**SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY**

DEPARTMENT OF MASTER OF COMPUTR APPLICATIONS

**III SEMESTER**

SUBJECT: Software Engineering Subject Code: 16MC3T05

Regulation: R16

**UNIT-I**

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| 1. Define Software Engineering and list out its Characteristics |
| 1. Discuss the evolution of software in detail |
| 1. Discuss the changing nature of software |
| 1. Describe Software Engineering – a Layered Technology |
| 1. Recall a myth? Give a focus on various software myths regarding Management and Practitioner |
| 1. Describe the generic frame work activities that are present in every software process? |
| 1. Illustrate CMMI Model with suitable example |
| 1. What is Software Development Life Cycle? (SDLC) |
| 1. Explain various types of software’s |
| 1. Illustrate the Umbrella activities of Process Framework. |

**UNIT-2**

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| 1. Demonstrate the different phase’s involved Waterfall process model. |
| 1. Explain Incremental Model in detail. |
| 1. Draw and explain the spiral model with its advantage and disadvantages? |
| 1. Demonstrate Prototyping and RAD Model with neat diagram |
| 1. Discuss about The Unified Process in detail |
| 1. Summarize Functional and Non-functional Requirements |
| 1. Discuss the components of a Software Requirement Specification document. |
| 1. Explain the ways and means for collecting the software requirements and how are they organized and represented |
| 1. What is the difference between SRS document and design document? |
| 1. What are the contents we should contain in the SRS document and design document. |

**UNIT-3**

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| 1. Discuss Requirement Engineering Process in detail |
| 1. Illustrate Requirement Elicitation and Analysis |
| 1. Describe different checks to be carried out during requirements validation process. |
| 1. Summarize the Task set for Project Planning Activities. |
| 1. Explain the Decomposition techniques in Project planning activities |
| 1. Discuss Size oriented metrics in detail |
| 1. Discuss the various Effort Estimation Techniques |
| 1. Illustrate COCOMO Model II with suitable example |
| 1. Demonstrate the PERT/CPM Method for Project Scheduling |
| 1. How would you formulate Effort estimation using LOC and FP? |

**UNIT-IV**

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| 1. Describe the Design concepts in detail? |
| 1. Define Design process and list out its characteristics |
| 1. Recall Object-Oriented Design process |
| 1. Illustrate Software Architecture Models with neat diagram |
| 1. Describein detail about Design Heuristics used in software engineering |
| 1. Examine theData centred Architecture and Data Flow Architecture |
| 1. Recall coupling and cohesion ?What are the various types of coupling and cohesion? |
| 1. What are the different types of architectural styles exist for software and explain any one software architecture in details? |
| 1. Describe transform and transactional mapping by applying design steps to an example system. |
| 1. Explain real time software design with an example. |

**UNIT-V**

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| 1. Demonstrate the three Golden Rules of UI design. |
| 1. Explain Validation Testing in detail. |
| 1. Explain the Test Strategies for conventional software? |
| 1. Summarize Black-Box and White-Box testing with suitable example. |
| 1. Write short notes on User Interface Design. |
| 1. Describe equivalence partitioning and Boundry value analysis? |
| 1. Discriminate verification and validation, and give explanation why validation is a particularly difficult process. |
| 1. Explain the testing procedures for boundary conditions. |
| 1. What do you mean by system testing? Give a case study of a system testing for operating system |
| 1. Discuss in detail about alpha and beta testing |