SIDDARTHA INSTITUTE OF SCIENCE AND TECHNOLOGY :: PUTTUR
(AUTONOMOUS)
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: Software Engineering(18CS0522)   **Course &Branch :**B.Tech - CSE
Year &Sem :III B.Tech& II-Sem   **Regulation :** R18

UNIT –I

Introduction and Introduction to Agility

1	**a**	Define software?	[L1][CO1]	**[2M]**
	b	What is Software Engineering?	[L1][CO1]	**[2M]**
	c	Represent the wearing out nature of Hardware and Software pictorially?	[L5][CO1]	**[2M]**
	d	Show the layered technology nature of Software Engineering?	[L2][CO1]	**[2M]**
	e	Name the five activities of the generic process framework?	[L1][CO1]	**[2M]**
	f	What are the umbrella activities present in the software engineering process framework?	[L1][CO1]	**[2M]**
	g	Write the customer myths existing in software engineering industry?	[L3][CO1]	**[2M]**
	h	Name the five phases of Unified process?	[L1][CO1]	**[2M]**
	i	Give the block diagram of Waterfall model?	[L2][CO1]	**[2M]**
	j	Name some common Agile process models?	[L1][CO1]	**[2M]**
2		Write in detail about the nature of software.	[L2][CO1]	**[10M]**
3	**a**	Discuss characteristics of software.	[L6][CO1]	**[05M]**
	b	Explain any two of the specialized process models.	[L5][CO1]	**[05M]**
4		Explain Framework activities and umbrella Activities of Process framework.	[L5][CO1]	**[10M]**
5	**a**	Define the term Software Engineering – A Layered Technology.	[L1][CO1]	**[03M]**
	b	Examine in detail about Spiral model.	[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,L3][CO1]	**[10M]**
10	**a**	What is Agility? Illustrate any two Agile Process Models.	[L1,L2][CO1]	**[05M]**
	b	Write a note on Agile Unified Process.	[L3][CO1]	**[05M]**

UNIT –II

Requirements Analysis and Specification

1	a	Define Requirements Engineering?	[L1][CO2]	**[2M]**
	b	Name the problems encountered in Requirements elicitation process?	[L1][CO2]	**[2M]**
	c	List the seven tasks of Requirements Engineering?	[L4][CO2]	**[2M]**
	d	Mention the types of requirements identified by QFD (Quality Function Deployment)?	[L1][CO2]	**[2M]**
	e	Specify Expected requirements?	[L2][CO2]	**[2M]**
	f	What is the Scenario based elements in the Requirements model?	[L1][CO2]	**[2M]**
	g	What are the types of models resulted from Requirements modeling?	[L1][CO2]	**[2M]**
	h	Define class-based modeling?	[L1][CO2]	**[2M]**
	i	Define flow-oriented models?	[L1][CO2]	**[2M]**
	j	Explain elements included in the CRC model?	[L2][CO2]	**[2M]**
2		Define Requirement Engineering and explain about Requirements Engineering Tasks	[L1][CO2]	**[10M]**
3		How to establish the groundwork for understanding of software requirements.	[L1][CO2]	**[10M]**
4		Illustrate Eliciting Requirements in software requirements gathering.	[L2][CO2]	**[10M]**
5		Write about Requirements analysis elements in detail	[L1][CO2]	**[10M]**
6		How to build Requirements model? Explain Negotiation and Validation requirements.	[L1][CO2]	**[10M]**
7		List various analysis rules of thumb in requirement analysis? Discuss Domain analysis in detail.	[L4][CO2]	**[10M]**
8		Discuss flow -Based Modeling with suitable examples.	[L6][CO2]	**[10M]**
9		Construct Class-Based Modeling briefly.	[L3][CO2]	**[10M]**
10		Write about scenario-based modeling? Also write about the UML models that supplement the use case.	[L3][CO2]	**[10M]**

UNIT –III

Design Concepts and Architectural Design

1	**a**	Define architectural design?	[L1][CO3]	**[2M]**
	b	Define interface design?	[L1][CO3]	**[2M]**
	c	Specify component level design?	[L2][CO3]	**[2M]**
	d	Name the software quality attributes suggested by Hewlett-Packard?	[L1][CO3]	**[2M]**
	e	Name the software design concepts?	[L1][CO3]	**[2M]**
	f	Define Data Abstraction?	[L2][CO3]	**[2M]**
	g	What is Modularity?	[L1][CO3]	**[2M]**
	h	Define cohesion and coupling?	[L1][CO3]	**[2M]**
	i	Define procedural abstraction and data abstraction?	[L1][CO3]	**[2M]**
	j	Name the different architectural styles available in software engineering?	[L1][CO3]	**[2M]**
2	**a**	What is the Design process? Discuss software quality guidelines and attributes.	[L6][CO3]	**[10M]**
	b	Explain common characteristics in the evolution of software design.	[L4][CO3]	**[10M]**
3		Determine software design concepts in detail.	[L5][CO3]	**[10M]**
4		Describe a Design model with various kinds of elements.	[L2][CO3]	**[10M]**
5		What is Architecture? Explain briefly about Architecture Genres.	[L3][CO3]	**[10M]**
6		List out various types of Architectural styles briefly.	[L4][CO3]	**[10M]**
7	**a**	How to assess alternate Architectural design.	[L1][CO3]	**[05M]**
	b	Identify Architectural patterns.	[L3][CO3]	**[05M]**
8		What is software architecture ? Describe in detail different types of software architectural styles with illustrations.	[L2][CO3]	**[10M]**
9		Explain the following: (i) Design process. (ii) Design model. (iii) Design concepts.	[L5][CO3]	**[10M]**
10		Discuss briefly about Architectural design and their tasks.	[L6][CO3]	**[10M]**

UNIT –IV

<u>User Interface Design and Web App Design</u>

1	**a**	What are the three golden rules in interface design?	[L1][CO4]	**[2M]**
	b	What is the categorization of users during the effective user interface design?	[L1][CO4]	**[2M]**
	c	What is the difference between Knowledgeable Intermittent users and knowledgeable frequent users?	[L1][CO4]	**[2M]**
	d	Specify the tasks on which interface validation focus?	[L2][CO4]	**[2M]**
	e	Define system response time and mention its characteristics?	[L1][CO4]	**[2M]**
	f	What are the design issues to be handled during user interface design?	[L1][CO4]	**[2M]**
	g	Mention the set of design goals that are applicable for webapps?	[L1][CO4]	**[2M]**
	h	Mention the general layout guidelines that must be followed in Webapp interface design?	[L1][CO4]	**[2M]**
	i	Elaborate MVC	[L6][CO4]	**[2M]**
	j	What are the options available in implementing the navigation mechanism in Webapps?	[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]	**[10M]**
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**	Define five quality attributes of WebApp Design.	[L1][CO4]	**[05M]**
	b	Discuss set of Design goals in WebApp.	[L6][CO4]	**[05M]**
8		Write about the design principles used for the WebApp interfaces.	[L2][CO4]	**[10M]**
9		Give detailed notes on WebApp Design Quality and their goals.	[L2][CO4]	**[10M]**
10	**a**	Design pyramid for WebApps?	[L6][CO4]	**[05M]**
	b	Identify the navigation pathways to access WebApp content and Function?	[L3][CO4]	**[05M]**

UNIT –V

Testing and Testing Conventional Applications

1	**a**	Specify the main activities of testing?	[L5][CO5]	**[2M]**
	b	Define Verification and Validation?	[L1][CO5]	**[2M]**
	c	What are the four levels of testing?	[L1][CO5]	**[2M]**
	d	What is stub procedure?	[L1][CO5]	**[2M]**
	e	Explain Regression testing.	[L2][CO5]	**[2M]**
	f	Discuss Alpha and Beta testing.	[L6][CO5]	**[2M]**
	g	What is Debugging?	[L1][CO5]	**[2M]**
	h	Define White-box Testing?	[L1][CO5]	**[2M]**
	i	Specify the approaches available to design black box test cases?	[L2][CO5]	**[2M]**
	j	What are the various types of loops ?	[L1][CO5]	**[2M]**
2		What is Testing? Explain a number of software testing strategies with neat sketch.	[L2][CO5]	**[10M]**
3	**a**	Explain system testing	[L5][CO5]	**[05M]**
	b	Elaborate a strategic approach to software testing.	[L6][CO5]	**[05M]**
4	**a**	Discuss the process of Art of debugging.	[L6][CO5]	**[05M]**
	b	What is the need of beta testing?	[L1][CO5]	**[05M]**
5		Distinguish between Validation testing and System testing.	[L4][CO5]	**[10M]**
6		Explain about the importance of test strategies in conventional software.	[L5][CO5]	**[10M]**
7	**a**	Write a short note on fundamentals of software testing.	[L3][CO5]	**[05M]**
	b	Describe briefly about White box testing.	[L2][CO5]	**[05M]**
8	**a**	Explain in detail about Black box testing.	[L5][CO5]	**[05M]**
	b	Illustrate Testing Strategies for Object Oriented software	[L2][CO5]	**[05M]**
9	**a**	How to test Specialized Environments, Architectures and Applications.	[L1][CO5]	**[05M]**
	b	Explain boundary value analysis with an example.	[L5][CO5]	**[05M]**
10		Compare white box testing and Black box testing.	[L5][CO5]	**[10M]**

Prepared by:
1. **Dr. M.A. Manivasagam**
   HOD &Professor/CSE