

DSE-2B Software Engineering

Total Marks: 150

Theory :75

Practical: 50

Internal Assessment: 25

5Lectures, 4Practicals (Each in group of 10 to 15)

S No	Topic	Reference
1	Introduction to Software Engineering: Challenges-Scale-Quality and Productivity-Consistency and Repeatability-Change, Software Engineering approach-Phased Development Process-Managing the Process	[1] Chapter 1 (complete)
2	Software Process: Desired characteristics-Predictability-Maintainability-Change supportive-Early Defect Removal, Software Process models: Waterfall model-Prototyping-Iterative-Timebox, Comparison of the models. More Software Processes: Project Management Process-Inspection Process-Configuration. Management Process: Requirements change management process-Process management process.	[1] Chapter 2 (complete)
3	Software Requirement Specification (SRS): Need for SRS-Requirement process, Problem Analysis using UML (Unified Modelling Language) and Data dictionary, Characteristics of SRS, Components of an SRS.	[1] Chapter 3(3.1-3.5)
4	Testing: Psychology of testing -Error, Fault and Failure-Black box testing-Boundary value analysis, Testing Process-Levels of Testing.	[1] Chapter 10(10.1.1,10.1.4,10.2(introduction) 10.2.2,10.4-10.4.1

Reference Books

1. Pankaj Jalote, An Integrated approach to software engineering (Third edition), Narosa, 2003
2. Roger S. Pressman, Software Engineering (Sixth edition), Tata McGraw Hill, 2009

Practical:

Practical exercises based on concepts listed in theory.

S. No	Practical Title
1.	<ul style="list-style-type: none">• Problem Statement,• Process Model
2.	Requirement Analysis: <ul style="list-style-type: none">• Creating a Data Flow• Data Dictionary, Use Cases• Survey/Interview Questionnaire
3.	Design Engineering: <ul style="list-style-type: none">• Architectural Design / Front End using HTML• DataBase Design