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 70 marks and divided into two groups:
Group-A: Objective questions (Compulsory) : 1 x 10 = 10
Group-B: Descriptive questions (6 out of 9 questions) : 7 x 10 = 70
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

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Books Recommended:

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

PRACTICAL: SOFTWARE ENGINEERING

SOFTWARE REQUIREMENT SPECIFICATION (SRS) OF ANY ORGANIZATION.