Course Code: 18CS0544 **R18**

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
Siddharth Nagar, Narayanavanam Road – 517583
QUESTION BANK (DESCRIPTIVE)

Subject with Code: Software Development and Testing(18CS0544) **Course & Branch**: B.Tech – CE,EEE,ME,ECE
Regulation: R18 **Year & Sem:** IV-B.Tech & I-Sem

UNIT –I
INTRODUCTION AND INTRODUCTION TO AGILITY

1	**a**	Define software and list characteristics of software.	[L1][CO1]	**[2M]**
	b	What is Software Engineering?	[L1][CO1]	**[2M]**
	c	Analyze the changing nature of software	[L4][CO1]	**[2M]**
	d	Explain the software engineering layers.	[L2][CO1]	**[2M]**
	e	Discuss Customer myths	[L2][CO1]	**[2M]**
2	Write in detail about the nature of software.		[L6][CO1]	**[10M]**
3	**a**	Discuss characteristics of software.	[L6][CO1]	**[05M]**
	b	Determine essence of practice in software engineering.	[L5][CO1]	**[05M]**
4	Explain how Framework activities helps to solve a problem using umbrella Activities		[L5][CO1]	**[10M]**
5	**a.**	Define the term Software Engineering – A Layered Technology	[L1][CO1]	**[03M]**
	b.	List out general principles of software engineering.	[L4][CO1]	**[07M]**
6	Discuss briefly about different types of software myths.		[L6][CO1]	**[10M]**
7	Explain in detail about the waterfall model and incremental model and problems encountered with them.		[L5][CO1]	**[10M]**
8	Discuss in brief about Unified Process Model with neat diagram.		[L6][CO1]	**[10M]**
9	What is Agile Process? Write a note on Extreme Programming(XP).		[L1][CO1]	**[10M]**
10	**a**	What is Agility? Illustrate any four Agile Process Models.	[L1][CO1]	**[05M]**
	b.	Write a note on Agile Unified Process.	[L3][CO1]	**[05M]**

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UNIT –II
REQUIREMENT ANALYSIS AND SPECIFICATION AND ARCHITECTURAL DESIGN CONCEPTS

1	**a**	What is Requirements Engineering?	[L1][CO2]	**[2M]**
	b	List number of problems encountered in Elicitation.	[L4][CO2]	**[2M]**
	c	Discuss three types of requirements.	[L6][CO2]	**[2M]**
	d	What is Modularity?	[L1][CO2]	**[2M]**
	e	Describe Quality attributes of Design Process?	[L2][CO2]	**[2M]**
2		Define Requirement Engineering and explain about Requirements Engineering Tasks	[L1][CO2]	**[10M]**
3		Illustrate Eliciting Requirements in software requirements gathering.	[L2][CO2]	**[10M]**
4		How to build Requirements model? Explain elements of requirements model?	[L1][CO2]	**[10M]**
5		List various analysis rules of thumb in requirement analysis? Discuss Domain analysis in detail.	[L4][CO2]	**[10M]**
6		Define data modeling concepts?Write a short note on data object?	[L1][CO2]	**[10M]**
7		What is software architecture ? Describe in detail different types of software architectural styles with illustrations.	[L2][CO2]	**[10M]**
8		Explain the following: **(i)** Design process. **(ii)** Design model. **(iii)** Design concepts	[L3][CO2]	**[10M]**
9		What is Architecture? Identify Architectural patterns.	[L2][CO2]	**[10M]**
10		List out various types of Architectural styles briefly.	[L4][CO2]	**[10M]**

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UNIT –III
USER INTERFACE DESIGN AND WEB APP DESIGN

1	**a**	What are the three golden rules in interface design?	[L1][CO4]	**[2M]**
	b	Define mental model and Implementation model?	[L1][CO4]	**[2M]**
	c	Compare Content architecture and WebApp architecture.	[L5][CO4]	**[2M]**
	d	Elaborate MVC	[L6][CO4]	**[2M]**
	e	What are navigation semantic units(NSUs)?	[L1][CO4]	**[2M]**
2	Elaborate golden rules to form the basis for a set of user interface design principles.		[L6][CO4]	**[10M]**
3	Explain the following: **i.** Briefly explain about user interface design. **ii.** Explain interface design workflow for WebApps.		[L5][CO4] [L2][CO4]	**[5M]** **[5M]**
4	List out various steps of Interface Design.		[L4][CO4]	**[10M]**
5	Examine the elements of interface analysis with examples.		[L4][CO4]	**[10M]**
6	a.	Explain the rules of user interface design.	[L5][CO4]	**[05M]**
	b.	Explain the steps involved in WebApp Interface Design.	[L2][CO4]	**[05M]**
7	a.	Explain Astheticdesign?List out the layout issues in detail.	[L1][CO4]	**[05M]**
	b.	Discuss about content design?What are the different design task focused.	[L6][CO4]	**[05M]**
8	Describe Architecture Design in detail.		[L2][CO4]	**[10M]**
9	Explain Navigation design in detail		[L5][CO4]	**[10M]**
10	a.	Define component level design	[L1][CO4]	**[05M]**
	b.	Identify the navigation pathways to access WebAPP content and Function?	[L3][CO4]	**[05M]**

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UNIT –IV
SOFTWARE TESTING AND APPROACH TO SOFTWARE TESTING

1	**a**	What is testing?	[L1][CO4]	**[2M]**
	b	Define verification and validation?	[L1][CO4]	**[2M]**
	c	What is unit testing?	[L1][CO4]	**[2M]**
	d	Discuss Alpha and Beta testing?	[L2][CO4]	**[2M]**
	e	Define white box testing?	[L1][CO4]	**[2M]**
2		What is testing? Explain a number of testing strategies with neat sketch?	[L1][CO4]	**[10M]**
3	**a**	Discuss the process of art of debugging?	[L2][CO5]	**[05M]**
	b	What is need of beta testing?	[L1][CO4]	**[05M]**
4		Explain about the importance of test strategies in conventional software?	[L2][CO4]	**[05M]**
5	**a**	Write a short note on fundamentals of software testing?	[L3][CO5]	**[05M]**
	b	Describe briefly about White box testing?	[L1][CO5]	**[05M]**
6	**a**	Explain in detail about Black box testing?	[L2][CO5]	**[05M]**
	b	Illustrate Testing Strategies for Object Oriented software?	[L3][CO5]	**[05M]**
7		Compare white box testing and Black box testing?	[L2][CO5]	**[10M]**
8	**a**	Write about module testing?	[L3][CO4]	**[05M]**
	b	Explain integration testing?	[L2][CO4]	**[05M]**
9	**a**	Discuss system testing?	[L2][CO4]	**[05M]**
	b	Illustrate acceptance testing?	[L3][CO4]	**[05M]**
10		Discuss about levels of software testing?	[L2][CO4]	**[10M]**

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UNIT –V
SOFTWARE QUALITY AND SOFTWARE TESTCASES

1	**a**	What is requirement Analysis?	[L1][CO5]	**[2M]**
	b	Explain software quality?	[L5][CO5]	**[2M]**
	c	Define multitesting strategy?	[L1][CO5]	**[2M]**
	d	Compare between test plan and test design?	[L5][CO5]	**[2M]**
	e	What is the purpose of test debugging?	[L1][CO5]	**[2M]**
2	Discuss about software testing lifecycle?		[L1][CO5]	**[10M]**
3	List out the testing principles in software?		[L4][CO5]	**[10M]**
4	Describe the test process?Define testing activities.		[L2][CO5]	**[10M]**
5	Define software quality assurance?Explain advantages and disadvantages.		[L1][CO5]	**[10M]**
6	What are test cases in software?		[L1][CO5]	**[10M]**
7	Discuss about test cases selection?		[L2][CO5]	**[10M]**
8	What is Test design?How to specify the testcases?		[L1][CO5]	**[10M]**
9	Explain the following: **(i)** Test plan **(ii)** Test design **(iii)** Test execution		[L5][CO5]	**[10M]**
10	Discuss about the case study on test tools and automation?		[L6][CO5]	**[10M]**

Prepared By: Department of CSE