

PROGRAMME: B. Sc (Information technology)		Semester – V	
COURSE: SOFTWARE TESTING		COURSE CODE : USIT503	
Periods per week 1 Period is 50 minutes	Lecture	5	
	Practical	3	
		Hours	Marks
Evaluation System	Theory Examination	2	60
	Theory Internal	--	40
	Practical		50

Unit-I	Fundamentals of testing: Necessity of testing , what is it, Testing principles, Fundamental test process, The psychology of testing	10 Lectures
Unit-II	Testing throughout the software life cycle: Software development models, Test levels, Test types: the targets of testing, Maintenance testing	10 Lectures
Unit-III	Static techniques: Reviews and the test process, Review process, Static analysis by tools	10 Lectures
Unit-IV	Test design techniques: Identifying test conditions and designing test cases, Categories of test design techniques, Specification-based or black-box techniques, Structure-based or white-box techniques, Experience-based techniques	10 Lectures
Unit-V	Test management: Test organization, Test plans, estimates, and strategies, Test progress monitoring and control, Configuration management, Risk and testing, Incident management	10 Lectures
Unit-VI	Tool support for testing: Types of test tool, Effective use of tools: Potential benefits and risks, Introducing a tool into an organization	10 Lectures

Books:

B1: Software Testing Foundations, 2nd Edition By Hans Schaefer, Andreas Spillner, Tilo Linz, Shroff Publishers and Distributors

(Unit I: Chapter 1,2, Unit II: Chapter 3, Unit III: Chapter 4, Unit IV: Chapter 5, Unit V: Chapter 6, Unit VI: Chapter 7)

B2: FOUNDATIONS OF SOFTWARE TESTING by Dorothy Graham, Erik van Veenendaal, Isabel Evans, Rex Black

(Unit I: Chapter 1, Unit II: Chapter 2, Unit III: Chapter 3, Unit IV: Chapter 4, Unit V: Chapter 5, Unit VI: Chapter 6)

References:

Software Testing by Yogesh Singh, Cambridge University Press

Software Testing Principles, Techniques and Tools, M.G. Limaye, TMH,

Software Testing A Craftman's Approach, Second Edition, Paul C. Jorgensen, CRC Press

Introduction to Software Testing, Paul Ammann, Jeff Offutt, Cambridge University Press.

Managing the Testing Process: Practical Tools and Techniques for Managing Hardware and Software Testing, Rex Black, Wiley.

Software Testing, Second Edition, Ron Patton, SAMS