5BCA1-SOFTWARE TESTING AND PROJECT MANAGEMENT

UNIT-I

Testing basics and Development Models: Principals and context of testing in software production, Usability and Accessibility Testing, Phases of Software Project, Process models to represents different phases Software Quality Control and its relation with testing, validating and verification, Software Development life cycle models, various development models.

White Box Testing: White Box Testing - Static Testing, Structural Testing-Unit code functional testing, Code coverage testing, code complexity testing,.

Black Box Testing- What? Why and when to do Black box testing, Requirements based testing, Positive and Negative Testing, Boundary value testing, Decision Tables, Equivalence Partitioning, State Based or Graph Based Testing, Compatibility Testing, User Documentation Testing, Domain Testing.

UNIT-II

Integration Testing: Introduction and types of integration testing, Scenario testing, defect bash.

System and Acceptance Testing- Overview, functional and non-functional testing, Acceptance testing.

Overview of some software testing tools: WinRunner, LoadRunner, Test Director.

(Some practical should be conducted using these tools)

UNIT-III

Performance Testing- Introduction, factors related to performance testing methodology for performing testing, Regression Testing,

Ad hoc Testing- Overview, Buddy & pair testing, Exploratory testing, Interactive testing, Agile and extreme testing.

Testing of Object Oriented Testing – Introduction, Differences in OO testing.

UNIT-IV

Software Project Management: Overview, Software Project Management Framework, Software Development life cycle, Organization Issues and Project Management, Managing Processes, Project Execution, Problems in Software Projects, Project

Management Myths and its clarifications.

Software Project Scope: Need to scope a software project, scope management process, communication techniques and tools, communication methodology

Software Requirement Gathering and Resource allocation: Requirement specifications, SRS Document preparation, Resources types for a software projects, requirement for resources allocation.

UNIT-V

Software Project Estimation: Work Breakdown structure (WBS), steps in WBS, Measuring efforts for a project, techniques for estimation – SLOC, FP, COCOMO and Delphi methods.

Project Scheduling: Scheduling and its need, scheduling basics, Gannt Chart, Network scheduling techniques, Pert and CPM

Using a Project Management Tool: Introduction to MS Project 2000, Managing tasks in MS Project 2000, Tracing a project plan, creating and displaying project information reports.

Text & Reference Books :

- *Software Testing: Principles and Practice* By Gopalaswamy and Srinivasan, 817758121x. Publisher, Pearson Education India. ISBN, 817758121x.
- *Software Testing Tools:* Covering WinRunner, Silk Test, LoadRunner, JMeter and TestDirector with case By Dr. K.V.K.K. Prasad, ISBN: 8177225324, Wiley Dreamtech, List Price: Rs. 279.00
- *http://www.columbia.edu/~jm2217/*
- *Basics of Software Project Management* – By NIIT,, Prentice Hall of India, ISBN 81-203-2490-0
- *Software Project Management* by Bob Hughes & mike Cotterell, Tata McGraw Hill , ISBN – 0-07-061985-9