AMIT-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.