Course Code: 19MC9122 **R19**

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR

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QUESTION BANK (DESCRIPTIVE)

Subject with Code : Software Engineering(19MC9122) **Course & Branch**: MCA

Year & Sem: II & II **Regulation:** R19

UNIT –I

SOFTWARE, SOFTWARE ENGINEERING & PROCESS AND PROCESS MODELS

1	Define Software, Software Engineering and Process? Discuss nature of Software.	[L1][CO1]	[12M]
2	a) Explain the levels in CMMI Model. b) Explain software engineering practices and principles	[L2][CO1] [L5][CO1]	[06M] [06M]
3	a) List Software Myths? Explain in detail. b) What is Process Patterns and explain them?	[L4][CO1] [L1][CO1]	[06M] [06M]
4	Analyze CMMI and its advantages? Explain about generic process model.	[L4][CO1]	[12M]
5	a) What are the customer myths and describe them? b) Discuss Water fall model in detail.	[L1][CO1] [L6][CO1]	[06M] [06M]
6	a) What is Prescriptive Process Model and explain it clearly? b) Analyze Personal and Team process model.	[L1][CO1] [L4][CO1]	[06M] [06M]
7	a) Identify the importance of Incremental Process model. b) Explain spiral model with suitable example.	[L3][CO1] [L5][CO1]	[06M] [06M]
8	a) Briefly explain Evolutionary process model. b) What is Agile development and explain it?	[L5][CO1] [L5][CO1]	[06M] [06M]
9	Define Unified Process and Discuss about the aspect oriented software development.	[L6][CO1]	[12M]
10	What is Agile process ? Explain Extreme programming?	[L1][CO1]	[12M]

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UNIT –II

SOFTWARE REQUIREMENTS AND REQUIREENTS MODELING

1	Define and explain functional and non-functional requirements. What are the importance of requirement modeling.	[L1][CO2]	[12M]
2	Define requirements engineering and explain about ground work analysis.	[L3][CO2]	[12M]
3	a) What is eliciting requirements in software engineering? b) What is the procedure for SRS document process?	[L1][CO2] [L1][CO2]	[06M] [06M]
4	Analyze the steps required to establish the groundwork for understanding of software requirements?	[L4][CO2]	[12M]
5	a) What is eliciting requirements? Explain. b) Explain the steps in developing uses cases.	[L1][CO2] [L5][CO2]	[06M] [06M]
6	What is requirements modeling. Cearly discuss about it.	[L6][CO2]	[12M]
7	a) Briefly explain scenario based modeling b) What is class based modeling? Explain.	[L1][CO2] [L3][CO2]	[06M] [06M]
8	Identify the role of Web App based modeling. explain?	[L3][CO2]	[12M]
9	a) List out the steps of project estimation? b) Explain empirical estimation models.	[L4][CO2] [L5][CO2]	[06M] [06M]
10	Discuss about Software Project Estimaton.	[L6][CO2]	[12M]

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UNIT-III

DESIGN CONCEPTS AND USER INTERFACE DESIGN

1	a) What are the software quality guidelines and attributes used in software design? b) What are Design Concepts? Explain Design model.	[L1][CO3] [L1][CO3]	[06M] [06M]
2	a) Clearly explain Architecture Design. b) Discuss about Architecture and its importance.	[L2][CO3] [L3][CO3]	[06M] [06M]
3	Listout Architectural Styles? Explain clearly.	[L4][CO3]	[12M]
4	Explain Data design and Architectural design.	[L5][CO3]	[12M]
5	Define Component. Write a short note on Designing Class based components.	[L1][CO3]	[12M]
6	Discuss about Component level design for web and mobile apps and discuss briefly about component based-development.	[L6][CO3]	[12M]
7	Define Design patterns. Analyze about Pattern based software design and Architectural Patterns.	[L4][CO3]	[12M]
8	Explain the following. a) Component level design patterns b) User interface design patterns.	[L3][CO3]	[12M]
9	Identify the roles of Interface design, Content design and Navigation design.	[L3][CO3]	[12M]
10	Explain the steps involved in Mobile app Design	[L2][CO3]	[12M]

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UNIT-IV

TESING AND TESTING CONVENTIONAL APPLICATIONS

1	Clearly explain Software testing strategies.	[L5][CO4]	[12M]
2	What are the Test strategies for conventional, object oriented software	[L1][CO4]	[12M]
3	Discuss about the testig strategies for web app, mobile app.	[L6][CO4]	[12M]
4	Explain the following. a) Validation testing b) SystemTesting c)The art of debugging.	[L2][CO4]	[12M]
5	a) What are Software testing fundamentals? b) Discuss about White-Box testing.	[L1][CO4] [L6][CO4]	[06M] [06M]
6	Analyze about Equivalence partitioning, Boundary value analysis and Graph based testing methods.	[L4][CO4]	[12M]
7	What are Object Oriented testing methods? Discuss about it.	[L1][CO4]	[12M]
8	Identify the roles of Testing methods applicable at class level and Interclass test case design.	[L3][CO4]	[12M]
9	Briefly explain Testing Web Applications and Mobile Applications.	[L5][CO4]	[12M]
10	Identify the role of Security Engineering and risk analysis and discuss Security assurance.	[L3][CO4]	[12M]

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UNIT-V

UMBRELLA ACTIVITIES AND SOFTWARE REENGINEERING

1	What are Umbrella Activities? Briefly explain.	[L1][CO5]	[12M]
2	Define and explain Measurement and metrics.	[L1][CO5]	[12M]
3	Define and explain Size oriented metrics, Function oriented metrics.	[L1][CO5]	[12M]
4	Identify what are Metrics for software quality? Explain.	[L3][CO5]	[12M]
5	What are Product metrics? Explain them clearly.	[L5][CO5]	[12M]
6	List out the Metrics for the requirements model. Explain.	[L4][CO5]	[12M]
7	Explain Metrics for the design model.	[L2][CO5]	[12M]
8	a) Discuss Metrics for source code. b) Analyze what are the Metrics for testing and Metrics for maintenance.	[L6][CO5] [L4][CO5]	[06M] [06M]
9	a) Define and explain Software Reengineering. b) Identify the importance of software reengineering process model	[L1][CO5] [L3][CO5]	[06M] [06M]
10	Identify reengineering Activities. Explain Reverse engineering.	[L3][CO5]	[12M]

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