

SEMESTER- VI

COURSE CODE :- **C 13**
COURSE TITLE :- **SOFTWARE ENGINEERING**
CREDIT :- **4**

Marks distribution

Full Marks: 20 (MSE) + 80 (ESE) = 100 Times: 3 hrs

Pass Marks: 45

This paper consists of 80 marks and divided into two groups:

Group-A: Objective questions (Compulsory) : 1 x 10 = 10

Group-B: Descriptive questions (7 out of 10 questions) : 7 x 10 = 60

Total = 80

The questions must cover the entire syllabus with equal distribution of marks as far as practicable.

Module 1: Software : Characteristics, Components and Applications, Software process, Software Engineering – A layered Technology, The software process, Software Process models, Linear Sequential Model, Prototyping Model, RAD Model and Evolutionary Software Models.

Module 2: Software Process & Project Metrics: Metrics in Project & Process Domains, Software Measurement and Metrics for Software Quality,

Module 3: Project Planning Objectives: Software Scope, resources, Software Project Estimation, Decomposition Techniques, Empirical estimation Models, Make-Buy decision.

Module 4: Risk Management: Software risks, Risk Identification, Projection, Defining Task set for software Project, selecting software engineering tasks, scheduling and project plan,

Module 5: Software Quality Assurance. Software reviews, Formal approach to SQA Software Reliability, The SQA plan.

Module 6: Conventional Methods for Software Engg : System Engg. Product Engg., Modeling the System, Architecture, System specifications, Analysis Concepts & Principles, Software prototyping, Specifications, Analysis Modeling, Design Concepts, Principles & Methods, Design for real-time system, Software Testing Methods.

Module 7: Object Oriented Software Engineering, Object Oriented Analysis, Object Oriented Design & Testing.

Module 8: Advanced Topics in Software Engg : Software Reuse, Reengineering, Client/Server Software Engg and Computer Aided Software Engg

Books Recommended :

1. Roger S. Pressman – Software Engineering – A Practitioner's Approach – McGraw Hill.
2. Richard Fairley – Software Engineering Concepts, TATA McGraw Hill.
3. PankajJalote – An Integrated Approach to Software Engineering – Narosa.