

AMCS-24 SOFTWARE ENGINEERING

UNIT-1 SOFTWARE LIFE CYCLE

- 1.1 Water fall model, Prototyping, Spiral model, pros and cons of each model.
- 1.2 Requirements Analysis, SRS, DFD, ER Diagrams, Decision tables, Decision Trees
- 1.3 Formal specification techniques:
- 1.4 Axiomatic and Algebraic specifications, Petrinets

UNIT-2 SOFTWARE DESIGN

- 2.1 Design Heuristics, Cohesion and Coupling Design Methodologies
- 2.2 Structured analysis and design,
- 2.3 Architectural Design, Interface design,
- 2.4 Component Level design.
- 2.5 Software Reuse and Software Maintenance issues.

UNIT-3 INTRODUCTION TO SOFTWARE QUALITY MANAGEMENT

- 3.1 Software Testing, Objectives of testing, Functional and Structural testing,
- 3.2 Generation of test data, Test Plan, Unit testing, Integration testing, System testing, Test reporting.
- 3.3 Overview of SQA Planning, Reviews and Audits,
- 3.4 Software configuration management,
- 3.5 Quality Standards,
- 3.6 Study of ISO9000 & CMM

UNIT-4 SOFTWARE PROJECT MANAGEMENT

- 4.1 Brief study of various phases of Project Management
- 4.2 Planning, Organizing, Staffing, Directing and Controlling Software Project Cost Estimation
- 4.3 COCOMO model, Software Project Scheduling
- 4.4 CASE tools: CASE definitions, CASE Classifications,
- 4.5 Analysis and Design Workbenches, Testing Workbenches

References Books:

1. Software Engineering, Roger S. Pressman, Seventh illustrated edition, McGraw-Hill, ISBN: 978-0- 07-337597-7.
2. Software Engineering, Pankaj Jalote, Third illustrated edition, Springer books, ISBN: 978-0-38-720881-7.
3. Software Quality assurance-Milind Limaye-First edition, Tata McGraw-Hill, ISBN:978-007- 107252-6.
4. Software Testing Principles, testing and tools-M.G.Limaye, First edition, Tata McGraw-Hill, ISBN:9780-07-013990-9.