**Lesson Plan**

Name of the Faculty : Deepika

Discipline : Computer Engg.

Semester : 5th

Subject : Software Engg.

Lesson Plan : 15 Weeks

Workload (Theory/Practical) per week (in hours): Theory-03

|  |  |  |
| --- | --- | --- |
| Week | Theory | |
| Lecture Day | Topic(Including assignment/test) |
| 1st | 1st | **Unit-I(Introduction to Software Engineering)** |
| Introduction, Programmes v/s Software Products. |
| 2nd | Emergence of Software Engineering- Early Computer Programming. |
| 3rd | High- level Language Programming. |
| 2nd | 4th | Control flow based Design, Data Structure Oriented Design. |
| 5th | Object Oriented Design. |
| 6th | Revise all the topics of Unit-I (briefly) |
| 3rd | 7th | Test of Unit-I |
| 8th | **Unit-II(Software Life Cycle Models)** |
| Requirement of Life Cycle Model. |
| 9th | Classic Waterfall Model. |
| 4th | 10th | Prototyping Model. |
| 11th | Evolutionary Model. |
| 12th | Spiral Model. |
| 5th | 13th | Comparison of different Life Cycle Models. |
| 14th | Revise Unit-II |
| 15th | Test of Unit-II |
| 6th | 16th | **Unit-III(Software Planning)** |
| Responsibilities of Software Project Manager. |
| 17th | Metrics for Project Size Estimation- LOC(Lines of Code). |
| 18th | Metrics for Project Size Estimation- Function Point Metric. |
| 7th | 19th | Project estimation Techniques- Using COCOMO Model |
| 20th | Project estimation Techniques- Halstead’s Software Science. |
| 21th | Revise Unit-III |
| 8th | 22th | **Unit-IV(Requirement Analysis and Specification)** |
| Requirement gathering and Analysis. |
| 23th | Software Requirement Specifications(SRS) |
| 24th | Formal Specification Technique. |
| 9th | 25th | Characteristics of good SRS. |
| 26th | Revise Unit-IV |
| 27th | Test of Unit-IV |
| 10th | 28th | **Unit-V(Software Design and Implementation)** |
| Characteristics and features of good Software Design. |
| 29th | Cohesion and Cupling. |
| 30th | Software design Approaches- Function Oriented Design, Object Oriented Design. |
| 11th | 31th | Structured Coding Techniques. |
| 32th | Coding Styles, documentation. |
| 33th | Revise Unit-V |
| 12th | 34th | **Unit-VI(Software Testing)** |
| Concept of Testing, Verification v/s Validations. |
| 35th | Unit Testing, Black Box Testing. |
| 36th | White Box Testing. |
| 13th | 37th | Integration testing. |
| 38th | System testing |
| 39th | Revise Unit-VI |
| 14th | 40th | **Unit-VII(Software Quality and Maintenance)** |
| Introduction to Capability Maturity Model. |
| 41th | ISO 9000 . |
| 42th | Six Sigma. |
| 15th | 43th | Configuration Management |
| 44th | Revise Unit-VII |
| 45th | Test of unit-V,VI,VII |