testing Methods & Strategy** Testing Fundamentals, Testing Documentation, Test Case Design, White Box Testing and its types, Black Box Testing and its types.	6	12
	4	**Software Testing Strategies** Strategic Approach to Software Testing, Unit Testing, Integration Testing, Validation Testing, System Testing	6	12
UNIT-III	5	**Software Metrics:** Concept and Developing Metrics, Different types of Metrics,	6	12
	6	**Defect Management:** Definition of Defects, Defect Life Cycle, Defect Management Process, Defect Reporting, Metrics Related to Defects, Using Defects for Process Improvement	6	12
UNIT-IV	7	**Testing Tools:** Types of test Tools, Tool Selection and Introduction, Cost Effectiveness of	8	16

		Tool Introduction, Tools for test management and Control, Test Specification, Static Testing, Dynamic Testing, Nonfunctional and Functional testing, Selection and Introduction of Test Tools,		
	8	**Test Management and Automation**. Test Execution, GUI Testing. Case study: Web Application Testing	6	12
		TOTAL	**50**	**100**

Text Book:

1. The Art of Software Testing, 3rd Edition by Glenford J. Myers, Corey Sandler, Tom Badgett.

Reference Books:

1. Software Testing: A Craftsman's Approach, Fourth Edition by Paul C. Jorgensen
2. Software Testing, 2nd Edition by Ron Patton
3. Software Testing Techniques, 2nd edition by: Boris Beizer
4. Software testing by Yogesh Singh Cambridge publication