USN									

21CST601

Sixth Semester B. E. Degree Semester End Examination (SEE)

Model Question Paper – 3

SOFTWARE ENGINEERING AND PROJECT MANAGEMENT

Time: 3 Hours] **[Maximum Marks: 100**

Instructions to Students:

Q No		Questions	Marks	CO	RBT Cognitive Level
1	a)	"Scrum is a subset of Agile". Justify.	5	CO1	L3
	b)	Describe concurrent development model used in software development.	8	CO1	L3
	c)	List and explain seven principles that focuses on software engineering practice as a whole.	7	CO1	L2
OR					
2	a)	With a neat diagram, explain the process of XP for developing a software.	7	CO1	L2
	b)	Compare and contrast waterfall and evolutionary software development model.	8	CO1	L3
	c)	Describe a generic process framework for software engineering.	5	CO1	L2
3	a)	Give the IEEE standard structure of an SRS. Prepare an SRS for Agricultural Information Management System which will be helpful for farmers.	8	CO2	L4
	b)	With suitable example, describe the Scenario-based modeling.	7	CO2	L2
	c)	Develop use cases for the following: (i) Train Reservation System (ii) Unified Insurance Management System	5	CO2	L4
OR					
4	a)	Define requirements engineering. List and explain seven distinct tasks of requirements engineering.	8	CO2	L2
	b)	Discuss the significance of use cases in requirements engineering process. Design various use cases for Super market management system.	7	CO2	L5

	c)	How to negotiate and validate requirements? Illustrate with examples.	5	CO2	L3
5	a)	List and explain all the fundamental software design concepts.	10	CO3	L2
	b)	Develop a complete architectural design for Safe home product. Also identify various components used in Safe home product.	10	CO3	L4
		OR			
6	a)	Describe basic design principles applicable to Component level design.	8	CO3	L3
	b)	With suitable examples, describe Architectural styles and Architectural Genres.	8	CO3	L2
	c)	Design architectural context diagram for the following systems: (i) Stock Market Trading System (ii) Consumer Products Management System	4	CO3	L4
7	a)	With a neat diagram, describe the debugging process.	6	CO4	L2
	b)	With suitable example, explain basis path testing in detail.	6	CO4	L2
	c)	Describe Validation and System Testing with examples.	8	CO4	L3
		OR			
8	a)	Explain a strategic approach to software testing.	8	CO4	L2
	b)	Explain graph based testing methods and boundary value analysis with suitable real time examples.	8	CO4	L3
	c)	Design various test cases for unified seat reservation system.	4	CO4	L4
9	a)	The decisions made by senior management can have a significant impact on the effectiveness of a software engineering team. Provide five examples to illustrate that this is true.	6	CO5	L4
	b)	How to establish a software metrics program? Describe with various steps and goals.	7	CO5	L2
	c)	Describe Empirical estimation models used during estimation of software projects.	7	CO5	L2
		OR			
10	a)	"Effective software project management focuses on four P's". Justify this statement with suitable analogy.	8	CO5	L4
	b)	Describe any three software metrics used for software measurement.	6	CO5	L3
	c)	Briefly explain various decomposition techniques used during software project estimations.	6	CO5	L2

1. Answer FIVE FULL questions as per choice.