

UNIT I INTRODUCTION 9

Software Engineering paradigms – Waterfall Life cycle model – Spiral Model – Prototype Model – fourth Generation Techniques – Planning – Cost Estimation – Organization Structure – Software Project Scheduling, – Risk analysis and management – Requirements and Specification – Rapid Prototyping.

UNIT II SOFTWARE DESIGN 9

Abstraction – Modularity – Software Architecture – Cohesion – Coupling – Various Design Concepts and notations – Real time and Distributed System Design – Documentation – Dataflow Oriented design – Jackson System development – Designing for reuse – Programming standards.

UNIT III SOFTWARE METRICS 9

Scope – Classification of metrics – Measuring Process and Product attributes – Direct and Indirect measures – Reliability – Software Quality Assurance – Standards.

UNIT IV SOFTWARE TESTING AND MAINTENANCE 9

Software Testing Fundamentals – Software testing strategies – Black Box Testing – White Box Testing – System Testing – Testing Tools – Test Case Management – Software Maintenance Organization – Maintenance Report – Types of Maintenance.

UNIT V SOFTWARE CONFIGURATION MANAGEMENT (SCM) & CASE TOOLS 9

Need for SCM – Version Control – SCM process – Software Configuration Items – Taxonomy – Case Repository – Features.

TOTAL = 45

REFERENCES:

1. Roger S. Pressman, "Software Engineering: A Practitioner Approach", Sixth edition, McGrawHill, 2005.
2. I. Sommerville, "Software Engineering", Sixth Edition, Addison Wesley-Longman, 2004.
3. Pankaj Jalote, "An Integrated approach to Software Engineering", Second Edition, Springer Verlag, 1997.