

**Paper Code:** BCADSC 6.3

**Paper title:** Software Testing

**Teaching Hours –** 5hrs/week

**Total Teaching Hours:** 60 Hrs.

**Marks:** Th-80+IA-20

**Credits:** 4

**UNIT I:**

Principles of Testing, Software Development Life Cycle Models (SDLC), Phases of Software Project, Quality, Quality Assurance and Quality Control, Testing, Verification and Validation, Life Cycle Models, White Box Testing: White Box Testing, Static Testing, Structural Testing

**12 Hrs**

**UNIT II:**

Testing Techniques: Black Box Testing, Integration Testing, Top-Down Integration, Bottom-Up Integration, Bi-Directional Integration, System and Acceptance Testing, Functional versus Non-functional Testing, Functional System Testing, Non-Functional System Testing, Acceptance Testing.

**12 Hrs**

**UNIT III:**

Performance Testing: Factors, Methodology, Process for performance testing, Regression Testing, Types, Testing of Object-oriented Systems, Usability and Accessibility Testing, approach, Quality factors, Aesthetics Testing, Accessibility Testing

**12 Hrs**

**UNIT IV:**

Common People Issues: Perceptions and Misconceptions About Testing, comparison between Testing and Development Functions, Providing Career Paths for Testing Professionals, The role of the Ecosystem and a call for Action. Organization Structures for testing teams:, Structures in Single product Companies, Structures for Multi-Product Companies. (14.1 to 14.3).

**12 Hrs**

**UNIT V:**

Test Planning, Management: Test Planning: Preparation, scope management, Test approach, setting up criteria, Identifying responsibilities, test deliveries, testing tasks, activity breakdown, communication and risk management. Software Test Automation: Introduction, Terms used, Skills needed

**12Hrs**

**References:**

1. SrinivasanDesikan, Gopaldaswamy Ramesh: Software testing Principles and Practices, 2nd Edition, Pearson, 2012.

**Additional Reading:**

1. Software Testing :AdityaMathur.
2. Software Testing, Ron Patton, Second Edition, SAMS Pearson Publication2011
3. The Craft of Software Testing, Brain Marick, Pearson Publication 2010